

Appropriate Assessment Screening & Natura Impact Statement – Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) AA for the proposed development at 'Barrington Tower', Brennanstown Road, Dublin 18



6th April 2022 Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd. On behalf of: Cairn Homes Properties Ltd.

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

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	development at 'Barrington Tower', Brennanstown Road, Dublin 18					
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Introduction

The following Appropriate Assessment (AA) (Screening Stage) and Natura Impact Statement have been prepared by **Altemar Ltd.** at the request of Cairn Homes Properties Ltd. The proposed 'Build-to-Rent' (BTR) development will consist of the construction of 8 no. blocks in heights up to 10 storeys comprising 534 residential units, a creche, a retail unit, residential support facilities and residential services and amenities. The proposal also includes car and cycle parking, public and communal open spaces, landscaping, waste management areas, plant areas, substations, switch rooms, and all associated site development works and services provision.

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 (Natura 2000 sites). European sites are those sites designated as Special Areas of Conservation (SAC) or Special Protection Areas (SPA).

The AA (screening stage) examines the likely significant effects of a plan or project, either on its own, or in combination with other plans and projects, upon a Natura 2000 site and considers whether, on the basis of objective scientific evidence, it can be concluded that there are not likely to be significant effects on any European site, in view of best scientific knowledge and the conservation objectives of the relevant European sites.

This Natura Impact Statement examines whether the plan or project, either alone, or in combination with other plans and projects, in the view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European sites.

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 27 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 environmental 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 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 (2009/147/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) and candidate SACs (cSACs) 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.

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;

- 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."

As outlined revised Guidance published in October 2021 (EC, 2021) "in Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;
- any Natura 2000 sites within the likely zone of influence of the plan or project. Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;
- Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);
- Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project.
- The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance."

Stages of the Appropriate Assessment

This Appropriate Assessment screening and Natura Impact Statement was undertaken in accordance with the European Commission Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, , 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', the European Communities (Birds and Natural Habitats) Regulations 2011.). 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, and local site or plan area characteristics;
 - 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 Stage 2 AA will not 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, Stage 2 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

The proposed 'Build-to-Rent' (BTR) development will consist of the construction of 8 no. blocks in heights up to 10 storeys comprising 534 residential units, a creche, a retail unit, residential support facilities and residential services and amenities. The proposal also includes car and cycle parking, public and communal open spaces, landscaping, waste management areas, plant areas, substations, switch rooms, and all associated site development works and services provision.

The proposed development provides 534 no. residential units as follows:

- 30 no. studios (5.6%)
- 135 no. 1 beds (25.3%)
- 318 no. 2 beds (59.6%)
- 51 no. 3 beds (9.5%)

The 534 no. units provide a residential density of 140 uph.

The units will be provided in 8 blocks ranging up to 10 storeys in height. All of these units have associate private space in the form of terraces or balconies which will look east/west/ north/ south. 50.7% of the proposed units are dual aspect.

Block AB provides 40 no. units and is 5 storeys. Block CD provides 32 no. units and is 5 storeys in height. Block E provides 68 no. units and ranges in height from 5 - 8 storeys (including the lower ground floor). Block F provides 96 no. units and ranges in height from 9 - 10 storeys (including the lower ground floor). Block G provides 89 no. units and ranges in height from 7 -8 storeys (including the lower ground floor). Block H provides 99 no. units and is 9 storeys in height. Block I provides 48 no. units and ranges in height from 5 to 6 storeys (including lower ground floor). Block J provides 62 no. units and ranges in height from 5 to 6 storeys (including lower ground floor).

In addition to residential units, the proposed development also provides a retail unit and a creche. The convenience retail unit, measuring 356.5 sqm, and the creche, measuring 336.8 sqm, is located on the ground floor of Block CD.

The proposed site outline and plan can be seen in Figures 1-3. The proposed elevations for the development are seen in Figure 5-12.

Site Context

The site is on Brennanstown Road, Dublin 18. It is bounded to the north by Brennanstown Road, to the south by Carrickmines Stream (Ticknick Stream) & Luas Line and to the west by Brennanstown Vale. The proposed development is approximately 4.85 km from Dún Laoghaire Harbour, 500m east of the Carrickmines Luas station and 3.24 km west from the coastline. Refer to Figure 1 for the location of the proposed development.

The Carrickmines Stream flows from west to east adjacent to the southern boundary of the proposed development and then discharges into Loughlin town River to the southeast of the site and into Dublin Bay. The site, which is currently greenfield, forms part of the Carrickmines Stream Catchment area. It is proposed that the development will discharge surface water runoff at a rate (equivalent of the existing agricultural runoff) into the Carrickmines Stream.

The total site area is approximately 3.81 hectares. There are two existing houses on the site which will be demolished as part of the development and the Barrington Tower which will be retained. The remainder of the site is currently greenfield. The site falls from northwest to southeast with the highest ground level of 80.00m OD Malin and the lowest ground level of 63.00m OD Malin.

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 was originally set at a radius of 2km for non-linear projects (IEA, 1995).

However, drainage from site, both surface water and foul, would be seen as the external output from the site during construction and operation that could have potential for effects on European sites. For clarity, information in relation to drainage during construction and operation is provided. In summary, surface water drainage during construction would discharge be to the Carrickmines Stream (Ticknick Stream) which leads to the marine environment within Killiney Bay, proximate to Rockabill to Dalkey SAC. Foul water will require new connections into the public infrastructure network and will enter the public network with treatment at Shanganagh WwTP. Significant reprofiling works are proposed on site and there is potential for contaminated runoff to enter the Carrickmines Stream (Ticknick Stream) with potential impacts on the watercourse and the marine environment in Killiney Bay.

Landscape of the Proposed Project

A Landscape Design Statement was composed by Murray & Associates, in relation to the landscape design masterplan of the proposed project, the report states that: '*The landscape design proposals aim to maximise the natural characteristics of this south-facing site and combine the views, heritage and design principles to create a place with a unique sense of place.* Barrington Tower is at the centre of the primary public open space and acts as a focal element, around which the scheme orbits. The site also provides walking and cycling links for the general public to the Luas stop at Brennanstown. Despite the steep terrain, accessible routes have been provided, with more direct stepped routes where necessary to address desire lines.'

In relation to proposed measures in relation to biodiversity for the development site, the report states the following:

'1. Bat House: In order to protect bats that might be disturbed during construction, including conservation works to the tower, a bat house is proposed to be constructed well in advance of any construction. It has been sited on the southern side of the site, close to the woodland and Ticknick Stream, the primary feeding grounds

for bats in the area. For the longer term conservation of these animals, several strategies are integrated into the landscape design:

2. Dark corridor: Planting to protect and maintain as dark as possible for commuting bats along existing boundary treelines/hedgelines, with new plants;

3. Tree Planting to control light spill from apartments, maintaining a dark corridor along the boundary for bats;

• Populus nigra 'Italica'

• Carpinus betulus 'Frans Fontaine'

4. Planting with bat-friendly plant mix which will encourage insects, upon which bats feed including Willow (Salix spp.), Guelder Rose (Viburnum opulus), Holly (Ilex aquifolium), Silver Birch (Betula pendula), Alder (Alnus glutinosa), Hawthorn (Crataegus monogyna) and Wild Rose (Rosa canina). At ground level flowering native species, such as, Primrose. Bluebell, Wild strawberry, etc., will also support insect life.

5. Lighting in Open Space

Bollard lighting (1m height) in main open space and all light fittings will have warm, bat-friendly colour temperature – max. 2700K (warm white) and 2200K along the western boundary, where height is also limited to 4m.'

Moreover, the Design Statement states, in relation to further biodiversity measures to be taken:

'Other measures included for Biodiversity are as follows, following the recommendations of the project Ecologists, Alternar:

Bird nesting boxes Insect 'hotels' i.e. log piles, brushwood piles from site in Biodiverse Green Roof (see indicative details below) Wildflower meadow in all areas except kickabout spaces and within 1m of paths; seed mix will be selected in collaboration with Amenity Grass areas to follow a 6-Week Mowing Regime; i.e. the grass will be cut at minimum 6-week intervals, to ensure that the grass areas have maximum possible ecological and biodiversity benefit, allowing the grass and ground flora to develop, whilst also being compatible with the kickabout and play functions.'

Furthermore, the report states that:

'Biodiverse Green Roof

The green roof system proposed allows for enhanced biodiversity with native Sedum plants in combination with select wildflowers. This results in a more place-specific green roof and enhances the biodiversity value significantly over a typical green roof, with non-native Sedum only. In addition, elements such as micro-mounds for mining pollinator insects and log piles, etc. can be introduced.' The proposed Landscape Masterplan is seen in Figure 13.

Drainage

An Engineering Assessment Report was composed by Waterman Moylan Engineering Consultants. The report outlines the proposed drainage network systems for the proposed development.

Foul Water Drainage

In relation to the receiving environment for the proposed development, the report states the following: 'There is an existing 225 mm Ø foul sewer to the south of the site running along the north of the Luas line. This foul water pipe discharges to the 900 mm Ø combined trunk sewer approximately 120m to the east of site. See Appendix A for Irish Water Record Maps. A Pre-Connection Enquiry form was submitted to Irish Water on January 2022 which outlined the proposals for the drainage of wastewater from the development. Irish Water responded with the Confirmation of Feasibility (COF) on 4thFebruary2022, with reference no. CDS2000317, stating that an upgrade of the existing 225mmØand 300mmØgravity sewer (from the development connection point up to the 900mm trunk sewer) may be required. Any upgrade works will be confirmed following future surveys to be undertaken to establish the integrity and capacity of the existing foul sewer line. Please refer to Appendix B for the Irish Water Confirmation of Feasibility.'

In relation to the proposed foul drainage for the proposed development, the report states that: '*It is proposed to drain the site to this existing 900mm trunk sewer network at the southern corner of the subject lands.*'

The effluent ultimately discharges into the Shanganagh Wastewater Treatment Plant (WwTP). Based on the 2020 Annual Environmental Report this WWTP is operating within compliance and has capacity (56,665 PE remaining) for the proposed development². The proposed drainage layout is seen in Figure 14.

² <u>https://www.water.ie/__uuid/cfbdb5b6-84b3-42bf-8f82-09df97f80944/d0038-02_2020_aer.pdf</u>



Figure 1. Site location map



Figure 2. Proposed site outline













Figure 8. Proposed elevations (Block F)



Figure 9. Proposed elevations (Block G)



Figure 10. Proposed elevations (Block H)

86775 87375 87375 86775 FFL 86.075 Block 1 - Root 83875 83875 FFL 82 775 River I. FEI M TH H HJ FFL 79.475 Title Block 1 - FEL03 FFL 76.325 Block I - FFL02 H FFL 73.175 THE Block I - FFL01 FFL 69.850 1 Block I - FFL00 FFL 66.175 Block I - FFL-01 Proposed East Elevation - Block I Proposed South Elevation - Block I 1 1:200 2 1:200 87375 87375 86775 86775 FFL 86.075 Block I - Roof H FFL 82.775 H III Block L. FEL04 ~ H H FFL 79.475 m Ricch I. EEL02 H H HIT Block I - FFL02 11/8 HII H H PFL 73.175 Block I - FFL01 Block I - FFL00 58000 66175 FFL 66.175 Block I - FFL-01 66175 3 Proposed West Elevation - Block I 1:200 Proposed North Elevation - Block I 1:200 4



FFL 86.075 Block L Boot

FFL 82.775

FFL 79.475

FFL 76.325

Direck L. EEL 0.4

Block I - EEL03

Block I - FFL02

FFL 73.175 Block I - FFL01

FFL 69.850 Block I - FFL00

FFL 66.175 Block I - FFL-01

FFL 86.075 Block I - Roof

FFL 82.775 Block I - FFL04

FFL 79.475 Block I - FFL03

FFL 76.325 Block I - FFL02

FFL 73,175 Block I - FFL01

FFL 69.850 Block I - FFL00

FFL 66.175 Block I - FFL-01

1

Figure 11. Proposed elevations (Block I)



Figure 12. Proposed elevations (Block J)



Surface Water Drainage

In relation to the surface water drainage the report states the following: '*The existing site drains surface water, unrestricted to Carrickmines Stream to the south of the site. It is proposed that the development will attenuate the surface water on-site before discharging at the existing greenfield rate into the Carrickmines Stream.*

The existing run-off rate for the existing hardstanding areas on site was estimated for the 1 in 1, 1 in 30 and 1 in 100 year return periods using the modified rational method:

Q = 2.78 x A x I (where A is the total pre-development area being drained in Hectares and I is the rainfall intensity in mm/h as estimated for the 60min storm from Flow using Met Eireann Data)

A = 0.057ha (current hardstanding as measured from topographical survey)

I –1 year return period= 11.362mm/h30 year return period = 24.804mm/h100 year return period =38.681mm/h. The greenfield run-off rates for the greenfield area of the site have been calculated in accordance with the Institute of Hydrology report No 124 "Flood Estimation for Small Catchments", using the UK SUDS Website for the remaining area of the site which is currently a greenfield and equates to 3.753ha.'

Flood Risk Assessment

A Flood Risk Assessment Report was composed by Waterman Moylan Engineering Consultants, which investigates the potential for flooding at the proposed development site. In conclusion the report states that: '*The subject site has been analysed for risks from tidal flooding from the Irish Sea, fluvial flooding from the Carrickmines Stream, pluvial flooding, groundwater and drainage system failures due to human error or mechanical system failure. Considering the assessment of the likelihood, consequence, risk and residual risk of the development for various modes of flooding, the proposed development is considered acceptable in terms of flood risk.' The following tables were also taken from the Flood Risk Assessment Report which summarises the flood risk for the proposed site. Table 5-1: 3x3 Matrix Flooding Risk Matrix*

		CONSEQUENCES						
pod		LOW	MODERATE	HIGH				
ikeliho	LOW	Extremely Low Risk	Low Risk	Moderate Risk				
	MODERATE	Low Risk	Moderate Risk	High Risk				
	HIGH	Moderate Risk	High Risk	Extremely High Risk				

Source	Pathway	Receptor	Likeli- hood	Consequence	Risk	Mitigation Measure	Residual Risk
Tidal	Irish Sea Coastal zone	Proposed Development	Extremely low	High. Flooding of building and the basements	n/a	None required	Extremely Low
Fluvial	Carrickmines River	Proposed Development	Moderate	Moderate. Water ingress into the building and basements	Low	None required	Extremely Low
Pluvial	Private and Public Drainage Network	Proposed Development	High	High. Flooding of the building and basements	Extremely High	Appropriate drainage design, over land flood routing and setting of appropriate floor levels	Low
Ground Water	Groundwater present seeping through basement walls and floor	Proposed Development	High	Moderate. Ground water ingress into basement	Moderate	Adequately waterproofing of basement structure if found necessary	Low
Human / Mecha nical Error	Drainage network	Proposed Development	High	Moderate. Water ingress into the building and basements	Moderate	Maintenance strategy	Low

rubic o 2. outlinding of the ribour tions noth ribouring rype	Table	5-2:	Summary	of the	Flood	Risks	from	Flooding	Type
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Figure 14. Proposed Drainage Layout

Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) has been prepared by AWN Consulting (AWN) on behalf of Cairn Homes Property Limited.

"The construction works associated with the development will be undertaken in a single phase. Blocks A-D will be completed first (weeks 10-60), followed by Blocks E,F and G (weeks 15-145). Blocks H, I and J will be completed last (weeks 45-170). The construction programme is intended to commence in the fourth quarter of 2022 / first quarter of 2023, with a 39-month programme.

Subject to detailed planning at the construction stage, it is currently envisaged that the construction compound, offices, staff parking, waste storage and collection area and storage areas will be located at the locations in Figure 3.1, and in Appendix 1 of this report."

Demolition Phase

"The development will include the demolition of Winterbrook, an existing dwelling and partial demolition of the modern extension dwelling to Barrington Tower. The protected structure 'Barrington Tower' will be retained, restored and reused.

The demolition shall be in full compliance with BS 6187 "Demolition in Buildings" and all measure necessary will be taken to protect the adjoining buildings from damage and persons from injury. Prior to the demolition works a Construction and Demolition Waste Resource Management Plan in accordance with The Environmental Protection Agency (EPA) of Ireland issued guidelines the 'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects' (2021) will be updated and prepared by the appointed demolition contractor to include any subsequent planning conditions.

The demolition will commence with the removal of any hazardous materials by an appropriately qualified contractor for disposal at an appropriate licensed waste collection facility. All non-structural items will then be removed segregated for re-use or re-cycling where possible. The remainder of the building structure will be removed in an approved sequence outlined in a Method Statement prepared by the yet to be selected demolition contractor's structural engineer."

Excavation & Construction Phase

"The project excavations will involve excavations for new foundations, site levelling and excavations for roads and services. The Resource and Waste Management Plan (RWMP) prepared by AWN (NK/217501.0623WMR02) for the development will be updated by the main contractor and will be in compliance with the requirements of the 'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects' 1 published by the Environmental Protection Agency (November 2021), which will identify and categorise any waste arising from the development.

The plan contains the proposals for the minimisation, re-use and re-cycling of site generated waste. As part of this plan separate storage areas will be designated on the site for various types of material in order to maximise the re-use and re-cycling potential. Procedure will also be put in place to ensure that all sub-contractors fulfil the requirements of the Waste Management Plan. The project involves the construction 534 no. residential units and residential amenities along with all associated site works. The works will include:

• Site set up, welfare facilities and compound establishment, decommissioning and movement of site compound and facilities as needed.

• Set up of hoarding around compound and the site boundary.

• Erection of safety signage to all areas and implementation of traffic/pedestrian management plan."

Identification of Relevant European sites (Natura 2000 sites)

The proposed development is not within a European conservation site. Special Areas of Conservation and Special Protected Areas within 15km of the proposed development are seen in Figures 15 and 16

respectively. South Dublin Bay SAC and South Dublin Bay and River Tolka Estuary SPA are the nearest European sites to the proposed development (4.5 km and 4.6 km respectively). Watercourse and European sites are seen in Figures 17-20. Details of international conservation sites within 15km of the proposed site are seen in Table 3 and 4.

The main watercourse proximate to the site is the Carrickmines Stream, a tributary to the Shanganagh River, which flows in an easterly direction to the south of the proposed development boundary. Surface water runoff from the proposed development will discharge at the existing greenfield rate into the Carrickmines Stream. The Carrickmines Stream outfalls to the Irish Sea approximately 1.4 km from Rockabill to Dalkey Island SAC. Given that the features of interest of this SAC are Reefs [1170] and Harbour Porpoise (*Phocoena phocoena*) [1351], there is potential for the proposed development to have a significant effect on the Conservation Objectives and Features of Interest of this SAC. Depending on rainfall, weather conditions and tidal movements, pollutants, dust or silt laden run off from the proposed development could enter the watercourse (the Carrickmines Stream) and travel downstream, discharging to the marine environment proximate to the Rockabill to Dalkey Island SAC. Foul water from the proposed development site will ultimately discharge into the Shanganagh WwTP. Based on the 2020 Annual Environmental Report this WWTP is operating within compliance. The Organic Capacity (PE) remaining in 2020 was reported to be 56,665³. After being treated, the foul water will be discharged to the Irish Sea⁴. Screening of European sites with potential for direct or indirect pathways or those within 15km, their conservation objectives, features of interest and potential significance of impacts from the proposed development on the European site and their features of interest are seen in Table 3 and 4. Table 3. Initial screening of European sites within 15km and European sites within 15km with potential of hydrological connection to the proposed development.

European Site	Code	Distance	Direct Hydrological / Biodiversity Connection
Special Areas of Conservation	•		
South Dublin Bay SAC	IE000210	4.5 km	No
Rockabill to Dalkey Island SAC	IE003000	4.7 km	Yes
Ballyman Glen SAC	IE000713	5.0 km	No
Knocksink Wood SAC	IE001209	5.3 km	No
Wicklow Mountains SAC	IE002122	7.2 km	No
Bray Head SAC	IE000714	7.9 km	No
North Dublin Bay SAC	IE000206	10.0 km	No
Glen of the Downs SAC	IE000719	12.8 km	No
Glenasmole Valley SAC	IE001209	13.1 km	No
Howth Head SAC	IE000202	13.1 km	No
Special Protection Areas			
South Dublin Bay and River Tolka Estuary SPA	IE004024	4.6 km	No
Dalkey Islands SPA	IE004172	5.2 km	No
Wicklow Mountains SPA	IE004040	7.2 km	No
North Bull Island SPA	IE004006	10.0 km	No
Howth Head Coast SPA	IE004113	14.9 km	No

Table 2. Proximity to designated sites of conservat	on importance
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Table 3. European Sites Screened "In"/ "Out" for Natura Impact Statement

European Site Code	Name	Screened IN/OUT	Details/Reason	
Special Areas of Conservation				

³ https://www.water.ie/ uuid/cfbdb5b6-84b3-42bf-8f82-09df97f80944/d0038-02 2020 aer.pdf

⁴ 090151b280688cdc.pdf (epa.ie)

European Site Code	Name	Screened IN/OUT	Details/Reason
European Site Code IE003000	Name Rockabill to Dalkey Island SAC	Screened IN/OUT IN	Details/ReasonConservation ObjectivesThe 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.Features of Interest 1170 Reefs 1351 Harbour porpoise Phocoena phocoenaPotential Impact The proposed development site is located 4.7 km from Rockabill to Dalkey Island SAC (Figure 15). The proposed development will involve site clearance and reprofiling. The Carrickmines Stream/Ticknick Stream is at the lower end of the site and due to the extent of the site clearance and reprofiling and relatively steep slope towards the watercourse, in the absence of
			mitigation, there is potential surface water run off and/or pollution from the proposed development site to discharge to the Carrickmines Stream. This watercourse outfalls to the marine environment approximately 1.4 km from Rockabill to Dalkey Island SAC.
			In the absence of mitigation measures there is potential for pollutants, chemicals, dust or silt laden run off from the proposed development site to enter the watercourse via the surface water run off. Due to the proximity of the SAC to where the watercourse enters the marine environment and the potential for Harbour Porpoise to be in the vicinity of the watercouese where it enters
			the marine environment there is potential for a negative impact on the conservation objectives or features of interest of this SAC. Stage 2 AA (Natura Impact Statement) is Required.

European Sites Screened Out for Natura Impact Statement

European Site Code	Name	Screened IN/OUT	Details/Reason
Special Area	as of Conservatio	on	
IEO00210	South Dublin Bay SAC	Out	 Conservation Objectives To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC, which is defined by the following targets: The permanent habitat area is stable or increasing, subject to natural processes. Maintain the extent of the <i>Zostera</i> –dominated community, subject to natural processes. Conserve the high quality of the <i>Zostera</i> –dominated community, subject to natural processes Conserve the following community type in a natural condition: Fine sands with <i>Angulus tenuis</i> community complex. Features of Interest 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 development site is located within a suburban area 4.5 km from the South Dublin Bay SAC (Figure 15). There is no direct pathway from the proposed development site to this SAC. The development is proximate to the Carrickmines Stream (a tributary of the Shanganagh River). Surface water from the site will discharge to the Carrickmines Stream, before ultimately discharging to the marine environment. Foul water from the site will be discharged to the existing network and will be treated at the Shanganagh WwTP. Due to the distance (4.5 km), dilution settlement and mixing, in the absence of any measures on site, any silt or pollution that enters the marine environment would not be at levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site. No significant effects are likely.
IE000713	Ballyman Glen SAC	Out	 Conservation Objectives To maintain or restore the favourable conservation condition of Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. Features of Interest Petrifying springs with tufa formation (Cratoneurion) [7220]
			Alkaline fens [7230] Potential Impact

European Site Code	Name	Screened IN/OUT	Details/Reason
			The development is 5.0 km from the Ballyman Glen SAC. The development has no direct or indirect hydrological or other connection to this SAC (Figure 15). The proposed development would not impact on the features of interest or the conservation objectives of this SAC which is inland.
			No significant effects are likely.
IE001209	Knocksink Wood 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
			Features of Interest Petrifying springs with tufa formation (Cratoneurion) [7220] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno- Padion, Alnion incanae, Salicion albae) [91E0].
			Potential Impact The development is 5.3 km from the Knocksink Wood SAC (Figure 15). The development has no direct or indirect hydrological or other connection to this SAC. The proposed development would not impact on the features of interest or the conservation objectives of this SAC which is inland.
			No significant effects are likely.
IE002122	Wicklow Mountains 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.
			Features of Interest Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or Isoeto-Nanojuncetea [3130] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Apine and Boreal heaths [4060] Species-rich <i>Nardus</i> 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 (<i>Androsacetalia</i> <i>alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] <i>Lutra lutra</i> (Otter) [1355]
			Potential Impact The development site is located 7.2 km from the Wicklow Mountains SAC (Figure 15). The development does not have a direct or indirect connection or pathway to the SAC. The SAC is located inland. The proposed development would not impact on

European Site Code	Name	Screened IN/OUT	Details/Reason
			the features of interest or the conservation objectives of this SAC which is inland.
			No significant effects are likely.
IE000714	Bray Head	Out	Conservation Objectives
	SAC		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
			Features of Interest Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]
			Potential Impact The development site is in a rural area 7.9 km from the Bray Head SAC (Figure 15). There is no direct pathway from the proposed development site to this SAC. The development is proximate to the Carrickmines Stream (a tributary of the Shanganagh River). Surface water from the site will discharge to the Carrickmines Stream, before ultimately discharging to the marine environment. Foul water from the site will be discharged to the existing network and will be treated at the Shanganagh WwTP. Due to the distance (7.9 km), dilution settlement and mixing, in the absence of any measures on site, any silt or pollution that enters the marine environment would not be at levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. 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	Out	Conservation Objectives:
	Bay SAC		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.
			Features of Interest 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1395 Petalwort (<i>Petalophyllum ralfsii</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with <i>Ammophila</i> <i>arenaria</i> 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes) 2190 Humid dune slacks Potential Impacts

European Site Code	Name	Screened	Details/Reason
			The development site is located within a suburban area 11.7 km from this SAC (Figure 15). There is no direct pathway from the proposed development site to this SAC. The development is proximate to the Carrickmines Stream (a tributary of the Shanganagh River). Surface water from the site will discharge to the Carrickmines Stream, before ultimately discharging to the marine environment. Foul water from the site will be discharged to the existing network and will be treated at the Shanganagh WwTP. Due to the distance (11.7 km), dilution settlement and mixing, in the absence of any measures on site, any silt or pollution that enters the marine environment would not be at levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.
			No significant effects are likely.
IE000719	Glen of the Downs 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. Features of Interest (91A0) Old sessile oak woods with Ilex and Blechnum Potential Impact
			The development site is located 12.8 km from the Glen of the Downs SAC (Figure 15). The development does not have a direct or indirect connection or pathway to the SAC. The SAC is located inland and the feature of interest is a terrestrial habitat. The proposed development would not impact on the features of interest or the conservation objectives of this SAC. No significant effects are likely.
IE001209	Glenasmole	Out	Conservation Objectives
	Valley SAC		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(6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>)(6410) Molinia meadows on calcareous, peaty or clayey-silt- laden soils (<i>Molinion caeruleae</i>)(7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>)Potential ImpactThe development site is located 12.8 km from the Glenasmole Valley SAC (Figure 15). The development does not have a direct or indirect connection or pathway to the SAC. The proposed

European Site Code	Name	Screened IN/OUT	Details/Reason
			development would not impact on the features of interest or the conservation objectives of this SAC which is located inland.
			No significant effects are likely
IE0000202	Howth Head 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
			(1230) Vegetated sea cliffs of the Atlantic and Baltic coasts (4030) European dry heaths
			Potential Impact The development site is located within a suburban area 13.1 km from the Howth Head SAC (Figure 15). There is no direct pathway from the proposed development site to this SAC. The development is proximate to the Carrickmines Stream (a tributary of the Shanganagh River). Surface water from the site will discharge to the Carrickmines Stream, before ultimately discharging to the marine environment. Foul water from the site will be discharged to the existing network and will be treated at the Shanganagh WwTP. Due to the distance (13.1 km), dilution settlement and mixing, in the absence of any measures on site, any silt or pollution that enters the marine environment would not be at levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site. No significant effects are likely.
Special Prot	ection Areas	1	
IE004024	South Dublin Bay and River Tolka Estuary SPA	Out	Conservation Objectives To maintain or restore the favourable conservation condition of the bird species listed as Conservation Interests for this SPA.
	517		To maintain the favourable conservation condition of the wetland habitat in South Dublin Bay and River Tolka Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it.
			Features of Interest Branta bernicla hrota (Light-bellied Brent Goose) [A046] Haematopus ostralegus (Oystercatcher) [A130] Charadrius hiaticula (Ringed Plover) [A137] Pluvialis squatarola (Grey Plover) [A141] Calidris canutus (Knot) [A143) Calidris alba (Sanderling) [A144] Calidris alpina (Dunlin) [A149]

European Site Code	Name	Screened IN/OUT	Details/Reason
			Limosa lapponica (Bar-tailed Godwit) [A157] Tringa totanus (Redshank) [A162] Chroicocephalus ridibundus (Black-headed Gull) [A179] Sterna dougallii (Roseate Tern) [A192] Sterna hirundo (Common Tern) [A193] Sterna paradisaea (Arctic Tern) [A194] Wetland and Waterbirds [A999]
			Potential Impact The development site is located 4.6 km from the South Dublin Bay and River Tolka Estuary SPA (Figure 16). Disturbance and noise from the development would be localised to the immediate environs. This SPA is coastal in nature and its features of interest are terrestrial habitats. There is no direct pathway from the proposed development site to this SPA. The development is proximate to the Carrickmines Stream (a tributary of the Shanganagh River). Surface water from the site will discharge to the Carrickmines Stream, before ultimately discharging to the marine environment. Foul water from the site will be discharged to the existing network and will be treated at the Shanganagh WwTP. The proposed development site consists of treelines, scrub and unmanaged areas of grassland and these habitats would not form <i>ex-situ</i> foraging habitats for wintering birds. Due to the distance (4.6 km), dilution settlement and mixing, in the absence of any measures on site, any silt or pollution that enters the marine environment would not be at levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.
IF004172	Dalkey	Out	Conservation Objectives
120071/2	Islands SPA	Jul	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.
			Features of Interest Sterna dougallii (Roseate Tern) [A192] Sterna hirundo (Common Tern) [A193] Sterna paradisaea (Arctic Tern) [A194]
			Potential Impact The development site is located 5.2 km from the Dalkey Islands SPA (Figure 16). Disturbance and noise from the development would be localised to the immediate environs of the site and would not be at levels to reach this SPA. This SPA is coastal in nature and its features of interest are terrestrial habitats. There is no direct pathway from the proposed development site to this SPA. The development is proximate to the Carrickmines Stream (a tributary of the Shanganagh River). Surface water from the site will discharge to the Carrickmines Stream, before ultimately discharging to the marine environment. Foul water from the site

European Site Code	Name	Screened IN/OUT	Details/Reason
			will be discharged to the existing network and will be treated at the Shanganagh WwTP. Due to the distance (5.2 km), dilution settlement and mixing, in the absence of any measures on site, any silt or pollution that enters the marine environment would not be at levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.
15004040	Wicklow	O ++	Concernation Objectives
12004040	Mountains SPA	out	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.
			Features of Interest Falco colombarius (Merlin) [A098] Falco peregrinus (Peregrine) [A103]
			Potential Impact The site is 7.2 km from the Wicklow Mountains SPA (Figure 16). The development site is not and important foraging or roosting area for these species. There is no direct or indirect pathway to this European site from the proposed development. The construction or operation of the proposed development will not have a significant effect on this SPA which is located inland.
			No significant effects are likely.
IE0004006	North Bull Island SPA	Out	Conservation Objective: To maintain or restore the favourable conservation conditions of the species and/or habitats listed as Qualifying Interests for this SPA.
			Features of Interest A046 Light-bellied Brent Goose (Branta bernicla hrota) A048 Shelduck (Tadorna tadorna) A052 Teal (Anas crecca) A054 Pintail (Anas acuta) A056 Shoveler (Anas clypeata) A130 Oystercatcher (Haematopus ostralegus) A140 Golden Plover (Pluvialis apricaria) A141 Grey Plover (Pluvialis squatarola) A143 Knot (Calidris canutus) A144 Sanderling (Calidris alba) A149 Dunlin (Calidris alpina alpine) A156 Black-tailed Godwit (Limosa limosa) A157 Bar-tailed Godwit (Limosa lapponica) A160 Curlew (Numenius arquata) A162 Redshank (Tringa tetanus) A179 Black-headed Gull (Chroicocephalus ridibundus)

European Site Code	Name	Screened	Details/Reason
		117001	A999 Wetlands
			Potential Impact
			The proposed development site is located 10.0 km from the North
			Bull Island SPA (Figure 16). This SPA is coastal in nature and its
			features of interest are terrestrial habitats. Disturbance and noise
			from the development would be localised to the immediate
			environs. This SPA is coastal in nature and its features of interest
			proposed development site to this SPA. The development is
			proximate to the Carrickmines Stream (a tributary of the
			Shanganagh River). Surface water from the site will discharge to
			the Carrickmines Stream, before ultimately discharging to the
			marine environment. Foul water from the site will be discharged
			to the existing network and will be treated at the Shanganagh
			WWIP. Due to the distance (10.0 km), dilution settlement and
			pollution that enters the marine environment would not be at
			levels that would significantly affect the European site. The
			proposed development site consists of treelines, scrub and
			unmanaged areas of grassland and these habitats would not form
			<i>ex-situ</i> foraging habitats for wintering birds. There is no direct or
			Indirect pathway to this site. The measures on site to comply with
			leads to the Shanganagh River are not necessary for the
			protection of this European site. No potential impact is foreseen.
			The construction and operation of the proposed development will
			not impact on the conservation interests of the site.
			No significant effects are likely.
IE004113	Howth Head	Out	Conservation Objective:
	Coast SPA		To maintain or restore the favourable conservation condition of
			the bird species listed as Special Conservation Interests for this
			SPA.
			Features of Interest
			A188 Kittiwake (Rissa tridactyla)
			Potential Impact
			The proposed development site is located 14.9 km from the North
			Bull Island SPA (Figure 16). This SPA is coastal in nature and its
			features of interest are terrestrial habitats. Disturbance and noise
			from the development would be localised to the immediate
			environs. This SPA is coastal in nature and its features of interest
			are terrestrial habitats. There is no direct pathway from the
			provide the carrickmines Stream (a tributary of the
			Shanganagh River). Surface water from the site will discharge to
			the Carrickmines Stream, before ultimately discharging to the
			marine environment. Foul water from the site will be discharged
			to the existing network and will be treated at the Shanganagh
			wwip. Due to the distance (14.9 km), dilution settlement and
			pollution that enters the marine environment would not be at

European Site Code	Name	Screened IN/OUT	Details/Reason
			levels that would significantly affect the European site. There is no direct or indirect pathway to this site. The measures on site to comply with Water Pollution Acts to ensure silt does not enter the stream that leads to the Shanganagh River are not necessary for the protection of this European site. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.



Figure 15. Special Areas of Conservation located within 15 km of the proposed development



Figure 16. Special Protection Areas within 15 km of the proposed development



Figure 17. Waterbodies proximate to the proposed development



Figure 18. Waterbodies and SACs within 5 km of the proposed development



Figure 19. Waterbodies and SACs within 15 km of the proposed development



Figure 20. Waterbodies and SPAs within 15 km of the proposed development

In-Combination Effects

To assess the cumulative impact of development within the wider area, a cut-off point of grants of permission within the last 5 years and a radius of a 1km has been included. The assessment also only includes new built development and does not include extensions to existing buildings. These have been identified from a desk-top review of the Dun Laoghaire Rathdown planning history portal. The below review includes approved developments and also considers developments which are currently going through the planning process but are not yet approved. Brennanstown Wood Residential Development. There are two application sites along the Brennanstown Road that have been approved by An Bord Pleanála which are the most significant recent applications which will have the greatest cumulative impact when considered with the subject site.

ABP reference: ABP-30161418

Decision: Granted 31st August 2018

Viscount Securities were granted planning permission for a strategic housing development at Brennanstown Road, Dublin 18 for 136 number residential units, comprising of 98 number apartments and 38 number houses. A 195 square metre creche facility and play area is proposed on the lower ground floor of Block 1. The development includes 227 number car parking spaces at basement / lower ground floor and surface level.

Doyle's Nursery

ABP reference: ABP-305859-20 Decision: Granted 25th June 2020 Atlas GP limited were granted planning permission for the Demolition of 'Benoni' and extant single storage buildings, construction of 234 no. apartments, creche and associated site works.

Within the wider area there are several grants of permissions or sites which are currently going through the planning process. These sites, due to their distance from the subject site are noted but are not considered to have a significant cumulative impact when taken together with the subject site, as a result they have not been included in any of the EIAR chapters. Figure 3-4 demonstrates the 500m catchment area in which this review has been conducted.

Cherrywood SDZ

Development including approx. 8,700 homes including a minimum of 10% social housing units, spread over the new Town Centre and 3 smaller Village Centres with superior transport links including an enhanced bus service and 5 Luas stops throughout.

Following on from this creation of the SDZ area, multiple planning permissions have been granted permission within the area. This was subject of an independent SEA Environmental Report along with an AA Screening Report and includes a Cherrywood Biodiversity Plan for the area as a whole.

DLR reference: DZ19A/0863

Decision: Granted 14th Jan 2020

Permission for a residential development consisting of the construction of 342 new residential dwellings, comprising 189 no. apartments arranged in 4 blocks; 28 No. duplex units; 60 No. triplex units and 65 No. 4 bedroom houses together with a Childcare Facility and ancillary open space. The proposed development includes for all associated infrastructural works to include the part delivery of the Cherrywood SDZ Planning Scheme's Druid's Glen Distributor Road. The development will also include the construction of: ancillary waste storage facilities; The application site is located within the Cherrywood Strategic Development Zone.

DLR reference: DZ18A/0208

Decision: Granted 4th Feb 2020

Permission sought for a residential development consisting of the construction of 367 no. new residential dwellings, comprising 190 no. apartments arranged in 4 blocks, ranging in height between 4- to 5-storeys in height, 24 no. duplex units, 60 no. triplex units and 93 no. 4 bedroom houses, together with a Childcare Facility and ancillary open space. The proposed development includes for all associated infrastructural works to include the part delivery of the Cherrywood SDZ Planning Scheme's Druid's Glen Distributor Road.

DLR reference: DZ20A/0399

Decision: Granted 22nd Jan 2021

Residential development comprising of 136 no. dwellings (total gross floor area of c.15,910 sqm) in a mixture of houses, duplexes, and apartments.

DLR reference: DZ20A/0552

Decision: Granted 11th Mar 2021

The development proposed consists of 163no. Dwellings (total gross floor area of c.17,645 sqm) in a mixture of houses, duplexes and apartments. 97no. Houses accommodated in buildings ranging from 2 to 3 floors consisting, 36no. Apartments in a single 3 storey building. The provision of c.1616sqm of open space, including green infrastructure in the form of an ecological buffer zone at boundary with Lehaunstown Lane.

DLR reference: DZ21A/0334

Decision: At the time of writing this application had not been determined. (Decision due 7th April 2022) Residential development comprising of 482 no. dwellings in a mixture of houses, duplexes, and apartments.

DLR reference: DZ21A/0664

Decision: Granted 9th Sep 2021

The proposed residential development comprises 47 no. apartments in 1 no. 4 storey over basement apartment block. The provision of c. 110 sqm of communal amenity space provided adjacent to the proposed apartment block

DLR reference: DZ21A/1042

Decision: Granted 27th Jan 2022

The development proposed consists of 122no. residential dwellings in a mixture of houses, duplexes and apartments, in a range of buildings 2 to 3 storeys. Private communal amenity open space a 10m wide ecological buffer alongside Lehaunstown Lane; provision of internal road network including new road carriageways.

DLR reference: DZ21A/0699

Decision: Granted 23rd Sep 2021

The proposal is a minor amendment to development already permitted under Planning Permission Reg. Ref. DZ20A/0552.

DLR reference: DZ21A/1069

Decision: Granted 2nd Feb 2022 The proposed development consists of minor amendments to the development granted permission under Reg. Ref. DZ20A/0399.

DLR reference: DZ19A/0597

Decision: Granted 11th Mar 2020 The proposed development will comprise 184 dwellings and associated site and development works

DLR reference: DZ18A/1129

Decision: Granted 4th Feb 2019

Construction of an attenuation pond (detention basin) with associated outfall to Ticknick stream. Infilling of the existing temporary attenuation pond (north of Mercer Link Road, constructed as part of the Phase 1 Roads and Infrastructure works permitted under Reg. Ref. DZ15A/0758). Construction of a new stormwater outfall pipe from Beckett Park attenuation system to Ticknick stream

DLR reference: DZ15A/0758

Decision: Granted 16th Aug 2016

The proposed development will consist of Roads and infrastructure (phase 1) to form part of public road network providing access and services for the future development of the adjoining SDZ lands. The total road length proposed is c.5.4kms, of which c.4.1kms is new road and c.1.3kms relates to works to existing roads.

DLR reference: DZ16A/0585

Decision: Granted 26th Sep 2016 Permission for retention (temporary for 3 years) for park and ride facility previously granted permission under Reg. Ref. D10A/0164.

DLR reference: DZ17A/0114

Decision: Granted 8th Feb 2018 Permanent park and ride facility.

DLR reference: DZ19A/0683

Decision: 8th Nov 2019 Permission for retention (temporary for 3 years) for park and ride facility previously granted permission under Reg. Ref. D10A/0164.

Carrickmines Substation, Barrington Tower

DLR reference: D11A/0127 Decision: 12th Jan 2012 Retention permission is sought for an electrical substation & ESB room to serve the new Luas Green Line (Line B1) tramway extension comprising a single storey concrete structure approx area 218 sq.m and hard surfaced service compound all within a metal/part timber fence enclosure, surface water drainage and associated site works.

The Apple House, Holmwood

DLR reference: D18A/0508 Decision: 13th Feb 2019 Permission for the erection of a two storey four bedroom detached dwelling and associated on site works, including shared access with existing house and connections to existing services, together with a Childcare Facility.

Carricáil, Glenamuck Road North

DLR reference: D18A/1187 ABP reference: ABP-304995-19 Decision: Granted 8th Nov 2019 The development shall provide for the demolition of a two-storey dwelling on site and the construction of 30 no. residential units in the form of 1 no. 4 storey residential block.

5 Brennanstown Vale

DLR reference: D21A/1021 Decision: Granted 24th Feb 2022 Permission is sought for development of a single detached dwelling over 3 storeys including roof accommodation.

Glenheather

DLR reference: D17A/0859 ABP reference: ABP-301581-18 Decision: Granted 7th Dec 2018 Demolition of existing outhouses and domestic garage and site clearance. Removal of existing vehicular entrance and construction of new. Construction of 1 no. two-storey dwelling house with pitched roofs.

Amberwell, Brighton Road

DLR reference: D18A/0143 ABP reference: ABP-302060-18 Decision: Granted 26th Feb 2019 Permission is sought for the demolition of the existing dwelling (377 sq.m) and the provision of 4 No. three storey There are no planned expansions or increases to the proposed development and given the confines of the site and scale of the development, the potential for future expansion is limited. The potential for the apartments to expand or increase in scale is limited to the confines of the permission sought and new planning permission will be required for further extensions to the blocks. The potential for increased retail, commercial or community uses within the blocks would be subject to further planning permissions.

The projects outlined above in addition to the supporting ecological information have been assessed for in combination effects on Natura 2000 sites. No in combination effects would be foreseen. The proposed project will require mitigation measures for the protection of the Carrickmines Stream and the Rockabill to Dalkey SAC. The developments outlined above would not be seemed to have an in-combination effect that could significantly effect European Sites. In particular, in relation to the Cherrywood SDZ AA Screening states that *"There are no elements of the draft Planning Scheme that could, on their own, lead to a risk of significant impacts on Natura 2000 site"* and that *"None of these Natura 2000 sites are deemed to be at risk of likely significant effects of implementing the draft Planning Scheme."* It is concluded that no significant effects on European sites will be seen as a result of the proposed development alone or combination with other projects.

No significant effects are likely from in combination effects

Appropriate Assessment Screening Conclusions

An initial screening of the proposed works, using the precautionary principle (without the use of any standard construction phase controls or mitigation measures) and the Source/Pathway/Receptor links between the proposed works and European sites with the potential to result in significant effects on the conservation objectives and features of interest of the European sites was carried out in Table 2. Based on best scientific knowledge and objective information and assessment, the possibility of significant effects caused by the proposed project was excluded for the following European sites within 15km in addition to sites beyond 15km with a direct/indirect pathway:

Special Areas of Conservation

- IE000210 South Dublin Bay SAC
- IE000713 Ballyman Glen SAC
- IE001209 Knocksink Wood SAC
- IE002122 Wicklow Mountains SAC
- IE000714 Bray Head SAC
- IE000206 North Dublin Bay SAC
- IE000719 Glen of the Downs SAC
- IE001209 Glenasmole Valley SAC
- IE0000202 Howth Head SAC

Special Protection Areas

- IE004024 South Dublin Bay and River Tolka Estuary SPA
- IE004172 Dalkey Islands SPA
- IE004040 Wicklow Mountains SPA
- IE004006 North Bull Island SPA
- IE004113 Howth Head Coast SPA

The project is limited in scale and extent. However, in the absence of mitigation measures, there is potential for surface water runoff and pollution to enter the marine environment via the Carrickmines Stream and impact on the features of interest of (IE003000) Rockabill to Dalkey Island SAC. A NIS is required due to potential significant impacts due to surface water runoff and pollution on Rockabill to Dalkey Island SAC because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures, that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

An NIS or Stage 2 Appropriate Assessment is not required for the effects of the project on all other listed Natura sites above because it can be excluded on the basis of the best objective scientific information following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the European Site/s.

An NIS is required given the potential for a significant effect on the Rockabill to Dalkey Island SAC due to the indirect pathway via the Carrickmines Stream (a tributary to the Shanganagh River) to the marine environment in Killiney Bay. In the absence of mitigation there is potential for significant effects on the features of interest of this SAC due to surface water and pollution impacts via the Carrickmines Stream.

A Natura Impact Statement is required for the proposed development.

Stage 2: Natura Impact Statement

A Natura Impact Statement (NIS) is required for Stage 2 of the Appropriate Assessment process but it is a matter for the competent authority (in this case the Board) to carry out a Stage 2 AA. In the case of the proposed development at Barrington Tower, Brennanstown Road, Dublin 18, acting on a strictly precautionary basis, an NIS is required in respect of the effects of the project on the Rockabill to Dalkey Island SAC (due to the potential for downstream impacts during construction and operation via the surface water run off), because it cannot be excluded on the basis of best objective scientific information, in the absence of control or mitigation measures, following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

A Stage 2 Appropriate Assessment or NIS is not required for the effects of the project on all other listed European sites within, and sites beyond, 15km because, it can be excluded, on the basis of the best objective scientific information following screening, that the plan or project, individually and/or in combination with other plans or projects, will have not a significant effect on the European Site/s.

In a strict application of the precautionary principle, it has been concluded that mitigation measures are required during construction to prevent significant effects on the conservation objectives of Rockabill to Dalkey Island SAC. Impacts are likely from the proposed works in the absence of mitigation measures, primarily as a result of direct hydrological connection from the proposed development site to the marine environment proximate to Rockabill to Dalkey Island SAC, via the surface water runoff which discharges to the Carrickmines Stream and ultimately the marine environment at Killiney Bay. As a result, there is potential for downstream impacts on this SAC from the project during site clearance, enabling, reprofiling, construction, landscaping and drainage works. There is potential for pollutants from the site to enter the watercourse and have negative impacts on the Conservation Objectives and Features of Interest of the Rockabill to Dalkey Island SAC. Foul water from the site will be treated at a Shanganagh Wastewater Treatment Plant before being discharged to the Irish Sea.

The NIS evaluates the potential for direct, indirect effects, alone or in combination with other plans and projects having taken into account the use of mitigation measures. A further review of the conservation objectives and features of interest is necessary to determine if significant effects are likely to impact the Rockabill to Dalkey Island SAC.

Rockabill to Dalkey Island SAC (Site code:003000)

Rockabill to Dalkey Island SAC is located 4.7 km from the planning boundary. There is potential for the site to be hydrologically connected to this SAC via the Carrickmines Stream which flows 39 m in an easterly direction to the south of the site boundary. The stream outfalls to the Irish Sea approximately 1.4 km from the Rockabill to Dalkey Island SAC. Depending on rainfall, general weather conditions and tidal movements, there is potential for pollutants, silt laden run off or dust, from the development to enter the watercourse and flow downstream to the marine environment, potentially having a significant impact on the Conservation Objectives or Features of Interest of this SAC.

Site-specific data

As outlined in the Rockabill to Dalkey Island Site Synposis (NPWS, Version date 10.02.2014):

'This site includes a range of dynamic inshore and coastal waters in the western Irish Sea. These include sandy and muddy seabed, reefs, sandbanks and islands. This site extends southwards, in a strip approximately 7 km wide and 40 km in length, from Rockabill, running adjacent to Howth Head, and crosses Dublin Bay to Frazer Bank in south Co. Dublin. The site encompasses Dalkey, Muglins and Rockabill islands.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[1170] Reefs

[1351] Harbour Porpoise (Phocoena phocoena)

Reef habitat is uncommon along the eastern seaboard of Ireland due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. A detailed survey of selected suitable islands has shown areas with typical biodiversity for this habitat both intertidally and subtidally. Species recorded in the intertidal included Fucus spiralis, Fucus serratus, Pelvetia canaliculata, Ascophyllum nodosum, Semibalanus balanoides and Necora puber. Subtidally, a wide range of species include Laminaria hyperborea, Flustra folicacea, Alaria esculenta, Halidrys siliquosa, Pomatocereos triqueter, Alcyonium digitatum, Metridium senile, Caryophyllia smithii, Tubularia indivisa, Mytilus edulis, Gibbula umbilcalis, Asterias rubens, and Echinus esculentus. These reefs are subject to strong tidal currents with an abundant supply of suspended matter resulting in good representation of filter feeding fauna such as sponges, anemones and echinoderms.

The area selected for designation represents a key habitat for the Annex II species Harbour Porpoise within the Irish Sea. Population survey data show that porpoise occurrence within the site boundary meets suitable reference values for other designated sites in Ireland. The species occurs year-round within the site and comparatively high group sizes have been recorded. Porpoises with young (i.e. calves) are observed at favourable, typical reference values for the species. Casual and effort-related sighting rates from coastal observation stations are significant for the east coast of Ireland and the latter appear to be relatively stable across all seasons. The selected site contains a wide array of habitats believed to be important for Harbour Porpoise including inshore shallow sand and mudbanks and rocky reefs scoured by strong current flow. The site also supports Common Seal and Grey Seal, Version date: 10.02.2014 2 of 2 003000_Rev13.Doc for which terrestrial haul-out sites occur in immediate proximity to the site. Bottlenosed Dolphins has also occasionally been recorded in the area. A number of other marine mammals have been recorded in this area including Minke, Fin and Killer Whales and Risso's and Common Dolphins.

The coastal environment of Co. Dublin is a very significant resource to birds with some nationally and internationally important populations. Of particular note in this site are the large number of terns (Arctic, Common and Roseate) known to use Dalkey Island as a staging area (approx. 2,000) after breeding. Other seabirds commonly seen include Kittiwake, Razorbill, Guillemot, Puffin, Fulmar, Shag, Cormorant, Manx Shearwater, Gannet and gulls.

This site is of conservation importance for reefs, listed on Annex I, and Harbour Porpoise, listed on Annex II, of the E.U. Habitats Directive.'

The Qualifying Interests (QI) (Features of Interest) and the National Conservation status of the QI for Rockabill to Dalkey Island SAC are seen in Table 4.

Table 4. Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for Rockabill to Dalkey Island SAC.

Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site				
integrity for	relevant European sites			
European	Qualifying Interests	Current		
Site Name		Conservation		
& Code		Status &		
		Trend		
Rockabill	[1170] Reefs	Inadequate		
to Dalkey	[1351] Harbour porpoise <i>Phocoena phocoena</i>	Favourable		
Island SAC				
[IE003000]				

The Conservation Objectives and overall status of species and habitats in Rockabill to Dalkey Islands are as follows⁵⁶:

'Objective: To maintain the favourable conservation condition of Reefs in Rockabill to Dalkey Island SAC, which is defined by the following list of attributes and targets.

Target 1: The permanent area is stable or increasing, subject to natural processes.

- The area of this habitat represents the minimum estimated area of reef at this site and underestimates the actual area due to the presence of vertical rock wall and steeply sloping rock within the reef habitat.
- This target refers to activities or operations that propose to permanently remove habitat from the site, thereby reducing the permanent amount of habitat area. It does not refer to long or short term disturbance of the biology of a site.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 2: The distribution of reefs is stable or increasing, subject to natural processes.

- The likely distribution of reef habitat in this SAC is indicated in figure 1.
- This target refers to activities or operations that propose to permanently remove reef habitat, thus reducing the range over which this habitat occurs within the site. It does not refer to long or short term disturbance of the biology of reef habitats.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 3: Conserve the following community types in a natural condition: Intertidal reef community complex and Subtidal reef community complex

- A semi-quantitative description of the communities has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 2.
- The estimated areas of the communities within the Reefs habitat given below are based on spatial interpolation and therefore should be considered indicative. In addition, as this habitat contains areas of vertical rock wall and steeply sloping rock, the mapped community extents will be underestimated: Intertidal reef community complex 10ha Subtidal reef community complex 172ha
- This target relates to the structure and function of the reef and therefore it is of relevance to those activities that may cause disturbance to the ecology of the habitat.
- Significant continuous or ongoing disturbance of communities should not exceed an approximate area of 15% of the interpolated area of each community type, at which point an inter-Departmental management review is recommended prior to further licensing of such activities.
- Proposed activities or operations that cause significant disturbance to communities but may not necessarily represent a continuous or ongoing source of disturbance over time and space may be assessed in a contextspecific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site

Objective: To maintain the favourable conservation condition of harbour porpoise in Rockabill to Dalkey Island SAC, which is defined by the following list of attributes and targets.

Target 1: Species range within the site should not be restricted by artificial barriers to site use.

⁵ NPWS (2013) Conservation Objectives Supporting Document -Rockabill to Dalkey Island SAC (Site code: 3000) Version 1 National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

⁶ NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

- This target may be considered relevant to proposed activities or operations that will result in the permanent exclusion of harbour porpoise from part of its range within the site, or will permanently prevent access for the species to suitable habitat therein.
- It does not refer to short-term or temporary restriction of access or range.
- Early consultation or scoping with the Department in advance of formal application is advisable for proposals that are likely to result in permanent exclusion.

Target 2: Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site.

- Proposed activities or operations should not introduce man-made energy (e.g. aerial or underwater noise, light or thermal energy) at levels that could result in a significant negative impact on individuals and/or the community of harbour porpoise within the site. This refers to the aquatic habitats used by the species in addition to important natural behaviours during the species annual cycle.
- This target also relates to proposed activities or operations that may result in the deterioration of key resources (e.g. water quality, feeding, etc) upon which harbour porpoises depend. In the absence of complete knowledge on the species ecological requirements in this site, such considerations should be assessed where appropriate on a case-by-case basis.
- Proposed activities or operations should not cause death or injury to individuals to an extent that may ultimately affect the harbour porpoise community at the site.'

Analysis of the Potential Impacts

This section 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) and the European sites downstream of the proposed development. This section provides a description of the potential impacts that the proposed development may have on biodiversity in the absence of mitigation. Potential impacts on Natura 2000 sites would be via the hydrological pathway. The proposed development will discharge surface water run off to the Carrickmines Stream (a tributary) to the Shanganagh River, which outfalls to the marine environment.

Construction Impacts

The construction of the proposed development would impact on the existing ecology of the site, the surrounding area and downstream of the proposed works. The proposed development involves the ground clearance, reprofiling, groundworks and construction, have potential to create runoff and dust, impacts that could impact the Carrickmines Stream. with potential for downstream impacts on the marine environment and Rockabill to Dalkey SAC. There is potential for significant effects on the qualifying interests of the designated site in the absence of mitigation measures. Construction phase mitigation measures are required on site in relation to the protection of the water quality entering the watercourses. There is potential for silt laden runoff and contamination to enter the watercourse with potential for downstream impacts on the Rockabill to Dalkey Island SAC, as the watercourse outfalls to the marine environment approximately 1.4 km from this SAC.

Operational Impacts

Once the proposed development is complete and in the operational phase, the surface water run off will discharge to the Carrickmines Stream, after on site attenuation and foul water from the site will be discharged to Shanganagh WwTP where it will be treated at discharged to the Irish Sea. There will be no impacts from the proposed development during the operational phase.

Designated European Sites.

The proposed development is not within a designated conservation site. It should be noted that the Carrickmines Stream flows in an easterly direction approximately 39 m from the southern boundary of the development. This stream is the receiving environment for the surface water run off from the site, which outfalls to the marine environment approximately 1.4 km from the Rockabill to Dalkey Island SAC.

Table 9. Potenti	al impacts on European sites	
Potential for	adverse effects on the quali	fying interests and conservation objectives of European sites
European Site	Qualifying Interests	Potential for Adverse Effects
Rockabill to	[1170] Reefs	Works will occur on site proximate to the Carrickmines
Dalkey Island	[1351] Harbour Porpoise	Stream. This stream is also the receiving environment for the
SAC	(Phocoena phocoena)	surface water run off from the proposed development. The
(IE003000)		stream then outfalls to the marine environment
		approximately 1.4 km from the Rockabill to Dalkey Island SAC.
		Site clearance and reprofiling works are proposed on a slope
		leading to the watercourse. In the absence of mitigation silt,
		pollution would enter the watercourse. The use of plant and
		machinery, as well as the associated temporary storage of
		construction materials, oils, fuels and chemicals could lead to
		pollution on site or in adjacent watercourses. The storage of
		topsoil or works in the vicinity of the watercourse onsite could
		lead to dust, soil or silt laden runoff entering the adjacent
		watercourse.
		Without the presence of mitigation measures there is a
		potential for impacts on Harbour Porpoise and reef within the
		marine environment, if significant quantities of pollution or
		silt were introduced into the watercourse or allowed to travel
		downstream to the European site. Despite the distance from
		the proposed works to the marine environment where the
		features of interest are located, it is considered by the sloping
		nature of the site significant quantities of silt or pollution
		could enter the Carrickmines Stream in the absence of
		mitigation. Silt or pollution could impact if significant levels
		enter the watercourse and Harbour porpoise are present in
		the vicinity of where the watercourse enters the marine
		environment in Killiney Bay. In addition, if significant
		quantities of silt entered the marine environment
		sedimentation of the Reef habitats could potentially occur.
		However, given the intervening distance of 1.4km between
		where the watercourse enters the marine environment and
		the SAC, it would be considered that due to dilution mixing
		that the residual impact would be considered slight, but not
		significant.
		ine mitigation measures outlined below will ensure that no
		silt or pollution enters watercourses or is allowed to travel
		downstream of the proposed works from the site clearance to
		the construction or operation phases of the proposed project.

Table 10. Mitig	ation Measures.	
Sensitive	Potential Impacts	Designed-in Mitigation
Receptors		
Rockabill to	Negative impacts	A CEMP was been prepared by AWN Consulting (AWN) on behalf of Cairn Homes Property Limited. The CEMP outlines the following
Dalkey Island	on Harbour	mitigation that will prevent adverse effects on the integrity the conservation objectives of Rockabill to Dalkey SAC:
SAC	Porpoise and Reef	"Surface Water Management
(IE003000)	through the	Run-off into excavations/earthworks cannot be prevented entirely and is largely a function of prevailing weather conditions.
	introduction of silt	Care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main
	and/or pollution via	excavation site which limits the potential for any offsite impacts. All run-off will be prevented from directly entering into any water
	the direct pathway	courses as no construction will be undertaken directly adjacent to open water.
	of the Carrick	No significant dewatering will be required during the construction phase which would result in the localised lowering of the water
	Mines Stream.	table. There may be localised pumping of surface run-off from the excavations during and after heavy rainfall events to ensure that the
		excavation is kept relatively dry.
		The following measures will be put in place during the construction phase to ensure protection of surface waterbodies. Construction
		works are informed by best practice guidance from inland Fisheries Ireland on the prevention of pollution during development
		projects: Control of Water Dallution from construction Sites, Cuidence for consultants and contractors (CE22), and
		Control of Water Pollution from construction Sites, Guidance for consultants and contractors (C532); and Cuidalines on Protection of Sicharing During Construction Marketin and Adjacent to Materia (2016)
		 Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016). Environmental Coord Prostice on Site (2nd edition) (CCO2).
		• Environmental Good Practice on Site (3rd edition) (C692).
		surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently
		the commencement of the construction works to collect surface water runoff by the site during construction
		It is envisaged that a number of geotextile lined settling basins and temporary mounding's and/or silt fences will be installed to ensure
		silts do not flow off site during the construction stage. This temporary surface water management facility will throttle runoff and allow
		suspended solids to be settled out and removed. All inlets to the settling basins will be 'ripranned' to prevent scour and erosion in the
		vicinity of the inlet
		Pollution Control
		Management of Suspended solids in run-off
		Any temporary storage of spoil, hardcore, crushed concrete or similar material will be stored as far as possible from any surface water
		drains and also stored in receptacles where possible. In order to minimise the risk of contamination, the stockpiled material will be
		removed off-site as soon as possible. Surface water drain gratings in areas near or close to where stockpiles are located will be covered
		by appropriate durable polyurethane covers or similar.
		There will be no direct pumping of silty water from the works to any watercourse. Sediment entrapment facilities will be installed to
		reduce sediment discharges to downstream properties and receiving waters. All run-off leaving a disturbed area should pass through a

Table 10. Miti	able 10. Mitigation Measures.				
Sensitive	Potential Impacts	Designed-in Mitigation			
Receptors					
		sediment entrapment facility before it exits the site and flows downstream such as straw bales, silt fencing, silt barriers and diversion dams. <i>Concrete Run-off</i> No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within 10 meters of an existing surface water drainage point. Wash-outs will only be allowed to take place in designated areas with an impervious surface.			
		Assidental Spills and Loaks			
		 Accidental Spills and Leaks No bulk chemicals will be stored within the active construction areas. Temporary oil and fuel storage tanks will be kept in the material storage area in suitable containers and will be appropriately bunded as required. Refuelling of vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in designated areas of the site, where possible, which will be kept away from surface water drains. Spill protection equipment such as absorbent mats, socks and sand will be available to be used in the event of an accidental release during refuelling. Training will be given to appropriate site workers in how to manage a spill event. The following mitigation measures will be taken at the construction site in order to prevent any spillages to ground of fuels during machinery activities and prevent any resulting soil and/or groundwater quality impacts: Refuelling will be undertaken off site where possible; Where mobile fuel bowsers are used the following measures will be taken: Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use; 			
		o The pump or valve will be fitted with a lock and will be secured when not in use;			
		o All bowsers must carry a spill kit; Operatives must have spill response training; and			
		 Portable generators or similar fuel containing equipment will be placed on suitable drip trays. 			
		Monitoring Weekly checks will be carried out to ensure surface water drains are not blocked by silt, or other items, and that all storage is located at least 10m from surface water receptors. A regular log of inspections will be maintained, and any significant blockage or spill incidents will be recorded for root cause investigation purposes and updating procedures to ensure incidents do not reoccur.			
		Dust Control Measures The aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design, planning and effective control strategies. The siting of construction activities and the limiting of stockpiling will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance. In			

Table 10. Miti	e 10. Mitigation Measures.					
Sensitive	Potential Impacts	Designed-in Mitigation				
Receptors						
		 addition, good site management will include the ability to respond to adverse weather conditions by either restricting operations on- site or using effective control measures quickly before the potential for nuisance occurs. During working hours, technical staff will be available to monitor dust levels as appropriate; and At all times, the dust management procedures put in place will be strictly monitored and assessed. The dust minimisation measures should be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust generation. In the event of dust nuisance occurring outside the site boundary, site activities should be reviewed, and procedures implemented to rectify the problem. Specific dust control measures to be employed are presented below. 				
		Site Boutes				
		Site access routes (particularly unpaved areas) can be a significant source of fugitive dust from construction sites if control measures are not in place. The most effective means of suppressing dust emissions from unpaved roads is to apply speed restrictions. Studies show that these measures can have a control efficiency ranging from 25% to 80% 14.				
		• A speed restriction of 20 km/hr will be applied as an effective control measure for dust for on-site vehicles or delivery vehicles within the vicinity of the site;				
		 Bowsers will be available during periods of dry weather throughout the construction period. Research shown found that the effect of surface watering is to reduce dust emissions by 50%. The bowser will operate during dry periods to ensure that unpaved areas are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicular use; and 				
		 Any hard surface roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced areas shall be restricted to essential site traffic only. 				
		Excavation				
		Excavation works during periods of high winds and dry weather conditions can be a significant source of dust.				
		• During dry and windy periods, and when there is a likelihood of dust nuisance, watering shall be conducted to ensure moisture content of materials being moved is high enough to increase the stability of the soil and thus suppress dust;				
		• During periods of very high winds (gales), activities likely to generate significant dust emissions will be postponed until the gale has subsided.				
		The movement of truck containing materials with a potential for dust generation to an off-site location will be enclosed or covered.				
		Stockpiling				
		The location and moisture content of stockpiles are important factors which determine their potential for dust emissions. The following measures will be put in place:				

Table 10. Miti	gation Measures.	
Sensitive	Potential Impacts	Designed-in Mitigation
Receptors		
		Overburden material will be protected from exposure to wind by storing the material in sheltered parts of the site, where possible; Regular watering will take place during dry/windy periods to ensure the moisture content is high enough to increase the stability of the soil and suppress dust.
		Site Traffic on Public Roads
		Spillage and blow-off of debris, aggregates and fine material onto public roads will be reduced to a minimum by employing the following measures:
		• Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered at all times to restrict the escape of dust;
		 Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
		• A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate, and an example of the washing equipment can be seen in Insert 7.1; and
		 Road sweepers will be employed to clean the site access route as required.
		General
		• The pro-active control of fugitive dust will ensure that the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released, will contribute towards the satisfactory management of dust by the construction contractor.
		Ecology
		The key strategies to be undertaken to minimise impact on the local flora and fauna during site clearing and construction are as follows.
		All site clearance works will comply with current legislative requirements and best practice;
		 Taking measures to limit the working area during the construction phase will reduce the impacts of the development on adjacent areas. The construction area will be clearly delimited by the site boundary and machinery should operate only within this allocated site area;
		 All re-fuelling of plant, equipment and vehicles will be carried out at the construction site boundary. All fuels, chemicals, liquid and solid waste will be stored in areas bunded in accordance with established best practice guidelines at the construction compound also; and Provision of spill kits;
		• Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains; and

Table 10. Mitigation Measures.	
Sensitive Potential Impacts Designed-in Mitigation	
Receptors	
 An ecologist will be appointed to oversee site clearance, reprofiling, construction and landscaping of the prop Tree retention will be carried out as outlined in the arborist report. A specific site clearance, reprofiling and phasing plan will be provided to the arborist and project ecologist for any site clearance or works commencing on site. No site clearance works will commence on site until approva provided by the arborist and project ecologist for the works to commence. All site clearance, reprofiling and enabling works will be approved and monitored by the arborist and project ecologist for the remaining habitats on site are maintained. All works in the riparian corridor will be carried out in consultation with and to the satisfaction of Inland Fishe the project ecologist, following the best practice guidelines for construction in the vicinity of watercourses. All and in the riparian corridor will include mitigation measures to prevent silt from runoff during works as set ou Abstraction of water from the watercourse will not be permitted. 	osed project. approval prior to I has been ecologist to ries Ireland and I works on site t below.

Adverse Effects on the conservation objectives of European sites likely to occur from the project (post mitigation)

A robust series of mitigation measures will be carried out. These have been developed by a multidisciplinary project team. These will ensure that no significant pollution events or silt enter the Carrickmines Stream and that the water entering the surface water system is clean, uncontaminated and that dust emissions are controlled on site. Early implementation of ecological supervision on site at initial mobilisation and enabling works is seen as an important element to the project.

With the successful implementation of the outlined mitigation measures, no significant impacts are foreseen from the construction or operation of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works. The construction mitigation proposed for the development satisfactorily addresses the potential impacts on designated conservation sites through the application the construction and operational phase controls as outlined above. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt, dust and pollution entering the Carrickmines Stream, will satisfactorily address the potential impacts on the conservation objectives of European sites are likely following the implementation of the mitigation measures outlined above. No in combination effects are foreseen.

Conclusion

In a strict application of the precautionary principle, it has been concluded that mitigation measures are required during construction to prevent impacts on the Rockabill to Dalkey Island SAC. Impacts are likely from the proposed works in the absence of mitigation measures, primarily as a result of direct hydrological connection from the proposed development site to the Rockabill to Dalkey Island SAC. As a result, there is potential for downstream impacts on this SAC from the project during site clearance, enabling, construction, landscaping and drainage works.

The surface water from the site will be discharged to the Carrickmines Stream which then outfalls to the marine environment at Killiney Bay approximately 1.4 km from the Rockabill to Dalkey Island SAC. There is potential for pollutants from the site to enter the watercourse, via the surface water runoff or the piped network from the sloped site and have negative impacts on the Conservation Objectives and Features of Interest of the Rockabill to Dalkey Island SAC, should significant quantities of pollutants or silt enter the watercourse. For this reason, a NIS was carried out to assess whether the proposed project, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European Sites. All other European sites were screened out at initial screening.

Construction on this site will create localised light and noise disturbance. This would not impact European sites as the nearest SPA is approximately 4.6 km from the proposed development site. Mitigation measures will be in place to ensure there are no significant impacts on the Carrickmines Stream that leads to Rockabill to Dalkey SAC which is within the marine environment. A project ecologist will be appointed to oversee works in relation to the enabling works and the implementation of mitigation measures as outlined on site. The implementation of mitigation measures outlined, which will be followed, will be sufficient to prevent adverse effects on the integrity of European sites. Foul water from the site will be treated at Shanganagh Wastewater Treatment Plant before being discharged to the marine environment. This WwTP is operating within capacity.

Following the implementation of the mitigation measures outlined, the construction and presence of this development would not be deemed to have a significant impact on the integrity of European sites. No significant impacts are likely on European sites, alone in combination with other plans and projects based on the implementation of standard construction phase mitigation measures.

This report presents an Appropriate Assessment Screening and NIS for the proposed development. It outlines 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 or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will impact on any the European site.

On the basis of the content of this report, the competent authority is enabled to conduct an Appropriate Assessment and consider whether, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European site.

The proposed project will not will adversely affect the integrity of the Rockabill to Dalkey SAC which was screened in at Stage 1 AA.

Data used for the AA Screening/NIS Assessment

NPWS site synopses and Conservation objectives of sites within 15km were examined. European sites beyond 15km have no direction connection to the proposed development site. The most recent SAC and SPA boundary shapefiles were downloaded and satellite imagery. Several site visits were carried out to determine if the site contained possible threats to a European site or any European species or habitats.

References

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

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- 13. NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
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- 17. NPWS (2017) Conservation objectives for Bray Head SAC 000714. Generic Version 6.0. Department of Arts, Heritage and the Gaeltacht.
- 18. NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- 19. NPWS (2021) Conservation Objectives: Knocksink Wood SAC 000725. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
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- 21. NPWS (2022) Conservation Objectives: Howth Head Coast SPA 004113. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
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