



Restoration of Bay Lane Quarry

Report to Inform Screening for Appropriate Assessment

March 2019





Bay Lane Soil Recovery Facility

Screening for Appropriate Assessment

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1 INTRODUCTION

This report comprises information in support of screening for Appropriate Assessment (AA) in line with the requirements of Article 6(3) of the EU Habitats Directive (EC 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora; the Planning and Development (Amendment) Act 2010; and the European Union (Birds and Natural Habitats) Regulations 2011 as amended for the application by GLV Bay Lane Limited (hereafter, 'GLV') in support of a planning application for the operation of a soil recovery facility at Bay Lane. It provides information on, and assesses the potential for, the proposed development to significantly affect European sites¹.

1.1 SITE LOCATION

The site which is located at Bay Lane, St. Margaret's, County Dublin² is located c. 1 km southwest off Exit 2 on the M2 motorway, c. 6 km NNW of Exit 5 on the M50 motorway. The site area is approximately 13.67 ha in total and lies approximately 59.5 m above Ordnance Datum. The quarry void extends over an area of 8.59 hectares.

The site falls under the Fingal County Development Plan 2017 – 2023 and the associated lands are zoned GE – General Employment 'Provide opportunities for general enterprise and employment', while also being subject to the Cherryhound Local Area Plan.

The site is located close to a good transport network including the N2/M2, M50, M1 and the N3, while also being accessible to the Dublin Port Tunnel and to Dublin City Centre.

1.2 LEGISLATIVE CONTEXT

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the "Habitats Directive" provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as the Natura 2000 network. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites (Annex 1.1). Article 6(3) establishes the requirement for AA:

"Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the

¹ The Natura 2000 network provides the ecological infrastructure for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species within the EU. The Natura 2000 network in Ireland is made up of European sites defined under the Birds and Natural Habitat Regulations 2011 as (a) candidate site of community importance, (b) site of community importance, (c) candidate special area of conservation, (d) special area of conservation, (e) candidate special protection area, or (f) special protection area. These are commonly referred to as, Special Areas of Conservation (SACs) and Special Protected Areas (SPAs).

² Address per FCC planning decision 1694 reference F00A/0862 of 20 April 2001.

competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

Article 6(4) states:

“If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.”

The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Union (Birds and Natural Habitats) Regulations 2011 as amended. The governing legislation is principally Part XAB (s. 177S) of the Planning and Development Act which requires that a Competent Authority *must take appropriate steps to avoid the deterioration of natural habitats and the habitats of species as well as the disturbance of species for which the site has been designated, in so far as such disturbance could be significant in relation to the objectives of the Habitats Directive.*

1.3 ROLE OF THE COMPETENT AUTHORITY

Fingal County Council, in its role as the Competent Authority, is obliged to examine the likely significant effects individually or in combination, of the proposed works on European sites in light of their specific Species of Conservation Interests (SCIs) (i.e. birds for which SPAs are designated, and wetland habitats), Qualifying Interest (QI) species (i.e. flora and fauna for which SACs are designated), and Conservation objectives (COs). If Screening for AA determines that there will likely be significant effects on a European site, then full AA must be carried out for the proposed works, including the compilation of a Natura Impact Statement (NIS) to inform the decision making.

1.4 STAGES OF THE APPROPRIATE ASSESSMENT PROCESS

The AA process progresses through four stages. If at any stage in the process it is determined that there will be no adverse effect on the integrity of a European site in view of the sites' COs, the process is effectively completed. The four stages are as follows:

- Stage 1 – Screening of the proposed plan or project for AA;
- Stage 2 – An AA of the proposed plan or project;
- Stage 3 – Assessment of alternative solutions; and
- Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI)/ Derogation.

Stages 1 and 2 relate to Article 6(3) of the Habitats Directive; and Stages 3 and 4 to Article 6(4).

Stage 1: Screening for AA

The aim of screening is to assess firstly if the plan or project is directly connected with or necessary to the management of European site(s); or in view of best scientific knowledge, if the plan or project,

individually or in combination with other plans or projects, is likely to have a significant effect on a European site. This is done by examining the proposed plan or project and the COs of any European sites that might potentially be affected. If screening determines that there is potential for significant effects or there is uncertainty regarding the significance of effects, then it will be recommended that the plan or project is brought forward to the next stage of the AA process.

Stage 2: Appropriate Assessment

The aim of Stage 2 of the AA process is to identify any adverse impacts that the plan or project might have on the integrity of relevant European sites. As part of the assessment, a key consideration is 'in combination' effects with other plans or projects. Where adverse impacts are identified, mitigation measures can be proposed that would avoid, reduce or remedy any such negative impacts and the plan or project should then be amended accordingly, thereby avoiding the need to progress to Stage 3.

Stage 3: Assessment of Alternative Solutions

If it is not possible during Stage 2 of the AA process to conclude that there will be no adverse effects on site integrity, Stage 3 of the process must be undertaken, which is to objectively assess whether alternative solutions exist by which the objectives of the plan or project can be achieved. Explicitly, this means alternative solutions that do not have adverse impacts on the integrity of a European site. It should also be noted that EU guidance on this stage of the process states that, '*other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria*' (EC, 2002). In other words, if alternative solutions exist that do not have adverse impacts on European sites; they should be adopted regardless of economic considerations. This stage of the AA process should result in the identification of the least damaging options for the plan or project.

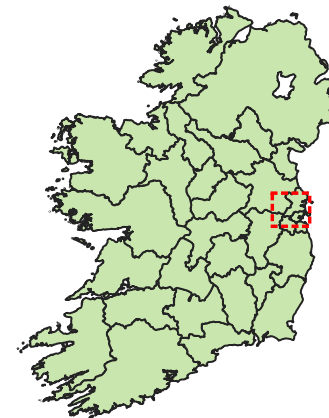
Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage of the AA process is undertaken when it has been determined that a plan or project will have adverse effects on the integrity of a European site, but that no alternatives exist. At this stage of the AA process, it is the characteristics of the plan or project itself that will determine whether or not the competent authority can allow it to progress. This is the determination of 'over-riding public interest'.

It is important to note that in the case of European sites that include in their qualifying features 'priority' habitats or species, as defined in Annex I and II of the Directive, the demonstration of 'over-riding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures.



Legend



- Proposed Development
- ➔ River Shallon

Client
GLV Bay Lane Limited

Project **Bay Lane Soil Recovery Facility**

Title
Figure 1.1: Site Location Plan

RPS RPS Consulting Engineers
West Pier Business Campus
Dun Laoghaire
Co. Dublin
Tel: +353 1 488 2900

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Notes
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2 METHODOLOGY

2.1 GUIDANCE DOCUMENTS ON APPROPRIATE ASSESSMENT

Appropriate Assessment Guidelines for Planning Authorities have been published by the Department of the Environment Heritage and Local Government (DEHLG, 2010a). In addition to the advice available from the Department, the European Commission has published a number of documents which provide a significant body of guidance on the requirements of Appropriate Assessment, most notably including, 'Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (EC, 2001), which sets out the principles of how to approach decision making during the process. These principal national and European guidelines have been followed in the preparation of this AA Screening. The following list identifies these and other pertinent guidance documents:

- Office for Official Publications of the European Communities, Luxembourg (EC, 2000), Communication from the Commission on the Precautionary Principle;
- Office for Official Publications of the European Communities, Luxembourg (EC, 2018), Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (Revised November 2018);
- Office for Official Publications of the European Communities, Brussels (EC, 2001), Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;
- European Commission (EC 2007), Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission;
- Department of the Environment, Heritage and Local Government, Dublin (DEHLG, 2010a), Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities;
- Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities (DEHLG, 2010b);
- European Commission (EC, 2013), Interpretation Manual of European Union Habitats. Version EUR 28;
- The Status of EU Protected Habitats and Species in Ireland. Habitats Assessments Volume 2; and NPWS 2013a,b,c)

EC (2000) notes that the implementation of an approach based on the precautionary principle should start with a scientific evaluation, as complete as possible, and where possible, identifying at each stage the degree of scientific uncertainty, and also that decisions taken based on the precautionary principle should be maintained so long as scientific information is incomplete or inconclusive. EC (2001) notes also that predicting the response of a receptor to a disturbance effect can be difficult and, in the absence of firm scientific information, requires a precautionary approach.

2.2 GUIDING PRINCIPLES AND CASE LAW

Over time legal interpretation has been sought on the practical application of the legislation concerning AA as some terminology has been found to be unclear. European and national case law has clarified a number of issues and some aspects of the published guidance documents have been superseded by case law. The following case law has been considered in the preparation of this report:

- When considering whether a European site can be screened out, the competent authority cannot take into account any measures intended to avoid or reduce the harmful effects of the proposed development (i.e. mitigation measures)³; however, a 2019 Irish High Court consideration⁴ concluded that Sustainable Drainage Systems (SuDS) are “*as a matter of fact and law... not mitigation measures which a competent authority is precluded from considering at the stage 1 screening stage*”;
- The screening must consider the cumulative impacts of any development: that already exists; for which a planning application has been made; which the applicant for permission intends to make an application in the future; and, which is a matter of public record and which is planned to be implemented in the future;
- Consideration of the cumulative effects of plans, including local area plans;
- Where an element of the proposed development is missing design detail or subsequent agreements, the assessment should assume the worst-case scenario (i.e. the design with the greatest environmental impact); and
- Making of findings explicit⁵.

2.3 INFORMATION SOURCES CONSULTED

This screening exercise is based on a desktop study which utilised the following sources of information in addition to a literature review:

- Information on the location, nature and design of the proposed development supplied by the client;
- Survey information that has informed the biodiversity chapter of the Environmental Impact Assessment Report prepared in support of the current proposal;
- Department of Environment, Community and Local Government – [online] land use mapping, available at www.mypian.ie/en/index.html;
- Environmental Protection Agency – Water Quality [online], Available at www.epa.ie and www.catchments.ie;
- Geological Survey of Ireland – Geology, soils and hydrogeology [online], Available at www.gsi.ie;
- Information on the conservation status of birds in Ireland (Colhoun and Cummins, 2013);
- Information on the Eastern River Basin District [online], Available at www.erbd.ie;
- National Parks and Wildlife Service – Natura 2000 site network information [online], Available at www.npws.ie;
- National Parks and Wildlife Service – Information on the status of EU protected habitats and species in Ireland (NPWS 2013a,b,c);
- National Biodiversity Data Centre [online], Available at www.biodiversityireland.ie;
- Ordnance Survey of Ireland – Mapping and Aerial photography [online], Available at www.osi.ie;
- Fingal Development Plan 2017-2023 (FCC, 2017);
- Fingal County Heritage Plan 2018-2023 (FCC, 2018);
- Fingal County Biodiversity Action Plan 2010-2015 (FCC, 2010); and
- Appropriate Assessment screening of an adjacent site (OPENFIELD, 2017).

³ *People Over Wind v Coillte Teoranta* (Court of Justice of the EU, case C-323/17)

⁴ *Kelly v An Bord Pleanála & anor* [2019] IEHC 84 (High Court)

⁵ *Connelly v An Bord Pleanála* [2018] IESC 31 (Supreme Court)

2.3.1 Consultation

The following organisations were consulted by email or Telephone relation to this assessment:

- Development Applications Unit (DAU), Department of Culture, Heritage and the Gaeltacht;
- Local NPWS Conservation Ranger;
- Inland Fisheries Ireland (IFI);
- Irish Raptor Study Group; and
- Fingal County Council Biodiversity Officer.

Consultation undertaken for the proposed development is summarised in **Table 2-1**.

Table 2-1: Summary of Consultation Responses Relevant to Appropriate Assessment

| Consultee | Method of Consultation | Summary of Consultation |
|--|------------------------|---|
| The Development Applications Unit of the Department of Culture, Heritage and the Gaeltacht | Letter via Email | General Scoping comments regarding nature conservation and ecological Survey and sources of baseline data. Development of CEMP and the need to subject the project to Appropriate Assessment. |
| NPWS Conservation Ranger | Telephone | Consideration for presence of Peregrine and Newt, owing to known records in proximity. Email confirmation of commencement regarding commencement of Licenced surveys |
| Inland Fisheries Ireland | Letter via Email | No response received (at this time) |
| Irish Raptor Study Group | Email Response | IRSG have no records up to 2017 of peregrine at the site. |
| Fingal County Council Biodiversity Officer | Telephone discussion | Need for seasonally appropriate, full survey data to complete impact assessment |

2.4 DESK STUDY AND FIELD SURVEY

2.4.1 Desk Study

The proposed development site lies within the O04W and O14B Ordnance Survey 2x2km Grid Squares. A data search for rare and protected species and Invasive Alien Plant Species (IAPS), from these grid squares, was carried using the National Biodiversity Data Centre (NBDC) online database⁶. However, the data search was focused on SCI birds and QI species.

2.4.2 Field Survey

⁶ Available online at: www.biodiversityireland.ie. Accessed January 2019

This report was informed by a habitat and protected species surveys of the proposed development site in October 2018, and February and March 2019 by an RPS ecologists. The surveys assessed the potential for all QIs/SCIs of European sites and scheduled⁷ invasive species to occur, given their ecological requirements identified by Balmer *et al.* (2013) for birds, and the NBDC and NPWS for all other species/habitats (NPWS, 2013b,c).

The survey included checks of suitable habitats for all highly mobile QI/SCI species potentially occurring. For instance, the adjacent Shallon Stream was checked for the potential of common kingfisher *Alcedo atthis* nest sites, and potential breeding or resting sites of otter *Lutra lutra*. Numerous non-breeding SCI bird species travel many kilometres from their core areas, and surveys also assessed potential presence of roosting or feeding sites of such species. Species survey had regard for relevant guidance (e.g. NRA, 2009). The potential of any buildings, vegetation, or features within the Zone of Influence (Zoi) (**Section 2.6.1**) of the proposed development to offer nesting or roosting habitat to SCI bird populations, was assessed.

The breeding bird survey was undertaken over three different time periods over two days and included a visual and binocular examination of all rock faces, stone piles, rubble and crevices. Supplemental ad hoc records noted during visits were included in the bird list for the proposed development site. Following on from the preliminary walkover survey and consultation responses, a number of vantage point surveys, over 8 hours on two separate dates, were undertaken to understand usage of the site by peregrine falcon *Falco peregrinus*. Further studies informed by a visit by an RPS Raptor specialist Mr Adam McClure in the early part of the breeding season focussed on understanding peregrine activity above and adjacent to the quarry and vantage point surveys to identify nesting on site.

2.5 SCREENING SEQUENCE

- Determining whether a project or plan is directly connected with or necessary to the conservation management of any European sites;
- Describing the project or plan;
- Identifying the European sites potentially affected by the project or plan;
- Identifying and describing any potential effects of the project or plan on European sites, alone, in-combination and cumulatively with other plans/projects; and
- Assessing the likelihood of significant effects on European sites.

2.6 RELEVANT EUROPEAN SITES

The identification of relevant European sites to be included in this report was based on the identification of the Zoi of the proposed development, a source-pathway-receptor model of effects, and the likely significance of any identified effects.

2.6.1 Zone of Influence

⁷ Invasive species scheduled to the EC (Birds and Natural Habitats) Regulations 2011-2015 ('the Regulations'). Under the Regulations, it is an offence to plant, disperse, allow or cause to disperse, spread or otherwise cause to grow in any place any species scheduled to the Regulations without a licence.

The proximity of the proposed development to European sites, and more importantly QIs/SCIs of the European sites, is of importance when identifying potentially likely significant effects. During the initial scoping of this report, a 15 km ZOI was applied for impact assessment. A conservative approach has been used, which minimises the risk of overlooking distant or obscure effect pathways, while also avoiding reliance on buffer zones (e.g. 15 km), within which all European sites should be considered. This approach assesses the complete list of all QIs/SCIs of European sites in Ireland (i.e. potential receptors), instead of listing European sites within buffer zones. This follows Irish departmental guidance on AA:

“For projects, the distance could be much less than 15 km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects” (DEHLG, 2010a; p.32, para 1).

Following the guidance set out by the NRA (2009), the proposed development has been evaluated based on an identified ZOI with regard to the potential impact pathways to ecological feature (e.g. mobile and static). The ZOI of the proposed development on mobile species (e.g. birds, mammals, and fish), and static species and habitats (e.g. saltmarshes, woodlands, and flora) is considered differently. Mobile species have ‘range’ outside of the European site in which they are QI/SCI. The range of mobile QI/SCI species varies considerably, from several metres (e.g. in the case of whorl snails *Vertigo* spp.), to hundreds of kilometres (in the case of migratory wetland birds). Whilst static species and habitats are generally considered to have ZOIs within close proximity of the proposed development, they can be significantly affected at considerable distances from an effect source; for example, where an aquatic QI habitat or plant is located many kilometres downstream from a pollution source.

Hydrological linkages between the proposed development and European site (and their QIs/SCIs) can occur over significant distances; however, any effect will be site specific depending on the receiving water environment and nature of the potential impact. As a precautionary measure, a reasonable worst-case ZOI for water pollution from the proposed development site is considered to be the surface water catchment. In this report, the surface water catchment is defined at the scale of Catchment Management Unit (CMU), as adopted in the River Basin Management Plan (RBMP) for Ireland 2018-2021 (DoHPLG, 2018).

2.6.2 Source-Pathway-Receptor Model

The likely effects of the proposed development on any European site has been assessed using a source-pathway-receptor model, where:

- A ‘source’ is defined as the individual element of the proposed works that has the potential to impact on a European site, its qualifying features and its conservation objectives;
- A ‘pathway’ is defined as the means or route by which a source can affect the ecological receptor; and
- A ‘receptor’ is defined as the Special Conservation Interests (SCI) of SPAs or Qualifying Interests (QI) of SACs for which conservation objectives have been set for the European sites being screened.

A source-pathway-receptor model is a standard tool used in environmental assessment. In order for an effect to be likely, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism results in no likelihood for the effect to occur. The source-pathway-receptor model was used to identify a list of European sites, and their QIs/SCIs, with potentially links to European site. These are termed as ‘relevant’ European sites/QIs/SCIs throughout this report.

2.6.3 Likely Significant Effect

The threshold for a Likely Significant Effect (LSE) is treated in the screening exercise as being above a de minimis level. The opinion of the Advocate General in CJEU case C-258/11 outlines:

“the requirement that the effect in question be ‘significant’ exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on a European site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.”

In this report, therefore, ‘relevant’ European sites are those within the potential Zol of activities associated with the construction and operation of the proposed development, where LSE pathways to European sites were identified through the source-pathway-receptor model.

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3 PROPOSED DEVELOPMENT

The proposed development consists of backfilling an existing quarry void to restore natural ground levels. The proposed development is located on Bay Lane, Dublin 15, and is connected to the M2, via the Cherryhound Tyrellstown Link Road. The site area is approximately 13.67 ha in total and original ground level lies approximately 59 m above Ordnance Datum. The quarry void extends over an area of 8.59 ha. The proposed development is bounded by Bay lane to the south, and agricultural lands to the west, north, and east (hereafter 'the proposed development site').

This application seeks permission for restoration of a 740,000 m³ void that requires backfilling to restore the quarry to natural ground levels. This will fill the quarry with clean soil and stone waste and then cover with a soil layer. An EPA waste licence will be sought for the proposed development, for the acceptance of clean inert soil and stone material (EWC 17 05 04 and 20 02 02), only.

There remains evidence of significant rock excavation and crushed stone production within the proposed development site. This extraction work has left a pit volume of c. 828,963 m³. The pit floor is generally flat with a layer of soil or stone. Within the open pit, small mounds of aggregate still remain, awaiting transport offsite. The north eastern section of the proposed development site has not been excavated for quarrying purposes. A volume of c. 116,834 m³ topsoil and unsuitable stone from quarrying (overburden), has been stockpiled in this area. (See **Drawing 6A, Appendix A**). Operations at the quarry halted in circa 2008, and the quarry has been inactive since then.

GLV has identified a shortage in available soil and stone treatment capacity in the Dublin market to support its current business. It is their intention to secure soil and stone treatment capacity to support its business needs. With this in mind, GLV purchased Bay Lane Quarry in 2018. Its intention is to develop Bay Lane Quarry into a soil and stone recovery facility in the course of restoring the facility.

3.1 PROJECT DESCRIPTION

3.1.1 Construction/staging

It is estimated that the works would take approximately three years, if consented, with the bulk of the operations comprising the backfill and restoration of the quarry void taking approximately 30 months with the importation of an estimated 740,000 m³ of inert waste which would be brought into discrete areas of the site on a phased basis, with backfilling of a single area at a time. As each area is filled, it would be covered with topsoil, with an estimated 27,000 m³ required for the entire project. Construction/staging, including de-watering and advanced works, will take c. 1 month to complete.

3.1.1.1 Dewatering

The quarry is subject to water inundation. In early October 2018, the water was confined to a sump pit in the corner area to north west of pit, closest to the link road roundabout. During the heavy rainfall period from October 2018 - January 2019 the quarry floor was covered in water to a depth of over 1 meter. This inundation will prevent activities on the quarry floor and may also pose a safety hazard.

The proposed development site has an existing concrete water settlement tank, for which all surface waters from the previous quarry operations were discharged into a drainage ditch along the southeast boundary, under a Local Authority Discharge Licence.

GLV proposes to dewater the quarry. GLV will apply to Fingal County Council for a new licence to pump surface water from the quarry floor into the retention tank, and then to discharge the water into the adjacent ditch, which flows into the Shallon Stream. The proposed temporary holding pond and the settlement tank will provide storage for up to the 50-year return period whilst the peak flow discharge to the unnamed stream is limited to greenfield run-off rate to reduce the flooding downstream. The 100-year return period event can be stored on site and will not be discharged downstream during a flood event. These works are estimated to take approximately 1 month to complete. This operation can only be done under Local Authority permit and will ensure that suspended solids would not lead to a deterioration of the watercourse.

3.1.1.2 Enabling and Advanced Works

Upon completion of the bulk drainage at the site, which is proposed for the summer months, the advance works will be undertaken within a short timeframe. These would include:

- Installation of temporary site offices and welfare facility;
- Creation of car park hardstanding and installation of security/perimeter lighting;
- Installation of wheel wash;
- Installation of weighbridge;
- Installation of quarantine area at dedicated concrete hardstanding;
- Preparation of revised internal unpaved road network to manage plant and vehicle movements to the deposition areas in the quarry; and
- Installation of packaged wastewater treatment plant⁸.

3.1.2 Operation

As the site becomes operational there will be a need to maintain a dry working surface in the quarry floor. This will require pumping of water to the settlement tank for the duration of the project or until such time that ponding water can drain through the soil layers. This process will be a continuation of that described in **Section 3.1.1.1**; however, it will be subject to a separate application for an EPA Waste Licence.

The bulk of the site operations in terms of activity and duration of the project will revolve around the daily deliveries of inert soil and stone. Once weighed and accepted for processing, the material will be deposited in the area in active use. It will be checked for contamination prior to backfilling. Contaminated material will in the first instance be refused or reloaded onto the delivering vehicle. If this is not possible, it will be brought to a dedicated quarantine area which shall be constructed atop

⁸ Sanitary effluent water will be generated from the canteen, toilet and wash facilities. All effluent will be collected in a sealed underground pipe network and discharged to a packaged wastewater treatment plant. Treated effluent will be percolated to ground at a treatment / percolation area location to be identified based on percolation testing. The system will be appropriately sized and will operate in compliance with appropriate code of practice for a facility, e.g. EPA Code of Practice: Wastewater Treatment Systems for Single Houses (EPA, 2009).

concrete hardstanding. If the material is found to be in contravention of the permitted waste category, it will be brought off site for treatment at an appropriately licenced facility.

3.1.2.1 Programme and Phasing

It is estimated that the works would take c. 2.5 years, if consented, with the bulk of the operations comprising the backfill and restoration of the quarry void taking approximately 30 months. Phasing, as outlined in **Drawing 6C (Appendix A)**, will be completed as follows:

Phase 1: Filling of the area north east of the haul route between the two reception area ramps to final restoration profile. This phase of the development will result in the completion of backfilling of north eastern part of the site to final restoration profile.

Phase 2: Filling of the area south west of the haul route between the two reception area ramps to final restoration profile. This phase of the development will result in the completion of backfilling of south western corners of the site to final restoration profile.

Phase 3: Filling of the haul route between the two reception area ramps to final restoration profile.

Phase 4: On completion of the filling stage, a covering layer of subsoil and topsoil will be placed and graded across the filled soil and stone. This topsoil will then be planted with grass to promote stability and to minimise soil erosion and dust generation.

3.1.3 Restoration

Upon backfilling of the phased quarry areas, redundant structures, plant equipment and stockpiles of unused material will be removed from site. The hard-standing areas will be broken up and the material recovered. The site access gateway will be retained.

As part of the restoration process, the packaged wastewater treatment system will also be removed. Therefore, there will be no potential for sewage to cause long-term water pollution following cessation of restoration activities.

It is proposed to restore the site's surface to its pre-extraction level, slightly domed to allow runoff, and compacted to prevent for future subsidence. An aftercare scheme will be implemented with the aim of bringing the restored soil and stone (and thereby the lands) into a condition which does not need to be treated differently from undisturbed land in the same use. The final restoration of the site will facilitate an after-use potential similar to that which existed prior to extraction works. As each of the phased areas is filled, it is proposed to commence spreading topsoil on them and 'green up' the area to help stabilise the ground and reduce the potential for sediment-laden water generation.

The proposed restoration will be carried out in accordance with the proposed landscaping plan (RPS, 2019) submitted as part of an EIAR to Fingal County Council (see **Restoration Plan Drawing in Appendix A**). The proposed development site will then be seeded with grass at an agreed minimum rate.

4 SCREENING OF EUROPEAN SITES

4.1 BRIEF DESCRIPTION OF THE RECEIVING ENVIRONMENT

4.1.1 Overview

The surrounding landscape is largely characterised by large agricultural fields, although the lands which have been zoned General employment have in parts been developed. There are several commercial developments in close proximity including an extensive warehousing/logistics facility to the north and a small cement batching plant to the west, and a logistics facility has planning approval immediately adjacent to the quarry to the west. The extensive Huntstown quarry complex is c. 2 km due south of Bay Lane Quarry.

4.1.2 Aquatic Environment

The proposed development site is located within the Nanny-Delvin WFD Catchment Management Unit. Analysis of the EPA online mapper⁹ identified the Shallon stream as the only surface watercourse within the Zol of the proposed development. The Shallon stream adjoins the northern boundary of the proposed development and flows northeast into the River Ward. The River Ward flow west, an into the River Broadmeadow, before discharging into the Malahide Estuary, c. 10 km downstream from the proposed development.

The upper reaches of the Shallon stream are heavily modified, including culverted waterbody sections under the Cherryhound Tyrellstown Link Road and M2. The river waterbody WFD status (2010-2015) for the Shallon stream and upper River Ward (WaARD_30) is 'good'. This status changes to 'poor' for the lower River Ward (WARD_040) and River Broadmeadow (BROADMEADOW_040).

The proposed development site is located near the southern boundary of the Swords groundwater body (IE_EA_G_011). The Swords groundwater body mostly lies within a locally important aquifer, moderately productive but there are smaller areas of unproductive aquifer. The groundwater flow direction is generally towards the coast or neighbouring surface water bodies. The discharge distances are generally of less than 1 km given the fissured nature of the bedrock and it's generally of moderate permeability¹⁰.

Bay Lane Quarry lies within Hydrometric Area HA 09 (Liffey-Dublin Bay). Originally, the surface water drainage from the proposed development site discharged into the Shallon River and associated drainage ditches under Local Authority (FCC) permit.

Field surveys recorded no aquatic habitats within the footprint or Zol of the proposed development which have affinity to QI habitats or offer any significant supporting value to QIs or SCIs of any European sites.

⁹ Available online at <https://gis.epa.ie/EPAMaps/>. Accessed March 2019.

¹⁰ Available online at https://jetstream.gsi.ie/iwdds/delivery/GSI_Transfer/Groundwater/GWB/SwordsGWB.pdf. Accessed January 2019

4.1.3 Qualifying Interests and Special Conservation Interests

The combined results for the desk study and field surveys are presented in this section. A further impact assessment of biodiversity within the ZOI of the proposed development is detailed in the Environmental Impact Assessment Report (EIAR) for the proposed development (RPS, 2019a).

4.1.3.1 QI Habitats, Flora and Scheduled Invasive Species

Field surveys recorded no terrestrial habitats within the footprint or ZOI of the proposed development have affinity to QI habitats or offer any significant supporting value to QIs or SCIs of any European sites.

The field survey recorded no evidence or potential for QI flora, including Killarney fern *Trichomanes speciosum*, marsh saxifrage *Saxifraga hirculus*, slender naiad *Najas flexilis*, slender green feather moss *Hamatocaulis vernicosus*, or petalwort *Petalophyllum ralfsii*. None of these species were returned from the desk study data search, and the proposed development is outside the favourable reference range of all these species (NPWS, 2013c).

No third schedule species were returned from the data search or recorded during the ecological field surveys. It is our understanding that there is no potential for invasive alien plants, scheduled to the European Communities (Bird and Natural Habitat Regulations) 2011-2015, to be present within the footprint or ZOI of the proposed development.

4.1.3.2 QI and SCI Mobile Species

QI Mammals

Evidence of European otter *Lutra lutra* was not forthcoming during the survey and no holts were identified. Accessible sections of the drainage ditch along the southern and eastern perimeter and the Shallon River were walked and although small holes in bankface or gaps under overhanging trees was noted, they were typically small in nature and likely only suitable for small rodents. The nature and quality of water features around the periphery of the site was such that aquatic resources were poor, making the area sub-optimal for otter occupancy.

The quarry floor had areas of shallow standing water in October 2018, which became completely inundated by December 2018 with no bare ground in the quarry void other than the tops of some remnant spoil heaps. There is little obvious flow in the water other than seepage/drainage from rock faces.

During the vantage point surveys for birds, holes in the rock face above the waterline were visually examined, using binoculars, with no resulting evidence of otter activity in the deeper water, or from the potential holes.

The artificial nature of these habitats in the quarry void, coupled with the relative lack of permanent water to support aquatic organisms, which otter may prey upon, in the Shallon stream and associated drainage ditches, suggests that otter are not residing in the proposed development site.

The proposed development is outside the favourable reference range of the lesser horseshoe bat *Rhinolophus hipposideros* (NPWS, 2013b), which is the only bat species designated as a QI in Ireland. The species is restricted to the western Atlantic seaboard and has never been recorded in Co. Meath.

QI Fish

The proposed development is within the favourable reference range of QI Atlantic salmon *Salmo salar*, QI river lamprey *Lampetra fluviatilis*, and QI brook lamprey *Lampetra planeri* (NPWS, 2013c), QI sea lamprey *Petromyzon marinus*. In addition, the proposed development is outside the favourable reference range QI Killarney shad *Alosa fallax killarnensis* and QI twaite shad *Alosa fallax fallax* (NPWS, 2013c).

QI Invertebrates and Amphibians

The proposed development is outside the favourable reference range (NPWS, 2013c) and potential foraging range (i.e. 10 km; Zimmerman *et al.*, 2011) of QI marsh fritillary *Euphydryas aurinia*. The favourable reference ranges of all QI whorl snails are outside the ZOI of the proposed development (NPWS, 2013c).

The proposed development is outside the favourable reference range of both QI freshwater pearl mussel *Margaritifera margaritifera* and QI Irish freshwater pearl mussel *Margaritifera durrovensis* (NPWS, 2013c), and is not within any *Margaritifera* Sensitive Area (O'Connor, 2017) or within the same Catchment Management Unit as any *Margaritifera* SAC catchment¹¹.

The proposed development is also outside the favourable reference range of QI white-clawed crayfish *Austropotamobius pallipes*, QI Kerry slug (*Geomalacus maculosus*) and QI natterjack toad *Bufo calamita* (NPWS, 2013c).

SCI Birds

The desk study data search indicated that there is potential for a large number of common bird species to use the proposed development site as breeding or feeding habitat. This was confirmed during the 2018 breeding bird survey, and incidental records from ecology walkovers, which recorded 19 bird species. These records included three SCI birds: lesser black-backed gull *Larus fuscus*, herring gull *Larus argentatus* and peregrine falcon *Falco peregrinus*, which were recorded overflying or landing within the proposed development site.

Lesser black-backed gull and herring gull were noted overflying, but not landing within the footprint or ZOI of the proposed development site. Lesser black-backed gull are SCI birds of the Lambay Island SPA (site code 4069), located c. 22 km northeast of the proposed development. Herring gull are SCI birds of the Ireland's Eye SPA (site code 4117), located c. 18.4 km east of the proposed development.

Up to five peregrine falcons were seen overflying or circling the proposed development site during field surveys. A young peregrine was photographed, during a vantage point survey in autumn 2018; perching on a shallow-sloped rock face ledge, c. 3 m below the original ground level, near the northwest corner of the existing pit. Further examination of the ledge from atop noted faecal staining and some down.

¹¹ Catchments of *Margaritifera* SAC populations listed in S.I. 296 of 2009.

Although nesting peregrine falcons are expected to occur in suitable quarries along the eastern seaboard, there are no records of known breeding from within the proposed development site based on field surveys (two visits in March) and through consultation with the Irish Raptor Study Group (IRSG). In winter they occupy areas where they do not breed, often frequenting areas with large concentrations of prey (IRSG consultation).

Peregrine are known to be established and breeding at two quarry/excavated pit sites within FCC: Roadstone Huntstown (IRSG consultation) and IMS Hollywood (RPS, 2019b), located c. 2 km southeast and c. 15.6 km northeast from the proposed development site, respectively.

The nearest European site designated for SCI peregrine falcon is Wicklow Mountains SPA (site code 4040), located c. 21 km south of the proposed development. Core Peregrine foraging ranges during breeding are estimated to be c. 2 km (maximum c. 18 km) in Britain (SHN, 2016); with reported pair density between 1.47 (Wicklow, Ireland) to 4.47 (Cumbria, England) per 100 km² (Burke *et al.*, 2015).

The site was visited in January by a raptor specialist (RPS Senior Ecologist Mr Adam McClure), and based on the visit, it was considered that:

- the proximity of Huntstown quarry, where Peregrine are known to occur, suggests that the presence within the proposed development site is typical; and,
- although peregrine were clearly active in the area, the quarry itself has features (by virtue of the height and orientation of the rock face, the potential ease of predation from fox, and the proximity to known nesting territory Huntstown quarry) that make the site unsuitable for nesting peregrine.

Five unidentified geese were noted overflying the site from east to west at the commencement of a dusk newt survey. Although it cannot be ruled out that these were light-bellied Brent geese *Branta bernicla hrota*, a SCI bird of Malahide SPA, the geese did not land within the ZOI of the proposed development. Given the nature of the fluctuating artificial waterbody, there is a lack of food source for wildfowl. There is potential for temporary occupation during passage to other sites. However, no wintering wildfowl or SCI species from the Malahide Estuary SPA were noted using the proposed development site during any field survey.

4.2 EUROPEAN SITES

There is a significant aggregation of designated sites in and around Dublin Bay and the County Dublin coastline, including European sites (SACs and SPAs), Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs), Ramsar sites, Nature Reserves and a UNESCO Biosphere Reserve. This screening exercise is restricted to European sites.

The European sites considered in this exercise are listed in **Table 4-1** and shown in **Figure 4.1**. The spatial boundary data for the European sites shown in **Figure 4.1** was the most recent available online from NPWS (dated January 2019).

While there may be scientifically appropriate reasons for extending or reducing a study area depending on the source, pathway and receptors of potential impacts, with regard to the current proposal, a 15 km distance is considered both conservative and acceptable (as it includes all

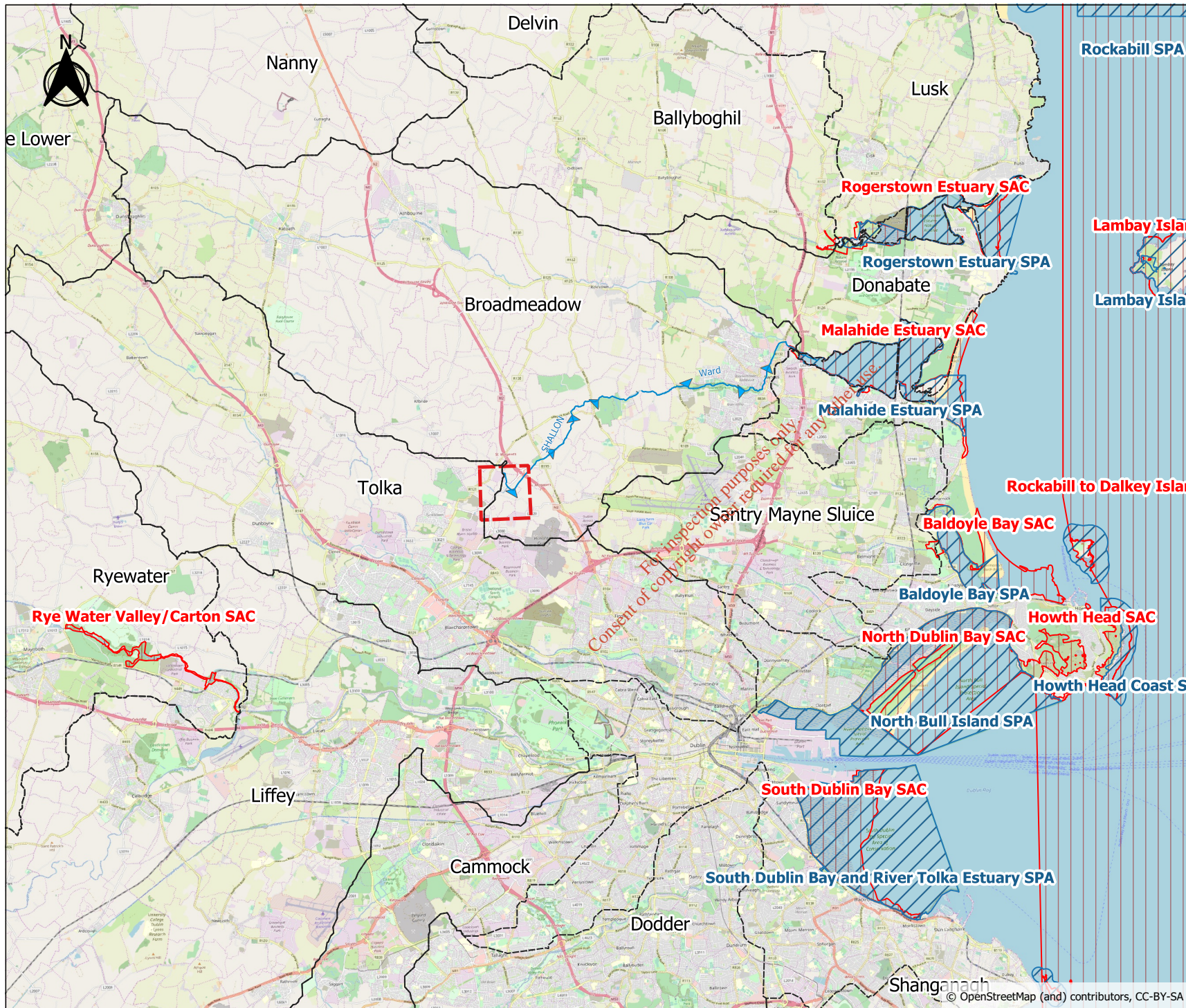
downstream European sites) to screen all likely significant effects that might impact upon European sites. The extent of the European site assessed in this report are illustrated in **Figure 4.1**.

European sites, and their QI/SCI features, within a 15 km buffer of the proposed development, are detailed in **Table 4-1**. The distance from each European site to the proposed development, and a description of the potential connectivity is also detailed.

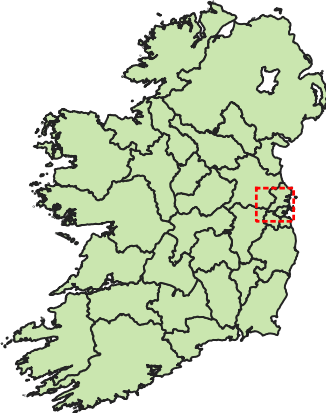
The Conservation Objective (CO) concept appears in the eighth recital of Directive 92/43/EEC which reads: *“whereas it is appropriate, in each area designated, to implement the necessary measures having regard to the conservation objectives pursued”*. Article 1 then explains that *“conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status”*.

NPWS publish COs for European sites on their website. NPWS advise in the general introductory notes of their Site-Specific Conservation Objective (SSCO) series publications that an appropriate assessment based on their *“published conservation objectives will remain valid even if the conservation objective targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out”*. NPWS advise that to assist in that regard, it is essential that the date and version are included when objectives are cited.

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Legend



- Study area
- Zone of Influence
- River waterbodies
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

Data Source: NPWS (last updated: January 2019)

Client: **GLV Bay Lane Limited**

Project: **Bay Lane Soil Recovery Facility**

Title: **Figure 4.1: European Sites Considered in the Assessment**

RPS

RPS Consulting Engineers
West Pier Business Campus
Dun Laoghaire
Co. Dublin
Tel: +353 1 488 2900

Issue Details

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Table 4-1: European Sites Considered in the Assessment

| Site Name and Code | Qualifying Interest Habitats and Species (*=Priority Habitat) | Distance from the Proposed Development ¹² | Connectivity |
|---|---|--|--|
| Special Area of Conservations (SACs) | | | |
| Baldoyle Bay SAC (000199) | <p>Conservation Objectives Specific Version 1.0 (19/11/12)</p> <p>Annex I Habitats:</p> <ul style="list-style-type: none"> ▪ Mudflats and sandflats not covered by seawater at low tide [1140] ▪ <i>Salicornia</i> and other annuals colonizing mud and sand [1310] ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] | c. 13.5 km east | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| Malahide Estuary SAC (000205) | <p>Conservation Objectives Specific Version 1.0 (27/05/13)</p> <p>Annex I Habitats</p> <ul style="list-style-type: none"> ▪ Mudflats and sandflats not covered by seawater at low tide [1140] ▪ <i>Salicornia</i> and other annuals colonizing mud and sand [1310] ▪ <i>Spartina</i> swards (<i>Spartinion maritimae</i>) [1320]** ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] ▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120] ▪ Fixed coastal dunes with herbaceous vegetation ("grey dunes")* [2130] | c. 12.1 km northeast | <p>Yes.</p> <p>The European site is located downstream of the study area, with direct hydrological connectivity through the Shallon stream.</p> |
| North Dublin Bay SAC (000206) | <p>Conservation Objectives Specific Version 1.0 (06/11/13)</p> <p>Annex I Habitats</p> <ul style="list-style-type: none"> ▪ Mudflats and sandflats not covered by seawater at low tide [1140] ▪ Annual vegetation of driftlines [1210] ▪ <i>Salicornia</i> and other annuals colonizing mud and sand [1310] ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] ▪ Embryonic shifting dunes [2110] ▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120] | c. 13.4 km southeast | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Thus, the designated site is not considered to be at risk from the proposed development.</p> |

¹² Distance measured "as the crow flies" from proposed development closest to the European site.

| Site Name and Code | Qualifying Interest Habitats and Species (*=Priority Habitat) | Distance from the Proposed Development ¹² | Connectivity |
|--|--|--|--|
| | <ul style="list-style-type: none"> ▪ Fixed coastal dunes with herbaceous vegetation ("grey dunes")* [2130] ▪ Humid dune slacks [2190] <p>Annex II Species</p> <ul style="list-style-type: none"> ▪ Petalwort (<i>Petalophyllum ralfsii</i>) [1395] | | |
| Rogerstown Estuary SAC (000208) | <p>Conservation Objectives Specific Version 1.0 (14/08/13)</p> <p>Annex I Habitats</p> <ul style="list-style-type: none"> ▪ Estuaries [1130] ▪ Mudflats and sandflats not covered by seawater at low tide [1140] ▪ <i>Salicornia</i> and other annuals colonising mud and sand [1310] ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] ▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] ▪ Fixed coastal dunes with herbaceous vegetation (grey dunes)* [2130] | c. 12.7 km northeast | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| South Dublin Bay SAC (000210) | <p>Conservation Objectives Specific Version 1.0 (22/08/13)</p> <p>Annex I Habitats</p> <ul style="list-style-type: none"> ▪ Mudflats and sandflats not covered by seawater at low tide [1140] | c. 13.5 km southeast | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| Rye Water Valley/Carton SAC (001398) | <p>Conservation Objectives Generic Version 6.0 (21/02/18)</p> <p>Annex I Habitats</p> <p>Petrifying springs with tufa formation (Cratonuerion)* [7240]</p> <p>Annex II Species</p> <ul style="list-style-type: none"> ▪ Narrow-mouthed Whorl snail (<i>Vertigo angustior</i>) [1014] ▪ Desmoulin's Whorl snail (<i>Vertigo moulinsiana</i>) [1016] | c. 11 km southwest | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| Special Protection Areas (SPAs) | | | |

| Site Name and Code | Qualifying Interest Habitats and Species (*=Priority Habitat) | Distance from the Proposed Development ¹² | Connectivity |
|---------------------------------|--|--|--|
| North Bull Island SPA (004006) | <p>Conservation Objectives Specific Version 1.0 (09/03/15)</p> <p>Qualifying Interests</p> <ul style="list-style-type: none"> ▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] ▪ Shelduck (<i>Tadorna tadorna</i>) [A048] ▪ Teal (<i>Anas crecca</i>) [A052] ▪ Pintail (<i>Anas acuta</i>) [A054] ▪ Shoveler (<i>Anas clypeata</i>) [A056] ▪ Oystercatcher (<i>Haematopus ostralegus</i>) [A130] ▪ Golden Plover (<i>Pluvialis apricaria</i>) [A140] ▪ Grey Plover (<i>Pluvialis squatarola</i>) [A141] ▪ Knot (<i>Calidris canutus</i>) [A143] ▪ Sanderling (<i>Calidris alba</i>) [A144] ▪ Dunlin (<i>Calidris alpina</i>) [A149] ▪ Black-tailed Godwit (<i>Limosa limosa</i>) [A156] ▪ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] ▪ Curlew (<i>Numenius arquata</i>) [A160] ▪ Redshank (<i>Tringa totanus</i>) [A162] ▪ Turnstone (<i>Arenaria interpres</i>) [A169] ▪ Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] ▪ Wetlands [A999] | c. 13.4 km southeast | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Furthermore, the study area does not hold suitable wetland features to support such SCIs. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| Rogerstown Estuary SPA (004015) | <p>Conservation Objectives Specific Version 1.0 (20/05/13)</p> <p>Qualifying Interests</p> <ul style="list-style-type: none"> ▪ Greylag Goose (<i>Anser anser</i>) [A043] ▪ Brent Goose (<i>Branta bernicla hrota</i>) [A046] ▪ Shelduck (<i>Tadorna tadorna</i>) [A048] ▪ Shoveler (<i>Anas clypeata</i>) [A056] ▪ Oystercatcher (<i>Haematopus ostralegus</i>) [A130] ▪ Ringed Plover (<i>Charadrius hiaticula</i>) [A137] ▪ Grey Plover (<i>Pluvialis squatarola</i>) [A141] ▪ Knot (<i>Calidris canutus</i>) [A143] ▪ Dunlin (<i>Calidris alpina alpina</i>) [A149] ▪ Black-tailed Godwit (<i>Limosa limosa</i>) [A156] | c. 10 km northeast | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Furthermore, the study area does not hold suitable wetland features to support such SCIs. Thus, the designated site is not considered to be at risk from the proposed development.</p> |

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| Site Name and Code | Qualifying Interest Habitats and Species (*=Priority Habitat) | Distance from the Proposed Development ¹² | Connectivity |
|---|---|--|--|
| | <ul style="list-style-type: none"> ▪ Redshank (<i>Tringa totanus</i>) [A162] ▪ Wetlands [A999] | | |
| Baldoyle Bay SPA (004016) | <p>Conservation Objectives Specific Version 1.0 (27/02/13)</p> <p>Qualifying Interests</p> <ul style="list-style-type: none"> ▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] [wintering] ▪ Shelduck (<i>Tadorna tadorna</i>) [A048] [wintering] ▪ Ringed Plover (<i>Charadrius hiaticula</i>) [A137] [wintering] ▪ Golden Plover (<i>Pluvialis apricaria</i>) [A140] [wintering] ▪ Grey Plover (<i>Pluvialis squatarola</i>) [A141] [wintering] ▪ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] [wintering] ▪ Wetlands [A999] | c. 13.5 km east | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Furthermore, the study area does not hold suitable wetland features to support such SCIs. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| South Dublin Bay and River Tolka Estuary SPA (004024) | <p>Conservation Objectives Specific Version 1.0 (09/03/15)</p> <p>Qualifying Interests</p> <ul style="list-style-type: none"> ▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] ▪ Oystercatcher (<i>Haematopus ostralegus</i>) [A130] ▪ Ringed Plover (<i>Charadrius hiaticula</i>) [A137] ▪ Grey Plover (<i>Pluvialis squatarola</i>) [A140] ▪ Knot (<i>Calidris canutus</i>) [A143] ▪ Sanderling (<i>Calidris alba</i>) [A144] ▪ Dunlin (<i>Calidris alpina</i>) [A149] ▪ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] ▪ Redshank (<i>Tringa totanus</i>) [A162] ▪ Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] ▪ Roseate Tern (<i>Sterna dougallii</i>) [A192] ▪ Common Tern (<i>Sterna hirundo</i>) [A193] ▪ Arctic Tern (<i>Sterna paradisaea</i>) [A194] ▪ Wetlands [A999] | c. 10.8 km southeast | <p>No.</p> <p>The European site does not have direct hydrological connectivity with the study area. Furthermore, the study area does not hold suitable wetland features to support such SCIs. Thus, the designated site is not considered to be at risk from the proposed development.</p> |
| Malahide Estuary (Broadmeadow/ Swords Estuary) SPA (004025) | <p>Conservation Objectives Specific Version 1.0 (16/08/13)</p> <p>Qualifying Interests</p> <ul style="list-style-type: none"> ▪ Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] ▪ Brent Goose (<i>Branta bernicla hrota</i>) [A046] | c. 10.2 km northeast | <p>Yes.</p> <p>The European site is located downstream of the study area, with</p> |

| Site Name and Code | Qualifying Interest Habitats and Species (*=Priority Habitat) | Distance from the Proposed Development ¹² | Connectivity |
|--------------------|---|--|---|
| | <ul style="list-style-type: none"> ▪ Shelduck (<i>Tadorna tadorna</i>) [A048] ▪ Pintail (<i>Anas acuta</i>) [A054] ▪ Goldeneye (<i>Bucephala clangula</i>) [A067] ▪ Red-breasted Merganser (<i>Mergus serrator</i>) [A069] ▪ Oystercatcher (<i>Haematopus ostralegus</i>) [A130] ▪ Golden Plover (<i>Pluvialis apricaria</i>) [A140] ▪ Grey Plover (<i>Pluvialis squatarola</i>) [A141] ▪ Knot (<i>Calidris canutus</i>) [A143] ▪ Dunlin (<i>Calidris alpina alpina</i>) [A149] ▪ Black-tailed Godwit (<i>Limosa limosa</i>) [A156] ▪ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] ▪ Redshank (<i>Tringa totanus</i>) [A162] ▪ Wetlands [A999] | | <p>direct hydrological connectivity through the Shallon stream.</p> |

** The NPWS note that for the purposes of Appropriate Assessment, that no assessment is required for *Spartina* swards (*Spartininio maritimae*) [1320] as it is considered, in Ireland, to be an alien species.

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5 ASSESSMENT CRITERIA

5.1 IS THE PROJECT NECESSARY TO THE MANAGEMENT OF EUROPEAN SITES?

The proposed development is not directly connected with or necessary to the management of any European site(s).

5.2 DIRECT, INDIRECT OR SECONDARY IMPACTS

Table 4-1 lists the European sites within 15 km of the study area. The study area does not lie within or is it not adjoining the boundaries of any European site (see **Figure 4.1**). Therefore, no direct impacts are likely to occur through land take or fragmentation of habitats.

The likely significance of effects on any European site from the proposed development has been assessed using a source-pathway-receptor model (**Section 2.6.2**). Each element can exist independently, however an effect is created when there is a linkage between the source, pathway and receptor. Potential indirect impacts via pathways to European sites identified above include:

- Surface and groundwater pollution;
- Disturbance to Qualifying Interest (QI)/Special Conservation Interest (SCI) Species; and
- Spread of Invasive Aliens Plant Species (IAPS).

5.2.1 Surface and Groundwater Pollution

There is a hydrological link between the proposed development and the Malahide Estuary, which is designated as both SAC and SPA. The effects of pollution, from surface water runoff and ground infiltration, on SCI fauna species and/or QI habitats and species, during construction and operation of the proposed development, have been assessed.

It has been determined that silt, grit, fuels or oils could enter surface water (Shallon stream) during the construction and operation of the proposed development. These effects are potentially amplified by the 'poor' receiving water quality of the lower reaches of the River Ward (WARD_040).

Both the construction and operation have the potential to interfere with the water table, potentially causing impact to groundwater. Groundwater vulnerability within the proposed development site is considered to be moderate. Any interference with groundwater is would be localised, minor and temporary; therefore, there is no potential for likely significant effects to the underlying groundwater body.

Adapting the precautionary principle, and in the absence of mitigation measures to control surface water pollution during construction and operation of the proposed development, the potential for LSEs to the Malahide Estuary SAC and the Malahide Estuary SPA cannot be ruled out.

5.2.2 Disturbance to Qualifying Interest (QI)/Special Conservation Interest (SCI) Species

The effects of noise, vibration, lighting, and human presence on SCI fauna species and/or QI habitats and species, during construction and operation of the proposed development, have been assessed. These effects are not predicted to result in any LSEs within the ZoI, as there are no significant populations of QI or SCI species present within the ZoI of the proposed development. The effects of noise, vibration, lighting and human presence are, therefore, scoped out from further assessment.

5.2.3 Spread of Invasive Aliens Plant Species (IAPS)

No Scheduled IAPS were identified from the desk study or field surveys; however, even when there are no records of Scheduled IAPS within the proposed development, the potential for the establishment of IAPS through the importation of material and/or poor plant biosecurity measures cannot be ruled out. Machinery and equipment used during the proposed development works, as well as material that may be brought onto site have the potential to introduce IAPS onto the site if they were previously used in an area containing IAPS.

5.3 KEY FINDINGS

The key findings of this AA Screening Report of the proposed development are that:

- In the absence of mitigation measures to control surface water pollution during construction and operation of the proposed development, the potential for LSEs to the Malahide Estuary SAC and the Malahide Estuary SPA cannot be ruled out; and
- In the absence of adequate assessment and mitigation measures to control the spread of scheduled invasive species during construction and operation of the proposed development, the potential for LSEs to the Malahide Estuary SAC and the Malahide Estuary SPA cannot be ruled out.

5.4 IN-COMBINATION EFFECTS

Legislation, guidance and case law requires that in-combination effects with other plans or projects are considered. On this basis, a range of other plans and projects were considered in terms of their potential to have in-combination effects with the proposed development.

The assessment of in-combination effects has regard for developments potentially affecting the Malahide Estuary SAC and the Malahide Estuary SPA, with which a potential pathway has been identified. The Natura Standard Data Form for Malahide Estuary SAC (NPWS, 2017a) and Malahide Estuary SPA (NPWS, 2017b) identify the most important impacts (high and medium) and activities with high effect on the sites as:

Malahide Estuary SAC:

- J02.01.02 - reclamation of land from sea, estuary or marsh
- A08 - fertilisation
- D01.05 - bridge, viaduct
- G02.01 - golf course

- I01 - invasive non-native species
- E01 - urbanised areas, human habitation
- G01.02 - walking, horseriding and non-motorised vehicles
- D01.02 - roads, motorways
- G01.03 - motorised vehicles
- G01.01 - nautical sports

Malahide Estuary SPA:

- G01.02 - walking, horseriding and non-motorised vehicles
- D01.04 - TGV
- E01 - urbanised areas, human habitation
- I01 - invasive non-native species
- J02.01.02 - reclamation of land from sea, estuary or marsh
- D01.01 - paths, tracks, cycling tracks
- A08 – fertilisation
- D01.05 - bridge, viaduct
- E02 - industrial or commercial areas
- G01.01 - nautical sports

5.4.1 Plans

5.4.1.1 National Development Plan 2018-2027

National Strategic Outcome 9 of the National Development Plan 2018-2027 (Government of Ireland, 2018) details the Sustainable Management of Water and other Environmental Resources. Within this outcome, Waste Management and Resource Efficiency has been identified as an investment action. The action states that:

“Investment in waste management infrastructure is critical to our environmental and economic well-being for a growing population and to achieving circular economy and climate objectives. Capacity will continue to be built in waste facilities, including anaerobic digestion, hazardous waste treatment, plastics processing, recycling, waste to energy, and landfill and landfill remediation, to meet future waste objectives..... Significant infrastructure capacity development will be required to separate and process various waste streams at municipal and national levels to achieve new EU legally-binding targets and the additional investment may include a potential role for public investment.”

The Plan was subject to SEA and Appropriate Assessment and a mitigation measure included an objective (NPO 75) to:

“ensure that all plans, projects and activities requiring consent arising from the National Planning Framework are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate”.

5.4.1.2 The Fingal County Development Plan 2017-2023

The Fingal County Development Plan 2017-2023 (FCC, 2017) highlights a number of potential larger infrastructural projects within the county. Within this Plan, the proposed development site is classified as GE – General Employment; a class attributed to providing opportunities for general enterprise and employment. Two specific objectives are set: Objectives NH51 and NH52. These Objectives state the intention of protecting these areas from inappropriate development and that development reflects and reinforces the distinctiveness of these areas, which provide a higher level of protection against the development of large infrastructural projects/developments.

A NIS has been completed of The Fingal County Development Plan 2017-2023(FCC, 2017b), which concluded:

“As a result of the assessment process, it is concluded that mitigatory measures identified in the stage 2 Appropriate Assessment are adequate to ensure the integrity of the European Sites which will not be significantly affected as a result of the potential impacts of the objectives contained with the Fingal Development Plan.”

5.4.1.3 Cherryhound LAP

The proposed soil restoration facility is within the boundary of the Cherryhound Local area Plan 2012-2018 (FCC, 2012) which has been extended to 2022 in keeping with the higher-level County Development Plan, its zonation is for GE – General Employment.

The LAP (as extended) has little detail in respect of specific projects or objectives, although it does recommend that the strong field boundaries and individual freestanding trees should be retained to assist with the structuring of the area. The AA Screening accompanying the LAP concluded that the LAP alone or in combination with others would not have significant effects on Natura sites.

5.4.1.4 MetroLink

The National Transport Authority commissioned the Fingal/North Dublin Transport Study to identify optimum long-term transport solutions to connect Dublin City Centre, Dublin Airport and Swords. The report was published in 2015 and the commencement of the construction phase is scheduled by 2021, operation by 2026/2027 (NTA, 2015). Although the project is located to the east of the Bay Lane facility nonetheless, it is proposed to cross the Ward River. There is insufficient information publicly available to allow further assessment and confirm potential cumulative impacts, except to say that environmental assessment will be required to consider in combination impacts with other projects. The potential for the development of the Metro North scheme to entail impacts to Biodiversity and European sites will be contemplated within its own Environmental Assessment together with possible cumulative and in-combination impacts.

5.4.2 Projects

A search was conducted of planning applications (projects) within the vicinity of the proposed development, using the Fingal County Council planning portal map viewer¹³ and the Department of

¹³ Available online at <http://fingalcoco.maps.arcgis.com/apps/webappviewer/index.html?id=3fa7d9df584c4d93aab202638db9dd1a>. Accessed March 2019.

Housing, Planning and Local Government EIA portal map viewer¹⁴. The search was limited to the five year period preceding the date of issue of this report, and excluded retention applications (i.e. typically local-scale residential or commercial developments where an impact has already occurred), incomplete, withdrawn, and refused applications. The relevant projects with potentially for in-combination LSEs on European sites, are detailed below.

5.4.2.1 Fingal Planning Portal

There are a number of commercial and industrial developments in the local area of the Bay Lane Quarry. Some share the same access road as the site including a cement company (Halton Concrete) located 200m to the west of the site and a commercial bus yard (Butlers Bus Tours) located approximately 250m to the east of the site.

There are a large number of residential and commercial planning applications in the planning system throughout Fingal administrative area but only a small number identified in close proximity to proposed development. There is potential for in-combination impacts on water quality in particular if both the proposed development and the planning applications resulted in water pollution of surface or ground waters. Many of these applications have on-site foul effluent treatment systems associated with them. However, due to the measures incorporated into the construction methodology for the proposed soil recovery facility to ensure protection of all waterbodies and water quality, it is not anticipated that the proposed developments will result in any in-combination impacts.

Two current commercial projects are located in close proximity to the proposed development:

- Planning Reference FW17A/0119 – Permitted development after appeal to ABP of Logistics Complex in greenfield site immediately north of proposed Bay Lane Soil recovery facility. The project planning documents included an AA Screening report (Roger Goodwillie & Associates, 2011), and a Landscape and Drainage design (FCC, 2012) to ensure that proposed SUDS drainage features including swales would not be planted to attract birds, and that the road network immediately adjacent to the site entrance be upgraded in advance of proposed development owing to the nature of truck movements on the local road network.
- Planning reference FW19A/0006 – additional information was sought by the Local authority on March 6th for a proposed single storey commercial facility, located c. 200 m northwest of the proposed development. The date for FCC decision is unknown. The AA screening submitted with the planning application (Moore Group Environmental Services, 2016) concluded that there would be no significant direct or indirect impacts on the Malahide Estuary SAC/SPA resulting in the project.

5.4.2.2 Strategic Infrastructure Development/ Strategic Housing Development

A key SID project is the Irish Water sponsored Greater Dublin Drainage Project (ABP 301908) which consists new wastewater treatment plant, sludge hub centre, orbital sewer, outfall pipeline and regional biosolids storage facility. The project has been subject to detailed environmental Impact assessment and has been subject to NIS, both of which include considerable mitigation measures to protect local biodiversity and aquatic environment and ensure that no adverse effects upon the

¹⁴ Available online at <http://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1>. Accessed March 2019.

integrity of European sites is likely. Oral Hearing is due to commence, and it is estimated that a decision will be forthcoming in 28/6/2019. A separate CPO application to ABP (#301807) in respect of the Regional Biosolids Storage Facility Project has been lodged (6/6/2018). Planned construction commencement in 2022 although it would be phased for specific elements. There could be overlap in construction impacts, but it is unlikely to be significant owing to distance between both site and mitigation measures to ensure protection of watercourses.

There are multiple planning and SID applications in respect of Dublin Airport Authority. Current and future developments could have construction and or operation impacts owing to overlap in timing of projects and potential sedimentation to tributaries for the Ward River. However, in combination impacts are considered unlikely to be significant owing to distance between both sites and mitigation measures to ensure protection of watercourses.

No current Strategic Housing Developments, pertinent to the current project, are currently listed on the website of An Bord Pleanála¹⁵.

5.4.3 In-Combination Conclusion

The key pathway in terms of construction and operational impacts relate to the potential pollution of watercourses, through sedimentation and dispersal of invasive species. No other pathways have been identified by which any plan or project could have a likely significant in-combination effect on European site(s).

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¹⁵ Available online at <http://www.pleanala.ie/shd/applications/CurrentApplications/CurrentApplications7Mar.pdf>. Accessed 15/03/2019

6 SCREENING CONCLUSIONS AND STATEMENT

RPS has prepared this AA screening report to assess whether the proposed development, individually or in combination with other plans or projects, and in view of best scientific knowledge, is likely to have a significant effect on any European site(s).

The screening exercise was completed in compliance with the relevant European Commission guidance, national guidance, and case law. The potential impacts of the proposed development have been considered in the context of the European sites potentially affected, their Qualifying Interests or Special Conservation Interests, and their Conservation Objectives.

Through an assessment of the source-pathway-receptor model, which considered the Zol of effects from the proposed development and the potential in-combination effects with other plans or projects, the following findings were reported:

- In the absence of mitigation measures to control surface water pollution during construction and operation of the proposed development, the potential for LSEs to the Malahide Estuary SAC and the Malahide Estuary SPA cannot be ruled out; and
- In the absence of mitigation measures to control scheduled invasive alien plant species during construction and operation of the proposed development, the potential for LSEs to the Malahide Estuary SAC and the Malahide Estuary SPA cannot be ruled out.

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APPENDIX A

Project Drawings

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Drawing 6A: Phasing Plan Phases 1 & 2

Drawing 6C: Phasing Plan Phase 4

Restoration Plan

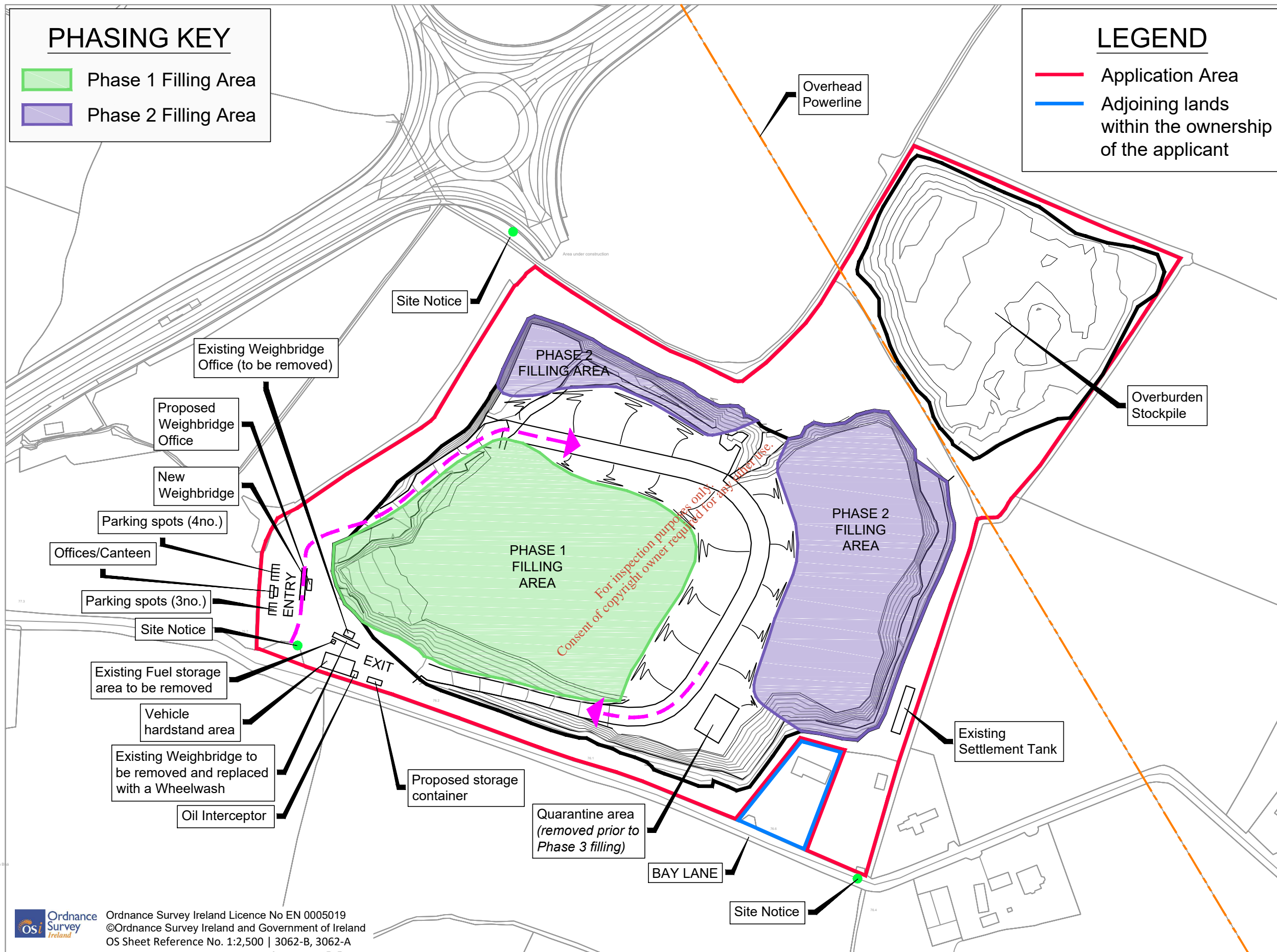
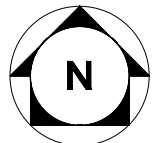
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PHASING KEY

- Phase 1 Filling Area
- Phase 2 Filling Area

LEGEND

- Application Area
- Adjoining lands within the ownership of the applicant



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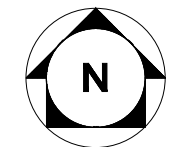
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| D01 | Feb'19 | RH | CMG | DRAFT ISSUE | CMG |

West Pier
 Business Campus
 Dun Laoghaire
 Co Dublin

T +353 1 4882900
 F +353 1 2835676
 W www.rpsgroup.com/ireland
 E ireland@rpsgroup.com

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| Drawn | RH | Project | |
| Checked | CMG | BAY LANE SOIL RECOVERY FACILITY | |
| Approved | CMG | | |
| Date | Feb. 2019 | Title | |
| Scale | NTS @ A1 1:2500 @ A3 | DRAWING 6A PHASING PLAN PHASES 1 & 2 | |
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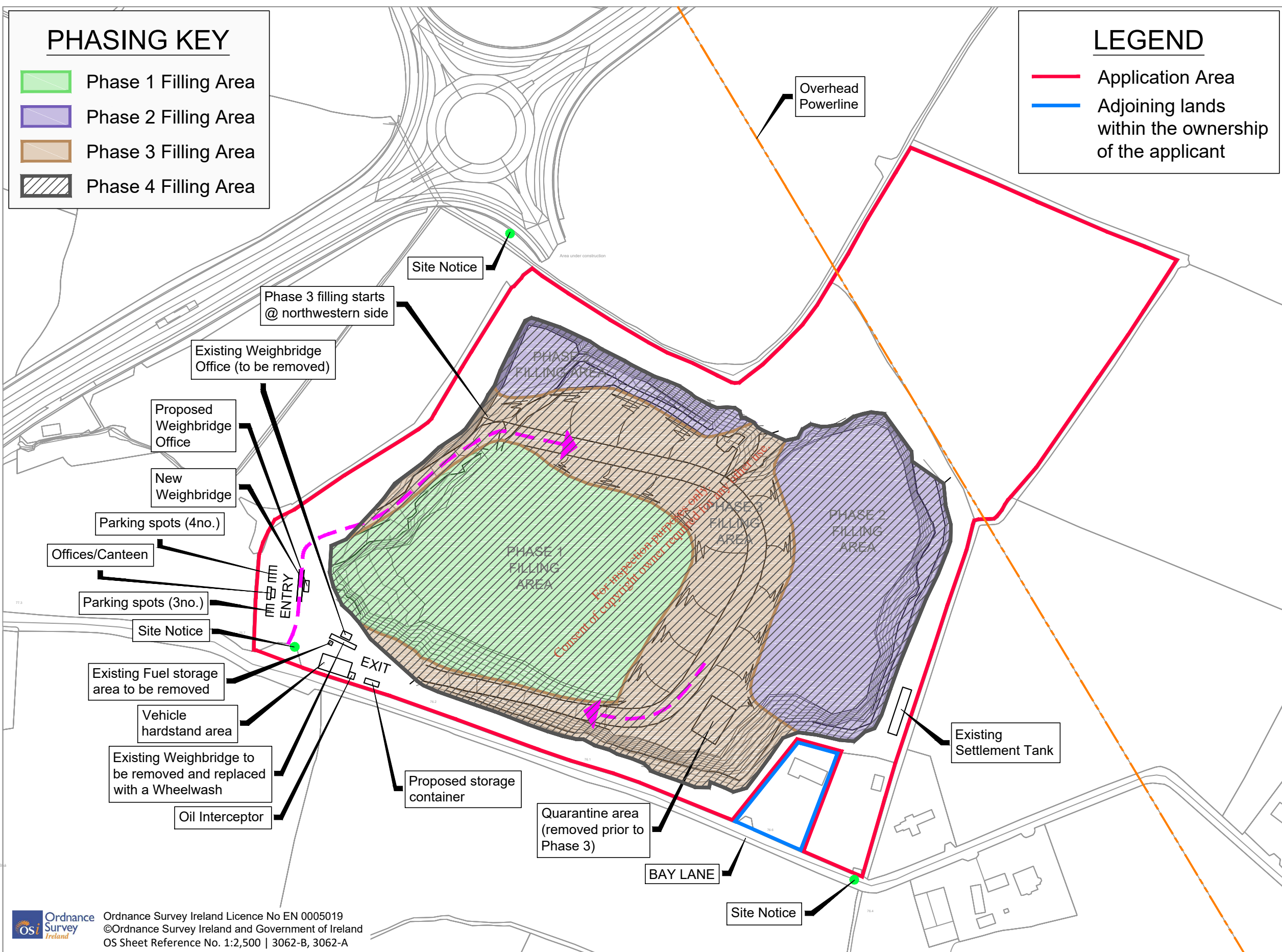


PHASING KEY

- Phase 1 Filling Area
- Phase 2 Filling Area
- Phase 3 Filling Area
- Phase 4 Filling Area

LEGEND

- Application Area
- Adjoining lands within the ownership of the applicant



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West Pier
Business Campus
Dun Laoghaire
Co Dublin

T +353 1 4882900
F +353 1 2835676
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E ireland@rpsgroup.com







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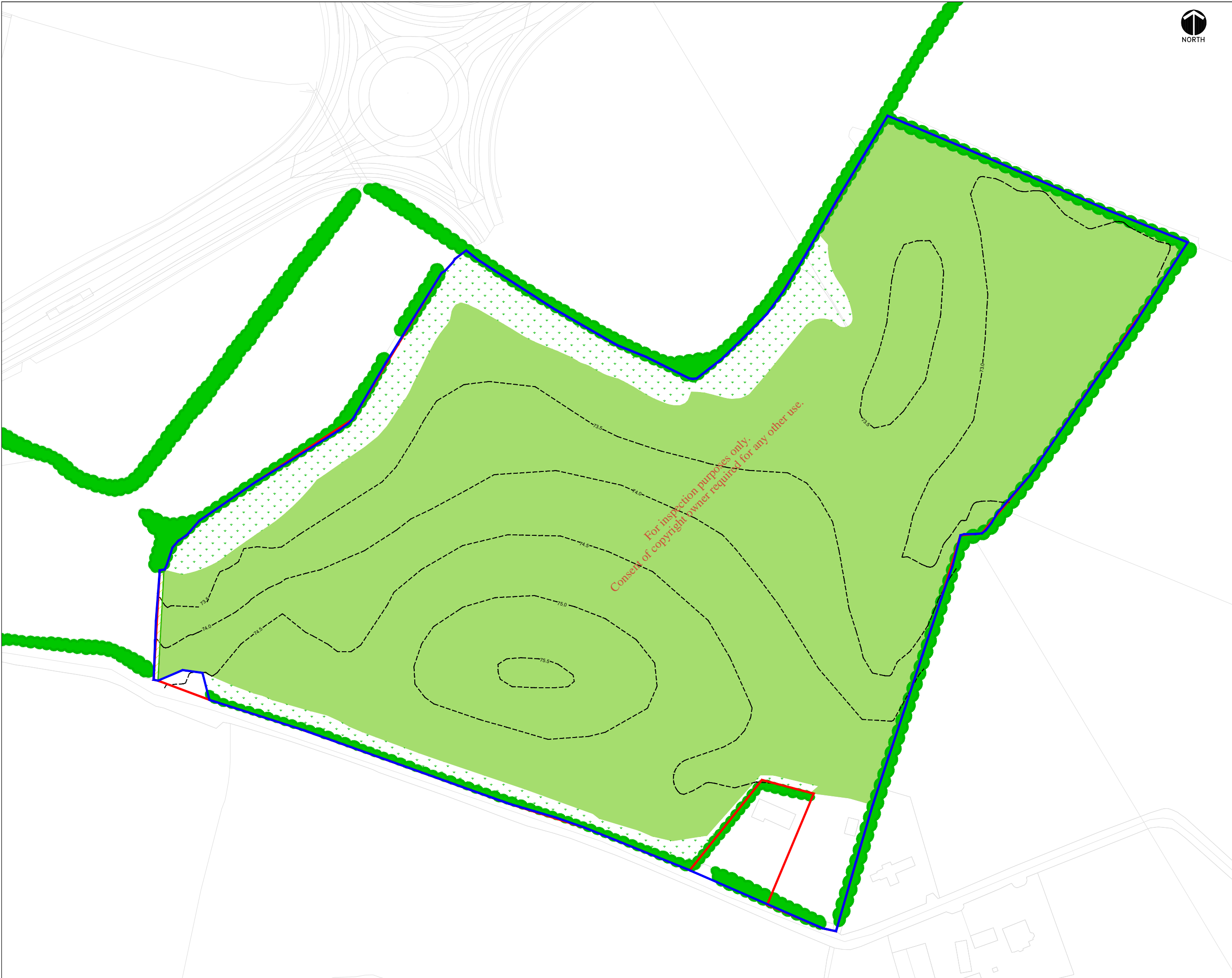
BAY LANE SOIL RECOVERY FACILITY

**DRAWING 6C
PHASING PLAN
PHASE 4**



Legend

-  Site Boundary
-  Lands in control of landowners
-  Existing vegetation to be retained
-  Proposed hedgerow with tree planting
-  Proposed agricultural grass seeding areas
-  Proposed contours and levels



| Revision | Date | Description | Drawn | Chk |
|----------|------|-------------|-------|-----|
| | | | | |

STATUS FOR PLANNING



Elmwood House
74 Boucher Road
Galtee
BT12 6RZ

T: +44 (0)28 9066 7914
F: +44 (0)28 9066 5285
W: rpsgroup.com/ireland

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PROJECT Bay Lane Soil Recovery Facility

TITLE Restoration Plan

SCALE/PAPER SIZE NTS @ A3
DATE 20.02.2019
PROJECT NUMBER NI2011

DRAWN BY SA
CHECKED BY RH
DRAWING NUMBER
REVISION

FIGURE 1.8



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RPS Dublin
West Pier Business Campus
Dun Laoghaire

