CHAPTER 8

BIODIVERSITY

8.0 INTRODUCTION

8.1 INTRODUCTION

8.1 The biodiversity assessment has been undertaken by Altemar Limited. It assesses the biodiversity value of the proposed development area and the potential impacts of the development on the ecology of the surrounding area and within the potential zone of influence (ZOI). Standard demolition, construction and operational phase control measures, in addition to monitoring measures are proposed, to minimise potential impacts of the proposed development and to improve the biodiversity potential of the proposed development site post construction. It should be noted that the proposed development site is a brownfield site and consists primarily of built land including warehouses, hard standing and an area or recolonising bare ground and as such is of low biodiversity importance.

8.2 The programme of work in relation to biodiversity assessment was designed to identify and describe the existing ecology of the area and detail designated sites, habitats or species of conservation interest that could potentially be impacted by the proposed development. It also assesses the significance of the likely impacts of the scheme on the biodiversity elements, and designs mitigation measures to alleviate identified impacts.

8.3 A separate AA Screening, in accordance with the requirements of Article 6(3) of the EU Habitats Directive, has been produced to identify potential impacts of the development on Natura 2000 sites, Annex species or Annex habitats. It concludes that '*Having taken into consideration foul and surface water drainage from the proposed development, the distance between the proposed development to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites, and the dilution effect with other effluent and surface runoff, it is concluded that the proposed development would not give rise to any significant effects to designated sites. The construction and operation of the proposed development will not impact on the conservation objectives of qualifying interests of European sites*.'

8.2 STUDY METHODOLOGY

8.4 A pre-survey biodiversity data search was carried out. This included examining records and data from the National Parks and Wildlife Service (NPWS), National Biodiversity Data Centre (NBDC) and the Environmental Protection Agency (EPA), in addition to aerial, 6 inch maps and satellite imagery. Desk studies were carried out to obtain relevant existing biodiversity information within the ZOI. The assessment also extends beyond the immediate development area to include those species and habitats that are likely to be impacted upon by the project. The ZOI of the proposed development has the potential to extend beyond the red line via the proposed foul and surface water drainage connections. Surface water drainage during demolition/construction and foul wastewater will be connected to an existing public foul network. Surface water drainage (during operation) will be directed to an existing public surface water sewer located in the loading area to the west of OMNI shopping centre. This network outfalls to a culverted section of the River Wad located 550m to the south of the subject site, which in turn discharges into the marine environment at Clontarf c.3.8km southeast of the subject site. As a result, there is an indirect hydrological pathway to designated conservation sites located within Dublin Bay via the proposed foul and surface water drainage strategy.

8.5 A habitat survey of the site was undertaken within the appropriate seasonal timeframe for terrestrial, bat and habitat assessment fieldwork. Field surveys were carried out as outlined in Table 8.1.

Table 8.1 Field Survey

Area	Surveyors	Survey Dates
Terrestrial Ecology/ Bat Fauna/Avian Fauna	Bryan Deegan (MCIEEM) of Altemar	23rd July 2021
Terrestrial Ecology/ Bat Fauna/Avian Fauna	Bryan Deegan (MCIEEM) of Altemar	19th August 2022

8.6 The proposed layout, drainage strategy and landscape design were reviewed to inform this assessment. Further, Chapter 2, Development Description, Chapter 6, Land, Soils, Geology & Hydrogeology and Chapter 7 Hydrology of this EIAR were reviewed.

8.2.1 Proximity to designated conservation sites and habitats or species of conservation interest

8.7 The designated conservation sites within 15km of the site were examined for potential impact. Sites beyond 15km had no direct or indirect pathways. This assessment included sites of international importance; Natura 2000 sites (Special Areas of Conservation (SAC), Special Protection Areas (SPA)) and Ramsar sites and sites of National importance ((Natural Heritage Areas (NHA), proposed Natural Heritage Areas (pNHA). Up to date GIS data (2022 NPWS data shapefiles) were acquired and plotted against 1, 5, 10 and 15km buffers from the proposed development site. A data search of rare and threatened species within 10km of the proposed site (GIS shapefile) was provided by NPWS. Additional information on rare and threatened species was researched through the National Biodiversity Data Centre maps.

8.2.2 Terrestrial and Avian Ecology

8.8 A pre-survey data search was carried out. This included a literature review to identify and collate relevant published information and ecological studies previously conducted and comprised of information from the following sources; the National Parks and Wildlife Service, NPWS Rare and Protected Species Database, National Biodiversity Data Centre, EPA WMS watercourses data, in addition to aerial, 6 inch, satellite imagery. Following the desktop study, walk-over assessment of the site was carried out on the 23rd July 2021 and again on 19th August 2022. The presence of mammals is indicated principally by their signs, such as resting areas, feeding signs or droppings - though direct observations are also occasionally made. Habitat mapping was carried out according to Fossitt (2000) using AcrGIS 10.5 and displayed on Bing satellite imagery or street mapping. Any rare or protected species or habitats were noted. As part of the fieldwork an invasive species assessment was carried out. Birds noted on site were classed based on the Birds of Conservation Concern in Ireland classification of red, amber and green, which is based on an assessment of the conservation status of all regularly occurring birds on the island of Ireland.

8.2.3 Bat Fauna

8.9 Onsite buildings and trees were inspected for bats. The site survey was supplemented by a review of Bat Conservation Ireland's (BCIreland) National Bat Records Database. A bat detector and emergent survey was carried out on the 23rd July 2021, and again on 19th August 2022. The bat assessment report is seen in Appendix 8.1.

8.10

8.2.4 Rating of Effects

8.11 The terminology for rating impacts is derived from the EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022).

8.2.5 Difficulties Encountered

8.12 No difficulties were encountered in relation to the preparation of the Biodiversity report. The bat surveys were undertaken within the active bat period (April to September) and a detector survey was possible. Insects were observed in flight during the bat surveys. The mammal survey was carried out outside the optimal terrestrial faunal period. However, the site is a brownfield site consisting of hard standing and warehousing with a small area of recolonising bare ground. All areas of the site were accessible and visible. No limitations are foreseen in relation to the faunal survey. Flora and habitat surveys were carried out within the optimal survey period.

8.3 CONSULTATION

8.13 Consultation was carried out with the project team in relation to the proposed project and specifically in preparation of the proposed landscape strategy. Rare and protected species data were acquired from the National Parks and Wildlife Service (NPWS).

8.4 EXISTING RECEIVING ENVIRONMENT

8.4.1 Zone of Influence

8.14 The potential ZOI of the project was deemed to be the site within the site outline with potential for downstream impacts via the proposed foul and surface water drainage strategy. No conservation sites are deemed to be within the potential zone of influence. This site outline is shown in Figure 8-1. However, as outlined in the Hydrology Chapter (Chapter 7) '*The site would have indirect hydrological connections with the North Dublin Bay SAC/pNHA and North Bull Island SPA through the local drainage networks (via both the Santry River and the River Wad). Given the potential loading and the distance from source to the Natura sites (over 3.8 Km downstream) and associated dilution factor, this risk would be imperceptible as any accidental discharge of potential contaminant would be attenuated, diluted and dispersed below statutory guidelines (i.e., S.I. European Communities Environmental Objectives Regulations, 2009 [S.I. No. 272 of 2009 as amended by SI No. 77 of 2019]).*'

8.4.2 Designated sites

8.15 As can be seen from Figures 8.2 (SAC's within 15km), 8.3 (SPA's within 15km), 8.4 (NHA and pNHA within 15km), 8.5 (Watercourses proximate to the site.), there is one Natura 2000 site (South Dublin Bay and River Tolka Estuary SPA) within 5km and three National conservation sites (Santry Demesne pNHA, Royal Canal pNHA, and North Dublin Bay pNHA) within five kilometres of the proposed development site. The distance and details of the conservation sites within 15km of the proposed development are seen in Table 8.2a and Table 8.2b. There is no direct pathway to designated sites. There is an indirect hydrological pathway to designated conservation sites within the marine environment via the proposed foul and surface water drainage strategy. Surface water drainage during demolition/construction and foul wastewater will be connected to an existing public foul network located on Swords Road. This network ultimately discharges to Ringsend Wastewater Treatment Plant (WwTP) for

treatment. Surface water drainage (during operation) will be directed to an existing public surface water sewer located in the loading area to the west of OMNI shopping centre. This network outfalls to a culverted section of the River Wad located 550m to the south of the subject site, which in turn discharges into the marine environment at Clontarf c.3.8km southeast of the subject site. The nearest designated site in the marine environment is a minimum of 3.7 km from the development. Watercourses and designated conservation sites located proximate to the proposed development site are demonstrated in Figures 8.6-8.10.

Table 8-2a. Natura 2000 sites within 15km of the proposed development

NATURA 2000 Site	Distance	Direct Hydrological / Biodiversity Connection
Special Areas of Conservation		
North Dublin Bay SAC	5.5 km	**No**
South Dublin Bay SAC	6.6 km	**No**
Baldoyle Bay SAC	6.9 km	**No**
Malahide Estuary SAC	8 km	**No**
Howth Head SAC	10.1 km	**No**
Rockabill to Dalkey Island SAC	10.8 km	**No**
Ireland's Eye SAC	11.7 km	**No**
Rogerstown Estuary SAC	12 km	**No**
Special Protection Area		
South Dublin Bay and River Tolka Estuary SPA	3.7 km	**No**
North Bull Island SPA	5.5 km	**No**
Baldoyle Bay SPA	7.2 km	**No**
Malahide Estuary SPA	8 km	**No**
Ireland's Eye SPA	11.5 km	**No**
Rogerstown Estuary SPA	12.3 km	**No**
Howth Head Coast SPA	12.6 km	**No**

Table 8-2b. National designated and Ramsar sites within 15km of the proposed development

Designation	Conservation Sites	Distance	Direct Hydrological / Biodiversity Connection
pNHA	Santry Demesne	0.3 km	**No**
pNHA	Royal Canal	3.3 km	**No**
pNHA	North Dublin Bay	3.8 km	**No**
pNHA	Grand Canal	5.4 km	**No**
pNHA	Feltrim Hill	5.5 km	**No**
pNHA	Dolphins, Dublin Docks	6.5 km	**No**
pNHA	Sluice River Marsh	6.9 km	**No**
pNHA	Baldoyle Bay	7 km	**No**
pNHA	South Dublin Bay	7.3 km	**No**
pNHA	Liffey Valley	7.9 km	**No**
pNHA	Malahide Estuary	8 km	**No**
pNHA	Booterstown Marsh	9.5 km	**No**
pNHA	Howth Head	9.7 km	**No**
pNHA	Ireland's Eye	11.7 km	**No**
pNHA	Rogerstown Estuary	11.9 km	**No**
pNHA	Dodder Valley	12.6 km	**No**
pNHA	Portraine Shore	12.6 km	**No**
pNHA	Dalkey Coastal Zone and Killiney Hill	13.6 km	**No**
pNHA	Fitzsimon's Wood	13.7 km	**No**
Ramsar	North Bull Island	5.7 km	**No**
Ramsar	Sandymount Strand/Tolka Estuary	6.7 km	**No**
Ramsar	Baldoyle Bay	7.3 km	**No**
Ramsar	Broadmeadow Estuary	8.1 km	**No**
Ramsar	Rogerstown Estuary	13.3 km	**No**

Figure 8.1 Proposed Development Site

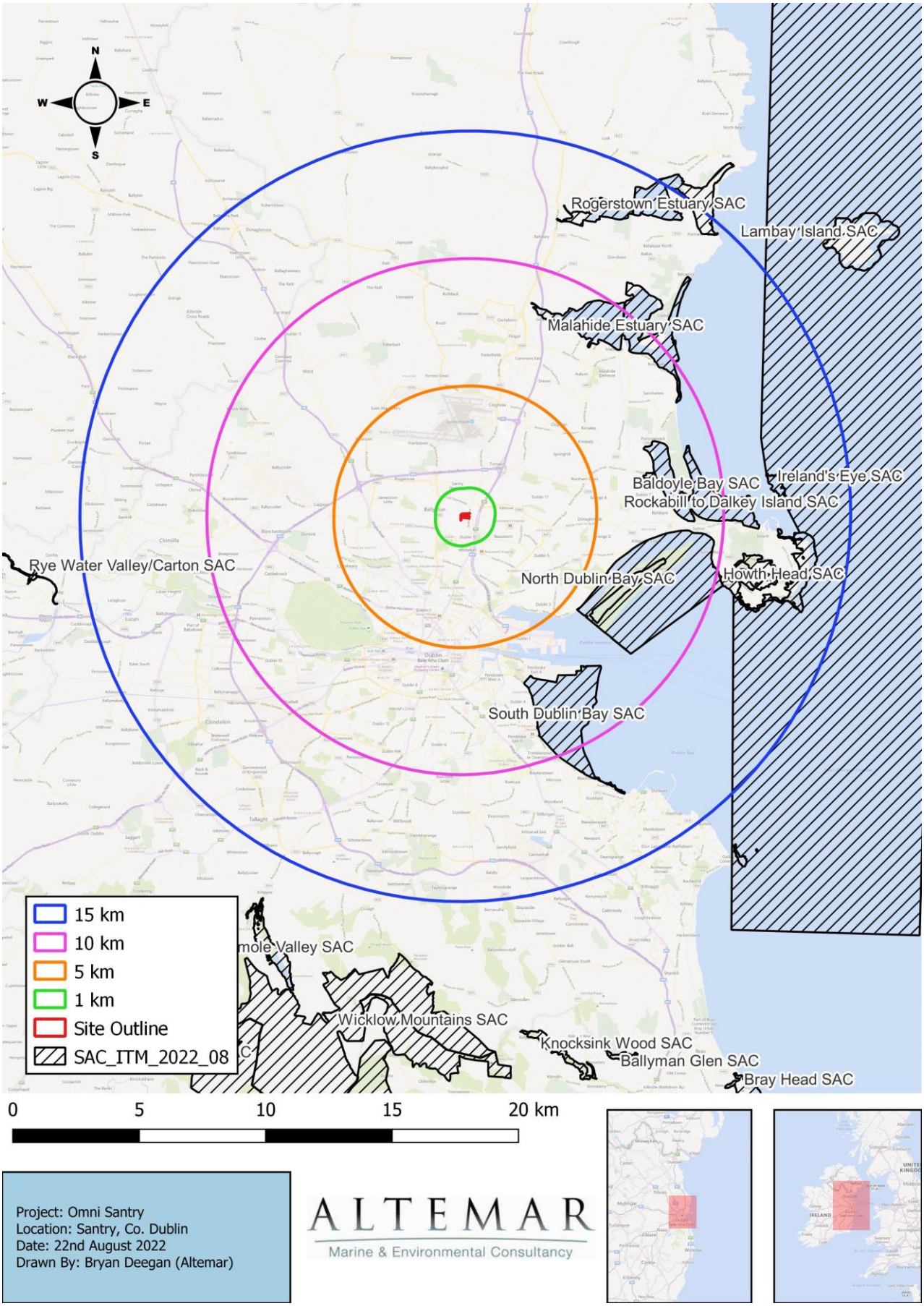

Figure 8.2 – Special Areas of Conservation within 15km

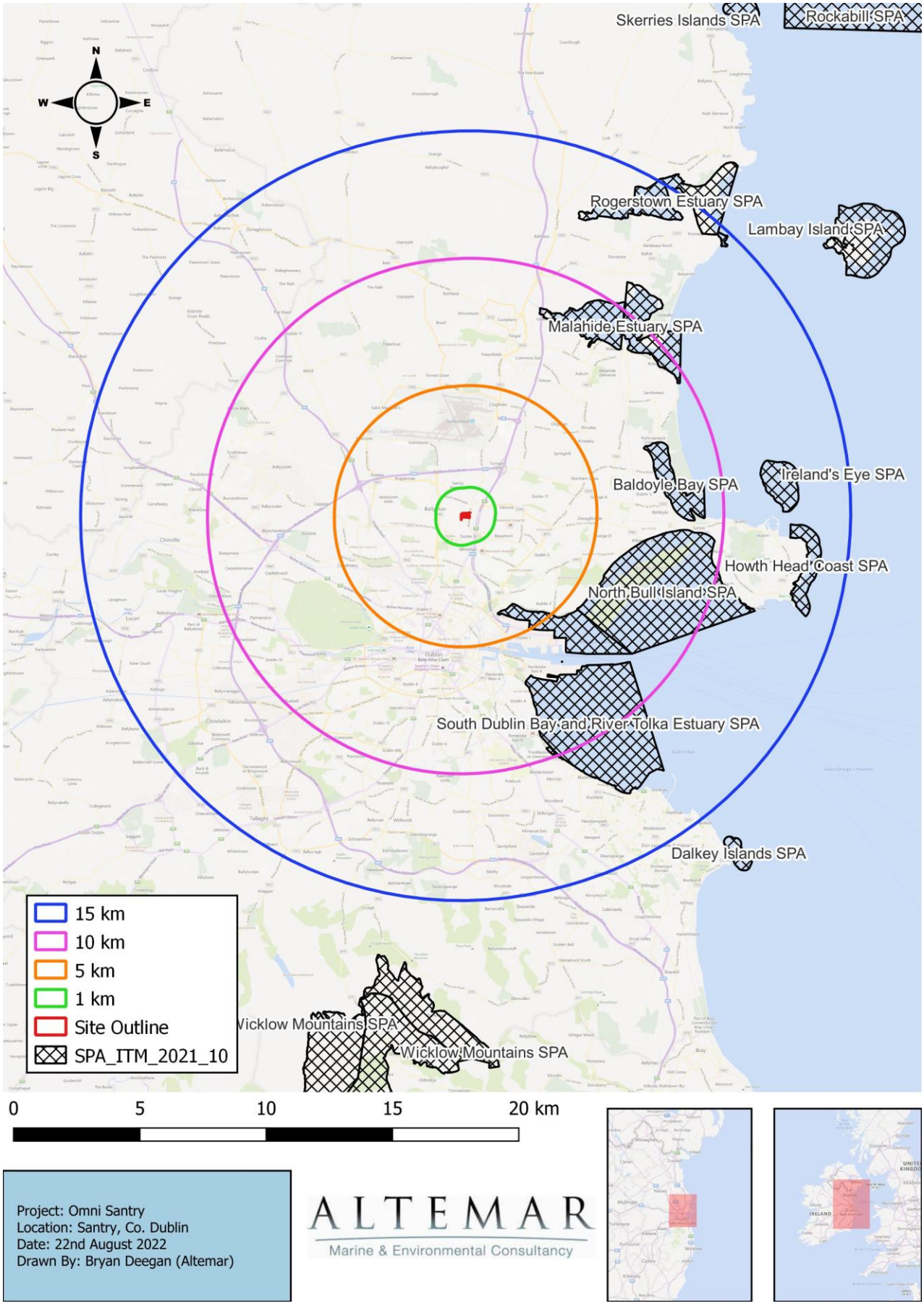

Figure 8.3– Special Protection Areas within 15km

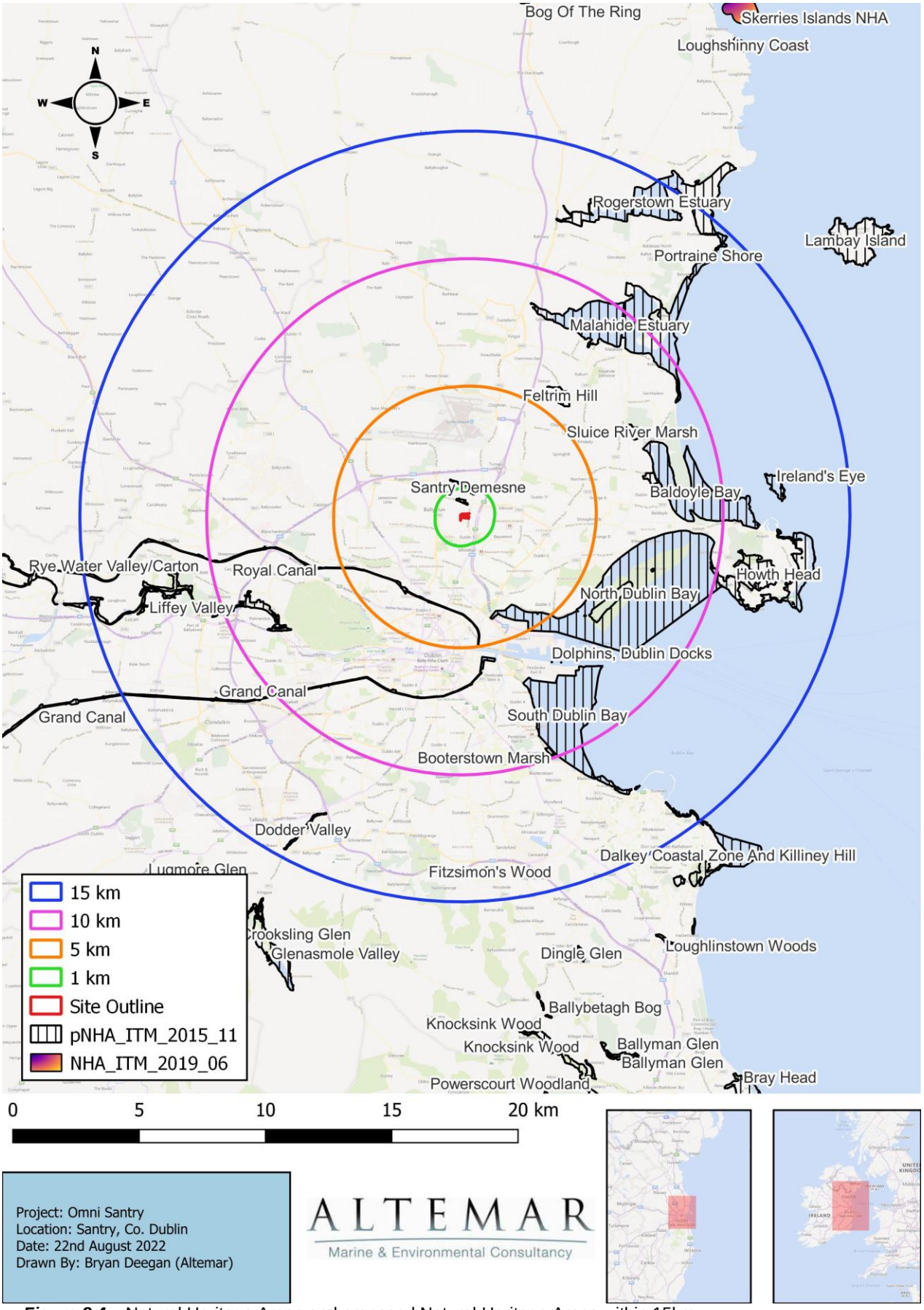

Figure 8.4 – Natural Heritage Areas and proposed Natural Heritage Areas within 15km

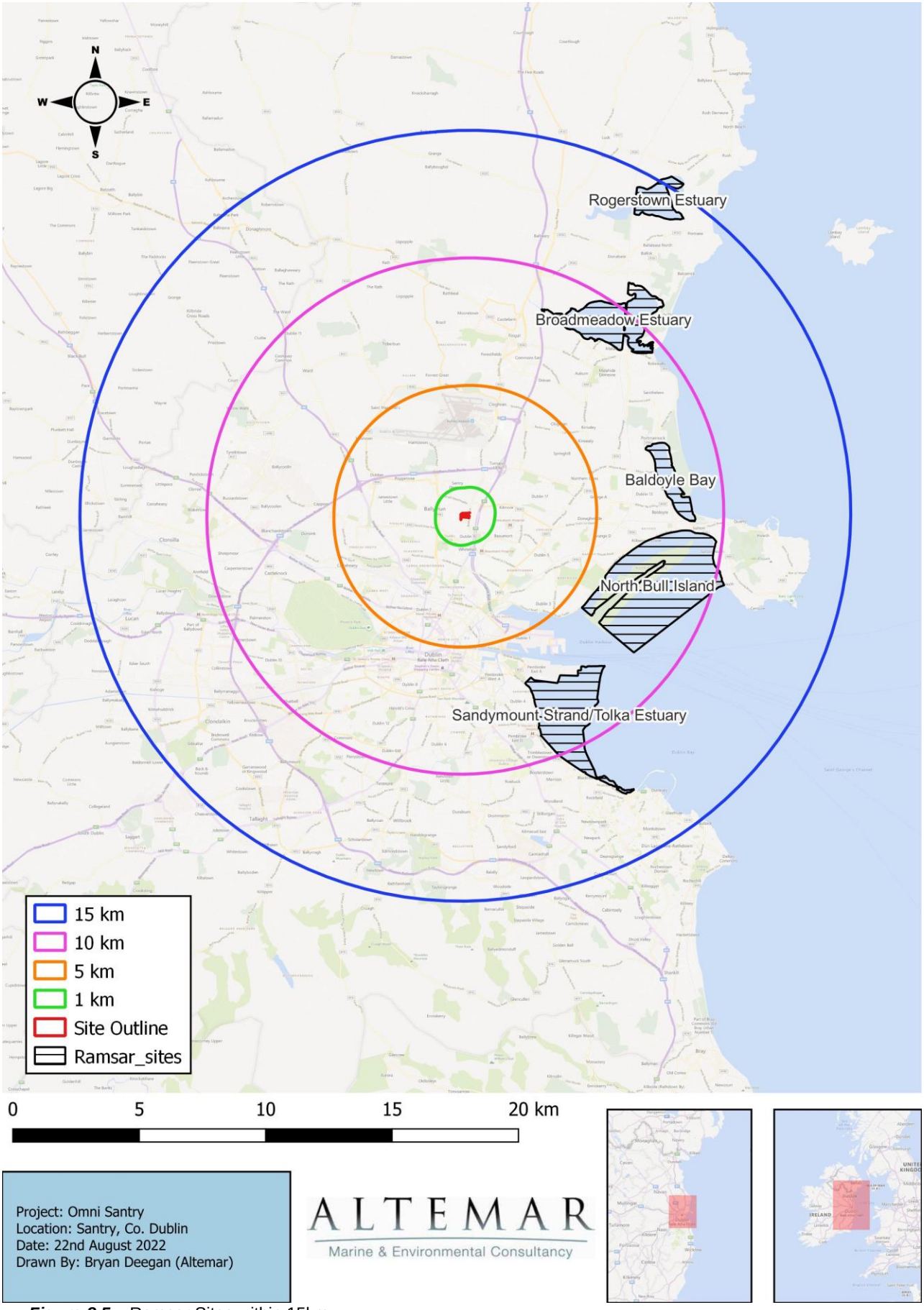

Figure 8.5 – Ramsar Sites within 15km

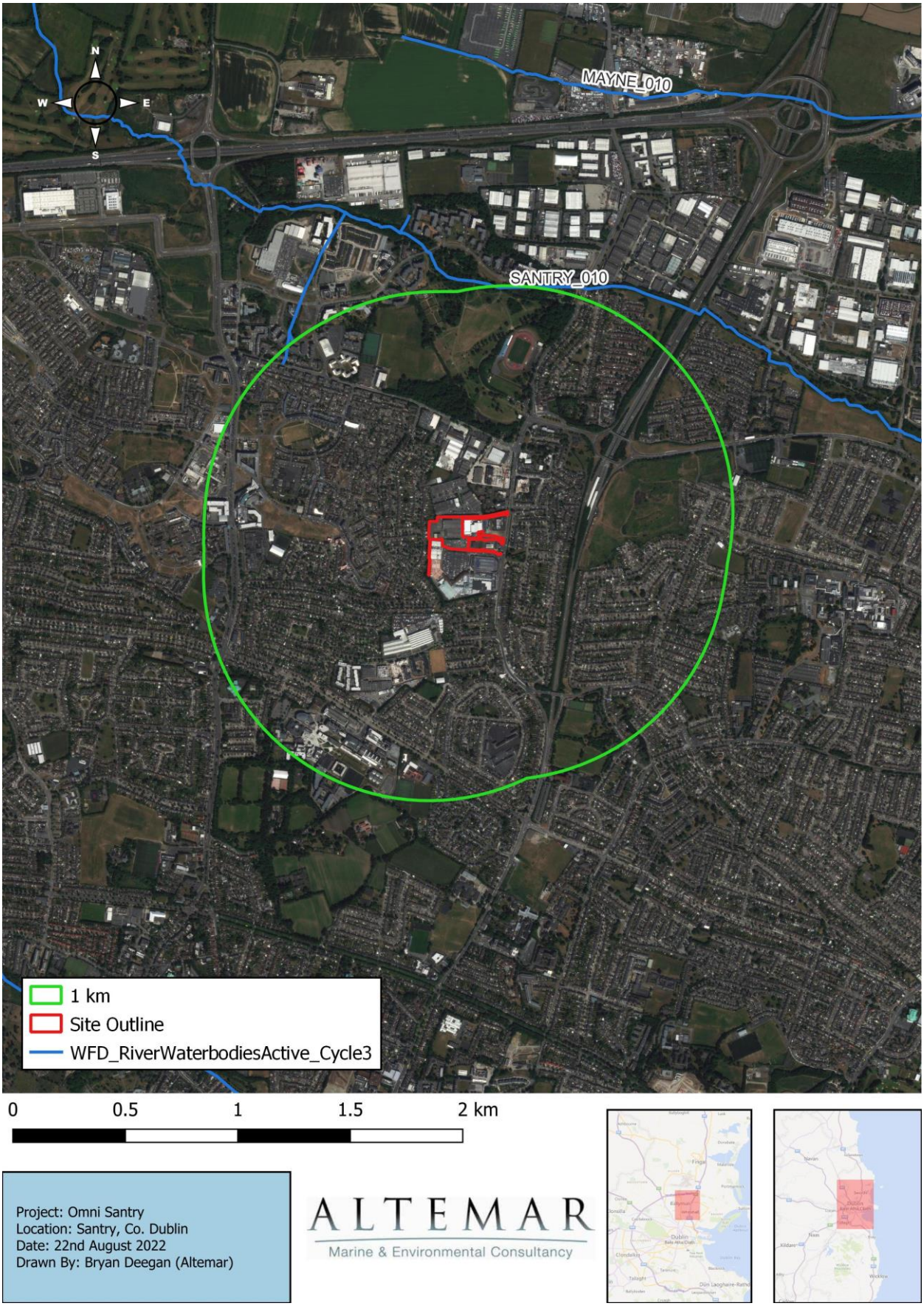

Figure 8.6 – Watercourses proximate to the subject site

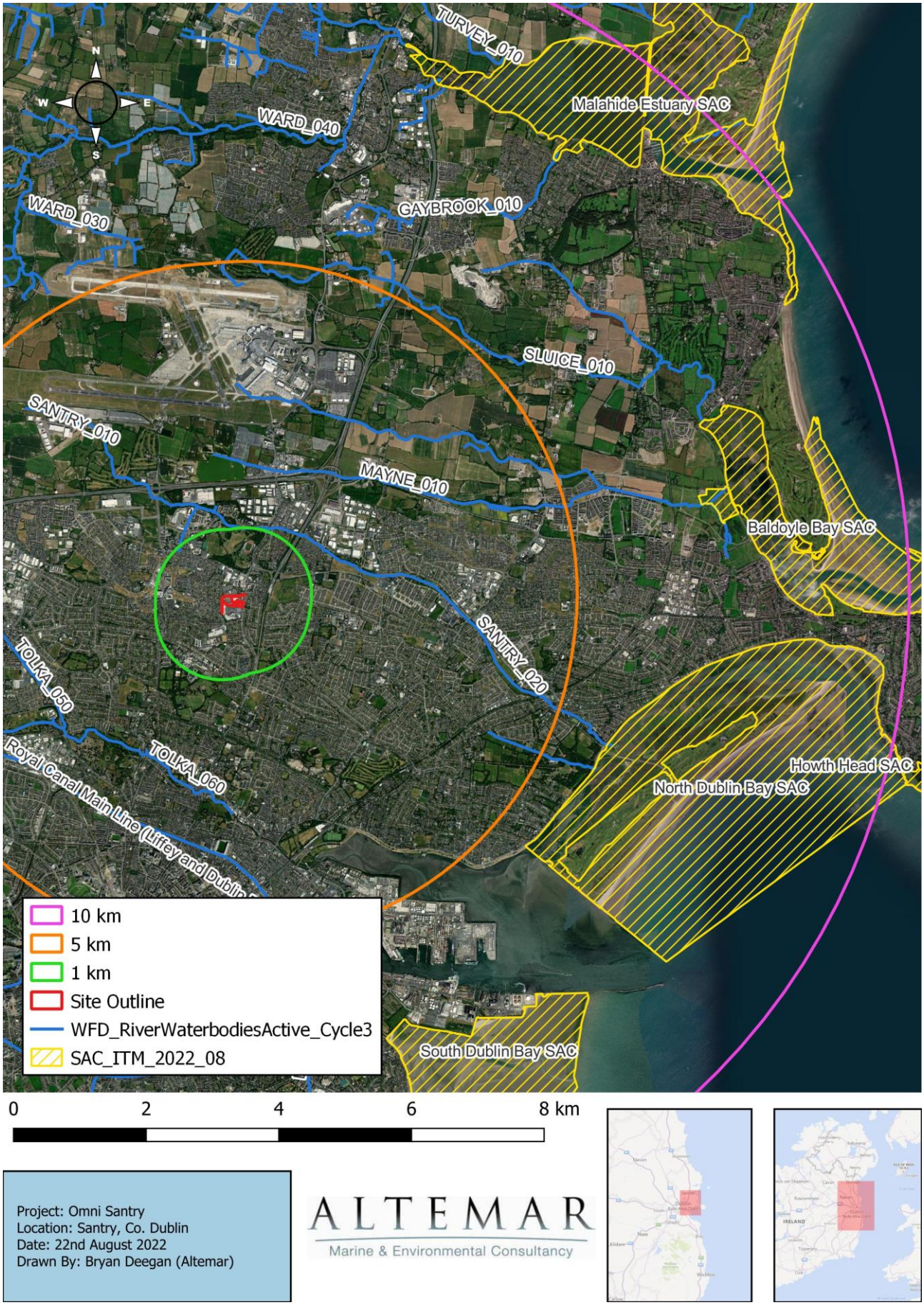

Figure 8.7 – Watercourses and SACs within 10km of the subject site

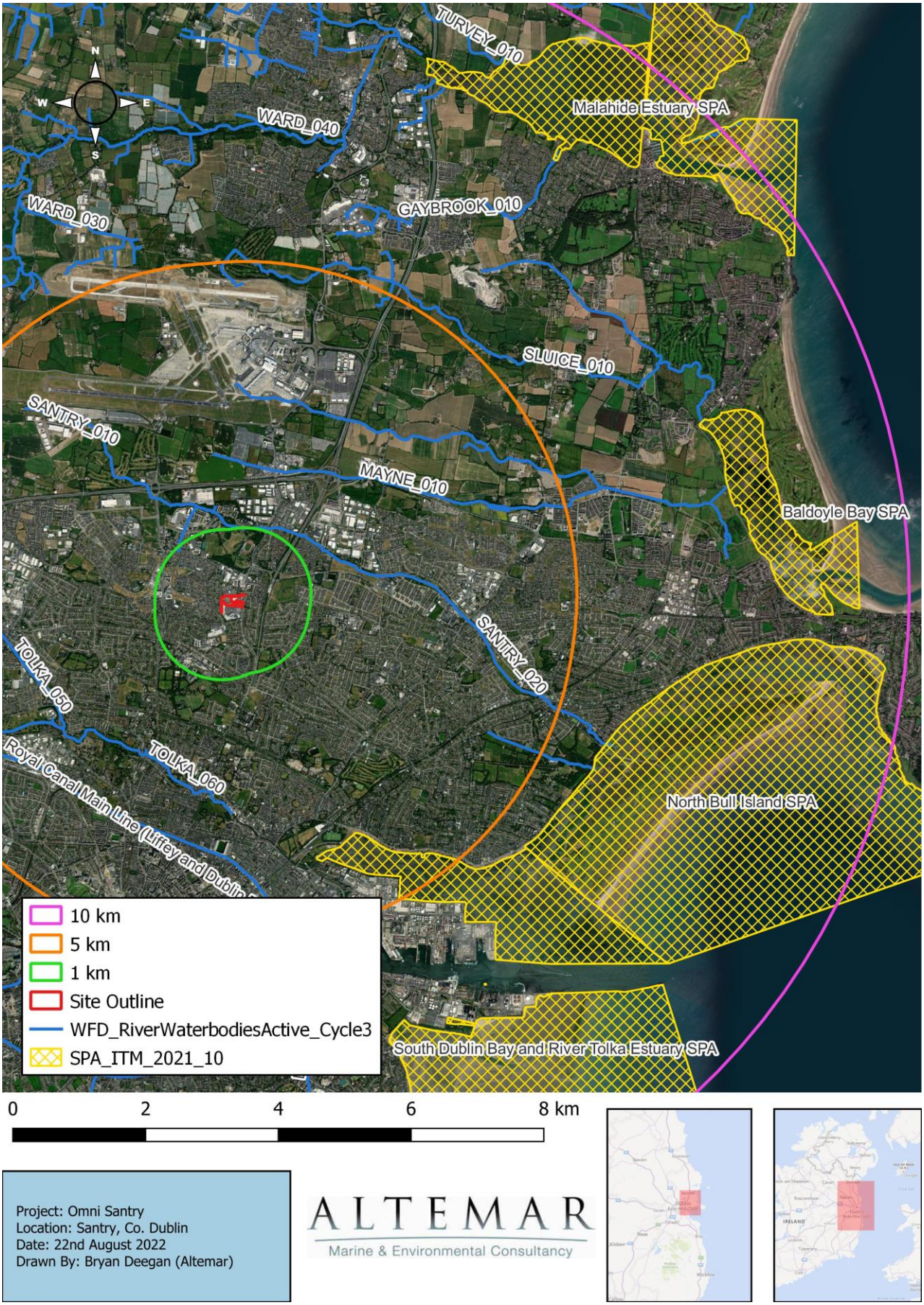

Figure 8.8 – Watercourses and SPAs within 10km of the subject site

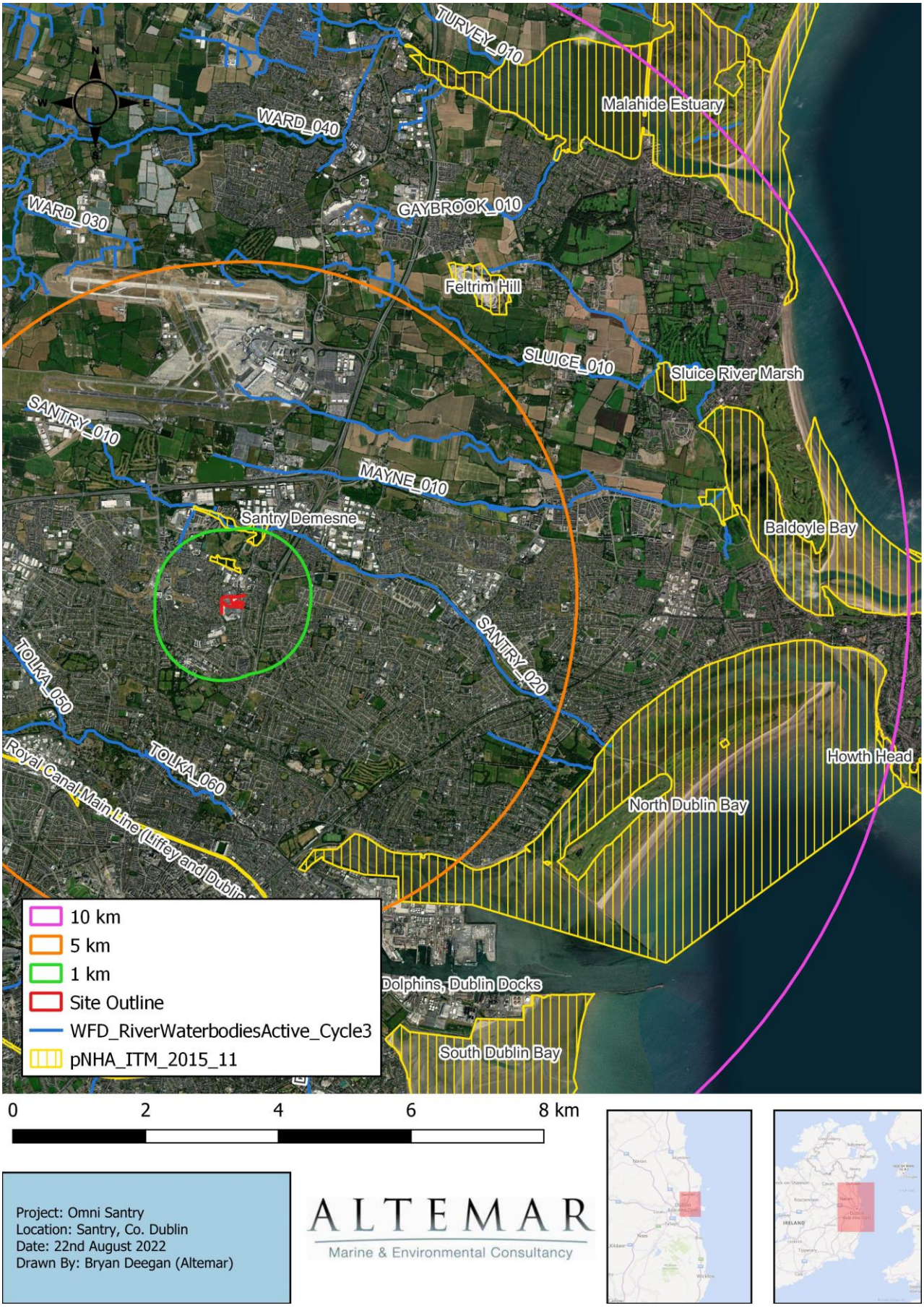

Figure 8.9 – Watercourses and pNHAs within 10km of the subject site

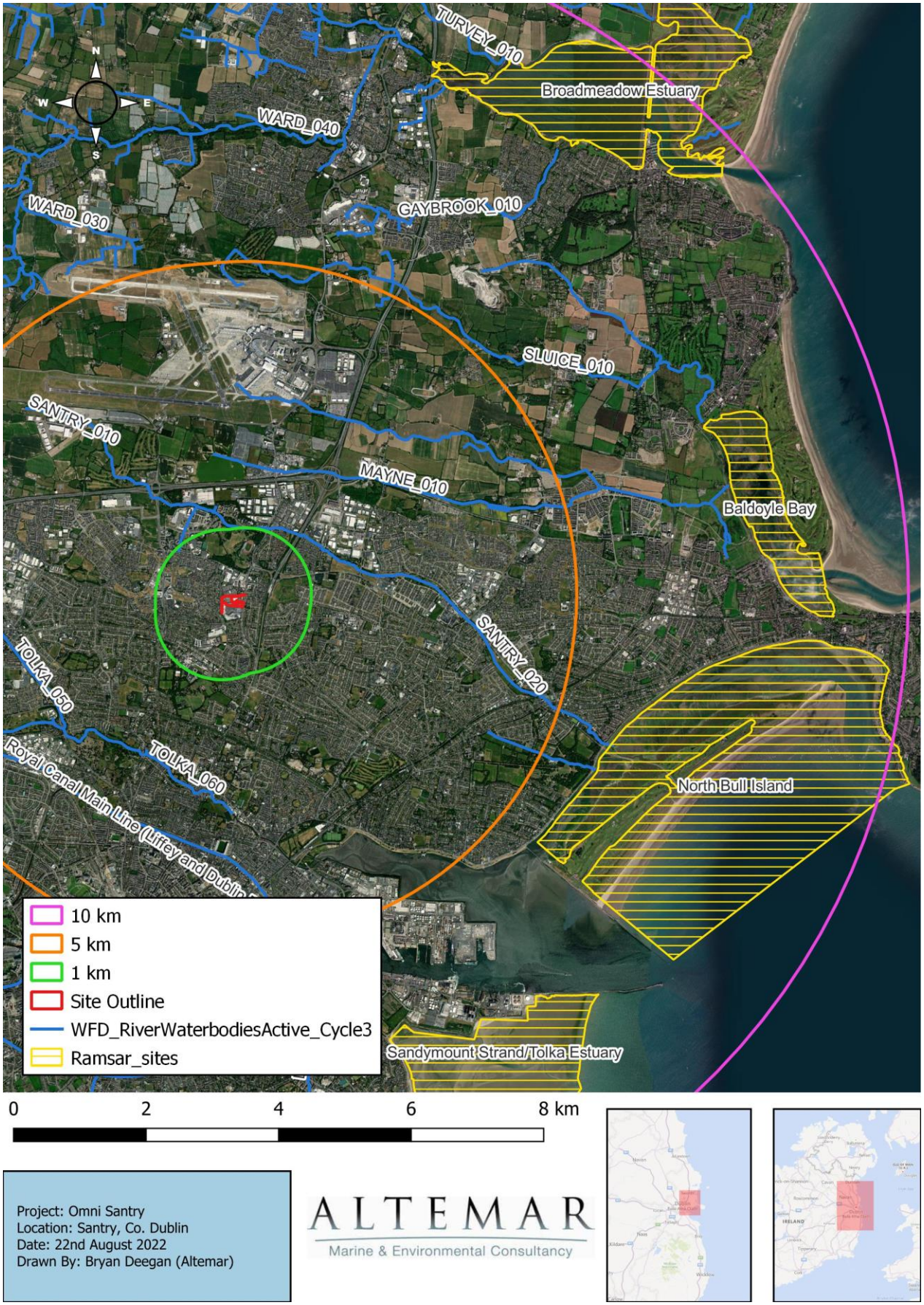

Figure 8.10 – Watercourses and Ramsar Sites within 10km of the subject site

8.4.3 Species data

8.16 It should be noted that no species of conservation importance were noted on site, based on NPWS and NBDC records as fine resolution. Species recorded within the 10km grid include are seen in Table 8.3.

Table 8.3. National Biodiversity Data Centre Records within the 2km^2 grid (O13U).

Black-billed Magpie (Pica pica); Common Swift (Apus apus); Common Wood Pigeon (*Columba palumbus*); Eurasian Jackdaw (*Corvus monedula*); Grey Heron (*Ardea cinerea*); Peregrine Falcon (*Falco peregrinus*); Mistle Thrush (*Turdus viscivorus*); Rook (*Corvus frugilegus*); Alexanders (*Smyrnium olusatrum*); Annual Meadow-grass (*Poa annua*); Barren Brome (*Anisantha sterilis*); Black Medick (*Medicago lupulina*); Black-poplar (*Populus nigra*); Bluebell (*Hyacinthoides non-scripta*); Bristly Oxtongue (*Picris echioides*); Bramble (*Rubus fruticosus agg.*); Broad-leaved Willowherb (*Epilobium montanum*); Butterfly-bush (*Buddleja davidii*); Charlock (*Sinapis arvensis*); Clustered Dock (*Rumex conglomeratus*); Cock's-foot (*Dactylis glomerata*); Coltsfoot (*Tussilago farfara*); Common Bird's-foot-trefoil (*Lotus corniculatus*); Common Chickweed (*Stellaria media*); Common Field-speedwell (*Veronica persica*); Common Fumitory (*Fumaria officinalis*); Common Mallow (*Malva sylvestris*); Common Mouse-ear (*Cerastium fontanum*); Common Nettle (*Urtica dioica*); Common Poppy (*Papaver rhoeas*); Common Ragwort (*Senecio jacobaea*); Cowslip (*Primula veris*); Creeping Buttercup (*Ranunculus repens*); Creeping Thistle (*Cirsium arvense*); Fern-grass (*Catapodium rigidum*); Field Forget-me-not (*Myosotis arvensis*); Giant Viper's-bugloss (*Echium pininana*); Glaucous Sedge (*Carex flacca*); Great Willowherb (*Epilobium hirsuteum*); Greater Plantain (*Plantago major*); Ground-ivy (*Glechoma hederacea*); Groundsel (*Senecio vulgaris*); Hairy Bitter-cress (*Cardamine hirsuta*); Hedge Mustard (*Sisymbrium officinale*); Herb-Robert (*Geranium robertianum*); Holly (*Ilex aquifolium*); Hornbeam (*Carpinus betulus*); Ivy (*Hedera helix*); Keeled-fruited Cornsalad (*Valerianella carinata*); Knotgrass (*Polygonum aviculare*); Lesser Hawkbit (*Leontodon saxatilis*); Lesser Swine-cress (*Coronopus didymus*); Lesser Trefoil (*Trifolium dubium*); Meadow Vetchling (*Lathyrus pratensis*); Nipplewort (*Lapsana communis*); Norway Maple (*Acer platanoides*); Opium Poppy (*Papaver somniferum*); Oxeye Daisy (*Leucanthemum vulgare*); Perennial Sow-thistle (*Sonchus arvensis*); Petty Spurge (*Euphorbia peplus*); Prickly Lettuce (*Lactuca serriola*); Prickly Sow-thistle (*Sonchus asper*); Purple Ramping-fumitory (*Fumaria purpurea*); Rape (*Brassica napus*); Ribwort Plantain (*Plantago lanceolata*); Rough Meadow-grass (*Poa trivialis*); Scarlet Pimpernel (*Anagallis arvensis*); Scentless Mayweed (*Tripleurospermum inodorum*); Selfheal (*Prunella vulgaris*); Shepherd's-purse (*Capsella bursa-pastoris*); Smooth Sow-thistle (*Sonchus oleraceus*); Soft-brome (*Bromus hordeaceus*); Spear Thistle (*Cirsium vulgare*); Square-stalked St John's-wort (*Hypericum tetrapterum*); Sun Spurge (*Euphorbia helioscopia*); Sweet Vernal-grass (*Anthoxanthum odoratum*); Sycamore (*Acer pseudoplatanus*); Taraxacum aggregate; Thyme-leaved Speedwell (*Veronica serpyllifolia*); Upright Hedge-parsley (*Torilis japonica*); Veronica hederifolia subsp. lucorum; Vicia sativa; Wall Speedwell (*Veronica arvensis*); Water Bent (*Polypogon viridis*); Wavy Bitter-cress (*Cardamine flexuosa*); White Clover (*Trifolium repens*); Wood Anemone (*Anemone nemorosa*); Yarrow (*Achillea millefolium*); Yorkshire-fog (*Holcus lanatus*); Albugo candida; Albugo tragopogonis var. tragopogonis; Ascochyta nymphaeae; Erysiphe magnicellulata; Erysiphe trifolii var. trifolii; Melampsora euphorbiae; Pestalotiopsis; Puccinia lagenophorae; Puccinia malvacearum; Puccinia oxalidis; Puccinia porri; Ramularia nymphaearum; Ramularia rubella; Rhizosphaera kalkhoffii; Silverleaf Fungus (*Chondrostereum purpureum*); 7-spot Ladybird (*Coccinella septempunctata*); Silpha atrata subsp. subrotundata; Sphaeriestes castaneus; Common Blue (*Polyommatus icarus*); Holly Blue (*Celastrina argiolus*); Orange-tip (*Anthocharis cardamines*); Small Tortoiseshell (*Aglais urticae*); Small White (*Pieris rapae*); Speckled Wood (*Pararge aegeria*); Common Earwig (*Forficula auricularia*); Bombus (Bombus) lucorum; Common Carder Bee (Bombus (Thoracombus) pascuorum); Heath Bumble Bee (Bombus (Pyrobombus) jonellus); Large Red Tailed Bumble Bee (Bombus (Melanobombus) lapidarius); Moss Carder-bee (Bombus (Thoracombus) muscorum); Small Garden Bumble Bee (Bombus (Megabombus) hortorum); Phyllonorycter messaniella; Dicyphus (*Dicyphus*) epilobii; Drymus (*Sylvadrymus*) sylvaticus; Forest Bug (*Pentatoma rufipes*); Harpocera thoracica; Scolopostethus affinis; Cylindroiulus Britannicus; Cylindroiulus caeruleocinctus; Cylindroiulus vulnerarius; Eyed Flat-backed Millipede (*Nanogona polydesmoides*); Spotted Snake Millipede (Blaniulus guttulatus); Eurasian Badger (*Meles meles*); Eurasian Red Squirrel (*Sciurus vulgaris*); Red Fox (*Vulpes vulpes*); Cuckooflower (*Cardamine pratensis*); Japanese Knotweed (*Fallopia japonica*); Lily Beetle (*Lilioceris lilii*); Orange-tip (*Anthocharis cardamines*); Common Darter (*Sympetrum striolatum*); *Sirex juvencus*; Garden Tiger (*Arctia caja*); Lime Hawk-moth (*Mimas tiliae*); Barn Owl (*Tyto alba*);

8.17 The NBDC record sightings of the following species proximate to the proposed development:

- Great Black-backed Gull *(Larus marinus)*
- Brown Rat *(Rattus norvegicus)*

Table 8-4 Species found by NPWS within 10km.

Hairy St. John's-wort (*Hypericum hirsutum*); Common Frog (*Rana temporaria*); Herring Gull (*Larus argentatus*); Opposite-leaved Pondweed (*Groenlandia densa*); Otter (*Lutra lutra*); Smooth Newt (*Triturus vulgaris*); Blue Fleabane (*Erigeron acer*); Common Lizard (*Zootoca vivipara*); Irish Hare (*Lepus timidus subsp. hibernicus*)

8.18 No species of conservation importance have been noted on site by NPWS.

8.4.4 Site Survey

8.19 Site assessments were carried out on the 23rd July 2021 and 19th August 2022. Habitats within the proposed development site were classified according to Fossitt (2000) (Figure 8.11) and the species noted within each habitat are described. Bat surveys, that included an internal and external examination of the buildings on site in addition to a bat emergent/detector survey were also carried out on the 23rd July 2021 and again on the 19th of August 2022 (Appendix 8.1).

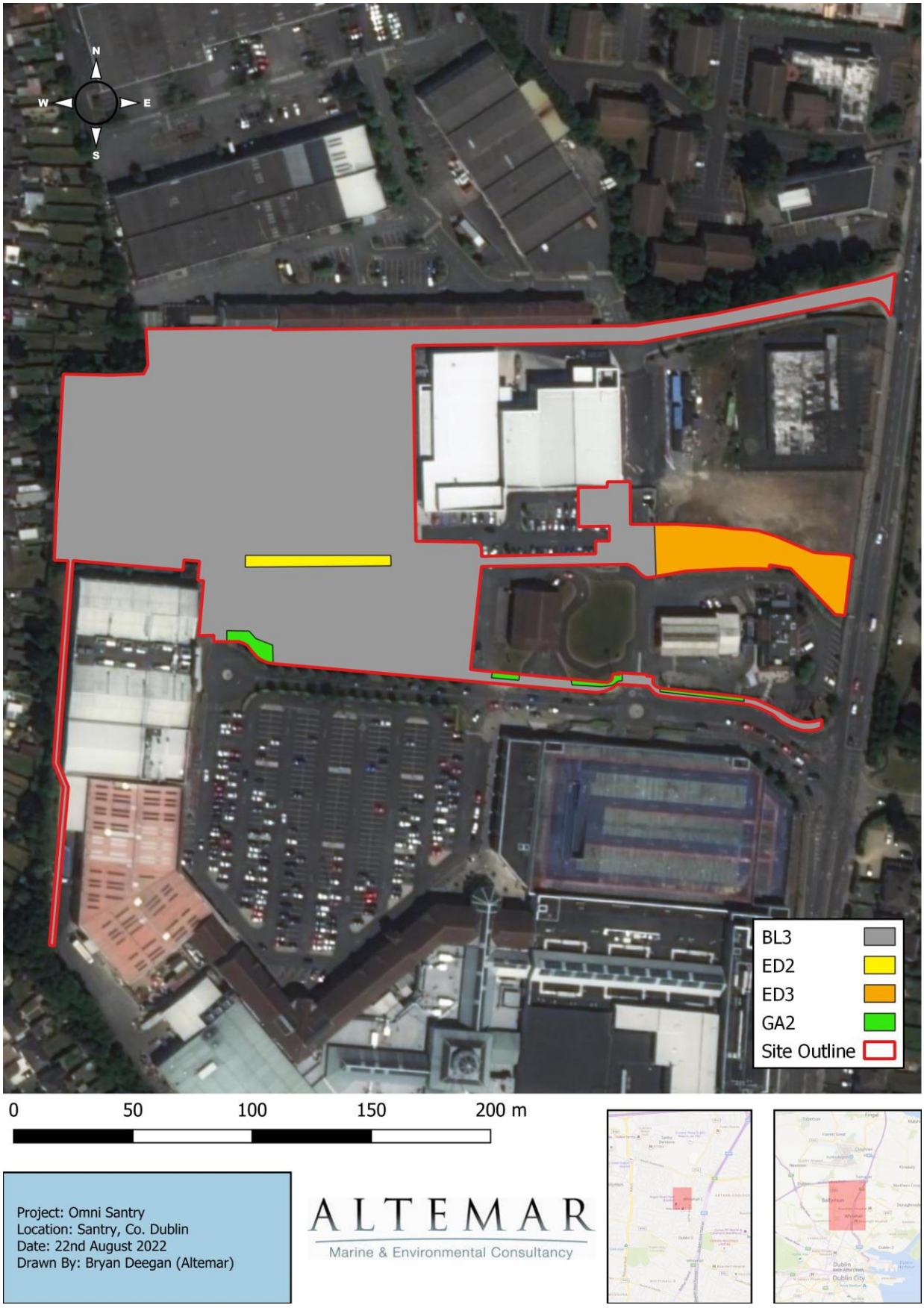

Figure 8.11. Fossitt Habitats on site (See habitat descriptions for details of Fossitt codes)

BL3-Buildings and artificial surfaces

Plate 8.1. Buildings and artificial surfaces

8.20 The vast majority of the proposed development site consists of Built Land (Fossitt 2000). A bat survey (inspection and emergent survey) was carried out on site on the 23rd of July 2021 and again on the 19th of August 2022 (Appendix 8.1). The exterior and interior of the buildings were brightly lit. No bats or evidence of bat presence/use of the building/structures was noted. No bats were noted flying within the proposed development site. No flora or terrestrial fauna species or habitats of National or international conservation importance were noted during the survey.

8.21 Opportunistic flora species had begun to grow in cracks and joints and in areas where debris had accumulated. Species included larger specimens of butterfly-bush (*Buddleja davidii*) right across the BL3 area in addition to bramble (*Rubus fruticosus agg*.), dandelion (*Taraxacum spp*.), rosebay willowherb (*Epilobium angustifolium*), plantains (*Plantago spp*.), Ivy (*Hedera helix*), honeysuckle (*Lonicera periclymenum*), cleavers (*Galium aparine*), common ragwort (*Senecio jacobaea*), Hart's-tongue (*Asplenium scolopendrium*), old man's beard (*Clematis vitalba*), thistles (*Cirsium arvense & C. vulgare*), docks (*Rumex spp*.), willow (*Salix sp*), rape (*Brassica napus*), great willowherb (*Epilobium hirsutum*), hoary willowherb (*Epilobium parviflorum*) and hedge bindweed (*Calystegia sepium*). Numerous feral pigeon (*Columba livia f. domestica*) occupy the interior of the derelict building spaces. It should be noted that herring gull (*Larus argentatus*) (amber listed) and lesser black-backed gull (*Larus fuscus*) (amber listed) were noted on the roof of the main warehouse building. It is expected that the birds were nesting on the roof as juveniles were noted, and several of the birds were defensive in nature.

GA2-Amenity Grassland

Plate 8.3 Amenity Grassland

8.22 Several small areas of amenity grassland will be impacted by the proposed development. These are proximate to existing roads. Species in GA2 consisted of creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), red clover (*Trifolium pratense*), dandelion (*Taraxacum spp*.), daisy (*Bellis perennis*), plantains (*Plantago spp*.), thistles (*Cirsium vulgare*), docks (*Rumex spp*.) and nettle (*Urtica dioica*).

ED3-Recolonising Bare Ground

Plate 8.3 Amenity Grassland

8.23 A section of the site is being recolonised by opportunistic species such as nettle (*Urtica dioica*), rape (*Brassica napus*), dandelion (*Taraxacum spp*.), oxeye daisy (*Leucanthemum vulgare*), bramble (Rubus fruticosus agg.), colt's foot (*Tussilago farfara*), creeping buttercup (*Ranunculus repens*), clover (*Trifolium spp*.), daisy (*Bellis perennis*), plantains (*Plantago spp*.), thistles (*Cirsium arvense & C. vulgare*), docks (*Rumex spp*.), butterfly-bush (*Buddleja spp.*`), ivy (*Hedera helix*), common birds-foot-trefoil (*Lotus corniculatus*), ragwort (*Senecio sp*.), rosebay willowherb (*Chamaenerion angustifolium*) and saplings of sycamore (*Acer pseudoplatanus*).

Evaluation of Habitats

8.24 The proposed brownfield development site is primarily built land (>85%) consisting of warehouses and hard standing. No habitats of conservation importance were noted on site.

Plant Species

8.25 The plant species encountered at the various locations on site are detailed above. No flora or faunal species of conservation importance were noted by the NPWS or NBDC. Flora seen on site were restricted to common opportunistic plant species in areas where debris was present on the roof. No water features that could act as potential spawning sites for frog species were noted on site. No amphibians or reptiles were noted on site. In relation to bird species, no bird species on Annex I of the EU Birds Directive were noted on site by the NPWS or NBDC. No invasive plant or animal species listed under the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) Section 49, the Third Schedule: Part 1 Plants, Third Schedule: Part 2A Animals were noted on site. No invasive plant species that could hinder removal of soil from the site during groundworks, such as Japanese knotweed, giant rhubarb, Himalayan balsam or giant hogweed were noted on site.

Fauna

8.26 No terrestrial fauna of conservation importance were noted on site. There are no mammal burrows on site. The site is primarily built land within an urban area.

Amphibians/Reptiles

8.27 The common frog (*Rana temporaria*) was not observed on site. There are no features within the site boundary that could be important to frogs. The common lizard (*Zootoca vivipara*) or smooth newt (*Lissotriton vulgaris*) were not recorded on site.

Terrestrial Mammals

8.28 No badgers or badger activity was noted on site. No protected terrestrial mammals were noted on site or in the immediate vicinity of the site.

Birds

8.29 Herring gull (*Larus argentatus*) (amber listed) and lesser black-backed gull (*Larus fuscus*) (amber listed) were noted to be nesting on site. No other bird species of conservation value were noted during the field assessment. The following bird species were noted on site:

Table 8.5: Bird Species noted in the vicinity of the proposed development

Common Name	***Scientific Name***
Wren	*Troglodytes troglodytes (green)*
Robin	*Erithacus rubecula (green)*
Blue tit	*Parus caeruleus (green)*
Great tit	*Parus major (green)*
Rook	*Corvus frugilegus (green)*
Feral pigeon	*(Columba livia f. domestica) (green)*

8.5 ANALYSIS OF THE POTENTIAL IMPACTS

8.30 The proposed development will involve the removal of the existing terrestrial habitats on site, demolition, re-profiling, excavations and the construction of residential units.

8.5.1 Demolition/Construction Impacts

8.31 The demolition/construction of the proposed development, would impact on the existing ecology of the site. These potential demolition/construction impacts would include impacts that may arise during the site clearance, demolition, re-profiling of the site and the building phases of the proposed development.

8.32 Standard construction phase mitigation measures are required on site particularly as significant demolition, clearance and reprofiling of the site is proposed which will remove all existing terrestrial habitats and can lead to silt laden and contaminated runoff to proximate surface water drainage networks.

Designated Natura 2000 sites within 15km

8.33 The proposed development is not within a designated conservation site. There is an indirect pathway to the marine environment via the surface water network. The project must comply with Water Pollution Acts and prevent silt laden runoff leaving the site via the surface water network. Runoff during site re-profiling, the demolition, construction and operation of project will be going to the foul network and treatment in Ringsend WwTP. As outlined in the Hydrology Chapter (Chapter 7) '*The site would have indirect hydrological connections with the North Dublin Bay SAC/pNHA and North Bull Island SPA through the local drainage networks (via both the Santry River and the River Wad). Given the potential loading and the distance from source to the Natura sites (over 3.8 Km downstream) and associated dilution factor, this risk would be imperceptible as any accidental discharge of potential contaminant would be attenuated, diluted and dispersed below statutory guidelines (i.e., S.I. European Communities Environmental Objectives Regulations, 2009 [S.I. No. 272 of 2009 as amended by SI No. 77 of 2019]).*'These measures would be in place whether or not designated sites are downstream of the works or not and the measures are not necessary for the protection of designated sites (See Hydrology Chapter Section 7.6).

Effects: Neutral / site / Not significant / long term/likely.

Terrestrial Ecology

8.34 During the site visits no flora, habitats or terrestrial mammal species of conservation importance were recorded on site or in NPWS or NBDC records.

8.35 Common mammalian species. Loss of habitat and habitat fragmentation may affect some common mammalian species and there is expected to be mortality during demolition and construction.

Effects: Neutral / site / Not significant / long term/likely.

Amphibians and reptiles

8.36 Frogs and reptiles were not observed on site.

Effects: Neutral / site / Not significant / long term/likely.

Bat Fauna

8.37 There is no evidence of a current or past bat roost in the buildings or trees on site. There was no foraging noted on site.

Effects: Neutral / site / Not significant / long term/likely. Mitigation is required in the form of a pre-demolition inspection.

Birds

8.38 Herring gull (*Larus argentatus*) (amber listed) and lesser black-backed gull (*Larus fuscus*) (amber listed) were noted to be nesting on site. The demolition of the site will result in the medium term loss of nesting habitat. Compliance with the Wildlife Act will be required in relation to nesting birds during demolition.

Effects: Minor adverse / site / Not significant / short-medium term term/likely. Mitigation is required in the form of a pre-demolition inspection for nesting birds

8.5.2 Operational Impacts

8.39 Once constructed, all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS, which is a significant improvement of the current drainage strategy. The biodiversity value of the site would be expected to improve as the landscaping matures. It would be expected that the ecological impacts in the long term would be positive once landscaping has established due to the implementation of a landscape strategy with a strong biodiversity element. This is primarily a result of the implementation of SuDS on site and the landscaping of a site that is primarily built land.

Designated Conservation sites within 15km

8.40 No significant impacts on designated sites are likely during operation.

Effects: Neutral / site / Not significant / long term/likely.

Terrestrial Ecology

8.41 As the landscaping elements improve with maturity it would be expected that the biodiversity value of the site to birds and flora would also increase.

Effects: Neutral / site / Not significant / long term/likely.

Bat Fauna

8.42 No mitigation measures are required during operation in relation to bats. No significant impacts are foreseen in relation to strikes. No bats were noted foraging on site and the buildings are constructed solid materials within a brightly lit environment.

Effects: Neutral / site / Not significant / long term/likely.

Birds

8.43 Herring gull (*Larus argentatus*) (amber listed) and lesser black-backed gull (*Larus fuscus*) (amber listed) were noted to be nesting on site. Given the current artificial nature of the site, it is likely that these birds will nest in future on site as the proposed roofs will provide a more suitable flat nesting environment with parapet walls than the current sloped or flat roofs with few parapet walls. The proposed development is within a built up environment and not proximate to large open grassland sites that could potentially attract wintering bird species. No significant impacts are foreseen in relation to bird strikes.

Effects: Neutral / site / Not significant / long term/likely.

8.6 MITIGATION MEASURES & MONITORING

8.44 Standard demolition, construction and operational controls will be incorporated into the proposed development project to minimise the potential negative impacts on the ecology within the Zone of Influence (ZoI). The project must comply with Water Pollution legislation to ensure that there are no contaminated discharges from the site including contaminated surface runoff, dust, and damage to the Santry River. Mitigation measures are outlined in the Hydrology Chapter and in the Air and Climate Chapter of the EIAR.

8.6.1 Demolition/Construction Mitigation

Designated Conservation sites within 15km

8.45 The primary pathway to designated sites is via surface water. No specific mitigation is required in relation to designated sites.

Biodiversity on site

8.46 A project ecologist will be appointed to oversee site clearance and drainage on site.

Birds

8.47 Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) should be adhered to. Should this not be possible, a pre-works check by a qualified ecologist should be undertaken to ensure nesting birds are absent. This would include nesting gulls on buildings. A pre-demolition assessment will be carried out in relation to nesting gulls on site.

Bats

8.48 No bat roosts or potential bat roosts will be impacted. However, a pre-demolition inspection will be carried out.

8.6.2 Operational Mitigation

Designated Conservation sites within 15km

8.49 The primary pathway to designated sites is via surface water. No specific mitigation is required in relation to designated sites.

Biodiversity on site

8.50 No specific mitigation is required in relation to biodiversity during operation.

8.7 ADVERSE EFFECTS LIKELY TO OCCUR FROM THE PROJECT (POST MITIGATION)

8.51 Standard demolition, construction and operational mitigation measures are outlined in the EIAR. These would ensure that surface water entering the existing public surface water drainage network is clean and uncontaminated. However, it should be noted that the early implementation of ecological supervision on site at initial mobilisation and enabling works is seen as an important element to the project, particularly in relation to the implementation of protection of nesting gulls, pre demolition inspections for bats and surface water runoff mitigation.

8.52 With the successful implementation of standard mitigation measures to limit surface water impacts and biodiversity mitigation/supervision, no significant impacts are foreseen from the demolition, construction or operation of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works. Positive impacts would be seen through the implementation of a landscape strategy with greater potential for biodiversity than currently exists on site.

8.53 The demolition, construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on biodiversity through the application of the standard demolition, construction and operational phase controls as outlined in the EIAR. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the existing public surface water drainage network will satisfactorily address the potential impacts on downstream biodiversity. No significant adverse impacts on the conservation objectives of Natura 2000 sites are likely.

8.54 It is essential that these measures outlined are complied with, to ensure that the proposed development does not have “downstream” environmental impacts. These measures are to protect the groundwater/surface water, which are potentially the primary vectors of impacts from the site.

8.8 RESIDUAL IMPACTS CONCLUSION

8.55 The demolition, construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on the sensitive receptors through the application the standard demolition, construction and operational phase controls. The overall impact on the ecology of the proposed development will result in a long term slight positive residual impact on the ecology of the area and locality

overall. This is primarily as a result of the loss of terrestrial habitats on site, supported by the creation of SuDS, additional biodiversity features and habitat complexity.

8.9 CUMULATIVE IMPACTS

8.56 Given that there will be no negative residual impacts arising from either the demolition, construction or operation of the proposed development there will be no cumulative impact associated with any of the cumulative developments referenced in Section 2.10 of Chapter 2 of this EIAR.

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APPENDIX 8.1

BAT SURVEY

Bat Fauna Survey for a proposed residential development at a site located to the north west corner of the Omni Park Shopping Centre, Santry and at Santry Hall Industrial Estate, Swords Road, Dublin 9.

24th August 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Serendale Limited.

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Document Control Sheet			
Client	Serendale Limited.		
Project	Bat Fauna Survey for a proposed residential development at a site located to the north west corner of the Omni Park Shopping Centre, Santry and at Santry Hall Industrial Estate, Swords Road, Dublin 9.		
Report	Bat Fauna Assessment		
Date	24th August 2022		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Jack Doyle	20th August 2022
Planning	Bryan Deegan		24th August 2022

SUMMARY

Structure:	Existing warehouses currently in use.
Location:	Industrial / warehouse buildings northwest of Omni Park Shopping Centre, Santry, Dublin 9
Bat species present:	None Roosting. No bat activity.
Proposed work:	Residential development.
Impact on bats:	Negligible following the implementation of mitigation.
Survey by:	Bryan Deegan MCIEEM
Survey dates:	23rd July 2021 & 19th August 2022

Receiving Environment

Background

Serendale Limited, intend to apply to An Bord Pleanála for permission for a strategic housing development Permission for a 7 year duration, t which comprises the demolition of the existing industrial / warehouse buildings northwest of Omni Park Shopping Centre, Santry, Dublin 9 and the construction of 457 no. apartments across 4 no. blocks, ranging in height from 4-12 storeys (over basement). The proposal includes 2 no. retail/café/restaurant units, 1 no. community building, 1 no. childcare facility, 1no. residential amenity space and 5 no. ESB substations.

The development also provides for a basement carpark of 213 no. spaces and 7 no. motorcycle spaces with 7 no. creche drop-off parking spaces and 6 no. carshare parking spaces located in newly reconfigured surface carpark. The proposal provides for 768 no. bicycle parking spaces.

The proposal includes the provision of a new public open space plaza, with consequential revisions to existing commercial car parking areas, to integrate the proposals with the wider District Centre.

The proposal includes the provision of pedestrian and cycle connections and improvements through Omni Park Shopping Centre, including a plaza and cycle/pedestrian link substantially in the form permitted as part of the Omni Living Strategic Housing Development (Ref. ABP-307011-20).

Access to the proposed 213 no. basement car parking spaces is via the existing Omni Park Shopping Centre. A secondary servicing and emergency access is via the existing service road to the rear of existing retail premises at Omni Park Shopping Centre and accessed from the Swords Road.

The development provides for all associated and ancillary site development, demolition and clearance works, hoarding during construction, revisions to car parking within the Omni Park Shopping Centre, soft and hard landscaping, public realm works, public lighting and signage, ancillary spaces, plant including photovoltaic panels, water infrastructure, utilities and services.

The proposed site outline, location, and layout plan are demonstrated in Figures 1 The proposed landscape masterplan is demonstrated in Figure 2.

Arborist

An Arboricultural Report has been prepared by Murray & Associates Landscape Architecture to accompany this planning application. This report outlines the following:
'*The main areas of impact to trees will be the trees located in the car park islands within the existing retail centre. This reconfigutation provides for more pedestrian space for circulation, and is a minor impact which will be more than offset by the new tree planting throughtout the scheme. The trees along the boundary will be unaffected by the proposed development. As there are extensive areas of hardstanding within the site it is unlikely that there are any roots of these trees within the development area.*

As the retained trees will be contained within a live car park it is not considered that tree protection measures are appropriate.'

Figure 1. Site Outline

Figure 1. Proposed site outline

Figure 2. Site Layout

Figure 2. Proposed site layout

Figure 3. Landscape masterplan

Figure 3. Proposed landscape masterplan

Lighting

An Outdoor Lighting Report has been prepared by Sabre Electrical Services Ltd. to accompany this planning application. This report outlines the following lighting data for the proposed lighting strategy at the subject site: It should be noted that the site is within an existing brightly lit industrial/ retail environment. No evidence of bat activity including foraging was noted on site. As a result no mitigation was required in relation to lighting.

DATE: 11 August 2022 DESIGNER: Alex Naper

PROJECT No: SES 11721 Rev B PROJECT NAME: Omni Plaza SHD - Serendale Limited

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	716382.65	739542.46	129.00	54.00	1.50	1.50
2	Grid 2	716376.76	739593.80	141.00	51.00	1.50	1.50
3	Grid 3	716317.81	739600.65	166.02	112.49	1.50	1.50
4	Grid 4 Steps	716393.63	739596.78	5.76	4.91	1.44	0.31
5	Grid 5 Steps	716448.26	739591.00	5.76	4.91	1.44	0.31
6	Grid 6 Steps	716474.08	739613.93	4.24	8.34	0.35	1.19

Luminaires

Luminaire A Data

Supplier	C U Phosco
Type	PS63-122-F28-740-W5-700-SSW
Lamp(s)	740 SS
Lamp Flux (klm)	13.20
File Name	PS63-122-F28-740-W5-700-SSW.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	461.8, 61.8, 0.8
No. in Project	9

Luminaire B Data

Supplier	Urbis Schreder
Type	FLEXIA TOP MIDI 5345 [Deep shape PC], [Lum. shape-related, PI
Lamp(s)	40 LH 3510 @ 300mA NW 740 230V DD-53-+ D+
LampFlux(klm)/Colour	6.61 NW 4000K/70
File Name	FLEXIA TOP MIDI 5345 40 LH 3510 300mA NW 740 37.8W 475DSS [Deep shape PC], ...
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	435.4, 331.9, 29.1
No. in Project	4

Luminaire C Data

Supplier	Urbis Schreder
Type	FLEXIA TOP 5308 Deep shape PC 20 LH3 510 @ 400mA NW 740 230V
Lamp(s)	20 LH 3510 @ 400mA NW 740 230V
LampFlux(klm)/Colour	3.58 NW 4000K/70
File Name	FLEXIA TOP 5308 20 LH 3510 400mA NW 740 29W 445452 Deep shape PC 230V TF ...
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	434.0, 92.0, 40.8
No. in Project	4

Luminaire E Data

Supplier	Urbis Schreder
Type	ALINEA Handrail 5121 - 3 LED 350mA NW Profiled Poly Clear, Sm
Lamp(s)	3 LEDs NW
Lamp Flux (klm)	0.37
File Name	ALINEA Handrail 5121 3 LED 350mA NW Profiled Poly Clear Smooth W0 731+Jdl
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	230.6, 22.2, 4.1
No. in Project	13

Luminaire F Data

Supplier	C U Phosco
Type	ES60-23-P4A-740-0350-10W
Lamp(s)	740 W
Lamp Flux (klm)	1.32
File Name	ES60-23-P4A-740-0350-10W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	23

Bat survey

This report presents the results of site visit by Bryan Deegan (MCIEEM) on the 23rd July 2021 & 19th August 2022 during which all treelines and buildings were inspected for signs of bat use or presence. Bat emergent/detector and inspection surveys were carried out.

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 26 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2007)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Kelleher and Marnell (2007), Bat Mitigation Guidelines for Ireland.

Legislative Context

Wildlife (Amendment) Act 2000.

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to "*Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora transposed into Irish Law i.e. European Communities (Natural Habitats) Regulations, 1997 (SI No. 64/1997).

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under section 23 of SI No. 64/1997 all bats are listed under the first schedule of Section 23 which makes it an offence to:

- deliberately capture a bat
- deliberately disturb a bat,
- damage or destroy a breeding site or resting place of a bat.

Survey methodology

The presence of bats is assessed with reference to their signs; principally staining, droppings, feeding signs such as invertebrate prey remains and the presence of bat fly *Nycteribiidae* pupae, although direct observations are also occasionally made. The nature and type of habitats present onsite are also indicative of the species likely to be present. The exterior and interior of the buildings were inspected for bat presence/access and a emergent survey carried out.

At dusk, bat detector surveys werec arried out onsite using a *Echometer Touch 2 Pro bat* detector to determine bat activity. Bats are identified by their ultrasonic calls coupled with behavioural and flight observations.

Survey constraints

The detector surveys were undertaken during the active bat season. Weather conditions were good with temperatures of 10°C after sunset. Winds were light and there was no rainfall.

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 1km^2 grid (Reference grid O1639) encompassing the proposed development show no sightings of bats. The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 4 - 6.

Figure 4. Brown Long-eared Bat (*Plecotus auritus*) (yellow), Daubenton's Bat (*Myotis daubentonii*) (purple), and both Brown Long-eared Bat and Daubenton's Bat (orange) (Source NBDC) (Site – red circle)

Figure 5. Natterer's Bat (*Myotis nattereri*) (purple) Common pipistrelle (yellow). Both species (orange)(Source NBDC) (Site – red circle)

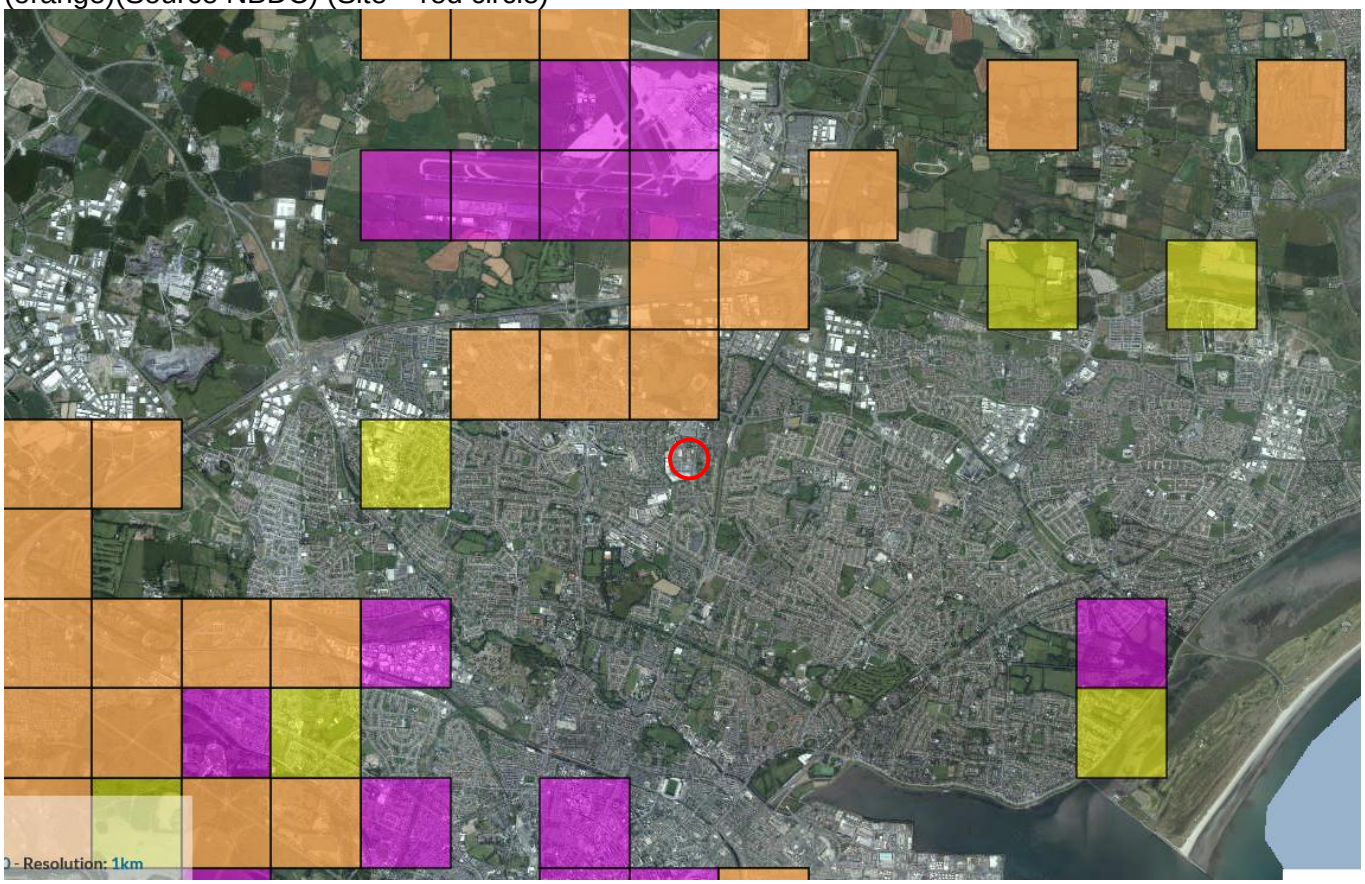

Figure 6. Lesser Noctule (*Nyctalus leisleri*) (purple), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow), and both Lesser Noctule and Soprano Pipistrelle (orange) (Source NBDC) (Site – red circle)

Detector surveys

No foraging activity was noted on site. The entire site is brightly lit by a combination of security lighting for the industrial units and streetlighting.

Buildings surveys

No evidence of bat activity was noted within the buildings on site. The interior is currently in use as a storage unit and is brightly lit.

Plate 1. Interior of warehouse.

Potential impacts of proposed redevelopment on bats

No roosts or bats emerging from buildings or adjacent trees were observed. No foraging or bat activity was noted on site. The site is brightly lit internally and externally by security lighting and streetlighting. Considerable light spill from security lighting enters the site from adjacent properties.

Mitigation measures

As no evidence of a bat roost was noted onsite, no mitigation measures in regard to these animals are needed during the proposed works. There is also no requirement for a *National Parks and Wildlife Service* derogation licence application to allow the planned works. A pre-demolition inspection will be carried out for bats. A derogation licence will be sought from NPWS if a bat roost is found to be present.

Predicted and residual impact of the proposal

There is no evidence of a current bat roost on site, therefore no negative impacts on roosts these animals are expected to result from the proposed development. The proposed development is within a built-up area with existing lighting and light spill and there is no foraging on site. The likelihood of bat collision is not significant as the materials proposed for the apartment blocks are generally solid and would have good acoustic properties to reflect echolocation signals. As a result, the buildings would be clearly visible to bat species. The impact of the proposed development on bats will be negligible in the long term based on the successful implementation mitigation.

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