Brownsbarn Site, Citywest, Co. Dublin

Screening for Appropriate Assessment

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Project number: 2020s1431

Exeter Ireland Property Ltd.

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Revision History

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Contract

This report describes work commissioned by Neill McGarry, on behalf of Exeter Ireland Property Limited, by an email dated 06/11/2020. William Mulville of JBA Consulting carried out this work.

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Purpose

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Abbreviations

AA	Appropriate Assessment
DoEHLG	Department of Environment, Heritage and Local Government
EC	European Communities
EPA	Environmental Protection Agency
EU	European Union
GIS	Geographical Information Systems
IROPI	Imperative Reasons of Over-riding Public Interest
NBDC	National Biodiversity Data Centre
NPWS	National Parks and Wildlife Service
PM	Particulate matter
QI	Qualifying Interest
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SPA	Special Protection Area
WFD	Water Framework Directive
WWTP	Waste Water Treatment Plant

1 Introduction

1.1 Background

JBA Consulting Ireland Ltd. has been commissioned by Exeter Ireland Property Limited to undertake a Screening for Appropriate Assessment in relation to a proposed development at Brownsbarn, Citywest, Co. Dublin.

1.2 Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000 sites. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79 / 409 / EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*"

Article 6(4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"*If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

Where the site concerned hosts a priority natural habitat type and / or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The requirements of Articles 6(3) and 6(4) of the Habitats Directive have been transposed into Irish legislation by means of the Habitats Regulations, 1997 (S.I. No. 94 of 1997) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 / 2011).

1.3 Appropriate Assessment Process

Guidance on the Appropriate Assessment (AA) process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DEHLG) (2009). These guidance documents identify a staged approach to conducting an AA, as shown in Figure 1-1 overleaf.

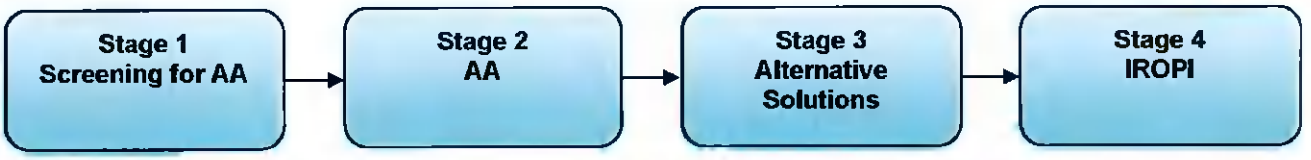


Figure 1-1:The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009).

1.3.1 Stage 1 - Screening for AA

The initial, screening stage of the Appropriate Assessment is to determine:

- whether the proposed plan or project is directly connected with or necessary for the management of the European designated site for nature conservation
- if it is likely to have a significant adverse effect on the European designated site, either individually or in combination with other plans or projects

For those sites where, potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

1.3.2 Stage 2 - AA

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

1.3.3 Stage 3 - Alternative Solutions

Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

1.3.4 Stage 4 - IROPI

Where adverse impacts of a plan or project on the integrity of Natura 2000 sites are identified and no alternative solutions exist, the plan will only be allowed to progress if imperative reasons of overriding public interest can be demonstrated. In this case compensatory measures will be required.

The process only proceeds through each of the four stages for certain plans or projects. For example, for a plan or project, not connected with management of a site, but where no likely significant impacts are identified, the process stops at stage 1. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site.

This report is in support of a Stage 1 Screening for Appropriate Assessment.

1.4 Methodology

The Screening for Appropriate Assessment has been carried out with reference to the following documents:

- DoEHLG (2009 rev 2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG 2009).
- European Communities (EC) (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission 2000).
- EC (2002) 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, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission et al. 2002).

- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission (European Commission 2007).
- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater, and Marine. (Chartered Institute of Ecology and Environmental Management, 2018)
- Fossitt, J. (2000). A Guide to Habitats in Ireland. The Heritage Council, Kilkenny (Fossitt 2000).

Data has been collected from a range of sources, including:

- NPWS website (www.npws.ie);
- River Basin Management Plans (RBMP) (www.wfdireland.ie);
- NBDC Biodiversity Maps (http://maps.biodiversityireland.ie/#/Map);
- Catchments (www.catchments.ie)

1.4.1 Limitations and Constraints

The screening assessment necessarily relies on some assumptions and it was inevitably subject to some limitations. These would not affect the conclusion, but the following points are recorded in order to ensure the basis of the assessment is clear:

- Information on the works and conditions on site are based on current knowledge at the time of writing. Changes to the site since surveys were undertaken cannot be accounted for.
- This assessment is based on the methodology for proposed works as described in this report. Where changes to methodology occur, an ecologist will need to be consulted to determine if the changes need reassessment.
- Adverse weather can cause delays to the schedule and alter the timing of works. This has been accounted for using a worst-case scenario where necessary.
- Floral species identification was limited given the timing (February) of the ecological walkover survey.

2 Project Description

2.1 The 'Project'

The proposed development is not directly connected with or necessary to the management of any Natura 2000 site and may have potential adverse impacts upon the Natura 2000 sites identified in Section 4. Therefore, the proposed project is subject to the requirements of the AA process.

2.2 Site location

The proposed development will be located in south-west Brownsbarn area, with the N7 running along the site's southern boundary. The N82 is located to the east of the site, providing access to the site. A tributary of the River Camac flows along the western boundary of the site (Figure 2-1).

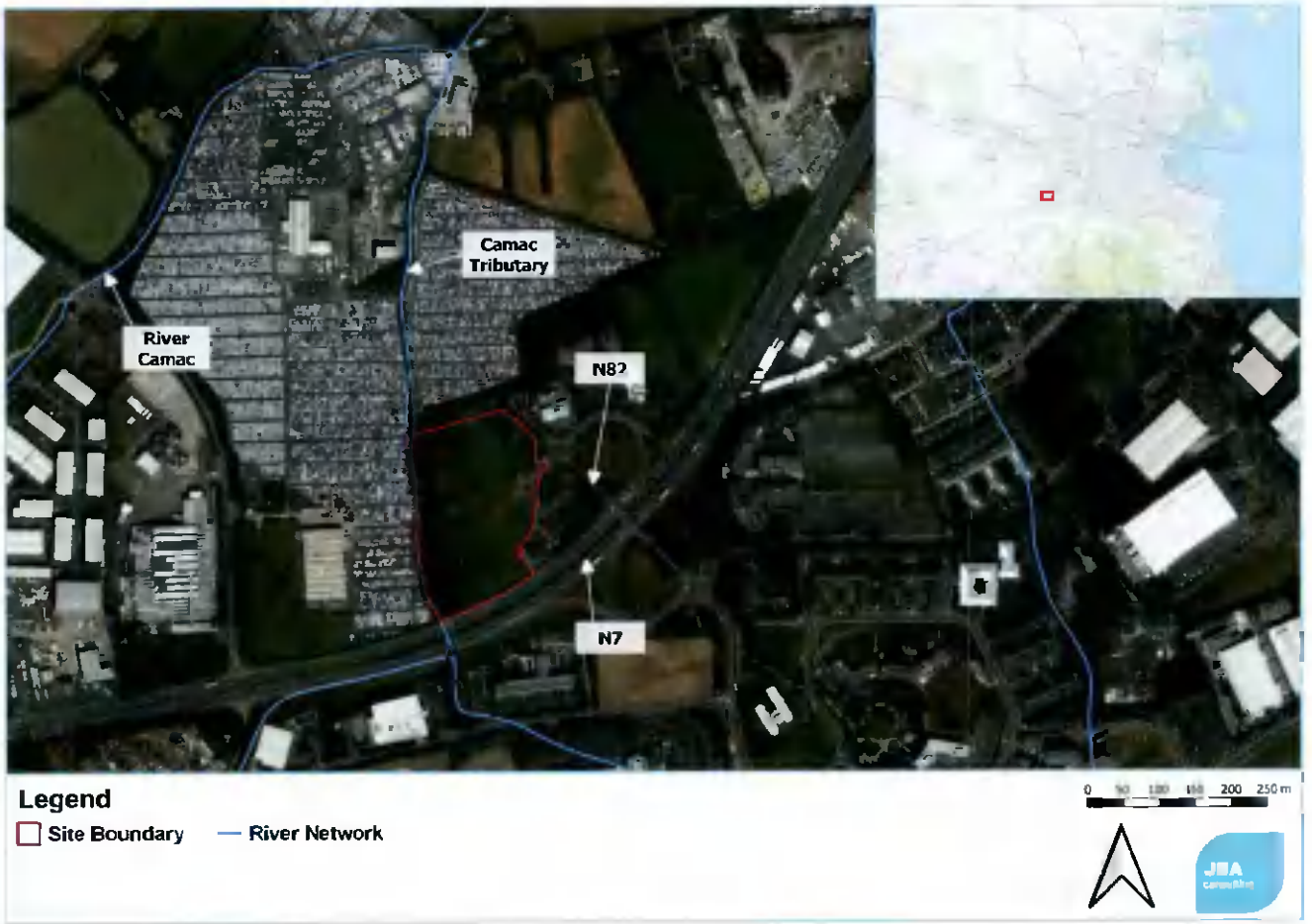


Figure 2-1: Site location (ESRI: Satellite Imagery 2021; OSM 2021)

2.3 Proposed project

Exeter Ireland Property IV B Limited intend to apply for permission for development at this 4.04 Ha site at Brownsbarn, Citywest Campus, Dublin 24. The lands are bounded to the south by the N7 Naas Road, to the north and west by the National Distribution Centre and to the east by Brownsbarn Drive and the Royal Garter Stables, a Protected Structure (RPS Ref. 261).

The development will comprise the construction of 2 No. warehouses with ancillary office and staff facilities and associated development as follows: Unit 1 will have a maximum height of 16.35 metres with a gross floor area of 8,156 sq m including a warehouse area (7,397 sq m), ancillary office areas (362 sq m) and staff facilities (397 sq m);

and Unit 2 will have a maximum height of 15.35 metres with a gross floor area of 5,990 sq m including a warehouse area (5,031 sq m), ancillary office areas (536 sq m) and staff facilities (423 sq m).

The development will also include: vehicular access/egress routes to the subject site via the existing roundabout and access road; plus alteration to the existing access arrangements to the subject lands to facilitate safe traffic flow to/from the proposed facilities; pedestrian access; 109 No. car parking spaces; bicycle parking; HGV Parking; HGV yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substation; sprinkler tanks; pump houses; and all associated site development works above and below ground.

The development's site layout and drainage plans can be viewed in Appendix A and B, respectively.

2.3.1 Project Area of Influence

The project will primarily affect the site only, but a wider area of influence is used for impacts relating to noise disturbance (1km), air pollution (10km), surface water (15km), with an additional transitional waters connection buffer to coastal areas; and any supporting habitat for SAC/SPA species (15km).

3 Existing Environment

3.1 Baseline conditions

The ecological walkover survey was conducted on 10th of February 2021 by JBA Ecologist William Mulville. The site is currently a greenfield site, with a mixture of recolonising bare ground, dry meadow grassland, scrubland and woodland habitats.

3.2 Habitats

The habitats recorded during the ecological walkover are listed in Table 3-1 below and displayed in Figure 3-1 overleaf.

Table 3-1: List of habitats recorded on site

Habitat	Fossitt Code
Stone walls and other stonework	BL1
Buildings and artificial surfaces	BL3
Recolonising bare ground	ED3
Eroding / upland rivers	FW1
Dry meadows and grassy verges	GS2
Mosaic: Dry meadow and grassy verges / Scrub	GS2 / WS1
(Mixed) broadleaved woodland	WD1
Scrub	WS1
Immature woodland	WS2

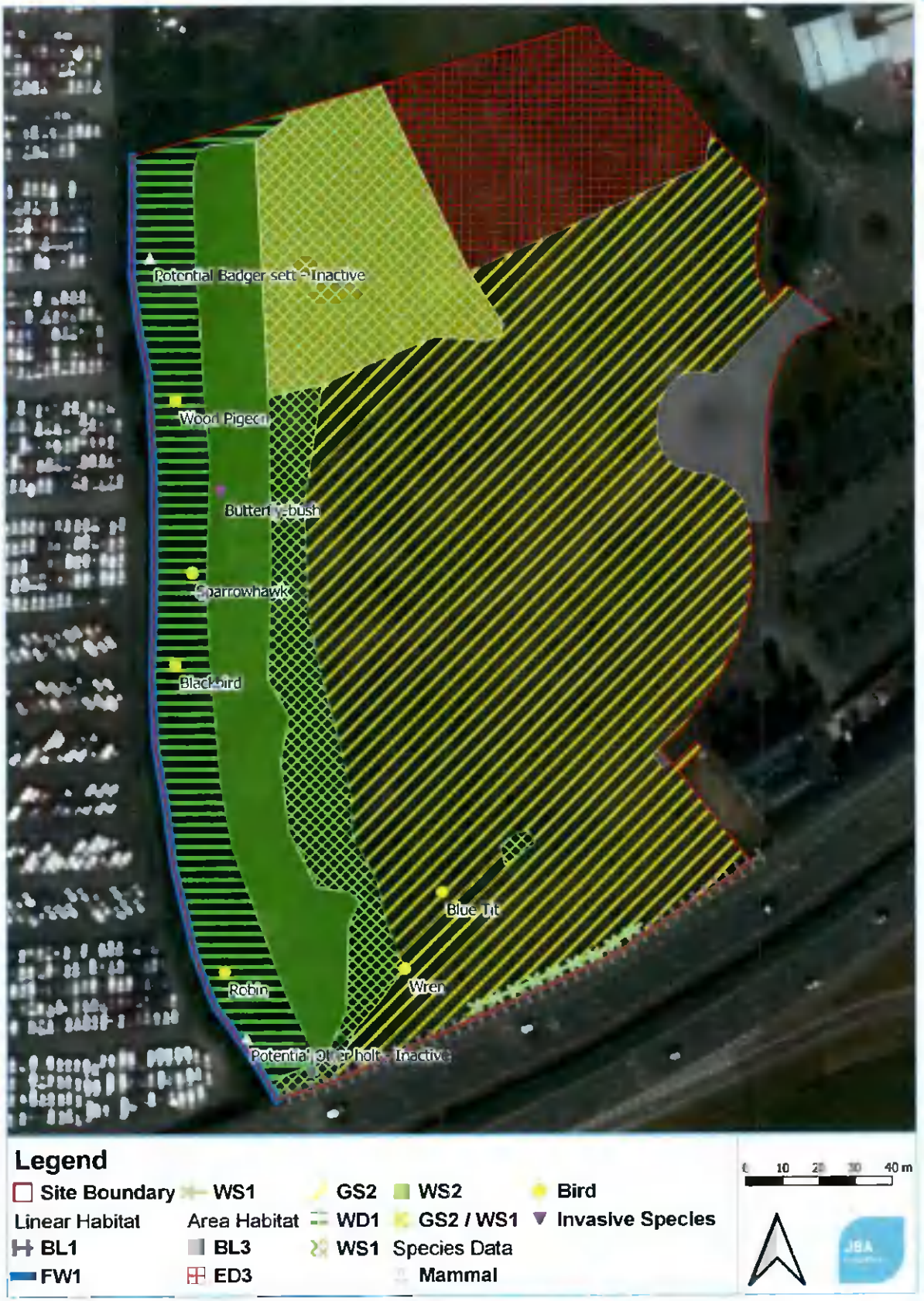


Figure 3-1: Habitat Map (ESRI: Satellite Imagery 2021)

3.2.1 Stone walls and other stonework (BL1)

This habitat consists of the southern boundary wall that runs parallel to the N7. This old stone wall hosts Common Polypody *Polypodium vulgare* (Figure 3-2), as well as moss species.

Figure 3-2: Common Polypody on the southern boundary wall

3 2.2 Buildings and other artificial surfaces (BL3)

This small artificial habitat, situated in the south-west corner of the site, consists of a small concrete area, which allows access to underground utility services.

3 2.3 Recolonising bare ground (ED3)

The north-east corner of the site is dominated by recolonising bare ground habitat. This area is in the process of being recolonised by dry grassland and scrub species. Floral species recorded in this habitat included Cock's Foot *Dactylis glomerata*; Vetch. *Vicia* spp.; Ribwort Plantain *Plantago lanceolata*; False Oat-grass *Arrhenatherum elatius*; Thistle. *Cirsium* spp.; Willowherb *Epilobium* spp.; and Bramble *Rubus fructicosus* agg.

3 2 4 Eroding / upland rivers (FW1)

This habitat refers to the tributary of the River Camac which flows along the western boundary of the site (Figure 3-3 overleaf). While the stream has been somewhat modified some natural riffle and pool features with varying substrate remain in channel. Floral species recorded in-stream and along its banks included Fool's Watercress *Apium nodiflorum*; Water Plantain *Alisma plantago-aquatica*; Hart's Tongue fern *Asplenium scolopendrium*; Ivy *Hedera hibernica*; and Bramble.

Figure 3-3: Camac tributary flowing along the western boundary of the site

3 2.5 Dry meadows and grassy verges (GS2)

The proposed site was largely dominated by dry meadow habitat (Figure 3-4). The floral assemblage of this habitat typically comprised of Cock's Foot; False Oat-grass; Vetch.; Ribwort Plantain; Ragwort *Jacobaea vulgaris*; Willowherb.; Hogweed *Heracleum sphondylium*; Thistle .; Dock *Rumex* spp.; Bramble; and saplings of Willow *Salix* spp.; Blackthorn *Prunus spinosa*; Alder *Alnus glutinosa*; Pedunculate Oak *Quercus robur*; and Evergreen (Holm) Oak *Quercus ilex*. Small depressions forming wetter environments also hosted Soft Rush *Juncus effusus*. Blue Tit *Cyanistes caeruleus* were observed utilising this habitat.

Figure 3-4: Dry meadow with scrub-to-immature woodland-to-mature woodland habitat progression

3.2.6 Mosaic: Dry meadows and grassy verges / Scrub (GS2 / WS1)

This mosaic habitat is located in the central northern section of the site. Here habitat succession is taking place as the dry grassland begins its transition into scrubland. This habitat contains the same species as described in the GS2 habitat, but the ratio and general cover of scrub species is now much higher.

3.2.7 (Mixed) broadleaved woodland (WD1)

Running the length of the western site boundary the linear mixed broadleaved woodland is one of the more prominent site features. The woodland is comprised of Alder; Sycamore *Acer pseudoplatanus*; Black Poplar *Populus nigra*; Willow.; Elder *Sambucus nigra*; and Ash *Fraxinus excelsior*; with a floral understorey assemblage of Ground-ivy *Glechoma hederacea*; Ivy; Hogweed; Common Primrose *Primula vulgaris*; Bramble; Cow Parsley *Anthriscus sylvestris*; Nettle *Urtica dioica*; Hart's Tongue-fern; and moss species. This woodland also hosts a potentially inactive Otter *Lutra lutra* holt along the banks of the Camac tributary as well as a potentially inactive Badger *Meles meles* sett (2-entrances). Blackbird *Turdus merula*; Wood Pigeon *Columba palumbus*; Robin *Erithacus rubecula*; and Sparrowhawk *Accipiter nisus* were recorded within the woodland.

3.2.8 Scrub (WS1)

Scrubland habitat was recorded along the southern boundary wall; in patches within the dry meadow; and along the edge of the immature woodland habitat. The floral species assemblages comprised Bramble; Hogweed: Willowherb.; and saplings of Alder; Willow sand Blackthorn.

3.2.9 Immature woodland (WS2)

Habitat succession has resulted in scrub maturing into immature woodland habitat on the edge of established mixed broadleaved woodland. This habitat contains the same species as the scrub habitat, with tree saplings now maturing to height of 4-5 metres. The invasive non-native Butterfly-bush *Buddleja davidii* was recorded within this habitat. Wren *Troglodytes troglodytes* was observed utilising this habitat.

3.3 Protected Flora and Fauna

3.3.1 Flora

No protected floral species were recorded by the JBA Ecologist during the ecological walkover survey of the proposed site. Furthermore, the NBDC shows no record of any protected flora species being present on-site (NBDC, 2021).

3.3.2 Fauna

Mammals (Otter & Badger)

A potential inactive Otter holt is located in the south-west corner of the site, along the right bank of the Camac tributary (Figure 3-5 in overleaf). The entrance was approximately 11 inches wide and 9 inches in height. The level of Ivy growth and debris in the entrance would suggest that this holt has not been used for over 6 months.

Figure 3-5: Potentially abandoned Otter holt along the bank of the Carnac tributary

A potential inactive Badger sett is located in the north-west corner of the proposed site, within the mixed broadleaved woodland habitat (Figure 3-6). The potential sett had two entrances, both measuring approximately 13 inches wide and 10 inches in height. The entrances had not been grown over by the surrounding vegetation but did contain vegetative debris, suggesting that this sett was in use within the last 6 months. The sett may be an outlier or satellite sett within a Badger's home range, meaning that it will only ever be used sporadically.

However, as these species are not QIs of any of the identified Natura 2000 sites, they will not be examined in any further detail within this AA Screening report.

Figure 3-6: Potentially abandoned Badger sett located within the mixed broadleaved woodland

Birds (Wood Pigeon, Robin & Sparrowhawk)

Three birds of conservation concern, namely Wood Pigeon, Robin and Sparrowhawk, were recorded within the site's woodland habitat. Wood Pigeon is protected under Annexes II(I) and III(I) of the EU Birds Directive, while Robin and Sparrowhawk are listed on the Amber List (Breeding) of Birds of Conservation Concern. All of the above are also protected under Ireland's Wildlife Act 1976 (and its subsequent amendments). However, as these species are not QIs of any of the identified Natura 2000 sites, they will not be examined in any further detail within this AA Screening report.

3.4 Invasive Non-native Species

One invasive non-native species was recorded on-site during the ecological walkover, namely Butterfly-bush. This species is stated to be a Medium impact species (NBDC, 2021), but is not listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011 S.I. No. 477/2011.

3.5 Waterbodies within the Vicinity of the Proposed Site

The site lies within the Water Framework Directive (WFD) Liffey and Dublin Bay catchment and the sub-catchment Liffey SC 090 (EPA, 2021a). A tributary of the River Camac (CAMAC_020) is located along the western boundary of the proposed site flowing north, where it flows into the River Camac approximately 500m north of the site. The River Camac feeds into River Liffey at Heuston Station, which is located approximately 11km north-east of the proposed site. The CAMAC_20 section currently has a 'Moderate' WFD (2013-2018) status and is also considered to be 'At Risk' (EPA, 2021a).

4 Natura 2000 Sites

The DEHLG (2009) guidance identifies that Screening for Appropriate Assessment of a plan or project should consider the following Natura 2000 sites:

- Any Natura 2000 sites within or adjacent to the plan or project area.
- Any Natura 2000 sites within the likely zone of impact of the plan or project. This is dependent on the nature and scale of the plan, with 15km generally recommended for plans, but potentially much less for projects.
- Any Natura 2000 sites that are more than 15km from the plan or project area. but may potentially be impacted upon, for example. through a hydrological connection.

As the scale of proposed works are considered of 'Project' status, only Natura 2000 sites within a 15km range of the proposed development were examined. Additional 50m river / estuarine (CIRIA 648, 2006) and 2km coastal buffers (Brussaard et al., 2016) are added where hydrological connectivity extension is applicable. The Natura 2000 sites within the range are listed in Table 4-1 below and their location are shown in Figure 4-1 in overleaf.

Table 4-1: Natura 2000 sites located within the 15km (plus hydrological connectivity extension) Zone of Influence (ZoI) of the proposed development.

Natura 2000 site	Site Code	Approximate direct distance from site
Rye Water Valley / Carton SAC	001398	8.4 km
Glenasmole Valley SAC	001209	5.6 km
Red Bog, Kildare SAC	000397	12.5 km
Wicklow Mountains SAC	002122	7.1 km
Poulaphouca Reservoir SPA	004063	12.9 km
Wicklow Mountains SPA	004040	10.4 km
North Dublin Bay SAC	000206	18.2 km
South Dublin Bay SAC	000210	15.2 km
North Bull Island SPA	004006	18.2 km
South Dublin Bay and River Tolka Estuary SPA	004024	15.2 km

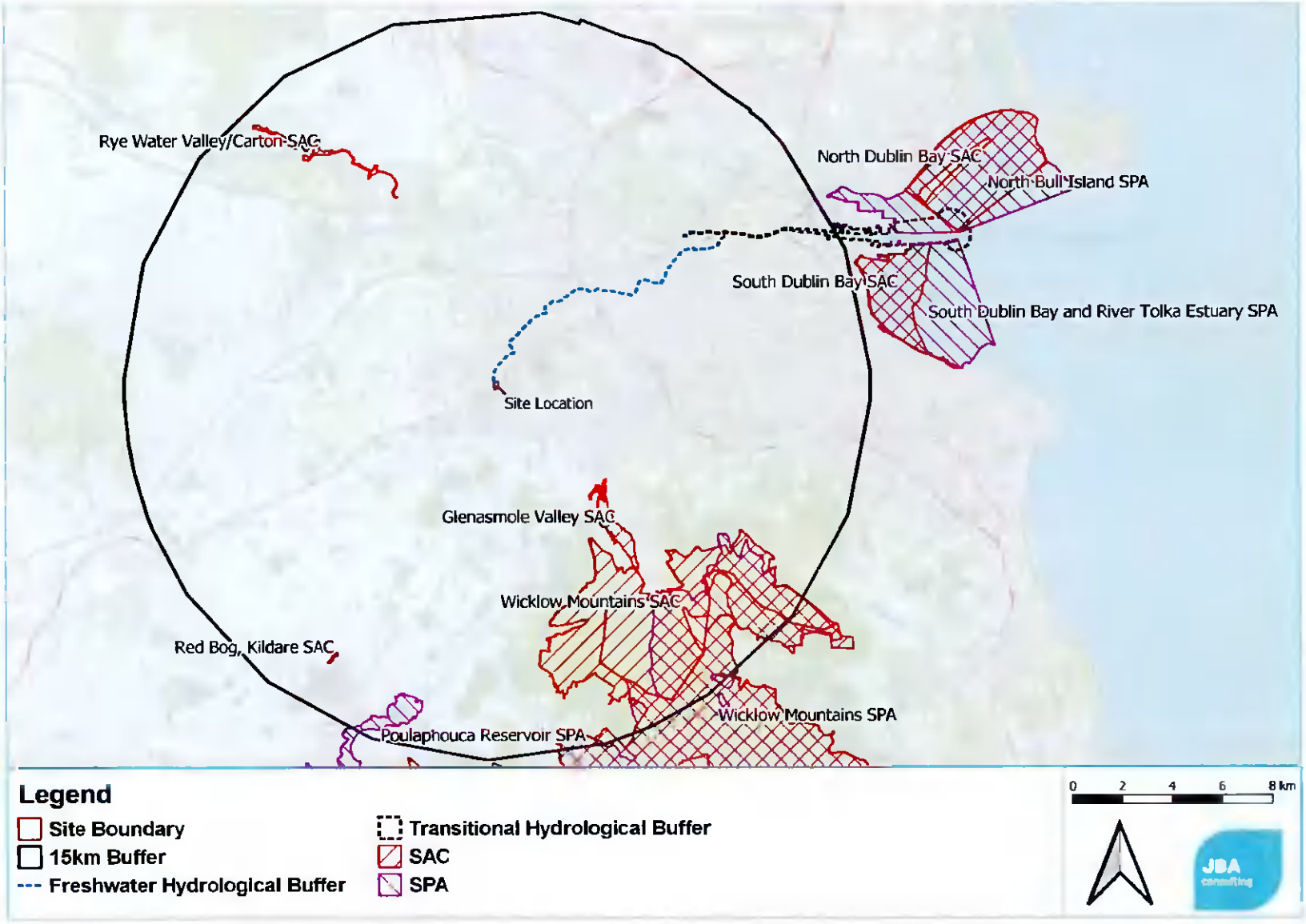


Figure 4-1: Natura 2000 sites and site location (OSM 2021)

Table 4-2: Site briefs; Qualifying Interests; and project-relevant threats /pressures and their impacts and sources in relation to the Natura 2000 sites within the 15km ZoI (plus hydrological connectivity extension).

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
Rye Water Valley / Carton SAC	The Rye Water Valley / Carton SAC is a river valley site, which includes at its western end a large area of estate woodland and an artificial lake. The eastern section of the site includes a section of railway, canal and aqueduct; it continues as far as Leixlip town. The importance of the site lies in the presence of a number of rare plant and animal species and a rare habitat, i.e. thermal, mineral, petrifying spring. The spring gives rise to a calcareous marsh, the habitat for *Vertigo angustior* and *Vertigo moulinsiana*. This marsh is species-rich and holds a number of plant and insect species which are rare or locally uncommon in Ireland. Four Red Data Book plant species have been recorded from the site, two of which, *Hypericum hirsutum* and *Viola hirta* are legally protected. The woods at the eastern end of the site are also of some ornithological interest (NPWS, 2017a).	- Petrifying Springs* [1130] - Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] - Desmoulin's Whorl Snail (*Vertigo moulinsiana*) [1016] (NPWS, 2018a)	Continuous urbanisation: Moderate impact (outside) Dispersed habitation: Low impact (outside)# Roads, motorways: Low impact (outside)# (Full list of threats / pressures - NPWS, 2017a)
Glenasmole Valley SAC	Glenasmole Valley lies at the northern foothills of the Dublin and Wicklow Mountains. Dry calcareous pasture grassland, improved to varying degrees, is a main habitat of the valley sides and occurs in association with wet grassland and, in places of seepage, fen or marsh type vegetation. The site has important examples of petrifying springs. The physical and chemical properties of the springs have been studied. Good examples of orchid rich calcareous grassland, including *Pseudorchis albida* (legally protected) and *Orchis morio* (Red Data Book species) are found here. Molinia meadows are also represented (NPWS, 2017b).	- Semi-natural dry grassland and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites) [6210] - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] - Petrifying springs with tufa formation (*Cratoneurion*)* [7220] (NPWS, 2018b)	Discontinuous urbanisation: Moderate impact (outside)# (Full list of threats / pressures - NPWS, 2017b)
Red Bog, Kildare SAC	The site comprises a relatively small wetland which lies between moranic ridges. Open water is a principal habitat though there are no obvious inflowing or outflowing streams. Open water is fringed by various wetland habitats, with bog (raised type), fens and freshwater marsh. The surrounding land is improved grassland. An extensive quarrying operation occurs to the east and south of site. The site displays a succession from open water (eutrophic in status) to ombrotrophic bog. Transition mire vegetation is considered to be well represented at this site,	- Transition mires and quaking bogs [7140] (NPWS, 2018c)	Dispersed habitation: Moderate impact (outside)# (Full list of threats / pressures - NPWS, 2017c)

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
	with some typical species (NPWS, 2017c)		
Wicklow Mountains SAC	An extensive upland site comprising much of the Wicklow Mountains and extending into Co. Dublin. The solid geology is mainly Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area has been glaciated and features fine examples of high corrie lakes, deep valleys and moraines. The site includes the headwaters of several major rivers, including the Liffey, the Dargle and the Slaney. The substrate over much of the site is peat, with poor mineral soil on the slopes and lower ground. Exposed rock and scree are included in the features found in the SAC. The dominant habitats on the site are blanket bog, heaths and upland grassland. The site comprises the largest complex of upland habitats in eastern Ireland, with important examples of blanket bog, wet heath and dry heath, extensive in area and mostly of good quality. Alpine heath occurs at high levels, along with calcareous and siliceous rocky habitats harbouring an arctic-alpine flora. A fine series of oligotrophic lakes occur, with some recorded to contain Arctic char (*Salvelinus alpinus*). Several oakwoods of moderate quality, typical of the dry acidic woods of eastern Ireland, are found. Eurasian Otter (*Lutra lutra*) occurs on several of the riverine systems (NPWS, 2017d)	- Otter (*Lutra lutra*) [1355] - Oligotrophic water containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] - Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletalia uniflorae and/or Isoeto-Nanojuncetea [3130] - Natural dystrophic lakes and ponds [3160] - Northern Atlantic wet heaths with *Erica tetralix* [4010] - European dry heaths [4030] - Alpine and Boreal heaths [4060] - Calaminarian grasslands of the *Violetalia calaminariae* [6130] - Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) * [6230] - Blanket bogs (* if active bog) [7130] - Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110] - Calcareous rocky slopes with chasmophytic vegetation [8210] - Siliceous rocky slopes with chasmophytic vegetation [8220] - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] (NPWS, 2017e)	Wildlife watching: Low impact (inside)# Trampling, overuse: Moderate impact (both)# Urbanised areas, human habitation: Moderate impact (both)# Collection (fungi, lichen, berries etc): Low impact (inside)# Outdoor sports and leisure activities, recreational activities: Moderate impact (both)# Paths, tracks, cycling tracks: Moderate impact (both)# (Full list of threats / pressures - NPWS, 2017d)
Poulaphouca Reservoir SPA	Poulaphouca Reservoir is located in the western foothills of the Wicklow Mountains. The site is of national importance for its population of Greylag goose (*Anser anser*), which is one of the largest in the country. The site provides the main roost for the birds, with feeding mostly on improved grassland outside of the site. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (*Cygnus cygnus*), Eurasian Wigeon (*Anas penelope*) and Common Goldeneye (*Bucephala clangula*). The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed gull (*Larus fuscus*), which in Ireland is rare	- Greylag Goose (*Anser anser*) [A043] - Lesser Black-backed Gull (*Larus fuscus*) [A183] (NPWS, 2018d)	Hunting: Low impact (inside)# Leisure fishing: Low impact (inside)# Nautical sports: Moderate impact (inside)# (Full list of threats / pressures - NPWS, 2017f)

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
	in winter away from the south coast (NPWS, 2017f).		
Wicklow Mountains SPA	This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. The site supports good examples of both upland and woodland bird communities. It has breeding Merlin (*Falco columbarius*) and Peregrine Falcon (*Falco peregrinus*), as well as Ring Ouzel (*Turdus torquatus*) and Red Grouse (*Lagopus lagopus*), both of the latter being Red listed in Ireland. It is the only site in Ireland where Common Merganser (*Mergus merganser*) breeds regularly (NPWS, 2017g).	- Merlin (*Falco columbarius*) [A098] - Peregrine Falcon (*Falco peregrinus*) [A103] (NPWS, 2018e)	Walking, horse-riding and non-motorised vehicles: High impact (inside)# Paths, tracks, cycling tracks: Moderate impact (inside)# (Full list of threats / pressures - NPWS, 2017g)
North Dublin Bay SAC	The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. The seaward side of the island has a fine sandy beach. A substantial area of shallow marine water is included in the site. The interior of the island is excluded from the site as it has been converted to golf courses. Nature conservation is a main land use within the site. The North Bull Island dune system is one of the most important systems on the east coast and is one of the few in Ireland that is actively accreting. It possesses extensive and mostly good quality examples of embryonic, shifting marram and fixed dunes, as well as excellent examples of humid dune slacks. Both Atlantic and Mediterranean salt marshes are well represented, and a particularly good marsh zonation is shown. The salt marshes grade into mudflats and sandflats, some of which are dominated by annual Salicornia species. Petalwort (*Petalophyllum ralfsii*) occurs at its only known station away from the western seaboard (NPWS, 2017h).	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - *Salicornia* and other annuals colonising mud and sand [1310] - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] - Mediterranean salt meadows (*Juncetalia maritimi*) [1410] - Embryonic shifting dunes [2110] - Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] - Humid dune slacks [2190] - Petalwort (*Petalophyllum ralfsii*) [1395]	Urbanised areas, human habitation: High impact (outside) Industrial or commercial areas: High impact (outside) Nautical sports: Moderate impact (inside)# Bait digging collection: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# Leisure fishing: Low impact (inside)# Antagonism with domestic animals: High impact (inside)# (Full list of threats / pressures - NPWS, 2017h)
South Dublin Bay	This intertidal site extends from the South Wall at Dublin Port to the West Pier at Dun Laoghaire, a distance of c. 5	- Mudflats and sandflats not covered by seawater at low	Urbanised areas, human habitation:

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
SAC	km. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. A number of small streams and drains flow into the site. The designated site possesses a fine and fairly extensive example of intertidal flats. Sediment type is predominantly sand, with muddy sands in the more sheltered areas. A typical macro-invertebrate faunal assemblage exists within the SAC. The SAC has the largest stand of Dwarf Eelgrass (*Zostera nolti*) on the east coast (NPWS, 2017i).	tide [1140] - Annual vegetation of drift lines [1210] - *Salicornia* and other annuals colonising mud and sand [1310] - Embryonic shifting dunes [2110] (NPWS, 2013)	High impact (outside) Industrial or commercial areas: High impact (outside) Bait digging collection: Moderate impact (inside)# Paths, tracks, cycling tracks: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# Nautical sports: Moderate impact (inside)# Non-motorised nautical sports: Moderate impact (inside)# Discharges: Moderate impact (both) (Full list of threats / pressures - NPWS, 2017i)
North Bull Island SPA	The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port. The site is among the top ten sites for wintering waterfowl in the country. It supports internationally important populations of Brent Goose and Bar-tailed Godwit and is the top site in the country for both of these species. A further 14 species have populations of national importance, with particular notable numbers of Shelduck, Pintail, Grey Plover, and Red Knot. The SPA is a regular site for passage waders such as Ruff, Curlew Sandpiper and Spotted Redshank. The site supports	- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Shelduck (*Tadorna tadorna*) [A048] - Teal (*Anas crecca*) [A052] - Pintail (*Anas acuta*) [A054] - Shoveler (*Anas clypeata*) [A056] - Oystercatcher (*Haematopus ostralegus*) [A130] - Golden Plover (*Pluvialis apricaria*) [A140] - Grey Plover (*Pluvialis squatarola*) [A141] - Red Knot (*Calidris canutus*) [A143]	Leisure fishing: Moderate impact (inside)# Industrial or commercial areas: High impact (outside) Urbanised areas, human habitation: High impact (outside) Nautical sports:

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
	Short-eared Owl in winter (NPWS, 2017j).	- Sanderling (*Calidris alba*) [A144] - Dunlin (*Calidris alpina*) [A149] - Black-tailed Godwit (*Limosa limosa*) [A156] - Bar-tailed Godwit (*Limosa lapponica*) [A157] - Curlew (*Numenius arquata*) [A160] - Redshank (*Tringa totanus*) [A162] - Turnstone (*Arenaria interpres*) [A169] - Black-headed Gull (*Chroicocephalus ridibundus*) [A179] - Wetland and Waterbirds [A999] (NPWS, 2015a)	Moderate impact (inside)# Bait digging collection: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# (Full list of threats / pressures - NPWS, 2017j)
South Dublin Bay and River Tolka Estuary SPA	This designated site comprises a substantial part of Dublin Bay. It includes virtually all of the intertidal area in the south bay, as well as much of the Tolka Estuary to the north of the River Liffey. A portion of the shallow bay waters is also included. The sediments are predominantly well-aerated sands. The sands support the largest stand of Dwarf Eelgrass on the east coast of Ireland. Sediments in the Tolka Estuary vary from soft thixotropic muds with a high organic content in the inner estuary to exposed, well aerated sands off the Bull Wall. The site possesses extensive intertidal flats which support wintering waterfowl which are part of the overall Dublin Bay population. It regularly has an internationally important population of Brent Geese, which feeds on Dwarf Eelgrass in the autumn. It has nationally important numbers of a further 6 species including: Oystercatcher, Ringed Plover, Red Knot, Sanderling, Dunlin and Bar-tailed Godwit. It is an important site for wintering gulls, especially Black-headed Gull and Common Gull (*Larus canus*). South Dublin Bay is the premier site in Ireland for Mediterranean Gull (*Larus melanocephalus*), with up to 20 birds present at times. Is a regular autumn roosting ground for significant numbers of terns, including Roseate Terns, Common Tern and Artic Tern (NPWS, 2017k).	- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Oystercatcher (*Haematopus ostralegus*) [A130] - Ringed Plover (*Charadrius hiaticula*) [A137] - Grey Plover (*Pluvialis squatarola*) [A141] - Red Knot (*Calidris canutus*) [A143] - Sanderling (*Calidris alba*) [A144] - Dunlin (*Calidris alpina*) [A149] - Bar-tailed Godwit (*Limosa lapponica*) [A157] - Redshank (*Tringa totanus*) [A162] - Black-headed Gull (*Chroicocephalus ridibundus*) [A179] - Roseate Tern (*Sterna dougallii*) [A192] - Common Tern (*Sterna hirundo*) [A193] - Arctic Tern (*Sterna paradisaea*) [A194] - Wetland and Waterbirds [A999] (NPWS, 2015b)	Leisure fishing: Moderate impact (inside)# Industrial or commercial areas: High impact (outside) Urbanised areas, human habitation: High impact (outside) Nautical sports: Moderate impact (inside)# Bait digging collection: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# (Full list of threats / pressures - NPWS, 2017k)

* = priority Annex I habitat

= indirect threat via the increase in the local populace and workforce; and recreational activities as a result of the development

5 Other Relevant Plans and Projects

5.1 Cumulative Effects

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region that may induce cumulative impacts must also be considered at this stage.

The following projects or plans were identified as potential sources of cumulative impacts:

- South Dublin County Council Development Plan 2016 - 2022
- Greater Dublin Drainage Strategy
- River Basin Management Plan for Ireland 2018-2021
- Planning Applications

5.2 Plans

5.2.1 South Dublin County Council Development Plan 2016 - 2022

The South Dublin County Council (SDCC) Development Plan sets out an overall strategy for the proper planning and sustainable development of the County. The objectives include a target of increased population and continuing the consolidation of established urban areas, to support and facilitate economic activity and topromote the ease of movement by sustainable modes (walking, cycling and public transport). The Plan also aims to protect and enhance surface water quality, to support, improve and protect Natura 2000 sites, and to develop an integrated Green Infrastructure network to enhance biodiversity, provide accessible parks, open spaces and recreational facilities (SDCC, 2016a). The plan also states that work will be in conjunction with Irish Water to protect existing water and drainage infrastructure, to promote investments aiming to support environmental protection and facilitate the sustainable growth of the county (SDCC, 2016a).

A Screening for Appropriate Assessment was carried out on the plan. This concluded that there are no likely significant direct, indirect or secondary impacts of the project on any Natura 2000 sites (SDCC, 2016b), therefore **the South Dublin County Council (SDCC) Development Plan is not anticipated to contribute to cumulative or in-combination effects.**

5.2.2 Greater Dublin Drainage Strategy

The Greater Dublin Drainage Strategy sets out the strategic planning for the development of waste water treatment in the Greater Dublin area in relation to the Ringsend WWTP Upgrade, Greater Dublin Drainage Project and associated wastewater network drainage projects (Irish Water, 2018b). The Ringsend WWTP Upgrade includes plans to expand the WWTP to its ultimate capacity, together with associated network upgrades required. The Greater Dublin Drainage Project is planned to relieve both the Ringsend WWTP and network loading by construction of a new WWTP at Clonshaugh, an orbital sewer and provision of an outfall pipe discharging 1km north east of Ireland's Eye.

The Ringsend WWTP upgrade is in progress and carried out in stages, with an increased capacity of 400,000 PE by Q1 2021 and the ultimate capacity of 2.4 million PE to be in operation by 2024 (Irish Water, 2018b).

The Greater Dublin Drainage Project is strategically important to the Dublin Region in that it will provide capacity for residential and commercial growth (Irish Water, 2018b).

The Greater Dublin Drainage Strategy is not anticipated to contribute to cumulative or in-combination effects.

5.2.3 River Basin Management Plan for Ireland 2018-2021

The River Basin Management Plan (RBMP) for Ireland 2018-2021 sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2021 (DoHPLG, 2018a). Changes from previous River Basin Management Plans is that all River Basin Districts are merged as one national River Basin District. The Plan provides a more coordinated framework for improving the quality of our waters — to protect public health, the environment, water amenities and to sustain water-intensive industries, including agri-food and tourism, particularly in rural Ireland.

The first cycle of River Basin Management Plans included the Eastern River Basin District - River Basin Management Plan (ERBDMP) 2009 – 2015 (WFD (2010). The plans summarised the waterbodies that may not meet the environmental objectives of the WFD by 2015 and identified which pressures are contributing to the environmental

objectives not being achieved. The plans described the classification results and identified measures that can be introduced in order to safeguard waters and meet the environmental objectives of the WFD;

- Prevent deterioration of water body status.
- Restore good status to water bodies.
- Achieve protected areas objectives.
- Reduce chemical pollution of water bodies

The ERBD Management Plan (2009-2015) and the River Basin Management Plan for Ireland (2018-2021) aim to improve the management and water quality of the Eastern RBD, and hence the River Boyne and Estuary. Preparation of the 2nd Cycle RBMPs 2018-2021 is now underway.

The River Basin Management Plan is not anticipated to contribute to cumulative or on-combination effects.

5.3 Other Projects

Since February 2018, the projects listed below (Table 5-1), which are not retention applications, home extensions and/or internal alterations, have been granted planning permission in the locality of the proposed site

Table 5-1: Projects granted planning permission since February 2018 in vicinity of proposed site.

Planning Reference	Address	Application Status	Decision date	Summary of development
SD18A/0266	Moneenalion Commons Upper, Baldonnel Business Park, Dublin 22	Grant Permission	17/09/2018	Amendments to the permitted logistics/warehousing scheme under SDCC Ref: SD15A/0309 (An Bord Pleanála Ref. PL06S.246392), as subsequently amended by SDCC Ref. SD17A/0362. The proposed amendments relate primarily to permitted Unit B and Unit C and consist of: (1) Omission of Unit C and provision of enlarged Unit B (increasing from 10,967sq.m GFA to 18,617sq.m GFA) with a height of c. 17.65m including mezzanine level. The previously permitted Units A, B and C resulted in a total of 32,771sq.m. The proposed units A and B result in a total of 29,454sq.m. which results in an overall reduction of 3.317sq.m. GFA. (2) The proposed Unit B incorporates 690sq.m GFA of ancillary office space (a reduction of 386sq.m compared to the combined permitted ancillary office space within permitted Unit B and C). (3) Omission of one vehicular entrance and associated bridge between permitted Unit B and C and replacement with two vehicular entrances and associated bridges to either side of proposed Unit B. (4) Relocation substation. (5) Reduction in car parking spaces from 329 to 235; 54 bicycle parking spaces are proposed to service Unit B. (6) Resultant amendments to site layout, yards, elevations, signage, internal road layout, landscaping, ground works, drainage, gates, fencing, services and utilities and all associated and ancillary site development works.
SD19A/0370	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Grant Permission	29/01/2020	Construction of two logistics/warehouse units (Unit C & D) southwest of Mountpark Baldonnell Phase 1 and west of the older original Business Park. Unit C will comprise of a GIA 11,492sq.m (including 592sq.m of associated office space); Unit D will comprise of a GIA 7,856sq.m (including 400sq.m of associated office space); provide for 193 car parking spaces and 56 bicycle spaces to serve the proposed development; flood mitigation works to store and attenuate flood flows from the River Camac; formation of plateaus on the site with surplus excavated material to allow for future development; access to the site will be from the existing Phase 1 development located on Clonlara Road; all ancillary landscaping, internal roads, associated infrastructure and site development works to support the development; the site is primarily greenfield and located between Casement Aerodrome and the N7 national route; the proposal will form a second phase of Development to that permitted under SD15A/0309 (ABP Ref. PL06S.246392) as amended by permissions SD17A/0362, SD18A/0266 and SD19A/0048; An Environmental Impact Assessment Report (EIAR) is submitted with the planning application.
SD18A/0314	Kingswood Business Park, Baldonnel, Dublin 22	Grant Permission	16/09/2019	Warehousing unit incorporating ancillary offices/staff facilities on 3 floors to the front (south) elevation, office/staff facilities for the warehouse use at the rear (north) elevation and plant room, totalling 14,104sq.m gross internal area, which comprises: (1) 12,240sq.m warehousing area (17.9m high); (2) 1,674sq.m front ancillary office/staff facilities area on 3 floors (12.45m high); (3) 122sq.m office/staff facilities attached to the rear of the warehouse (8.4m high), 63sq.m plant room attached to the eastern side of the warehouse (5.7m high). The development also includes (A) On-site security hut 16sq.m (3.00m high) at the HGV access/egress location; (B) 4,160sq.m solar panels placed on the warehouse roof; (C) Site access; (D) Ancillary car parking (145 spaces); (E) HGV marshalling yard on 16,380sq.m of yard and HGV parking for 49 vehicles; (F) Dock levellers and level access doors; (G) Canopy over level access doors attached to western elevation and canopy over dock levellers at the rear; (H) Perimeter landscaping; (I) Drainage works including underground surface water attenuation facility, flood management measures, foul sewer pumping and storage tank; (J) All services and utilities and (K) All associated site development works.
SHD3ABP-305267-19	Lands at Kilcarbery, Corkagh Demesne, Clondalkin, Dublin 22	Grant Permission	05/12/2019	1034 residential units comprising of (578 houses: 449 3-bed & 129 4-bed), 456 apartments: 142 1-bed, 224 2-bed, 90 3-bed), 2 childcare facilities (1 temporary, 1 permanent), 1 retail unit, 1 community facility and all associated site works.

SD18A/0420	Fortunestown Lane, Saggart, Co. Dublin	Grant Permission	30/01/2019	Amendments to the permitted residential development (Reg. Ref. ABP-300555-18) arising from Condition 2 and will consist of: (a) development of a crèche and community facility (271sq.m) with associated external play area and car parking in lieu of duplex units A-01 and A-02 within Block A and all associated amendments to the permitted site layout plan, hard and soft landscaping and adjoining street; (b) revised boundary treatments to the permitted dwelling units to comprise Type 1, 2m high brick walls to the side of the dwelling units; Type 2, 1.8m high vertical timber fencing to the rear and side boundaries of the rear gardens and Type 3, 1.8m high brick gossip wall to the front of the dwelling units; the proposed amendments will result in a reduction in the total number of units on the site from 526 to 524 dwellings; all associated site and development works on c.23.9ha site at Fortunestown Lane and Garter Lane (lands generally bounded by the Luas Red Line, Saggart Luas stop and Fortunestown Lane to the south, Garter Lane to the west, Bianconi Avenue to the north and Citywest Business Park, Citywest TLC Nursing Home and the Cuil Duin residential development to the east).
SD20A/0204	Baldonnell Business Park, Baldonnell, Dublin 22	Grant Permission	05/10/2020	Provision of a warehouse unit with ancillary office and staff facilities and associated development. The building will have a maximum height of 15.8m with a gross floor area of 2,222sq.m including a warehouse area (1,530sq.m), staff facilities (302sq.m) and ancillary office area (390sq.m) and will also include the provision of 1 new vehicular access/egress point along the north-west boundary of the subject site onto Clonlara Road; pedestrian access; 22 ancillary car parking spaces; bicycle parking; HGV marshalling yard with 2 loading bays; level access goods doors; dock levellers; access gate; signage; hard and soft landscaping; lighting; boundary treatments and associated site development works above and below ground.

5.4 Summary

The County Development Plan, RBMP and projects near the proposed project are considered in combination with the currently proposed project in the Screening Assessment section below.

6 Screening Assessment

6.1 Introduction

This screening exercise will focus on assessing the likely adverse effects of the project on the Natura 2000 site identified in Section 4 above.

This section identifies the potential impacts which may arise as result of the proposed project. It then goes on to identify how these impacts could potentially impact on Natura 2000 sites listed in Table 4-1. The significance of potential impacts is also assessed, with any potential in-combination effects also identified.

6.2 Assessment Criteria

6.2.1 Description of the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites

Potential adverse impacts that could cause a significant effect on the qualifying interests of the Natura 2000 sites, during the construction and operational phases of the project, will impact on the sites via surface water pathways, groundwater pathways and land and air pathways. Surface water pathways can impact on surface water quality and surface water dependent habitat quality. Groundwater pathways can impact on groundwater quality and quality of groundwater dependent habitats. Land and air pathways can impact by release or discharges of sediment or chemicals to surface or groundwater.

The proposed project is not anticipated to impact on the qualifying interests of any of the identified SACs or SPAs due to the absence of pathways between any potential source of impact and receiving environment in the case of the Natura 2000 sites. The rationale for excluding impacts via the main pathways is given in more detail in the following sections.

6.2.2 Surface Water Pathways

The Dublin Bay based Natura 2000 sites are hydrologically connected to the proposed site (Figure 6-1). However, during the construction phase surface water will be contained within the site as the existing riparian-zone buffer (10m min. width) comprising of mature woodland and well established understorey, is to be retained; and thus will act as a natural surface water run-off filter for sediments in the event of accidental diffuse run-off from the site. Additionally, any diffuse surface water input, which navigates through the riparian buffer into the Camac tributary, would undergo a high level of dilution by larger freshwater systems along a 14km hydrological section before entering the estuarine section of the River Liffey, where it would be further diluted for another 9.5km hydrological stretch before entering the coastal waters containing the Dublin Bay Natura 2000 sites.

While the proposed site has surface water connectivity with the Dublin Bay based Natura 2000 sites, the series of silt traps (Surfsep silt trap or similar approved), petrol interceptors (Klargester Class 1 Bypass Petrol Interceptor or similar approved) and attenuation (Stormtech Attenuation System MC3500) infrastructure within the surface water drainage system of the site, will negate any potential impacts before the water leaves the site, thus preventing any adverse impacts on these Natura 2000 sites. The foul water drainage of the proposed site will connect with the existing foul water drainage system within Brownsbarn area. Ultimately, the foul waste is treated at the Ringsend WWTP [D0034-01] which services the greater Dublin area.

Given that the remainder of the Natura 2000 sites are not located within the same surface water sub-catchment as the proposed site, Liffey_SC_090 (Figure 6-1 overleaf), it is not anticipated that these sites will experience any adverse impacts. Therefore, the proposed project is not anticipated to have any impact on the qualifying interests of the SACs and SPAs via surface water pathways.

Table 6-1 overleaf provides a summary of the screening rational for the surface water pathway.

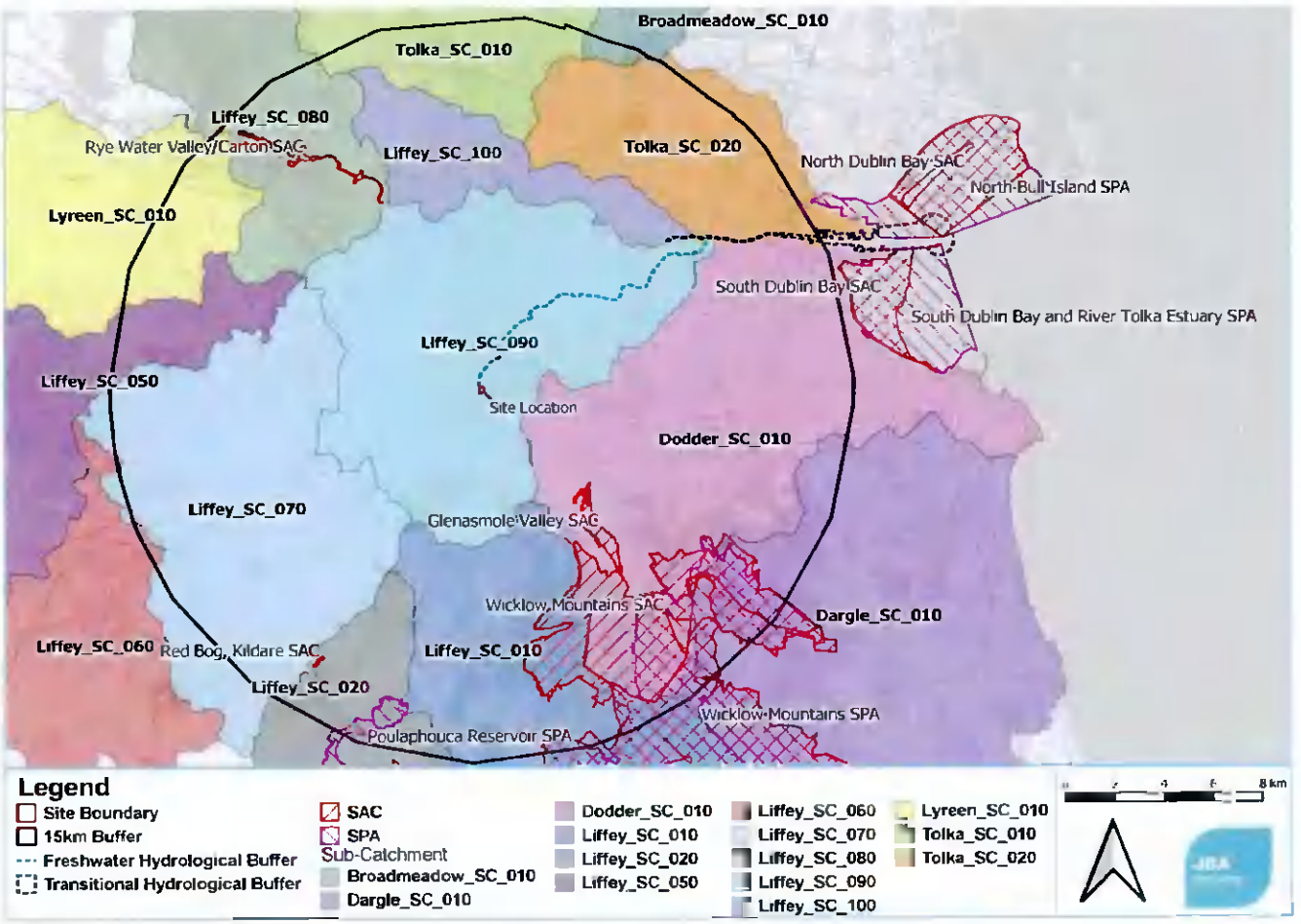


Figure 6-1: Site location and Natura 2000 sites, with surface water sub-catchment (OSM 2021)

Table 6-1: Surface water pathway screening summary for Natura 2000 sites

Natura 2000 site	Screening outcome for surface water pathways	Rationale
North Dublin Bay SAC South Dublin Bay SAC North Bull Island SPA South Dublin Bay and River Tolka Estuary SPA	No significant effect **(Screened out)**	Riparian buffer providing natural surface water filtering Distance / high level of dilution by larger freshwater system and transitional / coastal waters Appropriate operational surface and foul water drainage systems
Rye Water Valley / Carton SAC Glenasmole Valley SAC Red Bog, Kildare SAC Wicklow Mountains SAC Poulaphouca Reservoir SPA Wicklow Mountains SPA	No significant effect **(Screened out)**	Lack of direct hydrological connectivity

6.2.3 Groundwater

The site is located within the Dublin Urban - IE_EA_G_008 groundwater body, which underlies most of the greater Dublin area. The site shares this groundwater body with five of the Natura 2000 sites, namely the Rye Water Valley/Carton SAC; South Dublin Bay SAC; North Dublin Bay SAC; North Bull Island SPA; and South Dublin Bay and River Tolka Estuary SPA. The remaining Natura 2000 sites exist outside this groundwater body.

The bedrock underlying the proposed site is comprised of dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are also rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcar. This bedrock is overlain with limestone till sediments, with low subsoil permeability characteristics. As result of the above characteristics the site's aquifer vulnerability status is rated as 'Low-Moderate' (Figure 6-2). The aquifer within the underlying bedrock is considered to be locally important, with moderate productivity, though only in local zones. Therefore, the aquifer has a limited and relatively poorly connected network of fractures, fissures and joints, giving a low fissure permeability which tends to decrease further with depth. Generally, the lack of connection between the limited fissures results in relatively poor aquifer storage and flow paths that may only extend a few hundred metres (GSI, 2021). Therefore, impacts via a groundwater pathway are not anticipated given the distance to the Natura 2000 sites.

Regarding the groundwater to surface water impact pathway, the characteristics of the underlying aquifer means it is likely to rapidly discharge to the nearby watercourses, i.e. the River Camac, within the short flow paths present in the local bedrock (GSI, 2021). Therefore, there is the potential for groundwater to surface water impacts for the Dublin Bay Natura 2000 sites. However, any pollution event is unlikely to reach the Natura 2000 sites at toxic levels given sediment and aquifer contamination retention, as well as the high levels of dilution that would be experienced by pollutant as it travels to the Dublin Bay Natura 2000 sites (Figure 6-3 overleaf).Table 6-2 overleaf provides a summary of the screening rational for the groundwater pathway.

Figure 6-2: Aquifer vulnerability of proposed site (OSM 2021)

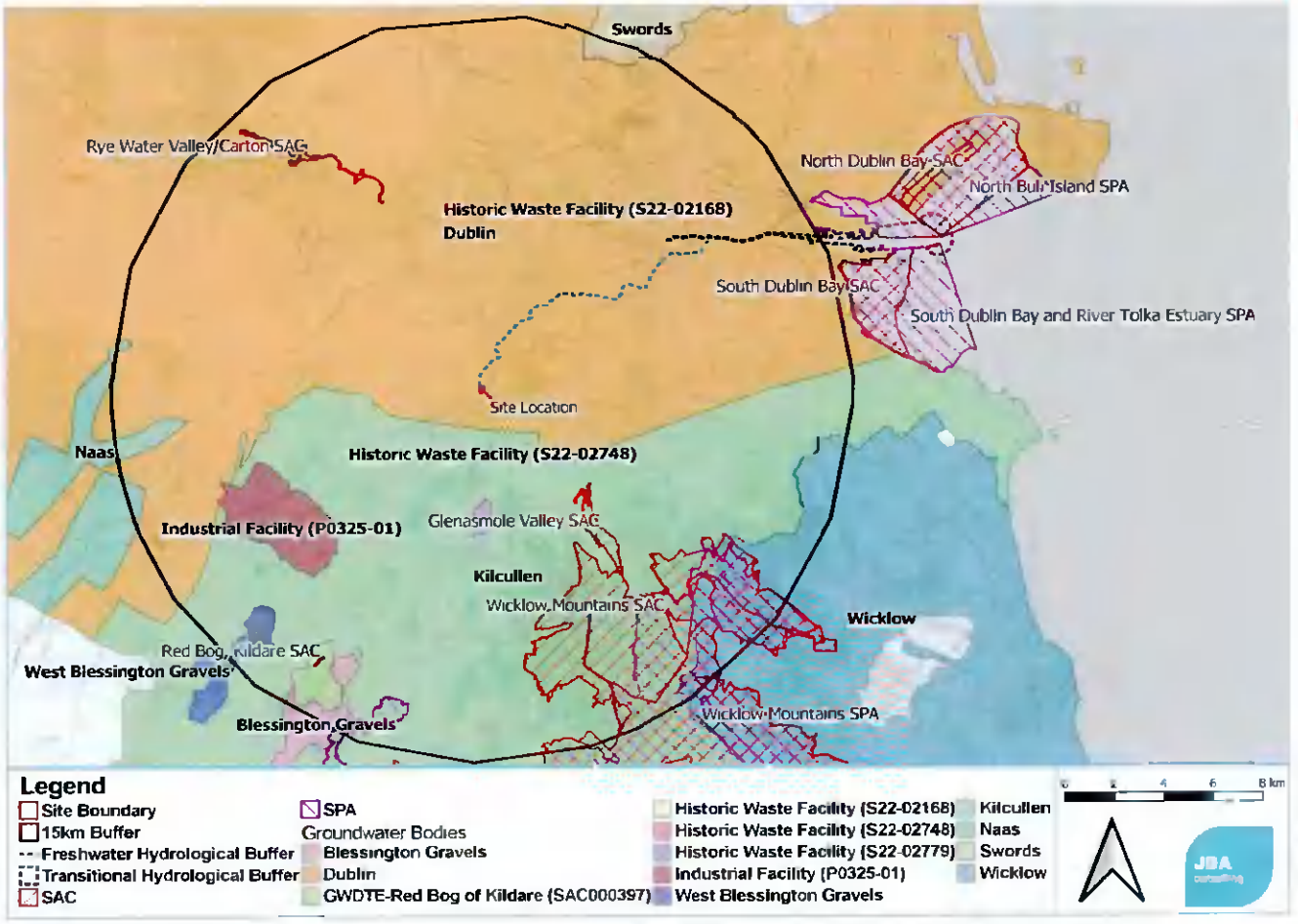


Figure 6-3: Site location and Natura 2000 sites, with groundwater body connectivity (OSM 2021)

Table 6-2: Groundwater pathway screening summary for Natura 2000 sites

Natura 2000 site	Screening outcome for groundwater pathways	Rationale
Rye Water Valley / Carton SAC North Dublin Bay SAC South Dublin Bay SAC North Bull Island SPA South Dublin Bay and River Tolka Estuary SPA	No significant effect **(Screened out)**	Sediment and aquifer contamination retention Distance / high level of dilution by larger freshwater system and transitional / coastal waters
Glenasmole Valley SAC Red Bog, Kildare SAC Wicklow Mountains SAC Poulaphouca Reservoir SPA Wicklow Mountains SPA	No significant effect **(Screened out)**	Lack of groundwater connectivity

6 2.4 Land and Air

The loss or degradation of supporting habitats outside the identified Natura 2000 sites via land- and air-based impacts could have potential adverse impacts on a number of the QIs associated with these Natura 2000 sites.

Land (physical, visual and noise disturbance)

Direct physical impacts and indirect impacts, such as visual and noise impacts, have the potential to physically disturb habitats as well as the floral and faunal species within them. This development will not result in any physical land-take or disturbance from the Natura 2000 sites within the ZoI, nor will it result in any visual or noise disturbance to the QIs due to the distances between the site and the Natura 2000 sites.

Air Pollution

Dust release and vehicle emissions can sometimes travel up to 10km and could potentially affect the riparian habitat of the two Whorl snails in the Rye Water Valley/Carton SAC by enrichment. Typically dust emissions are divided into settleable dust, respirable dust and PM10's and PM2.5 (10 um and 2.5 um respectively). Settleable dust will, depending on its size and weather conditions, settle out close to the source. The respirable fraction can travel a little further but typically settles out close to production. The lighter smaller PM10 and PM 2.5 fraction can travel. The distance and direction of travel is dependent upon wind speed and direction. The proposed site has a south-west prevailing wind year-round (Windfinder- Casement Aerodrome, 2021), therefore, any dust generated on-site will most likely be transported towards just the Dublin Bay Natura 2000 sites; and not towards the Rye Water Valley/Carton SAC. Natural barriers to PM 10 dispersion are treelines and hedgerows. As there is 8.4km of largely agricultural land with hedgerows between the site and the SAC, as well as woodlands bordering the watercourse of the Rye Water, any further dispersion of particles will be ameliorated.

Regarding the Dublin Bay Natura 200 sites, given that these sites are beyond the 10km dust settlement zone impacts via the air pathway in regard to dust, adverse impacts are not anticipated from the proposed works. Additionally, the QIs of the Dublin Bay Natura 2000 sites are not sensitive to dust-based pollution. Table 6-3 provides a summary of the screening rational for the land and air pathway.

Table 6-3: Land and air pathway screening summary for Natura 2000 sites

Natura 2000 site	Screening outcome for land and air pathways	Rationale
North Dublin Bay SAC South Dublin Bay SAC North Bull Island SPA South Dublin Bay and River Tolka Estuary SPA	No significant effect **(Screened out)**	No physical, visual or noise disturbance due to the distances between the site and the Natura 2000 sites Located beyond the 10km dust settlement zone Respective QIs are no sensitive to dust-based pollution
Rye Water Valley / Carton SAC	No significant effect **(Screened out)**	8.4km of natural dust barriers (hedgerows, treelines and woodland) Not located within the path of the site's prevailing wind
Rye Water Valley / Carton SAC Glenasmole Valley SAC Red Bog, Kildare SAC Wicklow Mountains SAC Poulaphouca Reservoir SPA Wicklow Mountains SPA	No significant effect **(Screened out)**	No physical, visual or noise disturbance due to the distances between the site and the Natura 2000 sites Not located within the path of the site's prevailing wind

6.2.5 Summary

Due to the proposed site's natural riparian filter buffer; appropriate operational drainage systems; and its proximity to the Natura 2000 sites within the ZoI, impacts via surface water, groundwater (to surface water) and land pathways to the SACs or SPAs are not anticipated.

6.2.6 Cumulative Impact

Given that the proposed development has no anticipated significant impacts on the Natura 2000 sites within the ZoI, then there cannot be any cumulative or in-combination impacts with the projects or plans identified in Section 5.

6.2.7 Description of likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites

Project Elements	Comment
Size and scale	Exeter Ireland Property IV B Limited intend to apply for permission for development at this 3.92 Ha site at Brownsbarn, Citywest Campus, Dublin 24. The lands are bounded to the south by the N7 Naas Road, to the north and west by the National Distribution Centre and to the east by Brownsbarn Drive and the Royal Garter Stables, a Protected Structure (RPS Ref. 261). The development will comprise the construction of 2 No. warehouses with ancillary office and staff facilities and associated development as follows: Unit 1 will have a maximum height of 16.45 metres with a gross floor area of 8,156 sq m including a warehouse area (7,397 sq m), ancillary office areas (362 sq m) and staff facilities (397 sq m); and Unit 2 will have a maximum height of 15.45 metres with a gross floor area of 5,730 sq m including a warehouse area (5,138 sq m), ancillary office areas (268 sq m) and staff facilities (324 sq m). The development will also include: vehicular access/egress routes to the subject site via the existing roundabout and access road; pedestrian access; 111 No. car parking spaces; bicycle parking; HGV Parking; HGV yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substations; sprinkler tanks; pump houses; and all associated site development works above and below ground.
Land-take	There will be no direct land take from any of Natura 2000 sites.
Distance from Natura 2000 site or key features of the site	The Natura 2000 sites and their proximity to the proposed site: - Glenasmole Valley SAC = 5.6 km - Wicklow Mountains SAC = 7.1 km - Rye Water Valley / Carton SAC = 8.4 km - Wicklow Mountains SPA = 10.4 km - Red Bog, Kildare SAC = 12.5 km - Poulaphouca Reservoir SPA = 12.9 km - South Dublin Bay SAC = 15.2 km - South Dublin Bay and River Tolka Estuary SPA = 15.2 km - North Bull Island SPA = 18.2 km - North Dublin Bay SAC = 18.2 km
Resource requirements (water abstraction etc.)	There will be no groundwater abstraction requirements.
Emissions (disposal to land, water or air)	Construction Emissions Surface water-based construction emissions are not anticipated to enter the local watercourse given the naturally retaining / filtering riparian buffer (10m min. width). Air-based construction emissions from the proposed development are not anticipated to impact the QIs of the Natura 2000 sites within the ZoI due to prevailing wind and the 10km dust settlement zone.

	Operational Emissions. The proposed site has surface water connectivity with the Dublin Bay based Natura 2000 sites, however, the series of silt traps (Surfsep silt trap or similar approved), petrol interceptors (Klargester Class 1 Bypass Petrol Interceptor or similar approved) and attenuation (Stormtech Attenuation System MC3500) infrastructure within the surface water drainage system of the site, will negate any potential impacts before the water leaves the site, thus preventing any adverse impacts on these Natura 2000 sites. The foul water drainage of the proposed site will connect with the existing foul water drainage system within Brownsbarn area. Ultimately, the foul waste is treated at the Ringsend WWTP [D0034-01] which services the greater Dublin area. Air-based operational emissions from the proposed development are not anticipated to impact the QIs of the Natura 2000 sites within the ZoI.
Excavation requirements	Construction phase excavation depths will average at 1.5m depth, with the maximum depth of approx. 2m at the location of foundation pads.
Transportation requirements	Levels of traffic to the site during the construction and operational phase will increase traffic to the Brownsbarn area due to construction-based vehicles, followed later by vehicles involved in the development's operations. Given the distance to the Natura 2000 sites and the size and scale of the proposed project, transportation requirements are not anticipated to affect the SACs or SPAs within the ZoI.
Duration of construction, operation, decommissioning etc.	Construction will last approximately 18 months. Operation will be permanent, and no decommissioning is anticipated.
Other	None

6.2.8 Description of likely changes to the Natura 2000 sites

Potential Impact	Comments
Reduction of habitat area	There will be no temporary or permanent reduction in habitat area for any of the Natura 2000 sites.
Disturbance to key species	There will be no temporary or permanent disturbance to key species within any of the Natura 2000 sites.
Habitat or species fragmentation	There will be no temporary or permanent habitat or species fragmentation within any of the Natura 2000 sites.
Reduction in species density	There will be no temporary or permanent reduction in species density within any of the Natura 2000 sites.
Changes in key indicators of conservation value (water quality etc.)	There will be no temporary or permanent changes in key indicators of conservation value (surface water, groundwater and air quality).
Climate change	N/A

6.2.9 Description of likely impacts on the Natura 2000 sites as a whole

Potential Impact	Comments
Interference with the key relationships that define the structure of the site	Interference with the key relationships that define the structure of the sites are not anticipated.
Interference with key relationships that define the function of the site	Interference with key relationships that define the function of the sites are not anticipated.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Potential Impact	Indicators
Loss (Estimated percentage of lost area of habitat)	No Natura 2000 sites will experience a direct loss in habitat area.
Fragmentation	Fragmentation of habitat and/or species is not anticipated.
Disruption & disturbance	Disruption and/ or disturbance is not anticipated.
Change to key elements of the site (e.g. water quality etc.)	Potential temporary changes to key elements (i.e. water quality) of the site are not anticipated.

6.2.10 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is unknown

Based upon best scientific judgement, significant impacts are not anticipated from the elements mentioned above; and no significant gaps in knowledge of the scale or magnitude of potential impacts from the proposed site exist.

6.3 Concluding Statement

Following this initial screening of the proposed development at Brownsbarn, Citywest, Co. Dublin, it can be concluded that significant impacts are not anticipated via surface water, groundwater, or land/air pathways on the following Natura 2000 sites:

- Rye Water Valley/Carton SAC (001398)
- Glenasmole Valley SAC (00120)
- Red Bog, Kildare SAC (000397)
- Wicklow Mountains SAC (002122)
- Poulaphouca Reservoir SPA (004063)
- Wicklow Mountains SPA (004040)
- North Dublin Bay SAC (000206)
- South Dublin SAC (000210)
- North Bull Island SPA (004006)
- South Dublin Bay and River Tolka Estuary (004024)

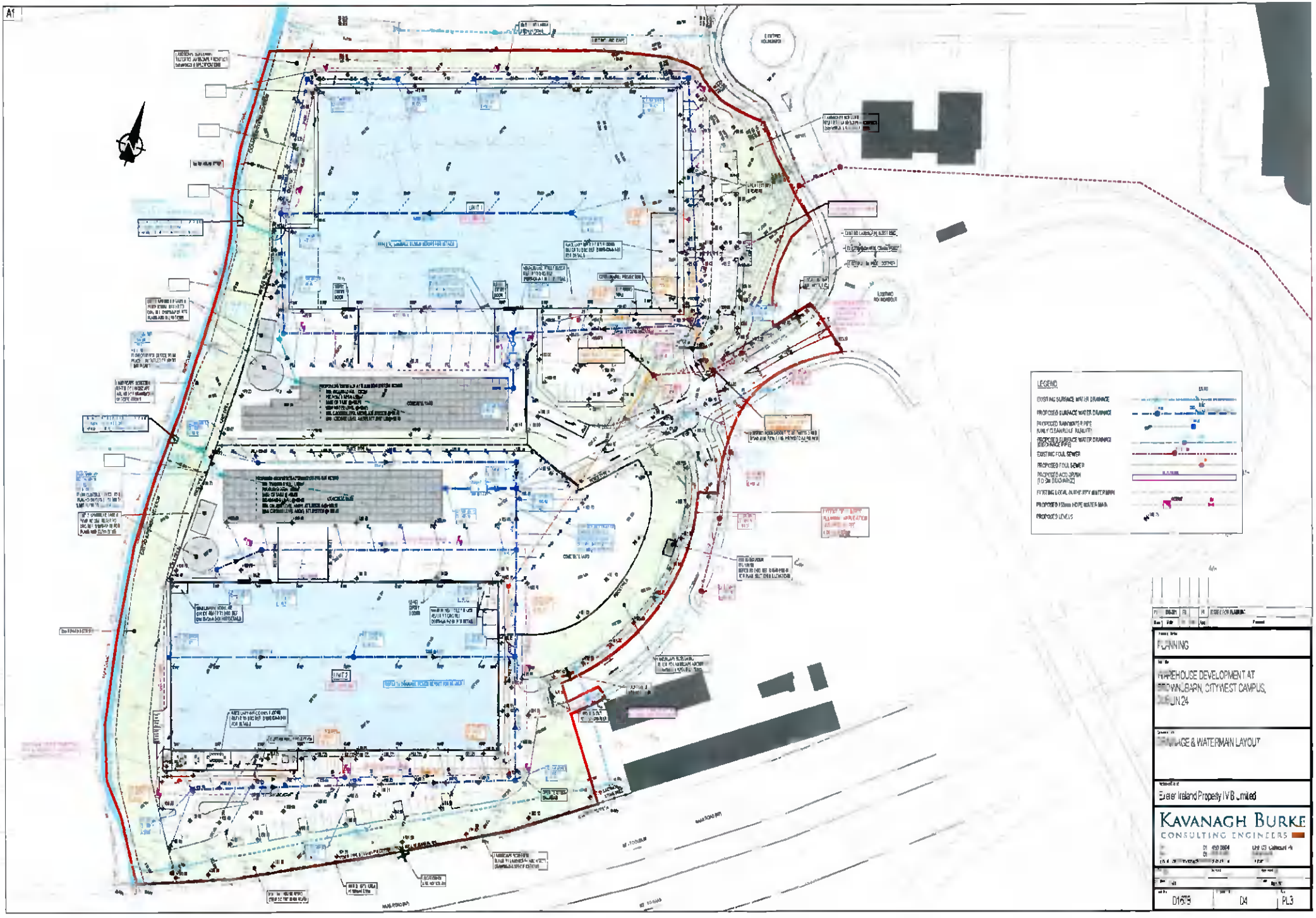
If any changes occur in the design of these works, a new Screening for Appropriate Assessment is required.

Appendices

A Site Plan


FENCE TYPE A
FENCE TYPE B
PLANNING
SITE PLAN
KAVANAGH BURKE
CONSULTING ENGINEERS
D1673
03

B Site Drainage Plan


A1
LEGEND
EXISTING SURFACE WATER DRAINAGE
PROPOSED SURFACE WATER DRAINAGE
PROPOSED RAINWATER PIPE
EXISTING FOUL SEWER
PROPOSED FOUL SEWER
PROPOSED LEVELS
PLANNING
WAREHOUSE DEVELOPMENT AT
BROWNSBARN, CITYWEST CAMPUS,
JUN 24
DRAINAGE & WATERMAIN LAYOUT
Exeter Ireland Property IV B Limited
KAVANAGH BURKE
CONSULTING ENGINEERS
D1675
D4
PL3

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