Natura Impact Statement for Strategic Housing Development at Auburn, Malahide, County Dublin

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The Purpose of this document

This document provides information to allow An Bord Pleanála to carry out an Appropriate Assessment of the proposed project. This document will assess whether adverse effects to the integrity of the Natura 2000 network are likely to occur as a result of granting planning permission in accordance with Article 6(3) of the Habitats Directive and s.177V of the Planning and Development Act. It will determine whether mitigation measures are required to ensure that negative effects can be avoided to the Natura 2000 network.

This report is based on a separate Screening Report for AA which has been prepared by Openfield Ecological Services and which concluded that significant effects to the Baldoyle Bay SAC and SPA could not be ruled out.

Section 177T of the Planning and Development Act 2000 defines a Natura Impact Statement as a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

It is the relevant competent authority, in this case An Bord Pleanála, which carries out any AA or screening for AA, stating:

This NIS therefore aids in the decision-making process and should be read with the AA Screening Report which has already identified the European sites which were screened in.

It should be noted that there is no prescribed format for an NIS. This report therefore follows the generally accepted format for AA provided by the European Commission.

Methodology

The methodology used for this assessment is set out in a document prepared for the Environment DG of the European Commission entitled 'Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (EC, 2021).

An earlier document, 'Assessment of plans and projects significantly affecting Natura 2000 sites 'Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (Oxford Brookes University, 2001). Chapter 3, part 1, of this document deals specifically with screening while Annex 2 provides the template for an AA report to be used.

In accordance with this guidance, the following methodology has been used to produce this screening statement:

Step 1: Information Required
This assesses whether adequate information is available in order to complete the AA or if, taking the Precautionary Principle into account, additional data are required.

Step 2: Impact Prediction
This identifies the likely impacts that may arise as a result of the project.

Step 3: Conservation Objectives
An assessment of whether or not there will be adverse effects on the integrity of the Natura 2000 site as defined by the conservation objectives and status of the site.

Step 4: Mitigation Measures
Mitigation through avoidance of adverse effects must be proposed. Where it is likely that significant effects will remain despite mitigation then a full assessment of alternative options must be undertaken and an application for the project to proceed made under Article 6(4) of the Habitats Directive: Imperative Reasons of Overriding Public Interest.

The steps are compiled into an AA report, a template of which is provided in Appendix II of the EU methodology.

Reference is also made to guidelines for Local Authorities from the Department of the Environment, Heritage and Local Government (DoEHLG, 2009).

A full list of literature sources that have been consulted for this study is given in the References section to this report while individual references are cited within the text where relevant.

AA Report (Natura Impact Statement) as per Annex 2 of EU methodology:

Step 1 – Information Required

Describe the elements of the project (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the Natura 2000 site (from the screening report prepared by Openfield)

It is planned to construct a Strategic Housing Development on the site at Auburn, Malahide, Dublin. The site is currently occupied by open grazing land and woodland. The site location is shown in figures 1 and 2.

The proposed development will consist of the preservation and protection of the existing Protected Structure of Auburn House and its stables as 1 no. residential dwelling; the conversion of the existing stables of Auburn House to provide for storage space for the main Auburn House and the construction of 368 no. new residential dwelling units (comprising 87 no. houses, 239 no. apartments & 42 no. duplex units) for an overall total of 369 no. residential units, including Auburn House. The development shall consist of 135 no. 1-bedroom apartments and duplex apartments, 138 no. 2-bedroom apartments and duplex apartments, 8 no. 3-bedroom apartments and duplex apartments, 47 no. 3-bedroom houses, 34 no. 4-bedroom houses, 6 no. 5-bedroom houses and the existing 11-bedroom Auburn House along with 1 no. childcare facility and 1 no. ancillary resident facility. The proposed development shall also provide landscaped public open space, car parking and all associated ancillary site development infrastructure including foul and surface water drainage, internal roads, cycle paths and footpaths, and boundary walls and fences. Vehicular access to the proposed development is to be via a new entrance at the R107 Malahide Road/Dublin Road entrance, with the existing entrance to Auburn House acting as a pedestrian/cyclist entrance and access to existing properties outside the application site, there will be a secondary entrance comprising modifications of the existing vehicular entrance off Carey's Lane to the south west of the development, the closure of the existing vehicular entrance to Little Auburn, the provision of 4 no. ESB substations, 1 no. new foul pumping station, public lighting; proposed foul sewer works along Back Road and Kinsealy Lane and all associated engineering and site works necessary to facilitate the development. The building heights range from 2 storey to 5 storey buildings with balconies or terraces being provided to the apartments and duplex units.

The AA screening report provided follows accepted methodologies. It highlights the fact that the site is within the hydrological catchment of the Baldoyle Bay SAC (site code: 0199) and SPA (site code: 4016), although physically separated from it.

Foul effluent from the proposed development will be sent to the wastewater treatment plant at Ringsend in Dublin. Emissions from the plant are currently not in compliance with the Urban Wastewater Treatment Directive. In April 2019 Irish Water was granted planning permission to upgrade the Ringsend plant. This will see improved treatment standards and will increase network capacity by 50%. There are no other discharges from this operation.

Wastewater will be pumped from the development site via Back Road and Kinsealy Lane to outfall via a stand-off manhole to the new gravity sewer, where it will drain by gravity to the new Chapel Road pumping station and ultimately to the North Fringe Interceptor Sewer. This route is shown in figure 4.

Water for domestic purposes will be sourced from a mains supply which originates in a reservoir along the River Liffey at Leixlip. This reservoir is not part of, or upstream of, any SPA or SAC along that river. The proposed site layout is shown in figure 3.

Inert construction and demolition waste will be removed by a licenced contractor and disposed of in accordance with the Waste Management Act.

Currently there is no attenuation of rain run-off and surface water is likely to percolate to the ground or follow surface pathways to the Hazelbrook Stream. In accordance with the Greater Dublin Strategic Drainage Study this project will incorporate sustainable drainage systems (SuDS). According to the Engineering Assessment Report from Waterman Moylan it is proposed to divide the site into four separate sub-catchments:

Catchment 1, which comprises the main portion of the site including the houses and Blocks 1, 2 and 3, is approximately 63,600m2. It will be attenuated in a proposed dry detention basin in the open space at the centre of the site.

Catchment 2, which includes Blocks 4 and 5 and the duplex units, is approximately 22,770m2. It will utilise a private on-site attenuation tank / system beneath the courtyard area. This tank is to be privately managed and maintained. The location and level of these Blocks relative to the outfall surface water pipe does not allow for above ground attenuation.

Catchment 3, which includes Block 6, approximately 7,730m2, is now proposed to be attenuated in the proposed dry detention basin in the open space at the centre of the site which also attenuation Catchment 1, following discussions with Fingal County Council Water Services to remove any underground attenuation tanks where possible.

Catchment 4, the entrance road, is approximately 3,040m2 and will be attenuated in a dry detention basin near the site entrance.

Storm water from each catchment will discharge at a controlled rate, limited to the greenfield equivalent runoff, to the existing streams on the site. The proposed development will be designed to incorporate best drainage practice.

The drainage strategy will be fully compliant with the Greater Dublin Strategic Drainage Study (SUDS) and will include attenuation storage as well as SUDS measures to ensure that the quality and quantity of run-off remains at a ‘greenfield’ rate. The proposed surface water drainage system for this development has been designed as a sustainable urban drainage system and uses permeable paving, filter drains, green/sedum roofing on apartment and

duplex blocks and bio-retention systems along with flow control devices and petrol interceptors.

There are no point air emissions from the site while some dust and noise can be expected during the construction phase.

Step 2 - Impact Prediction

The AA screening report describes the elements of the project which “have the potential to cause environmental impact”. These are:

Habitat Loss
The development site is approximately 1.4km from the boundary of the Malahide Estuary SPA/SAC as the crow flies (the nearest Natura 2000 site) and the intervening land is occupied by residential development and transport links. Because of the distance separating the two areas there is no pathway for loss or disturbance of any habitats which are qualifying interests for Natura 2000 site or other semi-natural habitats that may act as ecological corridors for important species associated with the qualifying interests of the Natura 2000 sites.

This development will not result in the loss of semi-natural habitats connected to any Natura 2000 site.

No significant effects to any Natura 2000 site are likely to arise from this source.

Habitat disturbance
No habitats will be disturbed within or directly connected to Natura 2000 sites. This development is will not significantly increase recreational pressure on Malahide Estuary or any other Natura 2000 site as it lies a significant distance to accessible areas likely to be used by birds.

The lands themselves are not suitable for regularly occurring populations of wetland or wading birds which may be associated with Natura 2000 sites at Malahide Estuary or Baldoyle Estuary. Typical habitats for these species are coastal and intertidal habitats while certain species may use inland amenity grassland for feeding. There are no habitats for such species on the development site.

No significant effects to any Natura 2000 site are likely to arise from this source.

Pollution during construction
During the construction phase there will be extensive earth works and some sediment may enter the drainage ditches, entrained in rain run-off. While sediment can be detrimental to the ecological quality in rivers, the same is not the case for estuaries and tidally influenced habitats, which rely on vast quantities of sediment for their functioning.

During the work on the new sewer line there is a risk of pollution of groundwater and water courses by accidental spillage of foul effluent during connections being made to live sewers.

In addition, extensive works are planned in close proximity to open water courses, including during the construction of the new sewer on Back Road and Kinsealy Lane (which crosses the Hazelbrook Sream), and using a precautionary approach, the potential for large quantities of silt or other construction pollutants to be washed downstream means that significant effects to the Baldoyle Bay SAC and SPA cannot be ruled out.

Pollution during normal operation - wastewater

The Ringsend plant is licenced to discharge treated effluent by the EPA (licence number D0034-01) and is managed by Irish Water. It treats effluent for a population equivalent (P.E.) on average of 1.65 million however weekly averages can spike at around 2.36 million. This variation is due to storm water inflows during periods of wet weather as this is not separated from the foul network for much of the older quarters of the city, including at the subject site. The Annual Environmental Report for 2020, the most recent available, indicated that there were a number of exceedences of the emission limit values set under the Urban Wastewater Treatment Directive and these can be traced to pulse inflows arising from wet weather. In April 2019 Irish Water was granted planning permission to upgrade the Ringsend plant. These works are underway and will see improved treatment standards and will increase network capacity by 50%.

While the issues at Ringsend wastewater treatment plant are being dealt with in the medium term evidence suggests that some nutrient enrichment is benefiting wintering birds for which SPAs have been designated in Dublin Bay (Nairn & O'Hallaran eds, 2012). No negative impacts to Natura 2000 sites can arise from the additional loading arising from this development as there is no evidence that negative effects are occurring to SACs or SPAs in Dublin Bay from water quality.

No significant effects to any Natura 2000 site are likely to arise from this source.

Pollution during normal operation – surface water

New surface water attenuation measures are designed so that there will be no net change to the quantity or quality of surface water leaving the site. These are standard measures which are included in all development projects and are not included here to reduce or avoid any effect to a Natura 2000 site. No significant effects can occur to any Natura 2000 site arising from this source.

No significant effects to any Natura 2000 site are likely to arise from this source.

Abstraction
There is no SAC or SPA within the zone of influence of the abstraction point along the River Liffey at Leixlip.

Since SACs and SPAs in Dublin Bay are below the high tide mark effects to these areas cannot occur as a result of abstraction from the Liffey. They are therefore considered to be beyond the zone if influence of this project.

No significant effects to any Natura 2000 site are likely to arise from this source.

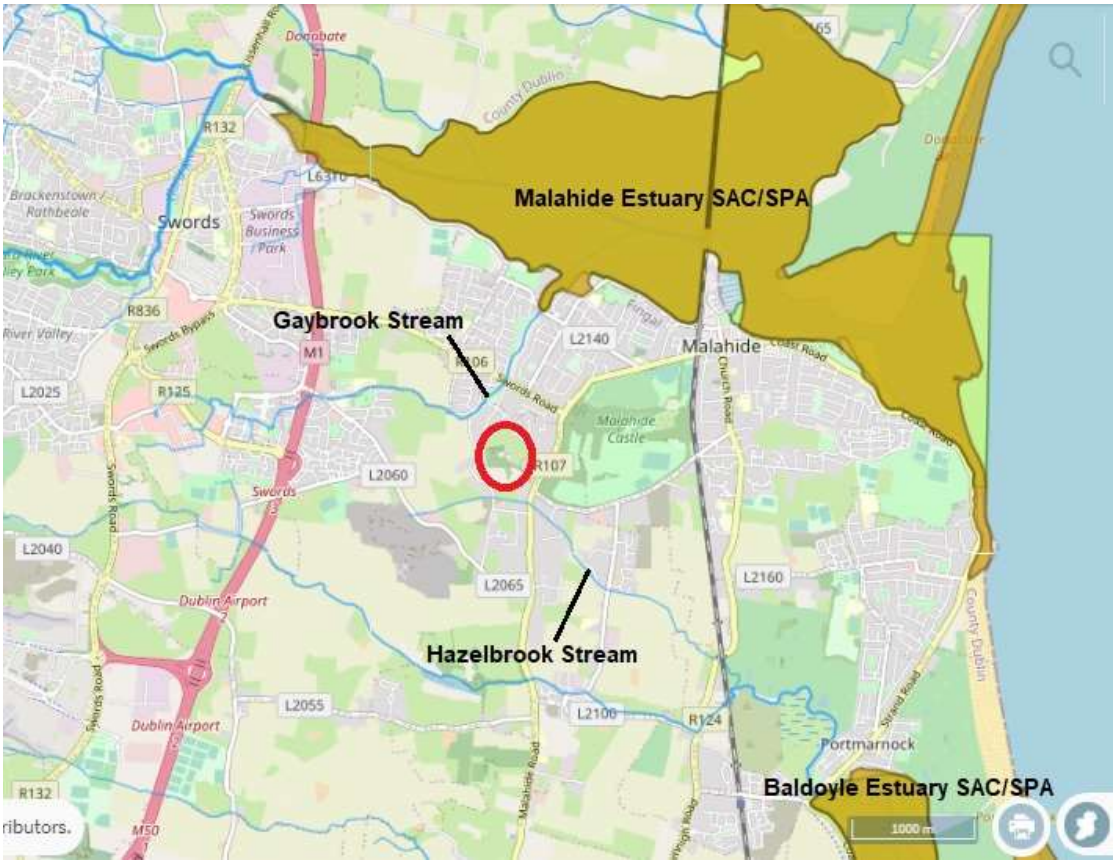

Figure 1 – Site location (red circle). The SACs are shown in tan while SPAs are shown in lime green. There is considerable overlap between SACs and SPAs in these areas (from www.epa.ie).

An assessment of the effects of the project 'in combination' with other potential sources is presented.

This development can be considered within the context of the broader urbanisation of lands that is accommodating the expansion of Dublin city and its hinterland. This is planned for under the Fingal County Development Plan 2017-2023. This type of urban expansion has been associated with a loss of habitat however the aforementioned plans envisage the preservation of 'green infrastructure' to preserve or augment local ecological features. A growing population is placing pressure on wastewater treatment facilities however a recent upgrade to the Swords wastewater treatment plant will provide for future development. An Natura Impact Statement for the Fingal CDP 2017-2023 found

that adverse effects to the integrity of Natura 2000 sites would not arise from its implementation.

The cumulative effects of this type of urban growth can arise from replacing permeable ground with hard surfaces. This can result in increased risk of flooding and deterioration of water quality, primarily from the run-off of particulate matter and hydrocarbon residues (Mason, 1996). To combat this effect the Greater Dublin Strategic Drainage Study was finalised in 2005. This aims to ensure that new developments integrate sustainable drainage systems (SUDS) to maintain natural, or 'green field' rates of surface water run-off while also improving water quality in rivers. This development includes SUDS techniques that will maintain current levels of water quantity and quality.

The Water Framework Directive sets out to attain 'good ecological status' of all water bodies. A second River Basin Management Plan was published in 2018 which identifies 190 'priority areas for action' where resources are to be focussed over the 2018-2021 period.

Specific projects which are under consideration by the Board, or which may be coming before the Board, include:

- an SHD application (ref.: TC06F.310125) for 102 no. residential units (56 no. houses, 46 no. apartments), creche and associated site works at Lamorlaye, Back Road, Malahide, Co. Dublin.
- An SHD application (ref.: TC06F.308804) for 458 no. residential units (242 no. houses, 60 no. duplex units, 156 no. apartments), creche and all associated site works on lands at Back Road, Broomfield, Malahide, Co. Dublin

Both of these developments are within the catchment of the Hazelbrook Stream that leads to Baldoyle Bay.

In the event that this project is under construction at the same time as other projects there is a possibility that construction pollutants entering waterways leading to Baldoyle Bay SAC and SPA could act in combination to result in negative effects to invertebrate communities in the SAC and, by extension, birds which are qualifying interests of the SPA.

Other than during the construction phase, there are no projects or plans which could act in combination with the current proposal to result in significant effects to Natura 2000 sites.

Figure 2 – Site boundary and habitats

Figure 3 – Site layout

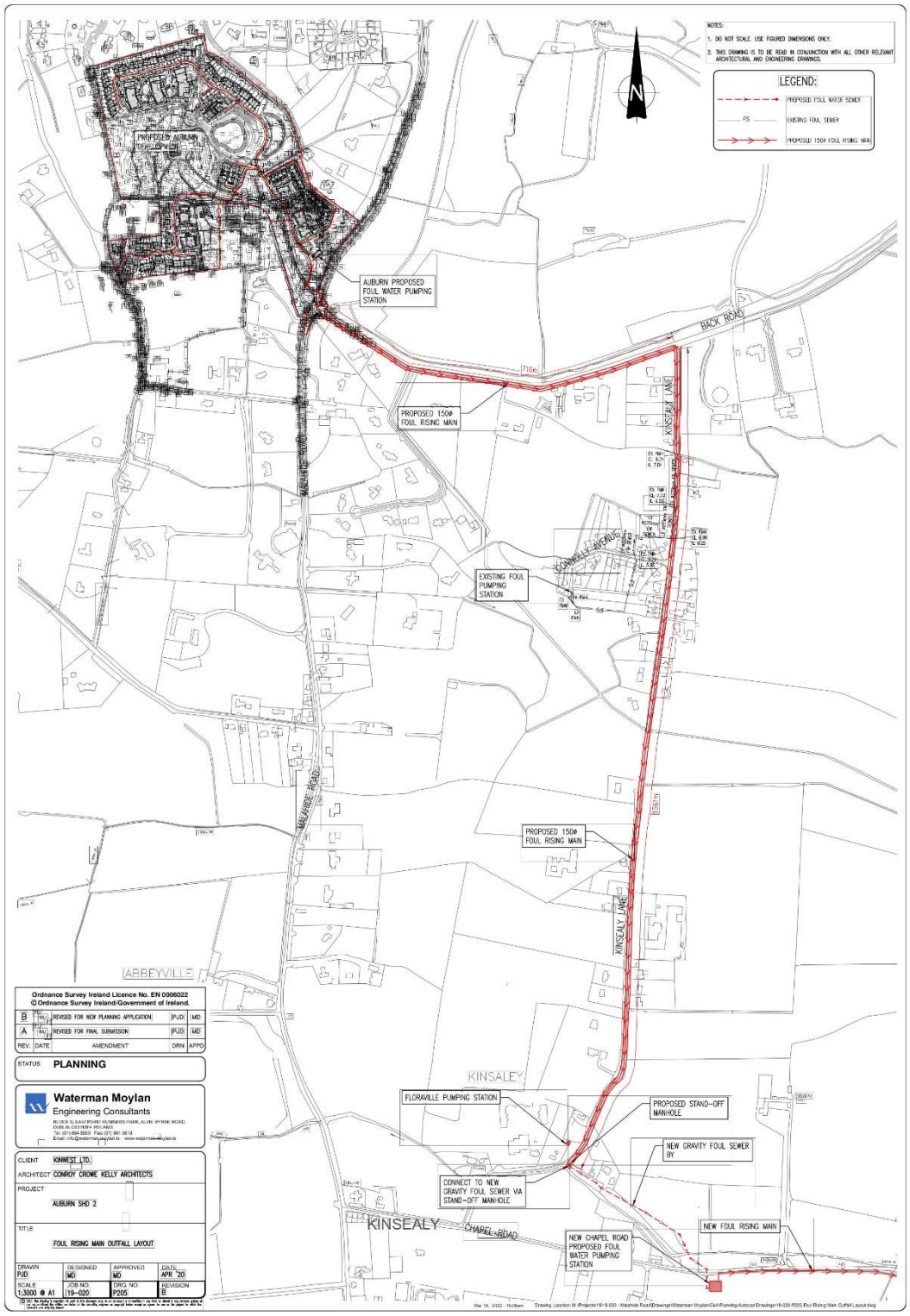

Figure 4 – Route of new sewer line along Back Road and Kinsealy Lane

Step 3 – Conservation Objectives
Set out the conservation objectives of the site

Site-specific conservation objectives for this SAC have been set out (NPWS, 2012) and these are summarised here.

Salicornia mudflats (1310)
Maintain habitat area and distribution including physical structure (sediment supply, creeks and pans, flooding regime). Maintain vegetation structure as measured by vegetation height, vegetation cover, typical species and sub-communities. Absences of the invasive *Spartina anglica.*

Atlantic/Mediterranean Salt Meadows (1330/1410)
Maintain habitat area and distribution including physical structure (sediment supply, creeks and pans, flooding regime). Maintain vegetation structure as measured by vegetation height, vegetation cover, typical species and sub-communities. Absences of the invasive *Spartina anglica.*

Mudflats (code 1140)
Permanent habitat area stable or increasing (estimated at 409 hectares); subject to natural processes.

For the Baldoyle Bay SPA the conservation objectives for each bird species relates to maintaining a population trend that is stable or increasing, and maintaining the current distribution in time and space (NPWS, 2013b).

Birds (similar for all species)
Long term population trend stable or increasing; there should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

Describe how the project will affect key species and key habitats. Acknowledge uncertainties and any gaps in information.

Hydrological pathways exist to the Baldoyle Bay SAC and SPA. Conservation objectives have been set to maintain the area of habitat for each of the qualifying interests of the SPA, as well as the numbers and range of species of the SPA.

Given the potential for large quantities of sediment and other construction pollutants to enter the Hazelbrook Stream, it is considered that effects to habitats and species, including bird species in the SPA, cannot be ruled out.

Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project

Very large quantities of sediment could increase deposition beyond normal levels, thereby affecting the areas of habitats for which the SAC has been designated. Construction pollutants such as concrete or hydrocarbons could affect habitat functioning through toxic effects to invertebrate life. This could affect the invertebrate communities within mudflats which are a qualifying interest if the Baldoyle Bay SAC. As wading birds depend upon these invertebrates for food, the integrity of the Baldoyle Bay SPA may also be affected.

Step 4 - Mitigation

Describe what mitigation measures are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the site. Acknowledge uncertainties and any gaps in information.

- Pollution prevention during construction

Construction will follow guidance from Inland Fisheries Ireland (IFI, 2016) for the protection of fish habitat. This will include the erection of a robust silt curtain (or similar barrier) along open drainage ditches to prevent the ingress of silt to the Hazelbrook Stream. Water leaving the site will pass through an appropriately-sized silt trap or settlement pond so that only silt-free run-off will leave the site.

Dangerous substances, such as oils, fuels etc., will be stored in a bunded zone. Emergency contact numbers for the Local Authority Environment Section, Inland Fisheries Ireland, the Environmental Protection Agency and the National Parks and Wildlife Service will be displayed in a prominent position within the site compound. These agencies will be notified immediately in the event of a pollution incident.

Site personnel will be trained in the importance of preventing pollution and the mitigation measures described here to ensure same.

A silt curtain or similar barrier will be erected along the drainage ditch to the east of the site and will remain in place for the duration of works.

The drainage ditch to the north is to be culverted as part of work and this will be done ‘in the dry’. In other words, it will be dammed at either end so that works will be done with no scouring of silt or sediment. Water will be pumped around the works area where necessary.

The site manager will be responsible for the implementation of these measures. They will be inspected on at least a daily basis for the duration of works, and a record of these inspections will be maintained.

In order to reduce the risk of defective or leaking foul sewers, the following remedial measures will be implemented:

- All new foul sewers will be tested by means of an approved air test during the construction phase in accordance with Irish Waters Code of Practice and Standard Details.
- All private drainage will be inspected and signed off by the design Engineer in accordance with the Building Regulations Part H and BCAR requirements.
- Foul sewers will be surveyed by CCTV to identify possible physical defects.
- The connection of the new foul sewers to the public sewer will be carried out under the supervision of Irish Water and will be checked prior to commissioning.
- Prior to commencement of excavations in public areas, all utilities and public services will be identified and checked, to ensure that adequate protection measures are implemented during the construction phase.

Additional measures have been incorporated into a preliminary Construction Management Plan prepared by Waterman Moylan which is included as part of this planning application. Relevant extracts of this document are reproduced here:

13.2 Sediment Control
Construction runoff is heavily laden with silt which can block road gullies and reduce the hydraulic capacity in pipes and watercourses, contributing to ponding and flooding. Continued development without appropriate controls will ultimately keep maintenance costs elevated, whether that be in cleaning gullies, jetting pipes or dredging. Sediment control plans can be implemented on-site to mitigate these issues.

Sediment basins and traps will be installed before any major site grading takes place. Additional sediment traps and silt fences will be installed as grading takes place to keep sediment contained on site at appropriate locations.

Key runoff-control measures will be located in conjunction with sediment traps to divert water from planned undisturbed areas away from the traps and sediment-laden water into the traps. Diversions will be installed above the areas to be disturbed before any grading operations. Any perimeter drains will be installed with stable outlets before opening major areas for development. Any additional facilities needed for runoff control will be installed as grading takes place.

During grading operations temporary diversions, slope drains, and inlet and outlet protection installed in a timely manner can be very effective in controlling erosion and sediment build up.

The main run-off conveyance system with inlet and outlet protection measures will be installed early and used to convey stormwater run-off through the development site without creating gullies or channels. Install inlet protection for

storm drains as soon as the drain is functional to trap sediment on site in shallow pools and to allow the flood flows to enter the storm drainage system safely. Install outlet protection at the same time as the conveyance system to prevent damage to the receiving watercourse.

During the final stages of construction unstable sediment from sediment basins and traps will be removed and if possible incorporated into the topsoil, not just spread on the surface.

13.2.1 Sediment Control Measures
Sediment entrapment facilities are necessary to reduce sediment discharges to downstream properties and receiving waters. All run-off leaving a disturbed area will pass through a sediment entrapment facility before it exits the site and flows downstream.

Straw Bales:
Straw bales can be placed at the base of a slope to act as a sediment barrier. These are not recommended for use within a swale or channel. Straw bales are temporary in nature and may perform for only a period of weeks or months. Proper installation and maintenance is necessary to ensure their performance.

Silt Fencing
A silt fence is made of a woven synthetic material, geotextile, and acts to filter run-off. Silt fencing can be placed as a temporary barrier along the contour at the base of a disturbed area, but is not recommended for use in a channel or swale. The material is durable and will last for more than one season if properly installed and maintained. Silt fencing is not intended to be used as a perimeter fence or in area of concentrated flow. If concentrated flow conditions exist, a more robust filter should be considered.

Silt Barriers
Silt barriers can also be temporarily installed in any road gullies of partially constructed roads to prevent sediment movement into downstream drainage systems or SUDS components.

When the catchment area is greater than that allowed for straw bale barriers or silt fences, runoff will be collected in diversion drains and routed through temporary sediment basins.

Diversion Drains
Diversion drains are simple linear ditches, often with an earth bund, for channelling water to a desired location. If the drains are being eroded, they can be lined with geotextile fabric or large stones or boulders.

The Assessment of Significance of Effects – Conclusion of Stage 2

This report contains an analysis of the proposed project and its relationship with areas designated under the Habitats and Birds Directives. Pathways exist between the development site and two such areas and these have been described in detail. Following this analysis, it is concluded that significant effects to the Baldoyle Bay SPA/SAC could not be ruled out. Specifically, this may arise from the impact to intertidal habitats from pollution during the construction phase. Arising from this assessment, mitigation has been proposed.

With the implementation of these measures adverse effects to the integrity of the SAC /SPA will not occur. This conclusion is based on best scientific knowledge.

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