

Ecological Impact Assessment Strategic Housing Development (SHD)



**On behalf of
Bellmount Developments Limited.**

**Wilton Road, Victoria Cross,
Bishopstown, Cork**



MALONE O'REGAN

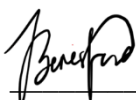


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**Ecological Impact Assessment
Strategic Housing Development (SHD)
Bellmount Developments Limited.**

Wilton Road, Victoria Cross, Bishopstown, Cork

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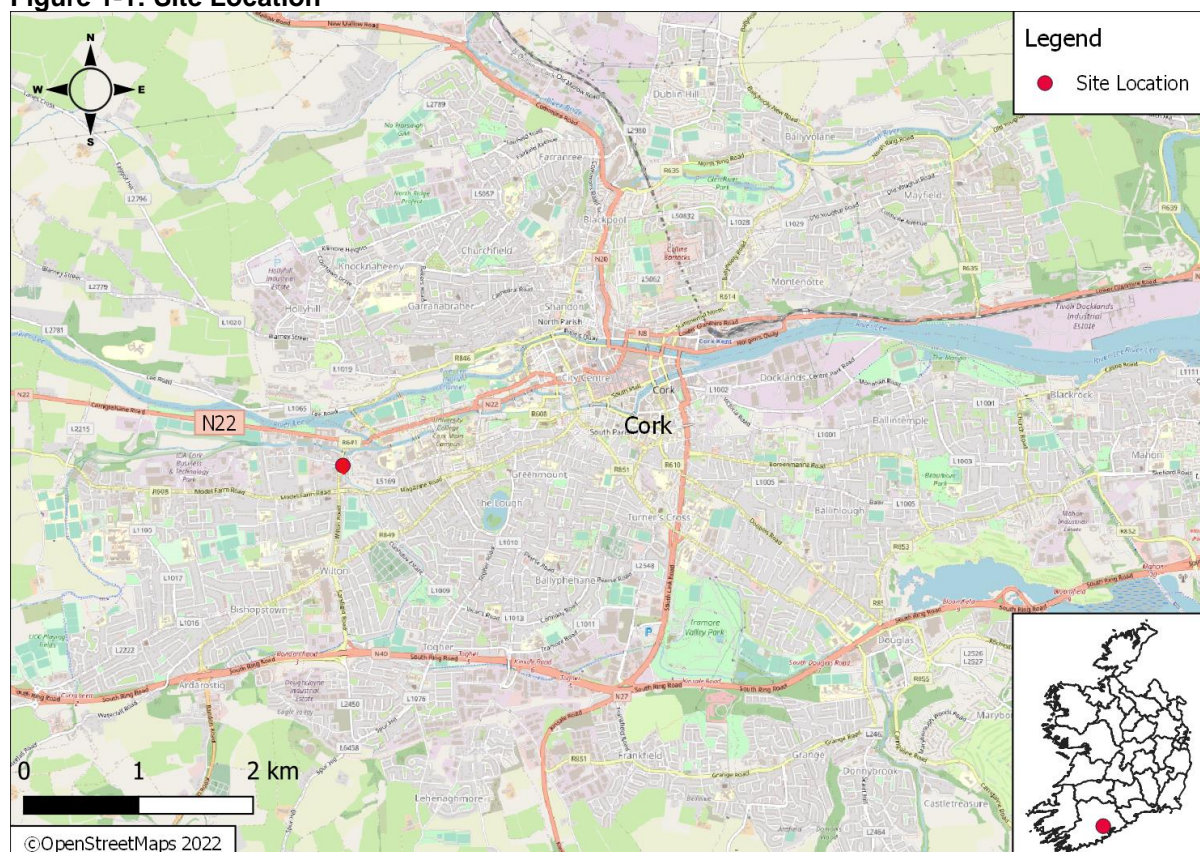
1 INTRODUCTION

1.1 Background and Purpose of Report

Malone O'Regan Environmental (MOR) were commissioned by Bellmount Developments Limited ('the Applicant') to undertake an Ecological Impact Assessment (EclA) for the proposed Strategic Housing Development (SHD) and all associated works on lands at Wilton Road, Victoria Cross (South), Co. Cork (OS Reference W 65206 71067).

The location of the proposed development ('the Site') is shown in Figure 1-1.

Figure 1-1: Site Location



The objective of this EclA was to survey and assess the land within and adjacent to the Site for the presence of any habitats or species that could present a constraint on or an opportunity for enhancement due to the proposed development.

1.2 Statement of Authority

The report was prepared by Ms. Jessica Beresford, Environmental Consultant. Jessica is a qualifying member of the Chartered Institute of Ecology and Environmental Management and has over a years' experience working in the ecological consultancy sector, including the preparation of EclAs, habitat surveys and specialist protected species surveys.

The report was approved by Mr. Dyfrig Hubble, Principal Ecologist. Dyfrig is a full member of the Chartered Institute of Ecology and Environmental Management. Dyfrig has over 15 years' experience working in the ecological consultancy sector, including habitat surveys and appraisals, and specialist protected species surveys.

1.3 Legislation and Planning Policy Context

1.3.1 Legislation Policy Context

Within Ireland, a number of sites of international or national importance to nature conservation, as well as many species of animal and plants are afforded a degree of legal protection, as set out in Box 1 below.

A study of biodiversity related planning policy at both national and local level has been undertaken for the Site and locality in order to highlight any potential conflicts with the relevant legislation and guidance documents.

Box 1 Designated Wildlife Sites and Protected and Otherwise Notable Habitats and Species
<p>The National Parks and Wildlife Service (NPWS) notifies sites in Ireland that are of international or national importance for nature conservation (although some sites that are of national importance for certain species have not been so designated). Internationally important sites may also be designated as:</p> <ul style="list-style-type: none"> • Special Areas of Conservation (SACs) and Candidate Special Area of Conservation (cSACs): the legal requirements relating to the designation and management of SACs in Ireland are set out in the European Communities (Birds and Natural Habitats) Regulations 2011-2021. • Special Protection Areas (SPAs) and candidate Special Protected Areas (cSPAs): strictly protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC), also known as the Birds Directive; and, • Ramsar sites: wetlands of international importance designated under the Ramsar Convention, to which Ireland is a signatory. <p>Other statutory site designations relating to nature conservation are:</p> <ul style="list-style-type: none"> • National Heritage Areas (NHAs): these represent examples of some of the most important natural and semi-natural terrestrial and coastal habitats in the country and are afforded protection under the Wildlife (Amendment) Act 2000. NHAs are legally protected from damage and receive protection from the date they are formally proposed for designation; and, • Proposed Natural Heritage Areas (pNHAs): these sites are not afforded the same protection as NHAs. These sites are proposed by the NPWS but are not statutorily proposed or designated. Prior to statutory designation these are subject to a very limited legal protection. They are, however, sites of significance for wildlife and habitats and are important for the purposes of this EclA report. <p>Legally protected species</p> <p>Many species of animal and plant receive some degree of legal protection. For the purposes of this study, legal protection refers to:</p> <ul style="list-style-type: none"> • Species included in the Wildlife (Amendment) Act 2000, excluding species that are only protected in relation to their sale, reflecting the fact that the site disposal will not include any proposals relating to the sale of species; and, • Species afforded protection under the Flora Protection Order 1999. <p>Other notable habitat/species categories</p> <ul style="list-style-type: none"> • Biodiversity Action Plan (BAP) species: those targeted in local or national BAPs as being of particular conservation concern (priority species); • Red and Amber List birds: those listed as being of high or medium conservation concern as listed by Birdwatch Ireland [1]; and, • Other Irish Red Data Book species and Nationally/Regionally/Locally Notable species where appropriate.

1.3.1.1 Planning Policy Statement

1.3.1.2 Project Ireland 2040, National Planning Framework

Project Ireland 2040 was launched by the Government in February 2018 [2] and incorporates two policy documents - the National Planning Framework and the National Development Plan 2021 -2030.

Under the biodiversity section “Project Ireland 2040 National Planning Framework”, the National Policy Objective 59 is to:

‘Enhance the conservation status and improve the management of protected areas and protected species by:

- *Implementing relevant EU Directives to protect Ireland's environment and wildlife;*
- *Integrating policies and objectives for the protection and restoration of biodiversity in statutory development plans;*
- *Developing and utilising licensing and consent systems to facilitate sustainable activities within Natura 2000 sites; and,*
- *Continued research, survey programmes and monitoring of habitats and species.'*

The National Policy Objective 60 in the same document is to:

'Conserve and enhance the rich qualities of natural and cultural heritage of Ireland in a manner appropriate to their significance.'

1.3.2 Local Planning Context

1.3.2.1 Cork City Development Plan 2022 - 2028

The Cork City Development Plan 2022-2028 [3] states that:

'It is the aim of the Council to protect, promote and conserve Cork City's natural heritage and biodiversity.'

Objective 10.7 - Designated areas and protected species

- a. To protect enhance and conserve designated areas of natural heritage and biodiversity and the habitats, flora and fauna for which it is designated;*
- b. To protect enhance and conserve designated species and the habitats on which they depend;*
- c. To ensure that any plan/ project and any associated works, individually or in combination with other plans or projects are subject to Appropriate Assessment Screening to ensure there are no likely significant effects on the integrity (defined by the structure and function) of any Natural 2000 site(s) and that the requirements of Article 6 (3) and 6(4) of the EU Habitats Directive are fully satisfied. When a plan/project is likely to have a significant effect on a Natural 2000 site or there is uncertainty with regard to effects, it shall be subject to Appropriate Assessment. The plan/project will proceed only after it has been ascertained that it will not adversely affect the integrity of the site or where, in the absence of alternative solutions, the plan/project is deemed imperative for reasons of overriding public interest, all in accordance with the provisions of Article 6(3) and 6(4) of the EU Habitats Directive.*

Objective 10.8 – Non-Designated Areas of Biodiversity Importance

- a. To work with local communities, groups, landowners, National Parks and Wildlife Service and other relevant parties to identify, protect, manage and where appropriate enhance and promote sites of local biodiversity value;*
- b. To map the City's ecological networks/corridors of local biodiversity value outside of designated areas;*
- c. To encourage the management of features which are important for wild flora and fauna. Such features are those which by virtue of their linear or continuous nature e.g. rivers, tree groups or hedgerows are essential for the migration dispersal and genetic exchange of wild species.*

Objective 10.9 - River and Waterway Corridors

To protect and maintain the integrity and maximise the potential of the natural heritage and biodiversity value of the River Lee and its associated watercourses. To promote an

integrated approach to the future development of the River Lee so that it includes all aspects of use e.g. recreation, maritime history and economic factors

Development proposals in river corridors shall:

- a. Dedicate a minimum of 10m from the water's edge in channelized rivers for amenity, biodiversity and walkway purposes;*
- b. Dedicate a minimum of 15m from the top of the bank in non- channelized rivers for amenity, biodiversity and walkway purposes;*
- c. Preserve the biodiversity value of the site subject to Ecological Assessment by a suitably qualified Ecologist;*
- d. Shall not involve landfilling, diverting, culverting or realignment of river and stream corridors;*
- e. Shall not have a negative effect on the distinctive character and appearance of the waterway corridor and the specific characteristics and landscape elements of the individual site and its context.*

Objective 10.10 - Trees and Urban Woodland

d. To ensure that new development benefits from adequate landscape structure / tree coverage, particularly in areas of the city with inadequate tree coverage.

Objective 10.12 - Alien Species

To implement measures to control and prevent the introduction and establishment of ecologically damaging alien invasive species (e.g. Japanese Knotweed and Himalayan Balsam).

Objective 10.13 Biodiversity Plan Actions

To adopt and implement the remaining actions from the Cork City Biodiversity Plan into the Heritage Plan 2014-2018.

6.1.1.1 Cork City Biodiversity Action Plan 2009-2014

The overall aim of the Cork City Biodiversity Action Plan is:

'To promote the appreciation and enjoyment of Cork City's biodiversity amongst the people of the city and to identify, understand and conserve the biodiversity of the city for future generations.'

- **Objective 1:** *To identify measures to protect and enhance the biodiversity of Cork City.*
- **Objective 2:** *To research and disseminate information on the biodiversity of Cork City.*
- **Objective 3:** *To promote interest and knowledge of Cork City's biodiversity through training and education.*
- **Objective 4:** *To raise awareness and enjoyment of Cork City's biodiversity and encourage participation and partnership amongst all.*

2 METHODOLOGY

2.1 Assessment Methodology for Prediction of Effects

The EclA process was undertaken in parallel with the proposed development design with a view of minimising the adverse ecological effects of the proposed development and, where possible, delivering benefits for biodiversity. Desk study data collection and field survey work were carried out as part of the EclA process, with the objective of ensuring that sufficient data was collected to identify the designated sites, habitat areas and species that could be significantly affected by the proposed development. This information then informed the assessment of effects on the potential biodiversity receptors.

The area for which biological data was collected was based on an assessment of the ecological zone of influence of the proposed development and associated activities. The ecological zone of influence is the area that could be affected by the proposed development, within which there is the potential for significant ecological effects. The starting point was that significant effects on designated nature conservation sites were unlikely to occur over 2km from the proposed Site boundary. However, adopting the precautionary principle, all SACs and SPAs within a 15km radius and all nationally designated sites for conservation within a 5km radius of the proposed development Site have been identified and impacts considered. Significant effects on priority habitats and species were considered unlikely at over 1km away. Desk study data were collected for this area (See Section 4.1), whilst field surveys focused on the site of the proposed development (See Section 4.2).

It should be noted that there was the potential for the zone of influence to be redefined during the assessment process in response to new design or environmental information, and / or for the geographical extent of field surveys to be extended to cover a greater extent of the desk study area (e.g. if the desk study identified species occurring off-site that could be significantly affected by the proposed development). In the end, such an increase in the study area was not required for this assessment.

The next stage of the assessment was to determine which, if any, of the sites, habitats, and species within the zone of influence (referred to in this report as 'potential biodiversity receptors') had the potential to be significantly affected by the proposed development (see Section 5). A high level 'scoping' assessment was then undertaken (see Section 5) to differentiate effects that were sufficiently likely to be significant as to merit more detailed assessment, from those that could be assessed at a less detailed level as they were classified as not likely to be significant (referred to as 'scoped-out' effects).

The assessment of how the potential biodiversity receptors would likely be affected by the environmental changes associated with the proposed development was based not only on the results of the desk study and field surveys, but also on published information on the potential biodiversity receptors' status, distribution, sensitivity to these changes, biology, and knowledge of ecological processes and functions, as appropriate.

2.2 Desk Study

A desk-based review of information sources was completed, which included the following sources of information:

- The National Parks and Wildlife Service (NPWS) website was consulted to obtain the most up to date detail on conservation objectives for the Natura 2000 sites relevant to this assessment [4];
- The National Biodiversity Data Centre (NBDC) website was consulted with regard to species distributions within 2km of the Site [5]; and,
- The EPA Envision website was consulted to obtain details about watercourses in the vicinity of the Site (<https://gis.epa.ie/EPAMaps/>) [6].

2.3 Field Survey

2.3.1 Habitat Survey

A Habitat Survey was undertaken using the Fossitt's Guide to Habitats in Ireland [7]. The survey aimed to identify the extent and quality of habitats present on the Site. The survey was carried out by one (1No) suitably qualified and experienced MOR ecologist on the 14th of June 2022.

The assessment was extended to also identify the potential for these habitats to support other features of nature conservation importance, such as species afforded legal protection under either Irish or European legislation.

2.3.2 Protected / Notable Species

The methodologies used to establish the presence / potential presence of faunal species are summarised below. These relate to those species / biological taxa that the desk study and habitat types present indicated could occur on the Site.

Amphibians

The Site was assessed for its potential to provide sheltering, foraging and breeding habitat for amphibians. These included water bodies suitable for egg-laying, and terrestrial habitats comprising open areas with mixed-height vegetation, such as heathland, rough grassland, open scrub or water body margins. Suitable well drained and frost-free areas are needed to enable amphibians to survive the winter.

Badger

The survey aimed to identify and examine areas where badgers (*Meles meles*) might occur by noting any evidence of badger activity. This included:

- Mammal paths;
- Badger hairs caught in sett entrances / fences / vegetation;
- Paw prints;
- Evidence of foraging (usually in the form of 'snuffle holes');
- Latrines; and,
- Badger setts.

Birds

The Site was assessed for its potential to support important assemblages of birds of rare or notable species. Any activity and potential nesting habitats were noted.

Otter

The survey aimed to identify and examine areas where otter might occur by noting any evidence of otter observed. Evidence of otter searched for included:

- Holts (features log piles, caves, and cavities);
- Slides (flattered areas of mud or vegetation);
- Paw prints;

Evidence of foraging (usually in the form of feeding remains such as fish scales, shellfish, etc.); and,
Spraints.

Bats

An external building inspection was undertaken on June 30th 2022 by two qualified MOR ecologists. The inspection aim to assess the buildings for the presence of features suitable for roosting bats. These feature include:

- Evidence of bat droppings / urine splashes;
- Bat specimens (live or dead);
- Evidence of feeding remains, (insect wings on the floor); and,
- Evidence of fur-oil staining.

Assessment criteria for evaluating the potential suitability of the proposed development for bats was done in concurrence with 'Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)' (Collins, 2016).

Table 2-1: Assessment guidelines for assessing the potential suitability of proposed development sites for bats (Collins, 2016)

Suitability	Description of Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions¹ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p> <p>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential²</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>

¹ For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

² This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ¹ and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ¹ and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Invasive species

The Site was assessed for the presence of any noxious / invasive species such as Japanese knotweed (*Fallopia japonica*) and any other invasive species.

Other Species

In addition, an assessment was carried out of the potential for the Site to support any other species considered to be of value for biodiversity.

2.4 Assessment Methodology

The current Guidelines for Ecological Impact Assessment in the UK and Ireland [8] recognise that an ecological assessment cannot consider in detail every individual species or habitat that may potentially be affected by a proposed development. The EclA process aims to identify those ecological receptors that could be significantly affected by the proposed development i.e. where the effects on the receptor are of sufficient concern that they could influence the planning decision) or for which the development could result in the breach of relevant legislation. The effects of the proposed development on these receptors are then assessed, considering the sensitive design measures (avoidance measures) and where necessary the mitigation measures incorporated as part of the proposed development. The scope of the EclA is determined iteratively.

2.4.1 Significance Evaluation Methodology

As part of the high-level assessment reported in Section 5.1, the conclusion about whether effects are sufficiently likely to be significant as to merit more detailed assessment is informed by a judgement about whether:

- The Site, habitat or species population is of sufficient quality or size that an effect upon it could be significant; and,
- The environmental changes associated with the development are such that there is the potential for a significant effect to occur (i.e. for the integrity of a site or for the conservation status of a habitat area or species population to be affected).

If the answer to both of these questions is yes, the relevant receptor would be subject to more detailed assessment and the significance of effects would be evaluated based on the methodology that is outlined below.

2.4.1.1 Negative Effects

For biodiversity receptors, an effect is assessed as being significant if the favourable conservation status of the specified biodiversity receptor is compromised by the proposed development. Conservation status is defined by CIEEM (2022) as follows:

- *“Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area;”* and,
- *“Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.”*

The decision as to whether the conservation status of the specified biodiversity receptor has been compromised has been made using professional judgement, drawing upon the results of the assessment of how each receptor will be affected by the proposed development.

A similar procedure has been used for designated sites that are affected by the proposed development, except that the focus is on the effects on the integrity of each site, defined as “the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and / or the levels of populations of the species for which it was designated.”

2.4.1.2 Positive Effects

A positive effect is assessed as being ‘significant’ if development activities are predicted to cause:

- An improvement in the condition of a habitat / species population from unfavourable to favourable – condition data are only available for some Natura sites, but professional judgement and a review of available literature has been used to apply the same principle to habitats / species elsewhere; or,
- Partial or total restoration of a site’s favourable condition.

If a species population, habitat or site is already in favourable condition, it is still possible for there to be a significant positive effect. There is however no simple formula for determining when such effects are significant, given the complexities of assessing these types of effects. In such cases, decisions about significance have therefore been made on a case by case basis.

2.5 Identification of Potential Biodiversity Receptors

The assessment of the ecological zone of influence of the proposed development concluded that the development would be likely to result in changes in the extent and / or condition of the existing land cover on the Site, with potential effects on habitats and species on the Site. There is also the potential for effects on any areas that adjoin the site, where fauna might make use of the land cover onsite.

The potential for off-site changes in noise and dust deposition was also assessed. It was concluded that, with the dust and noise control measures that have been built into the proposed development proposals, which are important for avoiding significant effects on people as well as biodiversity, there is no likelihood of significant effects associated with either dust or noise.

In summary, therefore, the ecological zone of influence of the proposed development is defined as:

- The Site of the proposed development (fauna and flora); and,
- Habitats adjoining the Site (fauna).

In the case of designated sites, a precautionary approach has been taken and the search area extended to identify sites outside of the zone of ecological influence. This information was used to further inform the assessment process and to ensure that the onsite habitats are not of importance for either habitats or species for which these sites have been designated.

As a basis for determining which biodiversity receptors need to be assessed within the zone of influence of the development, CIEEM's guidelines on EclA recommend that consideration be given to the biodiversity conservation value of the sites, habitats and species that occur within the zone (as appropriate). The guidelines also refer to the need to consider the legal status that is afforded to some species and habitats (See Box 1).

Legal status needs to be considered because all developments must comply with the requirements of the law. By implication, therefore, there cannot be significant effects as a result of non-compliance with the law. However, it should be noted that, notwithstanding legal requirements, there is the potential for some legally protected species to be significantly affected in relation to their biodiversity conservation value.

In relation to biodiversity conservation value, only those designated sites, habitat types and species that fall within one or more of the categories defined in Box 1 are of sufficient importance that they could be significantly affected by the proposed development.

Drawing upon the biological data assembled for the purposes of this EclA (Section 4), the potential receptors in relation to the proposed development are discussed in Section 5.

3 DESCRIPTION OF THE PROJECT

3.1 Site Context and Description

The Site is located at Victoria Cross (South), Bishopstown, Cork, within a predominately urban landscape. The Site is ca. 0.29 ha. in size. The Site is currently occupied by a Car Sales garage and is predominately comprised of areas of hardstanding with sections of treeline and vegetation along the eastern perimeter, followed by Glasheen River.

The Site is bordered to the west by Victoria Cross Road and to the north by Orchard Road, and existing buildings to the south. The surrounding area is a mix of private residential and university campus accommodation as well as restaurants, retailers, and other amenities due to the close proximity of University College Cork (UCC).

3.2 Watercourses within the Vicinity of the Site

The Site and adjacent watercourses are located within the Glasheen [Cork City] _SC_010 sub-catchment, forming part of the overall Lee, Cork Harbour and Youghal Bay WFD Catchment [9].

As per EPA maps, 1 (no) watercourse was identified adjacent to the Site along the eastern perimeter, the Glasheen (Cork City) River, please refer to Figure 3-1 below. It should be noted that this river is culverted under Orchard Road to the north of the Site. Glasheen (Cork City) River [10] flows in a northerly direction for ca. 100m before reaching a confluence with the Curragheen River.

The Curragheen River converges with the Glasheen (Cork City) River which continues in an easterly direction before forming part of the River Lee (south channel) ca. 300m downstream. It should be noted that this section of the Glasheen (Cork City) River is known colloquially as the Curragheen River until its confluence with the River Lee, ca. 340m north of the Site. To avoid confusion, from this point onwards the river that flows in an easterly direction ca. 100m north of the Site will be known as the 'Curragheen River.'

The River Lee continues in an easterly direction for ca. 8km before discharging into Cork Harbour.

According to the Water Framework Directive 2013–2018 (WFD), the status of both the Curragheen River and Glasheen (Cork City) River are currently '*poor*' and are both considered to be '*at risk*.'

According to the Water Framework Directive 2013–2018 (WFD), the status of the River Lee is '*moderate*' and is considered to be '*at risk*.'

The location of the key surface water features in the vicinity of the Site are illustrated in Figure 3-1 below.

Figure 3-1 Watercourses in the Vicinity*



*It should be noted that the surface waterbody labels in this Figure are as per the EPA names [6].

3.3 Proposed Development

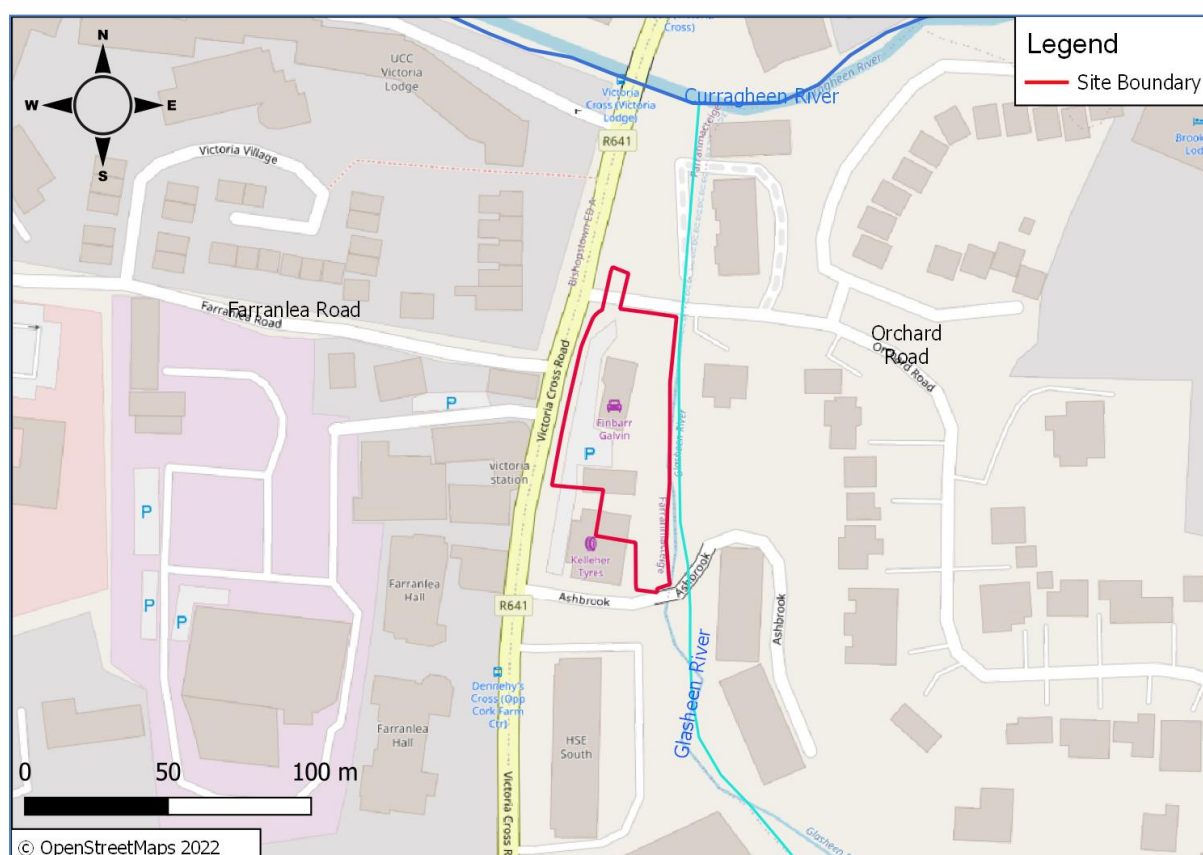
The Proposed Development is for a Strategic Housing Development (SHD) at Wilton Road, Victoria Cross (South), Cork and will comprise of:

1. The demolition of existing structures on site; and
2. The construction of 78 no. student accommodation apartments (ranging in size from single bed studio apartments to 8-bed apartments) comprising a total of 206 no. bed spaces in 1 no. 6 storey block;
3. Student amenity facilities including a study area, games room, lounge space, laundry room and server/ICT room;
4. The provision of landscaping and amenity areas including a courtyard space (including modifications to the external amenity area of the student accommodation scheme permitted under An Bord Pleanála Ref. 19/38385), 1 no. rooftop terrace and a riverfront amenity incorporating a pedestrian and cycle path accessing onto Ashbrook Heights and Orchard Road;
5. The provision of a set down area, 1 no. access point (for emergency vehicles only), footpaths and repositioned pedestrian crossing and associated tactile paving on Orchard Road;
6. The provision of a new junction build out at the junction of Orchard Road and Victoria Cross Road;
7. The provision of footpaths and landscaped areas along Victoria Cross Road; and

8. All associated ancillary development including pedestrian/cyclist facilities, lighting, drainage, boundary treatments, bin and bicycle storage and plant at ground and roof top levels.

Figure 3-2 below shows an outline site layout of the Proposed Development. A detailed drawing can be seen by referring to Drawing A01-10 submitted as part of the planning package.

Figure 3-2: Proposed Development Site Layout



3.3.1 Drainage

Surface Water Drainage

It is proposed to divert the existing storm water pipe moving along the western boundary of the Site and re-locate it under the existing footpath to get a sufficient distance to the edge of the foundation of the building in accordance with Section 3.5.9 of the Irish Water Code of Practice for Wastewater Infrastructure.

The proposed surface water drainage will discharge to the existing stormwater network northwest of the Site. The surface water drainage system will collect storm-water run-off from the Proposed Development, collecting run-off from impermeable road surfaces via gullies and adjoining areas. An attenuation tank has been proposed for the Site to provide flow attenuation and to limit the discharge of surface water from the Site to the Glasheen River during any storm event. Refer to JODA Engineering Consultants Engineering Report for further details.

Foul Water Drainage

It is proposed to divert the existing storm water pipe moving along the western boundary of the Site and re-locate it under the existing footpath to get a sufficient distance to the edge of

the foundation of the building in accordance with Section 3.5.9 of the Irish Water Code of Practice for Wastewater Infrastructure.

The proposed surface water drainage will discharge to the existing stormwater network northwest of the Site. The surface water drainage system will collect storm-water run-off from the Proposed Development, collecting run-off from impermeable road surfaces via gullies and adjoining areas. An attenuation tank has been proposed for the Site to provide flow attenuation and to limit the discharge of surface water from the Site to the Glasheen River during any storm event. Refer to JODA Engineering Consultants Engineering Report for further details.

3.3.2 Flood Risk Assessment

A Flood Risk Assessment (FRA) has been prepared by JODA Engineering Consultants and has been submitted as part of the overall planning application alongside this report. The FRA included an examination of Lee CFRAMS mapping and concluded that the Site is within an AEP Flood Extent zone between that predicted flood extents for the 0.1% AEP and the 1% AEP will include the site of the Proposed Development. Please refer to drawing M8/UA/EXT/CURS/009 included in Appendix B of the FRA. Therefore, the risks of the Site flooding as a result of fluvial and tidal flooding are moderate.

The ground floor level for the proposed building has been determined based on the 1% AEP for the mid-range future scenario of 5.20m OD for the River Lee and applying a freeboard of 0.3m giving a final level of 5.50m OD. This level is below the proposed flood defence level of 5.80m OD for the Lower Lee Drainage Scheme in the vicinity of the site. A finished floor level of 5.90m OD is deemed acceptable for the Proposed Development. The proposed drainage system has been designed in accordance with the relevant standards and regulations. Therefore, the flood risk arising from the proposed drainage infrastructure will be negligible and no further mitigation is proposed.

3.4 Demolition and Construction Procedures

During the demolition and construction phases of the Proposed Development potential environmental effects will be short-term and localised. Nonetheless, all works will comply with the relevant legislation, construction industry guidelines and best practice in order to reduce potential environmental impacts associated with the works. Where remaining potential impacts have been identified, additional mitigation measures will be employed to reduce, as far as practicable potential impacts.

All potential demolition phase environmental impacts will be addressed through the implementation of a comprehensive Construction and Demolition Resource Waste Management Plan (C&D RWMP) in accordance with current best practice guidelines. This plan will be agreed with Cork City Council (CCC) and relevant statutory bodies for the proposed works.

A Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor and will be submitted to the planning authority in advance of works commencing at the Site. The following guidance will be referred to and will be followed during the demolition and construction phases of the project to prevent water pollution that may occur within the area

- C532 – Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors (Construction Industry Research and Information Association (CIRIA, 2001);
- C741 - Environmental Good Practice on Site (4th edition) (CIRIA, 2015);
- C698 - Site Handbook for the Construction of SUDS (CIRIA, 2007); and,

- C697 – The SUDS Manual (CIRIA, 2007).

A construction compound and site offices will be set up at the proposed lay-by on the eastern boundary of the Site.

Works are proposed to be completed by the beginning of the of 2024/25 3rd level term. Works will be limited to 08:00 – 18:00 hours Monday to Friday, 08:00 hours – 14:00 hours on Saturday and closed for Sundays and Public Holidays.

Working hours will generally be agreed in advance with the Planning Authority. Should construction work be required outside of these hours, they shall be subject to agreement with the Local Authority. Refer to the Construction and Environment Management Plan (CEMP) submitted with the planning application for further details.

An Environmental clerk of works (ECoW) will inspect the Sites in advance of works commencing and will undertake Site inspections as required during the works, to ensure that they are completed in line with the mitigation measures detailed within the CEMP.

3.4.1 Waste Management

A preliminary Demolition and Construction Waste Management Plan (D&CWMP) has been submitted with the planning application.

3.5 Landscaping

A Landscape Plan has been developed for the Site. The Landscape Plan can be seen in Appendix B.

4 STUDY RESULTS

4.1 Desk Based Study

Prior to conducting any site surveys, a desk-based review of information sources was completed. This baseline information provided a valuable insight into the types of flora and fauna that may occur onsite and allowed for the identification of features / habitats located off-site that may require further assessment.

4.1.1 Statutory Nature Conservation Sites

In accordance with the European Commission Methodological Guidance [11] a list of European sites that can be potentially affected by the proposed development has been compiled. Guidance for Planning Authorities prepared by the Department of Environment Heritage and Local Government [12] states that defining the likely zone of impact for the screening and the approach used will depend on the nature, size, location and the likely effects of the project. The key variables determining whether or not a particular Natura 2000 site is likely to be negatively affected by a project are: the physical distance from the project to the site; the sensitivities of the ecological receptors; and the potential for in-combination effects.

Adopting the precautionary principle, all SAC and SPA sites within a 15km radius of the proposed development Site have been considered (Refer to Figure 4-1).

Two (2No.) Natura 2000 designated sites were identified within 15km of the Site (Table 4-1, Figure 4-1).

Table 4-1: Designated Natura 2000 Sites within 15km of the Site

Site Name	Site Code	Distance (km)	Direction from the Site
Special Area of Conservation (SAC)			
Great Island Channel SAC	001058	11.6km	E
Special Protection Area (SPA)			
Cork Harbour SPA	004030	4.8km	SE

The Site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of one (1No.) SAC and one (1No.) SPA are located within 15km of the Site.

There is a potential hydrological connection between the Site the Great Island Channel SAC and Cork Harbour SPA, located approximately 8km downstream of the Site, (refer to section 3.2 and Figure 4-2). Further consideration will therefore be given to these Natura 2000 sites, to assess potential adverse effects resulting from the proposed development. Further details are provided below.

Figure 4-1 Natura 2000 Sites within 15km

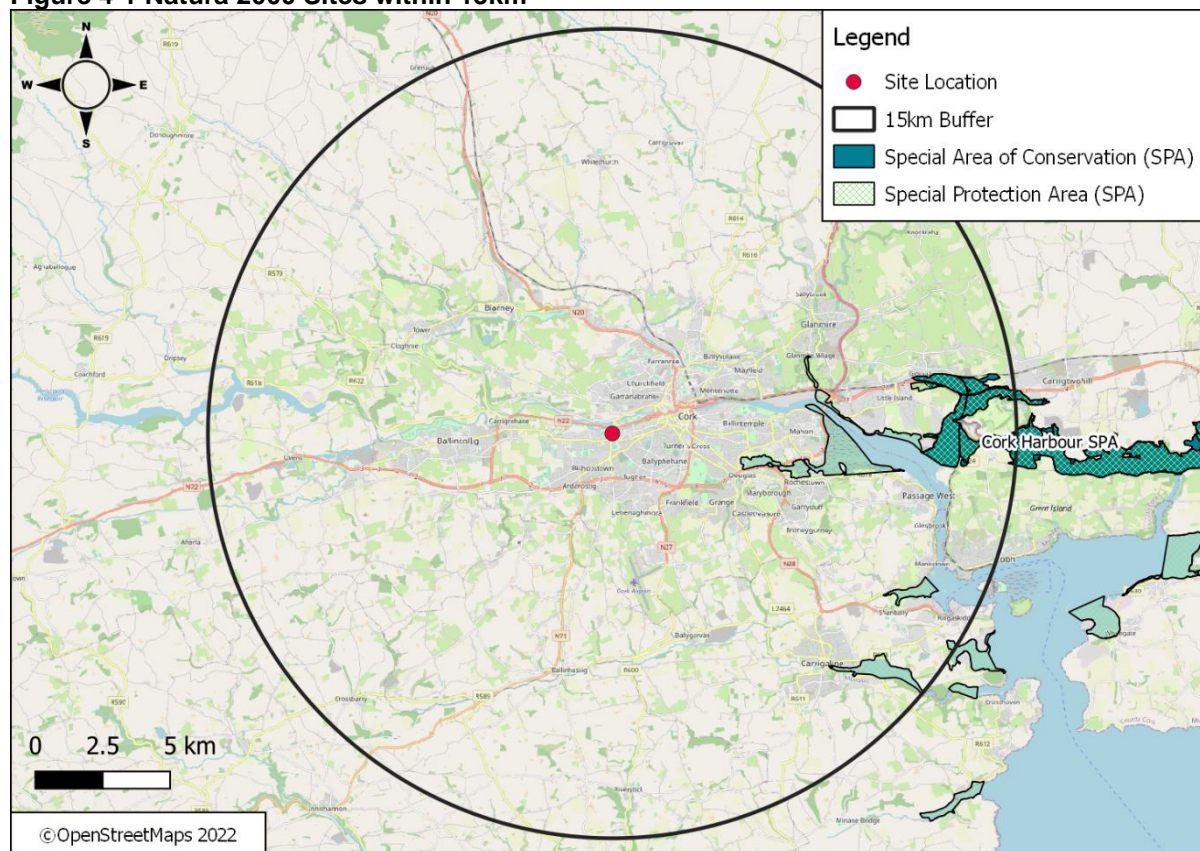
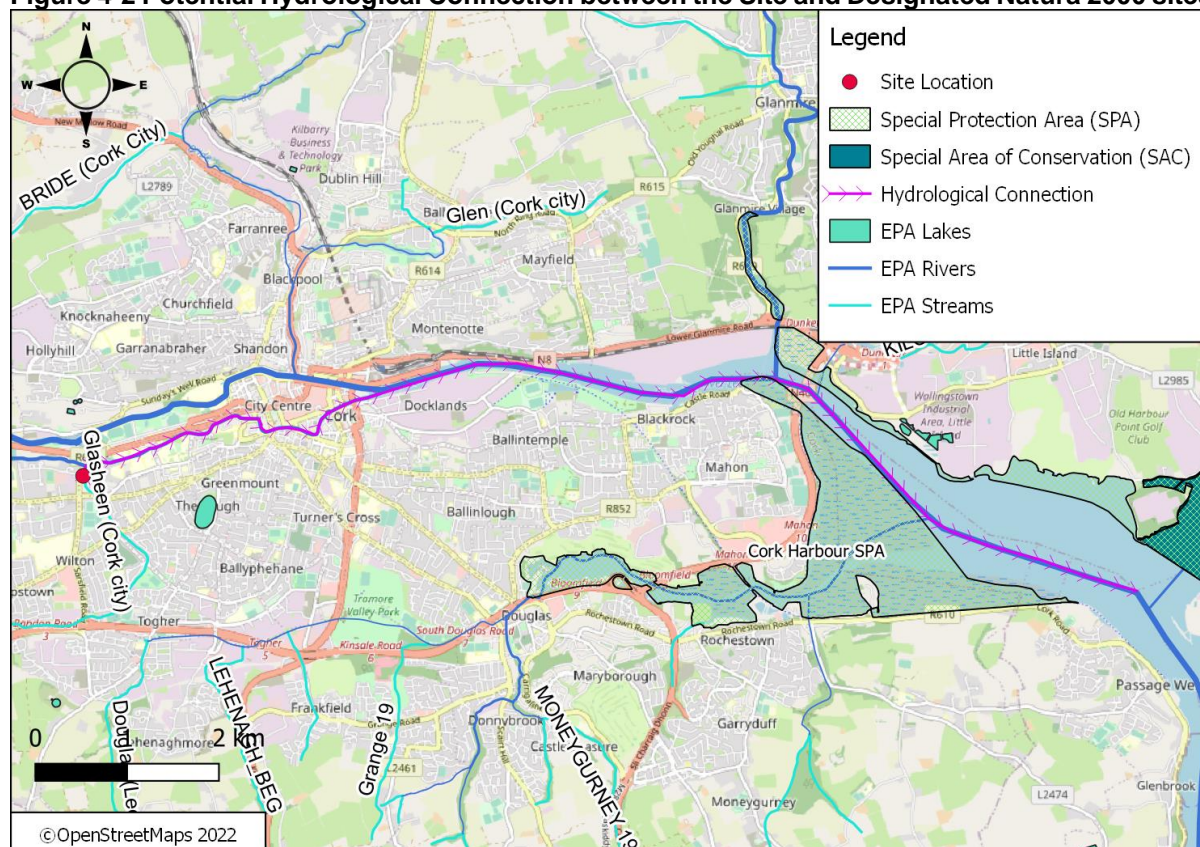


Figure 4-2 Potential Hydrological Connection between the Site and Designated Natura 2000 sites



4.1.2 Nationally Designated Conservation Sites

No Natural Heritage Areas (NHA) are located within 5km of the Site. However, four (4No.) proposed Natural Heritage Areas (pNHA) are located within 5km of the Site (refer to Table 4-1 and Figure 4-2).

Table 4-2: National Protected Sites within 5km

Site Name	Code	Distance (km) & Direction	Qualifying Interests
Proposed Natural Heritage Areas			
Lee Valley pNHA	000094	1.2km NW	<p>This pNHA occupies five sections of the River Lee valley, west of Cork City.</p> <p>The diverse range of intact semi-natural habitats, including freshwater marsh fringes, wet broadleaved woodland, wet grasslands, dry broadleaved woodland, unimproved dry grassland, make this site of regional conservation importance.</p> <p>The site is used by breeding wetland birds, including mallard, heron, sedge and grasshopper warblers, and reed bunting, and two locally distributed butterflies, small blue and wood white.</p>
Cork Lough pNHA	001081	1.3km SE	<p>This small lake is situated in the north-west of Cork City, 1km. north of the River Lee. The site is a local important area for the bird community</p>
Blarney Bog pNHA	001857	4.4km N	<p>Blarney Bog is an area of fen situated in the flat valley floor of the River Blarney. The main habitats of the area are lowland wet grassland and freshwater marsh/ fen. The area as a whole is used by a variety of bird species.</p>
Douglas River Estuary pNHA	001046	4.9km SE	<p>The site is situated in the north-west corner of Cork Harbour, stretching from Blackrock to Passage West.</p> <p>It is an integral part of Cork Harbour, which contains several other NHA's. This site occurs within the upper harbour and consists of extensive mudflats, formed from fine silts, bisected by the Douglas River. Damp grassland occurs on part of the southern side, extending to some low islands which are inundated in extreme tides.</p> <p>This site is of interest because it is an essential part of the Cork Harbour complex and contains high densities of wading birds than would be expected from its relative size.</p>

Figure 4-6: Natural Heritage Sites within 5km

The map displays the Cork City area and its surroundings, highlighting Natural Heritage Sites (pNHAs) within a 5km buffer of the city center. The city center is marked with a red dot. The 5km buffer is indicated by a black circle. Key sites include Blarney Bog, Lee Valley, and Douglas River Estuary. The map also shows major roads, including the N20, N22, N27, and N28, and various local roads. A legend in the top right corner defines the symbols: a red dot for 'Site Location', a black circle for '5km Buffer', and a blue shaded area for 'Proposed Natural Heritage Site (pNHA)'. A scale bar at the bottom left indicates distances of 0, 1, and 2 km. A north arrow is located in the top left corner. The map is credited to OpenStreetMaps 2022.

Table 4-3 provides a summary of records of legally protected or otherwise notable species that occur within a 2km grid square of the Site boundary [5].

Common Name	Scientific Name	Date of last record	Designation
Bird Species			
Barn Swallow	<i>Hirundo rustica</i>	08/05/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Common Swift	<i>Apus apus</i>	04/06/2019	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Black-headed Gull	<i>Larus ridibundus</i>	19/02/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Great Cormorant	<i>Phalacrocorax carbo</i>	24/06/2017	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List

Common Name	Scientific Name	Date of last record	Designation
Common Greenshank	<i>Tringa nebularia</i>	20/11/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Common Kingfisher	<i>Alcedo atthis</i>	03/12/2016	EU Birds Directive Annex I Bird Species Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Common Wood Pigeon	<i>Columba palumbus</i>	23/03/2020	EU Birds Directive Annex II and III Bird Species Wildlife Acts 1976 / 2000
Eurasian Curlew	<i>Numenius arquata</i>	20/11/2016	EU Birds Directive Annex II Bird Species Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	320/11/2016	EU Birds Directive Annex II and III Bird Species Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Herring Gull	<i>Larus argentatus</i>	20/11/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Little Egret	<i>Egretta garzetta</i>	20/11/2016	EU Birds Directive Annex I Bird Species Wildlife Acts 1976 / 2000
Mallard	<i>Anas platyrhynchos</i>	20/11/2016	EU Birds Directive Annex II and III Bird Species Wildlife Acts 1976 / 2000
Sand Martin	<i>Riparia riparia</i>	09/05/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Black-tailed Godwit	<i>Limosa limosa</i>	19/02/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Common Redshank	<i>Tringa totanus</i>	20/11/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List

Common Name	Scientific Name	Date of last record	Designation
Dunlin	<i>Calidris alpina</i>	20/11/2016	EU Birds Directive Annex I Bird Species Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Little Grebe	<i>Tachybaptus ruficollis</i>	20/11/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Peregrine Falcon	<i>Falco peregrinus</i>	20/05/2016	EU Birds Directive Annex I Bird Species Wildlife Acts 1976 / 2000
Mute Swan	<i>Cygnus olor</i>	23/03/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Northern Lapwing	<i>Vanellus vanellus</i>	20/11/2016	EU Birds Directive Annex II Bird Species Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Northern Wheatear	<i>Oenanthe oenanthe</i>	20/03/2018	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Amphibians			
Common Frog	<i>Rana temporaria</i>	05/02/2017	EU Habitats Directive Annex V Species Wildlife Acts 1976 / 2000
Mammals			
European Otter	<i>Lutra lutra</i>	12/12/2018	EU Habitats Directive Annex II Species Wildlife Acts 1976 / 2000
Lesser Noctule	<i>Nyctalus leisleri</i>	22/05/2016	EU Habitats Directive Annex IV Species Wildlife Acts 1976 / 2000
Pipistrelle	<i>Pipistrellus pipistrellus sensu lato</i>	22/05/2016	EU Habitats Directive Annex IV Species Wildlife Acts 1976 / 2000
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	22/05/2016	EU Habitats Directive Annex IV Species Wildlife Acts 1976 / 2000

Common Name	Scientific Name	Date of last record	Designation
Daubenton's Bat	<i>Myotis daubentonii</i>	22/05/2016	EU Habitats Directive Annex IV Species Wildlife Acts 1976 / 2000
Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	12/12/2018	Wildlife Acts 1976 / 2000
Eurasian Pygmy Shrew	<i>Sorex minutus</i>	23/10/2015	Wildlife Acts 1976 / 2000
West European Hedgehog	<i>Erinaceus europaeus</i>	09/06/2021	Wildlife Acts 1976 / 2000
Invasive Species			
Japanese Knotweed	<i>Fallopia japonica</i>	30/03/2021	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
Giant Hogweed	<i>Heracleum mantegazzianum</i>	19/06/2017	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
Giant Rhubarb	<i>Gunnera tinctoria</i>	11/08/2017	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
Nuttall's Waterweed	<i>Elodea nuttallii</i>	16/01/2018	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
Indian Balsam	<i>Impatiens glandulifera</i>	11/08/2017	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
Three-cornered Garlic	<i>Allium triquetrum</i>	30/04/2016	Medium Impact Invasive Species: Regulation S.I. 477 (Ireland)
Water Fern	<i>Azolla filiculoides</i>	16/01/2018	Medium Impact Invasive Species: Regulation S.I. 477 (Ireland)
Traveller's-joy	<i>Clematis vitalba</i>	31/05/2016	Medium Impact Invasive Species
Butterfly-bush	<i>Buddleja davidii</i>	03/05/2021	Medium Impact Invasive Species
Brown Rat	<i>Rattus norvegicus</i>	07/05/2018	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
American Mink	<i>Mustela vison</i>	13/07/2016	High Impact Invasive Species: Regulation S.I. 477 (Ireland)
Coypu	<i>Myocastor coypus</i>	31/05/2014	High Impact Invasive Species: Regulation S.I. 477 (Ireland) EU Regulation No. 1143/2014

Common Name	Scientific Name	Date of last record	Designation
Harlequin Ladybird	<i>Harmonia axyridis</i>	04/05/2022	High Impact Invasive Species: Regulation S.I. 477 (Ireland)

Note: Table includes records of protected species recorded within the last 10 years.

4.2 Field Survey

4.2.1 Habitats

Site Context and Surrounding Habitats

The Site is located in Cork City, and the Site and surrounding areas are heavily built-up with urban development. The Site is bordered to the west by the R641, to the east by the Glasheen River and to the north and south by roads that lead to residential areas. A wooden fence separates the Site boundary to the east and a metal fence separates it from the R641 to the west.

Buildings and Artificial Surfaces (BL3)

The majority of the Site is made of hard surfacing, concrete, and the disused car centre building. Much of the hardstanding is overgrown, dominated by weedy and recolonising species such as autumn hawkbit (*Scorzoneroides autumnalis*), butterfly bush, (*buddleja*), common nettle (*Urtica dioica*), common velvet grass (*Holcus lanatus*), dandelion (*Taraxacum officinale*), fireweed (*Epilobium angustifolium*), herb Robert (*Geranium robertianum*), ivy (*Hedera helix*), meadow grass (*Poa spp.*), red valerian (*Centranthus ruber*), smooth cat's ear (*Hypochaeris glabra*), willow spp. (*Salix*). Brambles (*Rubus fruticosus*), ivy spill over the top of the wooden fence to the east of the Site. Areas that are particularly densely vegetated are shown as 'Buildings and Artificial Surfaces (BL3) / Recolonising bare ground (ED3)' in the habitat map (Figure 4-4).

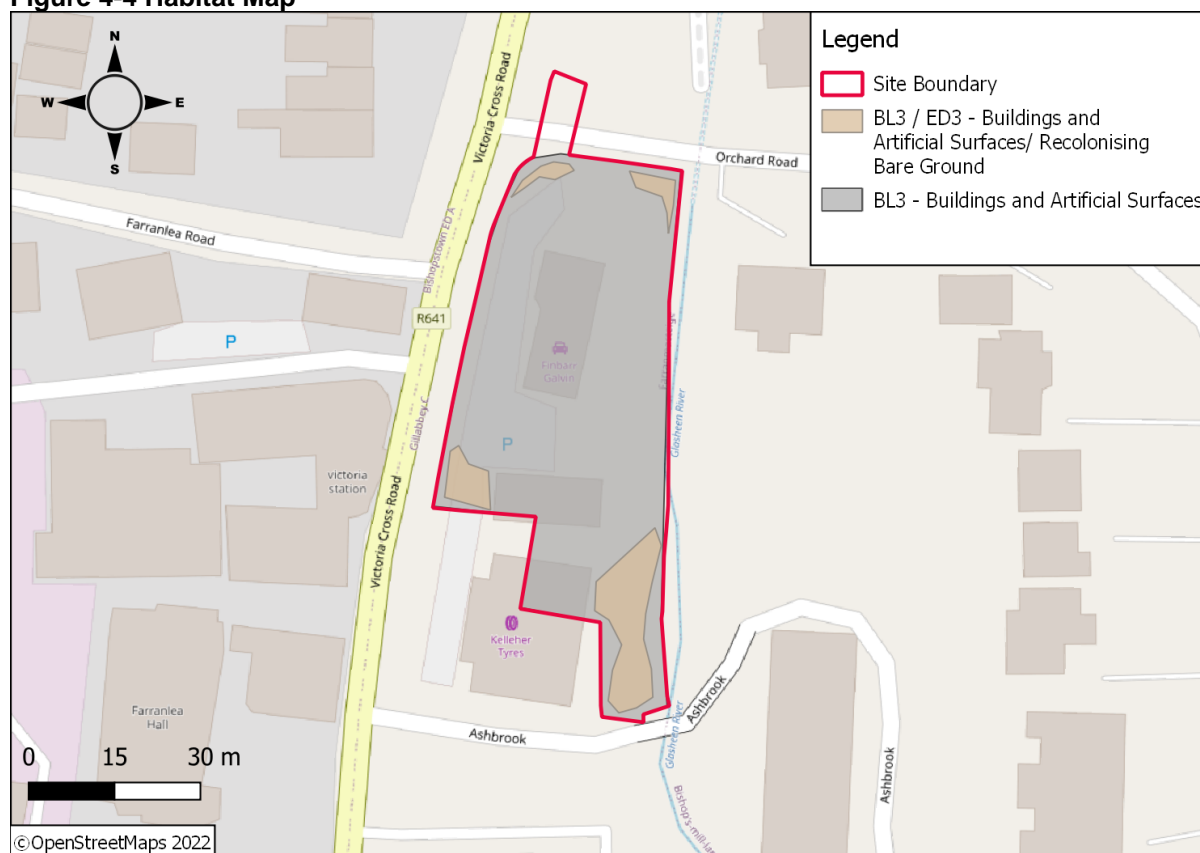
Buildings and Artificial Surfaces (BL3) / Recolonising bare ground (ED3)

As noted above certain areas of the hardstanding are dominated by common recolonising species. These do not exceed the '50% vegetation cover' as defined by Fossitt 2000 [7] to be included in Recolonising bare ground (ED3). The larger sections of vegetation have however been illustrated on the habitat map (Figure 4-4).

Treeline (WL1)

The canopies of the treeline to the east of the Site boundary spills over the fence. This included species such as elder (*Sambucus*) and sycamore (*Acer pseudoplatanus*). There is no treeline within in the Site boundary.

Figure 4-4 Habitat Map



4.2.2 Fauna

Amphibians

The NBDC holds records for amphibians, the common frog, within 2km of the Site [5]. However, based on the onsite habitats, it was concluded that the Site is considered unsuitable for foraging or breeding amphibians on the Site.

Badgers

The NBDC does not hold any records for badger within 2km of the Site [5]. It was concluded that the Site was suboptimal for this species and there were no suitable habitats for badger within the Site or immediate surrounding area.

Bats

The NBDC holds records for multiple bat species (lesser noctule, Daubenton's, and pipistrelles) within 2km of the Site [5]. As per the NBDC landscape suitability metric, the Site and surrounding area is considered to be of Moderate suitability for bats (Landscape Suitability Metric Score: 36 - 58) [5].

An initial assessment was carried out during the habitat survey for suitability of the habitats within the Site to support bat roosting, foraging and commuting. Bats are known to follow linear features as they commute through the landscape. Therefore, the Glasheen River and treeline running along the eastern boundary of the Site are considered suitable for commuting / foraging bats.

An external building inspection was undertaken using a ladder, close-focusing binoculars, a powerful focused-beam light source and an endoscope. There were multiple potential access points identified on the buildings, but upon closer inspection with the endoscope, none of the

potential access points were deemed to be in use by bats. No signs of bats were observed during the external building inspections.

Following the initial habitat survey and follow up external building inspections onsite, it was determined that the buildings are sub-optimal for roosting bats and there are no bats roosting within the buildings on the Site.

Birds

All the birds recorded onsite, or expected, are common species, which included magpie (*Pica pica*), rook (*Corvus frugilegus*) and carrion crow (*Corvus corone*). The onsite habitat are of limited value for birds species, however the 'Buildings and Artificial Surfaces (BL3) / Recolonising bare ground (ED3)' present onsite provide suitable nesting and foraging sites for a range of common bird species.

Otter

The NBDC holds records for otter within 2km of the Site [5]. During the Site walkover, no evidence of otter was identified nor were any suitable habitats for otter identified within the Site or the immediate surrounding area. Therefore, the Site is not considered to be of value to otter.

However, the Glasheen River, which borders the eastern boundary of the Site, although culverted under Orchard road to the north, has the potential to support commuting otters and also acts as a hydrological link between the Site and watercourses further (Curragheen River) down the catchment which are known to support otter.

Invasive Species

The NBDC holds records for invasive species within 2km (Table 4-3). No invasive species were noted within the Site.

Other Species

No other notable or protected species were identified on the Site or are considered likely to occur given the nature of the habitats and activities at the Site and on the adjoining lands.

5 CHARACTERISTICS AND POTENTIAL IMPACTS OF THE PROPOSED WORKS AND MITIGATION MEASURES

5.1 Potential Impacts

5.1.1 Designated Sites

European Designated Sites

A Natura Impact Statement (NIS) has been prepared as part of the overall planning application. The NIS concluded that the Proposed Development would not cause any adverse effects on any European designated sites or any of their designated features of interest provided the mitigation measures incorporated within the NIS are adhered to and the progression to Stage 3 of the Appropriate Assessment process (i.e. Assessment of Alternatives Solutions) was not considered necessary.

National Designated Sites for Conservation

There are no NHAs within 5km of the Site but there are four (4no.) pNHAs.

However, given the nature and scale of the proposed development, the water quality protection mitigation measures which will be put in place (see Section 5.2.1.1 and 5.2.2.1) and the nature of the habitats and features of interest for which the pNHA have been designated, it has been concluded that no significant impacts are likely to occur to these sites.

5.1.2 Habitat Loss and Habitat Alteration

The proposed development will not result in any direct loss of habitats for which the Great Island Channel SAC is designated, as the Site is not located within close proximity to any of the Annex I habitats designated for the SACs.

Any potential impacts to Annex I habitats within the wider area due to potential water quality impacts from the proposed development will be avoided by mitigation measures listed in Section 5.2.1.1 and Section 5.2.2.1 below.

Vegetation Removal

No tree or hedgeline will be removed as part of works. The complete removal all recolonising vegetation will be required as part of the proposed development.

5.1.3 Fauna

Aquatic Species

Although there are no watercourses located within the Site, the Glasheen River is located directly east and acts as a hydrological link between the Site and the Great Island Channel SAC and Cork Harbour SPA.

This SAC is not designated for any aquatic species and the SPA is designated solely for bird species and the NBDC does not hold any records for aquatic freshwater species within 2km of the Site [5]. However, given the hydrological connection from the Site to the SPA, should runoff of potential pollutants from the construction area reach the surface water and flow into the Glasheen River there is potential for aquatic species to be impacted.

Should sediment / silt enter the river network, there is the potential to clog fish gills, degrade spawning habitats and cover / smother aquatic plants. This would result in decreased food availability and shelter for fish species and indirectly impact the food availability for predators such as designated bird species within the SPA.

Should pollutants, such as hydrocarbons, concrete wash, or detergents, enter the Glasheen River and flow downstream, there is potential for the chemical balance of the waterbody to

change. A change in water chemistry would be toxic to fish and other wildlife. Therefore, the mitigation measures discussed below in Section 5.2.1.1 and Section 5.2.2.1 will be put in place to prevent the potential impairment of water quality, and in turn the potential impacts on aquatic species.

The proposed surface water drainage will discharge into the existing stormwater network located at the northwest of the Site. The design of the new drainage system will ensure that there will be no potential for the impairment of water quality during the operational phase.

Bats

As the onsite buildings are considered sub-optimal for roosting due to flat roofs, metal cladding and floor to ceiling windows, and no evidence of bats were recorded during the external inspections, it is considered unlikely that bats will be impacted by the demolition of the buildings. However, based on the records of bats within 2km of the Site, the stream and treeline along the eastern boundary and the potential access points identified into the buildings, it is considered possible, although very unlikely, for bats to utilise the building for roosting. Therefore, to ensure impacts on bats are avoided, pre-demolition surveys are required (see section 5.2).

The inappropriate installation of lighting resulting in light spillage onto retained / adjacent habitats, namely the Glasheen River, which is suitable for bats to commute / forage, has the potential to cause adverse effects on bat species. Therefore, appropriate mitigation measures will be put in place in order to ensure no impacts occur to bats utilising the Site or areas within the vicinity of the Site (see Section 5.2.2.2).

Birds

The onsite recolonising plant species offer suitable foraging opportunities for small birds. The buildings offer nesting potential for bird species; however no nesting birds were noted in / on these buildings at the time of surveying. The loss of potential foraging habitat through the removal of these plants will be compensated for by the additional planting around the Site (see LMP, submitted as part of the planning package).

Also, it should be noted that birds are highly mobile and so will move away from disturbances. Therefore, should any bird species which presently occur within the Site and the immediate vicinity of the Site experience minor disruptions during the construction phase, it can be concluded that they will move to a more suitable area. In addition, disturbances experienced by these species will be localised and short term. Given the availability of foraging habitat outside of the site boundary, and the limited value of the Site for foraging and nesting birds, no negative impacts are likely to occur.

Otter

Although it has been concluded that the area within the Site does not provide suitable habitats for otter holts / couches or for foraging, otter have the potential to be impacted during the construction phase through the impairment of water quality. Should run-off of potential pollutants from the construction area reach the surface water and flow into the nearby watercourse (Glasheen River), this would result in decreased water quality, which has the potential to result in decreased food availability for otter. The mitigation measures discussed below in Section 5.2.1.1 will be put in place to prevent the potential impairment of water quality, which will in turn prevent potential impacts to otter.

Invasive Species / Biosecurity Considerations

No invasive species were noted on the Site during the field surveys. However, measures will be implemented in order to ensure no invasive species are introduced to the Site during the construction phase (see Section 5.2.1.2).

Other Fauna

It is considered that the proposed development will not give rise to any significant impacts to other fauna, given the small scale of the proposed development and the low ecological value of the Site.

5.2 Mitigation Measures

5.2.1 Construction Phase

During the construction phase, all works will comply with all relevant legislation and best practice to reduce any potential environmental impacts. A pCEMP will be prepared by the appointed main contractor and will be submitted to the planning authority in advance of works commencing as detailed in Section 3.4.

The following mitigation measures will be incorporated and adhered to in order to ensure that the proposed works do not result in any contravention of wildlife legislation:

- All activities will comply with all relevant legislation and best practice to reduce any potential environmental impacts. The mitigation measures detailed within this EclA and the NIS will be fully adhered to;
- The Site manager shall ensure that all personnel working onsite will be trained and made aware of the mitigation measures detailed within this EclA and the NIS;
- An ECoW will be appointed for the construction works and will be available as required. If protected or notable species are encountered during operations at the Site, the ECoW will be contacted for advice;
- Protected and notable species posters will be erected on the Site notice board and maintained throughout the duration of the works; and,
- In advance of works, all Site personnel will receive a toolbox talk regarding notable and protected species. Everybody working onsite must understand the role and authority of the ECoW.

An ECoW will inspect the Site in advance of works commencing and will undertake site inspections as required during the works, to ensure that all works will be completed in line with the pCEMP and all wildlife legislation.

5.2.1.1 Protection of Water Quality during Construction

In order to ensure that the works do not have an impact on the surface water within the area surrounding the Site, mitigation measures will be put in place in accordance with best practice guidance to avoid impacts on these receptors. These measures will include:

- All construction works associated with the new drainage infrastructure onsite will be completed, checked, and cleaned where required, in advance of discharging to the Glasheen River
- Adequate spill kits including absorbent booms and other absorbent material will be maintained onsite;
- All contractor workers will be appropriately trained in the use of spill kits;
- Any accidental spillage of cementitious materials will be cleaned-up immediately;
- Any sediments adversely effected by contamination will be excavated and stored in appropriate sealed containers for disposal offsite in accordance with all relevant waste management legislation.

- The working area will be clearly defined and construction activities will be carefully planned to minimise ground disturbance;
- Stockpile of material will be covered during periods of prolonged or heavy rain and will be located away from the river as far as practically possible;
- A silt fence or similar sediment control structure will be installed along the southern boundary of the Site to prevent sediment running off into the Glasheen River
- Concrete pours will be adequately planned and executed;
- Washouts of equipment used for concrete operations will be done either offsite or within a designated washout area, which will comprise of a container that will capture the washout material / water for reused or disposal offsite;
- Adequate fuel storage facilities and re-fuelling protocols will be provided; and,
- Silt traps will be installed at appropriate locations to mitigate against any potential impacts to water quality associated with suspended solids in runoff from the construction area.

The following best practice guidelines will be followed, which are based on Inland Fisheries Ireland [13] and National Roads Authority [14] guidance documents:

- All materials shall be stored at the main contractor compound and transported to the works zone immediately prior to construction;
- Only emergency breakdown maintenance will be carried out onsite. Emergency procedures and spillage kits will be available and construction staff will be familiar with emergency procedures;
- Any pouring of concrete will only be carried out in dry weather. Washout of concrete trucks will not be permitted on the Site;
- Fuels, lubricants and hydraulic fluids for equipment used in the construction site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice;
- Fuelling and lubrication of equipment will be carried out offsite;
- No vehicle or equipment maintenance work will take place within the Site;
- Prior to any works commencing, all construction equipment will be checked to ensure that they are mechanically sound, to avoid leaks of oil, fuel, hydraulic fluids and grease; and,
- Measures will be implemented to minimise waste and ensure correct handling storage and disposal of waste.

Periodic monitoring will be undertaken during the construction works to ensure that the above measures are effective.

5.2.1.2 Protection of Fauna

Bats

In order to ensure that the works in relation to the proposed development do not have significant impacts on bats, the following mitigation measures will be followed:

- Immediately prior to works on the roof structure / demolition of the buildings, an updated internal and external building inspection will be required to confirm the presence / absence of roosting bats within the building;

- If bats are found to be roosting within the building during this inspection, then further measures may need to be considered in order to protect bats against any disturbance (i.e. lighting or noise levels). The NPWS will be consulted for advice and a derogation licence will be obtained if required; and,
- The findings of the updated bat inspection will be submitted to the council prior to the commencement of the demolition works.

Birds

Protection for Birds Section 40 of the Wildlife Act 1976, as amended by Section 46 of the Wildlife (Amendment) Act 2000, restricts the cutting, grubbing, burning or destruction by other means of vegetation growing on uncultivated land or in hedges or ditches during the nesting and breeding season for birds and wildlife, from 1st March to 31st August. The management of vegetation will be restricted to outside the bird breeding season.

In the event that works need to be undertaken within the main breeding season, this would be undertaken in consultation with NPWS.

Invasive species

To mitigate against the unintentional introduction of invasive species during construction and decommissioning works, the following mitigation measures will be followed:

- All vehicles, machinery and any other equipment used for the works will be washed prior to its use at the Site to prevent the import of plant material or seeds;
- Before machinery or equipment is unloaded at the Site, equipment will be visually inspected to ensure that all adherent material and debris has been removed;
- Any vehicles and machinery that are not clean will not be permitted entry to the Site;
- All materials to be imported to the Site including additional planting will be sourced from a reputable supplier and records of all material and supplies will be maintained;
- In advance of works, all site personnel will receive a toolbox talk with regards to invasive species; and,
- Everybody working onsite must understand the role and authority of the ECoW managing the issue of the non-native species.

Otter

Construction noise can impact on species such as otter, which include disturbance, behavioural impacts, stress and displacement from feeding grounds.

Given that there will be no in-river works, impacts of fish species associated with noise can be dismissed. There is however some potential for impacts on otter, which are known to occur within 2km of the proposed development.

However, to ensure that potential impacts are avoided, precautionary mitigation measure will be put in place during the construction phase to ensure that these works do not have any impacts on otter for which the SAC is designated and other protected / notable species that may occur within the area. The following mitigation will be implemented:

- Construction will be limited to the hours detailed in Section 3.4 which will minimise adverse effects on nocturnal fauna;
- In advance of works, all Site personnel will receive a Site induction or toolbox talk which will include reference to measures detailed in the CEMP;
- A solid and continuous hoarding shall be erected across the entire Site perimeter;

- Onsite vehicles/equipment shall be throttled down/switched off when not in use;
- Selection of low noise rated machinery and equipment;
- Use of acoustic enclosures/screens where applicable;
- Isolation of vibrational sources such as pumps/compressors where required;
- Cut off trenches to isolate vibration transmission path will be installed where required; and
- Noise compliance monitoring will be undertaken.

The higher level of noise associated with the construction works is unlikely to cause any disruption to otters within the area as the construction works are confined to daylight hours. Otters are most active at dusk or after dark. Also, given the location of the proposed development within Cork City and the high levels of human activity, any species utilising the area are likely to be habituated to elevated noise levels or will avoid this area. It is therefore concluded that provided the above mitigation measures are followed during the construction works no impacts will occur.

The mitigation measures discussed above in Section 5.2.1.1 will be put in place to prevent potential impacts to otter due to potential impairment of water quality.

Other flora and fauna

No significant impacts on other flora and fauna are expected, therefore, no mitigation additional to the ones specified above are required.

5.2.2 Operational Phase

Operational phase impacts for the proposed development relate only to water quality and nocturnal species (i.e. bats).

5.2.2.1 Protection of Water Quality during Operation

As the proposed development will discharge surface water runoff to the Glasheen River during the operational phase of the proposed development, there is potential for adverse effects on the water quality within the Glasheen River and further downstream in Cork Harbour.

A hydrocarbon and silt interceptor will be installed onsite to filter the stormwater runoff before discharging to the Glasheen River. As the foul drainage will connect into the existing services (subject to a valid connection agreement), which have sufficient capacity to support the proposed development.

In conclusion, there will be no adverse effects on the water quality to the Glasheen River following the installation of a Class 1 bypass hydrocarbon and silt interceptor and the operational activity at the Site will not cause any adverse effects to the water quality.

5.2.2.2 Protection of Fauna

Nocturnal Species

Nocturnal mammals (i.e., bats) are impacted by lighting. Therefore, it is important that lighting installed within the Site is completed with sensitivity for local wildlife while still providing the necessary lighting for human usage.

The main impact on bats that may arise is the potential lighting impact on the eastern boundary along the Glasheen River / treeline, which has the potential to be used by commuting / foraging bats. It should be noted that as the Site is located within a populated urban area and there is currently light spillage from surrounding developments onto this section of the Glasheen River to the east of the Site.

The lighting strategy has been designed in line with the Bat Conservation Trust (BCT) Guidelines on '*Bats and Artificial Lighting in the UK*' [15]. The lighting strategy has been designed to avoid excessive lighting and reduce light spillage onto the river. The following measures have been taken into consideration during the lighting layout design:

- Avoidance of excessive lighting;
- Light Emitting Diodes (LED's) will be used;
- Lighting will only be aimed where it is needed, with no upward lighting to retain darkness above;
- Lighting will be directed away from landscaped areas and the river corridor;
- Accessories such as baffles, hoods or louvres can be used to reduce light spill and direct light only where it is needed;
- Lighting will be turned down / off when not required; and,
- The height of lighting columns should be reduced as much as possible, as lighting at a lower levels further reduces ecological impact. All lighting columns directly adjacent to the Glasheen River are 6m in height, which are the lowest lighting columns proposed in the Site.

Following the installation of the lighting for the proposed development, a suitably qualified Ecologist should undertake a further site inspection in order to check the lighting patterns and lux levels along the site boundaries to ensure there are no impacts to bats or other nocturnal species.

6 CONCLUSIONS

Based on the findings of a detailed desk-based study, a review of all the ecological information available for the Site and wider area and a field survey by MOR Ecologists, it is considered reasonable to conclude the following:

- The Site itself is currently of Low local ecological value;
- The existing habitats onsite are not of value to any Annex I or Annex II species or Red listed birds;
- The Cork City Development Plan 2015-2021 [16] is consistent with the Cork County Development Plan 2022-2028 in highlighting the importance of student accommodation in Cork City. The Site is zoned as “Residential, Local Services and Institutional Uses” in the Plan.
- The proposed development will not result in any significant impacts on ecological receptors identified both onsite and in the surrounding area following the implementation of appropriate mitigation measures.

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- [3] Cork County Council, "County City Plan 2014-2020," 2015.
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- [15] BCT, "Bats and artificial lighting in the UK Bats and the Built Environment Series," Bat Conservation Truct & Institute of Lighting Professionals, 2018.
- [16] Cork City Council, "Cork City Draft Development Plan 2015-2021," Cork City Council, 2015.

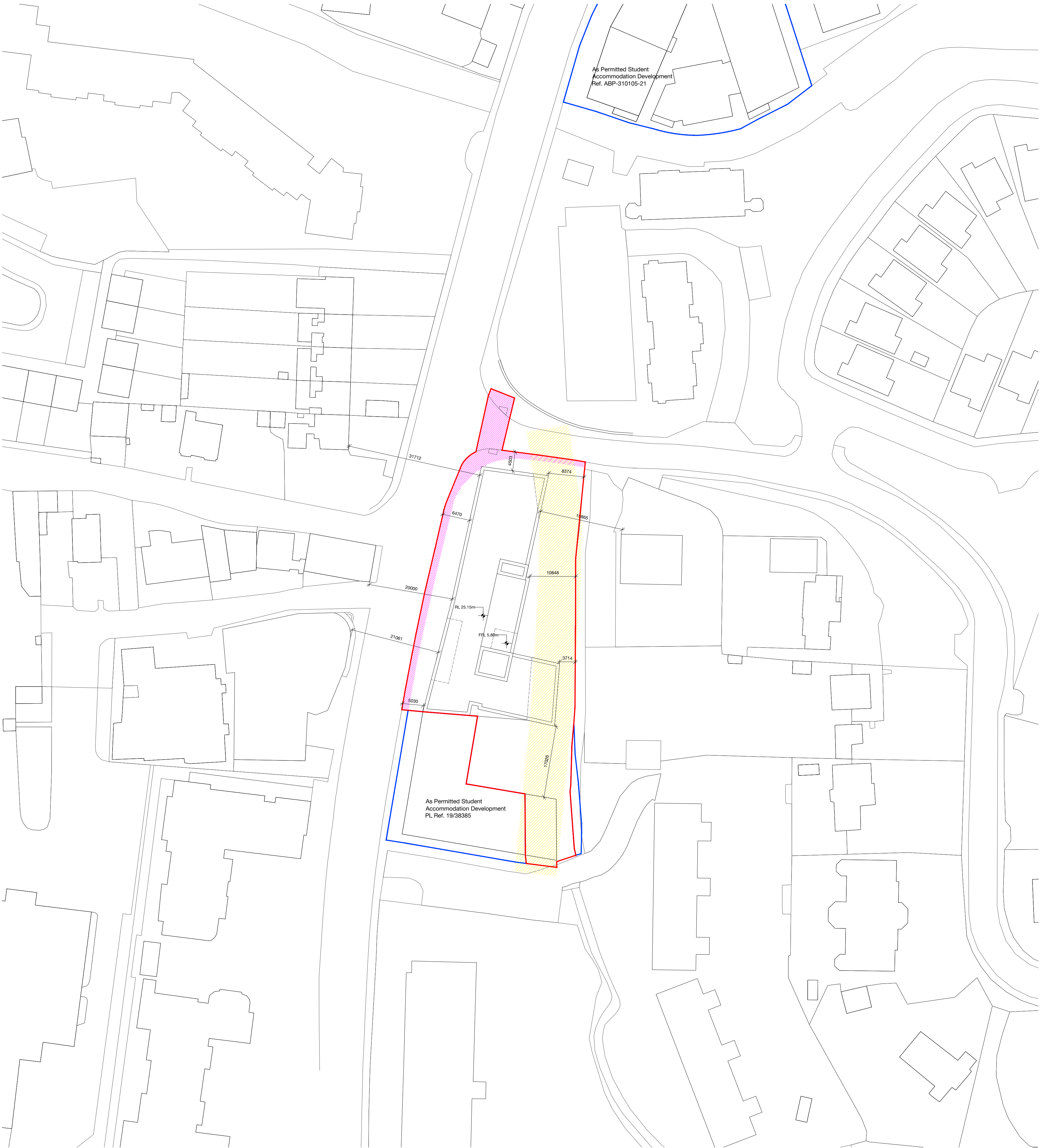
[17] Cork County Council, "Cork County Development Plan 2022-2028," Cork County Council, 2022.

[18] Cork City Council , "Cork City Draft Development Plan 2022-2028," Cork City Council, 2022.

APPENDICES

APPENDIX A

PROPOSED SITE PLAN



- Proposed Development Site Boundary 2882m² / 0.29ha
- Boundary of land in ownership of Applicant
- Land within ownership of Cork City Council 247m²
- Irish Water foul sewer clearance

Notes



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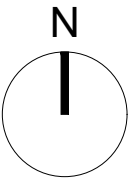
Project name
Wilton Road Garage

Project no
21125

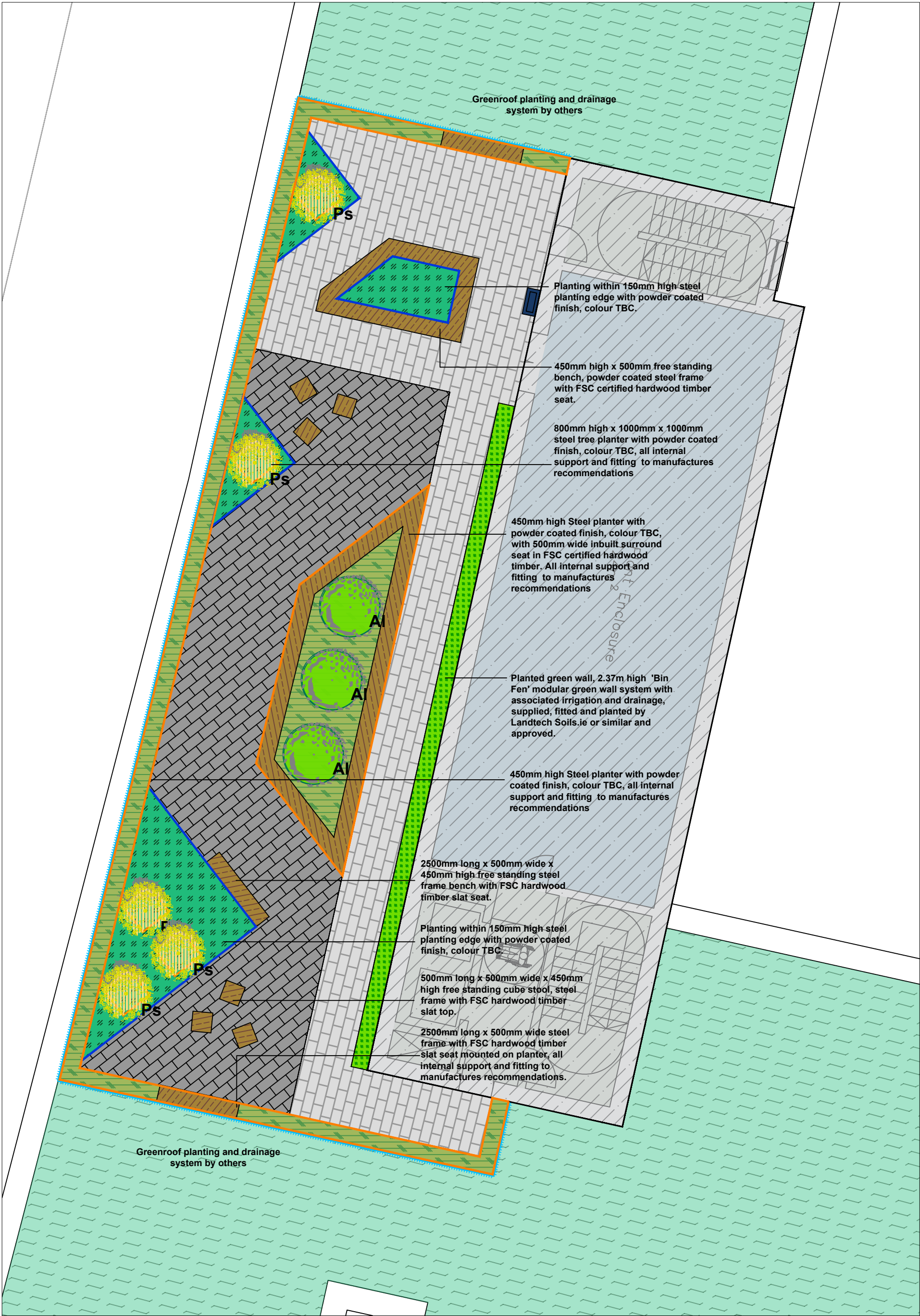
Client
Bellmount Developments Limited

Drawing Proposed Site Plan	Series Planning	Scale 1:500 @ A1
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Drawing no. A01-10	Revision A	Date 2022/07/13
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APPENDIX B



Landscape Layout, Scale 1:100, @ A2

Landscape Key

- 450mm high x 500mm wide, mild steel plate planter, S21 by OMOS or equal and approved, powder coated finish ral colour to be confirmed.
- 150mm high mild steel plate edge with folded top, powder coated finish ral colour to be confirmed.
- 1.8M high Ezi-Glass Rail and Post balustrade system with toughened laminated glass and stainless steel posts by Sligo Glass or equal & approved.
- Precast concrete slab with natural stone aggregate, ground finish, square edge, 600x400x50mm, laid in a stretcher bond pattern. Product: Kilsaran 'Shelbourne', black granite, or equal & approved.
- Precast concrete slab with natural stone aggregate, ground finish, square edge, 600x400x50mm, laid in a stretcher bond pattern. Product: Kilsaran 'Shelbourne', silver granite, or equal & approved.
- Planting 1: Mixed Shrub, Perennial and Ornamental grass mix, 450mm BS certified topsoil, as per planting schedule.
- Planting 2: Sedum, Perennial and Ornamental grass mix, 450mm BS certified topsoil, as per planting schedule.
- Amelanchier lamarckii, multi stem, 3-5breaks, 2M high, 1M clear stem, rootballed, with underground guying system.
- Prunus serrula, multi stem, 3-5breaks, 2M high, 1M clear stem, rootballed with underground guying system within steel tree box.

PLANTING SCHEDULE

Planting Mix 01: Perennial and Ornamental grass mix.
25% Stipa tenuissima, 2L Pot, @8/M2
25% Libertia chilensis, 2L Pot, @8/M2
10% Gaura lindheimeri whirling butterflies 2L Pot @8/M2
10% Salvia nemerosa 'cardonna' 2L Pot @8/M2
10% Echinacea purpurea 'Magnus', p9 Pot @9/M2
10% Achillea 'Credo', p9 Pot @9/M2
10% Penstemon 'Raven', p9 Pot @9/M2

Planting Mix 02: Sedum Perennial and Ornamental grass mix.
30% Stipa arundinacea, 2L Pot, @8/M2
20% Alchemilla mollis, p9 Pot @7/M2
15% Hylotelephium 'herbstfreude' autumn joy, 2L Pot @8/M2
15% Hylotelephium spectabile 'Stardust', 2L Pot @8/M2
10% Achillea 'Walther Funcke', p9 Pot @9/M2
10% Geranium dragon heart, p9 Pot @9/M2

Planting Notes:

All plant material to be inspected by the Landscape Architect prior to planting.

-Rasied Planters: Infilled with certified topsoil to BS 3882: 2007, depth of 450mm min.
-Topsoil: Topsoil shall be to BS 3882: 2007, medium texture with a high proportion of loamy material, free from subsoil, rubbish, roots of perennial weeds and other injurious to plant growth. All topsoil shall be stacked in heaps, not exceeding 2m high. During storage, topsoil heaps shall be kept free from contamination, compaction and weeds. Imported topsoil shall be from an approved source and a sample submitted and analyzed/tested at an independent approved laboratory. Soil Handling: Soil handling shall only take place during the driest parts of the year to prevent compaction of the insitu soils.
-Backfilling with Topsoil: Tree pits and Shrub beds shall be backfilled, in 200mm layers, with certified Topsoil. The plants shall be shaken during backfilling to avoid air pockets and the soil must be firmed as the hole is filled.

-Plant Stock and Timing: Plant material shall conform to BS 3936 Part 1: 1992, Part 2: 1990; Part 9: 1998; Part 10: 1990 and BS4043: 1989 and shall be protected at all times in transit to the site. The planting season shall be from 1st October to the 31st March. Planting shall not be carried out during periods of frost, drought, cold drying winds, or when the soil is waterlogged. Planting outside the planting season will require adequate watering to ensure establishment. All planting shall be planted upright at the same depth as the nursery soil level and evenly spaced, leaving room for growth.

-Trees: shall be guyed using underground anchors installed to manufactures instruction. Trees to be planted upright with collar at finished substrate level and back filled with Topsoil. Immediately following planting, all trees shall be watered-in to field capacity. Irrigation pipes: shall be included at the base of each individual tree and shall have a 35mm irrigation pipe and feed cup using Roottrain Metro Irrigation system by Greenleaf or equal and approved.

-Mulching: Prior to the application of mulch, the planting areas shall be completely weed free and watered sufficiently to achieve field capacity. The surface of the planting areas shall be mulched with a layer of Organic Compost Mulch or Fine Composted Bark Mulch composted for 2-4 weeks with a particle size of 0-8mm, to a depth of 50mm, ensuring that the low branches of shrubs and herbaceous plants are not smothered. The mulch shall be topped-up to maintain, after settlement, a depth of not less than 50mm.

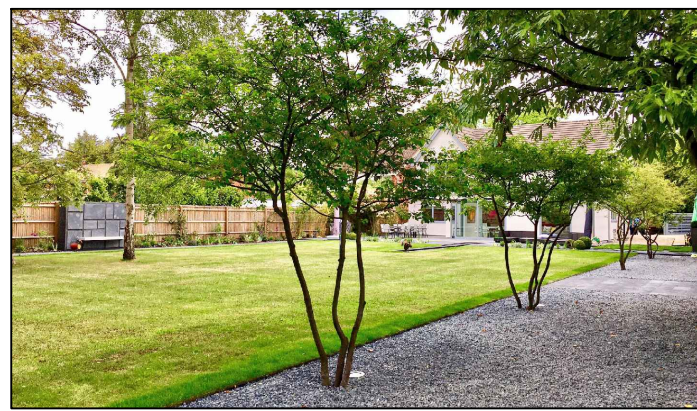
-After Care Period:The Aftercare Period shall extend for an 18 month period. During the Aftercare Period maintenance visits shall be carried out, at least monthly from April to September and twice during the dormant season to carry out the following operations to establish healthy growing plants in weed free areas. Maintenance operations shall include: watering, firming-up, pest and disease control, grass cutting, general pruning, weed control, top up mulch and autumn tidying. Replacement Planting. All plants, which have died, are missing or have failed to thrive, shall be noted and replaced with the same size and species as originally planted, in the following planting season.



Cube seating stool



Multi stem Prunus serrula



Multi stem Amelanchier lamarckii



Raised steel planter boundary in front of safety rail

THIS IS NOT FOR CONSTRUCTION

This drawing is the copyright of the Landscape Architect unless otherwise stated. All dimensions are in millimeters. Where dimensions are not given, drawings must not be scaled and the matter must be referred to the Landscape Architect. If the drawing includes conflicting details/dimensions the matter must be referred to the Landscape Architect. All dimensions must be checked on site. The Landscape Architect must be informed, by the contractor, of any discrepancies before work proceeds.

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Chartered member of the Irish Landscape Institute

Client:
Bellmount Development

Project: Wilton Road/
Victoria Cross

Drawing: 6th Floor
Landscape Layout

Date: 25/07/ 2022

Drawn By:
Wendy Kirkpatrick

Checked By:
Cathal O'Meara

Issue: Planning

Dwg No:2130-LA-P002

cathal o'meara
landscape architects



Scale 1:100, @ A2