

ECOLOGICAL IMPACT ASSESSMENT

for the proposed

**Pontoon at
Islandbridge, Dublin 8**

For: Sean Harrington Architects

3rd Floor
121/122 Capel Street
Dublin 1

**SEÁN
HARRINGTON
ARCHITECTS**

On behalf of: Dublin City Council

Civic Offices
Wood Quay
Dublin 8



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council

by:

CAAS

1st Floor
24-26 Ormond Quay
Co. Dublin



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	Author/Reviewer	Date
Prepared by	Callum O'Regan	Various dates to 12 December 2022
Reviewed by	Karen Dylan Shevlin	13 December 2022
	Paul Fingleton	16 December 2022
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1 INTRODUCTION

1.1 OVERVIEW AND AIMS

This report assesses potential impacts that may arise from the proposed development on biodiversity within the receiving environment, in accordance with the following guidance documents:

- Guidelines on Information to be contained in Environmental Impact Statement Reports. (2022) Environmental Protection Agency.
- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine (2018). Chartered Institute of Ecology and Environmental Management (CIEEM), Ver. 1.1 Updated September 2019.
- Guidelines for Preliminary Ecological Appraisal. (2017) Chartered Institute of Ecology and Environmental Management (CIEEM), Second Edition.
- A Guide to Habitats in Ireland (2000), Fossitt JA.
- Best Practice Guidance for Habitat Survey and Mapping. (2011) The Heritage Council.

It aims to discuss the existing ecological environment, the potential impacts of the masterplan and avoidance and mitigation measures in relation to habitats, flora and fauna in the zone of influence (ZOI) of the proposed masterplan. A separate stand-alone AA Screening Report is also included in the planning application documentation.

1.2 LEGISLATIVE CONTEXT

Specific focus is placed on protected species/habitat features as well as those of local or national importance. Ireland's *National Biodiversity Action Plan 2017–2021*¹, in accordance with the Convention on Biological Diversity, is a framework for the conservation and protection of Ireland's biodiversity, with an overall objective to secure the conservation, including, where possible, the enhancement and sustainable use of biological diversity in Ireland and to contribute to collective efforts for conservation of biodiversity globally. The plan is implemented through legislation and statutory instruments concerned with nature conservation. The Planning and Development Acts, 2000 (revised September 2020) and the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1989 to 1999 are particularly important in that regard and include a number of provisions directly concerned with the protection of natural heritage and biodiversity.

The Wildlife Acts, 1976–2012 are the principal mechanism for the legislative protection of wildlife in Ireland. They outline strict protection for species that have significant conservation value. In summary, the Wildlife Acts protect species from injury, disturbance and damage to breeding and resting sites. All species listed in the Wildlife Acts must, therefore, be a material consideration in the planning process. The Flora (Protection) Order, (2015) gives legal protection to certain species of wild flora, *i.e.*, vascular plants, mosses, liverworts, lichens and stoneworts. Under the Order, it is an offence to uproot, damage, alter, or interfere with any species listed species listed within the Order, or to damage or alter their supporting habitats.

The European Communities (Birds and Natural Habitats) Regulations, 2011–2015 transpose into Irish law Directive 2009/147/EC (the Birds Directive) and the Habitats Directive, which list habitats and species of Community, *i.e.*, European Union (EU), importance for conservation and that require protection. This protection is afforded in part through the designation of areas that represent significant populations of listed species within a European context, *i.e.*, Natura 2000 sites. An area designated for bird species is classed as a Special Protection Area (SPA), and an area designated for other protected species and habitats is classed as a Special Area of Conservation (SAC). Birds listed in Annex I of the Birds Directive in SPAs and habitats and species listed in Annexes I and II, respectively, of the Habitats Directive in SACs in which they are designated features have full European protection. Species listed on Annex IV of the Habitats Directive are strictly protected wherever they occur, whether inside or outside European sites. Annex I habitats outside of SACs are still considered to be of national and international importance and, under Article 27(4)(b) of the

¹ NPWS: <https://www.npws.ie/sites/default/files/publications/pdf/National%20Biodiversity%20Action%20Plan%20English.pdf>

European Communities (Birds and Natural Habitats) Regulations, 2011, public authorities have a duty to strive to avoid the pollution or deterioration of Annex I habitats and habitats integral to the functioning of SPAs.

Sites of national importance for nature conservation are afforded protection under planning policy and the Wildlife Acts, 1976–2012. NHAs are sites that are designated under statute for the protection of flora, fauna, habitats and geological interest. Proposed NHAs (pNHAs) are published sites identified as of similar conservation interest but have not been statutorily proposed or designated.

The International Union for the Conservation of Nature and Natural Resources (IUCN) provides a global approach for evaluating the conservation status of species to inform and catalyse action for biodiversity conservation through the Red List of Threatened Species.

1.3 APPROACH TO ECOLOGICAL EVALUATION AND IMPACT ASSESSMENT

Assessing impact significance is a combined function of the value of the affected feature (its ecological importance), the type of impact and the magnitude of the impact. It is necessary to identify the value of ecological features within the study area in order to evaluate the significance and magnitude of possible impacts.

The following parameters are described when characterising impacts (following CIEEM (2018), EPA (2017) and TII (2009, Rev. 2)):

Direct and Indirect Impacts - An impact can be caused either as a direct or as an indirect consequence of a proposed plan or project.

Magnitude - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.

Extent - The area over which the impact occurs – this should be predicted in a quantified manner.

Duration - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated;
- Permanent: The effects would take 60+ years to be mitigated.

Likelihood – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted;
- Extremely Unlikely: <5% chance as occurring as predicted.

The CIEEM Guidelines define an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area. The integrity of a site is the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified (CIEEM, 2018).

The results of the ecological survey were evaluated to determine the significance of identified features located in the study area on an importance scale ranging from international-national-county-local. The local scale is approximately equivalent to one 10km square but can be operationally defined to reflect the character of the area of interest. Because most sites will fall within the local scale, this is sub-divided into three categories: high local importance, local importance, and local value. The criteria used for assessing the importance of ecological features are shown in Table 1.

Table 1 Criteria used in Assessing the Importance of Ecological Features

Importance	Criteria
International	An internationally designated site or candidate site (SPA, cSPA, SAC, cSAC, Ramsar Site, Biogenetic Reserve). Also, sites which qualify for designation as SACs or SPAs – this includes sites on the NGO shadow list of SAC's.
National	A nationally designated site or candidate site (NHA, pNHA). Sites which hold Red Data Book (Curtis and McGough, 1988) plant species.
County	Sites which hold nationally scarce plant species (recorded from less than 65 of the national 10km grid squares); unless they are locally abundant. Sites which hold semi-natural habitats likely to be of rare occurrence within the county. Sites which hold the best examples of a semi-natural habitat type within the county.
High Local Importance	Sites which hold semi-natural habitats and/or species likely to be of rare occurrence within the local area. Sites which hold the best examples of a high quality semi-natural habitat type within the local area.
Local Importance	Sites which hold high quality semi-natural habitats.
Local Value	Any semi-natural habitat.

2 METHODOLOGY

2.1 DESK STUDY

A desktop review was carried out to identify features of ecological importance within the proposed masterplan site and the wider environment. Ecological impact assessment is conducted following a standard source-pathway-receptor model, where, in order for an impact to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – *e.g.*, pollutant run-off from proposed works.
- Pathway(s) – *e.g.*, groundwater connecting to nearby qualifying wetland habitats.
- Receptor(s) – qualifying aquatic habitats and species of European sites.

Specific focus was put into the assessment of sensitive receptors of protected species/habitat features; as well as those of local or national importance. A source is any identifiable element of the proposal which is known to have interactions with ecological processes. Pathways are any connections or links between the source and the receptor. This report determines if direct, indirect or cumulative adverse effects will arise from the proposed development.

2.2 FIELD SURVEY

Data was collected during an initial walkover survey conducted on the 9th of December 2021 with further surveys being conducted on 21st June 2022 and 12th of November 2022. The data represents a walkover of the proposed development site. A habitat survey of the proposed development site was conducted following standard guidelines set out in 'Best Practice Guidance for Habitat Survey and Mapping' developed by the Heritage Council of Ireland². Habitats were classified using habitat descriptions and codes published by the Heritage Council in 'A Guide to Habitat Types in Ireland'³. Plant species nomenclature follows Rose's 'The Wild Flower Key: How to identify wild flowers, trees and shrubs in Britain and Ireland'⁴. A list of the dominant and notable plant species was taken for each habitat type. Particular emphasis was given to the possible occurrence of rare or legally protected plant species (as listed in Flora Protection Order 1999) or Red-listed plant species (Curtis & McGough 1985, Wyse Jackson *et al.* 2016).

Observations were made for fauna species present or likely to occur on site. Emphasis was placed on mammals and birds, and especially for species listed in the respective Red lists, namely; Gilbert *et al.* 2021⁵ (birds), and Marnell *et al.* 2019⁶ (mammals). For mammals, the survey was focused on signs of their presence/activity, such as tracks, feeding marks and droppings, as well as any direct observations. Regarding bats, the main focus was on evaluation of suitable habitats to support roosting individuals or communities; however, an ecological assessment of habitat suitability was undertaken throughout the site. The assessment process undertaken for bats followed the BCT Guidelines⁷. Chapter 4 of these guidelines identify the approach to assess "preliminary ecological appraisal for bats". This chapter sets out methods for identifying habitat suitability which do not constitute assumptions. Based on the information from the assessment the survey effort requirements are identified.

Bird species were recorded by sight and sound during a bird point count conducted during the ecological walk over, following the Birdwatch Ireland Country Breeding Bird survey methods.

² Smith, George F., et al. "Best practice guidance for habitat survey and mapping." The Heritage Council: Ireland (2011)

³ Fossitt, J.A., 2000. A guide to habitats in Ireland. Heritage Council/ Chomhairle Oidhreachta

⁴ Rose, F., O'Reilly, C., Smith, D.P. and Collings, M., 2006. The wild flower key: how to identify wild flowers, trees and shrubs in Britain and Ireland. Frederick Warne.

⁵ Gilbert, G., et al. 2021. Birds of Conservation Concern in Ireland 4: 2020–2026. *Irish Birds*, 43, pp.1-22.

⁶ Marnell, F., Looney, D. & Lawton, C. (2019) Ireland Red List No. 12: Terrestrial Mammals. National Parks and Wildlife Service, Department of the Culture, Heritage and the Gaeltacht, Dublin, Ireland.

⁷ Collins, J. (ed.) 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

Particular attention was focused on areas within the site of high ecological value that interact or overlap with parts of the proposal to provide civil recreation.

During all surveys, particular attention was given to assessing the presence of rare or protected species. Each species identified was assessed in term of the EU Habitat Directive (92/43/EEC), Bird Directive (2009/147/EC), the Wildlife Act (1976), the Wildlife Amendment Act (2000) and the Red Data Lists for threatened and protected species, published on the NPWS website⁸.

2.2.1 LIMITATIONS

The initial ecological site walk-over to inform this assessment was carried out in winter (9th December 2021), which is not the optimum time for botanical and breeding bird surveys. However, further surveys were conducted in early summer 2022 for breeding birds, and summer 2022 and November 2022 for invasive species. An additional specialised botanical survey focused on the rare Toothwort plant (*Lathraea squamaria*) was carried out in May 2023.

The site is currently used for amenity activities by rowers and kayakers to progress further west along the River Liffey but is not managed as such. The proposal is small in scale and aims to enhance the amenity use of the site for rowers and kayakers and to prevent damage to the eastern bank of the island, while retaining the current ecological features and sensitivities.

Due to these factors, the current survey effort and assessment is deemed sufficient for the proposed site context and the proposed project therein. Therefore, overall, it is considered that there are no significant limitations to the present assessment of the ecological importance of the site.

⁸ NPWS website for protected species and habitats data accessed at: <https://www.npws.ie/maps-and-data>

3 PROPOSED DEVELOPMENT OF THE ISLANDBRIDGE PONTOON

3.1 SITE OVERVIEW

The proposed site is located on an island to the east of Islandbridge in Dublin City. The site is located between Phoenix Park to the north and the Memorial Gardens to the southeast (Figure 3.1). Despite this, in a wider landscape context the proposed site is situated in a highly urban environment with housing developments, roadways, industrial developments, and local amenity services. Due to this, this increases the local ecological value of the proposed site. The proposed site is currently utilised by kayakers to launch and retrieve kayaks from the river straight onto the river bank – without any structural support to provide safe movement for kayakers. In addition, this current method damages the river bank through abrasion and erosion.

to improve the area for use in recreational activities such as rowing and kayaking

3.1 PROJECT SPECIFICS

The proposed development is to provide a pontoon on the island with associated walkways to facilitate access to the river for rowing boats and kayaks. The project will not change the current use of the site, but rather implement a platform that help to avoid damage to bankside vegetation when launching and retrieving boats, and allow a safe platform for kayakers and boaters to embark and disembark. The mapping which provides the visual aid to the landscaping plans proposed are provided in Appendix IV accompanying this report.

The works proposed plan to combine the following elements:

1. Construction of a pontoon for use in recreational activities in the River Liffey;
2. Improving existing walkways that already exist on the proposed site.
3. Installation of 4x4m wide landing pontoons
4. Installation of 18x4m wide rowing pontoons
5. Installation of 16x3m gangway



Figure 3.1 Location of the proposed Liffey Pontoon

3.2 RECEIVING ENVIRONMENT

3.2.1 OVERVIEW

The proposed Islandbridge Pontoon lies within an island on the River Liffey to the east of Islandbridge. To the north of the proposed site is Phoenix Park and to the south east lies the Memorial Gardens with the rest of the surrounding area being various urban developments (Figure 3.1). The area as a whole provides an area of relatively moderate levels of biodiversity, with the proposed site consisting of a mixed broadleaved woodland and scrub. The proposed site and some of the surrounding area provides refugia for local flora and fauna in the urban expanse of Dublin City. As mentioned already, the proposed site is situated on the River Liffey, which flows westerly into Dublin Bay approximately 9.68km from the proposed site (Figure 3.2).

3.2.2 ZONE OF INFLUENCE

The operational phase works are not anticipated to have any impacts beyond the plan boundary due to the proposed characteristics of the project – i.e., a small scale, temporary project with minor construction phase works and an operational phase that is in keeping with the current site use and level of activity, with little change to the baseline environment and condition of the site itself. The construction phase works may have some effects beyond the boundary due to increased noise pollution, imposing of artificial lighting conditions during the construction phase only, noise disturbance, and possible water quality effects to the surrounding area. There are no identified possible operational phase impacts. The River Liffey flows through the site and connects to South Dublin Bay. Following the source-pathway-receptor model identifying the potential likely sources a Zone of Influence (ZOI) was established; 2km radius around the proposed site. Given the nature of the proposed works, impacts are not foreseen to be significant beyond this distance.

3.2.3 HYDROLOGY

As mentioned, the proposed site is located on the River Liffey and flows and into Dublin Bay approximately 9.68km at the closest point. There are no other surface water courses which directly connect the proposed site to Dublin Bay. The River Liffey was assigned a quality value of 3 out of 5 at the location of the proposed development site, which is defined as a poor status by the EPA.

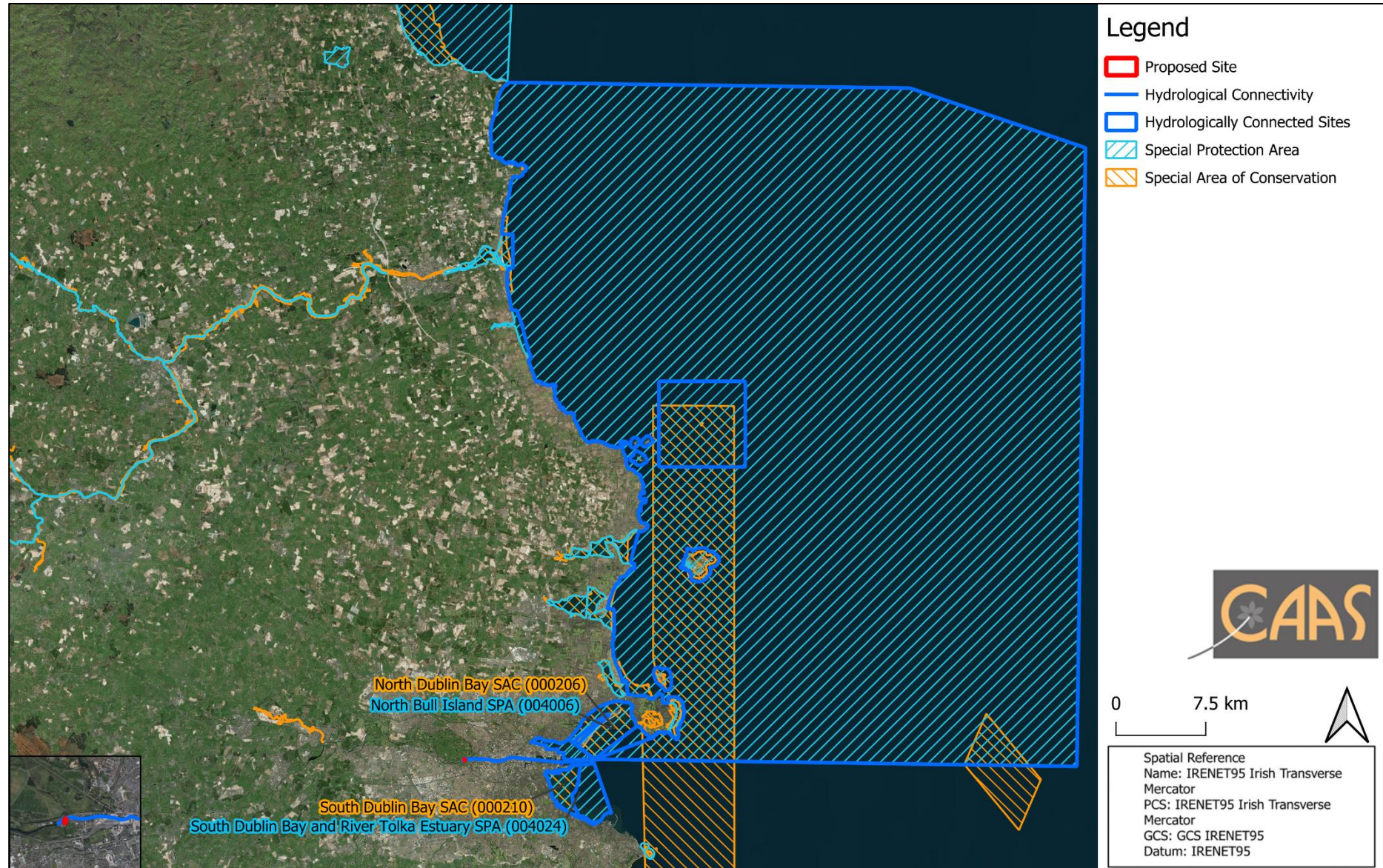


Figure 3.2 Hydrological connectivity of the proposed development boundary

3.2.4 DESIGNATED AREAS

In accordance with the European Commission Methodological Guidance (EC, 2001), a list of European Designated Sites that can be potentially affected by the works has been compiled. A dedicated Appropriate Assessment Screening, reviewing all European sites within an appropriate Zone of Influence of the proposed project, was undertaken. A review of the conservation objectives and qualifying interests of these sites was undertaken in order to identify what habitats and/or species could be vulnerable to risk of impact from the proposed project. This was done by assessing whether any source receptor links existed between the qualifying interests of the designated sites and the proposed project site.

When assessing ecological impacts, the CIEEM Guideline recommend a 15km pathway consideration zone as an adequate assessor for potential effects. Due to the characteristics and scale of the proposed project, all other Natura 2000 sites and pNHA/NHA sites beyond threshold distances of 15km are considered to be of sufficient distance from the proposed site, that no significant effects could be caused either directly or indirectly or in combination with other plans or projects to their interest features. Any impacts caused by the proposed development have no valid impact pathway to transfer along to reach any of the receptor interest features. These sites are thus 'screened out' and not considered further.

A stand-alone Appropriate Assessment Screening Report is submitted separately to this assessment, and expands on the potentially affected designated sites and their conservation objectives in more detail. Appendix I provides a list of all of the designated sites considered within the assessment arranged by distance from the proposed Development - which are assessed as part of this report. Figure 3.3 displays the Nature 2000 sites within a 15km Zone of Influence buffer of the proposed project. The proposed site has a surface water hydrological pathways connecting it to Natura 2000 sites in Dublin Bay, via the River Liffey, approximately 9.68km downstream at the closest point.

In addition to examining European sites, NHAs and pNHA have been considered. Figure 3.4 displays the National sites within a 15km pathway consideration zone of the site. Although NHAs and pNHAs do not form part of the Natura 2000 Network, they often provide an important supporting role to the network, particularly when it comes to fauna species which often do not obey site boundaries. There are however, NHAs and pNHAs that are designated for features that are not important at an international level and thus may not interact with the Natura 2000 network.

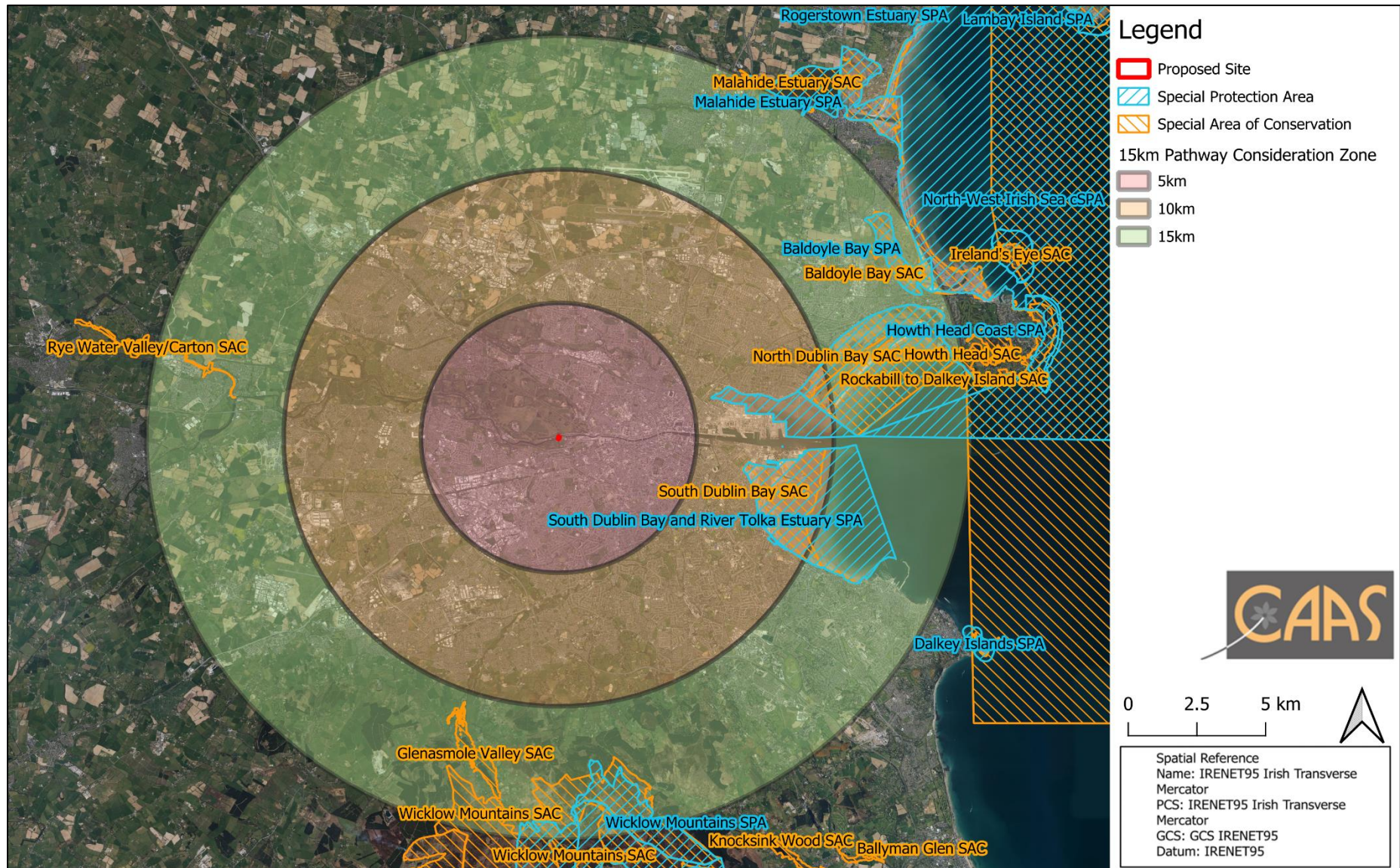


Figure 3.3 Natura 2000 sites within a 15km buffer of the proposed project area.

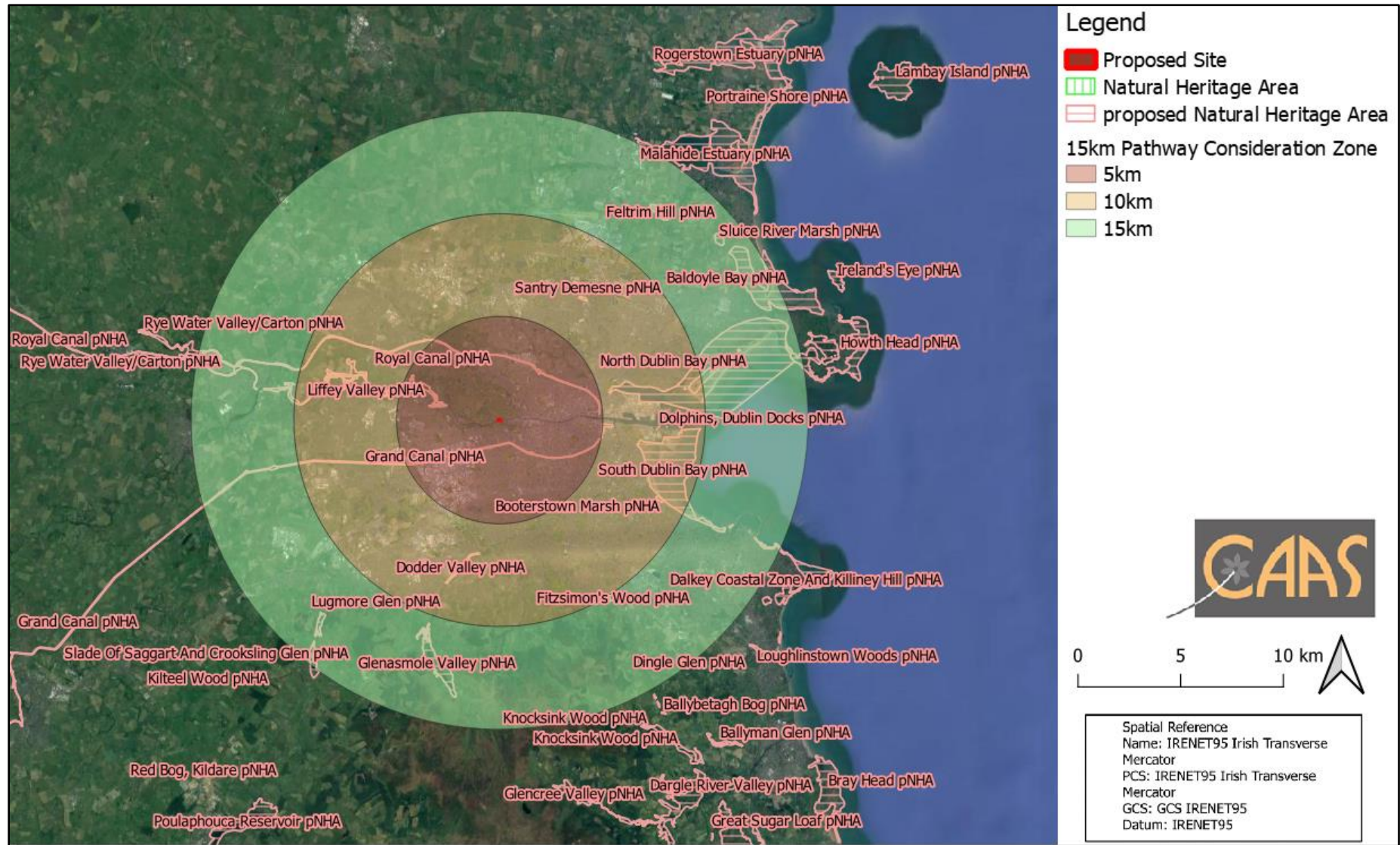


Figure 3.4 Natural Heritage Areas within a 15km buffer of the proposed project area.

3.2.5 RECORDS OF PROTECTED, RARE OR OTHER NOTABLE FLORA AND FAUNA SPECIES

The digital database of the National Biodiversity Data Centre (NBDC) was consulted to assess known records of rare, protected and invasive species that occur in the surrounding landscape. The collation of this information, as well as examination of aerial photographs allowed areas of potential ecological importance to be highlighted prior to field survey work. A search was undertaken of records of Red Data Book and Protected species held by the National Biological Data Centre (NBDC) database. A list of the rare and/or protected species recorded by the NBDC within the 10km x 10km grid square (O13) which contains the study area of this assessment, is provided in Appendix II⁹.

3.2.5.1 Invasive Flora Species

Publicly available NBDC data was accessed to identify invasive species in the 10km x 10km grid square which contains the study area (O13). 16 of the flora species and 7 of the fauna species listed in Appendix II, that have been recorded in the NBDC hectad O13 which contains the proposed site, are subject to restrictions (Third Schedule) under Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011.

3.2.6 FIELD SURVEY RESULTS

The result of the initial multidisciplinary ecological site visit of December 2021 and further ecological site visits in June and November 2022, and Wednes are discussed below. A detailed habitat map is provided in Figure 3.5.

3.2.6.1 Habitats and Flora

No Annex I habitats were found on site. The habitats present on the proposed site are of high local importance in terms of support for local biodiversity, resource availability, and ecological connectivity across an urban landscape to other pockets of ecological value in the urban Dublin landscape (see Figure 3.5 for a habitat map).

The habitats found on site consist of an area of mixed broadleaved woodland (WD1). The remaining, and only other habitat type in the proposed site consists of an area of scrub (WS1) interspersed throughout with invasive species (see section 3.2.6.2 below).

The mixed broadleaved woodland in the proposed site is an area of higher value refuge for local mammal, bird, insect and floral species in the area. This, along with scrub area to the southern part of the proposed site are of value to local insect and bird life. In addition, there is the aforementioned freshwater habitat of the River Liffey. The area is generally protected from visitor interference but the proposed site is accessible via steel bridges to the south west of the proposed site. Despite the mature, mixed broadleaved woodland being intermittently flooded and also a river island, the habitat is not riparian. The woodland is mature and is dominated and composed mainly of sycamore with few ash and willow trees in the habitat. The scrub area in the south of the proposed site is a transition grass/scrub that has been affected by some human disturbance, being dominated by common nettle and with also areas of bramble and ivy in the habitat.

A specialised botanical survey was carried out for the rare Toothworth plant (*Lathraea squamaria*), which has been recorded in the local vicinity of the proposed project. The survey was conducted in May 2023 within or around the proposed site itself, and also within the extended proposed works area, or 50m beyond the works area upstream and downstream. The survey was carried out in the optimal flowering period for this flower in Ireland (April – May) and did not find any individuals of the species along the areas surveyed.

The habitat types recorded, their distributions, and their ecological significance are aligned with what is expected of pockets of ecological significance along the River Liffey in Dublin City. A comprehensive

⁹ National Biodiversity Centre data. Accessed: 20th July 2023

habitat map of the proposed site is supplied in Figure 3.5 and a description of each of the habitats identified on site along with a species list for each can be found in Appendix III.

3.2.6.2 Invasive species

Two invasive species, Japanese knotweed and Himalayan balsam, which are both subject to restrictions (Third Schedule) under Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011, were recorded on site during the multidisciplinary ecological site visits (Figure 3.6). Himalayan balsam was recorded in high numbers on the island itself, with the vast majority of the island containing the species in the lower canopy level. Japanese knotweed was recorded to south of the proposed site where a temporary bridge for construction vehicles is proposed, due to nature of the species a further potential seeding area is outlined in the map below (Figure 3.6). As the River Liffey and the construction phase provides a suitable pathway for both Himalayan balsam and Japanese knotweed to spread, along with the consideration that both are subject to Third Schedule restrictions, an Invasive Species Management Plan is included for in the mitigation for this project, which will be compiled by a specialist invasive species treatment team – that will be contracted and have the plan in place prior to any construction or arborist works taking place on the site – and communicated where relevant to all teams.

3.2.6.3 Fauna

Non-volant mammals

No evidence of badger setts was found on site. A survey for otter signs (spraints, couches or holts) was also carried out during the initial multidisciplinary survey, and again on the 9th of June 2023, and no evidence was found of otter activity on the island / proposed site. This could indicate low use of the site by these mammals, especially given the optimum season for signs during which the surveys were conducted. This could be due to the current baseline levels of disturbance on the site from fishing and kayaking for the otters, the intermittent flooding of the island in the winter months is also possibly a factor for the lack of badger activity in the winter. The Dublin Otter Survey (2019)¹⁰ recorded otter spraint 500m from the proposed site, and an otter holt 750m from the proposed site. It is possible that non-volant mammals do use the site for foraging.

Bats

Due to the small scale and temporary duration of the proposed project's construction phase, the densely wooded nature of the proposed site, and the fact that only a small number of these trees are to be removed to facilitate the proposed development's operational phase (trees which are immature / require coppicing and thinning in order to maintain the overall health of the woodland patch – as per the Arborist's report accompanying this application), a bat activity survey was not deemed necessary for this assessment. A survey for potential roost features (PRFs) was carried out during the initial multidisciplinary site walkover, and again on the 9th of June 2023. This survey found that there were no PRFs within the proposed site works area, or within any of the trees to be felled as part of the Arborist recommendations for maintenance of biodiversity on the island. This is due to the fact that there are no trees with any features suitable for bat roosting within these areas. There is a dead and decaying tree that is located on the eastern site of the island, that has potential to support bat roosts (labelled as T843 in the Arborist Drawing No. 220123-P-10, accompanying the application for the proposed project). In consultation with the project Arborist, this tree will not be felled, but retained for biodiversity with minor maintenance on the top thin branches for safety (see Arborist Drawing No. 220123-P-11 accompanying the application for the proposed project). Therefore, there will be no impact to bat roosting habitat as a result of the proposed project.

Birds

Much of the broadleaved woodland in the northern section of the proposed site, holds high local value for nesting breeding birds. In addition to the broadleaved woodland, there is an area of scrub that also holds high local value for resident birds (Table 2).

A bird point count focused on passerines was conducted on site, for a duration of 15 minutes – in addition to treeline walks and opportunistic records of species during surveying. The bird species seen

¹⁰ Macklin, R., Brazier, B. & Sleeman, P. (2019). Dublin City otter survey. Report prepared by Triturus Environmental Ltd. for Dublin City Council as an action of the Dublin City Biodiversity Action Plan 2015- 2020.



Figure 3.5 Habitat map the proposed Liffey Pontoon as at June 2022¹¹

¹¹ Fossitt, J (2000) *A Guide to Habitats in Ireland*. Heritage Council



Figure 3.6 Invasive species recorded at the proposed Liffey Pontoon as at June 2022

and heard were recorded and the results in Table 2 below. One species was recorded, which is on the amber list of the Birds of Conservation Concern in Ireland¹².

Table 2 Bird survey results

Common name	Scientific Name	Heard	Seen	Red list status ¹²	Habitat type
Cormorant	<i>Phalacrocorax carbo</i>	Y	Y	Amber	Bank of river

Amphibians

No frogs were observed on site during the ecological walkovers. As the River Liffey will have minimal interactions with the proposed project in the operational phase that is additional to the current use of the river by kayakers, and only have small scale, and temporary duration or interactions during the construction phase, and that the majority of the site's receiving environment will remain unchanged as a result of the proposed project; a dedicated amphibian survey was not deemed necessary for this assessment.

Invertebrates

As the River Liffey will have no interactions with the proposed project in the operational phase that is additional to the current use of the river by kayakers, and only have small scale and temporary duration of interactions during the construction phase, and that the majority of the site's receiving environment will remain unchanged as a result of the proposed project; an invertebrate survey was not deemed necessary for this assessment.

Salmon

The River Liffey is a Salmonid River, and is protected under the Salmonid River Regs S.I. No. 293/1988. As the construction phase of the proposed development will interact with the River Liffey, there is potential for impacts on any potential salmon spawning sites upstream from the proposed development during the construction phase. Mitigation measures are provided in Section 5 in order to minimise any potential impacts on salmon spawns.

¹² Gilbert, G., et al. 2021. Birds of Conservation Concern in Ireland 4: 2020–2026. *Irish Birds*, 43, pp.1-22.

3.2.7 SUMMARY OF ECOLOGICAL EVALUATION AND RECOMMENDATIONS

Overall, the site of the proposed Islandbridge Pontoon has local importance relative to its surroundings in terms of ecological value. The site does contain aspects of higher local importance ecologically, such as the mixed broadleaved woodland on the northern part of the island.

Furthermore, as with most cities, areas like the proposed site are refugia for wildlife. Thus, the urban context of the larger surrounding area of the site, makes this an isolated resource that acts as an essential ecological stepping stone for bird, bat and mammal species.

The proposed project aims to enhance the amenity value of the proposed site with a view to minimal interruption or disturbance to the current habitats within the area. As part of the proposed project, it is thus imperative that all design and features are sensitive to the local ecology, and sensitive features. With regard to the noted ecological features resulting from multiple site visits, the particularly sensitive features of the proposed development site's ecology with regard to the proposed development are:

1. the River Liffey;
2. the mixed broadleaved woodland;
3. invasive species.

Therefore, executing the proposed Islandbridge Pontoon in an ecologically sensitive regard should have emphasis on the following (along with measures detailed in section 5):

1. ensuring measures are put in place and maintained during the construction phase to ensure the protection of the River Liffey;
2. retention of native vegetation where possible; and,
3. ensuring standard best practice is maintained for the construction phase regarding invasive species.

In addition, as the construction phase is the only phase identified here as having potential impacts, a CEMP will be produced for the proposed project by the contractor and all elements of the mitigation provided for in this assessment will be agreed to by the contractor with additional construction phase best practice measures – prior to any construction taking place. Particular aspects to be detailed on in the CEMP will be detailing how the above sensitive ecological aspects of the proposed site, and the overall biodiversity of the proposed site, will be protected and monitored during the construction phase with regard to water quality, dust, noise, lighting and invasive species. An Invasive Species Management Plan will also be produced by a specialist team and will detail appropriate methodology to remove the species in an ecologically sensitive manner that will be agreed with the arborist and construction team prior to any works taking place.

The proposed project has potential for impacts to bird and bat populations during the construction phase, along with freshwater fauna, but as the project's construction phase is temporary, and is small in scale, with an operational phase in keeping with the current site use and conditions of the site – these potential impacts are negligible following completion of the project.

4 POTENTIAL IMPACTS

Based on the baseline ecological environment and the extent and characteristics of the proposed project, the following potential impacts have been identified:

1. Augmentation of existing habitats i.e., removal of trees and scrub, ground disturbance
2. Otter habitat;
3. Water quality;
4. Construction, earthworks and dust;
5. Lighting during construction;
6. Noise and vibration;
7. Invasive species; and,
8. Water quality and Salmonid River

These potential impacts are discussed below:

1. Augmentation of existing habitats, as well as the removal of trees
 - The removal of any vegetation on site has potential to negatively impact breeding bird populations via reduction of available foraging, roosting or breeding habitat.
 - Removal of vegetation could also result in a reduction in insect life, also indirectly affecting mammal and bird populations.
 - The rare Toothwort (*Lathraea squamaria*) wildflower has been recorded in the vicinity of the proposed project, although a survey carried out in May 2023 did not find any individuals of the species on or around the proposed site itself, or within the works area, or 50m beyond this upstream and downstream. There is potential for the construction phase of the proposed project to disturb or damage the habitat which supports this species. There are no operational phase impacts as a result of the implementation of the proposed project as the site will continue in its current use and condition.
2. Otter habitat
 - A survey for otter holts and signs (spraints and tracks) on the island was carried out in the optimal season for surveying in 2022, and an additional survey carried out in 2023 – no signs of otter on site or within the local area of the site were found. However, there are records of otter spraints 500m from the proposed site, and an otter holt 750m from the Dublin City Otter Survey (2019)¹³ from the proposed site.
 - The proposed project is not going to change the use of the island, but improve the safe access to the island for use by kayakers, and reduce bank erosion of the island. Thus, it is not envisaged that the proposed project will result in a change in the use of the island by non-volant mammals in the operational phase of the proposed project as it will be in keeping with current levels of disturbance and site use. There may be some disturbance or reduced use of the island for foraging by non-volant mammals caused by the proposed project during the construction phase, but due to the small scale and temporary nature of the proposed project's construction phase, this disturbance is deemed to be very low to negligible and temporary as a result.
 - However, otters can establish new territories seasonally, and there is a possibility of use of the site of a holt or couch when construction begins. Thus, as a precautionary measure, mitigation will be proposed for this potential impact during the project's construction phase as part of the contractor's CEMP.
3. Water quality and Salmonid River
 - The River Liffey, and the associated downstream European sites, are hydrologically sensitive to potential changes in siltation, pollutants, and disturbance for the construction phase of the proposed project. The operational phase does not introduce any potential effects for water quality or Salmonid species due to it being in keeping with current site condition and site use.

¹³ Macklin, R., Brazier, B. & Sleeman, P. (2019). Dublin City otter survey. Report prepared by Triturus Environmental Ltd. for Dublin City Council as an action of the Dublin City Biodiversity Action Plan 2015- 2020.

4. Construction and Earthworks
 - The proposed development could interact with local habitats via dust, soil removal, and construction disturbance.
5. Lighting during construction phase
 - Strong artificial lighting during the construction phase for the proposed project could impact bat species that use the site for foraging and commuting, if not implemented with the appropriate ecological considerations with regard to bat populations.
 - Bats, non-volant mammals, and birds are sensitive to any significant changes in lighting within semi-natural habitat in which they reside.
 - No artificial lighting will be implemented during the operational phase of the proposed project.
6. Noise/vibration
 - The construction phase and movement of machinery could cause localised disturbance of breeding birds and wading birds that may use the habitats within the site area.
 - However, there is likely to be an existing degree of habituation to human activity near the site so this impact may not be across the whole site.
 - The operational phase is expected to be similar to current noise and vibration levels from amenity usage of the site and thus no potential impact is foreseen for the operational phase.
7. Invasive species
 - The construction phase and subsequent movement of construction machinery could cause the identified invasive species to spread further than the proposed development area.
 - If left unmitigated, the invasive species identified would further spread within the surrounding area of the proposed development and downstream from the proposed development, leading to further potential impacts for ecological systems downstream.
8. Water quality for salmon rivers
 - The construction phase and interaction with the River Liffey has potential to impact on any salmon spawning sites upstream of the proposed development during spawning season.
 - The operational phase is expected to be similar to the current amenity usage of the site and thus no potential impact is foreseen for the operational phase due to the proposed development.

4.1.1 POTENTIAL IMPACTS ON DESIGNATED SITES

The AA Screening Report accompanying this report sets out the likelihood and significance of any potential effects to European designated sites as a result of the proposed Islandbridge Pontoon. The AA screening found no significant adverse effects foreseen to be likely to affect the ecological integrity of any European sites. There is a direct hydrological link from the proposed site to European sites, via the river Liffey which links the proposed site to South Dublin Bay, approximately 9.68km downstream. The small nature of the proposed project, lack of interaction with the river Liffey during the operational phase as a result of the proposed project beyond the current baseline, and temporary timeline of the proposed project ensure that there is no potential for impacts to European sites as a result of the implementation of proposed project. Thus, there is no likelihood of interaction with European sites at any scale that would result in potential for significant effects as a result of the proposed Islandbridge Pontoon.

5 MITIGATION MEASURES

The proposed site has been identified to have an overall moderate local ecological importance due to the woodland habitat on the proposed within the site in the urban context of the larger surrounding area.

Overall, it is assessed that the implementation of the proposed development will have a low to very low impact, of temporary duration, in terms of the ecological resources present and current levels of biodiversity. However, there are potential higher risks due to the project, particularly concerning invasive species. Therefore, mitigation measures are required to ensure that the potential impacts identified are minimised.

Considering the key areas for potential impacts identified in section 4 above; the following mitigation measures are recommended for each one:

1. Augmentation of existing habitats, as well as the removal of trees

The removal of trees on site has potential to negatively impact breeding bird populations; however, only a small number of trees are to be removed and due to other treelines on and near the site there will be no long-term negative impact and the impact from the augmentation of the agricultural grassland on the ecology of the site will be negligible:

- ✓ No vegetation will be removed during the breeding bird season (1st March to the 31st of August).
- ✓ No vegetation is removed beyond the minimum required to complete the task.
- ✓ Timing of works will be as brief as possible to minimise potential disturbance effects.
- ✓ Any vegetation removal or disturbance works that must take place during the breeding season should have a suitable qualified ecologist consulted prior to any works commencing and where required an Ecological Clerk of Works will be appointed to oversee works.
- ✓ A tree planting plan and tree removal plan will be prepared by a qualified arborist detailing appropriate native replacement planting that is suitable for the flood prone nature of the proposed site.
- ✓ The rare Toothwort (*Lathraea squamaria*) wildflower has been recorded in the vicinity of the proposed project. As part of the mitigation proposed - a specialised survey was carried out to access if the plant occurs in the proposed site itself, or within any of the areas proposed for moving materials to the site / having interaction with the watercourse. If the plant was found to be flowering on site, the DCC Biodiversity Officer should be consulted and the area it is flowering in shall be off limits; restricting access by construction workers and preventing potential damage to the plant while the works take place. However, no record of the plant was found during the survey during the optimal flowering period of April – May. Due to the small scale and temporary nature of the proposed project's construction phase, and the lack of any operational phase effects a result of the implementation of the proposed project, beyond current levels of use of the site, this is sufficient mitigation to ensure the proposed project does not cause permanent impact to the flowering habitat of this species within the River Liffey during the construction phase.

2. Otter habitat

- ✓ A pre-construction survey for otter holts should be carried out by a qualified ecologist prior to any construction works taking place. In the event that a holt is recorded, consultation with the project ecologist and the NPWS will determine the next steps for the project – and a derogation licence sought from the NPWS if required.

3. Water quality and Salmonid River

- ✓ Ensure protection of the River Liffey by implementing best practice control measures during the construction phase
- ✓ The design and implementation of a CEMP prior to commencement of site works will detail methods for the protection of the water quality of the River Liffey for all aspects of the temporary construction phase, including best practice measures to be

implemented, in order to ensure that there will be no impact on water quality as a result of the construction phase of the proposed project.

- ✓ The CEMP will be reviewed by the project ecologist, Inland Fisheries Ireland, and the Dublin City Council Protection of Waterbodies Office prior to works taking place.

4. Construction and Earthworks

Elements of the proposed development that has potential to interact with existing habitats which have been identified to have local importance overall with certain aspects having a higher local value such as the freshwater habitats on site. Therefore, it is recommended that:

- ✓ Dust and debris control measures be implemented where relevant.
- ✓ The design and implementation of a CEMP prior to commencement of site works will ensure there is no impact on water quality or the island itself as a result of the small-scale construction phase.

5. Lighting during construction

Strong lighting in the area of the proposed project during the construction phase impact bat species that use the site for foraging and commuting if not carefully controlled.

Therefore, construction phase lighting will need to be installed taking into account the sensitivities of bats and artificial lighting, and in line with the appropriate guidelines:

- ✓ Implementation of lights out hours when construction is not active on site (evening and night hours).
- ✓ Directional low lux lighting will be implemented for the construction phase of the proposed project, in line with the upcoming February 2023 update of following guidance document: "*Lighting for Bats (Guidance Note 08/18 - Bats and artificial lighting in the UK*"¹⁴ - and stated as such in the accompanying CEMP.
- ✓ The design and implementation of a CEMP prior to commencement of site works will incorporate the recommendations from the above stated guidance document to ensure there is no impact for local light sensitive populations such as bats as a result of the temporary construction phase.

6. Noise/vibration

Most of the construction phase works are small scale in size and temporary in time scale.

- ✓ Nevertheless, the establishment of best practice measures for minimising and reducing noise and vibration from construction should be detailed in a CEMP which will be designed and implemented prior to commencement of site works will ensure there is no impact due to noise and vibration to local wildlife populations.

7. Invasive Species

- ✓ The establishment of best practices measures for the removal of and minimising the spread of the identified invasive species, Himalayan balsam and Japanese knotweed, during the construction phase will be detailed in the Invasive Species Management Plan, that is to be designed by a contracted specialist and carried out by the contracted specialist for the proposed development in agreement with Dublin City Council.
- ✓ The Invasive Species Management Plan (ISMP) will detail the timeline, treatment schedules, management schedules, and restriction zones in terms of time and space for the construction team and the arborists working on site – and will communicate as such prior to any works taking place on the site – and adjust works appropriately to accommodate the full implementation of the ISMP.

8. Water quality for salmon rivers

- ✓ Ensure the protection of any salmon spawning sites upstream of the River Liffey by restricting the construction phase of the proposed development to the months of August-October and January. This shall be agreed prior to the commencement of any works with the invasive species specialists' timelines, and the arborist and construction team. In addition, a CEMP will be produced detailing how water quality

¹⁴ Bat Conservation Trust and Institution of Lighting Professionals. 2018. Lighting for Bats - Guidance Note 08/18 - Bats and artificial lighting in the UK.

is to be maintained during the construction phase of the proposed project. The CEMP shall be developed in consultation with the project ecologist and Inland Fisheries Ireland.

The proposed development's aim is to optimise the use of the site in order to benefit recreational and sport activities. This in turn, protects the banks of the proposed site as the proposed pontoon will be used for these activities rather than the banks of the island. With the implementation of the above mitigation measures, the long-term impact of the proposed project is thus negligible on the ecological integrity and biodiversity of the site itself, and for supporting local wildlife populations.

The absence of the application of the above mitigation measures would render the project having the potential to have significant adverse effects on the ecological value of habitat of high local importance within the site area. It is thus recommended to implement these measures as part of the proposed project to avoid potential impacts to the ecological integrity of the proposed site itself.

5.1 CUMULATIVE IMPACTS

Plans of relevance in the context of this proposal include:

- Dublin City Development Plan 2022-2028
- Dublin City Biodiversity Action Plan 2021-2025

This project is small in scale, temporary in its construction phase, and has an operational phase that is in keeping with the current site condition. Therefore, there will be no impact due to cumulative impacts with the above-mentioned plan.

As the proposed site is within a relatively highly developed and urbanised context in Dublin City, there are numerous other proposed projects in the vicinity which are at planning stage or underway on various sites. A review of the Dublin City Council's planning database for projects within the project area (200m radius from the project boundary) over the past 5 years identified that the projects within the area are small – medium scale works predominantly relating to the alterations of existing structures, small private home extensions, extension of permissions. There is a project to repair existing sewer systems which could produce in-combination impacts with this proposed project, however, properly implemented mitigation measures implemented for this project will ensure the impacts will be negligible. There are also a small number of minor developments which fall under the Dublin City Development Plan housing targets (see Appendix V for a complete list of all recent planning applications under the above search criteria).

These developments will increase cumulative impacts of the proposed project but only during the construction phase, and, given the overall long-term negligible impacts of the proposed project, the overall cumulative impacts for local biodiversity as a result of the proposed project are also negligible.

6 RESIDUAL IMPACTS

Given the nature of the works proposed, there will be no net decrease in terms of the ecological integrity of the site due to the maintenance of the vast majority of natural features and vegetation and maintenance of existing habitat across the site. Following the management and mitigation measures detailed in section 5, appropriate construction phase measures; the potential impacts to the flora and fauna of the existing environment are foreseen to be negligible, and of a temporary duration (i.e., construction phase only). The operational phase will be in keeping with the current function and condition of the site current use in terms of both human pressures and ecological condition. The characteristics of the development detailed above indicate that any potential residual impacts will be localised and temporary, and due to the magnitude of works being undertaken, any impacts will be negligible on the long-term biodiversity and ecological integrity of the site.