Deansgrange
Flood Relief Scheme

EIA Screening

Final Report

June 2023

www.jbaconsulting.ie

www.jbbarry.ie

Comhairle Contae County Council

Oifig na nOibreacha Poiblí
Office of Public Works

JBA Project Director

Bernadette O'Connell
Block 660, Unit 8
Greenogue Business Plaza
Greenogue Business Park
Rathcoole
Dublin

JBB Project Manager

Eoin Dunphy
Classon House
Dundrum Business Park
Dundrum Road
Dublin 14

Revision History

Revision Ref/Date	Amendments	Issued to
P01/March 2023	Draft Report	JBB
P02/ April 2023	Draft Report	JBB
P03/ June 2023	Final – updated with OPW comments 14/04/2023	DLRCC

Contract

This report describes work commissioned by Dun Laoghaire Rathdown County Council, by a letter dated 16 December 2019. Conor O'Neill of JBA Consulting carried out this work.

Prepared by ..... Conor O'Neill BA (Mod) MSc
Environmental Scientist

Reviewed by ..... Bernadette O'Connell BA MSc CMLI
Director, Environmental Consultant

Purpose

This document has been prepared as a Final Report for Dun Laoghaire Rathdown County Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to Dun Laoghaire Rathdown County Council.

Copyright

Carbon Footprint

A printed copy of the main text in this document will result in a carbon footprint of 305g if 100% post-consumer recycled paper is used and 388g if primary-source paper is used. These figures assume the report is printed in black and white on A4 paper and in duplex.

JBA is aiming to reduce its per capita carbon emissions.

Table of Contents

List of Figures

Abbreviations

AA	Appropriate Assessment
AEP	Annual Exceedance Probability
ArbIA	Arboricultural Impact Assessment
CFRAM	Catchment Flood Risk Assessment and Management
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
FRS	Flood Relief Scheme
GHS	Geological Heritage Site
GIS	Geographic Information System
GSI	Geological Survey Ireland
EIS	Environmental Impact Statement
MCA	Multi-Criteria Assessment
EIA	Environmental Impact Assessment
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NPWS	National Parks and Wildlife Service
OPW	Office of Public Works
PCD	Public Consultation Day
PE	Population Equivalent
pNHA	Proposed Natural Heritage Area
QI	Qualifying Interest
RBMP	River Basin Management Plan
SAC	Special Areas of Conservation
SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Areas
UWWTP	Urban Wastewater Treatment Plant
WFD	Water Framework Directive
WWTP	Wastewater Treatment Plant
ZoI	Zone of Influence

1 Introduction

Dún Laoghaire Rathdown County Council intends to apply for planning permission for a Flood Relief Scheme along the Deansgrange Stream, from Deansgrange to Loughlinstown. The proposed development, which will be submitted under Part 8 of the Planning and Development Act (2000) as amended, consists of development of a flood relief scheme to minimise the risks currently posed to people, the community, social amenity, environment and landscape.

Deansgrange Stream has a history of flooding. A flood event occurred at Glenavon Park in 2008 caused by backing up at a footbridge. The footbridge has since been replaced. Regular flood events in recent years have occurred at Seafield Court, Killiney Hill Road and Achill Road affecting several properties in these areas. Reoccurring flood events have been reported upstream, in the Little Meadow area, Pottery Road and Johnstown Road.

1.1 Purpose of this Report

The purpose of this report is to identify whether there is a need under the Planning and Development Act 2000, as amended, for an environmental impact assessment (EIAR) for the proposed development.

Schedule 5 (Parts 1 and 2) of the Planning and Development Regulations 2001, as amended, lists the groups of development projects which are subject to EIA screening under the EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU. Part 1 lists those projects which are automatically subject to an EIAR due to the scale and nature of the project. Part 2 lists projects which are also likely to have significant environmental effects based on the nature and size of the development set out by threshold criteria for these projects.

An additional group of projects, which are considered sub-threshold developments under Part 2, may fall below the thresholds set but may, under further analysis, be deemed to have significant effects due to their location within a catchment, size, or proximity to sensitive areas.

This report documents the methodology employed to determine whether the proposed development falls under any of these groups, and therefore will have significant environmental impacts. Rationale has been given for the decision made in reference to the relevant legislation, and additional documents have been referenced where required.

This report is intended for the project as described below. Any significant changes to the project description or location would require preparation of a new EIA screening report.

An Appropriate Assessment (AA) Screening Report and Ecological Impact Assessment (EcIA) have been prepared by JBA Consulting and have identified any potential for impacts to Natura 2000 sites and other ecological receptors, respectively. This EIA Screening document, along with the AA Screening and EcIA, will be submitted as part of the planning application.

2 Description of Proposed Works

2.1 Site Location

The area slopes towards the south-east from an elevation of approximately 100mOD in the upper catchment to sea level where the river discharges at Killiney Beach. It is highly urbanised with limited large areas of greenspace.

The Deansgrange Stream is the main watercourse within the Deansgrange AFA. There are additional inflows into the watercourse from the West-Pier area via stormwater connections. The total catchment area for the watercourse is approximately 8.34km^2. The Carrickmines-Shanganagh River flows to the south of the Deansgrange Stream. There is no connection between the two watercourses.

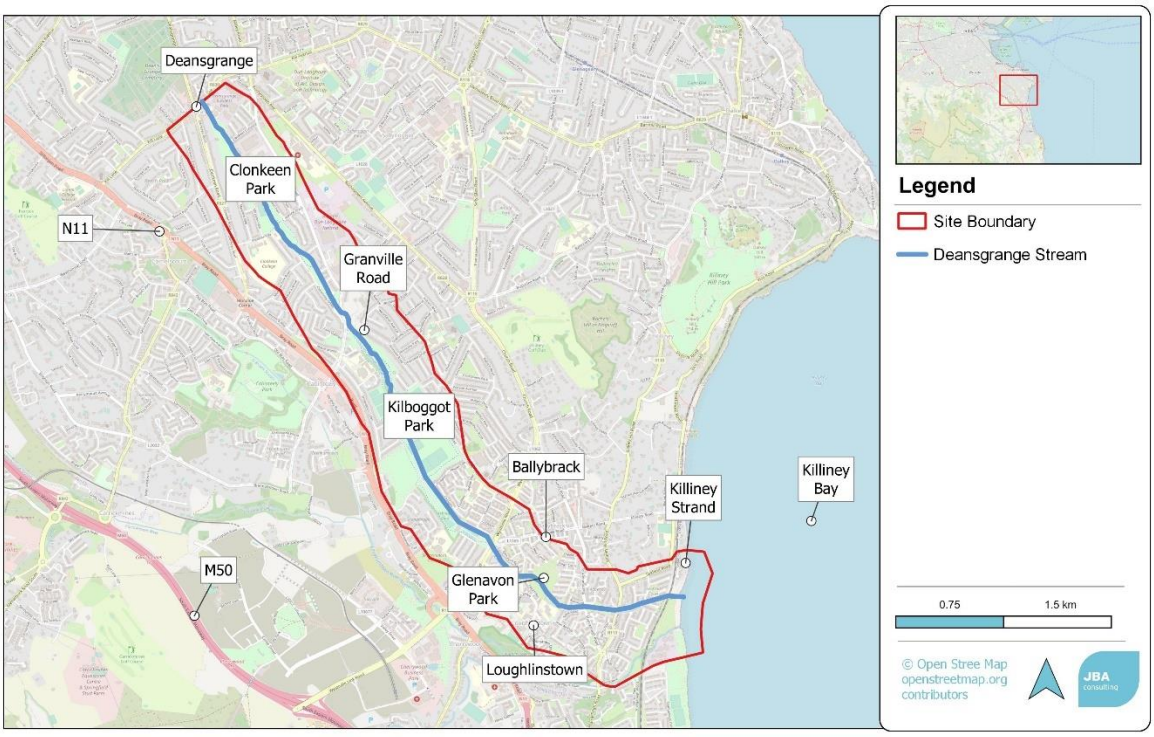


Figure 2-1: Site location and boundary of works (OSM, 2022)

2.2 Proposed Development

The works associated with the Deansgrange Flood Relief Scheme (FRS) extend through several locations across the Deansgrange Stream catchment, all at or in close proximity to the stream, between Johnstown Rd / Granville Rd and the environs of the Dublin-Wexford Rail line.

The proposed scheme consists of the installation of a 1200mm diameter tunnelled overflow culvert underneath the railway, the provision of additional storage in Glenavon Park, a series of flood containment walls upstream of the Killiney Hill Road Bridge, including upgrading the parapet of the existing bridge, upgrade works in the existing culvert at Granville Road, the upgrade of the existing screen at the entry of the Seafield culvert, installation of additional coarse screens and the provision for future adaptation of all the measures listed to the impact of climate change on the modelled flood levels.

The Deansgrange FRS' main objective is providing the required Standard of Protection (SoP) against floods caused by the 1 in 100 year design storms across the Deansgrange catchment. This area, studied as part of the wider Loughlinstown catchment, had been designated at risk of flooding in the Eastern Catchment Flood Risk Assessment and Management (CFRAM). The works undertaken within the Deansgrange FRS will manage this risk.

2.2.1 Johnstown Road

The flood protection measure required at Johnstown Road will consist of the relocation of an existing pedestrian entrance serving the walkway at the southwest in Clonkeen Park. A new entrance matching the characteristics of the existing entrance will be installed at a distance of 47m to the north. A short section of the existing masonry stone wall and railing will be removed to accommodate the new entrance. The new masonry stone wall and decorative railing will be constructed at the location of the existing entrance to match the existing masonry wall features.

To facilitate the continued circulation of pedestrians throughout the park, a new 4m wide footpath of length 30m will be installed at acceptable gradients (e.g., 1/21) to integrate Johnstown Road and the existing circulation route. The existing public cycle path will be extended north to facilitate continued access for cyclists to Clonkeen Park.

2.2.2 Granville Road

The flood relief measure required at Granville Road will consist of the replacement of 2 No. twin Concrete 1050mm dia. pipes which traverse beneath the existing road structure in a North-South direction with a new concrete culvert (inverted U shape) with dimensions of 1.2m high x 3m wide. New concrete headwalls will be constructed at the upstream and downstream face of the culvert. The culvert will extend the full width of the road carriageway including grass verge and footpaths, approximately 20m.

2.2.3 Glenavon Park

The flood relief measure proposed at Glenavon Park is an offline flood storage system within the existing greenspace adjoining the stream and the housing estate at Gleanntan. Two offline detention basins and a new flood defence embankment at the southern section of the park will provide a storage capacity of up to 9,615m3 during flood events. The Total Water Level (TWL) within the park will be controlled by a flow control structure which will be installed on the existing stream and also form part of the flood defence embankment structure. The new detention basins will be sloped at a gradient of 1:3 and include a new wetland which will seek to generate habitat opportunities along with some native planting. Included will be a series of meandering swales lined with stone to provide the permanent water to the sedimentation pond and wetland. The swales will be fed by a nearby surface water source to the north and local drainage.

The new flood defence embankment will be constructed to a level of 14.00mOD and will be integrated into the existing landscape to the east and west of the park. Integration of the embankment with existing levels will include new pedestrian pathways with viewing areas, promoting active travel from Gleanntan along the existing pathways on the east of the stream. The top of the embankment will be relatively flat and will be graded at a slope of 1:3 to meet existing ground levels. To traverse the stream from one side of the park to the other at the footpath, a new pedestrian bridge is proposed. This will be installed directly over the spillway.

Where the flood defence embankment adjoins the stream, a pipe will convey the main channel flow with a new bespoke headwall with rip rap or similar at either face. Directly above the main channel flow, the flow control weir and spillway will be installed to limit the top water level during a storm event. The wing walls for the new pipe within the river channel and spillway will also act as retaining walls for the flood defence embankments. The existing footpaths and bridge will be removed.

2.2.4 Killiney Hill Road

The proposed flood defence measure at Killiney Hill Road will consist of new walls of up to 1.5m in height along the boundaries of the properties upstream of the bridge and an upgrade to the existing bridge parapet. The new flood defence walls will be constructed of reinforced concrete and supported by precast or cast in situ piles with an interconnecting ground beam/ pile cap. This foundation has been specifically designed to mitigate any impact the foundations may have on the existing mature tree roots. In locations where the trees are not impacted, the walls will be supported by a conventional strip foundation. The new walls will be constructed to a total length of 240m; 103m and 130m on the northern and southern embankments respectively. At the upstream face of the existing bridge, c.13m of stone parapet and c.8m windward

boundary wall will be upgraded and reinforced. The walls will be clad on both façades and hand railings will be installed as required. A 7m long embankment will be also added at the northwest end of walls.

2.2.5 Seafield Screen

A series of proposed works to upgrade and install new screens have been included as part of the FRS. These will include the following works:

- A new debris screen is proposed at the entrance to the existing Seafield culvert. The works will include the replacement of adjoining walls and the onsite installation of a debris screen manufactured offsite. A horizontal and an inclined panel will provide the screening with a new working platform for maintenance.
- A new coarse screen is proposed to be installed at the pedestrian bridge adjoining the Abberley estate and upstream of Killiney Hill Road.
- The existing screens at Shanganagh Road and the Fish Pass in the environs of St. Columbanus National School are proposed to be upgraded. The existing screens and associated ancillaries will be demolished and replaced with new foundations, support structures and screens.

2.2.6 Seafield Railway Culvert

The current proposal allows for the installation of an overflow to the Seafield Culvert, consisting of the following elements:

- A 1200mm concrete pipe jacked sewer c.47m, installed underneath the existing railway line, including entry and exit shafts and temporary surcharge zones.
- A 1800mm concrete pipe c.119m section installed using open cut techniques between the exit shaft and the outfall.

Additional works to connect the trenchless and open cut sections of the overflow sewer, including a flow control weir and an outfall structure to the Deansgrange Stream.

2.2.7 Site compounds and access pathways.

Site compounds will be located on the amenity green spaces of the various housing estates and urban park within the site area. These compounds will be located +50m from the nearest watercourse. Access route will be along existing pathways and suburban roads for the majority of the scheme, with some access routes present through parkland.

Access pathways may require the use of a bailey bridge crossing the Deansgrange stream at Glenavon and a supporting bailey bridge on top of the existing bridge over the Shanganagh River near the WWTP so that heavy machinery is supported. The bailey bridge over the Shanganagh River will require piled foundations to support the weight of the bridge.

Vegetation removal will be restricted to removal of a low number of immature sycamore trees at Seafield Ct to facilitate entry for the proposed site compound within this amenity green space.

2.2.8 Plans

An overview of the proposed works is shown in the Buildability Report (JBB, 2023) which accompanies this report

2.2.9 Excavations

Maximum depths of 8.0m will be reached during the construction of culvert pipe under the railway near the stream outfall, however the majority of excavations will not be as deep as this.

2.2.10 Duration of the Works

- Works are expected to take approximately 18 months in total and will be completed in phases following environmental constraints such as breeding birds and seasonal restrictions to instream works. Works are expected to last until July 2026.

3 Purpose of Screening

3.1 Legislative Context for EIA in Ireland

The EU has set out mandatory requirements for Environmental Impact Assessments under the EIA Directive 2011/92/EU (as amended by Directive 2014/52/EU). The Directive identifies certain project types, described under Annex I, that will always have significant environmental effects due to their nature and size. These projects are required to undergo an EIAR in every Member State.

For projects listed under Annex II, the EIA Directive gives Member States discretion to decide the limits of projects requiring an EIAR. In Ireland, mandatory thresholds have been set for projects that would otherwise fall under Annex II, which are described in Schedule 5 of The Planning and Development Regulations 2001 as amended. These thresholds are based on project characteristics including size and location. Projects within these thresholds are always subject to an EIAR. In some circumstances, projects considered below the thresholds set under Schedule 5 Part 2 may still be considered by the Planning Authority to have significant effects on the environment, such as in cases where the projects are in a location of particular environmental sensitivity and may also be subject to an EIAR. These sub-threshold projects are reviewed by the Planning Authority on a case-by-case basis.

The principal piece of legislation under which an EIAR may be undertaken for various developments is The Planning and Development Act 2000, as amended. Further regulations are explained in The Planning and Development (Environmental Impact Assessment) Regulations 2001-2018. Legislation is examined below as to whether an EIAR will be required for this project.

3.2 The Planning and Development Act 2000 – Mandatory EIAR

The Planning and Development Act 2000, as amended, Section 172 sets out the types of projects that require an Environmental Impact Assessment Report (EIAR):

An environmental impact assessment shall be carried out by the planning authority or the Board, as the case may be, in respect of an application for consent for proposed development where either:

a. the proposed development would be of a class specified in

i. Part 1 of Schedule 5 of the Planning and Development Regulations 2001, and either-

I. such development would exceed any relevant quantity, area or other limit specified in that Part, or

II. no quantity, area or other limit is specified in that Part in respect of the development concerned, or

ii. Part 2 of Schedule 5 of the Planning and Development Regulations 2001 and either-

I. such development would exceed any relevant quantity, area or other limit specified in that Part, or

II. no quantity, area or other limit is specified in that Part in respect of the development concerned, or

b.

i. the proposed development would be of a class specified in Part 2 of Schedule 5 of the Planning and Development Regulations 2001 but does not exceed the relevant quantity, area or other limit specified in that Part, and

ii. the planning authority or the Board, as the case may be, determines that the proposed development would be likely to have significant effects on the environment.

3.2.1 Part 1 of Schedule 5 of the Planning and Development Regulations 2001, as amended

Projects which fall under Schedule 5, Part 1 are typically large infrastructure and energy projects and by their nature will always have significant environmental effects. The proposed development consists of a series of small-scale infrastructural developments on a single stream, and does not fall under Schedule 5, Part 1.

3.2.2 Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended

With regards to Part 2 projects, the thresholds were examined for the following category:

10. Infrastructure projects

(f) (ii) Canalisation and flood relief works, where the immediate contributing sub-catchment of the proposed works (i.e., the difference between the contributing catchments at the upper and lower extent of the works) would exceed 100 hectares or where more than 2 hectares of wetland would be affected or where the length of river channel on which works are proposed would be greater than 2 kilometres.

This category contains three thresholds; if any of these thresholds are exceeded, the proposed development must undergo a mandatory EIAR. As such, they will be addressed in turn.

1. "*where the immediate contributing sub-catchment of the proposed works (i.e., the difference between the contributing catchments at the upper and lower extent of the works) would exceed 100 hectares*"
   Works are proposed on two reaches of the Deansgrange Stream: an upstream area around Granville Road, and the section downstream of Glenavon Park to the sea. These two reaches are fed by the immediate sub-catchments shown on Figure 3.1. The Deansgrange Stream includes both surface runoff and storm water network contributions. The immediate sub-catchment areas impacted have therefore been derived by looking at the topography and storm water pipe networks contributing to the reaches impacted. The upstream Glenavon Park sub-catchment is 20.14 hectares, and the downstream Glenavon Park to river outfall sub-catchment is 71.86 hectares, giving a total scheme immediate contributing sub-catchment area of 92 hectares. The scheme is therefore under the 100-hectare threshold.

2. "*where more than 2 hectares of wetland would be affected*"
   JBA ecologists have undertaken a Fossitt habitat survey of the scheme area and defined the habitats in the areas to be affected. The survey results (detailed further in Section 4.2.2) note that no areas have been defined as 'wetland'. The scheme is therefore under the 2-hectare wetland threshold.

3. "*where the length of river channel on which works are proposed would be greater than 2 kilometres*"
   Works are proposed on two reaches of the Deansgrange Stream, as mentioned above. These include a culvert at Granville Road in the upstream catchment, and a storage area at Glenavon Park, flood walls at Killiney Hill Road, a replacement trash screen at Seafield, and a culvert at the Railway line in the downstream catchment. The total length of river channel in these two reaches is 1.37 km. This length includes the sections shown on Figure 3.1 in pink. The sections of Deansgrange Stream shown in blue do not have any works proposed, and are not included. The scheme is therefore under the 2km threshold.

The proposed flood relief scheme is below the thresholds above, and does not fall under any of the other categories in Schedule 5. Therefore, an EIAR has not been automatically triggered for this proposed development.

However, it is necessary to consider if this development could result in significant environmental effects under the category of sub-threshold developments.

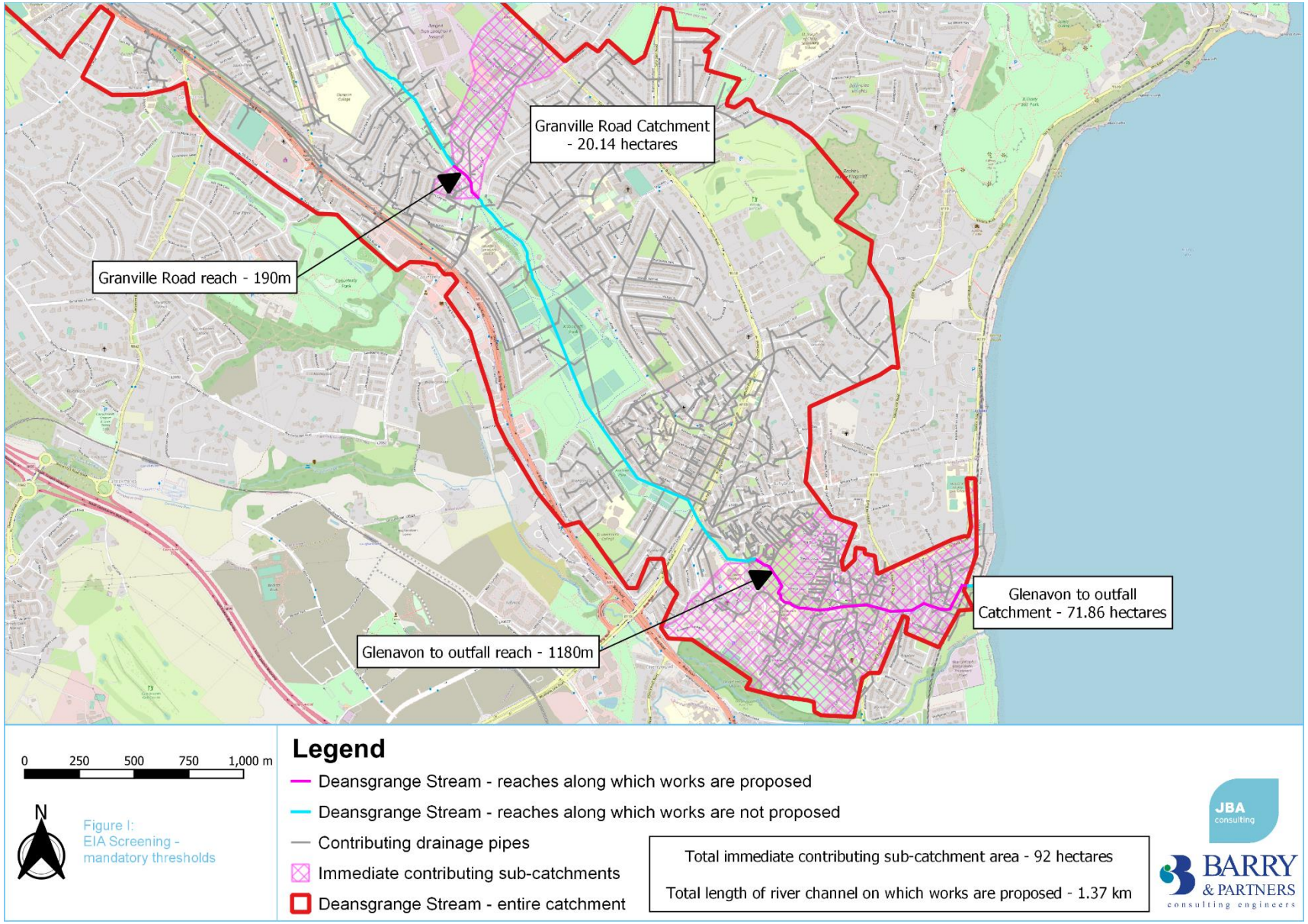


Figure 3-1: Proposed works in the Deansgrange FRS, showing that the scheme is below the thresholds for mandatory EIAR

3.3 Sub-threshold EIAR

In accordance with the requirement to submit an EIAR with sub-threshold planning applications (Article 103 of the Planning and Development Regulations 2001, as amended), where a planning application for sub-threshold development is not accompanied by an EIAR, and the Planning Authority considers that the development is likely to have significant effects on the environment it shall, by notice in writing, require the applicant to submit an EIAR. This process therefore occurs after submission of an application, if that application is not accompanied by an EIAR.

The decision as to whether a development is likely to have 'significant effects' on the environment must be taken with reference to the criteria set out in Schedule 7A of the Planning and Development Regulations 2001, as amended. Schedule 7A requires that the following information be provided for the purposes of screening sub-threshold development for EIAR:

1. A description of the proposed development, including in particular—

    a) a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works, and

    b) a description of the location of the proposed development, with regard to the environmental sensitivity of geographical areas likely to be affected.

2. A description of the aspects of the environment likely to be significantly affected by the proposed development.

3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from—

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

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

    c) The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7 of the Planning and Development Regulations 2001, as amended (DHPLG 2018).

In order to assist planning and other consenting authorities in deciding if significant effects on the environment are likely to arise in the case of development below the national mandatory EIAR thresholds, the Minister for the Environment, Heritage and Local Government published a Guidance document in August 2003, the Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-threshold Development and the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DHPLG 2018b). The Office of the Planning Regulators (OPR) has prepared a Practice Note (PN02) for Local Authorities on environmental impact assessment screening (July 2021).

The criteria, as transposed in Irish legislation, are grouped under three headings:

i. Characteristics of Proposed Development

ii. Location of Proposed Development

iii. Characteristics of Potential Impacts

For the purposes of assessing if the development is likely to have significant effects on the environment in reference to these three parameters, the project is examined below in further detail.

4 Overview of Environmental Impacts

An overview of the potential environmental impacts of the development, according to theme presented in an EIAR, is provided below.

4.1 Population and Human Health

The proposed flood relief scheme will have a positive impact on population and human health by alleviating flood risk for residences on the route.

There is a risk to the health and safety of workers on the development, as with any construction project. This will be mitigated against by the operational plans devised by the contractor. During construction of the culvert beneath the railway line, there is the possibility of temporary disruptions to train services, causing a temporary nuisance to commuters. This will be temporary and communicated to commuters by Iarnród Eireann prior to works, following consultation with the appointed contractors. There is also potential for general disturbance or impacts on access at works locations during construction. This will be temporary to short-term, and will be typical of construction projects. The construction stage impact will not be significant.

No negative impacts to human health are expected as a result of the operation of the development.

4.2 Biodiversity

Ecological receptors that must be examined include protected Natura 2000 sites under the Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC), as well as species protected under the Wildlife Act (1976), and any ecological receptors which may be negatively impacted by the proposed development, both directly and indirectly.

4.2.1 Proximity to Protected Sites

An Appropriate Assessment (AA) Screening has been completed by JBA Consulting for this project to determine whether there is a potential for impacts on nearby Natura 2000 sites.

Those sites within 5km (plus hydrological extension) of the proposed development are shown in Table 4.1. The AA Screening determined that there are no likely significant impacts on any Natura 2000 sites as a result of the proposed development, and that a Natura Impact Statement (NIS) is not required for the proposed development.

Table 4.1: Natura 2000 sites within 5km (plus hydrological extension) of the proposed development

Natura 2000 site	Site Code	Approx. direct distance from site	Approx. hydrological distance from site
South Dublin Bay and River Tolka Estuary SPA	004024	1.8km	9.1
South Dublin Bay SAC	000210	1.8km	7.2
Dalkey Islands SPA	004172	2.6km	2.6km
Rockabill to Dalkey Island SAC	003000	1.3km	1.3km
Ballyman Glen SAC	000713	4.8km	N/A

4.2.2 Other Ecological Receptors

An Ecological Impact Assessment (EcIA) has been prepared for the proposed development. To inform the EcIA, ecological site surveys were performed by JBA ecologists on the 27th of February and the 20th of August 2020. A further survey of areas where vegetation and/or trees are to be removed was conducted on the 30th of September 2022.

The ecological walkover survey recorded habitats and protected species, following the methods outlined in the documents below:

- Heritage Council (2011). Best Practice Guidance for Habitat Survey and Mapping (Smith et al. 2011).
- Fossitt, J. (2000). A Guide to Habitats in Ireland. The Heritage Council, Kilkenny (Fossitt 2000).
- Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2009).

Habitats recorded on site along the stream are listed in Table 4.2, and shown in Appendix A.

Table 4.2: List of habitats recorded on site

Habitat	Fossitt Code
Buildings and artificial surfaces	BL3
Amenity grassland (improved)	GA2
(Mixed) broadleaved woodland	WD1
Scattered trees and parkland	WD5
Other artificial lakes and ponds	FL8
Scrub	WS1
Depositing/lowland rivers	FW2
Hedgerow	WL1
Reed and large sedge swamps	FS1
Tall-herb swamp	FS2
Shingle and gravel shores	LS1
Treelines	WL2
Shingle and gravel banks	CB1
Dry meadows and grassy verges	GS2

The EcIA outlines mitigation measures to be put in place during construction for the protection of flora and fauna. The EcIA report should be read in full, but in summary the mitigation measures include:

- Recommendation that a Construction Environmental Management Plan (CEMP) be prepared and implemented by the appointed contractor;
- Measures for the setup and operation of the site compounds. The site compounds will be located at least 50m away from watercourses at all times;
- Pollution (silt, dust and noise) control measures during construction;
- A detailed methodology and mitigation measures regime for the instream works
- Trees will be retained wherever possible, with root protection zones established around mature trees if works are in close proximity to them. A qualified arborist and a qualified bat specialist will be on site to inspect and advise on tree and root protection during the works at Killiney Hill Road Bridge prior to removal.
- Works should be avoided during key breeding periods for birds and amphibians, set out in full in the EcIA. In particular, the Granville Rd Culvert is next to a frog spawning area, and trees shall not be removed during the bird nesting season.
- The shingle beach onto which the Deansgrange Stream has its outfall is an Annex I habitat and part of a pNHA. Any works taking place in this area will require an Ecological Clerk of Works (ECoW) to be present.

Trees at Killiney Hill Road Bridge

An Arboricultural Impact Assessment (ArbIA) has been carried out by Arbor-Care Ltd (2023) to assess the potential for impacts on trees as a result of the construction of flood walls at Killiney Hill Road Bridge. The ArbIA will be submitted as part of the planning application for the scheme. The trees along the southern

bank of Killiney Hill Road Bridge are of high amenity and ecological value. Given the nature of the proposed works, it is predicted that 3 no. trees will be removed at this location. However, given their high amenity value, every effort will be made to retain trees in this location; to aid in this, a qualified arborist will be present during works in this area, to monitor the level of root severance and stability of trees. If the trees are judged to be compromised, it will then be decided to remove trees to ground level. Provided the recommendations and methods of work as outlined in the ArbIA are adhered to, the proposed development can be carried out without having a negative impact on the character or appearance of the surrounding landscape, with respect to trees.

4.3 Soils and Geology

The underlying bedrock is primarily granite with microline phenocrysts. The lower portion of the stream where the majority of works will take place is underlain mainly by dark blue-grey slate, phyllite and schist. Most works will be above ground or require shallow excavations in the overlying sediment. The exception is work involving pipe installation at the railway and an opencut outfall. The deepest excavations will be required here for the tunnelling shafts, with the maximum excavation depths in the range of 8.0m, with the pipeline excavations shallower than this. Disposal or reuse of excavated materials is discussed in Section 4.9.3.

The subsoil underlying the site is mainly made ground, with sections of limestone till, alluvium along the stream, and beach sands at the stream outfall. The works located at Granville Road will be within alluvium. The lower works will be in a mixture of alluvium and made ground.

Killiney Bay Geological Heritage Site (GHS) is within the Deansgrange FRS Study Area, located downstream where Deansgrange Stream has its outfall to Killiney Bay. The GHS is a 5 kilometres long coastal section with a succession of several units of glacial till (The Heritage Council, 2020). No works are proposed within the GHS.

Three former landfill sites are located in the FRS area: Kilbogget Park, Johnstown Road/Rochestown Avenue, and Pottery Road. None of these sites are areas where works are proposed, and no impacts are anticipated.

4.4 Hydrology and Hydrogeology

4.4.1 Surface Water

The stream and proposed site lies within the Water Framework Directive (WFD) Ovoca-Vartry catchment and Dargle_SC_010 sub-catchment (EPA, 2020). The stream starts at Kill Lane (R830). The open stream flows in a north-west to south-east direction, passing through Clonkeen Park and Killbogget Park. The stream is culverted in several sections, first section is under the Killbogget Park landfill site and past the playing fields between Coolevin and Shanganagh Vale, reappearing south of Wyattville Road. Thereafter it continues through Glenavon Park and residential areas in Loughlinstown, the last stretch of the river is culverted before it reaches the outfall to Killiney Bay in the Irish Sea.

Deansgrange Stream is named KILL OF THE GRANGE STREAM_010 for the purposes of the WFD. The waterbody is at ‘Poor’ WFD status and is considered to be ‘At risk’ due to poor biological status (invertebrate status) and elevated phosphate and ammonia (EPA, 2020). The stream discharges to the Irish Sea at Killiney Bay (HA10) which is at ‘High’ status . The EPA has identified three pressures acting on the stream: hydromorphology, urban runoff, and urban wastewater.

The proposed development will require instream works or works close to the watercourse. Instream works have the potential to cause significant impacts if not properly carried out and managed, due to increases in sedimentation or surface runoff entering watercourses.

An Ecological Impact Assessment (EcIA) has been prepared for the proposed development outlining mitigation measures to be put in place for the protection of water quality and habitats during construction and operation. The mitigation measures include:

- A CEMP shall be prepared by the appointed contractor, incorporating the mitigation measures as outlined in the EcIA.
- The CEMP should strictly adhere to best practice environmental guidance.
- Construction compounds will be bunded and sited at least 300m away from the watercourse.
- Measures for pollution and spill prevention, such as bunding and emergency procedures.
- The erection of silt fences or straw bale silt screening to reduce sedimentation and surface runoff. The installation of these measures to be supervised by an Ecological Clerk of Works (ECoW).

Construction will strictly follow the methodology and mitigation measures outlined in the EcIA and will also follow best practice guidance for working near watercourses. With the mitigation measures in place, no significant impact is expected as a result of the proposed development.

4.4.2 Groundwater

The Wicklow groundwater is the main groundwater body underlying the Deansgrange Stream. Parts of the catchment, and the outfall of the stream, are within the Kilcullen groundwater body, and the Industrial Facility (P0019-02) groundwater body underlies a section of the stream near the Granville Road area and sub-catchment.

The Kilcullen and Wicklow groundwater bodies have the WFD status 'Good', while the Industrial Facility has the status 'Poor' (EPA, 2020). Of the three groundwater bodies, Kilcullen is not considered to be 'At risk', while Wicklow is under 'Review' and Industrial Facility is 'At Risk'.

Groundwater vulnerability, a measure of the likelihood of groundwater contamination occurring and classified by the Geological Survey Ireland (GSI, 2020), varies across the catchment area. Across the proposed works areas, groundwater vulnerability is Low. This rises to High and Extreme in parts of the upper catchment, upstream of the proposed works, and at the outfall on Killiney Beach.

There are no drinking water abstractions of groundwater within 2km of the catchment area, according to the EPA register dated June 2022. Two recreation abstractions are listed, for a golf course (APR002313) and parkland irrigation (APR002385), both with a maximum daily volume of 23m^3/d. Neither of these are in close proximity to areas of proposed excavation.

There is a low likelihood of impacts to groundwater. Excavations will generally be shallow, except at the railway culvert, which will be limited in extent and temporary. This risk will be further mitigated against by measures to be put in place by the appointed contractor, such as following best practice guidance regarding work near watercourses and the control of silt and sediments (i.e., C532 Control of water pollution from construction sites: Guidance for consultants and contractors, and C515 Groundwater control – design and practice, 2nd ed.).

4.5 Cultural Heritage

There are no National Monuments (state owned or vested in the care of local authorities), sites with Preservation Orders or Register of Historic Monuments sites within the Deansgrange FRS study area.

There are eight RMP sites located within the study area. None of these are close to the proposed works, the closest being approx. 275m southwest of the Killiney Hill Road bridge works, and not on a watercourse. No impacts to recorded archaeology are anticipated as a result of the proposed works. However, the uncovering of underground archaeology is a possibility during works. It is recommended that during any excavation or site clearance, an archaeologist be present, to identify and allow for recording in situ any archaeological features which are found.

Killiney Architectural Conservation Area (ACA) is located just north of the downstream section of Deansgrange Stream. Any development within an ACA must take into account the material effect that the proposed development would be likely to have on the character of the ACA. No works are proposed in or adjacent to the ACA, and the scheme will therefore have no impact on the ACA.

Four Record of Protected Structures (RPS) buildings are within the lower sub-catchment, and two are in the upper sub-catchment:

- Johnstown House, a country house and associated entrance walls and gate (RPS numbers 1639 and 2080 respectively) are close to the proposed culvert works at Granville Road. The proposed works are approx. 100m south of the entrance, and 200m south of the house. There will be no direct impact to either 1639 or 2080. During construction, there will be a temporary impact on the setting of both sites, which will not be significant and will be only during construction. Once operational, the proposed measures in this area are underground (culvert) and so will not impact on the curtilage of the house. The entrance walls and gate of Johnstown House are within the existing 1% AEP flood extent, and will be protected in the 1% AEP with defences in place, leading to a permanent positive impact.
- Loughlinstown House and stables (RPS numbers 1768 and 2002) are approx. 300m southwest of the proposed works in Glenavon Park. Modern buildings are between the RPS structures and the park, and the proposed works will not be visible nor impact the RPS structures, nor are the structures in the existing 1% AEP flood extent.
- Saint Aubyn's House (RPS number 1765) is approx. 300m northwest of the Killiney Hill Road bridge. There are intervening non-protected houses in between the site and the RPS building, and no impacts are expected, nor is the house within the existing 1% AEP flood extent.
- Hamp House (RPS number 1766) is approx. 50m north of the proposed works at Killiney Hill Road bridge. There will be no direct impacts to the house, however the proposed flood walls will be partially visible from the house and its setting. This impact will not be significant. Parts of the garden surrounding the house are within the existing and the post-scheme 1% AEP flood extent, with the defences reducing the extent of flooding within the grounds by a large amount. This will lead to a positive impact.

4.6 Air and Climate

There is potential for impacts to air quality through emissions during the construction phase of the development, due to the operation of machinery on site and transport of materials to and from the site. These impacts will be mitigated against with measures outlined in the contractor's operating plans and will not be significant.

The proposed development will not have a significant impact on climate or air quality once operational.

4.7 Noise and Vibration

There is potential for localised noise and vibration impacts during the construction phase due to operation of machinery on site. These impacts would be temporary and only during the construction phase. Mitigation measures against such impacts will be outlined in the contractor's operating plans.

Noise and vibration impacts are not anticipated once operational.

4.8 Landscape and Visual

The proposed development will give rise to temporary landscape or visual impacts to residents living in proximity to the development during the construction phase. These will be as a result of any construction traffic on the site, hoarding, or temporary removal of vegetation.

Permanent visual impacts are not anticipated at Granville Road, Seafield, or the Railway Culvert. At Glenavon Park, a landscape design plan will be implemented to create an attractive feature which includes habitat enhancement and wetlands as part of the off-line flood storage ponds.

The proposed flood walls at Killiney Hill Road will cause a minor non-significant visual impact for residents in the area. This will be lessened over time as vegetation re-establishes along the walls. The removal of 3 no. trees at this location will have a long-term impact on visual amenity, however due to the small number of trees and plans to replace with remedial planting, will not be significant.

There are no protected landscapes or views which will be impacted by the works. A protected view on Wyattville Road is close to the Deansgrange Stream, but does not overlook any of the proposed defences.

4.9 Material Assets including Traffic, Utilities, and Waste

4.9.1 Traffic

There will be localised impacts on traffic associated with the construction phase of the development. These will be temporary and limited in duration. The appointed contractor will include traffic management measures in their operating plans.

Works to the culvert beneath the railway will require consultation with Iarnród Eireann; impacts to the operation of the railway are expected to be temporary and not significant.

No impacts to traffic are anticipated in the operational phase.

4.9.2 Utilities

Limited instances of service diversions may be required during construction works. These will require consultation between the appointed contractor and service providers. No significant impacts will result from these diversions as they will be during the construction phase only, and only in limited circumstances.

4.9.3 Waste

During construction, a waste management plan will be devised and implemented by the contractor on site. Small amounts of construction waste will arise during this phase, and will be disposed of by the appointed contractor. Most waste will arise during the construction of the two additional storage ponds in Glenavon Park, and the excavations associated with the culvert beneath the railway. It is expected that the majority of excavated material at Glenavon Park can be reused for embankments and landscaping at that location, with the remainder disposed of at an appropriate licensed facility, or reused within the DLRCC jurisdiction if an Article 27 derogation is sought.

The material excavated at the railway will be tested for contamination prior to removal. The results of this testing will determine which licensed facility is appropriate for removal of the material. This will be carried out by competent, licenced contractors.

Once operational, the proposed development will not generate operational waste.

There are two EPA-licenced waste and emissions facilities in the vicinity, which will not be impacted by the proposed development. These are:

- IPC P0648-02, Becton Dickinson Penel Limited;
- IEL P0019-02, Amgen Technology (Ireland) Unlimited Company.

4.10 Cumulative Impacts

4.10.1 Plans

Dún Laoghaire Rathdown County Development Plan 2022-2028

The Dún Laoghaire Rathdown County Development Plan 2022 - 2028 has been prepared in accordance with the Planning and Development Act 2000. The plan sets out the overall strategy for planning and sustainable development for the county.

Policy Objective EI21 of the CDP states that:

"*It is a Policy Objective to assist the Office of Public Works (OPW) in the design and construction of flood relief schemes approved in the ten-year Programme of Investment in Flood Relief Measures following from the recommendations and outputs of the CFRAM for the Eastern District that are relevant for DLR*."

The proposed Flood Relief Scheme is in line with this Policy Objective.

River Basin Management Plan 2018-2021

Ireland's second River Basin Management Plan (RBMP) lays out the approach Ireland will take to protecting its waterbodies in line with the Water Framework Directive (WFD). The objectives of the RBMP are to:

- Ensure full compliance with relevant EU legislation;
- Prevent deterioration;
- Meet the objectives for designated protected areas;
- Protect high-status waters;
- Implement targeted actions and pilot schemes in focused sub-catchments aimed at (1) targeting water bodies close to meeting their objective and (2) addressing more complex issues that will build knowledge for the third cycle.

The existing stream is at Poor status. The mitigation measures included in the EcIA will ensure that the proposal will not lead to a deterioration in status or prevent the waterbody from meeting its WFD objectives.

4.10.2 Projects

There are several other recent developments or planning applications in the vicinity of the proposed project. Larger development planning applications in the near vicinity from the last three years that have been granted permission are listed below. Applications for home extensions, internal alterations and retention are not considered.

Planning Application Reference	**D22A/0451 / ABP Ref. 314620**
Development address	Cromlech Cottage, Killiney Hill Road, Killiney, Co. Dublin
Description: The development will consist of the demolition of existing structures on site, including a habitable dwelling; The construction of 3-storey terrace of units consisting of 7 No. 3-bed houses with car garage, bike storage at the ground floor and habitable spaces to the first and second floor with access to the development from Killiney Hill Road; All with associated site works, surface carparking, bin storage, signage, open spaces, landscaping, and boundary treatments.	
Final Decision on Application	Refuse permission, appealed to An Bord Pleanála
Decision Date	18-Aug-2022, ABP decision due 26-01-2023

Planning Application Reference	**D19A/0773**
Development address	Side of 96 Beech Grove Cottages, Loughlinstown, Co Dublin
Description: Permission for 3 bedroom detached bungalow and all associated site works.	
Final Decision on Application	Grant permission
Decision Date	24-Jan-2019

Planning Application Reference	**DZ19A/0863**
Development address	Site is generally bounded by Lehaunstown Lane to the west, Carrickmines Stream (partly) to the south and, Cabinteely Stream (partly) to the east and is located within the townland of, Brennanstown, Dublin 18
Description: Permission for a residential development at a site measuring approximately 8.24 ha in area. The development will consist of the construction of 342 new residential dwellings, comprising 189 no. apartments arranged in 4 blocks (all 4-storeys in height and comprising 15 x 1 bed units and 174 x 2 bed units); 28 No. duplex units (comprising 14 x 2 bed units and 14 x 3 bed units); 60 No. triplex units (comprising 40 x 2 bed units and 20 x 3 bed units) and 65 No. 4 bedroom houses	

(comprising a mix of detached, semi-detached and terraced house types) together with a Childcare Facility at ground floor level within Block C with a floor space of 249sq.m. (GFA), 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 (also known as Q to P3), measuring approximately 390 m in length to include the construction / completion of the part approved 3-span bridge (Option 1) over the Cabinteely Stream under Planning Ref. DZ16A/0587 (ABP Ref. PL06D.247915). It is noted that a portion of Road Q to P3 was also granted under Planning Ref. D15A/0385 (as amended by DZ19A/0622) and the road may be constructed under that permission. Permission is sought for the inclusion and utilisation of a temporary haul road (to be constructed by the Dún Laoghaire-Rathdown County Council Contractor as part of the Druid's Glen Road Q - P3 east of the Cabinteely Stream (up to a point CH 100m as defined on ATKINS Drawing No. 0101A). This temporary haul route would connect directly to the N11 via the proposed Junction Q and includes for a culvert, or temporary bridge crossing at the Cabinteely Stream. The proposed temporary haul route comprises a 4m wide unbound haul road approximately 160m long, and will be constructed from approximately CH 560m on Druid's Glen Road to a proposed site compound area to the west thereof measuring approximately 30m wide and up to 45m long in plan area and will be situated at, or above the 30m site contour. This site compound will be made available to the Dún Laoghaire-Rathdown County Council Contractor building the Druid's Glen Road from N11 to point P3. Following the sectional completion of Druid's Glen Road, the proposed temporary haul road will be available to accommodate construction traffic associated with the appointed contractor(s) responsible for the development of the subject lands (as per any planning permission granted). It is proposed that this temporary haul route would remain available until the permanent bridge crossing the Cabinteely Steam becomes operational. The development will also include the construction of: ancillary waste storage facilities; ancillary waste recycling collection area; associated car parking (total of 565 no. car parking spaces, comprising 257 spaces at basement level and 308 surface level spaces (including 9 no. ancillary car parking spaces in connection with the childcare facility); bicycle parking spaces (total of 492 no. cycle parking spaces, comprising 156 basement level spaces and 336 surface level spaces); a number of ancillary public open spaces; provision of boundary treatments; lighting; associated hard and soft landscaping (including changes in site levels and playground provision); associated infrastructural and site development works above and below ground (including 2 No. permanent water attenuation ponds and 1 no. temporary attenuation pond). The application site is located within the Cherrywood Strategic Development Zone.	
Final Decision on Application	Grant permission
Decision Date	14-Jan-2020

Planning Application Reference	**DZ19A/0797**
Development address	Lands at Loughlinstown Drive (0.5685ha), Loughlinstown, Co. Dublin comprising Loughlinstown Industrial Estate and part of HSE Health Centre
Description: Permission for development. The development will consist of the demolition of all existing buildings (1985sq.m) on site and the construction of a 4 storey Primary Care Centre and General Practitioner (GP) Surgery with a gross floor area of 4,267sq.m. The accommodation will consist of treatment rooms, consultation rooms, meeting rooms, staff facilities, ancillary offices and ancillary accommodation over 4 floors, with a maximum height of 16.955m. The building also includes an own door pharmacy (101sq.m) at ground floor. Permission is also sought for an ESB substation and switch room (35sq.m), bin store (19sq.m), a vehicular drop off area the main building entrance, 61 no. surface carparking spaces, 4 no. Motorcycle parking spaces, landscaping, lighting, external signage and all associated site and development works. Vehicular access/egress to the proposed development is via two points off Loughlinstown drive (one existing access to be retained and one proposed access point).	
Final Decision on Application	Grant permission
Decision Date	07-Dec-2020

The potential for cumulative impact of the plans and projects identified above are assessed in the Screening section below in combination with the currently proposed project.

5 Screening Assessment

5.1 Characteristics of the Proposed Development

To determine whether the characteristics of the proposed development are likely to have significant impacts on the environment, the following questions are answered in Table 5.1, following guidelines set out in Guidance for Consenting Authorities regarding Sub-Threshold Development (DoEHLG 2003) and in the OPR Practice Note PN02 (2021).

Table 5.1: Characteristics of the proposed development

Characteristics of the Proposed Development - Screening Questions		**Comment**
Could the scale (size or design) of the proposed development be considered significant (including any demolition works)?		No. The proposed development includes defences over a total length of 1.37km of river channel, with the proposed structures composed of small individual infrastructural elements such as culverts, flood walls, and trash screen on short individual sections of the river. Small sections of wall and an old trash screen will be removed; this is also not significant.
Considered cumulatively with other adjacent proposed developments, would the size of the proposed development be considered significant?		No. The proposed development has been assessed cumulatively with other adjacent proposed developments within this assessment and in the AA Screening. Most development applications in the surroundings are for alterations or extensions. A larger residential development at Beech Park is partially within the catchment area. However, none of the proposed defences are adjacent to the development, and there will be no direct or indirect impact on the development. Given the nature of the proposed development, and scale and location of surrounding developments, the cumulative effect is not expected to be significant.
Will the proposed development utilise a significant quantity of natural resources, in particular land, soil, water or biodiversity?		No. The proposal will not require any water abstraction or diversion, nor will it require large amounts of excavation. Limited tree removal will be required at a number of locations. These are isolated or small numbers of individual trees, and will not be a significant quantity; the AIA for the proposed development concluded that the impact on trees would not be significant. This impact can also be mitigated against by remedial planting following the construction phase.
Will the proposed development produce a significant quantity of waste, during construction, operation, or decommissioning?		No. Small amounts of construction waste will be produced during the construction phase of the development. During this phase, should excavated materials require off-site removal, they will be tested to determine the most appropriate means of disposal, and disposed of at appropriately licenced or permitted sites. This will be detailed in the contractor's operating plans. Operational waste will not be produced. On decommissioning, a non-significant amount of waste will be created from the proposed walls. This will be disposed of, or the materials reused where possible.
Will the proposed development create a significant amount or type of pollution?		No. Temporary air and noise pollution may occur during the construction phase, but will be mitigated against by operational plans devised by the contractor. These will not be significant.

		Once operational, the proposed development will not produce pollution.
Will the proposed development create a significant amount of nuisance?		No. During construction, some noise will be created, however this will be temporary and short-term. Construction works will be limited to certain times of day to avoid nuisance to local residences. A temporary disruption to train services is possible during the construction of the culvert beneath the railway. This will be done following consultation with Iarnród Eireann, and will be programmed to cause minimum disruption to services. Once operational, the proposed development will not produce any nuisance.
Will there be a risk of major accidents having regard to substances or technologies used?		No. The risks of this development will be those typically associated with normal construction practices. Construction machinery will be used during the construction phase and will be operated by licensed contractors, and following best practice guidance. These measures will help to ensure that no major accidents occur. Particular health and safety controls will be put in place in consultation with Iarnród Eireann during works around the railway culvert.
Will there be a risk of natural disasters which are relevant to the project, including those caused by climate change?		No. The proposed development is designed to meet the 100-year flood event SOP. The measures have been designed to be adaptable to climate change. Risk of natural disasters to the project is therefore low.
Will there be a risk to human health (for example due to water contamination or air pollution)?		No. Any potential risk to human health will be as a result of the construction phase of this project. All contractors will be subject to best practice methodologies and risk assessments in order to minimize any risk to human health.
Would any combination of the above factors be considered likely to have significant effects on the environment?		No. The development is relatively small scale. Environmental impacts are predictable and easily mitigated through the use of best practice guidelines during the construction phase. As such, significant impacts on the environment are not expected as a result of the proposed development.

Conclusion: The characteristics of the proposed development are not considered likely to result in a significant impact on the environment by virtue of its size, nature or operational activities.

Reasoning: The proposed development will see a short stretch of the Deansgrange Stream subject to flood defence measures. The proposed defences are small in scale and will require a small quantity of resources. The proposals will not cause a significant amount of pollution or nuisance.

5.2 Location of the Proposed Development

The following questions are answered below in Table 5.2 to determine whether the geographical location of the proposed development can be considered ecologically or environmentally sensitive.

Table 5.2: Location of the proposed development

Location of the Proposed Development - Screening Questions		**Comment**
Has the proposed development the potential to impact directly or indirectly on any site designated for conservation interest (e.g., SAC, SPA, pNHA)?		No. The AA Screening for the site concluded that there are no Natura 2000 sites likely to be directly or indirectly impacted by the development.
Has the proposed development the potential to impact directly or indirectly on any habitats listed as Annex I in the EU Habitats Directive?		No. The AA Screening and EcIA for the site found no potential impacts on habitats listed as Annex I in the EU Habitats Directive.
Has the proposed development the potential to impact directly or indirectly on any habitats listed as Priority Annex I in the EU Habitats Directive?		No. The AA Screening for the site found no potential impacts on habitats listed as Priority Annex I in the EU Habitats Directive.
Has the proposed development the potential to impact directly or indirectly on any species listed as Annex II in the EU Habitats Directive?		No. The AA Screening considered all Qualifying Interests of Natura 2000 sites within the scheme's Zone of Influence and found no potential impacts on species listed as Annex II. The EcIA considered other Annex II species which are not QIs of relevant Natura 2000 sites and found there will be negligible impacts on Otter following mitigation measures put in place, and slight negative impacts on fish. No significant impacts on Annex II species are anticipated.
Has the proposed development the potential to impact directly or indirectly on the breeding places of any species protected under the Wildlife Act?		No. An EcIA has been prepared for the proposed development outlining mitigation measures which will ensure no significant impacts to protected species or their breeding places occur.
Has the proposed development the potential to impact directly or indirectly on the existing or approved land use?		No. The proposed development will not impact existing land uses in the area.
Has the proposed development the potential to significantly impact directly or indirectly the relative abundance, availability, quality or regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground?		No. The proposed development will not impact the relative abundance, availability, or regenerative capacity of natural resources.
Has the proposed development the potential to impact directly or indirectly on any protected structures or Recorded Monuments and Places of Archaeological Interest?		No. There are no recorded archaeological features on site or in the near vicinity of the proposed development. It is recommended that during any excavation or site clearance, an archaeologist be present, to identify and allow for recording in situ any archaeological features which are found. Four Record of Protected Structures (RPS) buildings are within the lower sub-catchment, and two are in the upper sub-catchment. Of these, three (the house and entrance at

		Johnstown House, and Hamp House) will be indirectly visually impacted during construction, and during operation for Hamp House only. These will be minor visual impacts and will not impact the amenity value of any structure.
Has the proposed development the potential to impact directly or indirectly on listed or scenic views or protected landscapes as outlined in the County Development Plan?		No. The only listed views within the area are on Wyattville Road, and do not look towards any of the proposed defences.

Conclusion: The location of the proposed development is not considered likely to result in a significant impact on the environment.

Reasoning: The location is not sensitive. There are no Natura 2000 sites or designated ecological sites which will be impacted by the proposed development. The EcIA prepared for the proposed development includes mitigation measures which will mitigate any potential impacts on the ecology of the site. There will be no significant impacts to archaeology or architectural receptors.

5.3 Characteristics of Potential Impacts

The following questions were answered in Table 5.3, in line with Guidance on EIA Screening - June 2001, prepared for the European Commission by ERM (UK), to determine whether the environmental impacts of the development can be considered significant.

Table 5.3: Characteristics of potential impacts

Characteristics of Potential Impacts - Screening Questions		Comment
Will there be a large change in environmental conditions?		No. The proposed works involving culverts will replace or extend existing structures, while the Glenavon Park works will see limited level changes in the existing park. The proposed walls at Killiney Hill Road are short in extent. The existing environment of the stream through the site will be to a similar extent and condition post-development.
Will new features be out of scale with the existing environment?		No. Most of the proposed measures will be beneath the surface (culverts) or within the stream (screen). The proposed walls at Killiney Hill Road extend over a small area and will be within and overhung by vegetation.
Will the effect be particularly complex?		No. The primary environmental impacts are expected to occur during the construction phase, and will be mitigated by operational plans devised by the on-site contractor following best practice guidance and the measures included in the EcIA.
Will the effect extend over a large area?		No. Given the small scale and nature of the proposed development this is highly unlikely. The effect will be mostly confined to the site areas and immediately adjacent areas.
Will there be any potential for trans-frontier impacts?		No.
Will many people be affected?		Only residents and business owners in the local vicinity will be affected by the construction phase, however such impacts will be temporary and associated primarily with construction traffic travelling to and from the site. Once operational, people in the vicinity of the defences will experience visual minor to negligible visual impacts.
Will many receptors of other types (fauna and flora, businesses, facilities) be affected?		No. Impacts on other receptors are expected to be temporary and limited to the construction phase. Once operational, impacts to other receptors are not expected.
Will valuable or scarce features or resources be affected?		No. There will be no effect on scarce features or resources.
Is there a risk that environmental standards will be breached?		No. The appointed contractor will be contractually obligated to follow environmental guidance and standards, which will be outlined in the contract documents and operating plans devised for construction.
Is there a risk that protected sites, areas, features will be affected?		No.
Is there a high probability of the effect occurring?		No.
Will the effect continue for a long time?		No. Potential impacts would be brief to temporary, only occurring occasionally within the construction phase of the development or in the case of a breach of

		environmental standards. Once operational, no significant impacts will occur.
Will the effect be permanent rather than temporary?		Potential negative impacts would be temporary. The exception is minor visual impacts resulting from the proposed flood walls, which will not be significant. There will be positive permanent effects from flood protection of public spaces and properties.
Will the impact be continuous rather than intermittent?		No. Potential impacts would be intermittent. The exception is minor visual impacts resulting from the proposed flood walls, which will not be significant.
If it is intermittent, will it be frequent rather than rare?		No. Potential impacts would be rare, occurring only in the case of accidental breach of environmental standards during the construction phase.
Will the impacts be irreversible?		No.
Will it be difficult to avoid, or reduce or repair or compensate for the effect?		No. Mitigation measures to be put in place during construction will be sufficient to avoid or reduce potential impacts.

Conclusions: The characteristics of the potential impacts as a result of the proposed development are unlikely to be significant and are easily mitigated.

Reasoning: The potential impacts from this development would be primarily during the construction phase. It is easy to predict these impacts and mitigate them through the use of standard environmental procedures.

6 Conclusions and Recommendations

The purpose of this report was to identify whether there is a need under The Planning and Development Act 2000, as amended, for an EIAR for the proposed Flood Relief Scheme at the Deansgrange Stream, Dublin.

The proposed scheme consists of the installation of a 1200mm diameter tunnelled overflow culvert underneath the DART railway, the provision of additional storage in Glenavon Park, a series of flood containment walls upstream of the Killiney Hill Road bridge, including upgrading the parapet of the existing bridge, upgrade works in the existing culvert at Granville Road, the upgrade of the existing screen at the entry of the Seafield culvert, installation of additional coarse screens and the provision for future adaptation of all the measures listed to the impact of climate change on the modelled flood levels.

It was determined that the proposed development does not fall under Schedule 5 (Parts 1 and 2) of the 2001 Regulations, when having regard to Schedule 7. As such, an EIAR has not been automatically triggered. To determine whether the development may fall under the category of Sub-threshold development, with the potential to give rise to significant environmental effects, a screening exercise was undertaken.

During construction, typical impacts such as noise, dust, traffic disruption, and the generation of small amounts of waste are to be expected. These are typical construction phase impacts, and will be mitigated against by environmental operating plans devised by the on-site contractor, following best practice guidance and the mitigation measures outlined in the EcIA.

An AA Screening Report completed by JBA for the proposed development determined that no likely significant impacts are expected as a result of the proposed development. This is due to the small size of the development and the distance and lack of pathways to Natura 2000 sites.

An EcIA prepared for the proposed development outlines mitigation measures required during construction for the protection of ecology and water quality. These will be incorporated into the contractor's operating plans and will ensure that no significant impacts occur to ecology as a result of the proposed development.

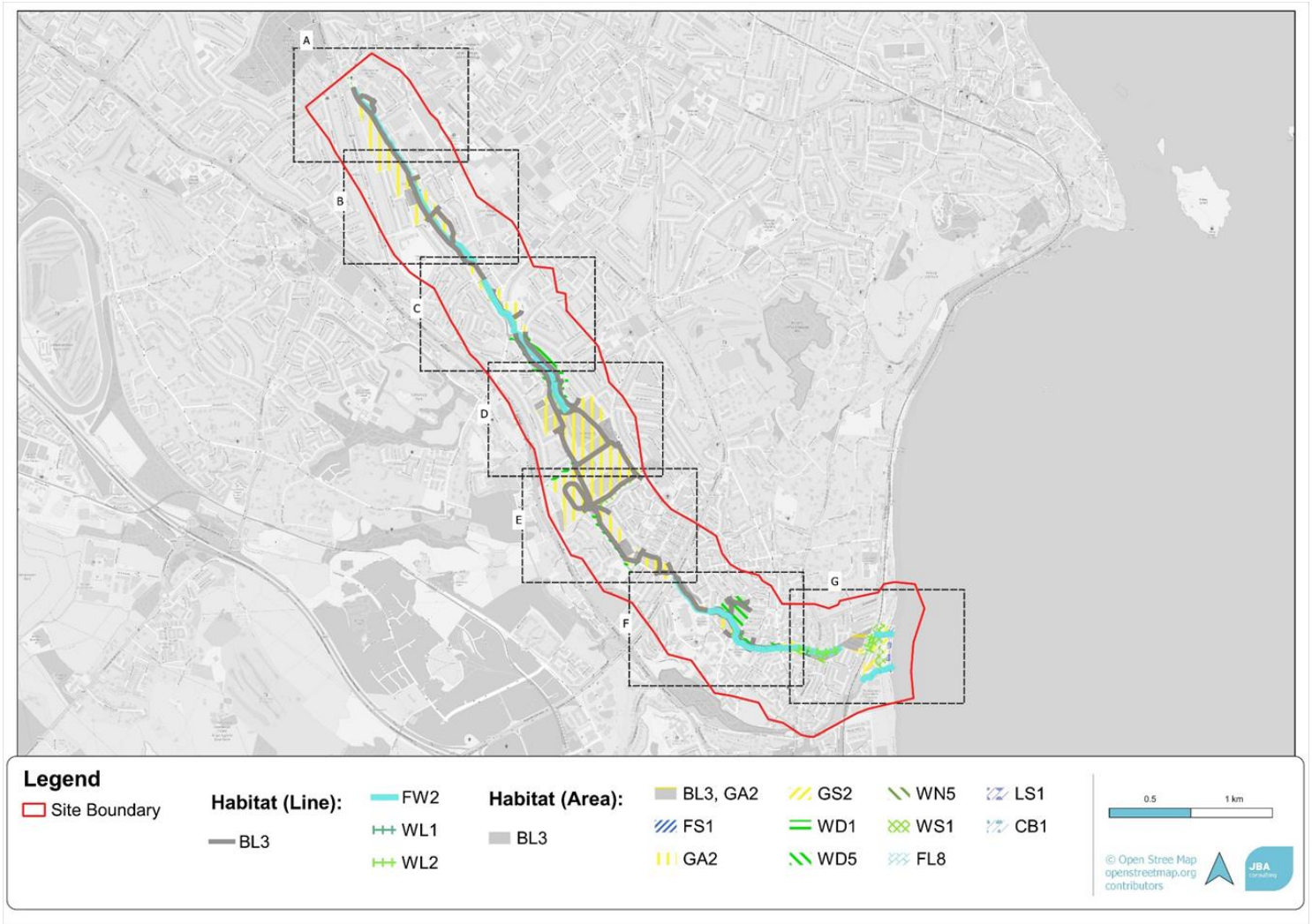
The proposed development requires instream works at several locations. This could result in impacts to surface water quality if not managed correctly. The mitigation measures outlined in the EcIA accompanying the application will ensure that no significant impacts to water occur.

Once operational, the proposed development is not expected to have significant impacts. Positive impacts to Population and Human Health can be expected due to the improved level of flood protection.

It has been concluded that the proposed development does not fall under the category of sub-threshold development, and thus an EIAR is not required.

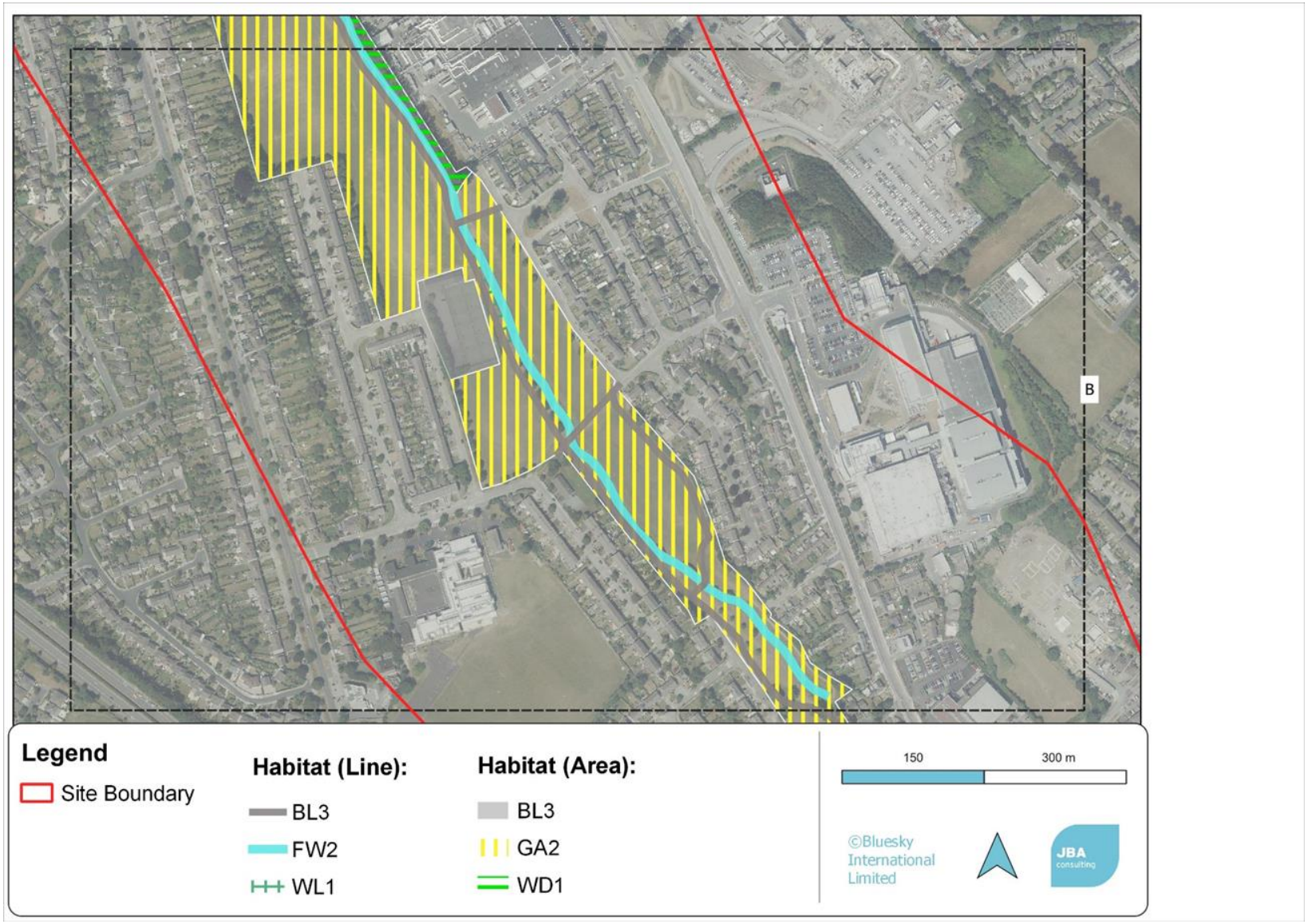
The overall conclusion is based on the details of the scheme available at the time of preparation of this report. If the extent of the scheme or the construction methods for the scheme are changed then the EIA Screening assessment should be reviewed.

Appendix A

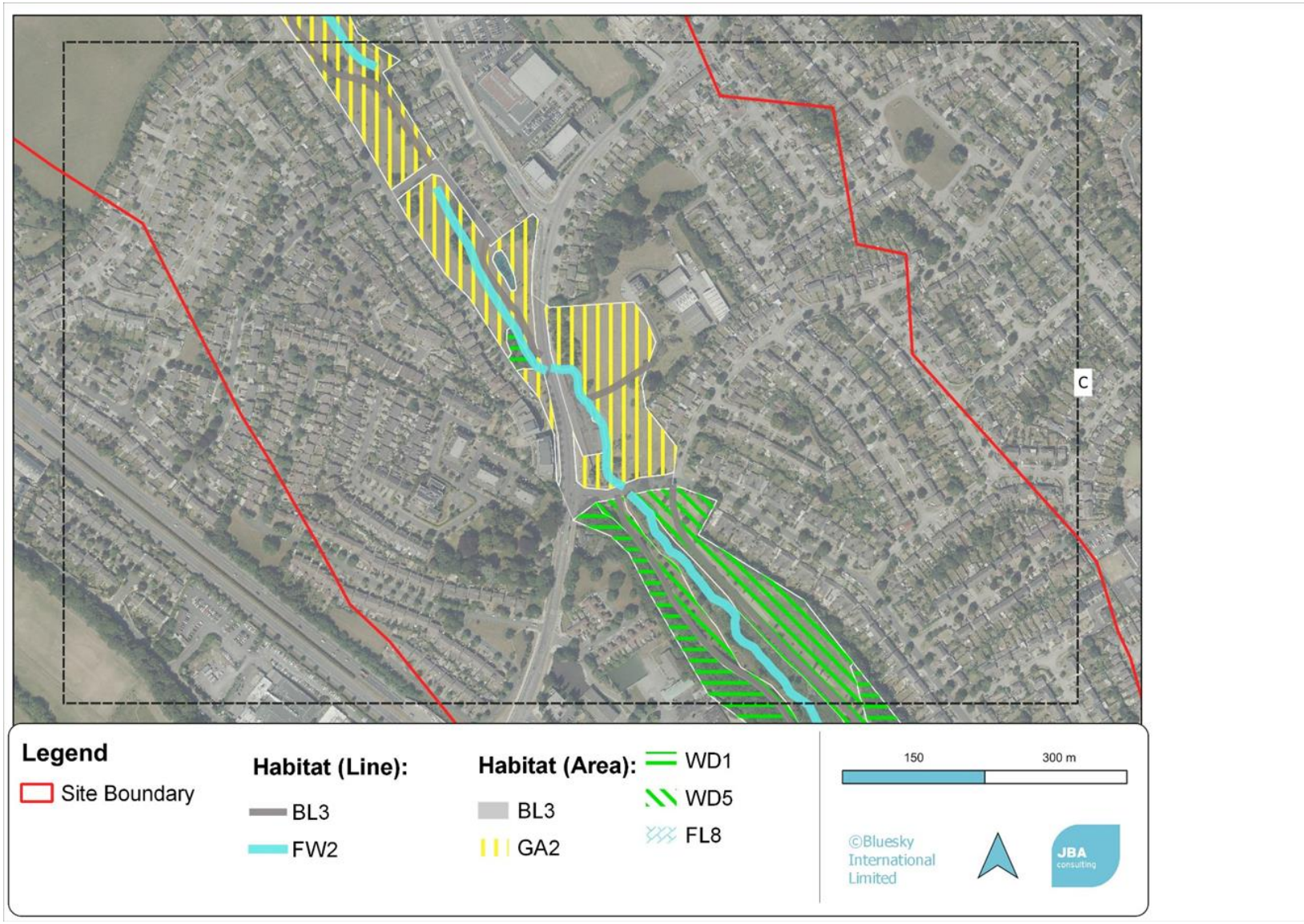


A.1 Habitat Maps Overview

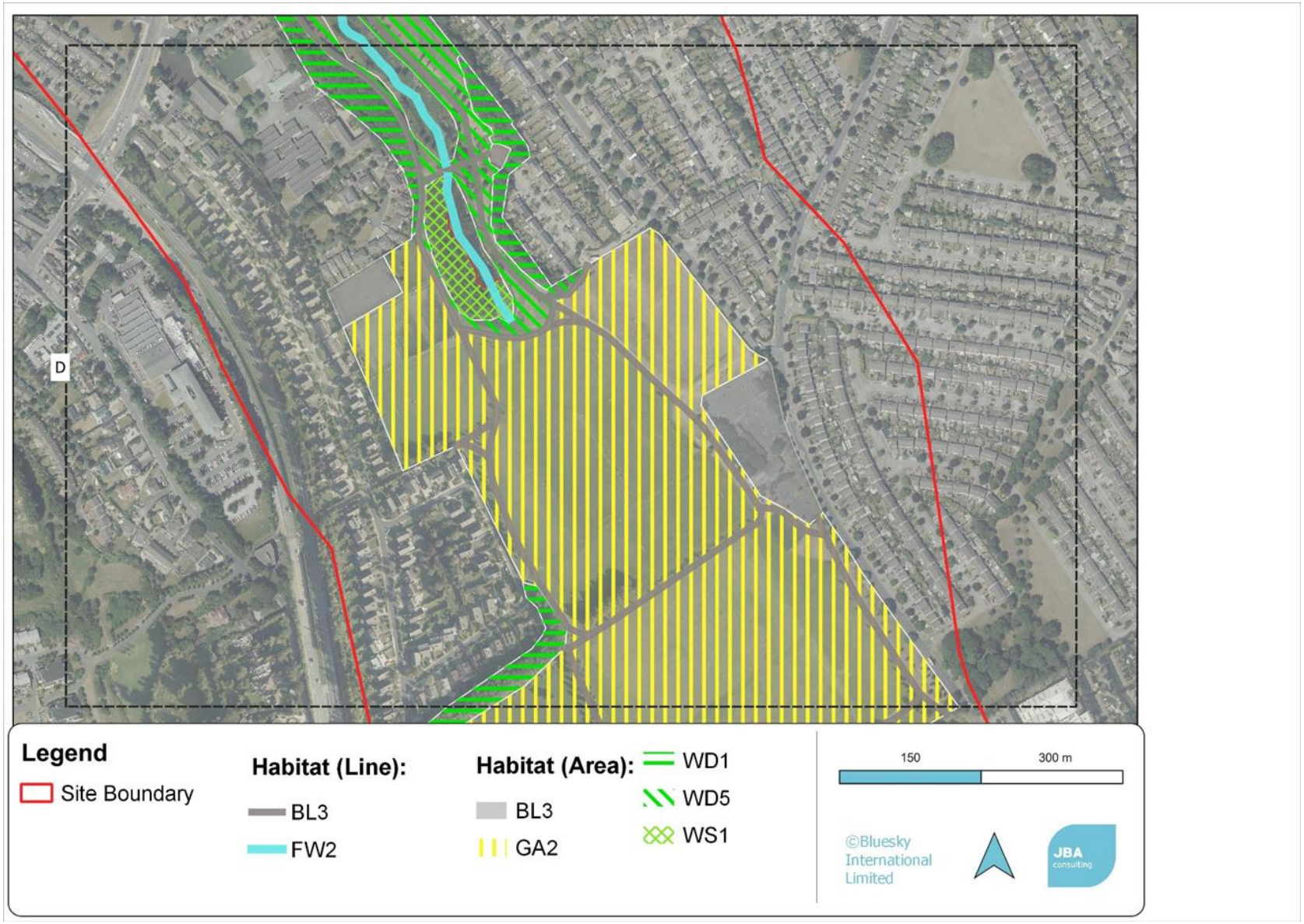
A.2 Habitat Map A



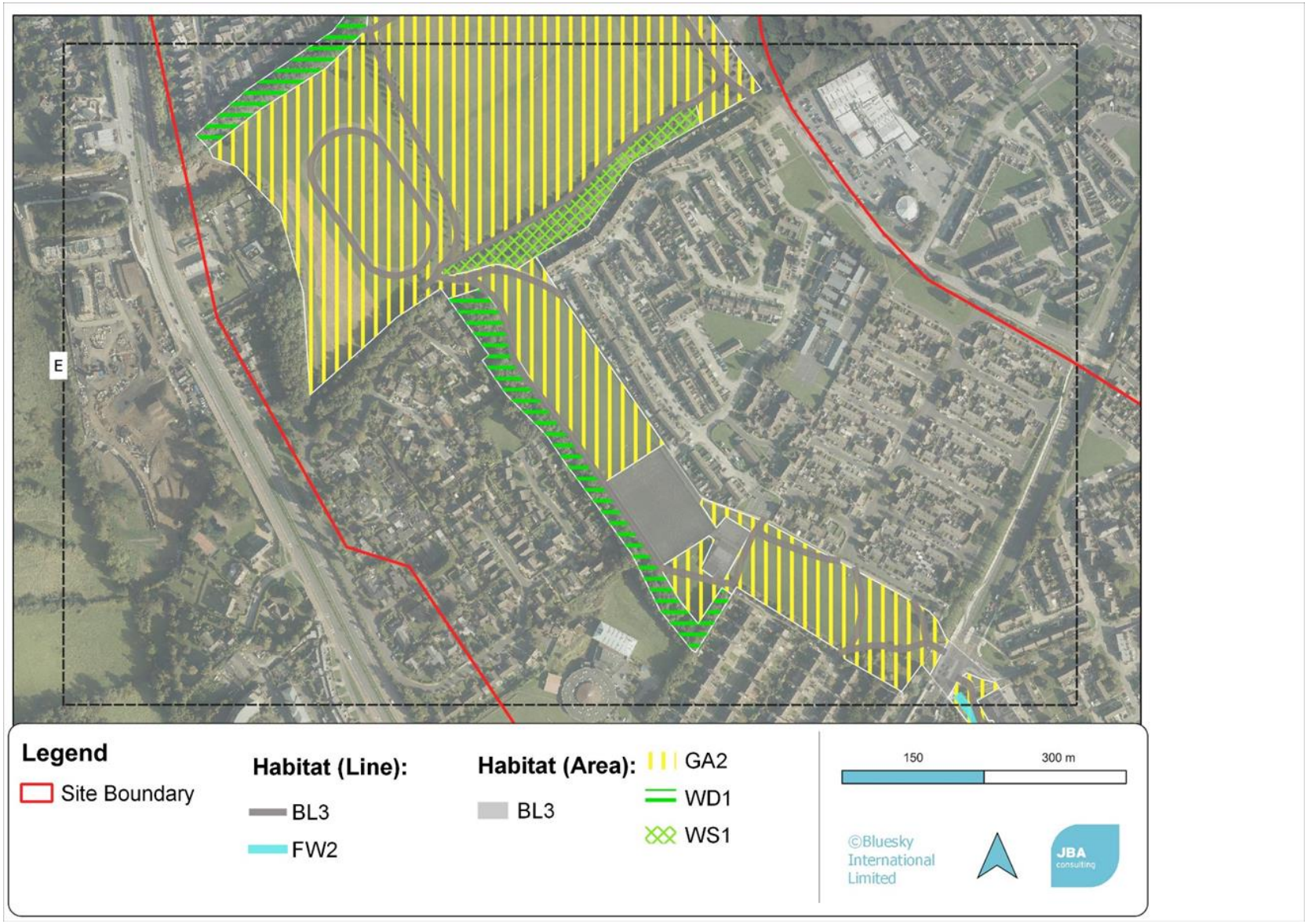
A.3 Habitat Map B



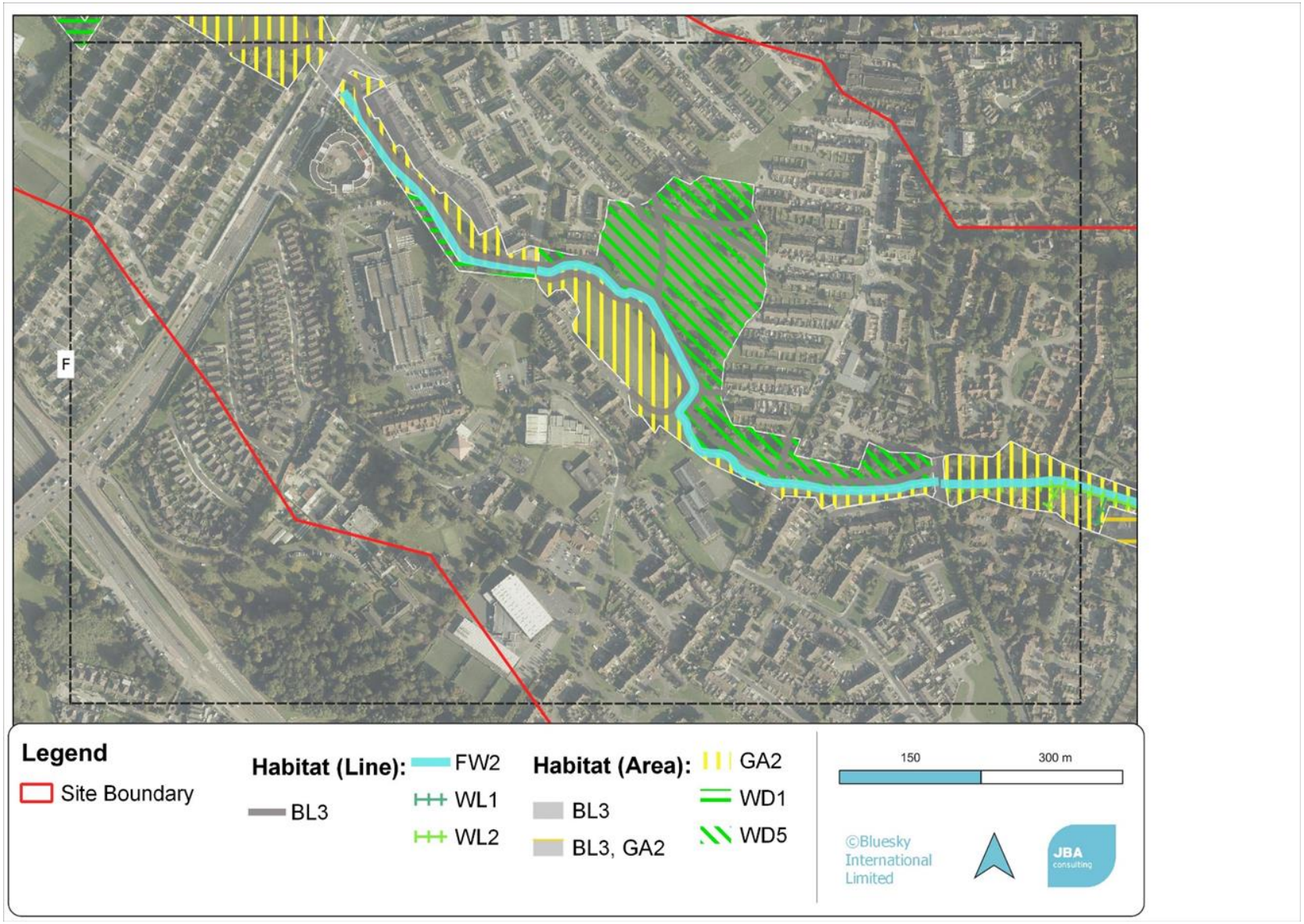
A.4 Habitat Map C



A.5 Habitat Map D



A.6 Habitat Map E



A.7 Habitat Map F

A.8 Habitat Map G

References

Arbor-Care Ltd (2023) Deansgrange Flood Relief Scheme Arboricultural Impact Assessment, February 2023

Dún Laoghaire-Rathdown County Council (2022) 'Dún Laoghaire-Rathdown County Development Plan 2022-2028'

EPA (2022) Guidelines on the Information to Be Contained in Environmental Impact Assessment Reports Environmental Protection Agency

EPA (2020) EPA Maps [online], Next Generation EPA Maps, available: https://gis.epa.ie/EPAMaps/ [accessed 16 Jan 2022].

Fossitt, J.A., (2000) A Guide to Habitats in Ireland, Heritage Council of Ireland series, Heritage Council/Chomhairle Oidhreachta: Kilkenny.

GSI (2020) 'Geological Survey Ireland Website', available: www.gsi.ie.

NRA (2009) Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes, National Roads Authority, available: http://www.tii.ie/technical-services/environment/planning/Ecological-Surveying-Techniques-for-Protected-Flora-and-Fauna-during-the-Planning-of-National-Road-Schemes.pdf

OPW, RPS (2016) Eastern CFRAM Study - UoM10 Preliminary Options Report, IBE0600Rp0039, Office of Public Works, available: http://eastcfram.irish-surge-forecast.ie/wp-content/uploads/2011/10/IBE0600Rp0039_HA10-Preliminary-Options-Report_F03-rev1.pdf [accessed 13 Feb 2020].

Smith, G.F., O'Donoghue, P., O'Hora, K., Delaney, E., 2011. 'Best practice guidance for habitat survey and mapping', The Heritage Council: Ireland

The Heritage Council (2020) Heritage Maps [online], Heritage Maps, available: https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html [accessed 19 Feb 2020].

Offices at:
Dublin
Limerick
Cork
Castlebar

JBA Registered Office
24 Grove Island
Corbally, Limerick
Ireland
+353 61 345463
info@jbaconsulting.ie
www.jbaconsulting.ie

JBB Registered Office
Classon House
Dundrum Business Park
Dundrum, Dublin 14
Ireland
+353 1 485 1400
info@jbbarry.ie
www.jbbarry.ie