

10 BIODIVERSITY – FLORA & FAUNA

10.1 Introduction

This chapter describes the likely significant effects on biodiversity resulting from the construction and operation of the proposed development at 42A Parkgate Street, Dublin 8. Permission exists (under ABP-306569-20) for demolition on site and the construction of Blocks B and C. This application refers to Block A within the context of an already approved development for Blocks B and C.

Where necessary, mitigation measures are identified to reduce effects and the likely residual construction and operational effects are described.

Chapter 3 provides a description of the proposed development and Chapter 4 describes the construction strategy.

The aspects of the proposed development that are of particular relevance to biodiversity are:

- Potential effects on species associated with the aquatic ecology of the River Liffey, e.g. Salmonids and Otters; and
- Potential effects on water quality in terms of connectivity with the European sites located downstream in Dublin Bay.

The Appropriate Assessment (AA) process was commenced by Moore Group for the proposed development and a Report for AA Screening and Natura Impact Statement (NIS) are presented as separate documents as part of the Planning application.

This chapter was prepared by Ger O’Donohoe of Moore Group. Ger has over 25 years’ experience as an environmental consultant with particular experience in the planning and management of Environmental Impact Assessments. His primary role in Moore Group is as Principal Ecologist in the the management and compilation of Environmental Impact Assessment Reports and undertaking Ecological Impact Assessments of the terrestrial and aquatic environments of any particular development.

Please refer to Chapter 1 for further details of his relevant qualifications and experience.

10.2 Assessment Methodology

10.2.1 General

This assessment concentrates on ecological features within the development area of particular significance, primarily designated habitats and species. This includes habitats/species listed in Annex I, II and IV of the EU Habitats Directive, birds listed in Annex 1 of the EU Birds Directive, rare plants listed in the Flora Protection Order and other semi-natural habitats of conservation value.

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project is not directly connected with or necessary to the management of a Natura 2000 site, which includes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), but which has the potential to have implications on a site’s conservation objectives. These implications can be significant effects, either individually or in combination with other plans or projects.

A habitat survey was carried out, in three stages, firstly through desktop research to determine existing records in relation to habitats and species present in the study areas. This included research on the National Parks and Wildlife Services (NPWS) metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development area.

Other environmental information for the area was reviewed, e.g. in relation to soils, geology, hydrogeology and hydrology. Interactions in terms of the chapters on these topics presented in this EIAR were important in the determination of source vector pathways and links with potentially hydrologically connected areas outside the proposed development site. While the main focus of biodiversity was on the proposed development site within the red line boundary, the surrounding

environment was taken into account in terms of biological and hydrological connectivity, particularly in relation to European sites. The Department of Housing Planning and Local Government (previously DoEHLG) Guidance on Appropriate Assessment (2009) recommends an assessment of European sites within a zone of impact of 15 km. This distance is a guidance only and the zone of impact has been identified taking consideration of the nature and location of the proposed project to ensure all European sites with connectivity to it are considered in terms of a catchment-based assessment.

10.2.2 Guidance and Legislation

10.2.2.1 EU Habitats Directive

The *Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna)* is the main legislative instrument for the protection and conservation of biodiversity within the European Union and lists certain habitats and species that must be protected within wildlife conservation areas, considered to be important at a European as well as at a national level. A Special Area of Conservation (SAC) is a designation under the Habitats Directive. The Habitats Directive sets out the protocol for the protection and management of SACs.

The Directive sets out key elements of the system of protection including the requirement for "Appropriate Assessment" of plans and projects. The requirements for an Appropriate Assessment are set out in the EU Habitats Directive. Articles 6(3) and 6(4) of the Directive.

10.2.2.2 EU Birds Directive

The *Birds Directive (Council Directive 79/409/EEC and Council Directive 2009/147/EC on the Conservation of Wild Birds)* provides for a network of sites in all member states to protect birds at their breeding, feeding, roosting and wintering areas. This directive identifies species that are rare, in danger of extinction or vulnerable to changes in habitat and which need protection (Annex I species). Appendix I indicates Annex I bird species as listed on the Birds Directive. A Special Protection Area (SPA) is a designation under The Birds Directive.

SACs and SPAs form a pan-European network of protected sites known as Natura 2000 sites (also called "European Sites") and any plan or project that has the potential to impact upon a Natura 2000 site requires appropriate assessment.

10.2.2.3 Wildlife Acts (1976 - 2012)

The primary domestic legislation providing for the protection of wildlife in general, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976. The aims of the Wildlife Act according to the National Parks and Wildlife Service are "...to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All bird species are protected under the Act. The Wildlife (Amendment) Act of 2000 amended the original Act to improve the effectiveness of the Act to achieve its aims.

10.2.3 Study Area

The study area of this assessment included the footprint of the existing buildings and hardstanding areas comprising the existing Hickey's site on Parkgate Street. The accessible area of the River Liffey was viewed for up to 250m either side of Heuston Bridge, see Figure 10.1.



Figure 10.1: Showing the site location and general survey area shaded (Source: Google Earth). Yellow dot marks approximate position of proposed building within otherwise consented SHD scheme.

10.2.4 Site Visits

The following surveys were undertaken on 26-27 February and 28 March 2019 and 23-24 January 2020, 25 August 2020, 31 March 2021 and 25 May 2021:

- Habitats;
- Bats (Internal Survey in February 2019, January, August 2020 and March 2021);
- Otters; and
- Birds.

Habitats were surveyed by conducting a study area walkover covering the main ecological areas identified in the desktop assessment. The survey dates are outside the optimal survey periods for botanical species, but this is not considered critical given the urban nature of this brownfield site.

The timing for internal building surveys for bats was optimal for surveying roosting bats and an unseasonably warm night in February 2019 allowed an external bat detector survey to be undertaken. A final internal pre-demolition survey of buildings for potential roosting bats was undertaken on 31 March 2021.

A visual survey for commuting otters was undertaken at low tide. A photographic record was made of features of interest.

Birds were surveyed using standard transect methodology and signs were recorded where encountered during the field walkover surveys.

Weather conditions during all surveys were dry with little or no wind.

10.2.5 Consultation

Consultation with the Development Applications Unit of the Department of Culture, Heritage, and the Gaeltacht and Inland Fisheries Ireland was undertaken by An Bord Pleanála for the consented SHD scheme (ABP Ref. ABP-306569-20, DAU Ref. SHD Parkgatestreet).

Specific issues regarding Birds, Biodiversity on Old Walls and Bats have been addressed with regard to the proposed demolition works required in preparation for the site for construction of the ground level of the entire site.

Additional Biodiversity mitigation measures were agreed with Dublin City Council in consultation with the National Parks and Wildlife Services (NPWS) to facilitate the site preparation works (for consented development ABP-306569-20), in order to avoid potential impacts on each issue - Birds, Biodiversity on Old Walls and Bats.

This prior consultation does not preclude An Bord Pleanála from consulting the NPWS further.

10.2.6 Categorisation of the Baseline Environment

The habitat survey was carried out firstly through desktop research to determine existing records in relation to habitats and species present in the study areas. This included research on the NPWS metadata website, and the National Biodiversity Data Centre (NBDC) database.

The following resources assisted in the production of this chapter of the report:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
 - National Parks & Wildlife (NPWS) protected site boundary data;
 - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
 - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
 - Open Street Maps;
 - Digital Elevation Model over Europe (EU-DEM);
 - Google Earth and Bing aerial photography 1995-2021;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
 - Natura 2000 - Standard Data Form;
 - Conservation Objectives;
 - Site Synopses;
 - National Biodiversity Data Centre records:
 - Online database of rare, threatened and protected species;
 - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Dublin City Development Plan 2016-2022

The second phase of the survey involved site visits to establish the existing environment in the footprint of the proposed development area. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011). Habitats in the proposed development area were classified according to the Heritage Council publication *A Guide to Habitats in Ireland* (Fossitt, 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of *An Irish Flora* (Parnell & Curtis, 2012).

The key ecological receptors were determined from desktop review of draft plans to be; potential effects on roosting bats, and potential effects on the water quality of the River Liffey and associated species including otters and salmon.

10.2.7 Assessment Methodology

Following desktop assessment and fieldwork, an evaluation of the development area and determination of the potential effects on the flora and fauna of the area is based on the following guidelines and publications:

- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2019).
- EPA Draft Guidelines on Information to be contained in an EIAR (EPA, 2017);
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council, 2011);
- Assessment of plans and projects significantly affecting Natura 2000 sites (EC, 2002);
- Managing Natura 2000 Sites (EC, 2018);
- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC, 2007);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);
- Ecological Surveying Techniques for Protected Flora & Fauna (NRA, 2008);
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009).

10.3 Receiving Environment (Baseline Situation)

10.3.1 Designated Conservation Areas

The Department of Housing, Planning and Local Government (previously DoEHLG)'s Guidance on Appropriate Assessment (2009)(loc. cit.) recommends an assessment of European sites within a Zone of Influence (Zoi) of 15km. This distance is a guidance only and a zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source- Pathway-Receptor framework and not by arbitrary distances (such as 15 km).

European sites that are located within 15km of the Project are listed in Table 10.1 and presented in Figures 10.2 and 10.3, below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on the 4 May 2021.

Site Code	Site name	Distance (km) ¹
000199	Baldoyle Bay SAC	11.96
000202	Howth Head SAC	13.22
000205	Malahide Estuary SAC	14.1
000206	North Dublin Bay SAC	7.47
000210	South Dublin Bay SAC	5.41
001209	Glenasmole Valley SAC	10.99
001398	Rye Water Valley/Carton SAC	13.14
002122	Wicklow Mountains SAC	12.02
000199	Baldoyle Bay SAC	11.96

¹ Distances indicated are the closest geographical distance between the proposed development and the European site boundary, as made available by the NPWS. Connectivity along hydrological pathways may be significantly greater. It may also be noted that distances are measured from the redline boundary of the consented SHD site.

003000	Rockabill to Dalkey Island SAC	13.48
004006	North Bull Island SPA	7.46
004016	Baldoyle Bay SPA	12.34
004024	South Dublin Bay and River Tolka Estuary SPA	4.37
004025	Malahide Estuary SPA	14.1
004040	Wicklow Mountains SPA	12.11

Table 10.1: European Sites located within 15km or the potential zone of impact of the Project. (Source: NPWS)

The proposed development site is currently covered predominantly by warehousing, with a high stone wall where it fronts onto the River Liffey, along its southern boundary. Permission exists (under ABP-306569-20) for demolition on site and the construction of Blocks B and C. This application refers to Block A within the context of an already approved development for Blocks B and C and associated site works. The nearest European sites are those associated with Dublin Bay including the South Dublin Bay and River Tolka Estuary SPA (Site code 004024) which is located approximately 4.37 km to the east, the South Dublin Bay SAC (Site code 000210) which is located approximately 5.41 km to the east, the North Bull Island SPA (Site code 004006) which is located approximately 7.46 km to the east, and the North Dublin Bay SAC (Site code 000206) which is located approximately 7.47 km to the east.

It should be noted that the primary pathway to European sites during the construction phase is hydrologically via the River Liffey and in this way the nearest sites are the South Dublin Bay and River Tolka Estuary SPA which is located over 6.8 river km downstream and the North Dublin Bay SAC and North Bull Island SPA which are located over 8.4 river km downstream. The South Dublin Bay SAC is located outside the South Bull wall and while hydrologically more disconnected from the River Liffey, it is included as it overlaps the South Dublin Bay and River Tolka Estuary SPA.

There will be indirect connectivity to Dublin Bay via the municipal system to Ringsend Wastewater Treatment Plant during the operational phase.

This information is reiterated from a Report for AA Screening which is provided as Appendix 10.1 to this chapter. The AA process continues to Stage 2 and a Natura Impact Statement (NIS) is presented as Appendix 10.2.

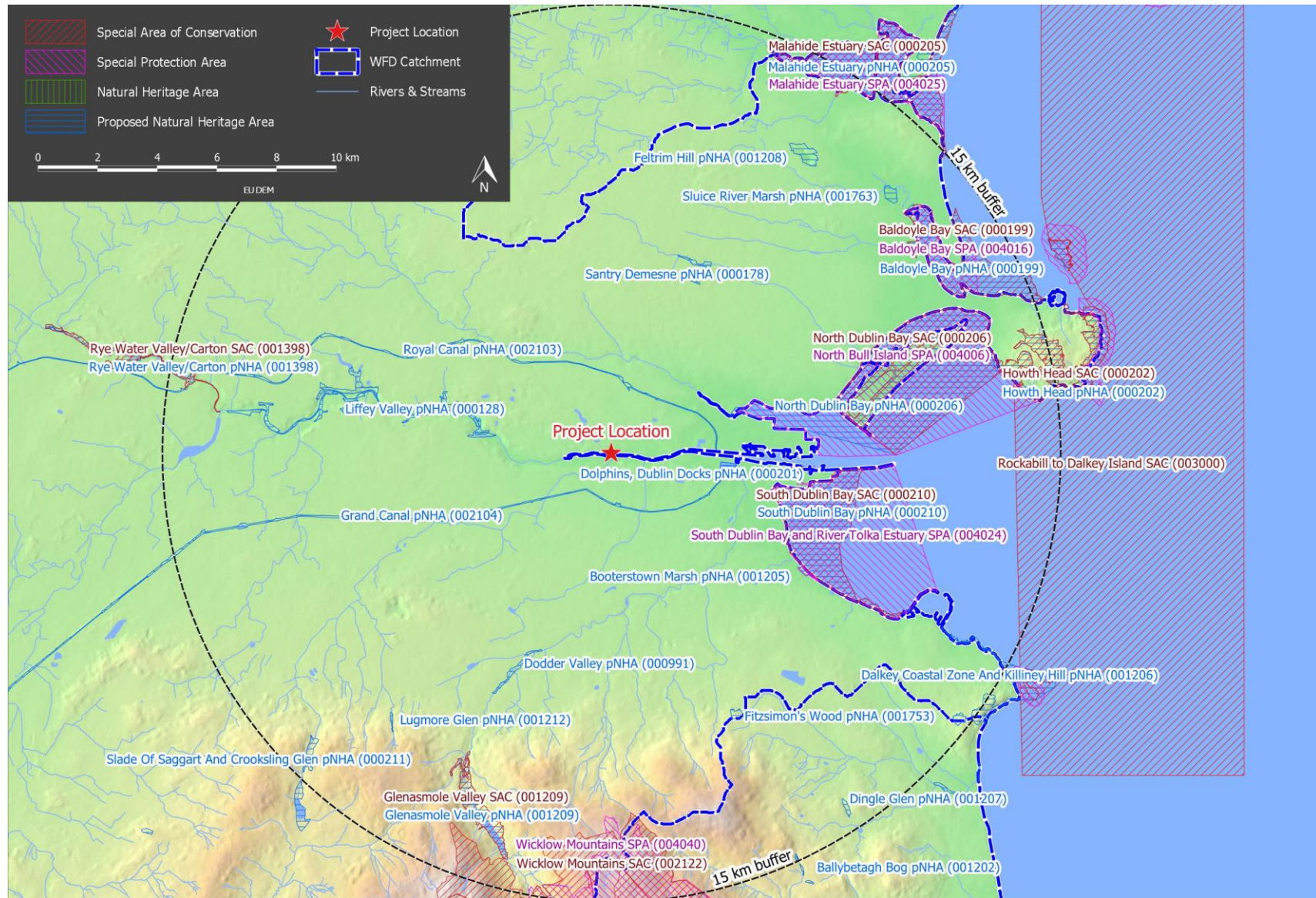


Figure 10.2: Showing the site location and general survey area (Source: Impact GIS).

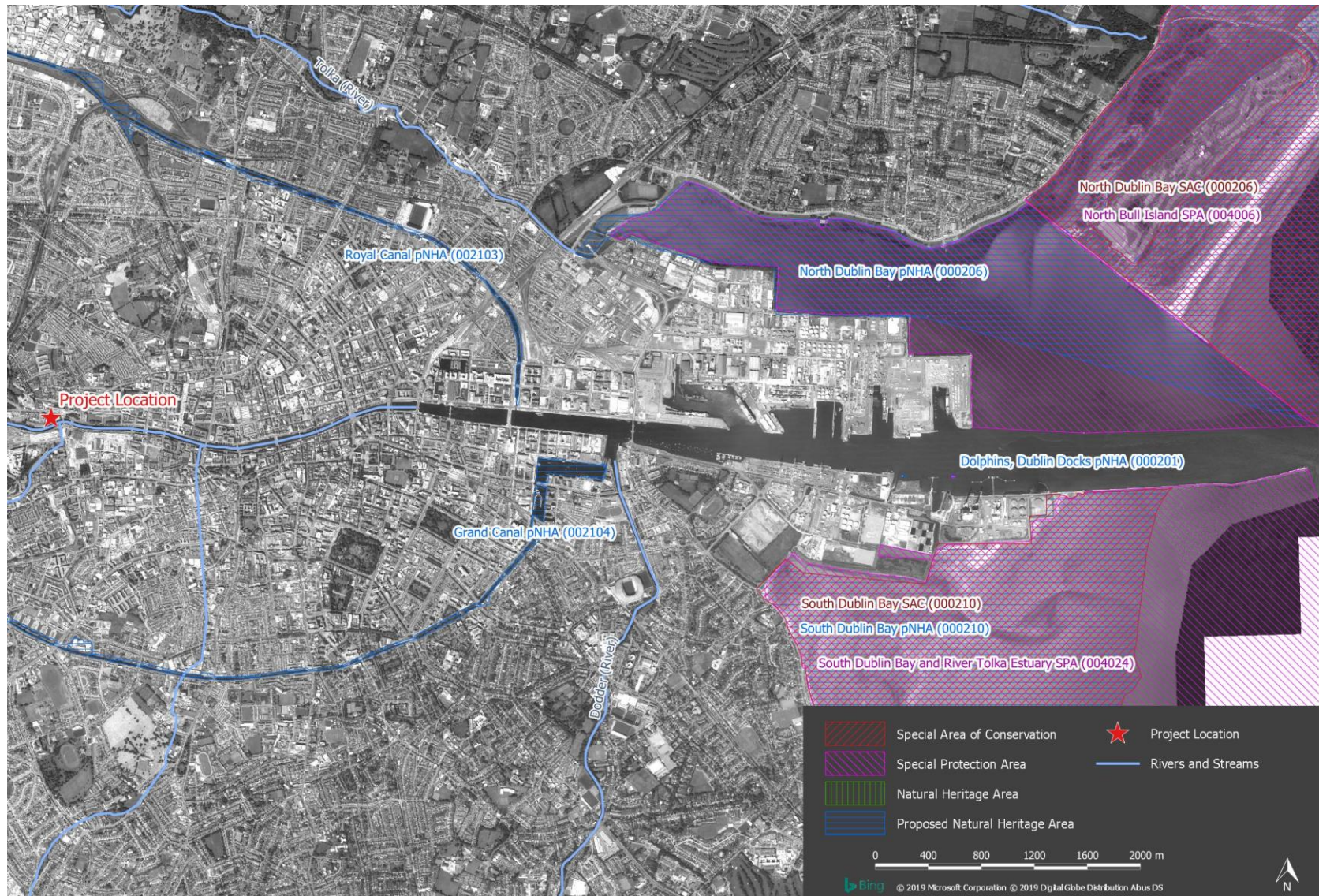


Figure 10.3: Detail of the locations of nearby European sites within a potential zone of impact (Source: Impact GIS).

10.3.2 Habitats; Flora & Fauna

In general, there are few natural habitats remaining in the proposed development area. They have either been modified or are artificial in nature. The main natural habitat of conservation concern is the River Liffey. Habitats are classified under the Fossitt codes (Fossitt, 2000).

10.3.2.1 Habitats & Flora

The predominant habitat on site is 'Buildings and artificial surfaces' (BL3) which comprise the entrance from Parkgate Street, the existing buildings and hardstanding areas of the site and adjacent Parkgate Street. A boundary stone and concrete wall (BL1) encompasses much of the site both by Parkgate Street and to the rear of the site, by the River Liffey.

There were no rare protected flora recorded in the Project area.

There are two 'green' areas; a small patch of grass which is scrubby in appearance to the south centre of the hardstanding area and an area outside the existing Hickey's site adjacent to Parkgate Street. The internal area is recolonised (ED3) by ruderal species such as Dandelion (*Taraxacum* agg.) and Dock (*Rumex obtusifolius*), Petty spurge (*Euphorbia peplus*), Germander speedwell (*Veronica chamaedrys*), Rye grass (*Lolium* spp.), Daisy (*Bellis perennis*), Ribwort plantain (*Plantago lanceolata*), Red clover (*Trifolium pratense*), Rosebay willowherb (*Chamerion angustifolium*) along with Cow parsley (*Anthriscus sylvestris*), Yorkshire fog (*Holcus lanatus*), Ragwort (*Senecio jacobaea*), False oat-grass (*Arrhenatherum elatius*), Juvenile Sycamore (*Acer pseudoplatanus*), Bramble (*Rubus fruticosus* agg.), Cleavers (*Galium aparine*) and with Ivy (*Hedera helix*) growing onto the adjacent wall. A few Butterfly bushes (*Buddleia davidii*) give the area a scrubby appearance. Buddleia is considered an invasive species on road projects but is widespread in abandoned urban sites and is easily removed with demolition waste.

The eastern corner of the site is bordered by a small, landscaped area at the corner of Parkgate Street and Heuston Bridge; separated from the internal site by the boundary wall and from the urban street by metal railings. It is comprised of a patch of rough grass planted with four cultivar Lime trees (*Tilia cordata*).

Sections between the buildings consist primarily of concrete, with a very sparse cover of plant species found in cracks and flower beds. Species recorded include: dandelion (*Taraxacum vulgaria*), Mouse-ear chickweed (*Cerastium*), Herb Robert (*Geranium robertianum*), Ladies smock (*Cardamine pratensis*), Shepherds purse (*Capsella bursa-pastoris*), Smooth sow-thistle (*Sonchus oleraceus*), Willowherb (*Epilobium hirsutum*), Creeping bent (*Agrostis stolonifera*) and Oxeye daisy (*Leucanthemum vulgare*). A small flowerbed has non-native holly and ornamental willow scrub.

The boundary wall to the River Liffey is colonised by patches of Ivy with small amounts of Ivy growing on the outer river side along with occasional Buddleia plants and Broad-leaved dock (*Rumex obtusifolius*) at lower levels. The floor level corresponding to the highest tidal level is colonised by a dense growth of Mexican fleabane (*Erigeron karvinskianus*) which continues along the river bank upstream adjacent to the neighbouring apartments on the river wall.

The River Liffey (FW2) is tidal at the point of the proposed development site at Seán Heuston Bridge with the Islandbridge weir upstream of Sarah Bridge (Islandbridge) historically referred to as the 'highest point to which ordinary tides flow'. Thus, downstream of the weir the waters become brackish or have saltwater intrusion, depending on the level of the tide. Shortly after the weir and 'Sarah Bridge' downstream, the river enters its urban course through Dublin City. It discharges to Dublin Bay and feeds into the designated European sites which comprise the Dublin Bay Biosphere.

Upstream of Chapelizod, the river has a more natural course and is designated at a proposed Natural Heritage Area; the Liffey Valley pNHA and also holds the status of a Special Amenity Area. The River Liffey is a Salmon river and the river valley upstream is designated for mixed deciduous woodlands which occur on both sides of the river, normally consisting of old estate woodlands.

The immediate riverine environment adjacent to the proposed development site does not contain any designated habitats but is important in terms of water quality as a habitat for salmonids and otters.

10.3.2.2 Fauna

Otters

The most recent and nearest records for otters from the National Biodiversity Data Centre is from the adjacent section of the river between Heuston Station and the proposed development site from 6 June 2017 as a recording of one live animal.

The nearest upstream sighting was from the vicinity of the War Memorial Gardens on 11th February 2015.

Other records include one from downstream at Ushers Quay on 18th May 2015 and from Millennium Bridge on 28 August 2013.

Sightings from the Grand Canal Dock and the mouth of the River Dodder are likely to refer to known recordings from the River Dodder. However, otters have wide ranging territories and there may be movement from the River Dodder upstream to the vicinity of the proposed development site. Suffice to say, the River Liffey is a commuting habitat for otters for the course of the river immediately adjacent to the proposed development site, as well as upstream in the more natural habitat of Liffey Valley and further downstream in Dublin City.

No holts, slides or prints of otter were observed on the habitats located within the subject site during the habitat surveys. A night time search for otters was conducted during low tide on 27 February 2019 at 22:00. Two surveyors; Ger O' Donohoe and John Curtin conducted searches of the site and the adjacent stretch of river for one hour. No signs of passing otters were noted. Given, no holts were recorded and given the review of recordings to date, the otter survey was not repeated and the 2019 survey is still relevant.

The results of the assessment of otters and otter usage in the area was supported in a personal communication between the Ger O'Donohoe and Ross Macklin (pers.comm. by phone) who has completed a survey of otters in the rivers of Dublin County and City. That report, (Macklin *et al.* 2019)² confirms the presence of otters upstream at Islandbridge and downstream at Grand Canal Dock and the mouth of the River Dodder with no records for the stretch of river adjacent to the proposed development site.

Bats

There are few records of bats from the general area with undetermined records of Daubenton's bat from upstream at Islandbridge (Tubridy & Associates, 2017; unpublished report) and other records from within the Phoenix Park (Phoenix Park Conservation Management Plan - www.phoenixpark.ie).

There is a small group of trees outside the main site area adjacent to Parkgate Street which are semi-mature and have no bat roosting potential. There are no other trees on site with potential roost features (PRFs).

The bat surveys included four buildings, see Figure 10.4 below. The bat surveys were undertaken are in line with recommendations in Chapter 10 of the Bat Conservation Trust 'Good Practice Guidelines, 3rd Edition, 2016' (Collins, J. (ed) 2016) and The Irish Wildlife Manual No. 25' (Kelleher, C. & Marnell, F. 2006).

The Bat Surveys undertaken are presented in Appendix 10.3. The results of the internal survey are outlined as follows.

Building 1 is a derelict dwelling while Building 2 is a disused warehouse. Building 3; taking up the majority of the site contains a currently used warehouse and office backing onto the river wall. The final building examined is a small boiler room; Building 4.

² 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.

Each of the buildings on site was examined for the presence of bats or their roosts. Searches were completed using ladder, high powered torch, thermal imaging device and endoscope by specialist John Curtin.

Evidence of bat usage sought during the surveys include:

- Bat droppings (these will accumulate under an established roost or under access points);
- Insect remains (under feeding perches);
- Oil (from fur) and urine stains;
- Scratch marks; and
- Bat corpses.

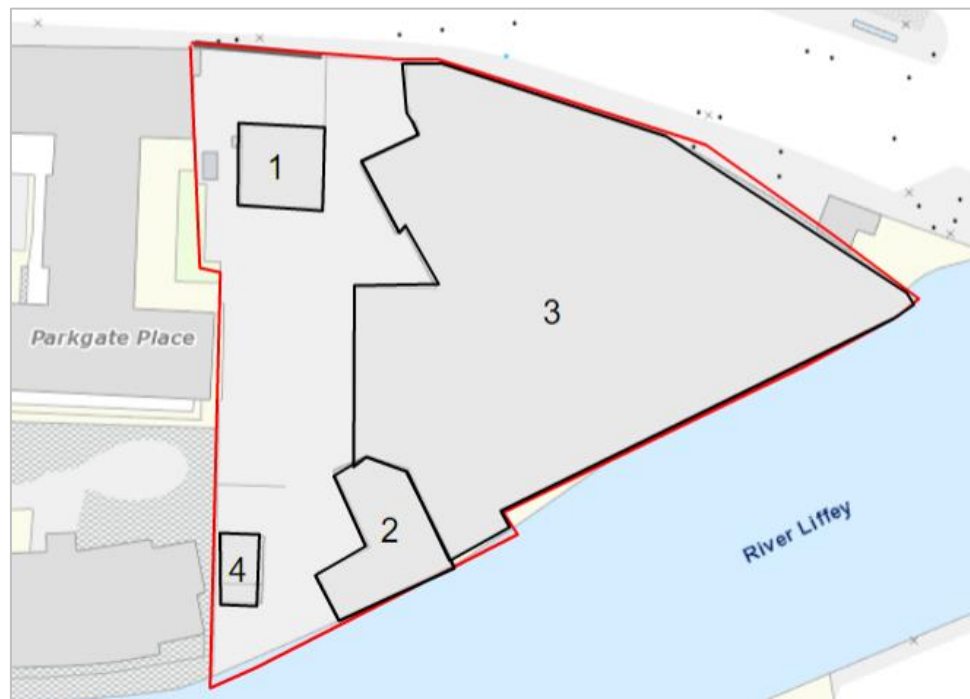


Figure 10.4: Locations of targeted internal bat surveys (Source: GeoHive).

Building 1 is a plastered stone construct with a damaged slated roof. The downstairs windows are boarded up. Potential access points for bats could be found through some open windows upstairs, along with numerous gaps in the roof and eaves. Curtains, chimneys and roof spaces were examined for evidence of bats however none were found. The building also contains a basement with some wintering bat roost potential; however a large amount of cobwebs would suggest bats do not use this space. Feral Pigeons occupy the dwelling. Despite a thorough examination no evidence of bat usage was found.

Building 2 consists of a two-storey cast concrete and brick building. This derelict warehouse contained single glazed broken windows and was occupied by numerous feral pigeons. Some wall cavities were noted suitable for bats. However, no signs of bats were found.

Building 3 encompasses the main building within the site; an occupied warehouse and offices. This large building is constructed from precast concrete, roof sheeting and a small portion of slate to the north. The building does not have an attic space. To the rear of the warehouse several rooms adjoin the river wall. These rooms have stone walls with exposed rafters and tongue and groove cladding underneath the slates. Potential access for bats is possible through open windows. However, no evidence of bats was found.

Building 4 is a boiler type room constructed of concrete with a concrete tiled roof. Two large openings to the east provided considerable light exposure thus reduced potential of the building as a day roost.

A room to the south was dark however this section contained a high degree of cobwebs; indicative of a lack of bat activity from void dwelling bats.

No signs of bats were found on top of rafters or on the ground. No evidence of bats was found in this building. The adjoining open storage shed is too open and light for bat potential.

The boundary stone walls were also examined for bat roost potential. Searches were completed using ladder, high powered torch, thermal imaging device and endoscope. The walls are partially plastered stone walls. There is some roost potential in wall crevices, but no evidence of bats was found during the search.

A final internal pre-demolition survey of buildings for potential roosting bats was undertaken on 31 March 2021.

Birds

The only record of birds from within the site were feral pigeons. The more interesting records relate to Cormorants (*Phalacrocorax carbo*) observed drying their wings on the parapet wall adjacent to the river during fieldwork in 2019.

Two Mute swans (*Cygnus olor*) and a mixed age flock of Herring gulls (*Larus argentatus*) were noted in the River Liffey at low water upstream of the site near Heuston Station at this time.

The site has since been prepared for demolition with appropriate bird deterrent measures installed under consent from and appropriate derogation licence from the NPWS and no records of birds were noted during a site visit in May 2021 either on buildings within the site or on the river wall.

A list of birds recorded during habitat surveys is presented in Table 10.2 below.

Common Name	Scientific Name	Behaviour	Numbers
Feral pigeon	<i>Columba livia domestica</i>	Within buildings in 2019 now excluded	10+
Herring Gull	<i>Larus argentatus</i>	Swimming on river	10+
Mute Swan	<i>Cygnus olor</i>	On river	2
Jackdaw	<i>Corvus monedula</i>	Overflying	1
Robin	<i>Erithacus rubecula</i>	Overflying	1

Table 10.2: Birds recorded within and adjacent to the Parkgate Street site.

10.4 Characteristics of the Proposed Development

10.4.1 Proposed Development

In brief, permission is sought for Strategic Housing Development, with a life of 8 years, at 42AParkgate Street, Dublin 8, for development comprising:

a 30-storey residential building ('Block A') (c.14,364 sq m gfa), including residential, café/restaurant, replacement office use and ancillary accommodation and works, located in the eastern apex of the site subject of otherwise consented development under ABP-306569-20.

The proposed new Block A building accommodates:

- 198no. 'Build To Rent' residential apartments (73no. studios, 97no. 1-bed, 27no. 2-bed & 1no. 3-bed) from 1st to 27th floors inclusive, including 53no. units with 'winter garden' balconies on the building's eastern elevation.
- Ancillary internal (c.384 sq m) and external (c.255 sq m) residents' private communal amenity areas and facilities, including ground floor reception/concierge area, lounge bars at mezzanine and 9th floors, and roof gardens at 9th and 28th floors, and access to other residents' private communal amenity areas within the consented scheme ABP-306569-20.

- 1no. café/restaurant (c.223 sq m) at ground floor. Replacement office floor area (c.595.6 sq m total) accommodated between 1st and 8th floor levels of Block A.
- Ancillary residential bicycle storage (22no. spaces), refuse, circulation and plant, and non-residential back of house and circulation areas at ground and mezzanine floors. Building Maintenance Unit (BMU) at roof level.

Ancillary and associated site works and other structural and landscape works are proposed to tie the proposed new Block A building in with the consented development (ABP 306569-20). Proposed amendments to the consented scheme, include:

- At the interface of proposed Block A with the consented Block B2 office building:
 - a reduction by c.909 sq m total of office floor area over 6 floors within the consented Block B2 office building;
 - a reduction by c.35 sq m of external residential amenity and associated minor amendments to landscaping at roof level of consented Block B2; and,
 - localised changes to the northern Parkgate St façade of the consented Block B2 to include a shadow gap at its junction with proposed Block A.
- 16no. additional bicycle parking spaces accommodated within consented Block B1 undercroft area.
- Minor localised amendments to adjoining consented public realm area to tie in with proposed Block A at ground level.
- New telecommunications infrastructure at roof level of consented Block B1, including: 4no. 300mm microwave link dishes mounted on 2no. 2m high steel poles fixed to the consented lift shaft overrun, housed within GRP radio friendly shrouds, to mitigate potential for interference with existing telecommunication channels.

The site within which the proposed works sit, benefits from extant permission for residential-led mixed use strategic housing development under ABP-306569-20 (i.e. the consented development). Permission is not being re-sought for the consented development.

For avoidance of doubt, while the red line site boundary is drawn around the entire planning unit of ABP-306569-20, the development works for which permission is expressly sought are identified with a green dashed line, within the wider red line planning unit.

The overall site (c.0.82 ha) is principally bounded by Parkgate Street to the north, the River Liffey to the south, an existing electricity substation and the junction of Sean Heuston Bridge and Parkgate Street to the east, existing Parkgate Place office and residential development to the west. The application site includes areas of public footpath and roadway on Parkgate Street and a small landscaped area at the junction of Sean Heuston Bridge and Parkgate Street. There are Protected Structures on site.

The river wall will be braced against the proposed new Block A building in the same manner as consented under ABP-306569-20, in so far as it affects the river wall.

10.4.2 Cumulative

There have been over 60 planning applications which have been granted in the vicinity of the proposed development in the past 5 years to date. These have been referred to in Appendix 21.1 of this EIAR. Of the applications to Dublin City Council listed, those referring to building extensions and/or changes of use have been eliminated due to their small scale and the focus moved to those applications for development that could have in combination effects.

10.5 Potential Effect of the Proposed Development

10.5.1 Proposed Development

The proposed development is based on the previous development proposal for the site, to form part of the consented SHD (ABP-306569-20). All of the on site habitats will have been removed to ground level

prior to the Block A development and therefore the only considerations are with regard to the Aquatic environment of the River Liffey during the construction phase.

10.5.1.1 Construction Phase

Terrestrial Environment

Habitats

There are no predicted effects on the terrestrial habitats of the proposed development. There are no rare or protected flora under the footprint of the proposed development.

There are no records of Third Schedule Invasive Species on or near the proposed development site.

The vegetation recorded is not significant and may be removed with demolition waste material.

There will be no impacts on the outer green area or Lime trees.

The vegetation of the river wall is sparse and riverside works are not predicted to be significant.

Mammals

The buildings on site present roosting potential to bats. However, none were recorded in surveys at the appropriate time of the year. There are no proposed mitigation measures for bats with regard to the demolition of buildings.

This area of the River Liffey is urban in nature and experiences a background level of noise and disturbance. Otters are relatively tolerant of urban activity and it is not predicted that the construction activity will affect the passage of otters along the river.

Birds

There will be a minor loss of perching area for cormorants and gulls as a result of the proposed development. The disturbance is not considered significant given the availability of resting places along the river downstream and particularly around the structures of Dublin Port.

Swifts and the potential for swift nesting was considered as part of the permitted development of Blocks B & C and measures for protection of Swifts was included in Compliance documentation presented to Dublin City Council to ensure no impacts would occur.

Aquatic Environment

Surface water

The River Liffey holds populations of Brown Trout (*Salmo trutta*) and Atlantic Salmon (*S. salar*). Salmonids are highly sensitive to pollutants of freshwater e.g. hydrocarbons, elevated suspended solids, oils and/or toxic substances. While not designated as a 'Salmonid river', Atlantic Salmon is listed under Annex II of the Habitats Directive and protected in freshwater.

Leakage could occur from construction site equipment. As a worst-case scenario an unmitigated leak from a temporary refuelling tank which would typically have a maximum capacity of 300 litres is considered. This would be a single short-term event i.e. if not adequately mitigated.

Use of wet cement is a requirement during construction. Run-off water from recent cemented areas will result in highly alkaline water with high pH. As this would only occur during particular phases of work this is again considered as a single short-term potential event rather than an ongoing event.

The construction requires soil excavation and removal and import. Unmitigated run-off could contain a high concentration of suspended solids during earthworks. This could be considered an intermittent short-term event i.e. if proposed mitigation measures to control sediment laden run-off were to fail.

Elevated suspended solids may be harmful to salmonids resulting in reduced oxygenation of surface waters due to settlement and the formation of deposits on the riverbed which in turn can give rise to septic and offensive conditions. Elevated suspended solids can clog salmonid gills and potentially cause mortality.

Chemical spills can result in fish mortality and could affect feeding habitats for bird species that rely on the sand and mudflats downstream in Dublin Bay for food sources.

Wet concrete and cement are very alkaline and corrosive and, in the absence of mitigation, can cause serious pollution to watercourses.

Existing surface water drainage on the site discharges to the River Liffey. It is envisaged that one of the existing surface water discharge points shall be maintained for the duration of the Works, subject to local authority agreement. All other existing surface water discharge points to the River Liffey will be decommissioned.

Indirect effects during construction relate to the potential for the proposed development to affect the water quality of the River Liffey and thus the species of conservation concern which inhabit the River Liffey, such as Salmon and Otter which extend from the mouth of the river up to and above the proposed development site. It also refers to the potential effect on the European sites located downstream in Dublin Bay, see the Appropriate Assessment and NIS documents.

in the absence of pollution control measures, there is the potential for suspended solids, from dewatering activities, demolition or excavation, to enter the adjacent River Liffey during the construction phase of the proposed development.

Any likely effects which could alter the trophic status of the greater Dublin Bay area and as a result affect the qualifying habitats which support the birds for which the Special Protection Areas are designated, could be considered a significant effect.

However, it is predicted that if the Best Practice mitigation measure described in the CEMP are implemented (see Appendix 4.1 of the EIAR), indirect effects will be avoided.

10.5.1.2 Operation Phase

Habitats

The arrangement of the residential blocks around a courtyard space allows for a communal garden. Permission for the courtyard (not part of this application) has been granted and the consented public plaza is being altered only in a minor way through this application in order to tie the new Block A into the public plaza.

The open space is conceived as a green space, in contrast to the public plaza. It consists of an open grass plane, with a birch grove, structural planting, flowering mixes to encourage pollinator species, raingardens, seating and a play area for toddlers and young children. The inclusion of pollinator friendly species in reference to the All-Ireland Pollinator Plan is seen as a positive effect on biodiversity.

Mammals

With regard to Bats and Otters, while it has been established that the immediate vicinity of the proposed development is of low value with few records of bats, there are records of bats upstream at Islandbridge and Daubenton's bats may feed further downstream near the Parkgate Street site. It has been established that there is some movement of otters along the River Liffey, albeit with no records in the immediate vicinity of the proposed development site. There will be no significant change in night time light levels over the river that would deter potentially commuting bats or otters.

Lighting along the river will be directed inward toward the developed areas. This will be achieved by appropriate lighting design and placement and the use of directional features such as cowls.

The internal river walk is unlikely to have an effect on commuting otters as it is predominantly located within the site and there will be no light spill onto the river.

The adjacent river and urban area is of relatively low value to commuting and feeding bats. However, the inclusion of pollinator friendly species will encourage insects as food sources in some small way.

Having regard to the Urban Development and Building Heights: Guidelines for Planning Authorities (DoH LG, 2018) , in development locations in proximity to sensitive bird and/or bat areas, proposed developments need to consider the potential interaction of the building location, building materials and artificial lighting to impact flight lines and/or collision. The river may provide a commuting habitat for bats such as Daubenton's. This species feed low over the water surface and would not be susceptible to collision. Indeed, all bats navigate their environment using echolocation and the risk of collision is unlikely.

Birds

Again, having regard to the Urban Development and Building Heights: Guidelines for Planning Authorities (2018), it is not predicted that there would be an effect on birds in terms of the proposed development height. Consideration of collision would be for larger species such as Mute swan recorded on the river in the vicinity of the site.

The site is located at the upstream urban area of the River Liffey and given the proximity of Seán Heuston Bridge and the Sherwin Bridge, and the short distance between, the movement of larger birds species alighting on the river would be either from the east further downstream from these two bridges or from the west, further upstream adjacent to Heuston Station where the landing trajectory is longer. Therefore, there are no predicted effects with regard to collision.

10.5.1.3 Do-Nothing Impact

If the proposed development were not to proceed, there would be a neutral effect in terms of biodiversity.

10.5.2 Cumulative

There have been over 60 planning applications which have been granted in the vicinity of the proposed development in the past 5 years to date. These have been referred to in Appendix 21.1 of this EIAR. Of the applications to Dublin City Council listed, those referring to building extensions and/or changes of use have been eliminated due to their small scale and the focus moved to those applications for residential development that could have in combination effects in terms of wastewater. Given the inclusion of Best Practice Construction Management enforced in the CEMP, see Appendix 4.1, indirect effects can be avoided and there will be no cumulative impacts.

The proposed development is set within the context of a recently permitted mixed use development on site (ABP 306569-20 refers). The Board has recently granted permission for mixed use development on the balance of the site, including 5no. blocks ranging from 8 to 13 storeys (c. 31,146 sq m) over ancillary basement area, accommodating 321no.'BTR' residential apartment, ancillary residents' amenity facilities, commercial office (c.3,698 sq m), retail (c.214 sq m) and café/restaurant (c.236 sq m), and all associated and ancillary conservation, landscaping and site development works.

The proposed development is intended to knit into the consented scheme, at the eastern site apex and interfaced with the consented office building (Block B2).

The consented development was granted including a number of mitigation measures which were subsequently presented to Dublin City Council and as previously mentioned in Section 10.2.5 and agreed in consultation with the National Parks and Wildlife Services (NPWS) in order to facilitate the site preparation works in order to avoid potential impacts on each issue, Birds, Biodiversity on Old Walls and Bats.

Given the employment of these measures and the proposed control of surface water emission, there is no potential for in-combination effects or cumulative impacts from other projects in the vicinity and the proposed development.

10.6 Mitigation Measure (Ameliorative, Remedial or Reductive Measures)

10.6.1 Proposed Development

There are limited semi-natural habitats on the site and all of the on-site habitats will have been removed to ground level prior to the Tower development and the only considerations are with regard to the Aquatic environment of the River Liffey during the construction phase.

Surface Water

Surface water from the proposed development will discharge to the River Liffey. A foreshore consent will be sought for this discharge. Mitigation measures relating to the protection of surface water quality and status are described in Chapter 14: Water and are summarised below.

“The employment of good construction management practices will minimise the risk of pollution of soil, surface water and groundwater. The following site-specific measures will be implemented for the proposed development which will include:

- Earthworks operations shall be carried out such that surfaces shall be designed with adequate falls, profiling and drainage to promote safe run-off and prevent ponding and flooding;
- Run-off will be controlled to minimise the water effects in outfall areas;
- All concrete mixing and batching activities will be located in areas away from watercourses and drains; and
- Good housekeeping (site clean-ups, use of disposal bins, etc.) will be implemented on the site.

In order to prevent the accidental release of hazardous materials (fuels, cleaning agents, etc.) during construction site activity, all hazardous materials will be stored within secondary containment designed to retain at least 110% of the storage contents. Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the project. Safe materials handling of all potentially hazardous materials will be emphasised to all construction personnel employed during this phase of the proposed development. The contractor’s sanitary facilities will discharge into the existing combined sewer on Parkgate Street or as otherwise agreed with Dublin City Council.

Construction management measures including specific measures to prevent pollution of the River Liffey have also been incorporated into the CEMP, see Appendix 4.1, which will ensure that there are no likely effects on the River Liffey from surface water runoff.

The CEMP has been formulated in consideration of standard best practice and, as expanded on by the contractor, will align with the guidance set out in the following documents:

- CIRIA – Guideline Document C532 Control of Water Pollution from Construction Sites (CIRIA, 2001); and
- CIRIA – Guideline Document C624 Development and Flood Risk - guidance for the construction industry (CIRIA, 2004); and
- CIRIA (2015) Environmental Good Practice on Site C692 (4th Edition) (C762). “

10.6.2 Cumulative

The consented development was granted including a number of mitigation measures which were subsequently presented to Dublin City Council and, as previously mentioned in Section 10.2.5, agreed in consultation with the National Parks and Wildlife Services (NPWS) in order to facilitate the site preparation works and avoid potential impacts on each issue, Birds, Biodiversity on Old Walls and Bats.

Given the employment of these measures and the proposed control of surface water emission, there is no potential for in-combination effects or cumulative impacts from other projects in the vicinity and the proposed development.

10.7 Residual Effect of the Proposed Development

10.7.1 Proposed Development

All of the on site habitats will have been removed to ground level prior to the Tower development and the only considerations are with regard to the Aquatic environment of the River Liffey during the construction phase.

10.7.1.1 Construction Phase

Given the employment of mitigation measures for the proposed control of surface water emission, there is no potential for residual effects from the proposed development during construction.

10.7.1.2 Operation Phase

The proposed development will incorporate SuDS features in order to improve water quality and reduce the quantity of surface water discharging into the receiving system. The water supply network will include low flow devices with the aim of minimising water usage.

Given the employment of these measures for the proposed control of surface water emission, there is no potential for residual effects from the proposed development during operation.

10.7.1.3 Worst Case Impact

As a worst-case scenario an unmitigated leak from a temporary refuelling tank during construction which would typically have a maximum capacity of 300 litres is considered. This would be a single short-term event i.e. if not adequately mitigated.

The construction requires soil excavation and removal and import during construction. Unmitigated run-off could contain a high concentration of suspended solids during earthworks. This could be considered an intermittent short-term event i.e. if proposed mitigation measures to control sediment laden run-off were to fail.

Given the employment of mitigation measures and the proposed control of surface water emission, a worst-case scenario can be avoided.

10.7.2 Cumulative

Given the employment of these measures and the proposed control of surface water emission, there is no potential for in-combination effects or cumulative impacts from other projects in the vicinity and the proposed development.

10.8 Monitoring

During the construction phase when and if dewatering of excavations is required, the Contractor will be responsible for monitoring the suspended solids content of the adjacent River Liffey water. The discharge of treated surface water from construction activities will be monitored to ensure that the discharged treated water will be in accordance to the Dublin City Council Discharge Licence if required.

The settlement tank and silt bag will be monitored by a Site Environmental Manager who will direct the control of settlement and whether a silt bag needs to be changed.

10.9 Reinstatement

If the site were to be reinstated a Demolition Plan would be presented with equal control of surface water emission mitigation measures to avoid potential effects on the River Liffey.

10.10 Difficulties Encountered

There were no difficulties encountered during the compilation of this Chapter.