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INTRODUCTION

- 5.1 This Chapter of the Environmental Impact Assessment (EIA) Report addresses the potential impacts on biodiversity, of soil and stone waste recovery activities on the western side of Huntstown South Quarry. These activities will facilitate the backfilling of the quarry to surrounding ground level and its ultimate restoration to grassland.
- 5.2 In order to facilitate the transfer and re-location of soil waste recovery activities from the North Quarry (where they are currently ongoing) to the South Quarry, a waste licence review application is to be submitted to the EPA to provide for the following :
- importation of soil and stone waste to the western side of Huntstown South Quarry at a maximum rate of 750,000 tonnes per annum (as permitted by Planning Ref. FW12A/0012);
 - extension of the licensed site boundary to incorporate the proposed waste recovery area on the western side of the South Quarry and the haul roads leading to / from it;
 - an increase in the total permitted (lifetime) soil and stone waste intake to the (extended) waste facility to 18.76 million tonnes;
 - continued use of pre-existing site infrastructure to support recovery activities; and
 - re-routing of traffic flows via existing internal haul roads (i.e. within the quarry complex) to access the backfilling / recovery area at the South Quarry.
- 5.3 No new infrastructure is required to facilitate the transfer and re-location of established soil waste recovery operations from Huntstown North Quarry across to the western side of the South Quarry, or the extension of the waste licence boundary to include this area.
- 5.4 It is currently envisaged that backfilling of the South Quarry will commence in early 2023, at which time it is expected that the ongoing backfilling of the North Quarry to surrounding ground level will be largely complete and the importation, backfilling and recovery of soil and stone waste at that location will cease.
- 5.5 Prior to commencement of the backfilling and recovery activities at the South Quarry, only a relatively minor amount of construction and/or preparatory site works will be required. These works will principally comprise:
- Upgrading and/or maintenance of existing internal haul roads and hardstanding areas as required to facilitate re-routing of HGV / trucks across the quarry complex;
 - Construction of any temporary access ramps which may be required to access initial backfill areas on the western side of the South Quarry; and
 - Establishment of any additional environmental control and monitoring infrastructure required in respect of backfilling activities.
- 5.6 Further details on the proposed development (site infrastructure, operations, environmental management systems, and controls, etc.) are provided in Chapter 2 of this EIAR.

Site Description

- 5.7 The proposed extension to the existing waste licence site area ("the Site") comprises the western side of the existing South Quarry, some surrounding lands and the haul routes leading to it within the Huntstown Quarry Complex.
- 5.8 The Site straddles the townlands of Huntstown, Cappoge and Grange in County Dublin and is located approximately 2.5 km north-west of Finglas and 1km west of the interchange between the N2 Dual Carriageway and the M50 Motorway.

- 5.9 The Huntstown Quarry Complex extends across the lands immediately north and east of the proposed licence extension area. The lands immediately south of it remain in use as agricultural grassland. The lands to the west and north-west comprise light industry as well as science and technology parks along Cappagh Road (including the Stadium Business Park, Huntstown Business Park and Millennium Business Park).

Purpose of this Chapter

- 5.10 The purpose of this Biodiversity Chapter is to summarise the baseline ecological conditions at the Site and to identify all potentially significant ecological effects associated with the backfilling and recovery activities at the South Quarry. Where necessary appropriate mitigation measures will be identified to reduce any residual effects to an acceptable level.
- 5.11 This Chapter forms part of an EIAR addressing future quarry backfilling activities across the townlands of Huntstown, Cappogue and Grange, Co. Dublin. The EIAR is prepared in order to assist the Environmental Protection Agency in making its determination of a waste licence review application to extend the existing licenced site area and to provide for soil backfilling and recovery activities on the western side of Huntstown South Quarry.

Evidence of Technical Competence and Experience

- 5.12 This EIA Chapter was prepared by SLR Ecologist Michael Bailey MCIEEM. SLR Senior Ecologist Owen Twomey carried out the technical review of the Chapter.
- 5.13 Michael Bailey is an Associate Ecologist with SLR and holds a BSc (Hons) in Biology and Ecology from the University of Ulster and an MSc in Quantitative Conservation Biology from the University of the Witwatersrand, Johannesburg, South Africa. Michael has 17 years' experience as a consultant ecologist with field and research experience in Ireland, the UK and Africa. He has undertaken numerous ecological surveys and assessments on various road, infrastructure, bridge, and greenway projects. He is a full member of the Chartered Institute of Ecology and Environmental Management.
- 5.14 Owen Twomey has worked in ecological consultancy since 2016. Owen holds a BSc in Environmental Science (Zoology) and a Postgraduate Diploma in Ecological Assessment. Owen has prepared ecological reports including Biodiversity Chapters to inform EIARs for a wide range of projects, including multiple quarry developments.

RELEVANT LEGISLATION AND POLICY

Legislation

- 5.15 The main pieces of legislation in terms of ecology in regard to developments such as that under assessment in this EIAR Chapter are as follows;
- The EIA Directive (2011/92/EU)
 - The Habitats Directive (92/43/EEC)
 - The Wildlife Acts 1976 to 2018
 - The Floral (Protection) Order 2015
- 5.16 Summary details in respect of this legislation are presented in Appendix 5-A of this Chapter.

Local Policy

- 5.17 The relevant local planning policies and objectives have been extracted from the Fingal County Development Plan (CDP) 2017 – 2023 and have been reproduced in Appendix 5-A of this EIAR Chapter. The policies listed are set out in Chapter 7: Movement and Infrastructure, Chapter 9:

Natural Heritage and Chapter 12: Development Management Standards of the current County Development Plan and are concerned with Natural Heritage and Environmental policies and objectives. In broad terms these policies and objectives aim to ensure correct measures are put in place to identify and protect natural heritage and important environmental features within Fingal.

METHODOLOGY

- 5.18 Methods used to carry out the survey of the Site, to evaluate the ecological value and to prepare the report are outlined in this section.

Scope

- 5.19 The scope of this EIAR Chapter is to describe the baseline ecological conditions within the Site and the potential effects that could arise from the transfer and re-location of quarry backfilling activities to Huntstown South Quarry. The study area used for the surveys and this report is the area of the proposed development (the proposed extension to the waste licence area).
- 5.20 This report will determine the zone of influence of the development and if important ecological features could be significantly affected. Important ecological features include sites designated for nature conservation, protected habitat and species, as well as habitats and species of principal importance for conservation of biodiversity. An assessment of the effects of the backfilling activities and related development on these features will be undertaken and mitigation measures will be recommended where deemed necessary.

Zone of Influence

- 5.21 The 'Zone of Influence' for a project is the area over which ecological features may be subject to significant effects because of the proposed development and associated activities. This is likely to extend beyond the Site, for example where there are ecological or hydrological links beyond the relevant site boundaries. The zone of influence will vary for different ecological features, depending on their sensitivity to an environmental change (CIEEM, 2018).
- 5.22 The zone of influence is identified through a review of the nature and scale of the proposed development, known impacts which generally arise with a particular development type, distance from ecologically sensitive sites and the features of interest of any sites designated for nature conservation. The desk study carried out for the proposed development includes identification of the potential zone of influence.
- 5.23 The potential zone of influence for this project is not likely to extend significantly beyond the Site largely due to its existing size and scale, the confined and enclosed nature of the excavated area at the South Quarry and the proposed phasing of restoration / backfilling works at the quarry over time. The zone of influence is increased if there is potential for impacts on groundwater, surface or ecological connections to features beyond this area that may be significantly affected by the proposed development activities.
- 5.24 The potential zone of influence for projects of scale, which do not result in increased emissions to air or watercourses and are located largely within an urban / industrial setting, is not likely to extend beyond the Site. A conservative zone of influence extending 2km beyond the proposed waste licence extension area has been adopted for the purposes of this ecological assessment.

Baseline Data Collection

Desk Study

- 5.25 A desk study was carried out to collate all existing and available ecological information on the Site. The Site and the surrounding area were viewed using existing available satellite imagery¹. High resolution aerial imagery of the Site, obtained as part of a drone survey, has been provided to SLR. This imagery was examined in the course of the desk study and has been incorporated into the habitat mapping prepared as part of this assessment.
- 5.26 The National Parks and Wildlife Service (NPWS)² and the National Biodiversity Data Centre (NBDC)³ online resources were accessed for information on sites designated for nature conservation and on protected habitats and species. Only records for the past 10 years are considered within this report as older records are unlikely to still be relevant given their age and the changes in land management that have occurred in the intervening period. The Environmental Protection Agency (EPA) Maps website⁴ was also accessed for other environmental information, such as surface water features, relevant to this assessment.
- 5.27 Fingal County Council's website was accessed for information on relevant planning policy while its planning portal⁵ was accessed for information on other planning applications within the quarry complex and in the area immediately surrounding it.
- 5.28 Birds of Conservation Concern in Ireland (BoCCI), published by BirdWatch Ireland and the Royal Society for the Protection of Birds (RSPB) in Northern Ireland, is a list of priority bird species for conservation action on the island of Ireland. The BoCCI lists birds which breed and/or winter in Ireland and classifies them into three separate lists: Red, Amber and Green, depending on the conservation status of the bird and hence their conservation priority. Birds on the Red list are those of highest conservation concern; Amber list birds are of medium conservation concern and Green list birds are not considered threatened. The BirdWatch Ireland website⁶ was accessed for information on birds of conservation concern.
- 5.29 The conservation status of mammals within Ireland and Europe is evaluated using one or more of the following documents: Wildlife Acts (1976 - 2018), the Red List of Terrestrial Mammals (Marnell *et al.*, 2009) or the EU Habitats Directive 92/43/EEC.
- 5.30 Huntstown Quarry has previously been through several assessments for planning and waste licensing purposes and the associated reports and documents have been reviewed as part of the desk study for this report.
- 5.31 Chapters of this EIAR prepared by other disciplines, such as Chapter 7 Water and Chapter 8 Air have also been reviewed as part of the desk study exercise. In addition, the Appropriate Assessment screening report prepared for the project was also reviewed as part of the overall desk study.

Field Survey(s)

- 5.32 The Site was visited on 16 March 2021 and a walkover survey was carried out by SLR ecologist Michael Bailey. The walkover survey was carried out in dry conditions and a temperature of 10°C. It was

¹ <https://www.google.ie/maps> and <http://www.bing.com/maps/>

² www.npws.ie (last accessed 23 March 2021)

³ <http://maps.biodiversityireland.ie/#/Map>

⁴ <http://gis.epa.ie/>

⁵ <http://planning.agileapplications.is/fingal>

⁶ <https://www.birdwatchireland.ie/>

overcast with cloud cover of 5 oktas⁷ and there was a light F2⁸ breeze (i.e. 6 -11 km/hr). The objective of the site visit was to undertake a walkover survey to better understand the ecology of the Site and to determine its ecological value.

- 5.33 Habitats were identified and classified using 'A Guide to Habitats in Ireland' (Fossitt, 2000) during the walkover survey. The dominant plant species present in each habitat type were recorded. Species nomenclature follows Parnell and Curtis (2012) for scientific and English names of vascular plants.
- 5.34 Incidental sightings or evidence of birds, mammals or amphibians were noted during the walkover survey. Trees or structures suitable for bat roosts within the Site and potential suitable bat foraging habitat were also noted.

Limitations

Desk Study

- 5.35 Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the Site. Interpretation of maps and aerial photography has been carried out using recent imagery (obtained in February 2021), but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field survey area.

Field Survey(s)

- 5.36 The surveys were carried out in suitable weather conditions. All areas of the Site were accessed except the bottom of the working quarry area where heavy machinery was operating at the time. While the field survey was carried out during the sub-optimal growing season for flowering plants, it was still possible to identify sufficient plants to allow accurate classification of the habitats present.

Assessment Approach

- 5.37 The ecological evaluation and impact assessment approach used in this Chapter is based on Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland ("CIEEM guidelines") (CIEEM, 2018).

Important Ecological Features

- 5.38 Ecological features can be important for a variety of reasons. Importance may relate, for example, to the quality or extent of the site or habitats therein; habitat and/or species rarity; the extent to which such habitats and/or species are threatened throughout their range, or to their rate of decline.
- 5.39 The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known / published accounts of distribution and rarity where available, and professional experience:
- International (European);
 - National (Ireland);
 - Regional (Leinster);
 - County (Dublin);
 - Townland (Huntstown, Cappogue and Grange);

⁷ Cloud amount is reported in oktas or eighths. Okta is a unit used in expressing the extent of cloud cover, equal to one eighth of the sky. <https://www.metoffice.gov.uk/guide/weather/observations-guide/how-we-measure-cloud>

⁸ Force 2 on the Beaufort Wind Scale <https://www.met.ie/climate/wind.asp>

- Local (intermediate area between Site and Townland); and
- Site (within the proposed licence extension area).

- 5.40 The above frame of reference is applied to the ecological features identified during the desk study and field surveys undertaken to inform this assessment.
- 5.41 In assigning a level of value to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. Examples of relevant lists and criteria include species of European conservation importance (as listed on Annexes II, IV and V of the Habitats Directive or Annex 1 of the Birds Directive), species protected under the Wildlife Acts 1976 - 2018 and Birds of Conservation Concern (Colhoun and Cummins, 2013).
- 5.42 The approach to impact assessment, as set out in the CIEEM guidelines, only requires that ecological features (habitats, species, ecosystems and their functions / processes) that are considered to be important and potentially affected by the proposed development, are carried forward to detailed assessment. It is not necessary to carry out detailed assessment of receptors that are sufficiently widespread, unthreatened and resilient to impacts from the proposed development and will remain viable and sustainable.
- 5.43 For the purposes of this assessment, ecological features of Local importance or greater and/or subject to legal protection have been subject to detailed assessment. Effects on other ecological features are considered unlikely to be significant in legal or policy terms.

Impact Assessment

- 5.44 The impact assessment process involves the following steps:
- identifying and characterising potential impacts;
 - incorporating measures to avoid and mitigate (reduce) these impacts;
 - assessing the significance of any residual effects after mitigation;
 - identifying appropriate compensation measures to offset significant residual effects (if required); and
 - identifying opportunities for ecological enhancement.
- 5.45 When describing potential impacts, reference has been made to the following characteristics, as appropriate:
- Positive or negative;
 - Extent;
 - Magnitude;
 - Duration;
 - Timing;
 - Frequency; and
 - Reversibility.
- 5.46 The impact assessment process considers both direct and indirect impacts. Direct ecological impacts are changes that are directly attributable to a defined action, e.g., the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or feature, e.g., the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of wet grassland.
- 5.47 Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance:

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

Significant Effects

5.48 The concept of ecological significance is addressed in Paragraphs 5.24 through to 5.28 of the CIEEM guidelines. Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purposes of EclA, a ‘*significant effect*’ is an effect that either supports or undermines biodiversity conservation objectives for ‘*important ecological features*’ or for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g., national / local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local and the scale of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.

Cumulative Effects

- 5.49 Cumulative effects can result from individually insignificant, but collectively significant, actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in combination with impacts of other proposed or permitted plans and projects, can result in significant effects.
- 5.50 Other plans and projects that need to be considered when establishing cumulative effects are:
- proposals for which consent has been applied but which are awaiting determination;
 - projects which have been granted consent, but which have not yet been started or which have been started but are not yet completed (i.e., under construction);
 - proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined;
 - constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
 - developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

Avoidance, Mitigation, Compensation and Enhancement

- 5.51 When seeking mitigation or compensation solutions, efforts should be consistent with the geographical scale at which an effect is significant. For example, mitigation and compensation for effects on a species population significant at a county scale should ensure no net loss of the population at a county scale. The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved.
- 5.52 Where potentially significant effects have been identified, the mitigation hierarchy has been applied, as recommended in the CIEEM guidelines. The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Once avoidance and mitigation measures have been applied, residual effects are then identified along with any necessary compensation measures, and incorporation of opportunities for enhancement.

- 5.53 It is important to clearly differentiate between avoidance mitigation, compensation and enhancement and these terms are defined here as follows:
- Avoidance is used where an impact has been avoided, e.g., through changes in scheme design;
 - Mitigation is used to refer to measures to reduce or remedy a specific negative impact in-situ;
 - Compensation describes measures taken to offset residual effects, i.e., where mitigation in situ is not possible; and
 - Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

BASELINE ECOLOGICAL CONDITIONS

- 5.54 The following section sets out the baseline ecological conditions at the Site based on the findings of the desk study and field survey.

Designated Sites

- 5.55 Sites which have been designated for nature conservation within the zone of influence of the proposed project are discussed in this section. These designations may include Natura 2000 sites, Natural Heritage Areas, National Parks, Nature Reserves, Wildfowl Sanctuaries and Ramsar Sites.
- 5.56 The proposed development area is not within or adjacent to any site designated for nature conservation or subject to any nature conservation designations.

Natura 2000 Sites

- 5.57 The closest Natura 2000 site is the South Dublin Bay and River Tolka Estuary SPA [004024]. This Special Area of Conservation (SAC) is located approximately 9 km south-east of the Site when measured in a straight line from its closest point (refer to Figure 5-1).
- 5.58 The Site is not connected via ecological features such as hedgerows or treelines or surface water pathways to any Natura 2000 site. The South Dublin Bay and River Tolka Estuary SPA is considered to be sufficiently distant from, and unconnected to, the Site to not be affected by any potential impacts and resultant effects.
- 5.59 The AA Screening Report prepared in support of this project found that significant effects on the South Dublin Bay and River Tolka Estuary SPA are not likely and that the proposal does not require progression to second stage Appropriate Assessment. Natura 2000 sites are therefore scoped out and excluded from any further consideration in this assessment.

Natural Heritage Areas/Proposed Natural Heritage Areas

- 5.60 The closest Natural Heritage Area (NHA) or proposed Natural Heritage Areas (pNHA) to the Site is the Royal Canal pNHA which is located approximately 2.7 km to the south-west.
- 5.61 The Site is not connected via ecological features such as hedgerows or treelines or surface water pathways to any Natural Heritage Area. The Royal Canal pNHA can be considered to be sufficiently distant from, and unconnected to, the proposed development to not be affected by the potential impacts and resultant effects. Natural Heritage Areas are therefore scoped out and excluded from any further consideration in this assessment.

Habitats

5.62 Figure 5.2 identifies the habitat recorded during the walkover survey carried out in March 2021. These habitats are discussed in detail below and their ecological importance assessed.

Active quarries and mines – ED4

- 5.63 Active quarries and mine (shown in Plate 5-1) is the dominant habitat within the Site comprising approximately 9.4 ha of the total licence extension area. This habitat can be broadly described as the western working area of the existing quarry with exposed rock faces and bare ground. This habitat includes some smaller areas of standing water, scrub and recolonising bare ground habitats which are not of sufficient size to be mapped or assessed individually.
- 5.64 The species recorded along the edges of the active quarry are typical of disturbed ground and are commonly occurring ruderal species. These include young silver birch *Betula pendula* and willow *Salix* sp., gorse *Ulex europaeus*, butterfly bush *Buddleia davidii*, wild strawberry *Fragaria vesca*, ribwort plantain *Plantago lanceolata*, white clover *Trifolium repens*, self-heal *Prunella vulgaris*, spear thistle *Cirsium vulgare*, weld *Reseda luteola*, lesser spearwort *Ranunculus flammula*, ox-eye daisy *Leucanthemum vulgare*, scentless mayweed *Tripleurospermum inodorum*, cow parsley *Anthriscus sylvestris*, and common sorrel *Rumex acetosa*.
- 5.65 This habitat is species poor and the species that do occur are common and widespread. This habitat is common and widespread across Ireland. The habitat is assessed as not important and is scoped out of further consideration within this ecological assessment.

Built ground and artificial surfaces – BL3

- 5.66 The built ground and artificial surface habitat comprises approximately 1.9 ha of roads and vehicle parking areas. The main access road leading into the quarry complex is paved. The internal access roads are composed of compacted aggregate and gravel tracks. This habitat is artificial in nature and is generally devoid of vegetation. Any plant diversity within this habitat is limited to the marginal habitat where the road is bordered by the adjacent hedgerow (WL1) or scrub habitat (WS1).
- 5.67 The artificial nature of this habitat and the lack of biodiversity within it gives it a negligible ecological value. The habitat is assessed as not important and is scoped out of further consideration within this assessment.

Spoil and bare ground – ED2

- 5.68 There is small area of stockpiled materials extending across an area of approximately 0.85 ha at the north-western corner of the South quarry. This anthropogenic habitat is subject to high levels of disturbance and has no botanical interest or value to wildlife. The habitat is assessed as not important and is scoped out of further consideration within this assessment.

Other artificial lakes and ponds – FL8

- 5.69 This habitat comprises of four constructed settlement ponds extending to 0.9 ha, which form part of the surface water management system for the South Quarry (refer to Plate 5.2). In addition, there are two small areas of open water either side of the main access road, approximately 200m to the north of the South Quarry, where treated water pumped from the settlement ponds is discharged into a drainage ditch. The ponds have edge vegetation comprising branched bur-reed *Sparganium erectum* and reed-mace *Typha latifolia*.
- 5.70 This habitat is common and widespread across Ireland. The habitat is assessed as not important and is scoped out of further consideration within this assessment.

Dry meadows – GS2

- 5.71 This habitat is present as small sections of fields (ca. 1.35ha) to the north-east and west of the settlement ponds. The sward is comprised of false oat-grass *Arrhenatherum elatius* and Yorkshire-fog, with creeping bent *Agrostis stolonifera*, and hard rush. The herbaceous layer includes rosebay willowherb *Chamerion angustifolium*, creeping thistle, herb-Robert *Geranium robertianum*, creeping cinquefoil, creeping buttercup, common ragwort, red clover and dandelion. Small patches of butterfly-bush, dog-rose and bramble *Rubus fruticosus* agg are also present.
- 5.72 Within the Site, this habitat is species poor and forms a small area. The habitat is common and widespread across Ireland. It has been assessed as important at the site level only and is scoped out of further consideration within this assessment.

Mixed broadleaved woodland – WD1

- 5.73 There are small blocks (totalling 3.65ha) of mixed broadleaved woodland habitat planted for screening purposes along the eastern, southern and western boundaries of the Site (shown in Plate 5.3). The eastern and southern boundaries are dominated by alder *Alnus glutinosa* with some willow *Salix* sp. also present. The dense canopies largely exclude ground and field flora except for dense bramble and some patches of common nettle *Urtica dioica*. This habitat along the western boundary is also dominated by alder with some sycamore *Acer pseudoplatanus* and silver birch also forming the canopy and a dense understorey comprising of butterfly-bush, dog-rose *Rosa canina* agg., bramble and gorse.
- 5.74 This habitat within the Site is comprised of relatively young trees which has ecological connectivity to the surrounding woodlands and hedgerows and has been evaluated as important at a local level.

Scrub – WS1

- 5.75 Approximately 4.4 ha of scrub habitat is present within the Site and located mainly on the western side of South Quarry. This habitat is dominated by bramble with occasional gorse, blackthorn *Prunus spinosa* and young hawthorn *Crataegus monogyna* and elder *Sambucus nigra* trees. Dog rose was infrequent. Rank grasses such as perennial ryegrass and cocksfoot *Dactylis glomerata* dominate and nettle was also abundant around the edges of the habitat.
- 5.76 Within the Site this habitat is species poor. This type of species poor scrub habitat is common and widespread throughout Ireland. The habitat is evaluated as important at the site level only and is scoped out of further consideration in this assessment.

Drainage ditch – FL4

- 5.77 There is a drainage ditch located beyond the northern face of the South Quarry which forms part of the existing surface water management system at the quarry (refer to Plate 5.5) and flows east across the Roadstone landholding for approximately 550 m.
- 5.78 The in-channel vegetation is typically sparse but water plantain *Alisma plantago-aquatica*, jointed rush *Juncus articulatus*, purple-loosestrife *Lythrum salicaria*, water mint *Mentha aquatica*, and reedmace *Typha latifolia* were present.
- 5.79 This habitat exists as part of the surface water management system and has low conservation and ecological value. The habitat is evaluated as important at the site level only and is scoped out of further consideration in this assessment.

Species

- 5.80 The NBDC database was searched for records of rare and/or protected species from the 2 km grid square O14A within which the Site is located. Only records for the past 10 years are considered for

the purposes of this assessment as older records are unlikely to still be relevant given their age and the changes in land management that have occurred in the intervening period. There were four records of protected and/or rare species (listed in Table 5-1 below) within the relevant grid square for the past 10 years.

Table 5-1
Species Recorded on NBDC for Grid Square O14A

Grid Square	Species Name	Date of Last Record	Designation
O14A	Common Frog <i>Rana temporaria</i>	28/09/2018	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
O14A	Smooth Newt <i>Lissotriton vulgaris</i>	28/09/2018	Protected Species: Wildlife Acts
O14A	Peregrine Falcon <i>Falco peregrinus</i>	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species
O14A	Blue Fleabane <i>Erigeron acer</i>	22/07/2017	Threatened Species: Listed as Endangered by NBDC and as Vulnerable in the Ireland Red List of Vascular Plants

5.81 The limited number of recent (within 10 years) records of species from the NBDC database does not necessarily imply that a species does not occur within the search area, rather that it has not formally been recorded as present.

Blue Fleabane

5.82 Blue Fleabane *Erigeron acer* has a restricted distribution in Ireland and is listed as Endangered by NBDC and as Vulnerable in the Ireland Red List of Vascular Plants⁹.

5.83 NBDC returned a record for blue fleabane *Erigeron acer* within grid square O14A. This record was made by SLR in 2017 and relates to the West Quarry area, outside of the Site under review.

5.84 No blue fleabane was observed within the Site during the site survey. However, this survey was conducted outside the optimal growing season for this species.

5.85 This plant is assessed as important at the local level.

Bats

5.86 The NBDC holds no records of any bat species within the 2km grid square within which the Site is located.

5.87 The Site does not support any buildings, trees, or structures that are considered to offer potential roost features (PRF).

⁹ Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016). *Ireland Red List No. 10: Vascular Plants*. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.

- 5.88 The Site has poor vegetation cover in the form of hedgerows or treelines and therefore provides low quality habitat for foraging and/or commuting bats.
- 5.89 Bats are legally protected under the Wildlife Acts 1976 – 2018. Under this legislation it is an offence to intentionally kill or injure a bat, or intentionally destroy or disturb a breeding place or resting place.
- 5.90 The Site is evaluated as important for bats at the Site level only and is scoped out of further consideration in this assessment.

Other Mammals

- 5.91 No other records or evidence of mammal use of the Site were detected during the field survey.
- 5.92 The population of other mammal species using the Site have been evaluated as not important and are scoped out of further detailed assessment.

Birds

- 5.93 Peregrine falcon *Falco peregrinus* is protected under Annex I of the EU Birds Directive. The NBDC holds records of peregrine falcon from 2011, in the grid square (O14A) within which the Site is located. Recent breeding bird surveys conducted around the adjacent North Quarry and West Quarry (SLR 2018 – 2020) found no evidence of peregrine falcon nesting.
- 5.94 Other bird species recorded within the Site include common, widespread and green listed species such as song thrush *Turdus philomelos*, wren *Troglodytes*, blackbird *Turdus merula*, goldfinch *Carduelis*, chaffinch *Fringilla coelebs*, pied wagtail *Motacilla alba*, robin *Erithacus rubecula*, jackdaw *Corvus monedula*, hooded crow *Corvus cornix* and rook *Corvus frugilegus*. All bird species observed are green listed under the Birds of Conservation Concern Ireland (BoCCI).
- 5.95 No breeding birds were observed in the surveys conducted around the adjacent North Quarry and West Quarry between 2018 and 2020 (SLR 2018 – 2020)¹⁰.
- 5.96 Bird species in Ireland, their nests and eggs, are protected under the Wildlife Acts 1976 – 2018 and there are habitats on Site that could provide breeding areas for some bird species. The bird population of the Site is evaluated as important at the local level.

Amphibians

- 5.97 Common frog *Rana temporaria* was recorded in grid square (O14A) within which the Site is located, in 2017, and was also recorded by SLR as present and breeding throughout the Huntstown Quarry Complex in 2017 and 2018 (SLR 2018). Smooth Newt *Lissotriton vulgaris* were also recorded as present and breeding throughout the Huntstown Quarry complex in 2017 and 2018 (SLR 2018).
- 5.98 A mitigation strategy to capture and remove common frogs from the West Quarry prior to backfilling operations was implemented by SLR under an appropriate derogation licence in 2017, and again in 2018 as part of the Central Quarry extension area that included the newly constructed settlement lagoons. A further mitigation strategy to capture and remove smooth newts under an appropriate derogation licence was also implemented by SLR in 2018 for part of the Central Quarry extension area that included newly constructed settlement lagoons.
- 5.99 No frogs or smooth newts were recorded during the field survey although the ponds within the Site are assessed as providing moderate quality breeding habitat surrounded by good terrestrial habitat for common frog and smooth newt. It is likely that these species could be present at these locations during the breeding season.
- 5.100 Common frog and smooth newt are legally protected under the Wildlife Acts 1976 – 2018.

¹⁰ Huntstown Waste Recovery Facility, Finglas, Dublin 11 Breeding Bird Surveys May 2018, June 2019 and June 2020.

Non-native Invasive Species

- 5.101 Evidence of rabbit *Oryctolagus cuniculus*, a non-native species, was noted within the Site by the observation of droppings in the grasslands and scrub areas near the settlement ponds.
- 5.102 No non-native invasive species of flora, as listed under the either the Wildlife Acts 1976 - 2018 or European Communities (Birds and Natural Habitats) Regulations 2011 were returned by NBDC within the 2km grid square within which the Site is located.
- 5.103 A small stand of Japanese knotweed *Fallopia japonica* was recorded during SLR site surveys in 2018 adjacent to a former access road into the adjacent North Quarry area. This has been treated in accordance with a pre-existing Non-native Invasive Species Eradication Plan as conditioned under the existing waste licence.
- 5.104 No non-native invasive plant species were observed during the field survey of the Site.

Summary of Important Ecological Features

- 5.105 Table 5-2 below summarises all important ecological features for which detailed ecological assessment is required. The geographical scale of importance for the ecological features within the Site are summarised along with their legal status and a rationale, where appropriate, for not carrying forward any features for detailed assessment.

Table 5-2
Summary of Important Ecological Features Subject to Detailed Assessment

Ecological Feature		Scale of importance	Comments on Legal Status and/or Importance
Habitats	WD1 – Mixed broadleaved woodland	Local	Protected in policies and objectives of the Fingal Development Plan. This habitat has connectivity to the surrounding woodlands and hedgerows.
Species	Common Frog	Local	The common frog is legally protected under the Wildlife Acts 1976 – 2018. There is a known population on the Site.
	Smooth Newt	Local	The smooth newt is legally protected under the Wildlife Acts 1976 – 2018. There is a known population on the Site.
	Blue Fleabane	Local	Listed as Endangered by NBDC and as Vulnerable in the Ireland Red List of Vascular Plants.
	Breeding Birds	Local	Wildlife Acts 1976 – 2018 confers protection on breeding birds. Referenced in policies and objectives of the Fingal CDP.

PROJECT DESCRIPTION

- 5.106 The proposed development is described in detail within Chapter 2 of this EIAR. The proposal provides for licensing of soil backfilling and recovery activities at Huntstown South Quarry and extension of the existing licensed site area to include the western side of the quarry and some internal access roads leading to it.
- 5.107 Backfilling on the western side of the quarry (using imported inert soil and stone waste) will extend from the quarry floor level up to original (former) ground level. In addition to imported materials,

some soil and stone in existing screening berms and/or stockpiles across the quarry complex site will also be used in the final restoration of the quarry.

- 5.108 The previously approved restoration scheme (Planning Ref. FW12A/0022) also provides for planting of hedgerows across the restored area in order to re-establish some former field boundaries which pre-dated quarry development.
- 5.109 The estimated volume of inert soil and stone material to be placed at the South Quarry to backfill it to former ground level is approximately 12.4 million m³ (equivalent to approximately 22.32 million tonnes). Of this, approximately 5.2 million m³ (or 9.36 million tonnes) will comprise soil and stone imported managed as waste which will be placed and recovered on the western side of the quarry. This is equivalent to approximately 468,000 HGV / truck return trips (at 20 tonnes per load) in order to completely backfill the western side of the quarry void.
- 5.110 Assuming soil waste intake for backfilling and recovery activities at the South Quarry is sustained at a permitted maximum rate of 750,000 tonnes per annum, this would correspond to an average of
- 37,500 HGV / truck return trips per year (assuming an average of 20 tonnes per load);
 - 125 return trips per day (assuming 300 working days in a calendar year)
 - 12 return trips per hour (assuming an 11-hour working day).
- 5.111 The backfilling and recovery activities at the South Quarry as proposed will therefore generate an average of 12 movements to and 12 movements from the quarry every hour of every working day (and a total of 24 movements per hour). This compares with the current average rate of 23 movements per hour in each direction (or a total of 46 movements per hour) which is currently permitted for the ongoing backfilling and recovery operations at the North Quarry.
- 5.112 On completion, the backfilled quarry will be returned to agricultural grassland, in keeping with some of the surrounding landscape. The approved restoration scheme also provides for planting of hedgerows across the restored area in an effort to re-establish some of the former field boundaries which pre-dated quarry development.
- 5.113 Traffic access to the South Quarry is obtained via the access road leading into the Huntstown Quarry Complex off the existing North Road (the former N2 National Primary Road now the R135 Regional Road). Within Roadstone's landholding, HGV traffic to and from the South Quarry runs across a network of internal paved haul roads which lead either to the main quarry descent at the northern face or around to its eastern side.
- 5.114 Inert materials will continue to be accepted between 08.00 hours and 18.00 hours each weekday (Monday to Friday) and on Saturdays from 08.00 hours to 13.00 hours, in accordance with Condition 1.7 of the existing waste licence in respect of backfilling at the North Quarry (Ref. W0-277-03). No materials will be accepted, or backfilling operations undertaken outside of those times including Sundays and Public Holidays.

ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

- 5.115 The following section sets out the potential impacts of the project and their effects on important ecological features. The information available from the desk study and fieldwork has been used to identify impacts and the significant effects including positive, negative, direct, indirect and cumulative effects.
- 5.116 The following design principles and “designed-in” mitigation have informed the assessment of impacts:

- Within the design of the proposal good practice environmental and pollution control measures are employed with regard to current best practice guidance such as, but not limited to, the following:
 - EPA Environmental Management Guidelines (2006): Environmental Management in the Extractive Industry (Non-Scheduled Minerals); and
 - DoEHLG (Department of the Environment, Heritage and Local Government) April 2004: Quarries and Ancillary Activities Guidelines for Planning Authorities.
- Landscaping measures are proposed for the Site, which is already very well screened by vegetation and topography, and subject to an existing agreed restoration scheme. These proposals are set out in Chapter 13 of this EIAR and include features that will minimise loss of biodiversity on-site. Such measures include the following:
 - Infilling of the quarry voids to previous ground levels with inert soil and stone material. This avoids the potential creation of a large water body which would attract birds and have a potentially negative effect on Dublin Airport nearby;
 - Restoration of backfilled quarry voids to a beneficial agricultural grassland after-use, as well as biodiversity-rich calcareous grassland in some areas; and
 - Planting of hedgerows made up from native species, to re-create the hedgerow pattern, which was originally present in this area prior to any quarrying activity.

5.117 Taking the above into account, the potential impacts of the proposed development are identified in the following sections of this assessment.

Habitats

Mixed Broadleaved Woodland – WD1

Potential Impacts

5.118 There will be no removal of any woodland as part of the backfill and restoration works planned for the South Quarry.

Proposed Mitigation Measures

5.119 None required.

Significance of Residual Effects.

5.120 As the proposed activities will be located within the existing quarry complex, no individual landscape elements, such as agricultural fields or hedgerows, will be affected. The re-establishment of native hedgerows across the restored landform will provide new habitat and wildlife corridors and contribute to long-term net biodiversity gain.

Flora

Blue Fleabane

Potential impacts

5.121 Blue Fleabane has been reported from within the Site, but the proposed development will not result in the loss of any habitat in which this plant has been located.

Proposed Mitigation Measures

5.122 None required.

Amphibians

Common Frog

Potential impacts

5.123 Common Frog has been reported from within the Site, but the proposed development will not result in the loss of any habitat in which this species has been located.

Proposed Mitigation Measures

5.124 None required.

Smooth Newt

Potential impacts

5.125 Smooth Newt has been reported from within the Site, but the proposed development will not result in the loss of any habitat in which this species has been located.

Proposed Mitigation Measures

5.126 None required.

Birds

Breeding Birds

Potential impacts

5.127 The proposed development will not result in the loss of any bird breeding habitat within the Site.

Proposed Mitigation Measures

5.128 None required.

Cumulative Effects

5.129 Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

5.130 The potential for cumulative effects must be considered due to the potential for other plans and projects acting in-combination with the proposed development to cause significant effects. To identify other plans and projects that could act together with the proposed development, the online planning portal for Fingal County Council was accessed.

5.131 The Fingal CDP 2017 – 2023 was also consulted to identify if there are specific plans and/or projects with the potential to act in-combination with the proposed project.

5.132 The effects of the proposed project are not likely to be significant and will be localised i.e., confined to the Site and the immediate area. There are no strategies or objectives in the Fingal CDP 2017 – 2023 that are likely to result in significant ecological effects when considered in-combination with the proposed backfilling and recovery activities.

5.133 A search of the Fingal County Council online planning search facilities indicates that the following developments are planned or have been granted planning permission in the last five years (and not yet built) in the vicinity of the (extended) waste licence area:

- The development of a construction and demolition waste recovery facility on lands within the Huntstown Quarry Complex (Planning Ref. No. FW17A/0012);

- The prospective Irish Water Biosolids Waste Facility to be located in Newtown, on lands to the west of the R135 Regional Road and north-east of the Roadstone landholding (ABP Reference SID/02/18);
- The construction of a 5,000m² pilot scale circular economy research and development building in the townlands of Huntstown / Coldwinters for Rathdrinagh Land Limited (Planning Ref. No. FW20A/0063); and
- The development of two data centre buildings immediately east of the Huntstown Power Station, between it and the R135 Regional Road (Planning Ref. No FW21A/0151).

5.134 No planned or prospective development in the surrounding area, when considered together with the proposed development, is likely to give rise to cumulative effects. It is considered that there is no pathway for the proposed development to act in-combination with other plans and projects.

Interactions with Other Environmental Receptors

5.135 The proposed backfilling and waste recovery operations at Huntstown South Quarry will potentially impact local habitats and species by way of changes to existing ground surfaces / landforms / vegetation and water drainage patterns, as well as the generation of noise and dust. Where relevant, these potential interactions are addressed in Chapter 6 (Land, Soil and Geology), Chapter 7 (Hydrology and Hydrogeology), Chapter 8 (Air Quality), Chapter 10 (Noise) and Chapter 13 (Landscape).

Do-Nothing Scenario

5.136 If the proposed waste licence review application is not approved, alternative strategies would have to be developed to progress the restoration / backfilling of the South Quarry to agricultural land use in line with the planning conditions attached to the current extractive permission, most likely using materials classified as non-waste by-product.

5.137 Although the end result would be the same as that provided for in the licence review application, it could ultimately take longer to complete given the limited number of decisions made by the Agency confirming by-product status for soil and stone to date. The reversion of the Site to its original land use and the re-establishment of similar habitats to those which pre-dated quarry development would therefore occur later than would otherwise be the case were the licence review successful.

5.138 Were the quarry backfilling activities not to proceed at all, the disturbed landform around the South Quarry would remain in place. Assuming quarry dewatering ceased, the worked-out quarry void would be drowned as groundwater levels rebounded to their natural level. This would result in the formation of a sizeable lake which would attract birdlife and ultimately present an increased risk of bird strike to aircraft on the overhead flight path in and out of Dublin Airport.

Summary of Effects

5.139 The effects of the proposed backfilling and soil waste recovery activities on the western side of Huntstown South Quarry and the proposed extension of the waste licence area thereto are summarised in Table 5-3 below:

Table 5-3
Summary of Important Features, Effects and Proposed Mitigation

Ecological Feature	Effect	Proposed Mitigation	Means of Delivering Mitigation	Residual Effects
WD1 – Mixed broadleaved woodland	Local level	None required	N/A	Not significant
Blue Fleabane	Local level	None required	N/A	Not significant
Common Frog	Local level	None required	N/A	Not significant
Smooth Newt	Local level	None required	N/A	Not significant
Breeding Birds	Local level	None required	N/A	Not significant

CONCLUSIONS

- 5.140 The proposed development, comprising backfilling and soil waste recovery activities on the western side of Huntstown South Quarry at the permitted maximum rate of 750,000 tonnes per annum will result in localised effects on the ecology of the Site.
- 5.141 There will be no effect on sites designated for nature conservation as a result of the proposed activities. There will be no loss of mixed broadleaved woodland or blue fleabane within the Site as a result of the proposed activities. This habitat will not be affected but will be further restored as part of the restoration plan of the proposed project. The restoration plan will result in a net increase in the amount of grassland areas. The habitats within the Site are commonly occurring, widespread and resilient.
- 5.142 There are known populations of common frog and smooth newt around the Site but the habitats they rely on will not be altered by the proposed works. Furthermore, the backfilling and recovery activities will not result in the loss of any bird breeding habitat within the Site.

REFERENCES

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- Kettunen, M., Terry, A., Tucker, G. and Jones A. (2007).** *Guidance on the maintenance of landscape features of major importance for wild flora and fauna - Guidance on the implementation of Article 3 of the Birds Directive (79/409/EEC) and Article 10 of the Habitats Directive (92/43/EEC).* Institute for European Environmental Policy (IEEP), Brussels, 114 pp. & Annexes.
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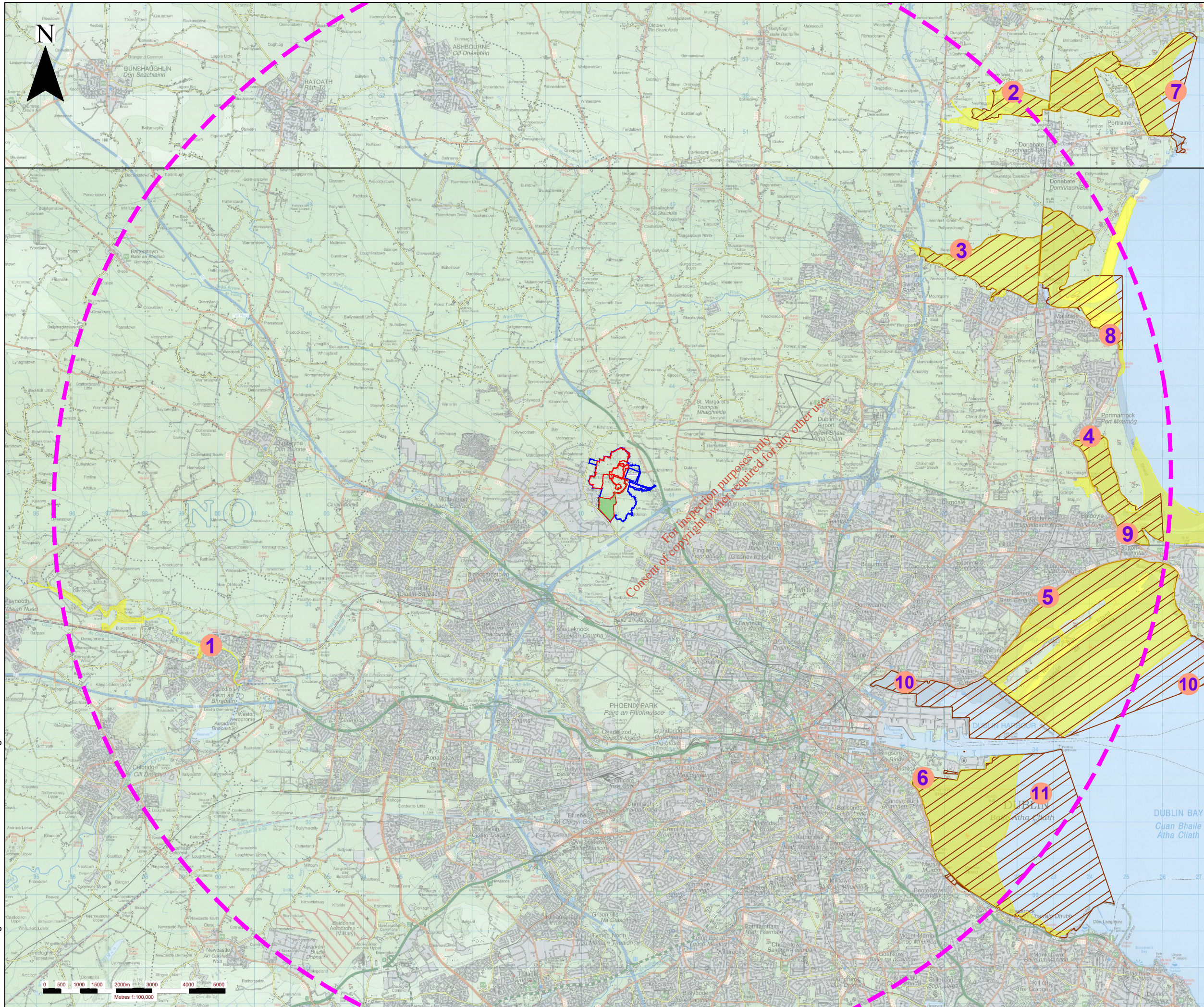
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FIGURES

Figure 5-1
Sites Designated for Nature Conservation

Figure 5-2
Habitat Plan

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NOTES

1. EXTRACT FROM 1:50,000 O.S DISCOVERY MAP NO. 50
2. CYAL50167032 (C) ORDNANCE SURVEY IRELAND / GOVERNMENT OF IRELAND

LEGEND

- ROADSTONE LIMITED LAND INTEREST (C. 171.8 HA)
- AMENDED WASTE LICENCE AREA (COMPRISING EXISTING LICENCE AREA AND PROPOSED EXTENSION) (C. 77.5 HA)
- PROPOSED EXTENSION TO CURRENT WASTE LICENCE AREA
- 15KM RADIUS FROM EXTENSION TO WASTE LICENCE AREA
- SPECIAL AREA OF CONSERVATION
- SPECIAL PROTECTION AREA

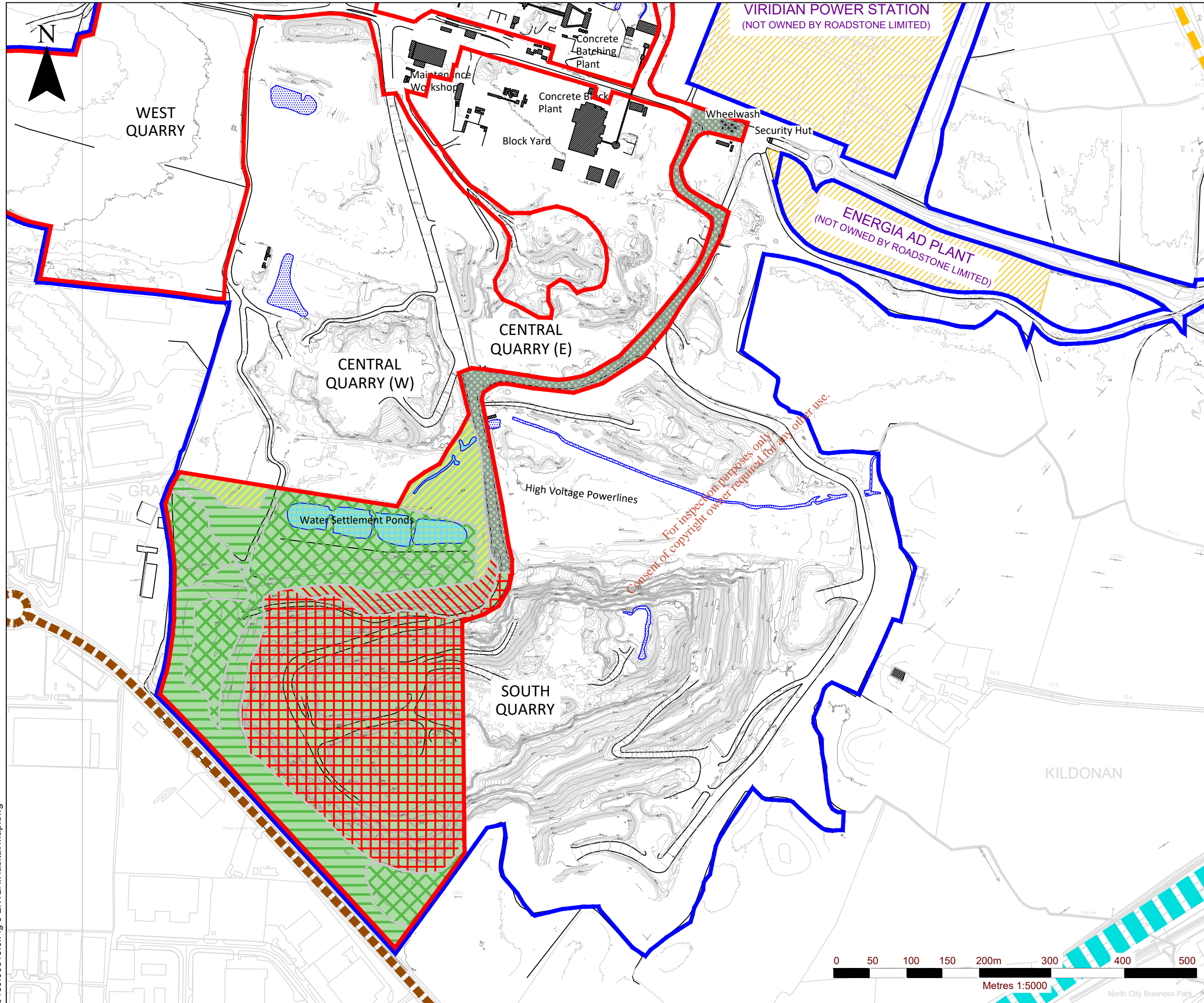
1. RYE WATER VALLEY / CARTON SAC (001398)
2. ROGERSTOWN ESTUARY SAC (000208)
3. MALAHIDE ESTUARY SAC (000205)
4. BALDOYLE BAY SAC (000199)
5. NORTH DUBLIN BAY SAC (000206)
6. SOUTH DUBLIN BAY SAC (000210)
7. ROGERSTOWN ESTUARY SPA (004015)
8. MALAHIDE ESTUARY SPA (004025)
9. BALDOYLE BAY SPA (004016)
10. NORTH BULL ISLAND SPA (004006)
11. SOUTH DUBLIN BAY & RIVER TOLKA SPA (004024)

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 WASTE LICENCE REVIEW APPLICATION
 NORTH ROAD, FINGLAS, DUBLIN 11
NATURE CONSERVATION SITES

FIGURE 5-1

Scale: 1:100,000 @ A3 Date: NOVEMBER 2021



NOTES

1. EXTRACT FROM 1:2,500 ORDNANCE SURVEY DIGITAL SHEET NO'S. 3062-A, 3062-B, 3062-C, 3062-D, 3063-A, 3063-C, 3130-A & 3130-B.
2. CYAL50167032 (C) ORDNANCE SURVEY IRELAND / GOVERNMENT OF IRELAND

LEGEND

	ROADSTONE LIMITED LAND INTEREST (C. 171.8 HA)
	AMENDED WASTE LICENCE AREA (COMPRISING EXISTING LICENCE AREA AND PROPOSED EXTENSION) (C. 77.5 HA)
	PROPOSED EXTENSION TO CURRENT WASTE LICENCE AREA
	FL8 - OTHER ARTIFICIAL LAKES AND PONDS
	BL3 - BUILDINGS AND ARTIFICIAL SURFACES
	ED2 - SPOIL AND BARE GROUND
	ED4 - ACTIVE QUARRIES AND MINES
	GS2 - DRY MEADOWS & GRASSY VERGES
	WD1 - MIXED BROADLEAVED WOODLAND
	WS1- SCRUB

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HABITAT PLAN

FIGURE 5-2

Scale 1:5,000 @ A3 Date NOVEMBER 2021

0180.00313.0:Fig 5-2.WLR.Habitat Map.dwg

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PLATES



Plate 5-1 ED4 - Active Quarries and Mines (South Quarry, looking North)



Plate 5-2 FL8 Ponds



Plate 5-3 WD1 – Mixed Broadleaved Woodland



Plate 5-4 FL8 & FL4 Ponds and Drainage Ditch

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APPENDIX 5-A
Relevant Legislation and Planning Policy

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RELEVANT LEGISLATION¹¹

EIA Directive

The EIA Directive, Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, as amended by Council Directive 97/11/EC of 3 March 1997, Directive 2003/35/EC of 26 May 2003 and Directive 2009/31/EC of 23 April 2009, now codified in Directive 2011/92/EU of 13 December 2011, is designed to ensure that projects likely to have significant effects on the environment are subject to a comprehensive assessment of environmental effects prior to development consent being given. The EIA Directive was first transposed into Irish law by the European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349 of 1989) which amended the Local Government (Planning and Development) Act, 1963 (and other legislation) to provide for environmental impact assessment.

Habitats and Birds Directive

The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora was adopted in 1992 and aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

The Natura 2000 network of protected areas are known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In general terms, they are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. The requirements of the Habitats Directive have been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I. No. 477/2011]. This legislation affords protection to both Special Protection Areas and Special Areas of Conservation.

Special Areas of Conservation (SAC) are designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive 92/43/EEC (Habitats Directive) which is transposed into Irish law by the EC (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). Special Protection Areas (SPA) are classified under the Birds Directive (2009/147/EC on the Conservation of Wild Birds). Article 6(3) of the Habitats Directive requires an 'appropriate assessment' to be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An 'appropriate assessment' is an evaluation of the potential impacts of a plan or project on the integrity of a Natura 2000 site, and the incorporation, where necessary, of measures to mitigate or avoid negative effects.

National Legislation

Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 to 2018 and the Floral (Protection) Order 2015. Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19(1) of the Act states that 'Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made'.

¹¹ Please note that the summary of relevant legislation provided herein is intended for general guidance only. The original legislation should be consulted for definitive information.

A list of proposed NHAs (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans.

RELEVANT PLANNING POLICY

Fingal Development Plan 2017 - 2023

The relevant planning policies and objectives as extracted from the Written Statement of the Fingal Development Plan 2017 – 2023 (Chapter 7: Movement & Infrastructure (WT & WQ), Chapter 9: Natural Heritage (NH) and Chapter 12: Development Management Standards (DMS)) are set out below:

Strategic Policies include:

- Policy 1 - Promote sustainable development by providing for the integration of economic, environmental, social and cultural issues into Development Plan policies and objectives, utilising the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) processes.
- Policy 11 - Protect, maintain and enhance the natural and built heritage of the County, particularly the coastal areas which are of such importance to residents of, and visitors to, the Dublin region.
- Policy 17 - Work with Irish Water to secure the timely provision of water supply and drainage infrastructure necessary to end polluting discharges to waterbodies, comply with existing licences and Irish and EU law, and facilitate the sustainable development of the County and the Region.
- Policy 18 - Secure the timely provision of infrastructure essential to the sustainable development of the County, in particular in areas of resource and waste management, energy supply, renewable energy generation and Information and Communications Technology (ICT).

Objectives:

- Obj. WT 01** Strive to achieve 'good status' in all waterbodies in compliance with the Water Framework Directive, the Eastern River Basin District Management Plan 2009-2015 and the associated Programme of Measures (first cycle) and to cooperate with the development and implementation of the second cycle national River Basin Management Plan 2017-2021.
- Obj. WT 02** Liaise with Irish Water to ensure the provision of wastewater treatment systems in order to ensure compliance with existing licences, EU Water Framework Directive, River Basin Management Plans, the Urban Wastewater Directive and the EU Habitats Directive.
- Obj. WQ 02** Protect and develop, in a sustainable manner, the existing groundwater sources and aquifers in the County and control development in a manner consistent with the proper management of these resources in conformity with the Eastern River Basin Management Plan 2009-2015 and the second cycle national River Basin Management Plan 2017-2021 and any subsequent plan and the Groundwater Protection Scheme.
- Obj. WQ 03** Implement the recommendations of the Groundwater Protection Scheme.
- Obj. WQ 06** Minimise the impact on surface water of discharges from septic tanks, proprietary effluent treatment systems and percolation areas by ensuring that they are located and constructed in accordance with the recommendations and guidelines of the EPA and Fingal County Council.
- Obj. NH 01** Support the implementation of the Fingal Heritage Plan in relation to the promotion and protection of Fingal's Natural Heritage.

- Obj. NH 13** Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicants will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011).
- Obj. NH 15** Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e., Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the period of this Plan.
- Obj. NH 18** Protect the functions of the ecological buffer zones and ensure proposals for development have no significant adverse impact on the habitats and species of interest located therein.
- Obj. NH 27** Protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management.
- Obj. NH 28** Consider the use of Tree Preservation Orders (TPOs) to protect important trees, groups of trees or woodlands.
- Obj. DMS 39** New infill development shall respect the height and massing of existing residential units. Infill development shall retain the physical character of the area including features such as boundary walls, pillars, gates/gateways, trees, landscaping, and fencing or railings.
- Obj. DMS 77** Protect, preserve and ensure the effective management of trees and groups of trees.
- Obj. DMS 78** Ensure during the course of development, trees and hedgerows that are conditioned for retention are fully protected in accordance with 'BS5837 (2012) Trees in relation to the Design, Demolition and Construction – Recommendations' or as may be updated.
- Obj. DMS 162** Ensure all development proposals include measures to protect and enhance biodiversity.
- Obj. DMS 163** Ensure Screening for Appropriate Assessment and, where required, full Appropriate Assessment is carried out for all plans and projects in the County which, individually, or in combination with other plans and projects, are likely to have a significant direct or indirect impact on any European site or sites.
- Obj. DMS 164** Ensure that sufficient information is provided as part of development proposals to enable Screening for Appropriate Assessment to be undertaken and to enable a fully informed assessment of impacts on biodiversity to be made.
- Obj. DMS 165** Ensure that Natura Impact Statements (NIS) and any other ecological impact assessments submitted in support of proposals for development are carried out by appropriately qualified professionals and that any necessary survey work takes place in an appropriate season.
- Obj. DMS 166** Ensure planning applications for proposed developments likely to have significant direct or indirect impacts on any European Site or sites are accompanied by a Natura Impact Statement prepared in accordance with the Guidance issued by the Department of the Environment, Heritage and Local Government (Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009).

Obj. DMS 167 Ensure ecological impact assessment is carried out for any proposed development likely to have a significant impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, or rare and threatened species including those species protected by law and their habitats. Ensure appropriate avoidance and mitigation measures are incorporated into development proposals as part of any ecological impact assessment.

Biodiversity Action Plan:

Fingal County Council has developed the Fingal Biodiversity Action Plan which sets out the Council's objectives for biodiversity conservation for the next 20 years. A major element of the Fingal Biodiversity Action Plan is the development of the Fingal Ecological Network. The Fingal Ecological Network sets out a spatial framework for biodiversity conservation and management in Fingal. The ecological network consists of the following elements (See Green Infrastructure Maps):

- Core Biodiversity Conservation Sites,
- Ecological Buffer Zones,
- Nature Development Areas, and
- Ecological Corridors and Stepping Stones including Trees and Hedgerows.

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