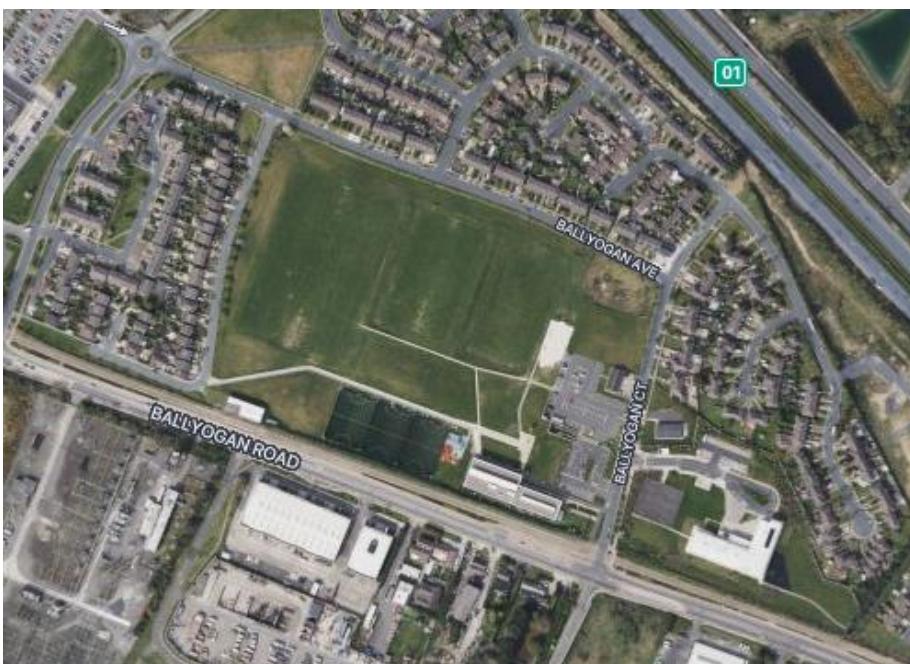


ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REPORT

AT

SAMUEL BECKETT CIVIC CAMPUS
BALLYOGAN
CO. DUBLIN



Prepared for

Dún Laoghaire-Rathdown County Council

Prepared by

Traynor Environmental Ltd

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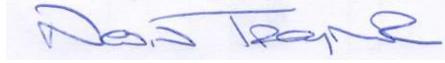


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This report refers, within the limitations stated, to the condition of the site at the time of the report. No warranty is given as to the possibility of future changes in the condition of the site. The report as presented is based on the information sources as detailed in this report, and hence maybe subject to review in the future if more information is obtained or scientific understanding changes.

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APPENDIX A – Red Arc Consulting Ltd Letter

APPENDIX B – Resource & Waste Management Plan (RWMP)

APPENDIX C – Construction Environmental Management Plan (CEMP)

1.0 INTRODUCTION

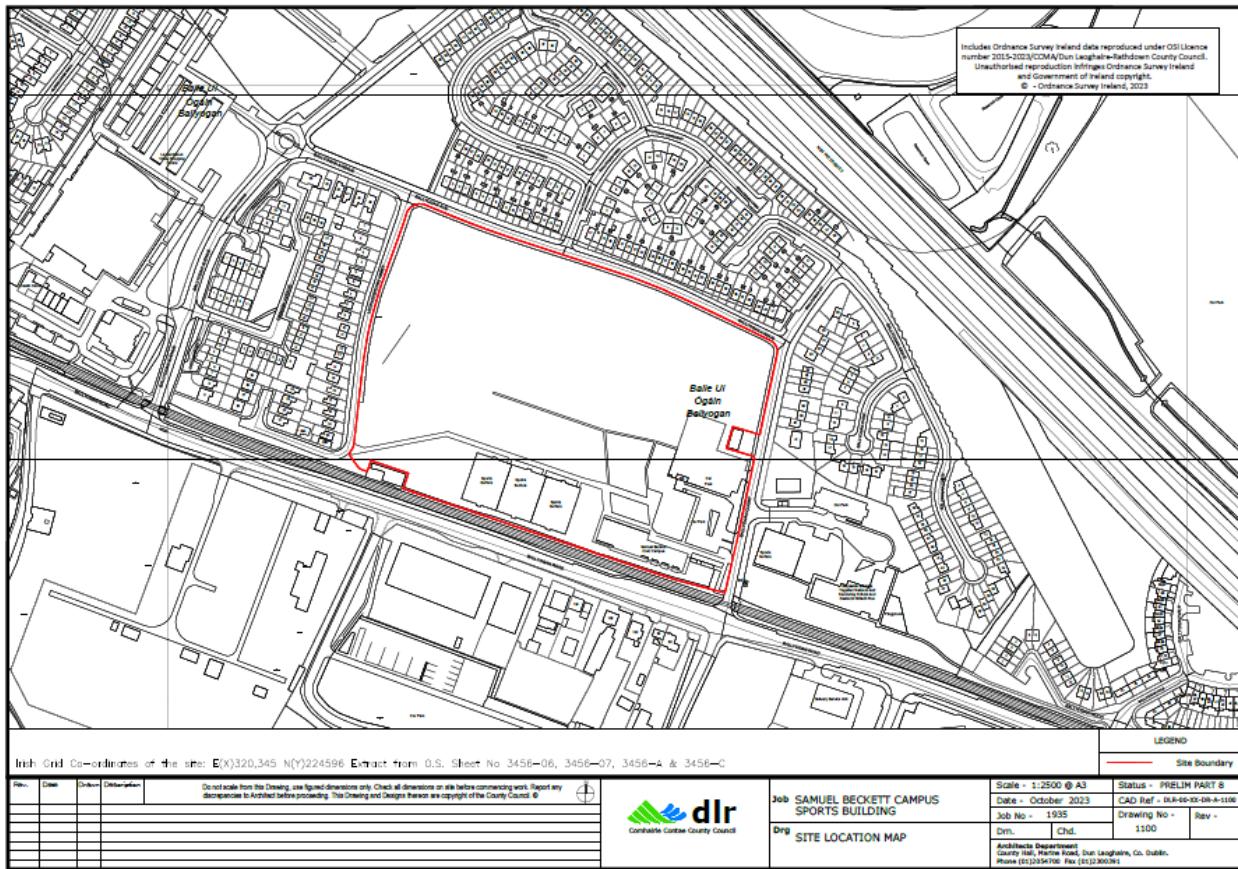
Traynor Environmental Ltd. has prepared the following Environmental Impact Assessment ('EIA') Screening Report for the proposed development at Ballyogan, Co. Dublin for Dún Laoghaire-Rathdown County Council ('the Applicant'). Permission will be sought under Part 8 of the Planning and Development Regulations 2001.

"The proposed development will consist of delivery of a Sustainably Built Multi-Purpose Sports Facility, including large format Sports Hall with spectator seating, 25m 6-lane Swimming Pool with spectator seating, Children's pool, Exercise Equipment Gym, Dance Studios, Fitness Room, Multi-purpose exercise/club rooms, coffee dock, Reception Hub, and ancillary rooms inc. changing rooms, FM office, back office, plant rooms etc.

Revised Site Landscaping to include retention and improvement of Playing Pitches, Changing and viewing areas, Creation of Mobility Hub (Bike & EV), Walking, Running and Cycling routes, enhanced parking, nature-based SuDS, and biodiversity measures. New Civic Space, Teenage Area, Playground and Skate Park(s)."

The indicative site is outlined in red on Figure 1.1 (hereafter referred to as 'the site'). The proposed development is described in further detail in Section 3 below.

Figure 1.1: Site Location Map



The purpose of this report is to provide the information required under Schedule 7A, having regard to the criteria set out in Schedule 7 of the Planning and Development Regulations 2001, as amended. This information will enable a screening determination in respect of the need for an Environmental Impact Assessment Report ('EIAR') for the proposed development.

It is the responsibility of the competent authority to make a decision as to whether there is a requirement for the preparation of an Environmental Impact Assessment Report (EIAR) with the information required under Schedule 7A of the Planning and Development Regulations 2001, as amended, to enable the competent authority to determine in light of the criteria set out under Schedule 7 of those regulations whether the proposed development is likely to have significant effects on the environment.

There is a mandatory requirement for an EIAR to accompany a planning application for some types of development that meet or exceed the "thresholds" specified in Schedule 5 to the Planning and Development Regulations. In addition to the mandatory requirement, there is a case-by-case assessment necessary for sub-threshold developments as they may be likely to have significant effects on the environment. If a sub-threshold development is determined to be likely to have significant effect on the environment, then an EIAR will be required. The second reason for this report is to document the studies undertaken by the Applicant, and the design team, to consider whether the development would be likely to have significant effects on the environment. The proposed development and component parts have been considered, as documented in Section 2, against the thresholds for EIA as outlined in the Planning and Development Regulations 2001 (as amended).

1.1 EIA SCREENING LEGISLATION AND GUIDANCE

The legislation and guidance listed below has informed this report and the method to EIA Screening:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports. (2022). Environment Protection Agency.
- Environmental Impact Assessment Screening, OPR Practice Note PN02 (Office of the Planning Regulator, 2021).
- European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018.
- Environmental Impact Assessment of Projects – Guidance on Screening. (2017). European Commission.
- Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report. (2017) European Commission.
- Guidelines for Planning Authorities on carrying out Environmental Impact Assessment. (August 2018). Department of Housing, Planning and Local Government.
- Advice Notes for preparing Environmental Impact Statements. (Draft, September 2015). Environment Protection Agency.
- Interpretation of definitions of project categories of Annex I and II of the EIA Directive. (2015) European Commission.
- European Union Environmental Impact Assessment (EIA) Directive 2011/92/EU as amended by 2014/52/EU.
- Planning and Development Act, 2000 (as amended).
- Planning and Development (Housing) and Residential Tenancies Act 2016
- Planning and Development Regulations 2001 (as amended).

The national requirements to provide an EIA with a planning application are outlined in *Planning and Development Act 2000* as amended ('the Act') and *Planning and Development Regulations, 2001* as amended ('the Regulations'). In addition to the national legislation there are requirements set out in the EIA Directive (Directive 2011/92/EU as amended by 2014/52/EU); for relevant purposes, the EIA Directive has been transposed into Irish planning legislation through amendments to the Act and the Regulations.

This includes: the criteria set out Schedule 7 of the Regulations; the information set out at Schedule 7A; any further relevant information on the characteristics of the development and its likely significant effects on the environment submitted by the applicant; any mitigation measures proposed by the applicant; the available results, where relevant, of preliminary verifications or assessments carried out under other relevant EU environmental legislation, including information submitted by the applicant on how the results of such assessments have been taken into account, and; the likely significant effects on certain sensitive ecological sites.

The screening process followed in this report is in accordance with the EIA Directive 2011/92/EU of the European Parliament and of the Council as amended by 2014/52/EU and as transposed by the Act and the Regulations and follows the format as per Section 3.2 of the EPA Guidelines (2022). The potential for significant effects of the proposed Project has been considered against the criteria under Schedule 7 of the *Planning and Development Regulations, 2001* as amended. In producing this report due regard has been paid to other EIA guidance including the European Commission's 2017 *EIA of Projects Guidance on Screening* as well as the published *Guidelines for Planning Authorities* and the OPR Practice Note PN02 *Environmental Impact Assessment Screening*.

Preliminary Screening for EIA

The Planning and Development Regulations 2001 (as amended) provide for the preliminary examination for EIA. The Departmental Guidelines (August 2018) state as follows in relation to such a preliminary examination:

"For all sub-threshold developments listed in Schedule 5 Part 2, where no EIAR is submitted or EIA determination requested, a screening determination is required to be undertaken by the competent authority unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment. This is initiated by the competent authority following the receipt of a planning application or appeal."

1.2 SCREENING METHODOLOGY

The screening process followed in this report is in accordance with the EIA Directive 2011/92/EU of the European Parliament and of the Council as amended by 2014/52/EU and follows the format as per Section 3.2 of the EPA Guidelines (2022).

The key steps to screen for an EIA are set out in Section 3.2 of the EPA Guidelines are as follows:

1. Is the development a type that requires EIA?
2. Is it of a type that requires mandatory EIA?
3. Is it above the specified threshold?
4. Is it a type of project that could lead to effects? and/or
5. Is it a sensitive location? and/or
6. Could the effects be significant?

The information required to be submitted to make a determination on EIA Screening is set out in Schedule 7A of the Regulations of 2001 (see also Annex IIA of the EIA Directive).

However, it is important to note that Schedule 7A states '*The compilation of the information at paragraphs 1 to 3 [of Schedule 7A] shall take into account, where relevant, the criteria set out in Schedule 7.*' Having regard to this for the purposes of compiling the relevant information on the likely effects of the proposed development and to address points 4 to 6 above, an evaluation of the characteristics of the project, the sensitivity of the location of the proposed development, and the potential for significant impacts has been made with regard to Schedule 7 of the Regulations.

Schedule 7 of the Regulations of 2001 sets out the criteria to determine whether a development would or would not be likely to have significant effects on the environment. The criteria are broadly set out under the three main headings:

- 1) Characteristics of proposed development (Section 3.0)
 - a) the size and design of the whole of the proposed development,
 - b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,
 - c) the nature of any associated demolition works,
 - d) the use of natural resources, in particular land, soil, water, and biodiversity,
 - e) the production of waste,
 - f) pollution and nuisances,
 - g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge, and
 - h) the risks to human health (for example, due to water contamination or air pollution).
- 2) Location of proposed development (Section 4.0)
 - a. the existing and approved land use,

- b. the relative abundance, availability, quality, and regenerative capacity of natural resources (including soil, land, water, and biodiversity) in the area and its underground,
- c. the absorption capacity of the natural environment, paying particular attention to the following areas:
 - i. wetlands, riparian areas, river mouths.
 - ii. coastal zones and the marine environment.
 - iii. mountain and forest areas.
 - iv. nature reserves and parks.
 - v. areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and.
 - vi. areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure.
 - vii. densely populated areas.
 - viii. landscapes and sites of historical, cultural, or archaeological significance.

3) Types and Characteristics of Potential Impacts (Section 5)

The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account—

- a. the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected),
- b. the nature of the impact,
- c. the transboundary nature of the impact,
- d. the intensity and complexity of the impact,
- e. the probability of the impact,
- f. the expected onset, duration, frequency, and reversibility of the impact,
- g. the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and
- h. the possibility of effectively reducing the impact.

However, it is important to note that Schedule 7A states 'The compilation of the information at paragraphs 1 to 3 [of Schedule 7A] shall take into account, where relevant, the criteria set out in Schedule 7.' The main body of this report (Sections 3.0, 4.0 and 5.0) will cover Schedule 7A fully, but it has been set out to present the information under the headings provided for in Schedule 7 in order to assist the Planning Authority in its screening assessment.

1.3 CONTRIBUTORS TO THE EIAR SCREENING REPORT

This EIA Screening Report has been informed by the enclosed documents (and the relevant listed mitigation measures as included therein). The preparation and co-ordination of this screening report has been completed by Traynor Environmental Ltd. and has relied on specialist input from the design team, Bat Eco Services, Hugh Delaney (Ornithologist), Noreen Mc Loughlin (Ecologist) and Red Arc Consulting, and the Architect's Office of Dún Laoghaire-Rathdown County Council. The various reports address a variety of environmental issues and assess the impact of the proposed development and demonstrate that subject to the various construction and design related mitigation measures recommended that the proposed development will not have a significant impact on the environment. This EIAR Screening Report should also be read in conjunction with the plans and particulars submitted with the proposal including the AA Screening and the Ecological Impact Assessment Report. It should be noted the Contractor appointed to undertake the works will be required to develop these framework documents as part of their overall Construction Management Plan in line with their obligations under the Safety, Health, and Welfare at Work (Construction) Regulations 2013 as amended.

2.0 SCREENING EVALUATION

2.1 IS THE DEVELOPMENT A PROJECT

The first step in screening is to examine whether the proposal is a project as understood by the EU Directive. For the purposes of the EU Directive, 'project' means: "*the execution of construction works or of other installations or schemes, or other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources.*"

The EPA Guidance (2022) states that if a proposed project is not of a type covered by the Directive, there is no statutory requirement for it to be subject to environmental impact assessment. In determining if the proposed project is of a type covered by the Directive it may be necessary to go beyond the general description of the project and to consider the component parts of the project and/or any processes arising from it.

If any such parts or processes are significant and, in their own right fall within the class of development covered by the Directive, the proposed Project as a whole may fall within the requirements of the Directive. Each element of the proposed development has been examined and the development clearly meets the definition of a Project as understood by the EU Directive.

2.2 IS THE DEVELOPMENT A PROJECT THAT REQUIRES A MANDATORY EIA

The next step is to determine if the proposed development is of a *project type* that requires mandatory EIA (i.e., is the proposed development of a project type in which a threshold does not exist). The types of projects to which thresholds do not apply are types that are considered to always be likely to have significant effects.

The type of projects for which an EIA is mandatory is set out in Schedule 5 Part 1 and Part 2 of the Regulations. An EIA is deemed mandatory under Section 172 of the Act to accompany a planning application for development for the types of projects set out in Schedule 5. This list was developed from Annex I and Annex II of the EIA Directive. The EPA Guidance (2022) requires an assessment beyond the general description of the project and to consider the component parts of the project and/or any processes arising from it.

In considering the wider context and the component parts of the project of the proposed development the thresholds of relevance to the proposal from Part 2 of Schedule 5 are set out below:

10. Infrastructure projects –

10 (b) (ii) Construction of a car-park providing more than 400 spaces, other than a car park provided as part of, and incidental to the primary purpose of, a development.

(b)(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

(In this paragraph, 'business district' means a district within a city or town in which the predominant land use is retail or commercial use).

15. Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

For the project types of Class 10 (a) to (m) an EIA is mandatory only if the project equals or exceeds, as the case may be, a limit, quantity or threshold set out. Project Class 15 does not set out any thresholds and a case-by-case assessment is required to be undertaken.

2.3 IS THE PROJECT ABOVE THE THRESHOLD FOR EIA

An EIAR is required to accompany an application for permission of a class set out in Schedule 5 Part 1 and Part 2 of the Regulations which equals or exceeds, as the case may be, a limit, quantity or threshold set for that class of development. A development that does not exceed a limit, quantity or threshold set for that class of development in Schedule 5 of the Regulations is known as a 'sub-threshold development'.

The proposed development and component parts have been considered against the thresholds outlined in Schedule 5, Part 2, Class 10 (a) to (m). The most relevant project type in the context of the proposed development are Class 10 (b) (ii) and (iv) noted in Section 2.2 above.

10 (b) (ii) Construction of a car-park providing more than 400 spaces, other than a car park provided as part of, and incidental to the primary purpose of, a development.

(b) (iv) the appropriate threshold is considered to be '*10 hectares in the case of other parts of a built-up area*' as the site location is not within a business district but is within a built-up area. The conservative and pragmatic approach is to consider the area to have a predominant land use for residential use rather than business use.

The proposed development comprises of a Sustainably Built Multi-Purpose Sports Facility. The proposed development site does not involve the construction of a car park providing more than 400 spaces and is not equal to, nor does it exceed the limit, quantity or threshold set out in Class 10 (iv); therefore, an EIA is not mandatory.

2.4 CONCLUSION – SUB THRESHOLD DEVELOPMENT

The proposed development is '*of a type set out in Part 2 of Schedule 5 [in the Planning and Development Regulations, 2001 (as amended)] which does not equal or exceed, as the case may be, a quantity, area or other limit specified in that Schedule in respect of the relevant class of development*'. The development is outside the mandatory requirements for EIA and is considered to be sub-threshold for the relevant project type.

An EIA Screening Report is still required to accompany a sub-threshold development which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7. Therefore, the final step in the screening process is to consider whether the development would be likely to have significant effects on the environment and therefore require an EIAR to be submitted and EIA carried out.

Directive 2014/52/EU requires the developer to provide information on the characteristics of the project and its likely significant effects on the environment, to allow the competent authorities to make a determination on the requirement for an EIA. The information required is set out in the Directive and transposed Schedule 7A of the Regulations. The remainder of this report presents the information required by Schedule 7A to demonstrate the likely effects on the environment, having regard to the criteria set out in Schedule 7.

The following Sections 3.0, 4.0 and 5.0 will provide information on the characteristics of the proposed development, the location and context, and its likely impact on the environment. These sections present the information required under Schedule 7A of the Regulations, broadly set out in the structure Schedule 7 to ensure that each aspect for consideration is robustly addressed.

3.0 CHARACTERISTICS OF PROPOSED DEVELOPMENT

This section addresses the characteristics of proposed development by describing the physical characteristics of the whole proposed development and a description of the location of the proposed development.

Figure 3.1 – Photomontage of the Proposed Development



Figure 3.2 – Photomontage of the Proposed Development



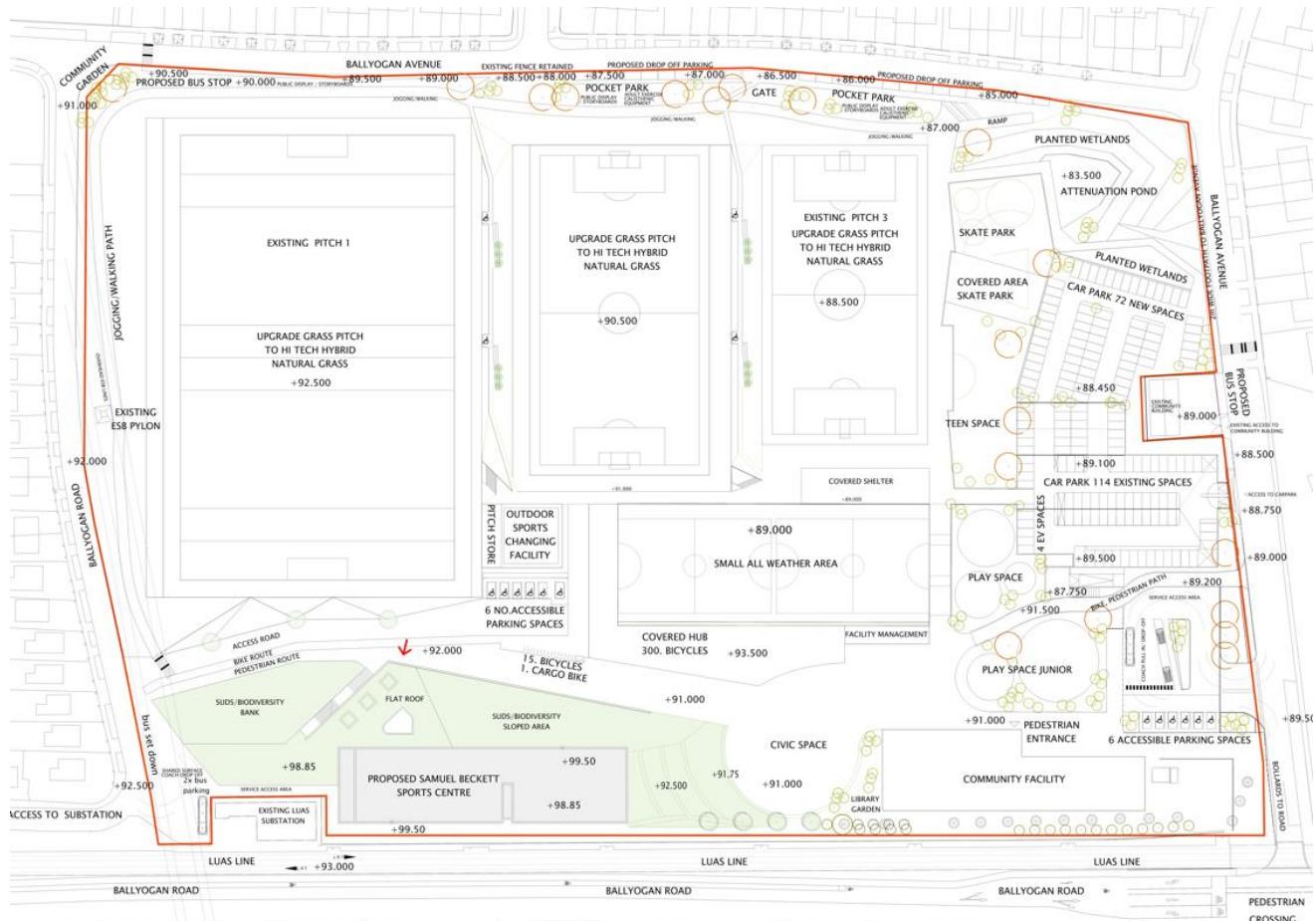
3.1 SIZE AND DESIGN OF THE PROPOSED DEVELOPMENT

The application site is 7.1ha and it encompasses the entire Samuel Beckett Civic Amenity site, which currently includes football pitches, all weather sports pitches, skate parks and a community centre. The site is located in an urban / sub-urban area, and access is provided by an existing entrance at the eastern perimeter of the site, from the Ballyogan Court Road. The site is bounded to the east by the Ballyogan Court Road, to the north by Ballyogan Ave, to the west by the Leopardstown Abbey Road and to the south by the Ballyogan Road. The Luas Line also lies to the immediate south of the site, along the Ballyogan Road. The site is close to the urban centres of Stepaside, Carrickmines and Leopardstown.

"The proposed development will consist of delivery of a Sustainably Built Multi-Purpose Sports Facility, including large format Sports Hall with spectator seating, 25m 6-lane Swimming Pool with spectator seating, Children's pool, Exercise Equipment Gym, Dance Studios, Fitness Room, Multi-purpose exercise/club rooms, coffee dock, Reception Hub, and ancillary rooms inc. changing rooms, FM office, back office, plant rooms etc.

Revised Site Landscaping to include retention and improvement of Playing Pitches, Changing and viewing areas, Creation of Mobility Hub (Bike & EV), Walking, Running and Cycling routes, enhanced parking, nature-based SuDS, and biodiversity measures. New Civic Space, Teenage Area, Playground and Skate Park(s)."

Figure 3.3 –Site Layout



3.2 CUMULATION WITH OTHER EXISTING OR PERMITTED DEVELOPMENT

This section outlines the potential cumulation with other existing or permitted developments. As part of the assessment of the impact of the proposed development, account has been taken of any relevant developments that are currently permitted, or under construction and substantial projects for which planning has been submitted within the surrounding areas, as well as existing local land uses. A preliminary assessment of potential cumulative effects on the environment is facilitated via the Source-Pathway-Receptor (SPR) model which is a multi-step process. The SPR methodology is a tool that ensures the most cautious means of assessment at the preliminary stages of a proposed development. The use of this tool ensures that all possible impacts are identified at a very early stage thus enabling further studies, mitigation measures or ameliorative actions to be put in place. The inherent use of the precautionary principle within the SPR methodology means that all potential for environmental impacts can be identified at a preliminary stage without any need for detailed studies, but rather upon available desktop information.

In order for there to be a potential cumulative effect all three elements of the SPR elements need to be present. If there is no pathway or functional link (direct or indirect) between the proposed development and a receptor, there is no potential for effect. Additionally, if there is no receptor within the area of a potential impact, there is similarly no effect as it does not cause harm to the environment due to the lack of a receptor.

There is no specific guidance available for a generic zone of influence to focus the assessment of existing land use and/or permitted projects that may result in cumulative effects. The research area has been established using expert judgement and based on the accessibility of data and taking into consideration the potential zone of influence of the potential environmental impacts of the proposed development. In considering the potential effects of the proposed development (Section 5), it can be established that the closer to the works, there is a greater the potential for impacts. The most significant environmental impacts are likely to be confined within 50-150 m of the proposed development. The project being considered, is not expected to have Regional, National, or International, or Transboundary impacts.

3.2.1 Existing Development

The site, as shown in Figure 3.4, is zoned in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 as Zoning Objective 'F' 'To preserve and provide for open space with ancillary active recreational amenities.

Figure 3.4: Land Use Zoning Map (Source – Dún Laoghaire-Rathdown County Development Plan 2022 - 2028)



Population

Table 1 compares population change in the State and Dublin between the 2016 and 2022 census.

Table 3.1. Population Changes 2016 - 2022

Population Change 2016 – 2022			
Location	2016	2022	% Change 2016 - 2022
State	4,761,865	5,123,536	+7.6%
Dublin	1,347,359	1,450,701	+7.7%

3.2.2 Permitted Development

The Site is within the administrative jurisdiction of Dún Laoghaire-Rathdown County Council.

The planning history for the Site of the Proposed Development was reviewed from data sources including:

- Dún Laoghaire-Rathdown County Council planning website, <https://www.dlrcoco.ie>.
- An Bord Pleanála website, <http://www.leanala.ie/>.
- EIA Portal, as provided by the Department of Housing, Planning and Local

Please refer to Table 5.3 details planning applications within the Proposed Development site.

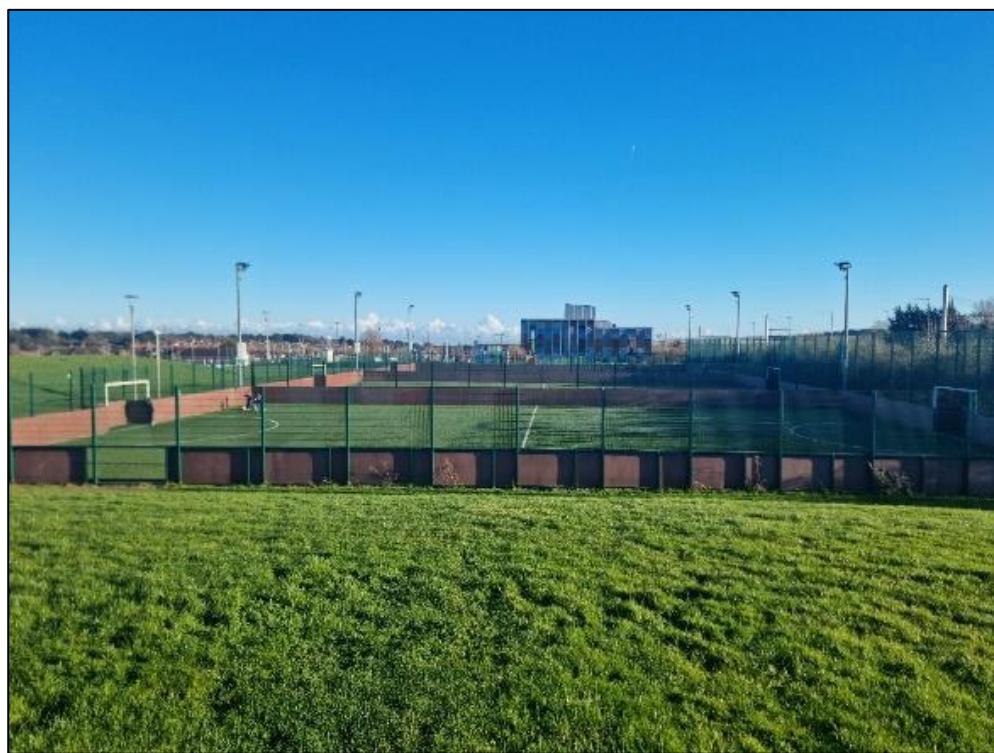
Table 3.1 Planning Applications in the Vicinity of the proposed development site

Reg. No	Applicant name and Development address	Proposed Development	Location (relative to proposed development site)
D22A/0958	Ballyogan Youth Centre, The White House, 41 Ballyogan Court, Ballyogan, Dublin 18, D18W3Y0	Planning permission for the installation of 1 Shomera Room, to be used as a youth care space, and all associated works.	2 meters east of the proposed site
D21A/0910	Liam Doyle 20 & 20B, Leopardstown Abbey, Carrickmines, Dublin 18, D18RD26	Permission is sought for proposed provision of 2 No. vehicular entrances to front of houses, in lieu of shared entrance (already granted Reg.Ref No. D06A/0838)	24 meters west of the proposed site
D20A/0795	Shane Duffley and Maria Tueyo 28 Leopardstown Abbey, Carrickmines, Dún Laoghaire, Dublin 18	Permission is sought for the demolition of the existing roof and part of boundary wall to the south elevation and the construction of a new two-storey extension (57sqm) with new roof up to the south boundary wall line, as well as the relocation and widening of the vehicular access and associated site works.	100 meters west of the proposed site

3.3 NATURE OF ANY ASSOCIATED DEMOLITION WORKS

No demolition works will take place as part of the proposed development. The proposed development will not give rise to the removal of any of the mature hedgerow or treeline vegetation. The proposed development will involve the removal of the existing Astro Turf pitches.

Figure 3.5: Existing Astro Turf Pitches



3.4 USE OF NATURAL RESOURCES (LAND, SOIL, WATER, BIODIVERSITY)

This section describes the proposed development in terms of the use of natural resources, in particular land, soil, water, biodiversity. In the overall context of Ballyogan, the proposed development there will not be a significant consumption of natural resources during construction and operation. The main use of natural resources will be land, soil, and water. Other resources used will be construction materials which will be typical raw materials used in construction of multipurpose buildings. The scale and quantity of the materials used will not be such that would cause concern in relation to significant effects on the environment.

3.4.1 Land and Soil

The proposed development will require the excavation and removal of soils and materials for the purposes of excavation for foundations, landscaping, access roads and services. It is proposed to reuse soil excavated on site, however should soil be removed off site, prior to being exported off-site, shall be classified as inert, non-hazardous or hazardous in accordance with the EPA's Waste Classification Guidance – List of Waste & Determining if Waste is Hazardous or Non-Hazardous document dated 1st June 2015 to ensure that the waste material is transferred by an appropriately permitted waste collection permit holder and brought to an appropriately permitted or licensed waste facility. Materials that can be reused will be notified to the EPA as a by-product. This ensures that waste and other materials removed from the site will have no significant effect on the environment. There will be a requirement for deliveries of imported stone, and other construction materials.

3.4.2 Water Consumption

The construction or operation of the scheme will not use such a quantity of water to cause concern in relation to significant effects on the environment. During construction of the scheme, water will be required for offices, welfare facilities, this will be provided by either tanker or temporary connection to the public main by agreement with Uisce Éireann. The construction phase will not use such a quantity of water to cause concern in relation to significant effects on the environment. There is no proposed extraction of groundwater at the site. Once the development is completed and the development is occupied there will be a domestic water requirement for showers, toilets, and canteen/coffee dock. The water demand will amount to 600m³ per month. The Average business water demand is approximately 0.15 litres/second with an average peak weekly demand of 0.69 litres/sec. The Average industrial water demand is approximately 3 - 5 litres/second with an average peak weekly demand of 3 – 5 litres/sec.

3.4.3 Biodiversity Resources

Investigations into the implications on existing biodiversity including species and habitats has been undertaken through the Appropriate Assessment (AA) Screening Report prepared by Noreen Mc Loughlin MSc, MCIEEM Ecologist Natural Heritage Areas (NHAs/pNHAs) are national designations under the Wildlife Act 1976, as amended. A Natural Heritage Area (NHA) is designated for its wildlife value and receives statutory protection. A list of proposed NHAs (pNHAs) was published on a non-statutory basis in 1995, but these have not since been statutorily proposed or designated. The proposed development site is not located within any NHA or pNHA. There are a number of pNHAs in the vicinity of the proposed development site. The accompanying AA Screening Report has assessed the potential for significant impacts of the construction and operational phases of the proposed development on Natura 2000 sites and habitat loss/alteration, habitat/species fragmentation, disturbance and/or displacement of species, change in population density and changes in water quality. There are fifteen Natura 2000 Sites within 15km of the Proposed Development, this site is summarised in Table 3.2.

Table 3.2 – Natura 2000 Sites Within 15km of the Application Site

Site Name & Code	Distance from Site	Qualifying Interests	Screened In / Out
South Dublin Bay and River Tolka Estuary SPA 004024	4.7km north-east	<ul style="list-style-type: none"> • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) • Oystercatcher (<i>Haematopus ostralegus</i>) • Ringed Plover (<i>Charadrius hiaticula</i>) • Grey Plover (<i>Pluvialis squatarola</i>) • Knot (<i>Calidris canutus</i>) • Sanderling (<i>Calidris alba</i>) • Dunlin (<i>Calidris alpina</i>) • Bar-tailed Godwit (<i>Limosa lapponica</i>) • Redshank (<i>Tringa totanus</i>) • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) • Roseate Tern (<i>Sterna dougallii</i>) • Common Tern (<i>Sterna hirundo</i>) • Arctic Tern (<i>Sterna paradisaea</i>) • Wetland and Waterbirds 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SPA.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SPA and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>As determined following an assessment of the site by an ornithologist, the site does not support sufficient or suitable habitat that could be used by the QIs of this SPA (especially brent geese) and significant effects upon these species will not arise.</p>
South Dublin Bay SAC 000210	4.7km north-east	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide • Annual vegetation of drift lines • Salicornia and other annuals colonising mud and sand • Embryonic shifting dunes 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Knocksink Wood SAC 000725	5km south	<ul style="list-style-type: none"> • Petrifying springs with tufa formation (<i>Cratoneurion</i>) • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application</p>

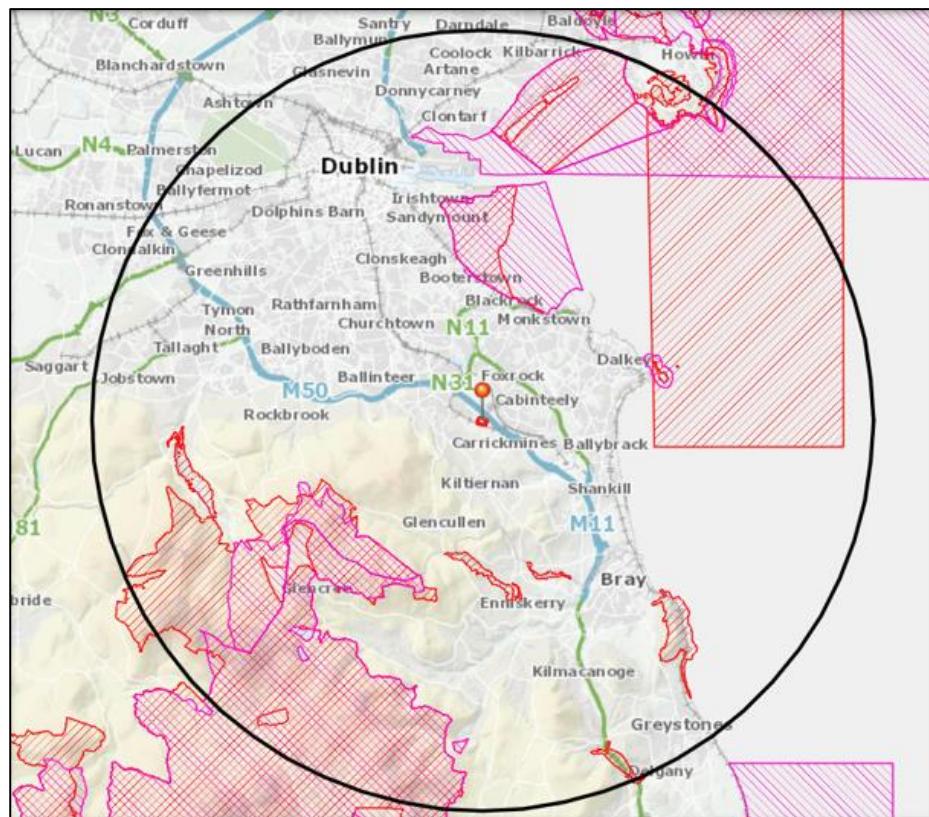
			<p>site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Ballyman Glen SAC 000713	5.5km south	<ul style="list-style-type: none"> • Petrifying springs with tufa formation (Cratoneurion) • Alkaline fens 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Wicklow Mountains SAC 002122	5.8km south-west	<ul style="list-style-type: none"> • Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) • Natural dystrophic lakes and ponds • Northern Atlantic wet heaths with <i>Erica tetralix</i> • European dry heaths • Alpine and Boreal heaths • Calaminarian grasslands of the <i>Violetalia calaminariae</i> • Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) • Blanket bogs (* if active bog) • Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) • Calcareous rocky slopes with chasmophytic vegetation • Siliceous rocky slopes with chasmophytic vegetation • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles • <i>Lutra lutra</i> (Otter) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Wicklow Mountains SPA 004040	6.3km south-west	<ul style="list-style-type: none"> • Merlin (<i>Falco columbarius</i>) • Peregrine (<i>Falco peregrinus</i>) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SPA.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SPA and significant effects arising from pollution during construction or operation can be ruled out.</p>

			<p>The site does not support any habitat that could be used by the QIs of this SPA and significant effects upon these species will not arise.</p>
Rockabill to Dalkey Island SAC 003000	6.6km east	<ul style="list-style-type: none"> • Reefs • <i>Phocoena phocoena</i> (Harbour Porpoise) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Dalkey Island SPA 004172	6.7km north-east	<ul style="list-style-type: none"> • Roseate Tern (<i>Sterna dougallii</i>) • Common Tern (<i>Sterna hirundo</i>) • Arctic Tern (<i>Sterna paradisaea</i>) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SPA.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SPA and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>The site does not support any habitat that could be used by the QIs of this SPA and significant effects upon these species will not arise.</p>
Bray Head SAC 000714	9.4km south-east	<ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic coasts • European dry heaths 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
North Bull Island SPA 004006	9.5km north	<ul style="list-style-type: none"> • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) • Shelduck (<i>Tadorna tadorna</i>) • Teal (<i>Anas crecca</i>) • Pintail (<i>Anas acuta</i>) • Shoveler (<i>Anas clypeata</i>) • Oystercatcher (<i>Haematopus ostralegus</i>) • Golden Plover (<i>Pluvialis apricaria</i>) • Grey Plover (<i>Pluvialis squatarola</i>) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SPA.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SPA and significant effects</p>

		<ul style="list-style-type: none"> • Knot (<i>Calidris canutus</i>) • Sanderling (<i>Calidris alba</i>) • Dunlin (<i>Calidris alpina</i>) • Black-tailed Godwit (<i>Limosa limosa</i>) • Bar-tailed Godwit (<i>Limosa lapponica</i>) • Curlew (<i>Numenius arquata</i>) • Redshank (<i>Tringa totanus</i>) • Turnstone (<i>Arenaria interpres</i>) • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) • Wetland and Waterbirds 	<p>arising from pollution during construction or operation can be ruled out.</p> <p>As determined following an assessment of the site by an ornithologist, the site does not support sufficient or suitable habitat that could be used by the QIs of this SPA (especially brent geese) and significant effects upon these species will not arise.</p>
North Dublin Bay SAC 000206	9.9km north	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide • Annual vegetation of drift lines • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) • Mediterranean salt meadows (<i>Juncetalia arenaria</i>) • Embryonic shifting dunes • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) • Fixed coastal dunes with herbaceous vegetation (grey dunes) • Humid dune slacks • <i>Petalophyllum ralfsii</i> (Petalwort) 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Glenasmole Valley SAC 001209	10.7km west	<ul style="list-style-type: none"> • Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) • Molinia meadows on calcareous, peaty, or clayey-silt-laden soils (<i>Molinion caeruleae</i>) • Petrifying springs with tufa formation (<i>Cratoneurion</i>)* 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Glen of the Downs SAC 000719	13.3km south	<ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>

Howth Head SAC 000202	13.6km north-east	<ul style="list-style-type: none"> Vegetated sea cliffs of the Atlantic and Baltic coasts European dry heaths 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SAC.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SAC and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>There will be no direct or indirect impacts or significant effects upon the QIs of this SAC.</p>
Howth Head Coast SPA 004113	14.7km north-east	<ul style="list-style-type: none"> Kittiwake Rissa tridactyla 	<p>Screened Out - There is no potential for direct effects as the proposed works area is located entirely outside the boundary of this SPA.</p> <p>There are no watercourses on the site, therefore there are no source-pathway-receptor linkages between the application site and this SPA and significant effects arising from pollution during construction or operation can be ruled out.</p> <p>The site does not support any habitat that could be used by the QIs of this SPA and significant effects upon these species will not arise.</p>

Figure 3.6. Location of the proposed development boundary and Natura 2000 sites located within a 15km radius of the site.



The habitats recorded on site are described below, no Annex I habitats were recorded within the proposed development site. The site habitats have been defined using Fossitt's 'A Guide to Habitats in Ireland'. The application site does not lie within or adjacent to any area that has been designated for nature conservation purposes.

Site habitats using the Fossitt's Guide to Habitats in Ireland were identified. Several habitat types were identified:

- Amenity Grasslands - (GA2)
- Buildings and Artificial Surfaces - (BL3).

The NHAs (pNHAs) located in the vicinity of the proposed development site are: Dingle Glen pNHA (001207), Fitzsimon's Wood pNHA(001753), Loughlinstown Woods pNHA (001211), Ballybetagh Bog pNHA (001202), Dalkey Coastal Zone And Killiney Hill pNHA (001206), Dodder Valley pNHA (000991), South Dublin Bay pNHA (000210), Glenasmole Valley pNHA (001209), Ballyman Glen pNHA (000713), Knocksink Wood pNHA (000725), Grand Canal pNHA (002104), Royal Canal pNHA (002103), North Dublin Bay pNHA(000206), Powerscourt Woodland pNHA (001768).

The pNHA's are designated for terrestrial habitats and therefore there is no pathway for the proposed development to impact on these sites.

It is concluded in the AA Screening that:

AA of the proposed development is not required as it can be excluded, on the basis of objective information provided in this report, that the proposed development, individually or in combination with other plans or projects, will not have a significant effect on any European sites."

3.5 PRODUCTION OF WASTE

The waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal.) Waste contractors will be employed to physically transport waste to the final waste disposal / recovery site. It is therefore imperative that the proposed facilities management company undertake on-site management of waste in accordance with all legal requirements and employ suitably permitted/licensed contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contractor handle, transport, and reuse/recover/recycle/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

3.6 POLLUTION AND NUISANCES

There are potential short-term nuisances such as dust, noise, as well as the potential for pollution of surface water/ groundwater associated with construction activities. The construction activities shall only take place in accordance with standard construction times or permitted times, for example 08:00 to 18:00 Mondays to Fridays inclusive, between 08:00 to 13:00 hours on Saturdays and not at all on Sundays and public holidays. No activity, which would reasonably be expected to cause annoyance to residents/users in the vicinity, will take place outside of these hours.

During the operation of the proposed development the complex will be managed effectively to avoid pollution and nuisances. It is deemed to be a negligible risk when the site is constructed and operational.

3.7 RISK OF MAJOR ACCIDENTS AND/OR DISASTERS

3.7.1 Landslides, Seismic Activity and Volcanic Activity

There have been no recorded landslide events at the site. Due to the local topography and the underlying strata, there is a negligible risk of a landslide event occurring at the site. There is a very low risk of seismic activity at the proposed development site. There are no active volcanoes in Ireland so there is no risk from volcanic activity.

3.7.2 Flooding/Sea Level Rise

The potential risk of flooding on the site was conducted by reviewing historical information, identifying sources of potential flood risk to the site, and using predictive information.

All relevant flood maps for the area have been reviewed for the proposed development which assessed the potential flood risk associated with fluvial, groundwater, coastal and pluvial flooding. Overall, the flood risk to and from the development as proposed is considered to be Low. The development as proposed is not predicted to result in an adverse impact to the existing hydrological regime of the area or increase flood risk elsewhere and is therefore considered to be appropriate from a flood risk perspective. Please refer to Section 4.2.8 which assesses flood risk in more detail.

3.7.3 Major Accidents/Hazards

The potential interaction with sites registered under the Seveso Directive (Directive 82/501/EEC, Directive 96/82/EC, Directive 2012/18/EU) and the Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the “COMAH Regulations”), which implement the latest Seveso III Directive (2012/18/EU) has been considered in respect to notified installations and their proximity to the proposed development site.

Due to the proposed development falling >8km from the closest Seveso site, the site will not form a constraint to the proposed development at this location.

3.7.4 Minor Accidents/Leaks

There is a potential impact on the receiving environment as a result of minor accidents/leaks of fuel/oils during the construction. However, the implementation of the mitigation measures set out in this report will ensure that the residual effect on the environment is imperceptible.

3.8 RISKS TO HUMAN HEALTH

The EC 2017 Guidance on the preparation of the Environmental Impact Assessment Report outlines that human health is a very broad factor that is highly project dependent. The guidance states: The notion of human health should be considered in the context of the other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study.

The EPA guidance explains that the scope of population and human health is project dependent but should consider significant impacts likely to affect aspects such as: convenience (expanded range of transport options); nuisance/ disturbance from lighting; displaced settlement patterns (residential); employment opportunities; settlement patterns; land use patterns; access for tourism, amenity, health impacts and/or nuisance due to noise, dust, or water pollution; and health and safety.

The characteristics of the proposed development, in terms of the risks to human health (for example, due to water contamination or air pollution) have been considered. The primary potential impacts of the proposed development on human health would be increased air pollution, noise, traffic, visual impact, or pollution of groundwater/nearby watercourses as a result of the proposed development.

The subject site is located in an area zoned in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 as Objective ‘F’ ‘To preserve and provide for open space with ancillary active recreational amenities. It is anticipated that a multipurpose sports facility at this location would not have a significant negative impact on local parks, local tourism or shopping amenities that would pose a risk to human health. The proposed development would only serve to continue the existing usage of such facilities. There are a variety of public transport options available to visitors and residents at the subject site. There are pedestrian routes, bus routes and cycling path facilities within reach of the development.

Geological Survey Ireland (GSI) data indicates that the site does not lie within a drinking water protection area. The area is serviced by mains water supply therefore wells are not used for potable water supply. The proposed mitigation measures during

the construction phase, including the implementation of a CEMP, will ensure that there is no impact on groundwater or the stormwater mains.

During the Operational Phase, the proposed development design includes an appropriately designed stormwater network, following the principles of Sustainable Urban Drainage Systems best practice. Wastewater from the site will be directed to the public foul sewer whilst clean surface water from the application site will be directed in the public system following attenuation.

A pre connection enquiry has been submitted to Uisce Éireann for connection to the public water supply and foul sewer.

Wastewater Treatment

Wastewater from the site will be directed to the public foul sewer following the agreement from Uisce Éireann.

- Average domestic discharge = 0.11l/s
- Peak Domestic Discharge – 6 x DWF = 0.66l/s
- Average & Peak non-domestic discharge 3 to 5l/s

4.0 LOCATION AND CONTEXT OF THE PROPOSED DEVELOPMENT

4.1 EXISTING AND APPROVED LAND USE

The site is surrounded primarily by the urban lands of south Dublin (commercial, residential and amenity areas), and the dominant habitats associated with these areas include buildings and artificial surfaces, as well as amenity grasslands and gardens. As stated in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 the site is zoned as Objective 'F' 'To preserve and provide for open space with ancillary active recreational amenities. Nearby recreational facilities include Ballyogan Community Centre, Leopardstown Village Centre, Gaelscoil Shliabh Rua and Stepaside FC.

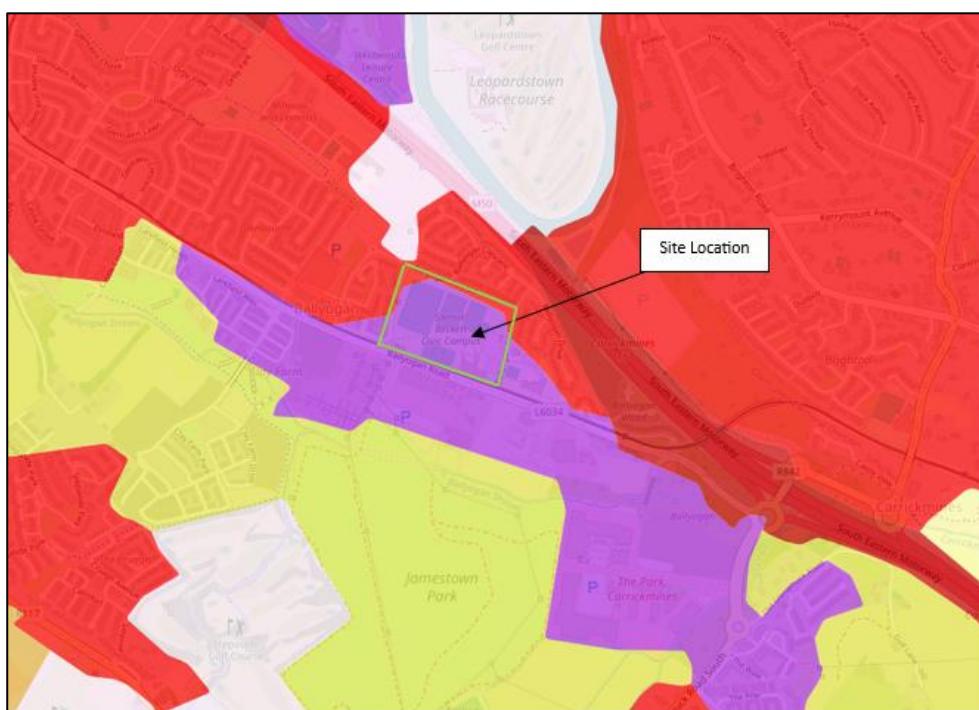
4.2 RELATIVE ABUNDANCE, AVAILABILITY, QUALITY AND REGENERATIVE CAPACITY OF NATURAL RESOURCES IN THE AREA AND ITS UNDERGROUND

4.2.1 Land Use

According to the EPA Mapping using the "Corine 2018" land cover data indicates that the predominant land use of the site is 'Artificial Surfaces' (Code_121). The lands surrounding the site have different cover types consisting of discontinues urban fabric. Historical OSI maps (1837) shows the Site as being undeveloped land. The Ordnance Survey maps for the area (1837 & 1888 - 1913) shows the site as being undeveloped lands.

The 1995-2005 aerial photographs show the site as being undeveloped land and residential housing located to the north, west and east of the site. The 2013-2018 aerial photographs show a carpark and pitches developed to the southeast of the proposed development site. The Corine Landcover (2018) for the site is presented below Figure 4.1.

Figure 4.1: Corine Landcover (2018)



4.2.2 Hydrogeology

According to GSI, the Groundwater Vulnerability represents the intrinsic geological and hydrogeological characteristics that determine the ease at which groundwater may be contaminated by human activities. The vulnerability of the groundwater depends on the time travel of infiltrating water, the quantity of contaminants that reach the groundwater and the contaminant attenuation capacity of the geological materials through which the water and contaminants infiltrate. The final vulnerability rating of an area is determined by the permeability and thickness of the subsoils underlying the groundwater, and the type of Recharge sources (diffuse or point source).

Therefore, areas where the infiltrating water and contaminants move faster from land to groundwater with high permeability are more vulnerable. According to the GSI the vulnerability classification for the proposed development site is 'High (H)' likely based on the presence of high permeability sand and gravel subsoils. There were no karst features identified adjacent to the site. The groundwater vulnerability map for the proposed development site is presented below in Figure 4.2.

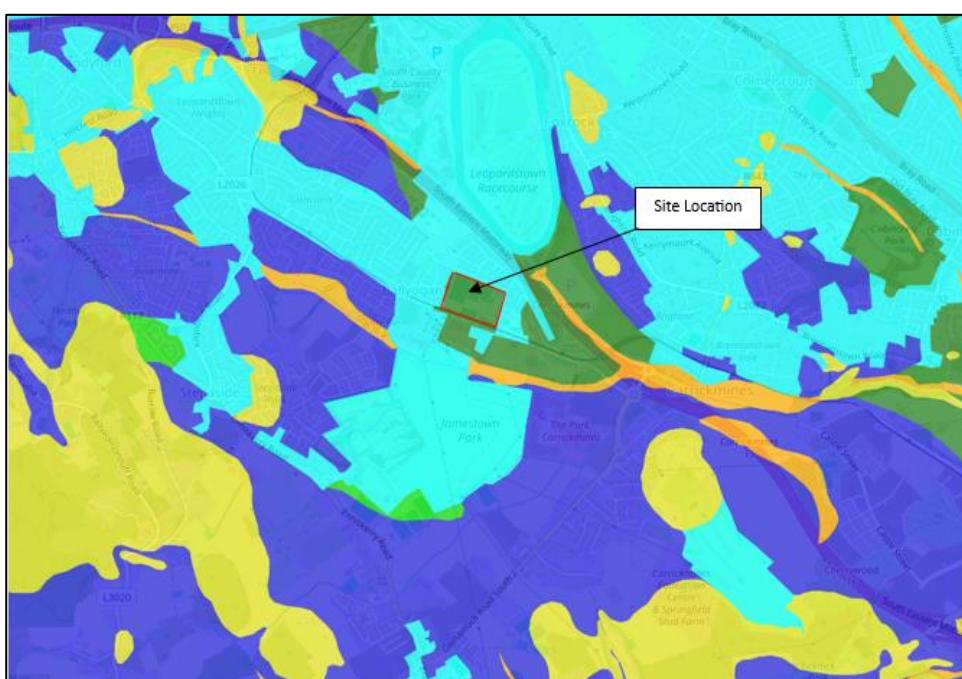
Figure 4.2: Groundwater Vulnerability



4.2.3 Soils

The "Teagasc Soils" from the GSI Mapping indicates the predominant soil type underlying the proposed development area to be till derived chiefly from limestone described as derived from mainly calcareous parent materials. The Soil Cover map for the site is presented below Figure 4. 3.

Figure 4.3: Soil Cover



4.2.4 Quaternary Sediments

The quaternary geological period extends from about 1.5 million years ago to the present day and is sub divided into two epochs: the Pleistocene epoch, which covers the Ice Age period, and extends up to 10,000 years ago and the Holocene Epoch, which extends from that time to the present day. Information available on the GSI online Mapping ("Quaternary Sediments") indicate that the proposed development site is classified as 'Till derived from limestones' (refer to Figure 4.4).

Figure 4.4: Quaternary Sediments



4.2.5 Bedrock Geology /Aquifer

The information obtained from the GSI Map indicates that the proposed development site is predominantly underlain by Granites & other Igneous Intrusive rocks. The Bedrock geology for the proposed site is presented below in Figure 4.5.

Figure 4.5: Bedrock Geology



4.2.6 Hydrology

The application site lies within the Ovoca-Vartry Hydrometric Area (10) and Catchment (10), the Dargle Sub-Catchment (010) and the Carrickmines Stream Sub-Basin (040). There are no watercourses within or adjacent to the application site. The Carrickmines River is ~208m north of the site and the Barnacullia Stream is ~232m south of the site. The Carrickmines River is largely culverted as it flows close to the M50 and through the sub-urban lands near Leopardstown. These streams merge near Carrickmines and this river continues to flow east / south-east until its confluence with the Shanganagh River near Cherrywood. The Shanganagh River flows east and it flows into Dublin Bay near Shanganagh (where there are no Natura 2000 designations).

The WFD classification scheme for water quality includes five status classes: high, good, moderate, poor, and bad. 'High status' is defined as the biological, chemical, and morphological conditions associated with no or very low human pressure. This is also called the 'reference condition' as it is the best status achievable - the benchmark.

Assessment of quality is based on the extent of deviation from these reference conditions. 'Good status' means a 'slight' deviation from this condition, 'moderate status' means 'moderate' deviation, and so on. The EPA have classified the ecological status of the Barnacullia Stream and the Carrickmines River as good status. The Shanganagh River has also been classed as good status. Under the requirements of the Water Framework Directive, this is satisfactory, and this status must be maintained.

The main hydrological features associated with the site is presented in figure 4.6.

Figure 4.6. Hydrological Features of the Area



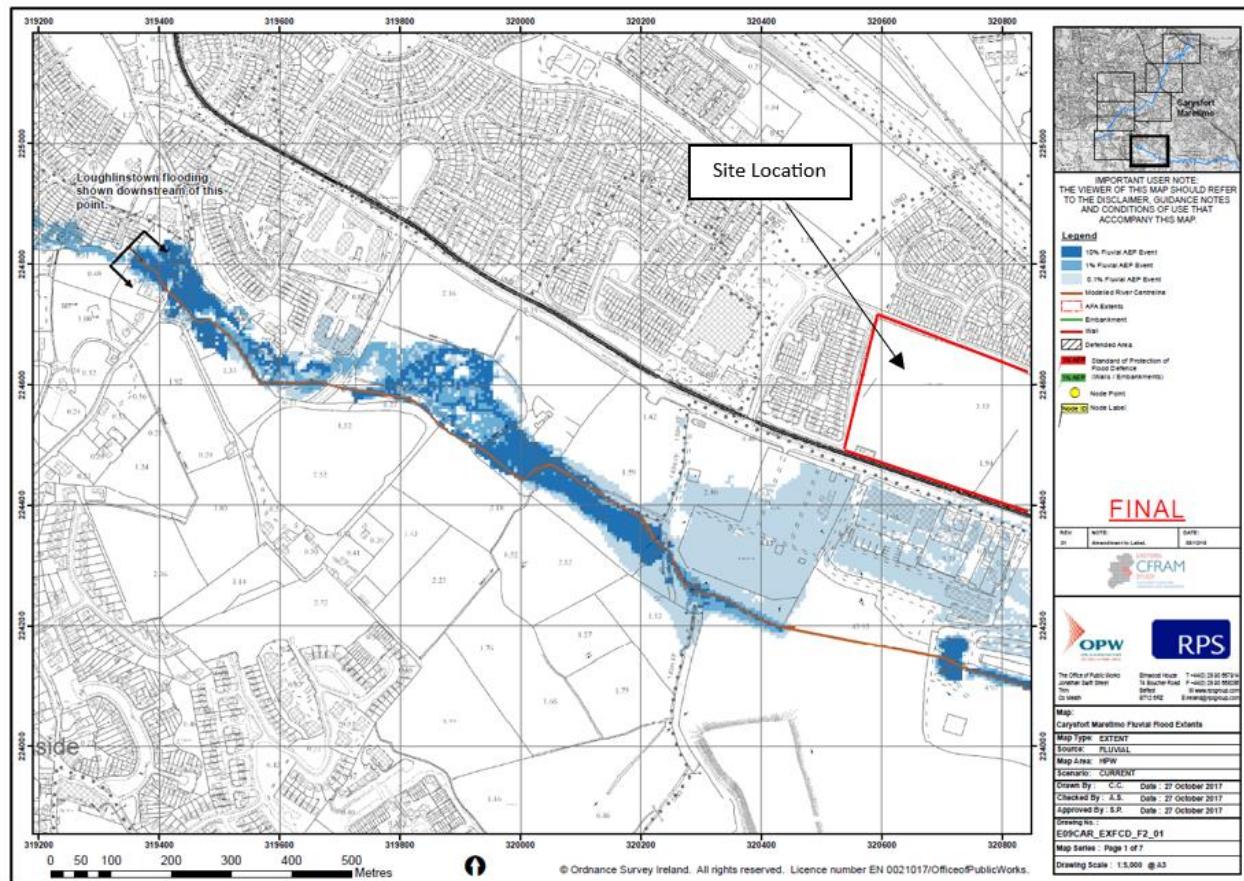
4.2.7 Flood Risk

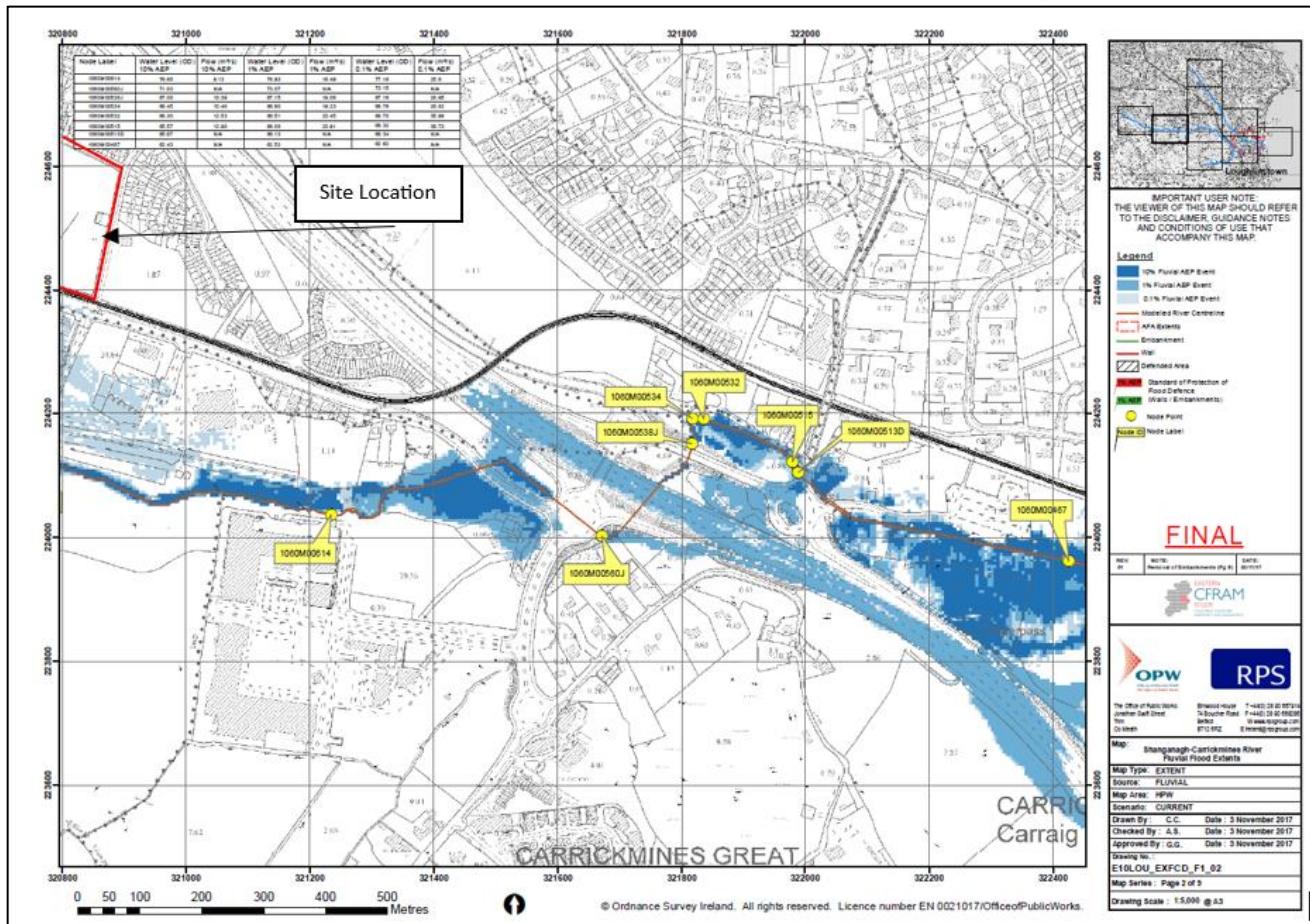
The development site is not identified as an area susceptible to flooding and there is no history of flooding at the site by the Dún Laoghaire-Rathdown County Development Plan and CFRAM mapping. The CFRAMS Map and Dún Laoghaire-Rathdown Flood Map both indicate that the site lies outside of Flood Zones A and B and can therefore be considered to be located within Flood Zone C. Surface water run-off discharge rates from the development site may be increased due to the increase in the area of impermeable surfaces, however the implementation of SuDS features will maintain runoff rates at, or below, existing greenfield runoff rates. The implementation of SuDS measures will mitigate the risk of flooding outside of the development site. Given the operational design measures proposed, the distance from the Carrickmines River and the robust nature of river habitats, no significant impact on water quality is predicted to occur and there will be no impact on the conservation objectives of any Natura Sites or the Carrickmines River due to operational surface water discharges.

Figure 4.7. Location of Past Flood Events (Site Marked at X)



Figure 4.8. Map showing no evidence of Flooding at the site.





4.2.8 Biodiversity

The potential ecological impacts of proposed development have been considered in terms of the sensitivity of the location through the Ecological Impact Assessment (EIA) that has been prepared by Noreen Mc Loughlin MSc, MCIEEM Ecologist in conjunction with Traynor Environmental Ltd.

A Bat (Site Walkover) and Mammal survey was also conducted by Dr Tina Aughney of Bat Eco Services. In relation to bats the site was surveyed to determine if the location has bat roosting, commuting and foraging potential. A site visit was undertaken on 20th January 2024 concluded that the proposed development site has a low potential for local bat populations due to the existing street lighting associated with buildings and pedestrian paths. The Mammal (Trail Camera Survey) was carried out from the 2nd February to the 9th February 2024. Trail cameras were deployed in four survey periods and four camera types used. Only one species of terrestrial mammal was recorded: Red Fox. A minimum of two foxes (general size and markings) are considered to use the survey area. The report concludes that "it is important to ensure that Red foxes can continue to traverse safely through the proposed development site safely. Any sort of fencing proposed must allow mammals to continue to access the site and not become "trapped" along an impenetrable fence line."

Winter bird surveys was also carried out by Dr Hugh Delayney (Ornithologist) during January and February 2024, which included 5 winter bird surveys. The report concluded that "the site is not a significant ex-situ foraging or roosting site for species of qualifying interest from nearby Special protection areas (SPA's). A selection of some passerines typical of parkland in suburban Dublin were recorded and remained consistent throughout the surveys."

The site is surrounded primarily by the urban lands of south Dublin (commercial, residential and amenity areas). No flora or terrestrial fauna species or habitats of national or international conservation importance were noted on site during the survey.

The nearest European sites to the Proposed Development South Dublin Bay and River Tolka Estuary SPA 004024 located 4.7km east at its closest point. The Proposed Development is located within the Ovoca-Vartry Hydrometric Area (10) and Catchment (10), the Dargle Sub -Catchment (010) and the Carrickmines Stream Sub-Basin (010). A review of aerial photography, Ordnance Survey Ireland (OSI) mapping and OSI Geographical Information System (GIS) data for rivers and streams indicates that there are no notable surface water features onsite and no direct hydrological pathways to offsite surface water bodies.

The accompanying AA Screening Report has assessed the potential for significant effects of the construction phase and operational phases of the proposed development on Natura 2000 sites and habitat loss/alteration, habitat/species fragmentation, disturbance and/or displacement of species, change in population density and changes in water quality. It has been objectively concluded by the Appropriate Assessment (AA) Screening Report that:

1. The Proposed Development is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The Proposed Development is unlikely to either directly or indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The Proposed Development, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to conclude that significant effects can be excluded at the screening stage.

4.3 ABSORPTION CAPACITY OF THE NATURAL ENVIRONMENT

The proposed development due to its size and localised nature will not have any effect on wetlands, riparian areas, river mouths, coastal zones, marine environments, mountain or forest areas, nature reserves, or densely populated areas.

The development site is not located within or adjoining an Architectural or General Conservation Area and is not located within or adjoining a Native Woodland Trust and is not covered by protected views, scenic routes, or viewpoints.

5.0 TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS

This section sets out the likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2 (as set out in Sections 4 and 5 above), with regard to the impact of the project on the factors specified in paragraph (b) (i) (I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act (as amended).

The quality, magnitude and duration of potential impacts are defined in accordance with the criteria provided in the Guidelines on Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022) this criterion is duplicated in Table 5.1.

Table 5.1 Description of Effects

Characteristic	Term	Description
Quality of Effects It is important to inform the non-specialist reader whether an effect is positive, negative, or neutral	Positive	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative/Adverse	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Describing the Significance of Effects 'Significance' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see Determining Significance).	Imperceptible	An effect capable of measurement but without significant consequences.
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects	An effect, which by its character, magnitude, duration, or intensity alters a sensitive aspect of the environment.
	Very Significant	An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the environment.
	Profound Effects	An effect which obliterates sensitive characteristics
Describing the Extent and Context of Effects Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly, or increasingly experienced.	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)

Describing the Probability of Effects Descriptions of effects should establish how likely it is that the predicted effects will occur so that the CA can take a view of the balance of risk over advantage when making a decision	Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Characteristic	Term	Description
Describing the Duration and Frequency of Effects Duration 'is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	Momentary Effects	Effects lasting from seconds to minutes
	Brief Effects	Effects lasting less than a day
	Temporary Effects	Effects lasting less than a year
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years
	Long-term Effects	Effects lasting fifteen to sixty years
	Permanent Effects	Effects lasting over sixty years
	Reversible Effects	Effects that can be undone, for example through remediation or restoration
	Frequency of Effects	Describe how often the effect will occur. (Once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

5.1 POPULATION AND HUMAN HEALTH

5.1.1 Construction Phase

The potential impacts of the proposed development on population human health and populations would be nuisances such increased air pollution (dust), noise, traffic, and visual impacts of the construction phase. The likely potential impact of the proposed development with respect to population and human health during the construction phase can be considered to be **negative, moderate to significant and short-term**.

The potentially significant short-term impacts (due to air pollution (dust), noise, traffic) during the construction phase will be mitigated in accordance with the CEMP at construction stage, and through implementation of binding hours of construction.

The construction phase of the proposed development will provide for the temporary employment of 10-20 no. construction workers which will provide benefits for local businesses providing retail or other services to construction workers and potential additional employment in the area.

The residual impact of the proposed development with respect to population human health during the construction phase after the implementation of mitigation measures set out in this report, is **negative, not significant, and short-term**.

Having regard to the foregoing, there is no real likelihood of significant effects on the environment arising from the proposed development in respect of population and human health impacts during the construction phase. Therefore, a requirement for subthreshold EIA does not arise.

5.1.2 Operational Phase

The proposed development will not result in any off-site exceedance of the relevant ambient air quality standards. The proposed development will not generate significant outward noise.

There are no planned direct discharges to water or land, although the risk of accidental discharge or spills exists. A number of design measures are proposed to prevent the contamination of groundwater during the operational phase. The design of the proposed development has due regard for the sensitivity of the surroundings and is not likely to adversely impact on local populations. The proposed development comprises a Multi-Purpose Sports Facility development which is not expected to significantly add to the current noise level of the surround environment. Noise and Vibration impacts are discussed further.

The residual impact of the proposed development with respect to populations and human health during the operational phase is positive, not significant, and long-term. Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of population and human health impacts during the operational phase. Therefore, a requirement for subthreshold EIA does not arise.

5.2 LAND, SOILS, GEOLOGY, HYDROGEOLOGY, HYDROLOGY

5.2.1 Construction Phase

Potential for increased sediment and runoff from excavation, soil handling, removal, and compaction

Earthworks and excavations will be required for construction phase operations to facilitate the sports facility. This will include the excavation of soil and subsoils. The construction works will alter the current drainage regime from the site and the rate and volume of direct surface run-off. The potential impact of this is a possible increase in surface water run-off and sediment loading, which could potentially impact local drainage if not adequately mitigated.

Movement of material will be minimised to reduce the degradation of soil structure and generation of dust. Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations.

The site preparation, excavations and levelling works required to facilitate construction of foundations, access roads and the installation of services will require excavation of soil, stones, and bedrock (if encountered). Soil will be kept onsite where possible, if any material is to be exported it needs to be brought off site by an approved collector or moved with the benefit of an Article 27 declaration. Any material, which is exported from site, if not correctly managed or handled, could impact negatively on human beings (onsite and offsite) as well as water and soil environments.

In the event that soil is required to be taken off site, prior to removal, all excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of possible contaminants in order to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be disposed of by a licensed waste disposal contractor.

Excavated soil will arise during the construction period and will be stored (if required) on site prior to being removed by a specialist contractor.

Stockpiles of soil and construction aggregate can have the potential to cause negative impacts on air and water quality. The effects of soil stripping and stockpiling will be mitigated through the implementation of appropriate earthworks handling protocol during construction. It is anticipated that any stockpiles will be formed within the boundary of the site and there will be no direct link or pathway from this area to any surface water body. Overburden material will be protected from exposure to wind by storing the material in sheltered parts of the site, where possible.

In respect of the foregoing, the residual impact as a result of the potential for increased sediment and runoff from excavation works on, land, soils, geology, hydrogeology, and hydrology during construction is considered to be negative, imperceptible, and short-term.

Potential for contamination from Accidental Spills and Leaks

There is potential for water to become contaminated with pollutants associated with construction activity. Contaminated water which arises from construction sites can pose a significant short-term risk to water quality for the duration of the construction if contaminated water is allowed to percolate to the aquifer or accidental discharges into surface water.

Machinery activities on site during the construction phase may result in run-off of contaminated waters into surface water networks or ground water. Potential impacts could arise from accidental spillage of fuels, oils, paints, cement, etc. which could impact surface water if allowed to runoff into surface water systems and/or receiving watercourses or groundwaters.

The potential impacts during the construction phase are required to be mitigated by ensuring best practice construction with respect to storage of any hazardous substances (fuels, chemicals and other construction materials that may pose a risk to the environment). The construction specific CEMP will set out this best practice construction methodology to manage the risk of accidental spills and leaks. These measures associated with the construction phase are best practice measures and are in no way included to avoid or reduce any potential harmful effects to any European sites, namely South Dublin Bay and River Tolka Estuary SPA 004024. Given the scale and localised nature of the proposed development, and the lack of impact pathways between the Site and surface water bodies there is no likelihood of significant effects on water quality.

The residual impact in respect of the potential for impacts related to contamination from accidental spills on soils, geology, hydrogeology, and hydrology during construction is considered to be **negative, imperceptible, and short-term**.

Dewatering, Run-off, and Sediment Loading

There is the potential for contaminated surface water run-off from site preparation, levelling, landscape contouring and excavations during the construction phase may contain increased silt levels or become polluted from construction activities. Silt water can arise from excavations, exposed ground, stockpiles, and access roads. Construction water containing large amounts of silt or other contaminants such as hydrocarbons has the potential to cause negative, and short-term impacts receiving surface water bodies, or surface water networks, if not adequately mitigated.

A CEMP will detail measures to help ensure that the receiving surface water drainage network is sufficiently protected for the duration of the proposed works. Where dewatering is required during the construction phase, dirty water will be fully and appropriately attenuated, through silt bags, before being appropriately discharged to ensure that no silty or contaminated water from the construction works will be discharged to any stormwater network.

Having regard to the foregoing, there is no real likelihood of significant effects on the environment arising from the proposed development in respect of land, soils, geology, hydrogeology, and hydrology impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.2.2 Operational Phase

Direct and Indirect Discharges Management

A pre connection enquiry has been submitted to Uisce Éireann for connection to the public water supply and foul sewer.

Wastewater Treatment

Wastewater from the site will be directed to the public foul sewer following the agreement from Uisce Éireann.

- Average domestic discharge = 0.11l/s
- Peak Domestic Discharge – 6 x DWF = 0.66l/s
- Average & Peak non-domestic discharge 3 to 5l/s

Surface Water Treatment

Clean surface water from the application site will be directed in the public system following existing 900m³ attenuation on site. Surface water design has been undertaken using best practice and integrated Sustainable Urban Drainage Systems in order to replicate the natural characteristics of rainfall run-off from the proposed development. As well as attenuating the water on site, the quality of the surface water will be improved while also providing an amenity through good quality integrated design. In addition to this the surface water drainage will be managed in accordance with the Greater Dublin Strategic Drainage Strategy (GDSDS) with attenuation in soft areas where possible (as per the Dun Laoghaire Rathdown County Development Plan). Therefore, these effects are determined to be negligible.

Conclusions

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of land, soil, geological, hydrogeological, and hydrological impacts during the construction and operational phases. Therefore, a requirement for sub-threshold EIA does not arise.

Figure 5.1 Existing Drainage and Water Main Layout

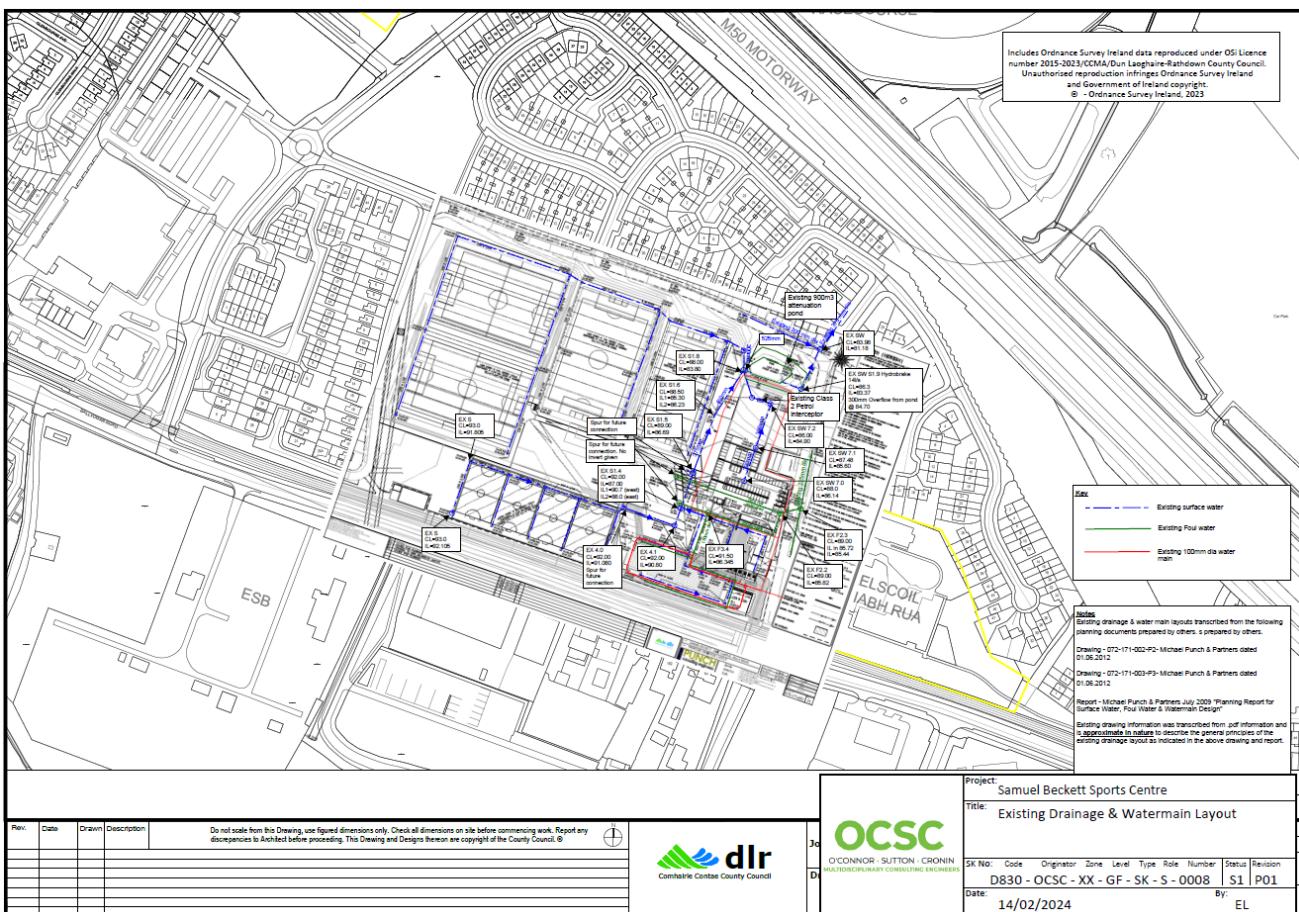
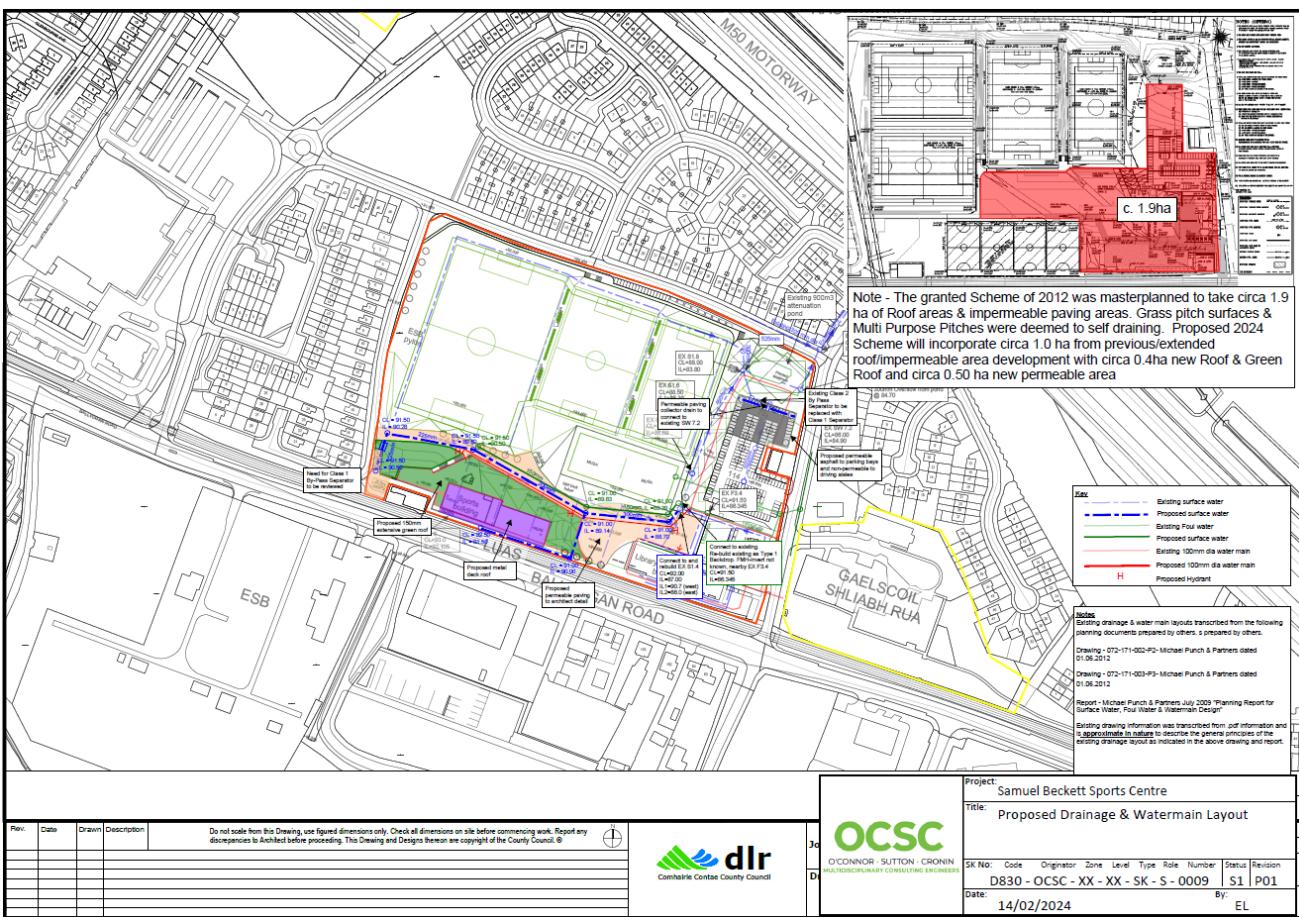


Figure 5.2 Proposed Drainage and Water Main Layout



5.3 BIODIVERSITY

5.3.1 Construction Phase

The potential impact from the proposed development on biodiversity with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive has been considered as a part of the AA Screening Report by Noreen Mc Loughlin Ecologist. The AA Screening Report for the site has confirmed that the site is not under any wildlife or conservation designation. Furthermore, no rare, threatened or legally protected species are known to occur or have been recorded on the site.

Having regard to the foregoing, there is no real likelihood of significant effects on the environment arising from the proposed development in respect of biodiversity impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise. Please refer to the accompanying AA Screening.

5.3.2 Operational Phase

The accompanying AA Screening Report by Noreen Mc Loughlin has assessed the potential for significant impacts of the operational phases of the proposed development on Natura 2000 sites and habitat loss/alteration, habitat/species fragmentation, disturbance and/or displacement of species, change in population density and changes in water quality.

The development during operation is considered to have no impact on the biodiversity in the area due to the distance from the site to the nearest SACs and site does not lie within or adjacent to any area that has been designated for nature conservation purposes. There are no habitats of biodiversity value on the application site.

Having regard to the foregoing, there is no real likelihood of significant effects on the environment arising from the proposed development in respect of biodiversity impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

It can be concluded objectively that this proposed development does not need to proceed to Stage II of the Appropriate Assessment process. There will be no impact upon the integrity, or the conservation objectives of the Natura 2000 sites identified. The habitats and species associated with this site will not be adversely affected.

5.4 AIR QUALITY AND CLIMATE

Air Quality

The Air Quality Standards (AQS) Regulations describe the air quality zoning adopted in Ireland as follows:

- Zone A (Dublin Conurbation)
- Zone B (Cork Conurbation)
- Zone C (16 Cities and Towns with population greater than 15,000); and
- Zone D (Rural Ireland: areas not in Zone A, B and C).

The proposed development is in Zone A. Based on published air quality data for the Zone A area in the vicinity of the subject site, it may be concluded that the air quality at the subject site may be characterised as being good with no exceedances of the Air Quality Regulations 2011 limit values of individual pollutants.

The quality of existing air quality at the subject site must be maintained and improved where possible as a result of the proposed development to ensure that local human health and the ecological environment is not adversely affected.

The EPA manages the National Ambient Air Quality Network. This network sets legislative limits and target values for the protection of human health and vegetation. Air quality in Ireland is generally good, however, there are concerning localised issues that are impacting negatively on the air we breathe. Air quality monitoring results in 2021 showed that fine particulate matter (PM_{2.5}) mainly from burning solid fuel in our homes, and nitrogen dioxide (NO₂) mainly from road transport, remain the main threats to good air quality. EPA monitoring shows that PM_{2.5} and NO₂ levels are within the current EU legal limits, however these pollutants exceed the World Health Organisation (WHO) Air Quality guidelines (AQGs) for health.

5.4.1 Construction Phase

Construction stage traffic and embodied energy of construction materials are expected to be the dominant source of greenhouse gas emissions as a result of the construction phase of the development. Construction vehicles, generators etc., may give rise to some CO₂ and N₂O emissions. However, due to the short-term nature of these works, the impact on climate will be **not significant, and short term**.

Nevertheless, some site-specific mitigation measures can be implemented during the construction phase of the proposed development to ensure emissions are reduced further. In particular the prevention of on-site or delivery vehicles from leaving engines idling, even over short periods. Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site.

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust and PM₁₀/PM_{2.5} emissions. While construction dust tends to be deposited within 350 m of a construction site, the majority of the deposition occurs within the first 50 m based on Transport Infrastructure Ireland (TII) guidance (2011).

The scheme has potential for dust impacts during construction due to the separation distance between the site and the nearest sensitive receptors. Therefore, during construction, there is potential for dust impacts on these sensitive receptors which would be considered in the absence of mitigation **negative, significant, and short-term**.

The pro-active control of fugitive dust will ensure the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released. The main contractor will be responsible for the coordination, implementation and ongoing monitoring of the dust minimisation measures. The key aspects of controlling dust are listed below. A detailed CEMP will be prepared and followed at construction stage by the appointed contractor.

In summary the measures which will be implemented will include:

- During very dry periods when dust generation is likely, construction areas will be sprayed with water.
- Exhaust emissions from vehicles operating within the site, including trucks, excavators, diesel generators or other plant equipment, will be controlled by the contractor through regular servicing of machinery.
- Vehicle speeds will be limited in the construction site.
- The surrounding roads used by trucks to access and egress from the site will be cleaned regularly using an approved mechanical road sweeper. Roads will be cleaned subject to local authority requirements. Site roads will be cleaned on a daily basis, or more regularly, as required.
- Wheel-wash facilities will be provided to remove excess mud from wheels. These facilities will be located at the exit from the site and away from sensitive receptors, where possible.
- The technique adopted for all works shall minimise the release of dust into the atmosphere.
- Daily visual inspections will be carried out at locations around the site boundary as required.
- These inspections will monitor the effectiveness of dust mitigation measures.

In the event of dust nuisance occurring outside the site boundary, movements of materials likely to raise dust would be curtailed and satisfactory procedures implemented to rectify the problem before the resumption of construction operations. The residual effects on air quality and climate will be **moderate, negative, short term** during the construction phase. Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of air quality and climate impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.4.2 Operational Phase

In relation to the operational phase of the proposed development, the proposed development will not result in any significant emissions of air quality pollutants or greenhouse gases once operational. Therefore, the potential impact to air quality from the operational phase of the proposed development is expected to be imperceptible.

Therefore, no site-specific mitigation measures are required. Current EPA guidance states that a development may have an influence on global climate where it represents "a significant proportion of the national contribution to greenhouse gases" (EPA, 2003). The "Guidelines on The Information to Be Contained in Environmental Impact Assessment Reports" (2022) states that impacts relevant to adaptation to climate change should be assessed and that projects should be assessed in terms of their vulnerability to climate change. Therefore, the impact to climate from the operational phase of the proposed Project is expected to be imperceptible in terms of national CO₂ emissions and Ireland's agreed limit under the Kyoto Protocol (Framework Convention on Climate Change, 1997, 1999) and the EU Effort Sharing Agreement ("20-20-20" Targets).

The proposed Project will not result in any impacts relevant to adaptation therefore the project will not be vulnerable to climate change. Based on the above the potential effects on Air Quality are **neutral, imperceptible, and short term** for the operational phase. Therefore, the residual impact of the proposed Project on ambient air quality is deemed to be imperceptible.

Having regard to the foregoing, there is no real likelihood of significant effects on the environment arising from the proposed development in respect of air quality and climate impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.5 NOISE AND VIBRATION

5.5.1 Construction Phase

During the construction phase there is potential for temporary impacts on the nearest residential, commercial, and industrial properties due to noise emissions from the plant equipment required for construction. The magnitude of noise generated will be dependent on several factors including the proximity of noise sensitive receptors, construction methods employed, the selection of plant and construction programming. A variety of items of construction methods and plant items will be required during the various phases of the construction project. Noise will be generated primarily from the onsite construction activity however noise can be generated during haulage of construction and waste materials to and from site.

The potential for noise and vibration effects in the absence of mitigation can be characterised as negative, **moderate to significant, and short term** for the construction phase.

There is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. The application of avoidance measures, such as binding hours of construction, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact will not be excessively intrusive. Any impacts will be short term in duration for the construction phase. The

The relevant mitigation measures are set out below:

- Construction Hours will be limited during which noisy site activities are permitted 08:00am to 18:00hrs Monday to Friday and 08:00am to 13:00hrs on a Saturday. No work to be carried out on a Sunday or bank holiday.
- Channels of communication will be established between the Contractor/Developer, Local Authority and Residents.
- A Site Representative will be appointed responsible for matters relating to noise.
- Typical levels of noise will be monitored during critical periods and at sensitive locations.
- Plant will be selected with low inherent potential for the generation of noise.
- All site roads will be kept even so as to mitigate the potential for vibration from lorries.
- Barriers will be erected as necessary around items such as generators or heavy-duty compressors.
- Noisy plant will be sited as far away from sensitive properties as permitted by site constraints.
- Engines, vehicles, and equipment will be switched off when not in use.
- Significant sources of noise will be enclosed.
- Plant will be used and serviced regularly in accordance with manufacturer's instructions.
- Cranes will be shut down during work periods / throttled to a minimum when not in use.
- Machinery having rotating parts will be serviced according to supplier recommendations to prevent friction induced sound.
- Materials should be lowered, not dropped, as far as practicable and safe.

All personnel must be made aware that noisy construction activities resulting in significant noise levels must be minimised and made aware of the above control measures. During the construction stage the following codes and regulations will be adhered to:

- BS 5228:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites, Part 1, and Part 2.
- SHWW (General Application) Regulations 2007 – 2016, Part 5 Noise and Vibration

Noise and vibration effects on the environment following the implementation of standard construction mitigation measures, the residual impact can be characterised as **negative, slight to moderate, and short term** for the construction phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of noise and vibration impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.5.2 Operational Phase

The operation of the proposed development will remain consistent with the type of activity and buildings in the vicinity of the proposed development site. The proposed development will give rise to additional road traffic on public roads, which can give rise to slight to moderate impacts in respect of noise.

The residual effects on noise and vibration are **neutral, imperceptible, and short term** for the operational phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of noise and vibration impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.6 LANDSCAPE AND VISUAL IMPACT

5.6.1 Construction Phase

The change of use of the site from the existing sports pitches and facility to that of a construction site, will give rise to short term and substantially localised effects on landscape character. This effect will be seen through the introduction of the new Multi Purpose complex, machinery, ancillary works, and associated hoarding, etc. Measures will be undertaken to mitigate any potentially adverse construction-related effects on immediately adjoining neighbours, particularly on the residents, commercial and industrial on the adjacent lands. Operation of a well-managed organised and planned construction site, with adequate control of construction traffic and working activity, will be undertaken which is key to avoiding and minimising impact.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of landscape and visual impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.6.2 Operational Phase

The proposed development is consistent with the land use zoning designation. In keeping with this context, the proposed development, once complete should integrate visually with the existing landscape and the newly planted trees and shrubs should develop and anchor the development in its surrounds and will not give rise to any significant landscape and visual effects. The design and layout of the proposed development is appropriate in terms of the existing site character, zoning, and context. The residual impact on landscape and visual impact during construction will be long term, and range from **imperceptible to moderate, neutral to positive**.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of landscape and visual impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.7 CULTURAL HERITAGE, AND ARCHAEOLOGY

5.7.1 Construction Phase

The Record of Monuments and Places (RMP) and the Sites and Monuments Record (SMR) do not record any monuments within the proposed site. The closest SMR site is DU026-001- Enclosure: Jamestown (Rathdown By.) located 0.1km south of the proposed site.

The proposed development works will be **neutral, imperceptible, and short term**.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of cultural heritage and archaeological impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.7.2 Operational Phase

The operational phase of the proposed development is not predicted to have any impact on archaeological, architectural, and cultural heritage.

In this regard any impacts upon cultural heritage and archaeological are considered to be neutral, imperceptible, and long term.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of cultural heritage and archaeological impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.8 TRAFFIC AND TRANSPORTATION

5.8.1 Construction Phase

During the construction phase of the proposed development, there will be additional traffic movements to/from the site from construction personnel, security staff, professional staff (i.e., design team, utility companies), excavation plant, dumper trucks and deliveries/removal of materials (waste/spoil). In order to transport construction material to the site in the most efficient and environmentally sensitive manner appropriate routes need to be identified. Having considered the site location, it is proposed that all vehicular access will be via the creation of a new entrance that is just off a local, third-class road.

It is not expected that the proposals will result in a material deterioration of existing road conditions.

After the implementation of mitigation measures the potential impact on Traffic and Transportation are **negative, short term and not significant** for the construction phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of traffic and transportation impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.8.2 Operational Phase

The proposed scheme will see an increased level of traffic coming to and from the site when compared to the existing situation. It is proposed that all vehicular access will be via the creation of a new entrance that is just off a local, third-class road. The potential impact on Traffic and Transportation during the operational phase are **negative, long term and not significant** for the operational phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of traffic and transportation impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.9 MATERIAL ASSETS, INCLUDING WASTE MANAGEMENT

The proposed development will have an impact upon other material assets such as 'built services and infrastructure such as electricity, telecommunications, gas, and water supply.

5.9.1 Construction Phase

Utilities

Welfare facilities (canteens, toilets etc.) will be available within the construction compound and this will remain in place for the construction of the proposed development. The offices and site amenities will initially need to have their own power supply (generator), water deliveries and foul water collection until connections are made to the mains networks.

Electrical connections will be made by suitably qualified personnel following consultation with the relevant authorities and will be cognisant of subsequent construction works. High voltage connections will be established for heavy duty equipment and site facilities, as required. All electrical works, including connection to the ESB network will be carried out by a suitably qualified contractor. The power and electrical supply requirements during construction are relatively minor, and there is no potential impact anticipated on existing users.

Water supply required for welfare facilities, dust suppression and general construction activities will be sourced from the existing public supplies. Although before connections are established to the water supply it may need to be trucked onto site. As with electrical works, this will be carried out by a suitably qualified contractor. It will be necessary to service the site with a reliable and safe water supply.

Site welfare facilities will be established to provide sanitary facilities for construction workers on site. The main contractor will ensure that sufficient facilities are always available to accommodate the number of employees on site. Wastewater from the site will be directed to the public foul sewer whilst clean surface water from the application site will be directed in the public system following attenuation.

Electrical connections will be made by suitably qualified personnel following consultation with the relevant authorities and will be cognisant of subsequent construction works. The power and electrical supply requirements during construction are relatively minor, and there is no potential impact anticipated on existing users.

In respect of the foregoing, the predicted impacts upon material assets (utilities) are considered to be neutral, imperceptible, and short term.

Waste and Waste Management

There will be some waste materials produced in the construction of the proposed scheme which will be disposed of using licensed waste disposal facilities and contractors. The scale of the waste production in conjunction with the use of licensed waste disposal facilities and contractors does not cause concern for likely significant effects on the environment.

The accompanying Preliminary Resource Waste Management Plan prepared by Traynor Environmental Ltd details the methodologies employed for the control, management, monitoring, and disposal of waste from the site. A RWMP will be prepared and followed at construction stage by the appointed contractor.

The plan sets out the measures used to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information to the residents of the development.

Other than waste generated from materials necessary for the construction of the building the proposed development will not produce significant volumes of waste.

All waste arising during the construction phase will be managed and disposed of in a way that ensures compliance with the Waste Management Act 1996 as amended and associated amendments and regulations and the Waste Management Plan. In the event, there is excess material with no defined purpose, it will be transported to an authorised soil recovery site or notified to the EPA as a by-product when it will be beneficially used.

It is considered that the proposed development will not have any significant impact in terms of resources or waste generation.

A carefully planned approach to waste management will ensure that the impact on the environment will be **short-term, neutral, and imperceptible**.

Conclusion

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of material asset impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.9.2 Operational Phase

Utilities: Foul Sewer, Stormwater and Potable Water

Water supply and wastewater will be provided via the existing public mains network. Foul water from the site will be directed to the public sewer. There will be no requirement for an on-site wastewater treatment system and percolation area.

As discussed in previous sections, Surface water from the site will be discharged to the public storm water network.

The proposal will have an impact on servicing and utilities infrastructure in the area, requiring connections to water, electricity, supplies, as well as connecting to the existing road network. Due to the location of the site, the development is well placed to benefit from in-situ infrastructure provision and will therefore constitute a sustainable use at the location.

In respect of the foregoing, the predicted impacts upon foul sewer, stormwater and potable water are considered to be neutral, imperceptible, and long term.

Waste and Waste Management

The proposed development will give rise to a variety of waste streams during the operational phase, i.e., when the project is completed, and fully operational. Most of the waste will be generated by the residents during the fully operational stage.

An Operational Waste Management Plan will be prepared at tender stage, which will outline measures to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information to the residents of the development.

During the operational phase, a structured approach to waste management as set out will promote resource efficiency and waste minimisation. Provided the mitigation measures are implemented and a high rate of waste prevention, reuse, recycling, and recovery is achieved, the predicted impact of the operational phase on the environment will be long-term, neutral, and imperceptible.

Conclusion

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of material asset impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.10 POTENTIAL IMPACTS FROM INTERACTIONS

This section discusses the potential interactions and inter-relationships between the environmental factors discussed in the preceding sections. This section covers both the construction and operational phase of the proposed development.

In accordance with the guidance not only are the individual significant impacts required to be considered when assessing the impact of a development on the environment, but so must the interrelationships between these factors be identified and assessed.

The majority of the interactions that are considered to have a neutral effect (i.e., no effects or effects that are imperceptible, within the normal bounds of variation or within the margin of forecasting error).

There is a potential interaction between land, soil geology, hydrogeology and hydrology, and biodiversity due to the potential for poorly managed surface water run-off during the construction phase of the proposed development. There is a potential for interactions between air quality during construction activities on human health via dust generation. There is a potential for interactions between noise and vibration during construction activities on human health. However, these potential interactions are short-term and associated with the construction phase.

During the operational phase, there is a potential interaction between land, soil geology, hydrogeology and hydrology, and biodiversity due to the potential for poorly managed surface water run-off, and foul water discharge during the operational phase of the proposed development. The designed Drainage will ensure that this interaction is neutral, and not significant.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of interactions between environmental factors during the construction or operational phases. Therefore, a requirement for sub-threshold EIA does not arise.

5.11 POTENTIAL CUMULATIVE IMPACTS

As part of the assessment of the proposed development, the likelihood of potential cumulative impact of the proposed development has been considered with any future development (as far as practically possible) and the cumulative impacts with developments in the locality (including planned and permitted developments).

This list of significant consented development is shown in Table 5.3. The review did not cover insignificant small extensions/applications, changes of use, retention, and other minor alterations in the vicinity of the proposed development. These proposed and consented development have been, where relevant, considered as a part of the overall project impact.

Cumulative impacts are those impacts that relate to incremental / additive impacts of the planned development in addition to historical, present, or foreseeable future actions. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

Each project currently permitted in the wider area is subject to planning conditions which include appropriate mitigation measures to minimise environmental impacts. Provided that mitigation measures for other developments are implemented as permitted, there will be no significant cumulative effects.

There is potential for significant cumulative effects, in respect of traffic, noise and dust during a simultaneous construction phase, and traffic impacts during the operational phase with the permitted development. There has been one planning application granted in the last 2 years within 500m of the site.

Any future development will be required to incorporate appropriate mitigation measures (e.g., noise management, dust management, traffic management, management of water quality in run-off water, landscape, etc) during the construction phase as such any cumulative development will not have a significant effect on human health, material assets, land, soils, geology, hydrogeology, and hydrology.

Any future development proposed on the surrounding lands should be cognisant with the zoning and will be subject to EIA and/or planning conditions which include appropriate mitigation measures to minimise environmental impacts.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development and the surrounding developments being constructed concurrently in respect of cumulative impacts during the construction or operational phases. Therefore, a requirement for sub-threshold EIA does not arise.

6.0 FINDINGS AND CONCLUSIONS

The purpose of this EIA Screening Report has been to consider whether there is a requirement for the preparation of an Environmental Impact Assessment Report (EIAR) with the information required under Schedule 7A of the Planning and Development Regulations 2001, as amended, to enable the competent authority to determine in light of the criteria set out under Schedule 7 of those regulations whether the proposed development is likely to have significant effects on the environment.

The proposed development and component parts have been considered against the thresholds outlined in Schedule 5, Part 2 Class 10 (a) to (m). The most relevant project type in the context of the proposed development is Class 10 (b) (ii) and (iv).

10. Infrastructure projects

10 (b) (ii) Construction of a car-park providing more than 400 spaces, other than a car park provided as part of, and incidental to the primary purpose of, a development.

(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

On the basis of the evaluation set out in Section 2.0 an EIA for the proposed Project is not mandatory. The proposed project is considered to be a sub-threshold development and therefore, the competent authority is required to assess whether the proposed development is likely to have significant effects on the environment in order to determine whether the submission of an EIAR is required. The information necessary to enable this screening assessment has been provided in this report and the methodology used has been informed by the available guidance, legislation, and directives.

Traynor Environmental Ltd has considered the proposed development and assessed the potential for significant environmental effects and the need for an EIAR is documented in Sections 3.0, 4.0 and 5.0. The author of this report acknowledges that it is for the competent authority to reach a determination to whether the submission of an EIAR is required.

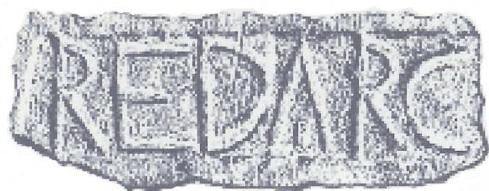
Based on the information provided in this report the competent authority, have reached the following determination from above:

It is concluded having regard to the nature, scale, and location of the subject site, that there is no likelihood of significant effects as a result of the proposed development on the environment (direct, indirect, or cumulatively with other development) and therefore it is considered that an Environmental Impact Assessment Report (EIAR) is not required in this instance.

SAMUEL BECKETT CIVIC CAMPUS
BALLYOGAN, CO. DUBLIN
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX A – RED ARC CONSULTING LTD. LETTER





Traynor Environmental Ltd,
Belturbet Business Park,
Creeny,
Belturbet, Co. Cavan

FAO: Nevin Traynor

DLRCC Part 8 Application for a development at the Samuel Beckett Civic Campus, Ballyogan, Co Dublin. Archaeological Potential.

Dear Nevin,

I have examined the relevant source materials for this part of County Dublin and how the proposed development might impact on the archaeological potential of the area.

The proposed development is to be located on the southern part of the Civic Campus site, adjacent to the LUAS line and the Ballyogan Road. The chosen site is approximately where the all-weather pitches are currently located, an area that has clearly been developed and subject to impacts during construction of the pitches.

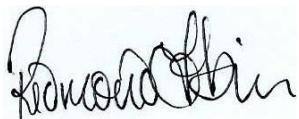
The development site has not been subject to any licensed archaeological investigation. The townland of Ballyogan has been subject to test excavations and monitoring in the past which defines the townland as having a very scattered archaeological heritage.

The proposed development is located 131m north of the Recorded Monument DU026-001---- which is listed as an enclosure. This enclosure was depicted on the historical Ordnance Survey maps as a tree ring / landscape feature which was built over in the past. 300m south of the site is the Recorded Monument DU026-115---- which is listed as a Linear Earthwork and likely to be an extant part of the

Pale boundary. The Carrickmines Castle complex lies 1.3km to the east of the development site.

The paucity of archaeological evidence from this area couple with the fact that the proposed development will be located on part of the Civic Campus that has already been developed would suggest that the archaeological risk potential of this site is low.

It would be a wise precaution to monitor the removal of the all-weather pitches and preparation of the site for the construction of the new building. This work should be carried out by a suitably qualified archaeologist under licence from the National Monuments Service of the Department of Housing, Local Government and Heritage.



Redmond Tobin B.A. MIAI
RedArc Consulting Ltd

19/02/2024

SAMUEL BECKETT CIVIC CAMPUS

BALLYOGAN, CO. DUBLIN

COMPLETED BY

TRAYNOR ENVIRONMENTAL LTD

APPENDIX B – RESOURCE WASTE MANAGEMENT PLAN (RWMP)



RESOURCE & WASTE MANAGEMENT PLAN

AT

SAMUEL BECKETT CIVIC CAMPUS
BALLYOGAN
CO. DUBLIN



Prepared for

Dún Laoghaire-Rathdown County Council

Prepared by

Traynor Environmental Ltd

Reference Number

24.060 TE

Date of Issue

6th March 2024



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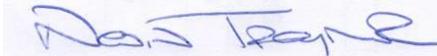


Client: Dún Laoghaire-Rathdown County Council

Traynor Env Ref: 24.060 TE

Status: Final

Date: 6th March 2024

Report Title:	Resource & Waste Management Plan
Doc Reference:	24.060 TE
Client:	Dún Laoghaire-Rathdown County Council
Authorised By:	 Nevin Traynor BSc. Env, H.Dip I.T, Cert SHWW, EPA/FAS Cert. <i>Environmental Consultant</i>

Rev No	Status	Date	Writer	Reviewer
1.0	Final	6 th March 2024	Angela Kelly	Nevin Traynor

This report refers, within the limitations stated, to the condition of the site at the time of the report. No warranty is given as to the possibility of future changes in the condition of the site. The report as presented is based on the information sources as detailed in this report, and hence maybe subject to review in the future if more information is obtained or scientific understanding changes.

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1.0 INTRODUCTION

Traynor Environmental Ltd has prepared this Resource & Waste Management Plan (RWMP) on behalf of Dún Laoghaire-Rathdown County Council for the proposed development at Samuel Beckett Civic Campus, Ballyogan, Co. Dublin. Permission will be sought under Part 8 of the Planning and Development Regulations 2001.

"The proposed development will consist of delivery of a Sustainably Built Multi-Purpose Sports Facility, including large format Sports Hall with spectator seating, 25m 6-lane Swimming Pool with spectator seating, Children's pool, Exercise Equipment Gym, Dance Studios, Fitness Room, Multi-purpose exercise/club rooms, coffee dock, Reception Hub, and ancillary rooms inc. changing rooms, FM office, back office, plant rooms etc.

Revised Site Landscaping to include retention and improvement of Playing Pitches, Changing and viewing areas, Creation of Mobility Hub (Bike & EV), Walking, Running and Cycling routes, enhanced parking, nature-based SuDS and biodiversity measures. New Civic Space, Teenage Area, Playground and Skate Park(s)."

This plan will provide information necessary to ensure that the management of Construction & Demolition (C&D) waste at the site is undertaken in accordance with the current legal and industry standards including the Waste Management Act 1996 as amended and associated Regulations, Environmental Protection Agency Act 1992 as amended, Litter Pollution Act 1997 as amended and the Eastern-Midlands Region Waste Management 2015 – 2021. In particular, this plan aims to ensure maximum recycling, reuse, and recovery of waste with diversion from landfill, wherever possible. It also seeks to provide guidance on the appropriate collection and transport of waste from the site to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil and/or water).

This RWMP includes information on the legal and policy framework for C&D waste management in Ireland, estimates of the type and quantity of waste to be generated by the proposed development and makes recommendations for management of different waste streams. The RWMP should be viewed as a live document and should be regularly revisited throughout a project's lifecycle so that opportunities to maximise waste reduction / efficiencies are exploited throughout, and that data is collected on an ongoing basis so that it is as accurate as possible.

2.0 CONSTRUCTION AND DEMOLITION RESOURCE & WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Irish Government issued a policy statement in September 1998 known as '*Changing Our Ways*', which identified objectives for the prevention, minimisation, reuse, recycling, recovery, and disposal of waste in Ireland. The target for C&D waste in this report was to recycle at least 50% of C&D waste within a five-year period (by 2003), with a progressive increase to at least 85% over fifteen years (i.e., 2013).

In response to the *Changing Our Ways* report, a task force (Task Force B4) representing the waste sector of the already established Forum for the Construction Industry, released a report entitled '*Recycling of Construction and Demolition Waste*' concerning the development and implementation of a voluntary construction industry programme to meet the Government's objectives for the recovery of C&D waste.

In September 2020, the Irish Government published a policy document outlining a new action plan for Ireland to cover the period of 2020-2025. This plan, '*A Waste Action Plan for a Circular Economy*' (WAPCE), replaces the previous national waste management plan, "*A Resource Opportunity*" (2012), and was prepared in response to the '*European Green Deal*' which sets a roadmap for a transition to an altered economical model, where climate and environmental challenges are turned into opportunities.

The WAPCE sets the direction for waste planning and management in Ireland up to 2025. This reorientates policy from a focus on managing waste to a much greater focus on creating circular patterns of production and consumption. Other policy statements of a number of public bodies already acknowledge the circular economy as a national policy priority.

The policy document contains over 200 measures across various waste areas including circular economy, municipal waste, consumer protection and citizen engagement, plastics and packaging, construction, textiles, green public procurement, and waste enforcement.

One of the first actions to be taken was the development of the Whole of Government Circular Economy Strategy 2022-2023 '*Living More, Using Less*' (2021) to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021. It is anticipated that the Strategy will be updated in full every 18 months to 2 years.

The Environmental Protection Agency (EPA) of Ireland issued '*Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects*' in November 2021. These guidelines replace the previous 2006 guidelines issued by The National Construction and Demolition Waste Council (NCDWC) and the Department of the Environment, Heritage, and Local Government (DoEHLG) in 2006. The guidelines provide a practical approach which is informed by best practice in the prevention and management of C&D wastes and resources from design to construction of a project, including consideration of the deconstruction of a project. These guidelines have been followed in the preparation of this document and include the following elements:

- Predicted C&D wastes and procedures to prevent, minimise, recycle, and reuse wastes.
- Design teams roles and approach.
- Relevant EU, national and local waste policy, legislation, and guidelines.
- Waste disposal/recycling of C&D wastes at the site.
- Provision of training for Resource Waste Manager (RM) and site crew.
- Details of proposed record keeping system.
- Details of waste audit procedures and plan; and
- Details of consultation with relevant bodies i.e., waste recycling companies, Local Authority, etc.

Section 3 of the Guidelines identifies thresholds above which there is a requirement for the preparation of a RWMP for developments. The new guidance classifies developments on a two-tiered system. Developments which do not exceed any of the following thresholds may be classed as Tier 1 development:

- New residential development of less than 10 dwellings.
- Retrofit of 20 dwellings or less.
- New commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 1,250m².
- Retrofit of commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 2,000m²; and
- Demolition projects generating in total less than 100m³ in volume of C&D waste. A development which exceeds one or more of these thresholds is classed as Tier-2 projects.

This development requires a RWMP as a Tier 2 development as it is above following criterion:

- New residential development of less than 10 dwellings

Other guidelines followed in the preparation of this report include 'Construction and Demolition Waste Management – a handbook for Contractors and Site Managers', published by FÁS and the Construction Industry Federation in 2002 and the previous guidelines, 'Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' (2006).

These guidance documents are considered to define best practice for C&D projects in Ireland and describe how C&D projects are to be undertaken such that environmental impacts and risks are minimised and maximum levels of waste recycling are achieved.

2.2 Regional Level

The proposed development is located in the Local Authority area of Dun Laoghaire Rathdown County Council (DLRCC).

The Eastern-Midlands Region Waste Management Plan 2015 – 2021 is the regional waste management plan for the Dun Laoghaire Rathdown area published in May 2015. Currently the EMR and other regional waste management plans are under review and the Regional Waste Management Planning Offices expect to publish the final plan in early 2022.

The Regional Plan sets out the strategic targets for waste management in the region and also specifies a mandatory target of 70% of C&D wastes to be prepared for reuse, recycling and material recovery (excluding soil and stones) by 2020. This reflects the target for management of C&D waste in the Waste Framework Directive.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130 - €150 per tonne of waste which includes a €75 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2012.

The Dún Laoghaire-Rathdown County Development Plan 2022 – 2028 sets out a number of objectives for the Dún Laoghaire-Rathdown area, in line with the objectives of the regional waste management plan. The plan identifies the Council's commitment to the promotion of the Waste Hierarchy. Waste policies with a particular relevance to the proposed development are:

Policy Objective EI11: Resource Management

It is a Policy Objective to implement the Eastern-Midlands Region Waste Management Plan 2015-2021 and subsequent plans, in supporting the transition from a waste management economy towards a circular economy, to enhance employment and increase the value recovery and recirculation of resources. Underpinning this objective is the requirement to conform to the European Union and National Waste Management Hierarchy of the most favoured options for waste as illustrated below subject to economic and technical feasibility and Environmental Assessment.

Policy Objective EI12: Waste Management Infrastructure, Prevention, Reduction, Reuse and Recycling

- To support the principles of the circular economy, good waste management and the implementation of best international practice in relation to waste management in order for the County and the Region to become self-sufficient in terms of resource and waste management and to provide a waste management infrastructure that supports this objective.
- To provide for civic amenity facilities and bring centres as part of an integrated waste collection system in accessible locations throughout the County and promote the importance of kerbside source segregated collection of household and commercial waste as the best method to ensure the quality of waste presented for recycling is preserved.
- To ensure any waste amenity facilities adhere to the Waste Regional Offices Waste Management Infrastructure siting guidelines.
- To develop a County wide network of multi material recycling centres, bring centres and a re-use centre and to require the provision of adequately-sized recycling facilities in new commercial and large-scale residential developments, where appropriate.
- To require the inclusion of such centres in all large retail developments to maximise access by the public. To ensure new developments are designed and constructed in line with the Council's Guidelines for Waste Storage Facilities.

Policy Objective EI13: Hazardous Waste

It is a Policy Objective to adhere to the recommendations of the 'National Hazardous Waste Management Plan 2014-2020' and any subsequent plan, and to co-operate with other agencies, to plan, organise, authorise and supervise the disposal of hazardous waste streams, including hazardous waste identified during construction and demolition projects.

2.3 Legislative Requirements

The primary legislative instruments that govern waste management in Ireland and applicable to the project are:

- Waste Management Act 1996 (No. 10 of 1996) as amended.
- Environmental Protection Act 1992 (No. 7 of 1992) as amended.
- Litter Pollution Act 1997 (No. 12 of 1997) as amended.
- Planning and Development Act 2000 (No. 30 of 2000) as amended

One of the guiding principles of European waste legislation, which has in turn been incorporated into the Waste Management Act 1996 - 2001 and subsequent Irish legislation, is the principle of "Duty of Care". This implies that the waste producer is responsible for waste from the time it is generated through until its legal recycling, recovery or disposal (including its method of disposal). As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final destination, waste contractors will be employed to physically transport waste to the final destination. Following on from this is the concept of "Polluter Pays" whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect management of waste produced, including the actions of any contractors engaged (e.g. for transportation and disposal/recycling of waste).

It is therefore imperative that the client ensures that the waste contractors engaged by construction contractors are legally compliant with respect to waste transportation, recycling, recovery, and disposal. This includes the requirement that a contractor handle, transport, and recycle/recover/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or Waste Facility Permit granted by the relevant Local Authority under the *Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments* or a waste or IED licence granted by the EPA. The COR/permit/licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and/or disposed of at the specified site.

2.4 Local Authority Guidelines

DLRCC's Waste Management Division have issued *Guidance Notes for Environmental Design and Management of Construction Projects* (July 2022) which provide good practice guidance for environmental design and construction of new build high density developments to assist developers in demonstrating to local planning and waste management authorities that they have considered how the design, construction and operation of the proposed development complies with best environmental management practice.

Waste planning shall take account of "Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects", published by the Environmental Protection Agency in 2021. The objective of the guidelines is to allow developers and designers to demonstrate to local planning and waste management authorities that they have considered how the design and the operation of waste management services will enable construction and demolition contractors to effectively manage their wastes arisings.

The following list sets out the main points that are considered to be necessary to proper construction waste management:

- Identification, subject to site restrictions, of a dedicated and secure compound, containing bins and skips into which all waste generated by construction site activities will be placed and designation of a single person with responsibility for provision of signage and verbal instruction to ensure proper housekeeping, maintenance of records and segregation of construction waste materials.
- Measures to ensure tracking of all waste generated to final destination. The recording of gate receipts for the licenced facility to which excavation and demolition wastes are brought is essential to ensure that waste materials removed from sites are properly disposed of and that site management is in compliance with statutory obligations under the Waste Management Acts 1996, as amended.
- Analysis of the waste arisings/material surpluses; specific waste management objectives for the project; and proposals for prevention, reuse and recycling of waste, including applications under Article 27 of the European Communities (Waste Directive) Regulations, 2011 and planning for design of projects to facilitate maintenance, replacement and re-use of building materials, recycling of demolition material and the use of materials from renewable sources.
- In all developments in excess of 10 housing units and commercial developments in excess of 1000 sq.m, a materials source and management plan illustrating design for maintenance and replacement in addition to type of materials/proportion of re-use/recycled materials to be used shall be developed and implemented by the developer to support the development of the circular economy.

- Identification and management of any Hazardous Wastes likely to arise during the construction process. In the event that hazardous soil, or historically deposited hazardous waste is encountered during the work, the contractor must notify Dún Laoghaire Rathdown County Council, Environmental Enforcement Section, and provide a Hazardous/Contaminated Soil Management Plan, to include estimated tonnages, description of location, any relevant mitigation or monitoring proposed, and destinations for authorised disposal/treatment, in addition to information on the authorised waste collector(s).
- Identification and management of any invasive species found, including plans for eradication and follow up checks.
- This RWMP has been prepared to demonstrate exactly that and aims to do that in a comprehensive manner.

3.0 DESCRIPTION OF THE PROJECT

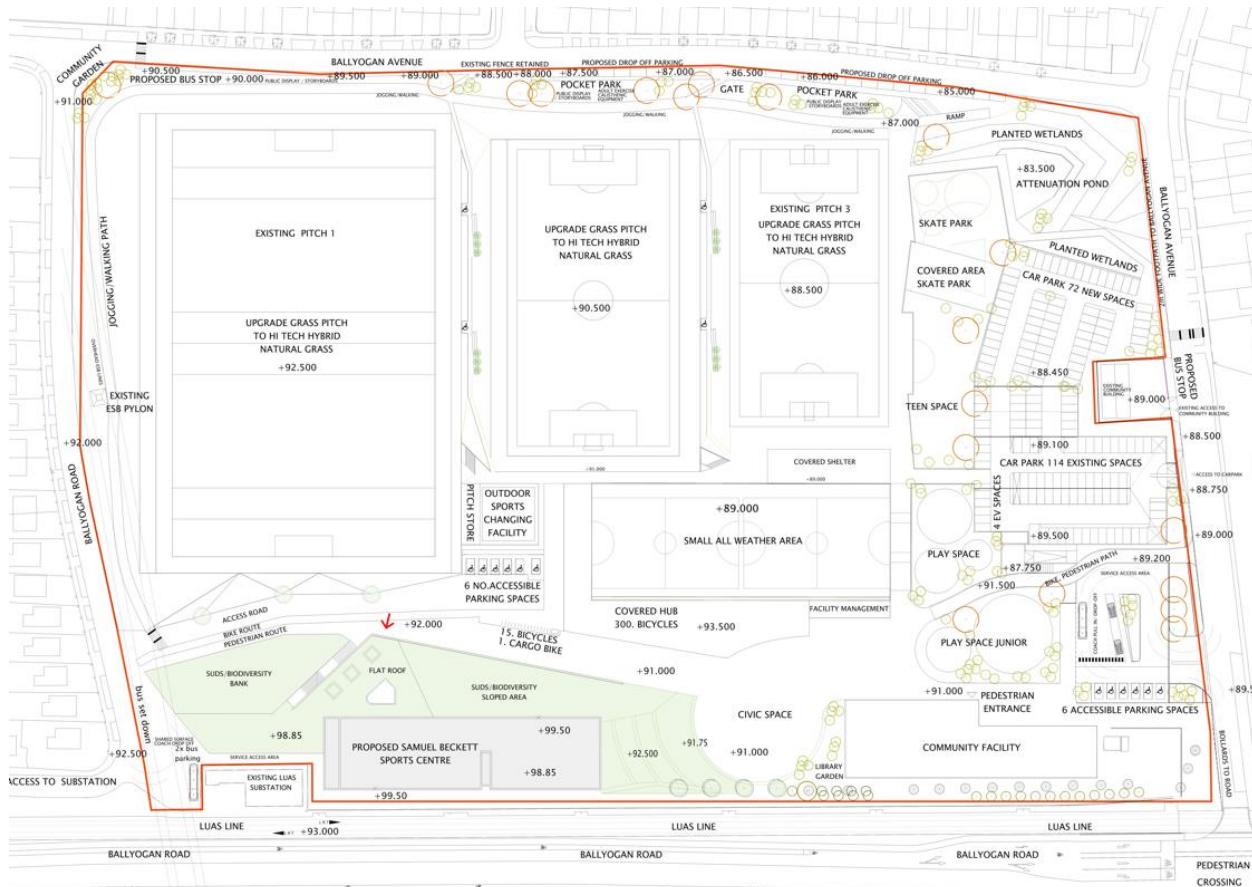
3.1 Location, Size and Scale of the Development

The application site is 7.1ha and it encompasses the entire Samuel Beckett Civic Amenity site, which currently includes football pitches, all weather sports pitches, skate parks and a community centre. The site is located in an urban / suburban area, and access is provided by an existing entrance at the eastern perimeter of the site, from the Ballyogan Court Road. The site is bounded to the east by the Ballyogan Court Road, to the north by Ballyogan Ave, to the west by the Leopardstown Abbey Road and to the south by the Ballyogan Road. The Luas Line also lies to the immediate south of the site, along the Ballyogan Road. The site is close to the urban centres of Stepside, Carrickmines and Leopardstown.

"The proposed development will consist of delivery of a Sustainably Built Multi-Purpose Sports Facility, including large format Sports Hall with spectator seating, 25m 6-lane Swimming Pool with spectator seating, Children's pool, Exercise Equipment Gym, Dance Studios, Fitness Room, Multi-purpose exercise/club rooms, coffee dock, Reception Hub, and ancillary rooms inc. changing rooms, FM office, back office, plant rooms etc."

Revised Site Landscaping to include retention and improvement of Playing Pitches, Changing and viewing areas, Creation of Mobility Hub (Bike & EV), Walking, Running and Cycling routes, enhanced parking, nature-based SuDS and biodiversity measures. New Civic Space, Teenage Area, Playground and Skate Park(s)."

Figure 1 – Site Layout Plan



3.2 Details of the Non-Hazardous Wastes to be produced.

There will be topsoil and subsoil excavated to facilitate the proposed development. During the construction phase there may be a surplus of building materials, such as timber off-cuts, broken concrete blocks, cladding, plastics, metals and tiles generated. There may also be excess concrete during construction which will need to be disposed of. Plastic and cardboard waste from packaging and supply of materials will also be generated. Waste will also be generated from construction workers e.g., organic/food waste, dry mixed recyclables (wastepaper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables and potentially sewage sludge from temporary welfare facilities provided onsite during the construction phase. Waste printer/toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated infrequently from site offices.

3.3 Potentially Hazardous Wastes to be Produced.

3.3.1 Contaminated Soil

In the event that any contaminated material is encountered, it will need to be segregated from clean/inert material, tested, and classified as either non-hazardous or hazardous in accordance with the EPA publication entitled ‘Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous’ using the HazWasteOnline application (or similar approved classification method). The material will then need to be classified as clean, inert, non-hazardous, or hazardous in accordance with the EC Council Decision 2003/33/EC, which establishes the criteria for the acceptance of waste at landfills.

3.3.2 Fuel/Oils

As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded (or stored in double-skinned tanks) and located in a dedicated, secure area of the site. Provided that these requirements are adhered to, and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

3.3.3 Other known Hazardous Substances

Paints, glues, adhesives, and other known hazardous substances will be stored in designated areas. They will generally be present in small volumes only and associated waste volumes generated will be kept to a minimum. Wastes will be stored in appropriate receptacles pending collection by an authorised waste contractor. In addition, WEEE (containing hazardous components), printer toner/cartridges, batteries (Lead, Ni-Cd or Mercury) and/or fluorescent tubes and other mercury containing waste may be generated during construction activities.

These wastes (if encountered) will be stored in appropriate receptacles in designated areas of the site pending collection by an authorised waste contractor. In the event that hazardous soil, or historically deposited hazardous waste is encountered during the work, the contractor must notify Dun Laoghaire Rathdown County Council, Environmental Enforcement Section, and provide a Hazardous/Contaminated Soil Management Plan, to include estimated tonnages, description of location, any relevant mitigation, destination for authorised disposal/treatment, in addition to information on the authorised waste collectors.

4.0 KEY MATERIALS & QUANTITIES

4.1 Project Resource Targets

Project specific resource and waste management targets for the site have not yet been set and this information will be updated for these targets once these targets have been confirmed by the client. However, it is expected for projects of this nature that a minimum of 70% of waste is fully re-used, recycled, or recovered. Target setting will inform the setting of project-specific benchmarks to track target progress. Typical Key Performance Indicators (KPIs) that may be used to set targets include (as per guidelines):

- Weight (tonnes) or Volume (m³) of waste generated per construction value;
- Weight (tonnes) or Volume (m³) of waste generated per construction floor area (m²);
- Fraction of resource reused on site.
- Fraction of resource notified as by-product.
- Fraction of waste segregated at source before being sent off-site for recycling/recovery; and
- Fraction of waste recovered, fraction of waste recycled, or fraction of waste disposed.

4.2 Main C&D Waste Categories

The main non-hazardous and hazardous waste streams that could be generated by the construction activities at a typical site are shown in Table 4.1. The List of Waste (LoW) code (as effected from 1 June 2015) (also referred to as the European Waste Code or EWC) for each waste stream is also shown.

Waste Material	LoW Code
Concrete	17 01 01
Bricks	17 01 02
Tiles and ceramics	17 01 03
Wood	17 02 01-03
Glass	17 02 02
Plastic	17 02 03
Bituminous mixtures, coal tar and tarred products	17 03 02
Copper, Bronze, Brass	17 04 01
Aluminium	17 04 02
Lead	17 04 03
Zinc	17 04 04
Iron & steel	17 04 05
Tin	17 04 06
Mixed metals	17 04 07
Soil and Stones	17 05 04
Gypsum-based construction material	17 08 02
Mixed C&D waste	17 09 04

Table 4.1 Typical waste types generated and EWCs (individual waste types may contain hazardous substances)

5.0 WASTE MANAGEMENT

5.1 Demolition Waste Generation

No demolition works will take place as part of the proposed development.

5.2 Construction Waste Generation

Table 5.2 shows the breakdown of C&D waste types produced on a typical site based on data from the EPA National Waste Reports, the GMIT and other research reports.

Waste Types	%
Mixed C&D	33
Timber	28
Plasterboard	10
Metals	8
Concrete	6
Other	15
Total	100

Table 5.2 Waste materials generated on a typical Irish construction site.

Table 5.3 shows the predicted construction waste generation for the proposed development based on the information available to date along with the targets for management of the waste streams. The predicted waste amounts are based on an average largescale development waste generation rate per m², using the waste breakdown rates shown in Table 5.3 and the schedule of areas supplied by the project architects.

Waste Types	Tonnes	Reuse		Recycle/Recover		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Mixed C&D	55.14	10	5.51	80	44.11	10	5.51
Timber	46.78	40	18.71	55	25.73	5	2.34
Plasterboard	16.71	30	5.01	60	10.02	10	1.67
Metals	13.37	5	0.67	90	12.03	5	0.67
Concrete	10.02	30	3.01	65	6.52	5	0.50
Other	25.06	20	5.0124	60	15.04	20	5.01
Total	167.08		37.93		113.45		15.71

Table 5.3 Estimated on and off-site reuse, recycle and disposal rates for construction waste.

These quantities are provisional only and subject to further determination during construction works.

5.3 Proposed Resource and Waste Management Options

Waste materials generated will be segregated on site, where it is practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source where feasible. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled. There are numerous waste contractors in the DLRCC Region that provide this service.

All waste arisings will be handled by an approved waste contractor holding a current waste collection permit. All waste arisings requiring disposal off-site will be reused, recycled, recovered or disposed of at a facility holding the appropriate registration, permit or licence, as required. Written records will be maintained by the contractor(s) detailing the waste arising throughout the C&D phases, the classification of each waste type, waste collection permits for all waste contractors who collect waste from the site and COR/permit or licence for the receiving waste facility for all waste removed off site for appropriate reuse, recycling, recovery and/or disposal. Dedicated bunded storage containers will be provided for hazardous wastes which may arise such as batteries, paints, oils, chemicals etc, if required. The management of the main waste streams is outlined as follows:

Soil, Stone, Gravel & Clay

The waste hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e., incineration) and, least favoured of all, disposal. The excavations are required to facilitate construction works so the preferred option (prevention and minimisation) cannot be accommodated for the excavation phase.

When material is removed off-site it could be reused as a by-product (and not as a waste). If this is done, it will be done in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011, which requires that certain conditions are met and that by-product notifications are made to the EPA via their online notification form. Excavated material should not be removed from site until approval from the EPA has been received. The potential to reuse material as a by-product will be confirmed during the course of the excavation works, with the objective of eliminating any unnecessary disposal of material.

The next option (beneficial reuse) may be appropriate for the excavated material, pending environmental testing to classify the material as hazardous or non-hazardous in accordance with the EPA Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous publication. Clean inert material may be used as fill material in other construction projects or engineering fill for waste licensed sites. Beneficial reuse of surplus excavation material as engineering fill may be subject to further testing to determine if materials meet the specific engineering standards for their proposed end use.

Any nearby sites requiring clean fill/capping material will be contacted to investigate reuse opportunities for clean and inert material. If any of the material is to be reused on another site as a by-product (and not as a waste), this will be done in accordance with Article 27. Similarly, if any soils/stones are imported onto the site from another construction site as a by-product, this will also be done in accordance with Article 27. Article 27 will be investigated to see if the material can be imported onto this site for beneficial reuse instead of using virgin materials.

If the material is deemed to be a waste, then removal and reuse / recovery / disposal of the material will be carried out in accordance with the Waste Management Act 1996 as amended, the Waste Management (Collection Permit) Regulations 2007 as amended and the Waste Management (Facility Permit & Registration) Regulations 2007 as amended. Once all available beneficial reuse options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered.

In the event that contaminated material is encountered and subsequently classified as hazardous, this material will be stored separately to any non-hazardous material. It will require off-site treatment at a suitable facility or disposal abroad via Transfrontier Shipment of Wastes (TFS).

Bedrock

While it is not envisaged that bedrock will be encountered, if bedrock is encountered, it is anticipated that it will not be crushed on site. Any excavated rock is expected to be removed off- site for appropriate reuse, recovery and / or disposal. If bedrock is to be crushed on- site, the appropriate mobile waste facility permit will be obtained from DLRCC.

Silt & Sludge

During the construction phase, silt and petrochemical interception will be carried out on runoff and pumped water from site works, where required. Sludge and silt will then be collected by a suitably licensed contractor and removed offsite.

Concrete Blocks, Bricks, Tiles & Ceramics

The majority of concrete blocks, bricks, tiles, and ceramics generated as part of the construction works are expected to be clean, inert material and will be recycled, where possible.

Hard Plastic

As hard plastic is a highly recyclable material, much of the plastic generated will be primarily from material off-cuts. All recyclable plastic will be segregated and recycled, where possible.

Timber

Timber that is uncontaminated, i.e. free from paints, preservatives, glues etc., will be disposed of in a separate skip and recycled off-site.

Metal

Metals will be segregated where practical and stored in skips. Metal is highly recyclable and there are numerous companies that will accept these materials.

Plasterboard

There are currently a number of recycling services for plasterboard in Ireland. Plasterboard from the construction phases will be stored in a separate skip, pending collection for recycling. The site manager will ensure that oversupply of new plasterboard is carefully monitored to minimise waste.

Glass

Glass materials will be segregated for recycling, where possible.

Waste Electrical and Electronic Equipment (WEEE)

Any WEEE will be stored in dedicated covered cages/receptacles/pallets pending collection for recycling.

Other Recyclables

Where any other recyclable wastes such as cardboard and soft plastic are generated, these will be segregated at source into dedicated skips and removed off-site.

Non-Recyclable Waste

C&D waste which is not suitable for reuse or recovery, such as polystyrene, some plastics and some cardboards, will be placed in separate skips or other receptacles. Prior to removal from site, the non-recyclable waste skip/receptacle will be examined by a member of the waste team (see Section 9.0) to determine if recyclable materials have been placed in there by mistake. If this is the case, efforts will be made to determine the cause of the waste not being segregated correctly and recyclable waste will be removed and placed into the appropriate receptacle.

Other Hazardous Wastes

On-site storage of any hazardous wastes produced (i.e. contaminated soil if encountered and/or waste fuels) will be kept to a minimum, with removal off-site organised on a regular basis. Storage of all hazardous wastes on-site will be undertaken so as to minimise exposure to on-site personnel and the public and to also minimise potential for environmental impacts. Hazardous wastes will be recovered, wherever possible, and failing this, disposed of appropriately.

On-Site Crushing

It is currently not envisaged that the crushing of waste materials will occur on- site. However, if the crushing of material is to be undertaken, a mobile waste facility permit will first be obtained from DLRCC and the destination of the accepting waste facility will be supplied to the DLRCC waste unit. It should be noted that until a construction contractor is appointed it is not possible to provide information on the specific destinations of each construction waste stream. Prior to commencement of construction and removal of any construction waste offsite, details of the proposed destination of each waste stream will be provided to DLRCC by the project team.

5.4 Tracking and Documentation Procedures for Off-Site Waste

All waste will be documented prior to leaving the site. Waste will be weighed by the contractor, either by weighing mechanism on the truck or at the receiving facility. These waste records will be maintained on site by the nominated project Waste Manager (see Section 9.0).

All movement of waste and the use of waste contractors will be undertaken in accordance with the Waste Management Acts 1996 - 2011, Waste Management (Collection Permit) Regulations 2007 as amended and Waste Management (Facility Permit & Registration) Regulations 2007 and amended. This includes the requirement for all waste contractors to have a waste collection permit issued by the NWCPO. The nominated project waste manager (see Section 10.0) will maintain a copy of all waste collection permits on-site.

If the waste is being transported to another site, a copy of the Local Authority waste COR/permit or EPA Waste/IE Licence for that site will be provided to the nominated project waste manager (see Section 10.0). If the waste is being shipped abroad, a copy of the Transfrontier Shipping (TFS) notification document will be obtained from DLRCC (as the relevant authority on behalf of all local authorities in Ireland) and kept on-site along with details of the final destination (COR, permits, licences etc.). A receipt from the final destination of the material will be kept as part of the on-site waste management records.

All information will be entered in a waste management recording system to be maintained on site.

6.0 DESIGN APPROACH

The client and the design team have integrated the 'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects' guidelines into the design workshops, to help review processes, identify and evaluate resource reduction measures and investigate the impact on cost, time, quality, buildability, second life and management post demolition and construction.

Further details on these design principles can be found within a forementioned guidance document. The design team have undertaken the design process in line with the international best practice principles to firstly prevent wastes, reuse where possible and thereafter sustainably reduce and recover materials. The below sections have been the focal point of the design process and material selections and will continue to be analysed and investigated throughout the design process and when selecting material. The approaches presented are based on international principles of optimising resources and reducing waste on construction projects through:

- Prevention.
- Reuse.
- Recycling.
- Green Procurement Principles.
- Off-Site Construction.
- Materials Optimisation; and
- Flexibility and Deconstruction.

6.1 Designing for Prevention, Reuse and Recycling

Undertaken at the outset and during project feasibility and evaluation the Client and Design Team considered:

- Establishing the potential for any reusable site assets (buildings, structures, equipment, materials, soils, etc.);
- The potential for refurbishment and refit of existing structures or buildings rather than demolition and new build;
- Assessing any existing buildings on the site that can be refurbished either in part or wholly to meet the Client requirements; and
- Enabling the optimum recovery of assets on site.

6.2 Designing for Green Procurement

Waste prevention and minimisation pre-procurement have been discussed and will be further discussed in this section. The Design Team will discuss proposed design solutions, encourage innovation in tenders and incentivise competitions to recognise sustainable approaches. They will also discuss options for packaging reduction with the main Contractor and subcontractors/suppliers using measures such as 'Just-in-Time' delivery and use ordering procedures that avoid excessive waste. The Green procurement extends from the planning stage into the detailed design and tender stage and will be an ongoing part of the long-term design and selection process for this development.

6.3 Designing for Off-Site Construction

Use of off-site manufacturing has been shown to reduce residual wastes by up to 90% (volumetric building versus traditional). The decision to use offsite construction is typically cost led but there are significant benefits for resource management. Some further considerations for procurement which are being investigated as part of the planning stage design process are listed as follows:

- Use of pre-cast structural concrete panels which can reduce the residual volumes of concrete blocks, mortars, plasters, etc;
- Using pre-cast hollow-core flooring instead of in-situ ready mix flooring or timber flooring to reduce the residual volumes of concrete/formwork and wood/packaging, respectively; and

6.4 Designing for Materials Optimisation During Construction

To ensure manufacturers and construction companies adopt lean production models, including maximising the reuse of materials onsite. This helps to reduce the environmental impacts associated with transportation of materials and from waste management activities. This includes investigating the use of standardised sizes for certain materials to help reduce the number of offcuts produced on site, focusing on promotion and development of off-site manufacture.

6.5 Designing for Flexibility and Deconstruction

Design flexibility has and will be investigated throughout the design process to ensure that where possible products (including buildings) only contain materials that can be recycled and are designed to be easily disassembled. Material efficiency is being considered for the duration and end of life of a building project to produce; flexible, adaptable spaces that enable a resource-efficient, low-waste future change of use; durability of materials and how they can be recovered effectively when maintenance and refurbishment are undertaken and during disassembly/deconstruction.

7.0 ROLES & RESPONSIBILITIES

The Best Practice Guidelines on the Preparation of Resource Waste Management Plans for Construction and Demolition Projects promotes that a RM (Resource Waste Manager) should be appointed. The RM may be performed by number of different individuals over the life-cycle of the Project; however it is intended to be a reliable person chosen from within the Planning/Design/Contracting Team, who is technically competent and appropriately trained, who takes the responsibility to ensure that the objectives and measures within the Project RWMP are complied with. The RM is assigned the requisite authority to meet the objective and obligations of the RWMP. The role will include the important activities of conducting waste checks/audits and adopting construction and demolition methodology that is designed to facilitate maximum reuse and/or recycling of waste.

7.1 Role of the Client Advisory Team

The Client Advisory Team or Design Team is formed of architects, consultants, quantity surveyors and engineers and is responsible for:

- Drafting and maintaining the RWMP through the design, planning and procurement phases of the project;
- Appointing a RM to track and document the design process, inform the Design Team and prepare the RWMP.
- Including details and estimated quantities of all projected waste streams with the support of environmental consultants/scientists. This should also include data on waste types (e.g. waste characterisation data, contaminated land assessments, site investigation information) and prevention mechanisms (such as by-products) to illustrate the positive circular economy principles applied by the Design Team;
- Managing and valuing the demolition work with the support of quantity surveyors.
- Handing over of the RWMP to the selected Contractor upon commencement of construction of the development, in a similar fashion to how the safety file is handed over to the Contractor;
- Working with the Contractor as required to meet the performance targets for the project.

7.2 Future Role of the Contractor

The future construction Contractors have not yet been decided upon for this RWMP. However, once selected they will have major roles to fulfil. They will be responsible for:

- Preparing, implementing and reviewing the RWMP throughout the construction phase (including the management of all suppliers and sub-contractors) as per the requirements of these guidelines.
- Identifying a designated and suitably qualified RM who will be responsible for implementing the RWMP;
- Identifying all hauliers to be engaged to transport each of the resources / wastes off-site;
- Implementing waste management policies whereby waste materials generated on site are to be segregated as far as practicable;
- Renting and operating a mobile-crusher to crush concrete for temporary reuse onsite during construction and reduce the amount of HGV loads required to remove material from site.
- Applying for the appropriate waste permit to crush concrete onsite.
- Identifying all destinations for resources taken off-site. As above, any resource that is legally classified as a 'waste' must only be transported to an authorised waste facility;
- End-of-waste and by-product notifications addressed with the EPA where required;
- Clarification of any other statutory waste management obligations, which could include on-site processing;
- Full records of all resources (both wastes and other resources) will be maintained for the duration of the project; and
- Preparing a RWMP Implementation Review Report at project handover.

8.0 ESTIMATED COST OF WASTE MANAGEMENT

An outline of the costs associated with different aspects of waste management is provided below.

The total cost of C&D waste management will be measured and will consider handling costs, storage costs, transportation costs, revenue from rebates and disposal costs.

8.1 Reuse

By reusing materials on site, there will be a reduction in the transport and recycle/recovery/disposal costs associated with the requirement for a waste contractor to take the material off-site.

Clean and inert soils, gravel, stones etc. which cannot be reused on site may be used as access roads or capping material for landfill sites etc. This material is often taken free of charge or a reduced fee for such purposes, reducing final waste disposal costs.

8.2 Recycling

Salvageable metals will earn a rebate which can be offset against the costs of collection and transportation of the skips.

Clean uncontaminated cardboard and certain hard plastics can also be recycled. Waste contractors will charge considerably less to take segregated wastes, such as recyclable waste, from a site than mixed waste.

Timber can be recycled as chipboard. Again, waste contractors will charge considerably less to take segregated wastes such as timber from a site than mixed waste.

8.3 Disposal

Landfill charges are currently at around €130 - €150 per tonne which includes a €75 per tonne landfill levy specified in the Waste Management (Landfill Levy) Regulations 2015. In addition to disposal costs, waste contractors will also charge a collection fee for skips.

Collection of segregated C&D waste usually costs less than municipal waste. Specific C&D waste contractors take the waste off-site to a licensed or permitted facility and, where possible, remove salvageable items from the waste stream before disposing of the remainder to landfill. Clean soil, rubble, etc. is also used as fill/capping material, wherever possible.

9.0 TRAINING PROVISIONS

A member of the construction team will be appointed as the RM to ensure commitment, operational efficiency, and accountability in relation to waste management during the C&D phases of the development.

9.1 Resource Waste Manager Training and Responsibilities

The nominated RM will be given responsibility and authority to select a waste team if required, i.e. members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site.

The RM will have overall responsibility to oversee, record and provide feedback to the client on everyday waste management at the site. Authority will be given to the Waste Manager to delegate responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage.

The RM will be trained in how to set up and maintain a record keeping system, how to perform an audit and how to establish targets for waste management on site. The RM will also be trained in the best methods for segregation and storage of recyclable materials, have information on the materials that can be reused on site and be knowledgeable in how to implement this RWMP.

9.2 Site Crew Training

Training of site crew in relation to waste is the responsibility of the Waste Manager and, as such, a waste training program will be organised. A basic awareness course will be held for all site crew to outline the RWMP and to detail the segregation of waste materials at source. This may be incorporated with other site training needs such as general site induction, health and safety awareness and manual handling.

This basic course will describe the materials to be segregated, the storage methods and the location of the Waste Storage Areas (WSAs). A sub-section on hazardous wastes will be incorporated into the training program and the particular dangers of each hazardous waste will be explained.

10.0 TRACKING AND TRACING / RECORD KEEPING

Records will be kept for all waste material which leaves the site, either for reuse on another site, recycling or disposal. A recording system will be put in place to record the waste arisings on Site. A waste tracking log will be used to track each waste movement from the site. On exit from the site, the waste collection vehicle driver will stop at the site office and sign out as a visitor and provide the security personnel or RM with a waste docket (or Waste Transfer Form (WTF) for hazardous waste) for the waste load collected. At this time, the security personnel will complete and sign the Waste Tracking Register with the following information:

- Date
- Time
- Waste Contractor
- Company waste contractor appointed by, e.g., Contractor or subcontractor name.
- Collection Permit No.
- Vehicle Reg.
- Driver Name
- Docket No.
- Waste Type
- EWC / LoW

The waste vehicle will be checked by security personnel or the RM to ensure it has the waste collection permit no. displayed and a copy of the waste collection permit in the vehicle before they are allowed to remove the waste from the site.

The waste transfer dockets will be transferred to the RM on a weekly basis and can be placed in the Waste Tracking Log file. This information will be forwarded onto the DLRCC Waste Regulation Unit when requested.

Each subcontractor that has engaged their own waste contractor will be required to maintain a similar waste tracking log with the waste dockets / WTF maintained on file and available for inspection on site by the main contractor as required. These subcontractor logs will be merged with the main waste log. Waste receipts from the receiving waste facility will also be obtained by the site contractor(s) and retained. A copy of the Waste Collection Permits, CORs, Waste Facility Permits and Waste Licences will be maintained on site at all times and will be periodically checked by the RM. Subcontractors who have engaged their own waste contractors, will provide the main contractor with a copy of the waste collection permits and COR / permit / licence for the receiving waste facilities and maintain a copy on file, available for inspection on site as required.

11.0 OUTLINE WASTE AUDIT PROCEDURE**11.1 Responsibility for Waste Audit**

The appointed RM will be responsible for conducting a waste audit at the site during the C&D phase of the proposed Project. Contact details for the nominated RM will be provided to the DLRCC Waste Regulation Unit after the main contractor is appointed and prior to any material being removed from site.

11.2 Review of Records and Identification of Corrective Actions

A review of all waste management costs and the records for the waste generated and transported off-site should be undertaken mid-way through the construction phase of the proposed Project.

If waste movements are not accounted for, the reasons for this will be established in order to see if and why the record keeping system has not been maintained. The waste records will be compared with the established recovery / reuse / recycling targets for the site. Each material type will be examined, in order to see where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how the targets can be achieved.

Upon completion of the C&D phase, a final report will be prepared, summarising the outcomes of waste management processes adopted and the total recycling / reuse / recovery figures for the development.

12.0 CONSULTATION WITH RELEVANT BODIES**12.1 Local Authority**

Once construction contractors have been appointed and have appointed waste contractors, and prior to removal of any C&D waste materials off-site, details of the proposed destination of each waste stream will be provided to the DLRCC Waste Regulation Unit.

DLRCC will also be consulted, as required, throughout the excavation and construction phases in order to ensure that all available waste reduction, reuse, and recycling opportunities are identified and utilised and that compliant waste management practices are carried out.

12.2 Recycling / Salvage Companies

The appointed waste contractor for the main waste streams managed by the construction contractors will be audited in order to ensure that relevant and up-to-date waste collection permits and facility registrations / permits / licences are held. In addition, information will be obtained regarding the feasibility of recycling each material, the costs of recycling / reclamation, the means by which the wastes will be collected and transported off-site, and the recycling / reclamation process each material will undergo off-site.

SAMUEL BECKETT CIVIC CAMPUS
BALLYOGAN, CO. DUBLIN
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX C – CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)



OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

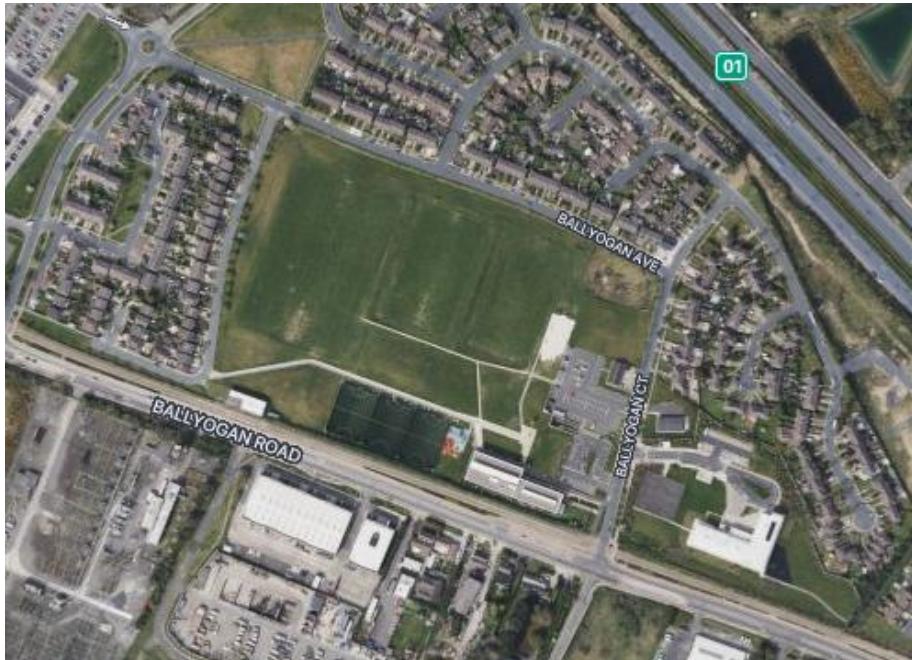
FOR PROPOSED DEVELOPMENT

AT

SAMUEL BECKETT CIVIC CAMPUS

BALLYOGAN

CO. DUBLIN



Prepared for

Dún Laoghaire-Rathdown County Council

Prepared by

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1.0 INTRODUCTION

1.1. Overview

This document outlines the Construction, Environmental Management Plan (OCEMP) for the proposed development at Samuel Beckett Civic Campus, Ballyogan, Co. Dublin.

1.2 Purpose of CEMP

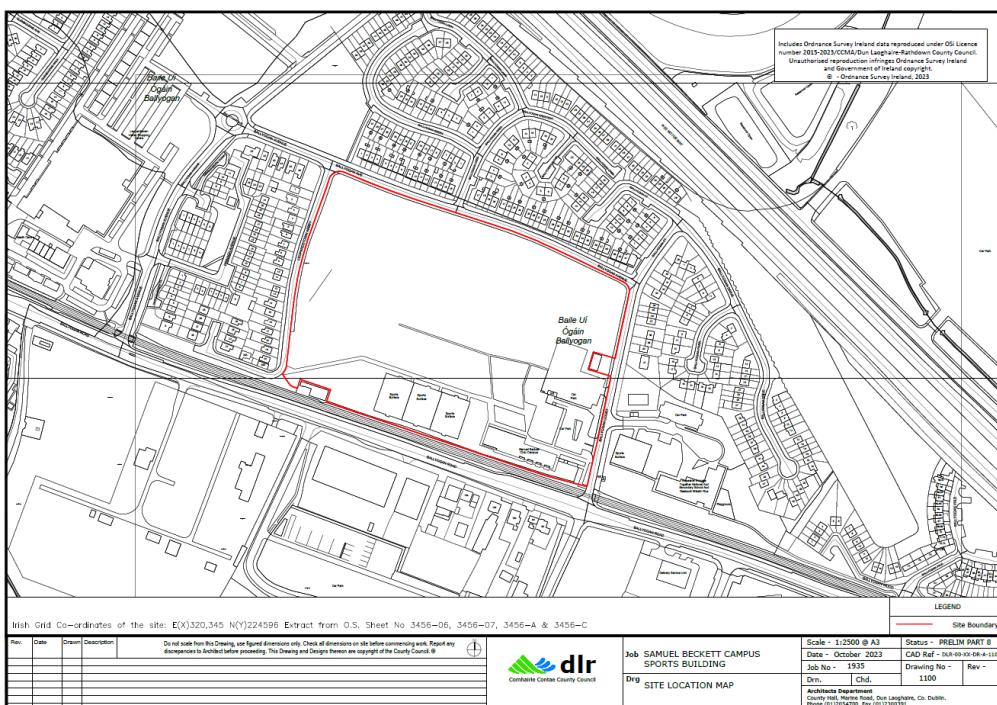
The purpose of this OCEMP is to provide recommended measures to avoid, minimise and control adverse environmental impacts associated with the construction of the proposed development. The OCEMP will document the commitment to safeguarding the environment through the identification, avoidance and mitigation of the potential environmental impacts which are associated with the proposed development. Dún Laoghaire-Rathdown County Council will undertake the works in accordance with the provisions of the OCEMP. This may be further added to, to address other detailed construction matters. The OCEMP will be updated by the Contractor to address any subsequent planning conditions relevant to the proposed development.

1.3 Structure

This OCEMP has been structured as follows:

- **Section 1** outlines the purpose of the OCEMP and introduces the proposed development.
- **Section 2** describes in detail the proposed development.
- **Section 3** describes the Drainage for the proposed development.
- **Section 4** identifies the Environmental Constraints for the proposed development.
- **Section 5** outlines the minimum standards, legislation and guidance required of the Contractor during the development of the OCEMP.
- **Section 6** identifies the relevant roles and responsibilities for developing, implementing, maintaining, and monitoring environmental management.
- **Section 7** sets out the mechanisms through which environmental requirements would be managed.
- **Section 8** sets out the general requirements to of the OCEMP.
- **Section 9** provides a summary of control measures to be implemented by the Contractor; and
- **Section 10** sets out the procedures for the Emergency Response Plan.

Figure 1.1 – Site Location Map



2.0 THE PROPOSED DEVELOPMENT

2.1. Site Location & Surrounding Land use

The application site is 7.1ha and it encompasses the entire Samuel Beckett Civic Amenity site, which currently includes football pitches, all weather sports pitches, skate parks and a community centre. The site is located in an urban / sub-urban area, and access is provided by an existing entrance at the eastern perimeter of the site, from the Ballyogan Court Road. The site is bounded to the east by the Ballyogan Court Road, to the north by Ballyogan Ave, to the west by the Leopardstown Abbey Road and to the south by the Ballyogan Road. The Luas Line also lies to the immediate south of the site, along the Ballyogan Road. The site is close to the urban centres of Stepaside, Carrickmines and Leopardstown.

2.2. Existing Site Setting

The application site is 7.1ha and it encompasses the entire Samuel Beckett Civic Amenity site, which currently includes football pitches, all weather sports pitches, skate parks and a community centre. The site is located in an urban / sub-urban area, and access is provided by an existing entrance at the eastern perimeter of the site, from the Ballyogan Court Road. The site is bounded to the east by the Ballyogan Court Road, to the north by Ballyogan Ave, to the west by the Leopardstown Abbey Road and to the south by the Ballyogan Road. The Luas Line also lies to the immediate south of the site, along the Ballyogan Road. The site is close to the urban centres of Stepaside, Carrickmines and Leopardstown.

Photographs of Existing Site Entrance



Photographs of Existing Pitches on site.



2.3 Proposed Development

"The proposed development will consist of delivery of a Sustainably Built Multi-Purpose Sports Facility, including large format Sports Hall with spectator seating, 25m 6-lane Swimming Pool with spectator seating, Children's pool, Exercise Equipment Gym, Dance Studios, Fitness Room, Multi-purpose exercise/club rooms, coffee dock, Reception Hub, and ancillary rooms inc. changing rooms, FM office, back office, plant rooms etc.

Revised Site Landscaping to include retention and improvement of Playing Pitches, Changing and viewing areas, Creation of Mobility Hub (Bike & EV), Walking, Running and Cycling routes, enhanced parking, nature-based SuDS, and biodiversity measures. New Civic Space, Teenage Area, Playground and Skate Park(s)."

Figure 2.1 – Site Layout Showing Proposed Development.



2.4 Key Stages

The proposed development will involve the following key work phases:

- Tender Stage.
- Procurement and appointment of successful Tenderer(s) (hereafter referred to as The Contractor).
- Detailed Design Stage.
- Site preparatory works including the preparation of all required Detailed Safety and Health, and Environmental Management documents.
- Site mobilisation.
- Construction Stage of the buildings
- Completion.

It is anticipated that the construction phase will take 24 months. The proposed sequence of construction outlined is subject to confirmation once the building contract has been awarded and on completion of the Detailed Construction Environment Management Plan for agreement with Dún Laoghaire-Rathdown County Council.

2.5 Construction Phase

There will also be earth removal works associated with the construction of the proposed development. Further details provided in the Resource Waste Management Plan (RWMP) submitted as part of this planning application. Construction of the proposed development will initially involve excavations to facilitate the construction of foundations and the installation of services, and then construction of the proposed development itself.

2.5.1 Construction Equipment and Fuel Usage

During the construction phase a variety of items of plant will be in use for the purposes of site preparation, construction, and other site works. There will be vehicular movements to and from the site that will make use of existing roads. Due to the nature of these activities, there is potential for generation of noise, air (dust), and surface water emissions arising from construction. Table 2.1 below contains a non-exhaustive list of the various construction plant and equipment anticipated to be used for the construction phase of the proposed development. It must be noted that this list is indicative and will be refined closer to the commencement of construction. An estimate of the daily fuel consumption of the construction equipment is also provided. The average daily fuel consumption will naturally depend on the intensity of use of each item.

Table 2.1 Anticipated Construction Plant & Equipment

Construction Equipment	Daily (Litres/day)
Crane	100
Excavators	120
Diesel Generators	80
Floodlights	10
Materials Handling Plant including:	
- Dump Trucks	
- Front End Loaders	
- Trailer Tractors	
- Portable Compaction Equipment	
- Telescopic Handlers	200
Ancillary Small Plant and Tools	35
Bulldozer	100
Forklift truck	15
Portable compaction equipment	20
Scaffolding and mobile hydraulic access platforms	20
Telescopic handler	30
Trucks	600

2.5.2 Construction Personnel

It is anticipated that the construction phase will take 24 months with a daily range of 10-60 personnel.

2.5.3 Contractor Site Compound Services

During construction works, temporary construction facilities will be provided. During construction, power will be supplied via suitably bunded generator(s), maintained by the construction contractor.

Foul waste during construction will be temporarily stored and regularly disposed of using appropriate facilities off-site.

The contractor's site compound layout will include the following:

- Temporary site accommodation incorporating management and engineers' cabins, WC facilities, canteen, and drying room facilities.
- Primary materials storage including containerised units and lock ups for tools and equipment.
- A waste storage and recycling area either within or adjacent to compound.
- Parking for key management and staff.

2.5.4 Construction Quantities

The following tables identify the anticipated types and volumes of raw materials and waste materials anticipated during the construction of the proposed development. During construction, all construction materials will be sourced from local suppliers, where possible, to minimise the impact of natural resources used in the transportation of materials. Waste produced during the construction of the proposed development and concurrent development will be managed in accordance with a site-specific Resource Waste Management Plan (RWMP) formulated for the proposed development. This will ensure high levels of reuse, recovery and recycling of construction wastes arising.

2.5.5 Construction Drainage & Wastewater Management

Surface Water Management

The new building will have approx. 50% extensive green roof. There is currently drainage beneath the 3 main pitches and there is also an existing large open attenuation area in the north-eastern section of the site, which has capacity for the whole site including the proposed sports building. This attenuation area has a geotextile membrane at its base. It is now proposed to enhance this area by including more nature-based elements. It is also intended to include significantly more hedgerow on site and shallow swales will be incorporated between the three main pitches.

It is also proposed that strategies will be employed to conserve and protect water resources and prioritise nature-based solutions. Methods of on-site water recycling will be employed, such as greywater use for cisterns and irrigation.

Water Consumption

The construction or operation of the scheme will not use such a quantity of water to cause concern in relation to significant effects on the environment. During construction of the scheme, water will be required for offices, welfare facilities, this will be provided by either tanker or temporary connection to the public main by agreement with Irish Water. The construction phase will not use such a quantity of water to cause concern in relation to significant effects on the environment. There is no proposed extraction of groundwater at the site.

Once the development is completed and the development is occupied there will be a domestic water requirement for showers, toilets, and canteen/coffee dock. A pre connection enquiry has been submitted to Irish Water for connection to the public water supply and foul sewer. The water demand will amount to 600m³ per month. The Average business water demand is approximately 0.15 litres/second with an average peak weekly demand of 0.69 litres/sec. The Average industrial water demand is approximately 3 - 5 litres/second with an average peak weekly demand of 3 – 5 litres/sec.

Wastewater Management

A pre connection enquiry has been submitted to Uisce Éireann for connection to the public water supply and foul sewer. Wastewater from the site will be directed to the public foul sewer. There will be no on site wastewater treatment plant or associated percolation area.

- Average domestic discharge = 0.11l/s
- Peak Domestic Discharge – 6 x DWF = 0.66l/s
- Average & Peak non-domestic discharge 3 to 5l/s

2.5.6 Construction Security / Fencing

Temporary Heras fencing or hoarding will be provided during the construction phase, the locations of this temporary hoarding will vary as work progresses across the site.

2.5.8 Construction Water Demand

The average water demand during the construction of the proposed development will be approximately 0.4 litres/min. Water supply during the construction phase may be imported to site via bowsers should the need arise (i.e., for dust-control measures).

2.5.9 Resource Waste Management Plan (RWMP)

A RWMP will be submitted with the application which complies with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects"" published by the EPA in 2021 and will ensure that all material is disposed of using licensed waste disposal facilities and contractors in accordance with regulatory requirements.

2.5.10 Construction Sequence

Prior to the commencement of construction, a contractor-specific Method Statement and Safety Risk Assessment will be prepared by the construction contractors. The following provides a summary of the proposed construction sequence:

- Temporary construction facilities and site set up.
- Site enabling and preparation Infrastructure construction.
- Building construction
- Commissioning and handover

2.5.11 Construction Hours

Construction hours are anticipated to be as follows:

- 08:00 – 19:00 Monday to Friday
- 08:00 – 14:00 Saturday
- No work except for exceptional circumstances Sunday or Bank Holidays

3.0 Proposed Development

The proposed development will provide a mix of finishes to the multi -purpose sports facility, which will be in keeping with the surrounding area.

The layout was very much formed around the nature and topography of the site, the zoning parameters, and the surrounding buildings. Taking these constraints into account the existing sports complex.

The layout design proposes a distinctive area within a high-quality public realm which will results in a sense of place and legibility within the scheme. The carefully designed green open spaces also reinforce the character of the surrounding area which will foster community interaction.

Figure 3.1 – Mood board for the proposed Development



Figure 3.2 – Photomontages of the Proposed Development



Figure 3.3 – Photomontage of the Proposed Development



3.1 Drainage Works

The new building will have approx. 50% extensive green roof. There is currently drainage beneath the 3 main pitches and there is also an existing large open attenuation area in the north-eastern section of the site, which has capacity for the whole site including the proposed sports building. This attenuation area has a geotextile membrane at its base. It is now proposed to enhance this area by including more nature-based elements. It is also intended to include significantly more hedgerow on site and shallow swales will be incorporated between the three main pitches. It is also proposed that strategies will be employed to conserve and protect water resources and prioritise nature-based solutions. Methods of on-site water recycling will be employed, such as greywater use for cisterns and irrigation.

4.0 Environmental Constraints

This section summarises the receiving environment along with key environmental factors that should be considered during the construction phase.

4.1 Noise and Vibration

During the project, best available technology will be employed by the Main Contractor to minimise noise from the construction operations and shall comply with the BS5228:2009 "Noise and Vibration Control on Construction and Open Sites". The main contractor will deal with the immediate dangers to hearing etc. associated with high noise levels and the impact of same on construction operatives, by means of risk assessment and mitigation/precautionary measures and equipment, all pursuant to the current health and safety legislation. Current legislation limits, assessment period of 8 hours of one week. (Noisiest 8 hours likely to experience).

- Lower Action Value (LAV) – 80 dBA LEX,8, 135 dB Peak – Hearing Protection shall be made available, and information shall be provided.
- Upper Action Value (UAV) – 85 dBA LEX,8, 137 dB Peak – Use of Hearing Protection is mandatory, measures to eliminate the noise as much as possible shall be applied.
- Exposure Limit Value (ELV) – 87 dBA LEX,8, 140 dB Peak – Not to be exceeded Protection by ear plugs/muffs given by their Signal-to-Noise Ratio (SRN) or Noise Reduction Rating (NRR) is typically 20 – 30 dB Exposure = LEX,8 – (SNR – 10).

4.2 Air Quality

The greatest potential impact on air quality during the demolition/construction phase of the proposed developments is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 350m of a construction site, the majority of the deposition occurs within the first 50m which in this case does not contain any sensitive receptors.

Best practice procedures will include a dust minimisation plan to ensure the construction of the proposed development will not result in significant dust impacts upon the environment.

All environmental emissions are controlled according to established best practice, with ongoing monitoring on a regular basis.

4.3 Soils, Geology and Hydrogeology

According to the Geological Survey of Ireland (GSI) website, the lithology for the proposed development site is underlain by till derived from granites. The bedrock geology underlying the site and surrounding area is mapped as *Siluro-Devonian granitic rocks & appinite*, described as "Pale grey fine to coarse-grained granite".

The underlying bedrock geology at the site Granites & other Igneous Intrusive rocks (GI) has been classified by the GSI as a 'Poorly Productive Aquifer (PI)', this being bedrock which is poorly productive in general.

Groundwater vulnerability in the site and vicinity of the site was generally mapped as being 'High (H)'. Local groundwater would therefore not be considered as a sensitive receptor.

The GSI data indicates that the site does not lie within a drinking water protection area.

4.3.1 Construction Impacts

General construction activities will require temporary storage of cement and concrete materials, oils, fuels paints etc. which have the potential to cause localised pollution.

All excavated soils will be classified appropriately prior to being disposed off-site to a licenced facility by a licenced contractor. All excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of possible

contaminants in order to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be disposed of by a licensed waste disposal contractor.

Considering the above measures, the construction of the proposed development will not produce any significant impacts to soils, geology, or hydrogeology, and due to the highly localised extent of their impact (designated places within the site boundary) present no potential to interact with other cumulative developments.

4.4 Ecology

An Ecological Impact Assessment (EIA) and Screening for Appropriate Assessment is provided as part of the application completed by Noreen McLoughlin MCIEEM. The Ecological Impact Assessment Report concludes the construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on the sensitive receptors through the application the standard construction and operational phase controls. The overall impact on the ecology of the proposed development will result in a long term minor adverse not significant 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 additional biodiversity features including sensitive landscaping strategy and mitigation.

It is concluded in the AA Screening that:

AA of the proposed development is not required as it can be excluded, on the basis of objective information provided in this report, that the proposed development, individually or in combination with other plans or projects, will not have a significant effect on any European sites."

4.5 Landscape and Visual Amenity

4.4.1 General Design Principle

The boundary treatment will be designed to integrate the site with the local context, adding to the existing screen planting.

4.4.2 Boundary Landscape

The boundary treatment will vary. Please refer to Landscape drawings prepared by the Architect.

4.6 Water Resources

The application site lies within the Ovoca-Vartry Hydrometric Area (10) and Catchment (10), the Dargle Sub-Catchment (010) and the Carrickmines Stream Sub-Basin (040). There are no watercourses within or adjacent to the application site. The Carrickmines River is ~208m north of the site and the Barnacullia Stream is ~232m south of the site. The Carrickmines River is largely culverted as it flows close to the M50 and through the sub-urban lands near Leopardstown. These streams merge near Carrickmines and this river continues to flow east / south-east until its confluence with the Shanganagh River near Cherrywood. The Shanganagh River flows east and it flows into Dublin Bay near Shanganagh (where there are no Natura 2000 designations).

The EPA have classified the ecological status of the Barnacullia Stream and the Carrickmines River as good status. The Shanganagh River has also been classed as good status. Under the requirements of the Water Framework Directive, this is satisfactory, and this status must be maintained. The site is within the Wicklow Groundwater Body and the current status of this is noted to be good. Groundwater vulnerability throughout the site is noted to be high.

4.7 Traffic and Transportation

During the construction phase (c. 24 months) of the proposed development, there will be additional traffic movements to/from the site from construction personnel, security staff, professional staff (i.e., design team, utility companies), excavation plant, dumper trucks and deliveries/removal of materials (waste/spoil). . As with any construction project, the contractor will be required to prepare a comprehensive traffic management plan for the construction phase. The purpose of such a plan is to outline measures to manage the expected construction traffic activity during the construction period. It should be noted that the impacts of the construction will be temporary, and it will be the contractor's responsibility to prepare a Traffic Management Plan for the approval of Dun Laoghaire Rathdown County Council in advance of any works.

4.8 Population and Human Health

The predominant land use surrounding the site is urban and sub urban with some residential and recreational uses to. The latest census data (2022) indicates that the population of the villages Stepaside, Glencullen and Kiltiernan, was in excess of 20,000.

The primary potential impacts of the proposed development on human health would be increased air pollution, noise, or pollution of groundwater/watercourses as a result of the proposed development, and these potential impacts have been assessed below. Visual impact and traffic are also potential but less significant impacts (based on the nature of the development).

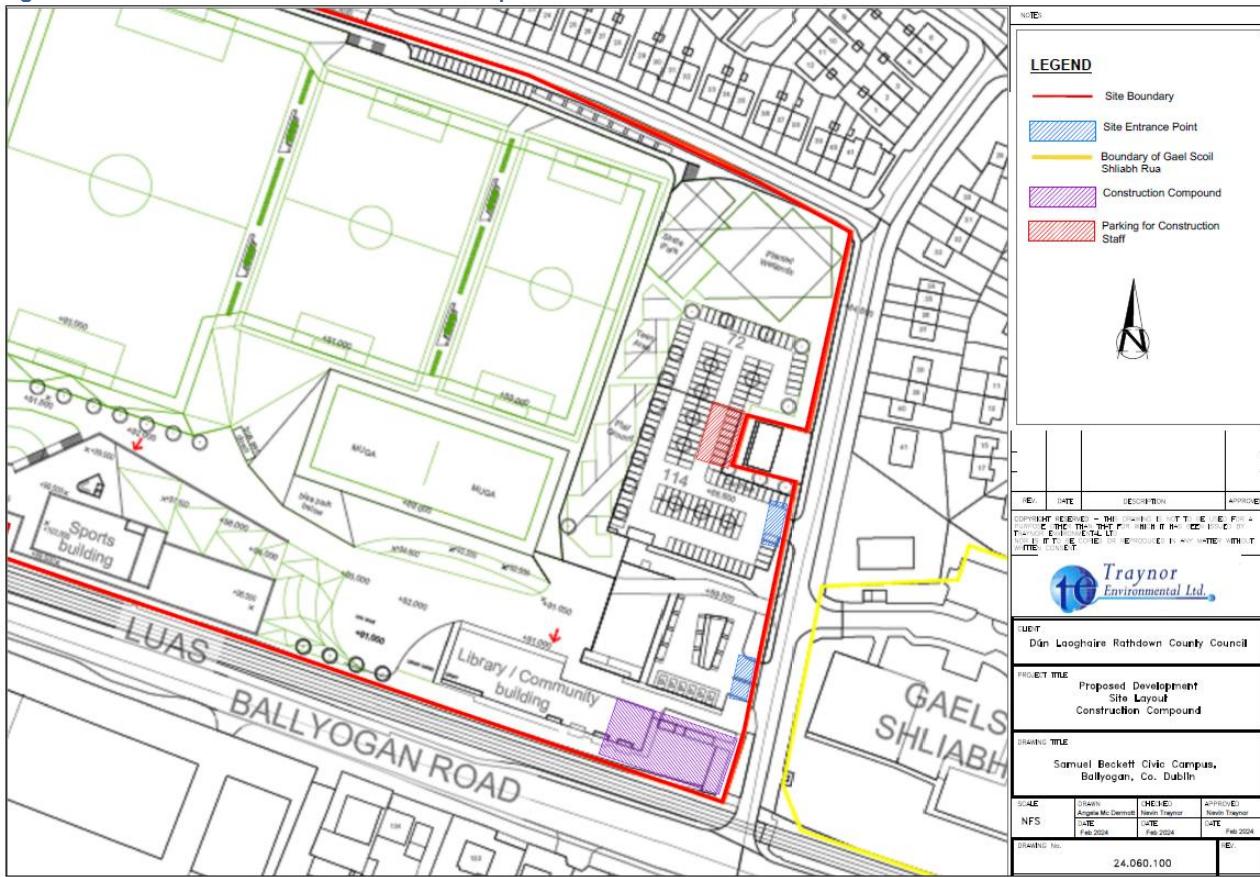
4.8.1 Noise Impact on Human Health

The design of the proposed development as a stand-alone project. The development has taken due regard of the sensitivity of the surroundings to the proposed development site. A variety of items of plant will be in use for the purposes of site preparation, installation of infrastructure, construction, installation, and other site works. There will be vehicular movements to and from the site that will make use of existing roads. Due to the nature of these activities, there is potential for generation of significant levels of noise, however, considering the distances between most construction activities and sensitive locations, the risk of significant impacts is considered low. Table 4.3 outlines typical items of plant that it is advised will be in use during various phases of the construction programme.

Table 4.3 - Typical Noise Emission Levels for Typical Construction Activities

Item (BS 5228 Ref.)	Activity/ Notes	Plant Noise Level at 10m Distance (dB L _{Aeq,1hr}) ¹	Predicted Noise Level at 350m (dB L _{Aeq,1hr})
HGV Movement (C.2.30)	Removing soil and transporting fill and other materials.	79	40
Tracked Excavator (C.4.64)	Removing soil and rubble in preparation for foundation.	77	38
General Construction (Various)	All general activities plus deliveries of materials and plant.	84	45
Dewatering Pumps (D.7.70)	If required.	80	41
JCB (D.8.13)	For services, drainage, and landscaping.	82	43
Vibrating Rollers (D.8.29)	Road surfacing.	77	38
Total Construction Noise (cumulative for all activities)			49

There is no item of plant that would be expected to give rise to noise levels that would be considered out of the ordinary or in exceedance of the levels outlined in Table 4.3. It is concluded that there will be no significant noise impacts associated with the proposed construction works and therefore no specific mitigation measures will be required. Good practice measures are however outlined in BS 5228 Code of Practice for Noise and Vibration Control on Construction and Open Sites.

Figure 4.3 Site Location & Construction Compound

4.8.2 Air Impact on Human Health

There is the potential for dust emissions during the construction phase to impact nearby receptors. Using the UK Institute of Air Quality Management (IAQM) methodology it was determined that the surrounding area was of low sensitivity to dust soiling, human health, and ecological dust related impacts. Based on the scale and magnitude of the proposed development there is an overall low risk of dust impacts from the proposed works. No mitigation other than standard best practice measures are proposed for the construction phase. Impacts to air quality because of construction dust emissions are predicted to be short-term, localised, and imperceptible.

4.8.3 Soils, Hydrology and Geological Impact on Human Health

There is no significant risk of pollution of soil, groundwater or watercourses associated with the proposed development provided control/mitigation measures are followed at all times.

4.8.4 Flood Impact on Human Health

As is required under the Dún Laoghaire Rathdown County Development Plan 2022 – 2028 Appendix 15 – Strategic Flood Risk assessment and in accordance with the requirements set out in the DoEHLG guidelines The Planning System and Flood Risk Management 2009 (the Guidelines), Based on the information available it is concluded that this site is suitable for development and has an overall low risk of being affected by flooding.

5.0 LEGISLATION AND GUIDANCE

All parties, contractors and consultants working on this project shall be subject to the laws of Ireland and the various international/regional protocols and agreements to which Ireland is a party. If legislation is updated the latest version shall be followed. All relevant new legislation will be followed as appropriate. This document outlines most current legislation at the date of issue. It is the responsibility of the Contractor to ensure that they are up to date with the details of the latest iterations of legislation relevant to the project throughout the duration of the contract.

The Designer should be aware of all key environmental risks and associated measures set out within this OCEMP, and the final detailed design should take due cognisance of these where relevant. The Contractor should set out the OCEMP in a clear format and must address all key environmental risks and associated measures.

The Contractor must be aware of and comply with the legislation and guidance set out in this document, any specific planning conditions which may be associated with the proposed development, and other relevant documentation as prescribed by the Employer and planning authority.

5.1 Legislation

It should be noted that the appointed Contractor will be required to be aware of their obligations under legislation.

Such legislation, includes, but is not restricted, to:

- Planning and Development Act, 2000, as amended 2017 (S.I. No. 20 of 2017), 2018 (S.I. No. 16 of 2018), 2020 (S.I. No. 92 of 2020), 2021 (S.I. No. 18 of 2021) and 2022 (S.I. No. 75 of 2022).
- Planning and Development Regulations 2001 to 2022.
- The European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477 of 2011), as amended, 2015 (S.I. No. 355 of 2015) and 2021 (S.I. No. 388 of 2021).
- Water Framework Directive (WFD): Directive 2000/60/EC of the European Parliament and Council establishing a framework for Community Action in the field of water policy, as amended.
- European Communities Environmental Objectives (Surface Waters) Regulations, 2009, S.I. No. 272 of 2009, as amended, 2012 (S.I. No. 327 of 2012), 2015 (S.I. No. 386 of 2015), 2019 (S.I. No. 77 of 2019).
- European Communities Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9 of 2010, as amended, 2016 (S.I. No. 366 of 2016).
- Waste Management Acts as amended.
- The Water Pollution Acts of 1977.
- The Wildlife Acts 1976 to 2021.
- Water Policy Regulations 2003, S.I. No. 722 of 2003, as amended, 2005 (S.I. No. 413 of 2005), 2008 (S.I. No. 219 of 2008), 2010 (S.I. No. 93 of 2010) and Amendment (No. 2) Regulations, (S.I. 326 of 2010) & EU Water Policy Regulations 2014 (S.I. 350 of 2014) and 2018 (S.I. No. 261 of 2018).
- European Communities (Drinking Water) Regulations 2014, S.I. No. 122 of 2014, as amended 2017 (S.I. No. 464 of 2017) and 2020 (S.I. No. 2184 of 2020).
- Guidelines on protection of fisheries during construction works in and adjacent to waters (IFI, 2016).
- Litter Pollution Act of 1997, as amended, 2017 (Bill 58 of 2017).
- Litter Pollution Regulations 1999, S.I. No. 359 of 1999).
- European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014), as amended 2019 (S.I. No. 233 of 2019).
- Waste Management (Facility Permit and Registration) Regulations 2007, S.I. No. 821 of 2007, as amended, 2008 (S.I. No. 86 of 2008), 2015 (S.I. No. 198 of 2015), 2019 (S.I. No. 250 of 2019).
- Waste Management (Collection Permit) Regulations 2007, S.I. No. 820 of 2007, as amended, 2015 (S.I. No. 197 of 2015), 2016 (S.I. No. 24 of 2016).

- Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended 2010 (S.I. No. 350 of 2010).
- Environment (Miscellaneous Provisions) Act 2011, as amended 2015.
- Waste Management (Hazardous Waste) Regulations, 1998, as amended, 2000 (S.I. No. 73 of 2000).
- Waste Management (Shipment of Waste) Regulations 2007, S.I. No. 419 of 2007.
- Waste Management (Movement of Hazardous Waste) Regulations, 1998 (S.I. No. 147 of 1998).
- European Communities (Shipments of Hazardous Waste Exclusively within Ireland) Regulations 2011, S.I. No 324 of 2011.
- European Communities (Transfrontier Shipment of Waste) Regulations 1994 (S.I. No. 121 of 1994); • Waste Management (Transfrontier Shipment of Waste) Regulations 1998, as amended, 2014 (S.I. No. 861 of 2014).
- Waste Management (Registration of Brokers and Dealers) Regulations 2008, SI No. 113 of 2008.
- Waste Management (Prohibition of Material Disposal by burning) Regulations 2009, S.I. No. 286 of 2009, as amended 2013 (S.I. No. 504 of 2013), 2017 (S.I. No. 599 of 2017), 2019 (S.I. No. 684 of 2019) and (S.I. No. 51 of 2022).
- European Communities (Waste Directive) Regulations 2011, S.I. No. 126 of 2011, as amended 2016 (S.I. No. 315 of 2016) and (S.I. No. 323 of 2020).
- European Waste Catalogue (EWC) and Hazardous Waste List 2002, 2015 and 2018.
- Waste Management (Food Waste) Regulations 2009, S.I. No 508 of 2009, as amended, 2015 (S.I. No. 430 of 2015).
- Protection of the Environment Act 2003.
- European Union (Properties of Waste Which Render It Hazardous) Regulations 2015, S.I. No. 233 of 2015, as amended, 2018 (S.I. No. 383 of 2018).
- Air Pollution Act, 1987 (Air Quality Standards) Regulations, 1987, as amended, 2002 (S.I. No. 271 of 2002), 2011 (S.I. No. 180 of 2011), 2016 (S.I. No. 659 of 2016).
- Air Pollution Act, 1987 (Emission Limit Values for use of Asbestos) Regulations, 1990, S.I. No. 28 of 1990).
- EC (Control of Emissions of Gaseous & Particulate Pollutants from Non-Road Mobile Machinery) Regulations 2007, S.I. No.147 of 2007, as amended, 2011 (S.I. No. 263 of 2011), 2012 (S.I. No. 407 of 2012), 2013 (S.I No. 417 of 2013), 2016 (S.I. No. 2016/1628).
- EU F Gas Regulations 2006, as amended, 2014, S.I. No. 517 of 2014, 2019 (S.I. No. 367 or 2019).
- Environmental Protection Agency Act 1992 (Noise) Regulations, 1994 S.I. 174 of 1994.
- Environmental Noise Regulations 2006, S.I. No. 140 of 2006.
- European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018).
- European Communities (Noise Emission by Equipment for use Outdoors) Regulations, 2001, S.I No. 632 of 2001, as amended, 2006 (S.I No. 241 of 2006).
- European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Amendment Regulations 1996, S.I No. 359 of 1996 and 2001, S.I No. 632 of 2001).
- Local Government (Planning and Development) Act 1963 (S.I. No. 28 of 1963), as amended 1993 (S.I. No. 12 of 1993).
- Noxious Weed Act, 1936, S.I. No. 38 of 1936.
- Noxious Weed Order, 1937, S.I. No. 103 of 1937.
- Flora (Protection) Order, 2015, S.I. No 356 of 2015.
- The Forestry Act, 1946, S.I. No. 13 of 1946, as amended, 2009 (S.I. No. 40 of 2009) & Forestry Act, 2014, S.I. No. 31 of 2014.
- Forestry Regulations, S.I. No. 191 of 2017, as amended 2020 (S.I. No. 32 of 2020).
- The National Monuments Act 1930, S.I. No. 2 of 1930, as amended, 2004 (S.I. No. 22 of 2004).
- European Union (Environmental Impact Assessment and Habitats) (Section 181 of the Planning and Development Act 2000) Regulations, 2013 (S.I. No. 403 of 2013), 2015 (S.I. No. 301 of 2015), 2019 (S.I. No. 418 of 2019); and,
- European Union (Environmental Impact Assessment and Habitats) (Environmental Impact Assessment) Regulations, 2018, S.I. No. 296 of 2018.

5.2 Industry Guidance

The Contractor should take due consideration of, and incorporate best practice guidance, including but not limited to the following:

- CIRIA (2001). C532. Control of water pollution from construction sites. Guidance for consultants and contractors.
- CIRIA (2006). C648. Control of water pollution from linear construction projects. Technical Guidance.
- CIRIA (2015). C741. Environmental Good Practice on Site.
- CIRIA (2015). C753. The SuDS Manual.
- Environmental Protection Agency (2021). 'Best Practice Guidelines for the preparation of resources & waste management plans for construction & demolition projects.

6.0 PROJECT ROLES & RESPONSIBILITIES

For the purposes of clarity, the roles, and responsibilities of the project team for the proposed development should be determined at the very outset of the Construction Stage of this project. These are typically performed by the Client, Engineer and Contractor as presented below. Specific details will be determined upon the Detailed Design and Contract stage.

6.1 The Client/Employer

DLR Coco will be responsible for ensuring that competent parties are appointed to undertake the construction and that sufficient resources are made available to facilitate the appropriate management of risks to the environment.

6.2 Site Foreman

A Site Foreman will be appointed by the Contractor to ensure that the OCEMP is effectively implemented. The Site Foreman will be a suitably qualified, competent, and experienced professional that would perform the necessary tasks, review environmental procedures, and consult with the members of the construction team and stakeholders as required. The Site Foreman will be responsible for:

- Ensuring that the OCEMP and all relevant documents such as environmental control plans is developed, implemented, and maintained on site.
- Ensuring compliance with the Conditions of the Planning Permission.
- Ensuring the mitigation measure set out in the OCEMP are implemented.
- Ensuring that construction occurs in accordance with the relevant environmental requirements and that such compliance is adequately recorded and documented.
- Conducting regular environmental inspections and compiling an environmental compliance report monthly; Attending site and stakeholder meetings as required.
- Keeping up to date with relevant environmental best practice and legislative changes.
- Ensuring all staff have undertaken adequate environmental inductions, awareness briefings and training.
- Dealing with environmental complaints; and
- Managing and responding to environmental incidents and ensuring that all incidents are recorded and reported in an appropriate manner.

6.3 Construction Director

The Construction Director will be responsible for the overall execution and organisation of all environmental related activities, as appropriate. Some responsibilities of the Construction Director will comprise the following:

- Overall responsibility for the implementation of the OCEMP.
- Allocating the correct resources to ensure the successful implementation of the OCEMP; and,
- Assisting in the management review of the OCEMP for suitability and effectiveness.

6.4 Construction Manager

The Construction Manager is directly responsible to the Construction Director in assisting with the successful execution of the Proposed Development. The responsibilities of the construction manager in respect of the OCEMP comprise the following:

- To report to the Construction Director on the on-going performance and development of the OCEMP.
- To discharge his/her responsibilities as per the OCEMP; and,
- To support and augment the Construction Management Team (CMT) through the provision of adequate resources and facilities for the duration of the implementation of the OCEMP.

7.0 ENVIRONMENTAL MANAGEMENT PROCEDURES

7.1 General

The Contractor will be required to have a recognised environmental management system such as ISO 14001:2015 or be able to demonstrate that they are actively working towards implementing such a system.

The works Contractor will undertake the works in accordance with the provisions of the OCEMP. The OCEMP will be updated by the Contractor to address any subsequent planning conditions relevant to the proposed development and will be reviewed by the Employer and/or the Employer's Representative. The Contractor will review and add to the OCEMP as appropriate and shall issue the updated OCEMP. A record of the review and any recommendations will also provide (for review and approval by the Employer and/or the Employer's Representative) Environmental Control Plans (ECPs), which will be maintained and updated in accordance with the OCEMP. ECPs will include (if applicable), but will not be restricted to:

- Air Quality Control Plan.
- Construction Noise and Vibration Control Plan.
- Pollution Prevention Control Plan.
- Traffic Management Control Plan; and,
- Soil Erosion and Sedimentation Control Plan.

7.2. Environmental Policy

Contractors shall have an environmental policy dated and signed by the most senior person in the company. The policy shall:

- Be appropriate to the nature, scale and environmental impacts of the organisation's activities, products, and services.
- Include a commitment to continual improvement in environmental performance.
- Include a commitment to comply with all applicable legislation and with other requirements to which the organisation subscribes which relate to its environmental aspects.
- Provide a framework for setting and reviewing objectives and targets.
- Be documented, implemented, and maintained.
- Be communicated to all persons working for or on behalf of the organisation; and be available to the public.

7.3. Environmental Aspects

Contractors are expected to use a qualitative approach to identify and evaluate potential environmental aspects along with any controls to prevent or mitigate environmental damage. A Control Measures Register for the Proposed Development has been provided in Appendix A.

7.4 Training, Awareness and Competence

The Contractor (and their sub-contractors) will be selected with due consideration of relevant qualifications and experience. The Contractor will be required to employ construction staff with appropriate skills, qualifications, and experience appropriate to the needs of the works to be carried out during construction.

A site induction will be provided to all construction staff before they commence work on site. Where appropriate, the Contractor will identify specific training needs for the construction workforce and will ensure that appropriate training requirements are fulfilled. A baseline level of environmental awareness will be established through the site induction programme. Site inductions will cover the following as a minimum:

- Introduction to the Environmental Manager.
- The requirements of the OCEMP and consequences of non-compliance.
- The requirements of due diligence and duty of care.
- Identification of environmental constraints and potential impacts of the work.
- Procedures associated with incident notification and reporting including procedures for dealing with damage to the

- environment; and,
- The benefits of improved environmental and sustainability performance; and the potential consequences of departure from specified procedures, work instructions and method statements.

7.5 Meetings

The Environmental Manager will be responsible for arranging and holding monthly meetings with the Employer and/or the Employer's Representative. The Environmental Manager will develop and distribute minutes on monthly meetings accordingly.

7.6 Monitoring and Inspections

For the duration of the contract, the environmental performance of the Contractor will be monitored through site inspections and audits. The programme for monitoring, inspections and audits shall be specified in the contract. The Contractor shall develop, implement, and maintain an Environmental Inspections and Monitoring Plan. Records of all inspections carried out should be maintained and all actions should be closed out in a reasonable time. If additional monitoring and inspections are required due to any subsequent planning conditions, these will be added to the OCEMP.

7.6.1 Monitoring

Mitigation and monitoring will be carried out so that construction activities are undertaken in a manner that does not give rise to negative effects. Suitable monitoring programmes will need to be developed, implemented, documented, and assessed in accordance with the specification outlined in the OCEMP.

The results of all environmental monitoring activities will be reviewed by the Environmental Manager on an ongoing basis to enable trends or exceedance of criteria to be identified and corrective actions to be implemented as necessary.

7.6.2 Inspections

Inspections of construction activities will be carried out by the Environmental Manager daily to ensure all necessary environmental measures relevant to the construction activities are being effectively implanted by construction staff, ensuring legal and contractual conformity.

7.6.2.1 Daily Inspections:

The daily inspections should include, but not be limited to, checking that:

- The site boundary is marked out and respected.
- All waste is appropriately stored and segregated.
- Waste skips are covered to prevent wind-blown litter.
- Drip trays are in place for all stored equipment and plant.
- All chemicals/fuels are stored with appropriate containment/bunds/cover.
- Construction noise is within permitted limits and does not create a nuisance.
- Dust does not create a nuisance; and
- Fencing/hoarding is secure.

7.6.2.2 Weekly Inspections

The inspections should include, but not be limited to confirming that:

- Daily checklists have been completed.
- Waste storage areas have been checked and there is no build-up of waste materials.
- Spill kits have been checked and contain all relevant materials.
- The performance of all pollution control equipment has been checked and the equipment is working effectively.
- Noise reduction/monitoring equipment has been checked and is operating effectively.
- Control measures identified in Planning Conditions and the OCEMP are adhered to.

7.7 Nonconformity and Corrective and Preventative Action

The Contractor shall establish, implement, and maintain procedures to deal with actual and potential non-conformities and for taking corrective and preventative action. Non-conformities may be identified through:

- Internal contractor audits.
- Audits by the Employer and/or the Employer's Representative.
- Audits undertaken by external certification bodies.
- Audits undertaken by regulatory authorities (Dun Laoghaire Rathdown County Council); and
- General observations.

The Contractor procedures shall define the requirements for:

- Identifying and correcting non-conformities.
- Mitigating the environmental impacts of non-conformities.
- Investigating non-conformities including identify root causes and implementing appropriate actions to avoid their reoccurrence.
- Evaluating the need for actions to prevent non-conformities and implementing appropriate actions designed to avoid their reoccurrence.
- Setting realistic timeframes for undertaking effective corrective and preventative actions.
- Recording the results of corrective and preventative actions taken; and
- Reviewing the effectiveness of corrective and preventative actions.

All actions identified should be appropriate to the nature and magnitude of the issue and the environmental impacts encountered.

7.8 Reporting

The Contractor will be required to submit a report, the frequency to be agreed with the Contractor and Employer and/or the Employer's Representative to the Employer and/or the Employer's Representative for review and approval. The report shall address the following as minimum:

- Summary of compliance with the OCEMP including identification of any non-conformances.
- Interpretation of the results of ongoing monitoring.
- Detailed description of any issues and/or non-conformances identified during inspections and/or audits.
- Record of incidents and corrective actions (including Corrective Actions Reports as appropriate).
- Synopsis of environmental complaints received/queries raised by stakeholders; and
- Records of environmental training undertaken (as appropriate).

7.9 Environmental Records

The Contractor shall maintain records of all environmental documentation including monitoring, environmental compliance, test results, method statements and plans. All records will be kept up-to-date and be made available for audits, inspections, and periodical reporting. The Contractor will maintain the following environmental records (as a minimum) that will be made available for inspection to the Employer and/or the Employer's Representative and the relevant authorities if required:

- Management plans.
- Records of environmental incidents.
- Environmental reports.
- Records of environmental training.
- Register of environmental complaints.
- Corrective Action Reports.
- Environmental inspection and audit reports.
- All monitoring data.
- Waste and chemical inventories; and
- Health and Safety records.

8.0 GENERAL REQUIREMENTS

It is the responsibility of the Contractor to ensure compliance and to avoid and/or reduce significant adverse effects that have been identified at this preliminary juncture where practicable. Where the Contractor diverts from the methodologies and working areas outlined herein and/or defined in the granted planning consent and associated conditions that may be granted, it would be the responsibility of the Contractor to obtain the relevant licenses, permits and consents for any such changes.

8.1 Good Housekeeping

The Contractor will always employ a 'good housekeeping' policy. This will include, but not be restricted, to the following:

- General maintenance of working areas and cleanliness of welfare facilities and storage areas.
- Provision of site layout map showing key areas such as first aid posts, material storage, spill kits, material and waste storage, welfare facilities etc.
- Maintain all plant, material and equipment required to complete the construction work in good order, clean and tidy.
- Keep construction compounds, access routes and designated parking areas free and clear of excess dirt, rubbish piles, scrap wood, etc. at all times.
- Details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) will be provided at the boundaries of the working areas.
- Provision of adequate welfare facilities for site personnel.
- Installation of appropriate security, lighting, fencing, and hoarding.
- Effective prevention of oil, grease or other objectionable matter being discharged from the working area.
- Provision of appropriate waste management at each working area and regular collections to be arranged.
- Excavated material generated during construction will be reused on site as far as practicable and surplus materials/soils shall be recovered or disposed of to a suitably authorised waste facility site.
- Effective prevention of infestation from pests or vermin.

8.2 Site Compound

All Construction & Demolition waste materials will be segregated onsite into the various waste streams, via. labelled dedicated skips and storage areas. Waste will be removed from site by a suitably permitted waste haulage contractor. Each waste haulage contractor must hold a current valid waste collection permit issued by the National Waste Collection Permit Office (NWCPO).

To support the construction, phase a temporary construction compound is proposed to be located to the north of the existing car parking area. The contractor's site compound layout will include the following:

- Temporary site accommodation incorporating management and engineers' cabins, WC facilities, canteen, and drying room facilities.
- Primary materials storage including containerised units and lock ups for tools and equipment.
- Waste storage and recycling area either within or adjacent to compound.
- Parking for key management and staff.

8.3 Hours of Working

8.3.1 Core Working Hours

Construction hours are anticipated to be as follows:

- 08:00 – 19:00 Monday to Friday
- 08:00 – 14:00 Saturday
- No work except for exceptional circumstances Sunday or Bank Holidays.

8.3.2 Start-up and shutdown

The Contractor may require a period of up to one hour before and one hour after core working hours for start-up and shutdown activities in working areas. Activities permitted may include deliveries and unloading of materials, movement of staff to their place of work, maintenance and general preparation works. The use of plant machinery likely to cause disturbance, will not be permitted outside of the core working hours.

8.3.3 Additional working hours

It may be necessary in exceptional circumstances to undertake certain activities outside of the construction core working hours. Any construction outside of the construction core working hours will be agreed by the Contractor in advance with Dun Laoghaire Rathdown County Council and scheduling of such works shall have regard to nearby sensitive receptors. In the case of work required in an emergency or which if not completed would be unsafe or harmful to workers, the public or local environment, Dun Laoghaire Rathdown County Council will be informed as soon as reasonably practicable of the reasons and likely duration and timing (outside of the core working hours).

8.4 Security

Security will be the responsibility of the Contractor- who will provide adequate security to prevent unauthorised entry to or from the site. The following measures may be used to prevent unauthorised access:

- Install CCTV and security systems where required.
- Consult with neighbouring properties and local crime prevention officers including Dun Laoghaire Rathdown County Council and An Garda Siochana on site security matters where required.
- Prevent access to restricted areas and neighbouring properties by securing equipment on site such as ladders and scaffolding; and
- When there is no site activity, close and lock site gates and set appropriate site security provisions as required.

8.5 Hoarding and Fencing

Existing boundary fencing will be maintained throughout. Hoarding or fencing will be established around each of the working areas before any significant construction activities commences in that working area.

8.6 Water Quality and Monitoring

During the construction works there will be ongoing visual inspection monitoring for any visible signs of pollution (suspended solids, silt, hydrocarbon sheen and or other products). If any evidence of pollution is seen, then immediate corrective action will be taken to eliminate the source of the pollution.

8.7 Services and Utility

Site services shall be installed as part of the works. Working areas will be powered by mains supplies or diesel generators where an electrical supply is not available. The Contractor will be responsible for undertaking their own service to establish the full extent of underground services prior to the commencement of construction to support any surveys already undertaken as part of early design work and statutory consent applications.

8.8 Lighting

The following measures will be applied in relation to site lighting during construction:

- Lighting will be provided with a minimum luminosity sufficient for safety and security purposes. Where practicable, precautions will be taken to avoid shadows cast by the site hoarding on surrounding footpaths, roads, and amenity areas; and,
- Motion sensor lighting and low energy consumption fittings will be installed to reduce usage and energy consumption.

8.9 Reinstatement of Working Areas on Completion

The Contractor will reinstate all working areas as work proceeds during construction. All plant, equipment, materials, temporary infrastructure, and vehicles will be removed at the earliest opportunity and the surface of the ground restored as near as practicable to its original condition.

On completion of construction works the Contractor will ensure that all waste and potentially polluting material is removed from the site and is disposed/recovered of using appropriately authorised contractors as per the RWMP (The Contractor shall, as appropriate, undertake rehabilitation of site compound and other areas no longer to be used by the Contractor. Following site clearance and rehabilitation DLR Coco Representative will undertake a final inspection of the site. Any environmental issues identified during the final inspection will be raised with the Contractor. Mitigation measures and timeframes for completion will be agreed between the Contractor and the Employer's Representative in line with agreed procedures prior to final sign off.

8.10 Health and Safety

The Contractor would be required to ensure all relevant health and safety, fire safety and security requirements are in place prior to the commencement of construction and in accordance with the relevant legislation requirements in addition to the specifications of Dun Laoghaire Rathdown County Council. Relevant Irish and EU health and safety legislation will be complied with at all times by all construction staff and personnel during construction. Further, the Contractors would also have to ensure that all aspects of their works comply with good industry practice and all necessary consents, licenses and authorisations have been put in place for the proposed development.

8.11 Integrated Pest Management (IPM)

An Integrated Pest Management (IPM) to be established in accordance with best practice within the guidelines for the campaign for responsible rodenticide use (CRRU Ireland – Wildlife Aware). Rodent pest control technicians will have completed their training and have been included on the register of 'pest management trained professional users' (PMUs) maintained by the Department of Agriculture Food and the Marine are fully equipped to implement best practice in the delivery of rodent pest management services, based upon consideration of the risk hierarchy and implementation of an Integrated Pest Management (IPM) approach. Records of the conclusions and decisions reached by PMUs and by professional users on site will be maintained for management purposes and to facilitate auditing and compliance inspections by regulatory authorities.

9.0 EMERGENCY RESPONSE PLAN

The contractor shall establish, implement, and maintain procedures to identify and manage potential environmental emergency situations and potential accidents. The contractor shall respond to actual emergency situations and prevent and mitigate adverse environmental impacts.

The contractor should periodically test, review and update emergency preparedness and response procedures.

9.1 Key Requirements

During construction accidents, incidents and emergencies that have an environmental impact may occur. In the event of an emergency, the first response is to locate the source of that which is giving rise to the environmental impact where appropriate and stop continuation of the situation, followed by the containment, control and mitigation of the situation. The Emergency Response Procedure will be displayed within the Site Office / compound. A copy of the Material Safety Data Sheets for all the chemicals used on the project site will also be kept at the site office. The main objectives of the Emergency Response Plan are to:

- Ensure that all means are available to contain the consequences of an accidental spill, fire, or release of oil/fuel.
- Ensure that employees are suitably trained to respond to fire and spill.
- Ensure that proper reporting takes place; and
- Ensure that proper investigation is undertaken.

All contractor personnel and sub-contractors will be instructed and rehearsed, as appropriate, in the requirements of the emergency response procedure. Following control of an incident or emergency, an investigation will be conducted, and corrective actions identified and addressed. The Contractor's Environmental Manager will verify the close out of environmental related actions and notify the Employer and/or the Employer's Representative of any emergency.

9.2 Emergency Incidents

Emergency incidents are those occurring that rise to significant negative environmental effects including but not limited to the following:

- Any malfunction of any mitigation measure and/or environmental protection system.
- Any emission that does not comply with requirements of the contract.
- Any circumstance with potential environmental pollution; or
- Any emergency that may give rise to environmental effects (e.g., significant spillages or fire outbreak).

9.3 Spill Contingency Plan

The main causes of contamination can occur through:

- Spillage of hazardous material including fuel oils, waste materials or chemicals.
- Spillage of wastewater sewage and other liquid effluents; and
- Spillage of contaminated wash down water with oils, chemicals etc from vehicles, equipment, and machinery.

Prior to commencing activities on site, Contractors should develop, implement, and maintain a Spill Contingency Management Plan.

9.4 Emergency Incident Response Plan

The Contractor will be required to develop an Emergency Incident Response Plan. The Plan will contain emergency phone numbers and method of notifying local authorities, statutory authorities, and stakeholders. The Plan will include contact numbers for key personnel. The Contractor will ensure that all staff and personnel on site are familiar with the emergency requirements.

In the case of work required in an emergency, or which if not completed would be harmful or unsafe to workers, the public or to the local environment, Dun Laoghaire Rathdown will be informed as soon as reasonably practicable of the reasons and likely duration. Examples may include where the ground needs stabilising if unexpected ground conditions are encountered or equipment failure. In the event of an emergency incident occurring, the Contractor will be required to investigate and provide a report to include the following, as a minimum:

- A description of the incident, including location, type of incident and the likely receptor.
- Contributory causes.
- Negative effects.
- Measures implemented to mitigate adverse effects; and
- Any recommendations to reduce the risk of similar incidents occurring. Further, if any sensitive receptor is impacted, the appropriate environmental specialists will be informed and consulted with accordingly. Any response measures will be incorporated into an updated Emergency Incident Response Plan.

9.5 Emergency Access

The Contractor will be required to maintain emergency access routes throughout construction and identify site access points for the working area.

9.6 Extreme Weather Events

The Contractor will consider the impacts of extreme weather events and related conditions during construction. The OCEMP should consider all measures deemed necessary and appropriate to manage extreme weather events and should specifically cover training of personnel and prevention and monitoring arrangements for staff. As appropriate, method statements should also consider extreme weather events where risks have been identified.

10.0 ENVIRONMENTAL MANAGEMENT AND CONTROLS

The Contractor will be required to have due regard to and incorporate any additional requirements where relevant from any planning conditions which may apply.

10.1 Risk Identification

Contractors shall undertake a qualitative waste management risk assessment or appraisal prior to the commencement of construction activities. This assessment will be updated by the Contractor and any planning conditions.

11.0 CONCLUSION

The project OCEMP will be a live document which will be reviewed throughout the construction process through regular auditing, monitoring, and site inspections. This will ensure that the environmental performance of construction activities associated with the project are subject to continual improvement and will ensure that environmental objectives and targets outlined in the Plan are achieved. Revisions to the OCEMP may include any changes and improvements made during the works from an environmental perspective.

APPENDIX A

CONTROL MEASURES REGISTER FOR THE PROPOSED DEVELOPMENT

Environmental Controls Register													
Document Type : Register For Proposed Development at Samuel Beckett Civic Campus, Ballyogan, Co Dublin													
Document Title: Environmental Controls Register													
Responsible Department: Dún Laoghaire-Rathdown County Council													
Area of Activity	Aspect	Probability	Severity	Significance	Description of impact		Control Measures		Probability	Severity	Significance		
Dún Laoghaire-Rathdown County Council													
Construction													
Works compound / Laydown areas / Site stores	Storage of waste materials	4	5	20	Run off (leachate), failure and windborne material from waste stockpiles affects land, water, air and causes nuisance.		Areas for waste skips and stockpiles will be located on hard-standing ground at a safe distance away from any watercourses. All waste produced as part of the works will be segregated, secured and fully labelled with waste codes and description. General waste skips will be enclosed. Stockpiles of soils will be covered with plastic sheeting to prevent rainwater runoff where practical and safe to do so. Any contaminated waste is segregated and placed on plastic sheeting and covered to prevent leachate. All works associated with the development should be confined to the proposed development site and be done in full accordance with the plans and information submitted.		2	5	10		
Works compound / Laydown areas / Site stores	Storage of materials	4	5	20	Run off (leachate), failure and windborne material from stockpiles and storage of material affects land, water, air and causes nuisance.		Material stockpiles will be covered with plastic sheeting to prevent rainwater runoff. Where possible, materials will be delivered to site in quantities required for a particular phase of works. Stockpiles will be located at a safe distance from any watercourses and are to be profiled.		2	5	10		
Works compound / Laydown areas / Site stores	Storage of Chemicals/Oils	4	4	16	Incorrect storage of Chemicals/Oils affects land, water and air, by spillages, leakages.		Areas for Chemicals/Oils storage and Chemicals/Oils waste are to be located on bunded areas or in secure containers on hard-standing. Skips and stockpiles will be located away from watercourses. All waste produced as part of the development will be segregated, secured and fully labelled with waste codes and description. Waste Chemicals/Oils packaging will be segregated and stored securely. All Chemicals/Oils items are accompanied by a Safety Data Sheet. All SDS are to be held on site. Chemicals/Oils Assessments are kept on file, environmental impacts understood, communicated and attached to RAMS. Chemicals/Oils materials which can react are kept separated. All Chemicals/Oils storage areas will be well ventilated. Items which may be affected by water and weather are to be sheltered. Items are to be kept out of access routes to avoid damage.		3	3	9		
Works compound / Laydown areas / Site stores	Storage of fuels	4	5	20	Incorrect storage of fuels affects land, water and air, by spillages, leakages		All oils/ fuels will be stored in accordance with the EPA Guidance Note on Storage and Transfer of Materials (110% or double skinned and protected). All oils/ fuels will be sited at a distance greater than 50m from groundwater monitoring boreholes and a safe distance from Watercourses. Spill kits should be present in all plant machinery. Oil booms and oil soakage pads should be kept on site to deal with any accidental spillage.		2	5	10		
Works compound / Laydown areas / Site stores	Storage of plant and tools	4	4	16	Poor storage of plant leads to higher potential for leaks and spills to ground or watercourses.		Areas for plant storage are to be located on bunded areas or in secure containers on hard-standing. Plant and tools will be stored securely in stores or in locked compounds with appropriate bunding and/or drip trays employed.		3	3	9		
Works compound / Vehicles	Location of car parks	3	4	12	Surface pollution from cars and plant affects land, water and air.		Car parks are to be located on hardstanding or of compacted type 1 material. The nature of the material makes oil spillages or leaks easily identifiable. Any oil spillages which are spotted are dealt with (spill kits etc.) appropriately.		2	4	8		
Offices / Welfare	Location of areas for site office and welfare	3	4	12	Poor management/ operation of toilet/ welfare and waste facilities (including septic waste collection) can result in vermin and nuisance from odour, visual impact and potential issues		Where possible site offices are connected to the mains via the permanent site supplies for water, sewage and electricity. Where this is not possible the foul waste will be removed regularly by competent waste contractors. Food waste will be placed in organic wheelie bins which will be enclosed and in good condition. They will be regularly emptied.		2	4	8		
Material use	Identification of materials to be re-used on site	3	5	15	Improper use of materials on site can potentially cause pollution of land and water.		All excavations proposed to be tested for suitability for re-use.		2	5	10		
Stockpiling topsoil	Storage of topsoil for re-use	3	4	12	Incorrect storage of topsoil can degrade the material. Material can also be wind blown and have the potential for leachate or cause siltation in the river.		Stockpiles will be profiled to allow sufficient aeration to be maintained and prevention of compression during storage. Stockpiles to be no taller than 2m.		2	3	6		
Planning & Permitted Development	Permissions from Dun Laoghaire Rathdown County Council (DLRCC)	3	5	15	Failure to adhere to or be fully aware of planning conditions or constraints and permitted development parameters can lead to environmental harm and prosecution by Dun Laoghaire Rathdown County Council (DLRCC). Failure to comply with the controls in place can lead to environmental harm and prosecution. This has wider implications to the project development, client reputation and programme.		Any Planning permission conditions will be passed to the Contractor as part of the Contract document.		2	5	10		
Existing Knowledge - Drainage	Identification and protection of drainage	4	5	20	Failure to protect drains from pollutants can cause harm to ground and watercourses. Damage to drains and drainage systems introduces pollution pathways and effects ground, ground water and watercourses.		Site drainage plans will be made available by the Structural Engineers to all Contractors and other related personnel working on the project. Works areas, laydown areas, stockpiles have all been assessed in relation to drain locations. Spill kits and drain covers (where applicable) will be made available and easily accessible to the Contractors on site. Drip trays to be used under all static plant.		2	5	10		
Site works, excavations, land clearance construction, demolition	Contaminated land on site (if discovered)	3	5	15	Mismanagement of contaminated land can potentially damage surrounding environment (in particular ground contamination as well as potential risk to controlled waters). Incorrectly managed contaminated land causes potential pollutant pathways to be introduced. Failure to identify or to correctly classify contaminated land leads to impacts in the environment either on site or off.		Awareness training will be provided to the site team on what to do if suspected contamination is encountered. Any discovery is immediately highlighted to the site management team. Any material suspected to be contaminated is segregated and stored on plastic sheeting or within an appropriate impervious container and clearly labelled. Where possible the material is covered to prevent any leachate run off or airborne movements of contaminants.		2	5	10		
Site works, excavations, land clearance construction, demolition	Contaminated water on site (if discovered)	3	4	12	Mismanagement of contaminated water on site can lead to pollution of water courses. Contamination includes non-hazardous substances such as silt and substances which suppress oxygen content in water.		No excavation waters to be discharged to any watercourses. Awareness training given to the site team on what to do if suspected contamination is encountered. Any discovery is immediately highlighted to the site management team. Pollution prevention methods and appropriate movement / disposal of water will be put in place. Silt management will be put in place for any movements of water, this is in the form of silt fences, silt bags. If any trace of contaminants are identified the water will be sampled and if required removed as waste.		2	4	8		

Site works, excavations, construction, demolition	Waste generated on site	4	4	16	Impacts associated with the release of waste to the surrounding surface or ground water. Inappropriate removal of waste impacts the wider environment.	All road sweeping, excavations, and washing out of concrete containers activities are to be carried out in line with current best practice guidance. No silty water is to be discharged to drains, surface water or ground. Collection and disposal of liquid and solid waste is to be carried out via an authorised waste management company.	2	4	8	No additional measures.
Excavation works for the drainage works	Contamination of Surface water	4	4	16	Impacts associated with the release of silt to the surrounding surface.	The timing of excavations should be completed during dry weather. No works should be carried out during heavy rain. Works should be only be carried out after the silt fencing has been installed.	2	4	8	
Site works & plant usage	Dust / air borne substances / pollutants generated	4	4	16	Dust and emissions to air potentially contribute to degradation of local air quality.	Plant is turned off when not in use. Maintenance regime - Daily and Weekly inspections. Any problems are reported and actioned with the plant withdrawn from use during this time. Appropriate machinery is used for the task (i.e. appropriate size) Dust suppression will be employed when required. Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. Any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions. Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads. Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site road, this will be 20 kph, and on hard surfaced roads as site management dictates. Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary. Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods. During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions. At all times, these procedures must be strictly monitored and assessed. In the event of dust nuisance occurring outside the site boundary, movements of materials likely to raise dust must be curtailed and satisfactory procedures implemented to rectify the problem before the resumption of construction operations.	2	4	8	No additional measures.
Site works & plant usage	Noise generated	4	5	20	Noise emanating from activities onsite may result in nuisance (local residential/commercial) and/or breaches of conditions of local noise limits.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays. Planning conditions may impose additional constraints on noisy works and site hours. Plant and generators will not be left running when not in use. Any generators needed for prolonged periods of time are located away from residential and commercial properties wherever possible.	1	5	5	No additional measures.
Site works & plant usage	Permitted working hours	3	5	15	Works outside permitted working hours cause nuisance to local population. Failure to abide by local authority regulations may result in interventions from regulators.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays. Planning conditions may impose additional constraints on noisy works and site hours. Noisy activities do not take place at weekends and construction activities do not take place outside the constructions site hours as stipulated by the Local Authority. Any complaints received are dealt with by the site team.	2	4	8	No additional measures.
Site works, plant usage.	Vibration generated	3	4	12	Movement of heavy plant, deliveries, multiple vehicles and excavation activities cause the disturbance of local or migratory ecology and residential/business receptors due to excessive vibration levels.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays. Planning conditions may impose additional constraints on works causing vibration. Plant and generators are not left running when not in use. Any generators needed for prolonged periods of time are located away from residential and commercial properties wherever possible.	2	4	8	No additional measures.
Excavations	Vibration generated - Earthworks	3	3	9	Earthwork activities cause the disturbance of residential/business receptors due to excessive vibration levels.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays. Planning conditions may impose additional constraints on noisy works and site hours. Plant and generators are not left running when not in use. Any generators needed for prolonged periods of time are located away from residential and commercial properties wherever possible.	2	6	6	No additional measures.
Site works / plant usage / welfare areas	Light generated	3	3	9	Light emanating from activities onsite may result in nuisance (local residential/commercial) and/or breaches of conditions of local agreements.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays. Planning conditions may impose additional constraints on noisy works and site hours. Any areas required to be lit during darkness hours are located away from residential and commercial properties. All lighting used is task based and diverted from areas of residential or commercial activities. Mammal friendly lighting should be employed on site to reduce impacts upon nocturnal species, including bats. The recommendations outlined in the guidance "Bats and Lighting Guidance Notes for: Planners, Engineers, Architects and Developers" should be followed. See https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf . Luminaire design is extremely important to achieve an appropriate lighting regime. Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires any new lighting within the site, and existing lighting should be upgraded to these specifications. This is taken from the most recent BCT Lighting Guidelines (BCT, 2023).	3	2	6	No additional measures.
					- A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component. - Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. [Definition: Red Light refers to the light sources in the red spectrum and mainly consist of long wavelength light above 600nm with an RA value of 60 (for good colour recognition). This wavelength of light is considered to have the least impact on bats.] - Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill. - Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges. - Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards. - Only luminaires with a negligible or zero Upward Light Ration, and with good optical control, should be considered. - Luminaires should always be mounted horizontally, with no light output above 90o and/or no upward tilt. - Where appropriate, external security light should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow (e.g. 1-2-minute timer). - Use of a Central Management System (CMS) with additional web-enables devices to light on demand. - Use of motion sensors for the local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS. - The use of bollard or low-level downward-directional luminaires is strongly discouraged. - Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed					

Site works, excavations, construction, demolition.	Increase in hardstanding / changes in permeability of surfaces	3	4	12	Drainage system/ surface water capacity could be overloaded which could result subsequent pollution.	Surface drainage prepared by the Engineers is incorporated in to the design. Drainage plans are available. Additional control measures include silt fences. During the construction works there will be ongoing monitoring of the local water courses for any visible signs of pollution (suspended solids, silt, hydrocarbon sheen and or other products). If any evidence of pollution is seen then immediate corrective action will be taken to eliminate the source of the pollution.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - site office	4	5	20	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Removal of office waste from site will be completed using authorised carriers approved by the NWCPO http://www.nwcpo.ie/permitsearch.aspx and disposal/recovery sites approved on the NWCPO Register http://facilityregister.nwcpo.ie/ . Only approved persons can sign documentation. A copy is held on site in hard copy. A copy of the carrier's licence, broker's licence (if applicable) and the disposal site permit, licence or exemption is also held in hard copy on site. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - soil and stone	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste is segregated on site and tested where appropriate. Any spoil or material suspected of being contaminated would be quarantined and clearly signed. No soil and stone is to leave sites without accompanying lab test data. All disposal site permits are checked to ensure the facility is licenced/permited to receive the relevant EWC code assigned to the soil and stone load. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - inert waste and non-hazardous	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Streams are recorded by the Contractor. Copies of waste collection permits are obtained and checked for validity on the NWCPO Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are kept in the site files. Copies of disposal site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/ . The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. Any waste identified as inert (brick, concrete, glass, etc.) can be managed in the onward waste chain and re-used under waste codes of practice.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - hazardous waste	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Copies of waste collection permits are obtained and checked for validity on the NWCPO Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are kept in the site files. Copies of recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/ . The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. No hazardous waste is mixed with non-hazardous waste or inert. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - hazardous waste	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Streams are recorded by the contractor. Copies of carrier waste collection permits are obtained and checked for validity on the NWCPO website Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are kept in the site files. Copies of disposal/recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/ . The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. No hazardous waste is mixed with non-hazardous waste or inert. All wastes will be segregated in line with the Waste Hierarchy. Hazardous waste is stored on bunds, in ventilated areas or on drip trays as appropriate. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - foul wastewater from construction workers.	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Streams are recorded by the contractor. Copies of carrier waste collection permits are obtained and checked for validity on the NWCPO Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are kept in the site files. Copies of disposal/recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/ . The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. No hazardous waste is mixed with non-hazardous waste or inert. All wastes will be segregated in line with the Waste Hierarchy. Hazardous waste is stored on bunds, in ventilated areas or on drip trays as appropriate. The waste streams will be recorded by the main contractor.	2	5	10	No additional measures.
Generation of waste	Waste Duty of Care requirements	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste will be stored in skips / containers of good condition. Skips / containers delivered to site which are in poor condition will be rejected. Waste will be stored securely within the site compounds. Waste will be managed in line with the Waste Hierarchy. Copies of waste collection permits are obtained and checked for validity on the NWCPO Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are to be kept in the site files. Copies of disposal/recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/ . The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Concrete	Concrete use	4	5	20	Concrete and concrete water are high in pH which causes pollution of ground and groundwater, surface water and harms ecology. Mismanaged wet concrete has the potential to harm the environment.	Concrete and cement mixing activities will take place as far as possible from a watercourse or surface water drain, to reduce the risk of runoff entering a watercourse. Surplus dry concrete, cement and grout is collected and stored correctly within secure containment. Excess made up concrete will be sent back to the batching plant in the first instance.	2	5	10	No additional measures.

Concrete	Concrete washout process	4	4	16	Run off and arisings from concrete washout activities contains high pH pollutants which cause harm to ground and surface water.	Concrete mixing and delivery lorries should return to the batching plant for washout. Where this is not possible equipment, such as chutes, portable mixers, barrows, pump lines, shovels, etc. are washed out in a designated area that has been specifically designed to contain wet concrete/wash water. Washout activities are not located near watercourses, boreholes or sensitive receptors. Effluent from washout is collected in a sealed system or container and not allowed to discharge to ground. Concrete washout is performed in an impermeable container such as a skip, plastic trough or specially constructed and lined washout pit. Evaporation or settlement methods are acceptable. In periods of heavy rainfall concrete washout skips/containers are covered to prevent excessive volumes or overflowing. The concrete washout area is inspected prior to use, lined, inspected during use and placed on hardstanding or impermeable protection which also includes provision to safeguard against run-off. Concrete washout water is then removed from site by certified waste collectors to approved disposal sites.	2	5	10	No additional measures.
Concrete	Use of shuttering (washing down)	3	3	9	Concrete and concrete water are high in pH which causes pollution of ground and groundwater, surface water.	Prefabricated or reusable shuttering required to be washed is managed on site. This run off has the potential to contain dilute amounts of shuttering lubricant and concrete residue. Any run-off from the washout process is captured either in a bunded area and removed by a waste collector approved by the NWCPo.	2	3	6	No additional measures.
Demolition	Demolition of the existing derelict house on site.	3	4	12	Demolition of structures can cause dust impacts on local receptors (residences, businesses and water bodies).	Dampening down is employed during demolition activities if the weather is dry. Barriers may be required to be installed to prevent dust passing to sensitive receptors. Road sweeping employed where necessary to reduce dust impacts. All broken out material is checked for signs of contamination. If any are suspected this material is segregated. The concrete is then removed off site	2	4	8	No additional measures.
Plant / vehicle use on roads	Mud, dust generated on shared access routes	3	3	9	Dust and mud create nuisance on local roads. Impact on local receptors.	Activities which produce dust and mud to be controlled on site as much as possible. Dampening down is employed at point source and for any stockpiles. Road sweeping to be employed where necessary to reduce dust and mud impacts. Silt fencing or ground profiling may be employed to prevent migration of silt which may form mud on roads.	2	3	6	No additional measures.
Plant / vehicle use on roads	Road sweeping	3	4	12	Incorrect management of road sweeping activities leads to environmental harm and a breach of legislation. Poorly executed road sweeping activities causes nuisance with regards to dust and mud on roads.	Ensure road sweeping activities are conducted by competent contractors with a clear scope of works. Coordination and consideration of local road-users is given where possible, for example, no road sweeping occurs on public roads during rush hours, school collection times, specifics applicable to the road and the site are accounted for.	2	4	8	No additional measures.
Foundations	Generation of arisings	4	4	16	Potential damage to surrounding environment (ground, groundwater and watercourses).	Arisings from foundation activities are stored securely and assessed prior to removal from the works area. If the nature of the material is wet containment or silt prevention methods are employed such as silt fencing, skips.	2	4	8	No additional measures.
Demolition / Equipment Removal	Segregation, storage and disposal of equipment	4	5	20	Equipment which contains hazardous substances such as oils, can harm the environment when incorrectly managed. Equipment which is to be relocated for reuse could be damaged through incorrect storage on the site. Failure to follow the Waste Regulations may result in environmental harm. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Equipment will be removed and held in secure containers or placed on containment. It will be appropriately labelled. Equipment intended for re-use or return to is stored securely and away from works areas and traffic routes which may have the potential for accidental damage. Competent contractors are used to remove equipment and all removal activities.	2	5	10	No additional measures.
Plant and tool usage	Spills and leaks from tools and plant	4	4	16	Poor maintenance of plant leads to higher potential for leaks and failures. Maintenance tasks increases risk of leaks and spills to ground or watercourse. Lack of preparation in spill response causes additional clean up and potential pollution events.	All plant delivered to site is inspected prior to first use by a competent person. Only modern, serviced plant is allowed on to site. Plant inspection checklists are carried out in. Daily and Weekly inspections are carried out. Plant maintenance regime is maintained. Any problems identified are reported and actioned (the plant is withdrawn from use). Any maintenance activities are undertaken off site where possible or in controlled areas where potential leaks and spills are contained and controlled. All works areas have a spill kit and plant is located near to spill kits at all times. Spill kits will be maintained, kept free from debris and dirt and water ingress. Spill response training and regular drills.	2	4	8	No additional measures.
Plant and tool usage	Storage of plant and tools	4	4	16	Poor storage of plant leads to higher potential for leaks and spills to ground or watercourse.	Areas for plant storage are located on bunded areas or in secure containers on hard-standing. Plant and tools are stored securely either in stores or in locked compounds with appropriate bunding, drip trays employed.	2	4	8	No additional measures.
Generators	Use and containment of fuel in mobile and static generators.	4	5	20	Poor storage and maintenance of generators leads to higher potential for leaks and failures. Maintenance tasks and refuelling increases risk of leaks and spills to ground or watercourse.	All generators delivered to site are inspected prior to first use by a competent person. Only modern, serviced plant is allowed on to site. Generators are located on hard-standing, within a bund or within their own secondary containment. Mobile generators located on drip trays. Inspections are carried out and generators are maintained by competent contractors. Any problems identified are reported and actioned (the plant is withdrawn from use). Spill kit located next to generator. Spill kits are to be maintained, kept free from debris and dirt and water ingress. Spill response training and regular drills.	2	4	8	No additional measures.
Fuel	Use of fuel (including refuelling of items).	4	4	16	Potential damage to surrounding environment in particular watercourse, groundwater or ground contamination.	Any diesel bowsers on site are controlled by authorised personnel and are kept closed and locked when not in use. When refuelling takes place on site either via the bowser, tanker deliveries or handheld fuel cans the operations are located within a controlled area and with the use of containment or drip tray/plant nappies. Spill kits made available and easily accessible to the working parties. Drip trays to be used under all static plant and fuel powered items in the works areas. Induction includes refuelling operations. All handheld fuel containers are returned to stores when not in use.	2	4	8	No additional measures.
Emergency conditions	Fire	3	5	15	Storage of combustible materials and mismanagement of hot works results in a major event and/or result in a significant pollution event in the event of a fire.	No fires are permitted on site. All hot works are subject to Hot Work Permits. Fire extinguishers and fire marshals are present on site.	2	4	8	No additional measures.
Emergency conditions	Uncontrolled release of oil or other hazardous chemicals	3	5	15	Normal spill control measures overloaded resulting in pollution of controlled waters or ground.	All activities involving significant volumes of oil or hazardous chemicals are subject to RAMS.	2	5	10	No additional measures.
Biodiversity Enhancement and Landscaping	Environmental Protection				Failure of Good procedures and Housekeeping on site.	If there is an opportunity to install a bat box scheme (summer woodcrete bat boxes on poles), these could be located in the potential biodiversity area in the north-eastern corner of the proposed development site. A detailed landscaping plan should be prepared for the entire site and the overall aim of the landscaping plan should be to promote biodiversity net gain within the site, with the use of suitable native and / or non-native pollinator friendly plants. Planting guidelines within the All-Ireland Pollinator Plan 2021-2025 should be followed. Nature Based Solutions for surface water management within the site should be incorporated, e.g., green roofs, tree pits, swales etc. Any additional landscaping or planting on the site should focus primarily on native Irish species. Species that additionally provide benefits to local pollinators should also be included. Areas of the site should be managed for pollinators and wildflower areas should be encouraged. This can be done by cutting at the end of the summer season and removing the grass clippings from the area to compost elsewhere. The perimeters of the site should be planted with a mixture of native hedgerow species, and groups of larger trees should also be incorporated around the site. The existing attenuation area offers ample opportunity to increase biodiversity in the site. At the moment, this area lies unmanaged and the grassland habitat within it is becoming rank. The area is also attracting rubbish dumping. If the surface water proposals for the site result in the creation of an attenuation pond in this area, then the morphology of the pond should allow for shallow edges and stones to allow for easier use of the pond by frogs and newts should they happen to colonise. Suitable aquatic plants and marginal vegetation should be included in a planting scheme for this pond. The drier margins of the pond and the remaining area of the corner should then be managed to maximise habitat for pollinators, i.e., no fertilization, cutting annually in late summer and removing the cuttings for composting after 2 days.				

