

**HUNTSTOWN QUARRY, NORTH ROAD,
FINGLAS, DUBLIN 11**

**Proposed Increase in Soil Waste Intake to
Huntstown Quarry Inert Soil Recovery Facility**

**ENVIRONMENTAL IMPACT STATEMENT
NON-TECHNICAL SUMMARY**

SLR Ref: 501.00180.00152

August 2016

Roadstone

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1.0 INTRODUCTION

- 1.1 This Non-Technical Summary provides supporting information to accompany a planning application to Fingal County Council and a Waste Licence Review Application (WLA) to the Environmental Protection Agency (EPA) by Roadstone Limited in respect of a proposed increase in the permitted waste intake to its established licensed inert soil recovery facility at the Huntstown Quarry Complex at North Road, Finglas, Dublin 11, from a maximum of 750,000 tonnes per annum at the present time to 1,500,000 tonnes per annum in future years.
- 1.2 The location of the application site is indicated on an extract from the 1:50,000 scale Ordnance Survey Discovery Series map, reproduced as Figure NTS-1.
- 1.3 Roadstone is currently importing significant volumes of excess or waste soil, stone and rock from construction and development sites across Dublin City and County to backfill the North Quarry at Huntstown. The backfilling activity is part of the overall restoration scheme for the Roadstone landholding which ultimately envisages that all existing and/or planned quarries at the quarry complex will be backfilled to former ground level using inert, naturally occurring soil and stone waste material.
- 1.4 Having undertaken a review of the existing market and intake rates at other recovery facilities across the Greater Dublin Region, Roadstone has established that there is significant demand for additional soil waste recovery capacity at authorised (ie. permitted or licensed) soil waste recovery facilities around the region at the current time.
- 1.5 This application provides for an increase in the permitted maximum annual intake to the existing recovery facility at Huntstown to 1.5 million tonnes per annum, and in so doing, seeks to provide the additional soil waste recovery capacity required by the construction and development industries over the short-to-medium term (ie. next 6 -10 years).

Site Location

- 1.6 The site to which the application relates is located entirely within the townlands of Huntstown, Johnstown and Kilshane, Co. Dublin, approximately 2.5km north-west of the Dublin suburb of Finglas and 2km north-west of the interchange between the N2 Dual Carriageway and the M50 Motorway. The plan extent of the lands owned by Roadstone Ltd. are outlined in blue on a 1:500 scale map of the area, reproduced as Figure NTS-2. The plan extent of the application site is also outlined in red on the same figure.

Site Description

- 1.7 The application area covers a total area of approximately 48.65 hectares (117.25 acres) and comprises
 - a deep limestone quarry (the North Quarry) with perimeter screening and overburden mounds
 - a relatively shallow quarry (the West Quarry) from which overburden soil cover has been removed and
 - existing ancillary site infrastructure (offices, sheds, hardstand areas, wheelwash, weighbridges, settlement ponds etc.), much of which is shared with aggregate, concrete and asphalt production businesses co-located at the Huntstown Quarry Complex.

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Site Access

- 1.8 Traffic access to the application site is primarily obtained via the existing North Road (the former N2 National Primary Road). Traffic coming from Dublin City Centre or the M50 Motorway turns onto the N2 Dual Carriageway and travels a short distance north, before turning (west) off a dedicated slip road onto the R135 regional Road (known as the 'North Road') at Coldwinters. Thereafter traffic continues south for a short distance along the North Road before turning right (west) via a dedicated right-turn junction onto the access road leading into the Huntstown Quarry Complex.
- 1.9 As well as serving Roadstone's quarries and related businesses, the access road also serves the Huntstown Power generating plant operated by Viridian and the proposed anaerobic digestion plant which has yet to be built by Stream BioEnergy (approved under Permission Ref. FW13A/0089).
- 1.10 Traffic travelling south from Ashbourne exits the N2 Dual Carriageway at the Cherryhound Interchange near The Ward and continues south along the North Road, through Kilshane Cross, to the right-turn junction with the access road leading into the Huntstown Quarry Complex.

Surrounding Land Use

- 1.11 The application site is located entirely within the existing quarry complex at Huntstown. The land immediately beyond the south-eastern corner of the North Quarry is used for the processing of aggregates, manufacture of concrete, masonry and asphalt products and production of recycled aggregate (in the Central Quarry) while the lands to the immediate west, north and north-east of it are primarily in use as agricultural grassland.
- 1.12 At the West Quarry, the lands immediately to the north comprise the North Quarry and some lands in agricultural use while the lands to the east and south-east comprise a nature reserve area and the South Quarry, where rock continues to be extracted for aggregate and concrete production. The lands to the south and west comprise neighbouring light industry and science and technology parks (Ballycoolin Business Park, Rosemount Business Park, Millennium Business Park and Northwest Business Park).
- 1.13 At a greater distance, the Huntstown Power station (operated by Viridian), North Road and recently constructed N2 Dual Carriageway all lie to the east of the application site. The M50 motorway and the proposed alignment for the Metro West light rail line both lie to the south, while there is additional light industrial and commercial development on lands further to the south west. The lands to the north are still used predominantly as agricultural grassland. Existing land-use in the vicinity of the application site, including residential and industrial development, is shown on a land-use map in Figure NTS-2.

Planning and Licensing Status

- 1.14 In August 2014, Roadstone secured planning permission for continuation of quarrying at Huntstown until 2034 (Fingal County Council Ref. No FW12A-0022 and An Bord Pleanala Ref. No. 06F.241693). This grant of planning permission includes provision for backfilling and restoration of the existing North, West and South Quarries and the planned Central Quarry to above groundwater level and/or to original ground level. Details of the approved restoration plan are shown in Figure NTS-3.

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- 1.15 The backfilling of the quarries at Huntstown also facilitates the restoration of the quarried lands to agricultural use (at least initially) and improves the protection provided to the underlying groundwater resource, which is currently classified as 'extremely vulnerable' due to the absence of any protective soil cover.
- 1.16 The entire development at Huntstown was subject to Environmental Impact Assessment (EIA). For impact assessment purposes, a maximum projected waste intake rate of 750,000 tonnes per annum was assumed in the Environmental Impact Statement (EIS) which accompanied the planning application. As such, this is the de-facto upper limit on permitted waste intake for backfilling of quarries within the Huntstown complex.
- 1.17 In addition to obtaining planning permission for an increase in the maximum annual limit of soil waste intake, it will also be necessary to submit a separate waste licence review application to the EPA in order to obtain a similar increase in the maximum annual intake limit set by the current waste licence (Ref. W0277-01). The waste licence review application to the EPA will also make provision for
- extension of the existing licensed area to also provide for the backfilling of the West Quarry;
 - additional backfilling of an area in the south end of the North Quarry which has been quarried in recent years and is likely to be further quarried (in accordance with existing planning permission) in the near future (1-2 years); and
 - some minor modifications to the licensed area to take account of changes in land ownership and re-alignment of internal haul roads around the quarry complex in recent years.
- 1.18 Making provision in the waste licence review application for additional backfilling at the West Quarry and the area quarried / to be quarried at the southern end of the North Quarry, will increase the overall permitted capacity of the licensed waste recovery facility from 3,850,000m³ (7,300,000 million tonnes) to approximately 5,025,000m³ (9,550,000 tonnes).
- 1.19 The inert soil, stone and rock being recovered at the facility are sourced from construction and development sites where prior studies, field inspections and investigations and/or laboratory testing has indicated that there is no contamination present in any of the excess soils transferred off-site. All inert soil, stone and rock is brought to the facility by waste contractors holding valid waste collection permits and using authorised vehicles.

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2.0 PROPOSED DEVELOPMENT

- 2.1 The 2014 planning permission which provides for the backfilling of all existing and/or planned quarries at Huntstown (including the North Quarry and West Quarry) was granted on the basis of a maximum projected soil and stone waste intake rate of 750,000 tonnes per annum. The existing waste licence applies a restriction on soil and stone waste intake to the recovery facility, and also limits it to a maximum of 750,000 tonnes per (calendar) year.
- 2.2 In view of significant market demand, Roadstone proposes to increase the annual maximum intake at the recovery facility, from 750,000 tonnes per year currently to 1,500,000 tonnes per year.
- 2.3 The proposed development will essentially comprise an intensification of soil and stone waste recovery activities at the Huntstown facility, over and above that which has already been approved.
- 2.4 The very strong market demand for soil waste recovery generated by the lift in construction and development related activities around Dublin in early 2016 meant that the rate of soil waste intake and acceptance at the facility over the first three to four months of 2016 was broadly comparable to that for which planning permission is now being sought (approximately 6,250 HGV loads brought to site per month).
- 2.5 Roadstone identified at that time that the existing facility at Huntstown had the capacity to physically accommodate the increased rate of waste importation without any significant adverse operational or environmental impacts (other than some delay as HGVs queued along internal haul roads within its property to be weighed in at the weighbridge). The company does not therefore consider there to be any requirement for it to provide additional physical infrastructure at the recovery facility to accommodate the increased waste intake.
- 2.6 In order to assist in the identification and assessment of impacts associated with the proposed intensification of recovery activities at Huntstown, details of existing waste facility infrastructure, waste operations and procedures and arrangements for environmental controls and monitoring are provided in the main body of the Environmental Impact Statement.

Site Infrastructure

- 2.7 The existing site infrastructure at the existing recovery facility includes site offices, staff welfare facilities (canteen and changing areas, washing and sanitary facilities), site security, site roads (both paved and unpaved), traffic control signs, parking and hardstanding areas, wheelwash, weighbridge, fuel storage tanks, a waste inspection and quarantine shed, sewerage and surface water drainage infrastructure (including settlement ponds and hydrocarbon treatment infrastructure), plant maintenance sheds and all required site services and utilities. The existing site layout is indicated in Figure NTS-4.
- 2.8 Discharges from quarry dewatering and ongoing soil and stone waste recovery activities at the North Quarry are directed to the Ballystrahan Stream and Ward River catchment and are currently regulated by way of the EPA waste licence (Ref. W0277-01)
- 2.9 Roadstone also discharges process water from aggregate washing and concrete production activities at the central infrastructure area via a series of existing settlement ponds to the Ballystrahan Stream. These discharges are

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regulated by way of a separate discharge licence from Fingal County Council (Ref. No WPW/F/008-01) which was issued on the 24th November 2011.

Waste Operations and Procedures

- 2.10 Backfilling of the Huntstown North and West quarries using imported inert soil and stone waste extends from the quarry floor level up to their original (former) ground level.
- 2.11 On completion; the backfilled quarries will be initially returned to agricultural use, most likely as grassland, in keeping with some of the surrounding pastoral landscape. A plan of the approved restoration scheme is provided in Figures NTS-2. Cross-sections through the final landforms at each quarry are provided in Figures NTS-5 and NTS-6.
- 2.12 The estimated volume of inert soil and stone material to be placed at the North and West Quarries is approximately 5,025,000m³. Of this, a relatively small volume, estimated at no more than 50,000m³ will be sourced from on-site stockpiles, perimeter screening berms and general site levelling works required for the final restoration of the quarry. The remainder of the material will need to be imported.
- 2.13 The duration of backfilling activities at the North and West quarry voids will largely be dictated by the rate at which approximately 4,975,000m³ (9,450,000 tonnes) of externally sourced inert soil and stone is imported to the site.
- 2.14 Were the maximum intake to be accepted at the facility each year, the time required to backfill both the North and West quarries would be of the order of 6 years. If the average annual intake rate is lower, around the range of a more moderate 750,000 to 1,000,000 tonnes per annum, the time required to achieve this would be of the order of 9.5 to 12 years.
- 2.15 There are operating procedures in place at the existing recovery facility to ensure that all soil and stones forwarded for backfilling / recovery purposes are pre-sorted at source, are inert and free of construction or demolition waste or any non-hazardous / hazardous domestic, commercial or industrial wastes.
- 2.16 Site procedures have also been developed and implemented at the recovery facility in respect of waste acceptance (or rejection), waste inspection, waste handling and waste testing. These will continue in place and activities intensified as required to accommodate the increased waste intake.
- 2.17 There are also extensive environmental control procedures and environmental monitoring arrangements in place around the recovery facility and the wider quarry complex at Huntstown to ensure any noise, dust or water emissions are within permitted limits. Records of environmental monitoring and testing are maintained on-site and will be forwarded to the EPA / Fingal County Council as required.

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3.0 HUMAN BEINGS

- 3.1 Quarrying activities have been established across Roadstone's landholding at Huntstown for over 45 years. The nature of any impacts on human beings arising from the proposed intensification in waste recovery activities will be similar to those arising from the ongoing quarry and waste recovery operations.
- 3.2 Noise or dust emissions will have negligible or no impact on much of the local residential housing surrounding the application site. Existing perimeter screening berms and the separation distance between dust and noise sources and sensitive receptors both provide significant attenuation of any dust and noise emissions likely to be generated by the increase in waste recovery activity.
- 3.3 Notwithstanding this, established mitigation measures will continue to be implemented in order to minimise / ameliorate the effects of noise or dust emissions from the recovery facility. In this regard, it should be noted that the existing mitigation measures were demonstrated to be effective when there was a short-term increase in the intensity of waste recovery activities at the North Quarry in the early months of 2016.
- 3.4 An assessment of traffic impacts along the R135 Regional Road (North Road) and across the local road network arising from the increased intake of inert soil and stone via and the resultant increase in HGV traffic movements, indicates that there will be no significant adverse effect on traffic safety or on the capacity of existing roads and junctions in the local area.
- 3.5 Given established land uses and existing traffic levels along the R135 North Road and N2 Dual carriageway immediately to the east, it is considered that the increased traffic movements generated by the proposed development will not result in any significant adverse residual effects on the residential amenity of properties along the designated access and egress routes.
- 3.6 At the end of the quarry backfilling operations, there will be a long-term, permanent reduction in HGV traffic movements over the local road network leading to and from the Huntstown quarry complex, with consequent improvement of the human environment.
- 3.7 The proposed increase in the rate of backfilling would ensure that the duration of impacts on the human and natural environment would be less than that anticipated at the time planning permission and waste licence were issued in respect of backfilling / restoration / soil waste recovery activities at the existing facility.
- 3.8 It bring also bring forward the final restoration of the North and West quarries and make them available at an earlier date than might previously have been envisaged for productive agricultural use in the immediate short term (following restoration) and for potential re-development for zoned industrial and enterprise activity thereafter.

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4.0 FLORA AND FAUNA

- 4.1 There are no designated or proposed Special Areas of Conservation (SACs) or Special Protection Areas (SPAs) within or contiguous to the application site, existing waste recovery facility or Roadstone's wider landholding at Huntstown. No designated sites will be directly or indirectly impacted by the proposed increase in the rate of waste intake to the existing licensed inert soil recovery facility at Huntstown Quarry.
- 4.2 The proposed increase in the waste intake rate to the existing licensed inert soil recovery facility at the North Quarry is not likely to have any implications on protected or important species.
- 4.3 The backfilling of the West Quarry will result in the direct loss of habitats supporting protected species including: Irish hare and common frog evaluated as being of Local (higher) value; and smooth newt at County value.
- 4.4 However, through the implementation of appropriate mitigation measures (principally species relocation), it is considered that the proposed increase in the permitted waste intake rate is not likely to have a significant impact on the local population status of these species. It is envisaged that following relocation of smooth newts from the West Quarry to a suitable receptor site, ongoing population monitoring will be undertaken at the receptor site.
- 4.5 While the proposed increase in the permitted waste intake rate to the soil recovery facility will not result in any loss of important habitats, there will be a loss of a number of ponds formed in the base of the West Quarry that are of Local (higher) value following the stripping of topsoils and overburden. However, due to extant planning consent for quarrying and backfilling operations in the West Quarry, these habitat areas would otherwise be lost through continuation of quarrying at this location and/or permitted backfilling. The impact of this previously permitted development is considered significant at a Local (higher) level.

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5.0 SOILS AND GEOLOGY

- 5.1 Topsoil (the upper layer of soil capable of sustaining vegetation and crop growth) was previously stripped from the site in order to facilitate the development of the quarry and is currently stockpiled (with subsoil) in mounds across and around the application site.
- 5.2 Soils in the vicinity of the Huntstown quarry complex are generally well-drained calcareous soils (derived from limestone) which are suitable for a wide range of agricultural activity, generally grassland or tillage. There are also some poorly drained calcareous soils which have more restricted uses, principally as seasonal grassland.
- 5.3 The Huntstown Quarry complex straddles a number of geological formations. It is underlain by the limestones of the Malahide Formation in the southern part, with the Waulsortian Limestones of the Feltrim Limestone Formation and the calcareous mudstones and argillaceous limestones of the Tober Colleen Formation occurring to the northwest of it, around the centre of the quarry. There is a faulted contact running broadly west to east through the quarry complex, which means that the northern part of the complex is also underlain by the limestones of the Malahide Formation.
- 5.4 Consultations held previously with the Geological Survey of Ireland (GSI) to established that the geological contact between the Waulsortian Limestones of the Feltrim Limestone Formation and the Tober Colleen Formation exposed in the roadway leading into the Central Quarry at Huntstown has been designated as a Geological Heritage Site as part of Theme 8 of the Irish Geological Heritage (IGH) Programme (Lower Carboniferous).
- 5.5 In time, the existing exposure could be designated as a Natural Heritage Area (NHA) on geological and geomorphological grounds under the Wildlife (Amendment) Act of 2000. The proposed increase in waste intake to the existing recovery facility will however have no impact on the exposure.
- 5.6 Any increase in the rate of importation of soil and stones introduces a greater risk of potential soil contamination at the existing recovery facility, be it through the inadvertent importation of contaminated soil or accidental spills/ leaks of fuel or oil.
- 5.7 Assuming the continued implementation of best practice management procedures in operating the recovery facility, and the provision of the additional plant and human resources to achieve this, the potential risk of soil contamination from imported material is considered to be low.
- 5.8 Backfilling and restoration of the quarry voids will improve the visual appearance of the local landscape and facilitate re-establishment of the grassland habitat which originally existed at the site.

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6.0 WATER

- 6.1 The bedrock formations underlying the application site and the wider Huntstown Quarry complex are generally considered to be Locally Important (LI) karstified aquifers. Maps published by the EPA indicate that the site is located in an area with high to extreme groundwater vulnerability status. This reflects the potential for rapid groundwater movement through thin (or non-existent) soil cover into the underlying (poor) bedrock aquifer.
- 6.2 Previous sampling and testing of groundwater from monitoring wells across the Huntstown Quarry complex indicates that groundwater quality at the application site is generally good and that established operations have no significant impact on local groundwater quality.
- 6.3 Published mapping indicates that the Huntstown quarry complex straddles two river catchments, that of the Ward River to the north and the Tolka River to the south. In reality land drainage works and surface water managements systems at Huntstown will have slightly altered the boundary between the Ward and Tolka catchments and all lands within the application site lie within the Ward catchment, with off-site discharges from both the North Quarry and West Quarry being directed to the Ballystrahan Stream which flows north from the top of the catchment, from the north-east boundary of the Roadstone property holding.
- 6.4 The Ward River and its tributary the Ballystrahan stream are currently classified as being of 'Poor' status as a result of urban wastewater discharges siltation and siltation by agriculture. Off-site discharges from the established waste recovery activities at the North Quarry and from the wider quarry complex are currently regulated by way of an EPA waste licence (Ref. W0277-01) and a discharge licence from Fingal County Council (Ref. No WPW/F/008-01) respectively. Discharge compliance is generally good, although there are occasional exceedences of water quality emission thresholds.
- 6.5 Potential impacts of increasing the rate of backfilling and restoring the North Quarry and West Quarry using inert materials have been assessed and it is considered that in the absence of mitigation measures, the proposed development could have the potential to negatively impact groundwater and surface water quality, specifically by increasing the risk of
- contaminated soils being placed at the site
 - fuel or chemical spillages occurring or
 - discharges to the Ballystrahan Stream (or Ward River catchment) having high levels of suspended solids, organic contaminants or nutrients.
- 6.6 It is therefore proposed that, as part of the proposed development, a wide range of surface water management and best practice mitigation measures, together with a number of additional measures, will be implemented during the ongoing restoration, backfilling and recovery activities in order to protect groundwater quality. These measures include implementation of site management protocols in respect of plant refuelling and maintenance activities and detailed soil waste acceptance and handling procedures.
- 6.7 The proposed backfilling of the quarry void is unlikely to have any adverse long term impact on the local groundwater flow regime; it will not create any barrier to groundwater flow, nor will it reduce groundwater recharge nor lead to a reduction in groundwater levels at off-site supply wells.

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- 6.8 Established surface water and groundwater monitoring regimes will remain in place for the duration of the waste recovery activities at the existing facility and until such time as quarry backfilling and restoration works are ultimately complete.

7.0 AIR QUALITY

- 7.1 Given the inert nature of the materials being used to restore the application site and the absence of biodegradable (organic) wastes, no landfill gas emissions arise from the waste recovery operations at Huntstown Quarry.
- 7.2 The principal air quality impact associated with the planned intensification of inert waste recycling activities at the existing facility will be an increased risk of fugitive dust emissions. Additional emissions are likely to arise during dry periods from
- (i) increased trafficking by HGVs over unpaved soil surfaces;
 - (ii) increased end-tipping of inert soil and stone; and
 - (iii) increased handling / compaction of inert soil.
- 7.3 In order to control potential dust rise and dust emissions, there will be continued implementation (and intensification) of existing mitigation measures being implemented at the facility principally
- (i) spraying of water from a tractor drawn bowser on unpaved haul roads and/or exposed soil surfaces, particularly during windy periods and/or dry spells;
 - (ii) placing and compacting soils immediately after being unloaded and minimising the amount of soil being stockpiled (if temporary stockpiling is required, they should be formed against quarry faces, as far as possible from nearby residences);
 - (iii) routing all HGVs leaving site through the wheelwash facility in order to remove and/or dampen any dust / mud material attaching to the undercarriage and to prevent transport of fine particulates off-site, onto the local public road network;
 - (iv) construction of internal haul roads across backfilled ground using minor quantities of imported aggregate and
 - (v) planting the upper restored surface with grass as soon as possible after placing cover soil in order to minimise soil erosion and dust emissions.
- 7.4 The amount of dust or fines carried onto the public road network will be further reduced by periodic sweeping of paved internal roads and the existing local road in front of the application site.
- 7.5 A detailed air quality assessment undertaken in respect of the proposed development concluded that, with the range of design measures incorporated into the working scheme and assuming continued implementation of mitigation measures, it will not have a dust deposition impact on assessed sensitive receptors located around the Huntstown quarry complex.
- 7.6 Notwithstanding this, dust emissions levels will continue to be monitored at the waste recovery facility and across the wider Huntstown quarry complex. Dust emissions are ultimately to be controlled by way of existing / future planning permissions and by the current EPA waste licence.

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8.0 NOISE

- 8.1 Noise monitoring in and around the application site and Huntstown Quarry complex indicates that noise levels are elevated and that average ambient noise levels in the local area typically range between 60dBA L_{Aeq} and 75dBA L_{Aeq} , depending on location and proximity to the N2 Dual Carriageway or M50 motorway or the frequency of overhead aircraft movements along the flight path leading in and out of Dublin Airport. These noise levels are consistent with daytime levels in busy urban areas close to heavily trafficked roads.
- 8.2 Noise prediction assessments indicate that there will be minimal, if any, increase in noise levels arising at nearby residences under a worst case scenario when 2 no. additional bulldozers and additional HGV trucks are generating noise 100% of the time at the boundary of the application site facility (rather than intermittently and some distance inside it, as will most likely be the case in reality).
- 8.3 The resultant predicted (maximum) future noise levels at nearby sensitive receptors are comparable to, and only slightly elevated above, existing ambient levels, making it highly unlikely that any adverse noise impacts will be noticed or experienced by nearby residents. It is therefore considered that mitigation measures to reduce the noise impacts of plant associated with the planned recovery facility are not strictly necessary.
- 8.4 Notwithstanding this, a number of measures will continue to be implemented at the proposed recovery facility to further mitigate any potential noise impacts. These include retention of existing perimeter screening berms, maintenance of plant, fitting of plant silencers, maintenance of road surfaces, control of traffic speed and unloading activities within the facility.

9.0 LANDSCAPE AND VISUAL IMPACT

- 9.1 The existing inert waste recovery facility at Huntstown Quarry is located on the urban fringe of a large city. The current Fingal County Development Plan (CDP) designates all of the North Quarry and part of the West Quarry as part of a rural zoned area, with the western side of the West quarry designated as suitable for 'heavy industry'. The proposed development is considered to be in compliance with the stated zoning objectives for such land-use designations.
- 9.2 The entire application site is also designated as a Nature Development Area, i.e. an area with potential for biodiversity enhancement in the CDP. However, notwithstanding this, the principle of backfilling the Huntstown quarries was previously approved under planning permission Ref. FW12-0022 (and An Bord Pleanála (ABP) Ref. 241693).
- 9.3 No views requiring protection are identified in the vicinity of Huntstown Quarry on the Green Infrastructure Map published in the current (and draft replacement) CDP.
- 9.4 An assessment of landscape impact determined that the sensitivity of the low-lying landscape character surrounding the quarry complex at Huntstown is low and that the proposed increase in permitted waste intake will not increase the magnitude of those landscape effects that are already established and/or permitted. It was therefore concluded that there will be no additional landscape impact over and above what is already extant arising as a result of the proposed development.

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- 9.5 An assessment of the sensitivity of identified visual receptors surrounding the application site and the wider quarry complex, combined with the likely magnitude of any visual impacts arising from the intensification of activities at the existing recovery facility, concluded that, while activities may be potentially visible, impacts would be limited and would not be regarded as significant.
- 9.6 The proposed retention of all boundary hedgerows and of the existing wildlife areas, as well as the ultimate restoration of the application site to agricultural use and replanting of boundary hedgerows which were previously removed will ensure that the biodiversity currently present on site will be maintained and enhanced in the long term. This is in compliance with the provisions made under the current Fingal County Development Plan for Nature Development Areas.

10.0 CULTURAL HERITAGE

- 10.1 A cultural heritage study in respect of the waste recovery facility at Huntstown Quarry comprising a paper study and fieldwork was carried out in June 2016. A wide variety of paper, cartographic, photographic and archival sources was consulted. All the lands impacted by the proposed development were visually inspected.
- 10.2 The current Fingal County Development Plan shows a protected structure, a holy well, within Roadstone's landholding and the application site (Ref. No 663). This protected structure is also a national monument. In reality, this is a natural spring, located immediately inside the application site. As this area has previously been disturbed by quarry activity, backfilled and restored in recent years, the future importation, haulage and placement of soil at the North Quarry will have little or no direct impact on this location.
- 10.3 Records held by the National Monuments Service of the Department of Environment, Heritage and Local Government indicate that there are a number of national monuments within and in the immediate vicinity of Roadstone's landholding. At the northern end of the application site, the ruins of Kilshane Church, a graveyard and holy well (Ref. DU014-012) are identified as part of an extended archaeological site. These features are also included in the list of protected structures in the Fingal County Development Plan. There are no visible remains of these monuments remaining in situ. The proposed development will have no impact on these ruins.
- 10.4 The cultural heritage study concluded that the continued operation of the waste recovery facility and the increase in the rate of waste intake thereto, will have no direct impact on any other known archaeological, architectural or cultural heritage feature or item.

11.0 MATERIAL ASSETS

- 11.1 The application site at Huntstown Quarry is well located in terms of access to the strategic national and regional road networks, principally the N2 Dual Carriageway between Dublin and Ashbourne, the M50 Motorway and the R135 Regional Road, the former N2 National Primary Road).
- 11.2 There are also several nationally important utilities in the vicinity of the quarry complex, including 100kV and 220kV power lines to the north and south-west running to the electricity sub-station at the N2/M50 interchange, a gas fired electricity generation plant and a gas pipeline.

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- 11.3 The area surrounding Roadstone's landholding comprises a mix of rural agricultural lands to the north and east and large-scale industrial development in the form of several business / technology and industrial parks to the west and south-west. A limited amount of low density residential housing is also present along the local road network.
- 11.4 The proposed increase in the rate of waste intake and infilling at the North Quarry and/or West Quarry will not result in any significant adverse short-term or long-term impact on any existing infrastructure or utilities in the surrounding area.
- 11.5 The increased rate of backfilling could have potential effects on surrounding land uses and on residential amenity by way of increased traffic, noise and dust deposition. An assessment of the potential impact however concluded that with the implementation of defined mitigation measures, these impacts will be minor and not significant. It is therefore considered that the activity will not have any significant effects on surrounding land use over the short-term.
- 11.6 In the medium to long-term, the recovery activities and the backfilling and restoration operations will ultimately cease at Huntstown and the application site will be restored. Notwithstanding the assessment that effects on assets will not be significant, any residual effects that may arise will also ultimately cease.

12.0 TRAFFIC

- 12.1 The proposed development provides for an increase in the current rate of waste intake at its licensed inert soil recovery facility at Huntstown Quarry, from a maximum of 750,000 tonnes per annum at present, to a maximum of 1,500,000 tonnes per annum. At the maximum project intake rate, the recovery facility would have a projected remaining life span of 6 years.
- 12.2 The existing recovery facility at Huntstown is well located in terms of access to the strategic highway network and all HGV traffic can be routed on roads considered suitable to accommodate frequent HGV movement.
- 12.3 Junction capacity assessment was carried out to determine the impact the additional development trips would have on the existing junctions within the vicinity of the proposed development. The analysis showed that the existing R135 / Elm Road signalised junction and the R135 / N2 Slip Road roundabout junction will operate when the development is operational in 2017 and 2023.
- 12.4 The R135 / N2 Slip Road priority junction and the R135 / L3125 signalised junction (at Kilshane Cross) are currently operating at capacity. With the planned development operational in 2017 and 2023, both junctions will continue to operate at capacity, with queues and delays during the AM and PM peak hours. It should be noted the development flows will have an insignificant impact on the operational performance of both junctions, as the junctions are operating at capacity even without this development in place in 2017 and 2023 during the AM and PM peak hours.
- 12.5 With the future opening of the Western Link Road (part of the Dublin Airport Local Area Plan), traffic flows travelling through the R135 / L3125 signalised junction to and from Dublin Airport will re-distribute onto the Western Link Road. As a result the R135 / L3125 signalised junction at Kilshane Cross will operate within capacity in 2017 and 2023 during the AM and PM peak hours with the proposed development in place.

NON TECHNICAL SUMMARY

- 12.6 A road capacity assessment of the R135 (North Road) was carried out to determine the impact the additional development flows would have on the R135 Regional Road. Guidance published by Transport Infrastructure Ireland (TII) indicates that the R135 Regional Road would be classified as a Type 2 Single Carriageway with a capacity of 8,600 AADT (for a level of service D).
- 12.7 The assessment showed that in 2016 the R135 operates within capacity (for a level of service D), with an existing Annual Average Daily Traffic (AADT) level of 7,742 vehicles.
- 12.8 In 2017 and 2023 with the additional development trips and an increase in the background flows, the R135 will have a proposed AADT of 7,932 in 2017 and a proposed AADT of 8,451 in 2023, which is below the recommended AADT capacity for a Level of Service D for a Type 2 Single Carriageway.
- 12.9 The section of the R135 (North Road) between the quarry entrance and Kilshane Cross has recently been upgraded and resurfaced on foot of Condition No. 21 of the 2014 planning permission for continuation of quarrying related activity at the Huntstown Quarry complex (Ref. FW12A/0022).
- 12.10 A review of accident records on the surrounding highway network covering the period from 2006 to 2013 showed that no fatal or serious incidents were recorded at the North Road access to the Huntstown Quarry Complex. The one fatal incident and one serious incident recorded both occurred at Kilshane Cross. Three minor incidents occurred in close proximity to the North Road quarry access. However it appears these took place prior to the N2 road realignment and upgrading. None are therefore specifically relevant to the development proposal, both in terms of location and incident detail. As such, it is considered that the proposed development would not have a significant impact on road safety.
- 12.11 Overall it is considered that the development proposal would have a minimal impact in terms of highways and transportation. For the above reasons the proposed development of the site accords with the national, regional and county planning policies and is considered to be acceptable in traffic and transport terms.

FIGURES

Figure NTS-1
Site Location Map

Figure NTS-2
Surrounding Land Use

Figure NTS-3
Restoration Plan

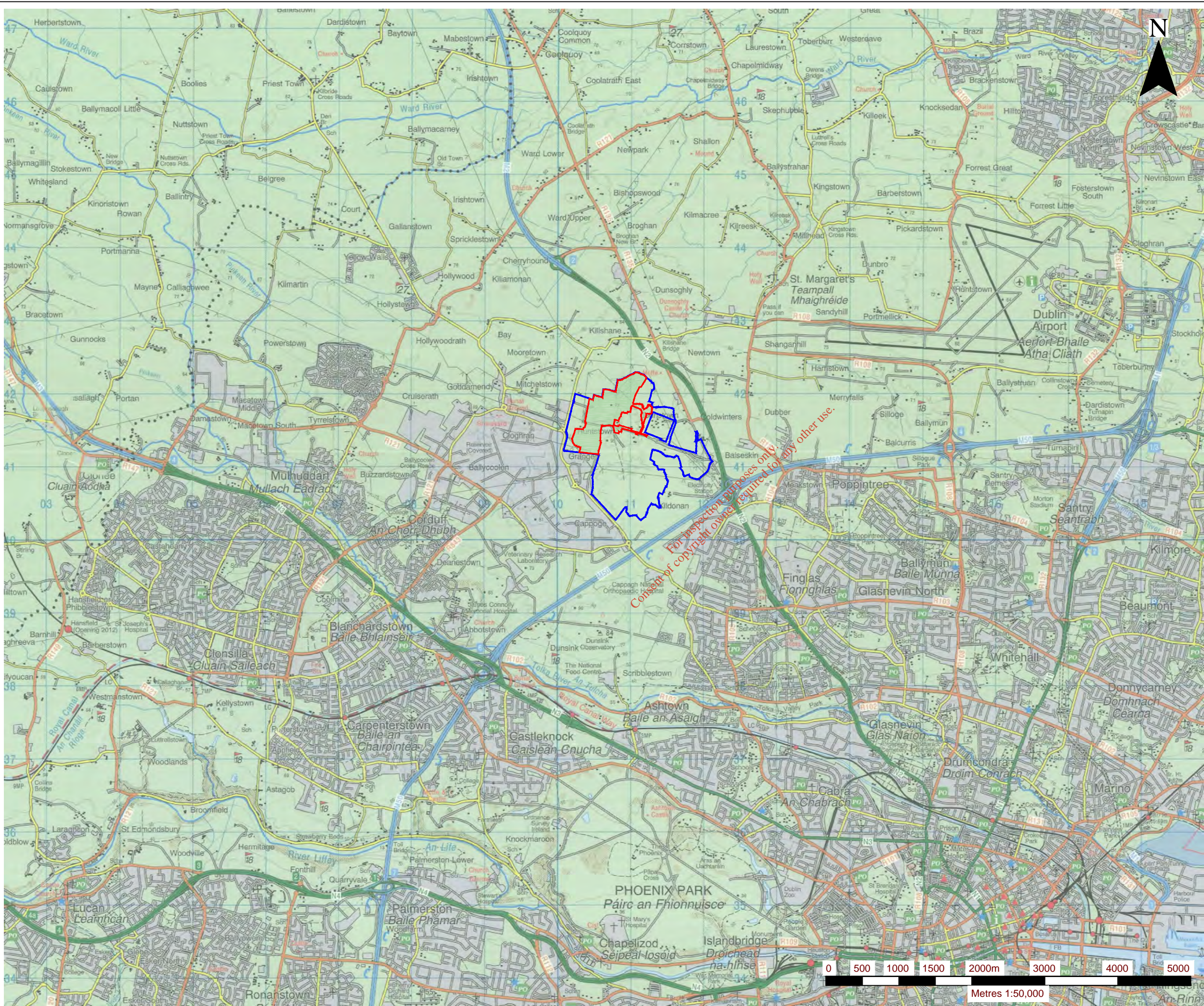
Figure NTS-4
Existing Waste Recovery Facility Layout

Figure NTS-5
North Quarry Restoration Cross-Sections

Figure NTS 6
West Quarry Restoration Cross-Sections

Figure NTS-7
Environmental Monitoring Locations

0180.00152.0.FIG_NTS-1.Site Location Map.dwg



NOTES

1. EXTRACT FROM 1:50,000 O.S DISCOVERY MAP NO. 50
2. ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000716 (C)
ORDNANCE SURVEY & GOVERNMENT OF IRELAND

LEGEND

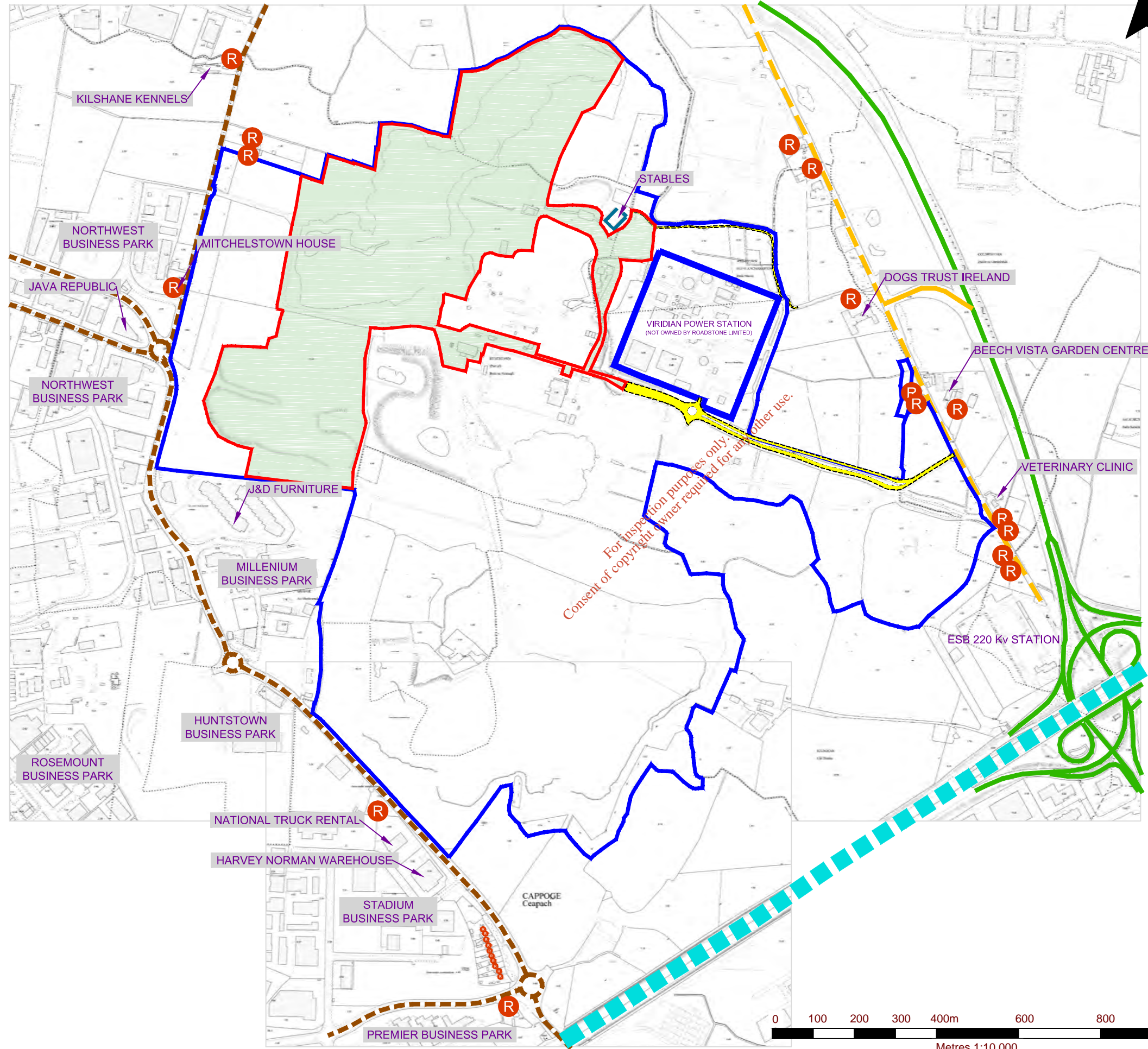
- ROADSTONE LIMITED LAND INTEREST (c. 200.3 ha)
- APPLICATION AREA (c. 48.65 ha)

SLR SLR CONSULTING IRELAND
7 DUNDRUM BUSINESS PARK
WINDY ARBOUR
DUBLIN 14
T: +353-1-2964667
F: +353-1-2964676
www.slrconsulting.com

ROADSTONE LIMITED
ENVIRONMENTAL IMPACT STATEMENT
HUNTSTOWN WASTE RECOVERY FACILITY
NORTH ROAD, FINLAGAN, DUBLIN 11
SITE LOCATION MAP

FIGURE NTS 1

Scale: 1:50,000 @ A3 Date: AUGUST 2016



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. ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000716 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND

LEGEND

	ROADSTONE LIMITED LAND INTEREST (c. 200.3 ha)
	APPLICATION AREA (c. 48.65 ha)
	N2 DUAL CARRIAGEWAY
	NORTH ROAD (R135)
	LOCAL ROAD
	M50 MOTORWAY
	RIGHT OF WAY
	LOCATION OF NEAREST RESIDENCES

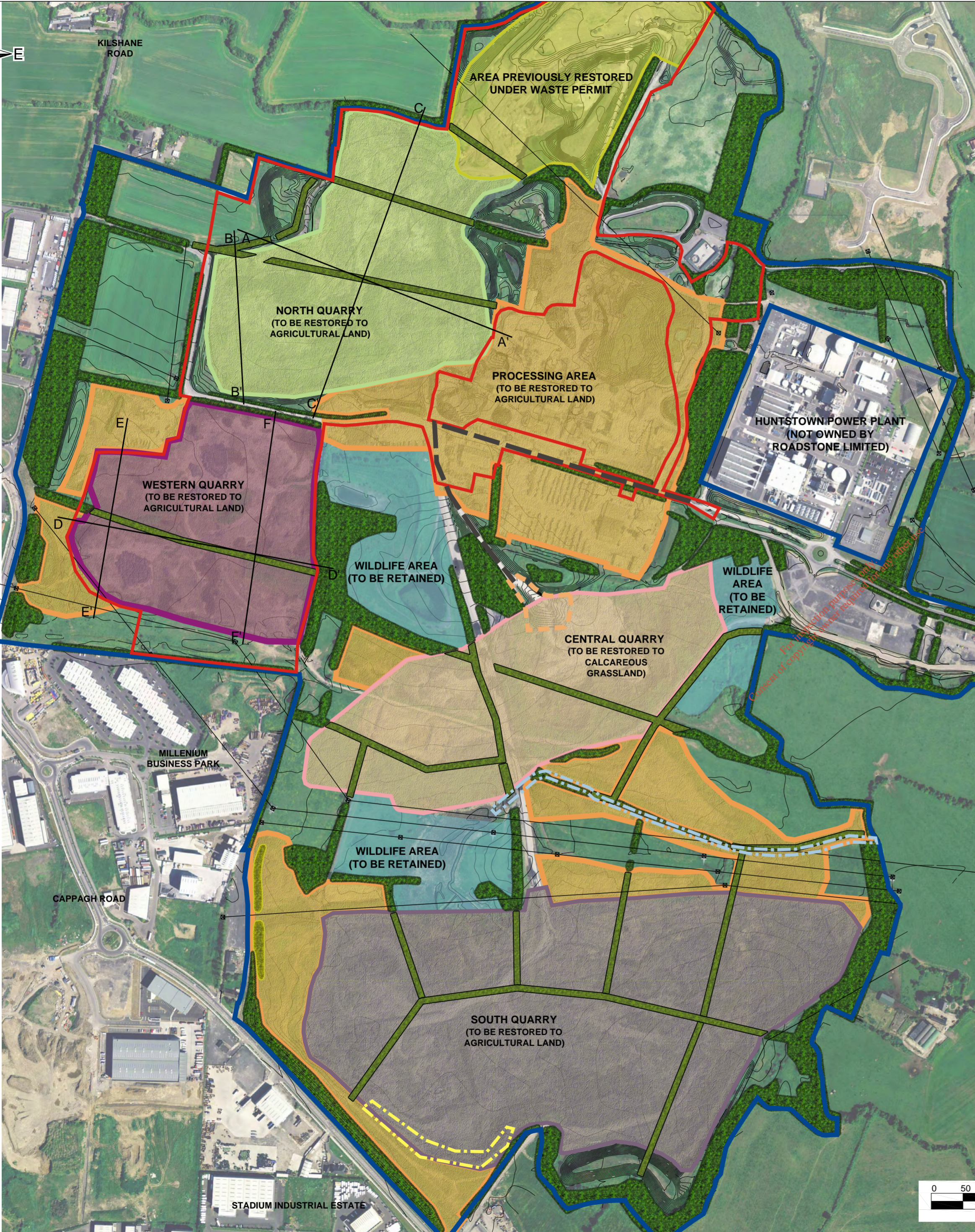
SLR CONSULTING IRELAND
 7 DUNDRUM BUSINESS PARK
 WINDY ARBOUR
 DUBLIN 14
 T: +353-1-2964667
 F: +353-1-2964676
 www.slrconsulting.com

ROADSTONE LIMITED
 ENVIRONMENTAL IMPACT STATEMENT
HUNTSTOWN WASTE RECOVERY FACILITY
 NORTH ROAD, FINGLAS, DUBLIN 11
SURROUNDING LAND USE

FIGURE NTS-2

Scale 1:10,000 @ A3 Date AUGUST 2016

0180.00152.0.FIG_NTS-2.Surrounding Land Use.dwg



LANDSCAPE AND RESTORATION SCHEME

On completion of the extraction works, it is proposed to fill the quarry voids using imported inert soils and overburden and topsoil stored on site. The western quarry will be restored without further quarrying, as the stone material was found to be of inferior quality. The quarry areas will then be returned to agricultural after-use, with the exception of the Central Quarry which will be restored to calcareous grassland, to increase the biodiversity of the site and connect the existing wildlife areas. The final restored levels will be similar to the previous levels, prior to any extraction works taking place. Restoration will take place in a phased manner, as extraction operations cease in a given area and are subject to waste licenses being granted. In order to divide the large sites into smaller compartments, it is proposed to carry out native hedge planting in the location of former boundary lines, as indicated on the plan.

Please note that Roadstone Ltd are committed to pump all of the worked out quarry voids until such time that waste licenses are granted and the voids are filled to above the ground water level, in order to avoid large water bodies forming.

CULTIVATION, GRASS SEEDING AND ESTABLISHMENT (AGRICULTURAL GRASSLAND)

Following cessation of landform construction, topsoil and soil forming materials, from storage mounds on site, are to be spread over the areas to be restored to grassland to a depth of 20mm. All soil handling to be carried out in accordance with current best practice guidance.

Final cultivations will include raking the seeding area with a chain harrow or drag mat to form a true, even surface, suitable for subsequent maintenance by mechanical blade trimming and extending the cultivation into any adjacent existing areas to ensure full marrying in of levels and to achieve a fine tilth.

For all areas, an agricultural seed mix suitable for the intended land use will be evenly sown, in calm weather, at an appropriate time of year (for example September) at the rate recommended by the manufacturer. The seed to be used is to be fresh and for use in the season of seeding. A certificate is to be provided in respect of each consignment of seed mix giving the supplier's name, the proportions of constituents of the mixture and a signature of the representative of the supplier.

The contractor shall mix the seed well with bulking agent, e.g. dry sand, in order to assist an even distribution. The seed will be mixed well before application and frequently during application. The seed will be divided into two equal sowings in two transverse directions at the specified rates. After seeding, the soil will be lightly harrowed or surface raked and rolled lightly, for example with a Cambridge roller, to ensure a good contact between soil and seed.

When the grass is between 40mm and 75mm high, the contractor will remove debris and all stones and clay balls larger than 40mm in any dimensions and roll the area with a light roller. The area will be cut to approximately 35mm high. Spot treatment using a selective herbicide shall be applied to pernicious agricultural weeds, such as thistle, docks and ragwort.

CALCAREOUS GRASSLAND

As far as practically possible, the in-filled Central Quarry will be restored to fields supporting calcareous grassland. As the landform construction is nearing completion, guidance will be sought from an experienced ecological consultant. It is envisaged that it should be possible to collect seed and/or take hay cuts for seeding from the existing fields along the eastern boundary of the Central Quarry. In any case no fertiliser will be applied to this area, to ensure the best chance of developing a species rich sward.

PROPOSED NATIVE WOODLAND SCREEN AND HEDGE PLANTING

Approximately 3,000 sq.m. of woodland screen planting is to be carried out and it to be planted at 1.5m centres, in same species groups of 20-30. Groups are to be randomly spread throughout the planting blocks.

Approximately 4,800 lin.m. of hedge will be planted in total. Hedges are to be planted in two staggered rows, with plants within each row 50cm apart (i.e. 4 plants per m) and rows 50cm apart. Feathered trees to be planted at distances of 8-16m and staked. Transplants to be planted randomly in same species groups of 10-20.

Trees shall conform to BS3936 for nursery stock and shall be supplied true to size and species name, as per the tables below. All proposed plant species are native and will be sourced locally. The percentage of berry producing trees is low, in order not to attract a large amount of birds, which could result in a hazard for Dublin Airport. Planting is to take place between the months of November and March.

All plant handling, planting works and aftercare will be carried out in accordance with the CPSE Recommendations for Plant Handling. Establishment maintenance to be carried out for 24 months following the completion of each planting phase.

Native Woodland Screen Planting Mix

No.	Plant Name	Common Name	Height (cm)	Age/Pot Size	%
<i>Transplants</i>					
390	Alnus glutinosa	Common Alder	60-90	1+1	30
260	Corylus avellana	Hazel	60-90	1+0	20
390	Euonymus europaeus	Spindle Tree	60-90	1+1	30
130	Quercus robur	Pedunculate Oak	60-90	1+1	10
130	Salix caprea	Goat Willow	60-120	0+1	10

Native Hedge Planting Mix

No.	Plant Name	Common Name	Height (cm)	Age/Pot Size	%
<i>Feathered Trees</i>					
190	Alnus glutinosa	Common Alder	150-175	2xTR	1
190	Quercus robur	Pedunculate Oak	150-175	2xTR	1
<i>Transplants</i>					
3450	Alnus glutinosa	Common Alder	60-90	1+1	18
4800	Corylus avellana	Hazel	60-90	1+0	25
2880	Crataegus monogyna	Hawthorn	60-90	1+1	15
4800	Euonymus europaeus	Spindle Tree	60-90	1+1	25
1920	Prunus spinosa	Blackthorn	60-90	1+0	10
960	Sorbus aucuparia	Rowan	60-90	1+1	5

NOTES

1. TOPOGRAPHIC SURVEY PREPARED BY FUGRO BKS BASED ON MAY 2009 AERIAL PHOTOGRAPHY
2. ALSO REFER TO FIGURES NTS-5 & NTS-6: RESTORATION SECTIONS (NORTHERN AND WESTERN QUARRY)

LEGEND

- ROADSTONE LIMITED LAND INTEREST (c. 200.3 ha)
- APPLICATION AREA (c.48.65 ha)
- EXISTING FEATURES TO BE RETAINED**
- HEDGEROWS AND SCREEN PLANTING BELTS
- WILDLIFE AREAS
- AREA PREVIOUSLY RESTORED UNDER EXISTING WASTE LICENCE PERMIT
- STREAM CORRIDOR FROM WILDLIFE AREA TO EASTERN BOUNDARY OF SITE
- ELECTRICITY LINES CROSSING OVER THE APPLICATION SITE
- PROPOSED LANDSCAPE FEATURES**
- PROPOSED WOODLAND SCREEN PLANTING ALONG PARTS OF WESTERN BOUNDARY
- PROPOSED RESTORATION FEATURES**
- PROPOSED RESTORATION CONTOURS
- QUARRY AREA TO BE INFILLED AND RESTORED TO AGRICULTURAL LAND UNDER EXISTING WASTE LICENCE (REF: W0277-01); INCREASED FILL RATE SUBJECT TO THIS APPLICATION
- PREVIOUSLY STRIPPED WESTERN QUARRY AREA TO BE INFILLED AND RESTORED TO AGRICULTURAL LAND, SUBJECT TO THIS APPLICATION
- QUARRY AREAS TO BE INFILLED AND RESTORED TO AGRICULTURAL LAND SUBJECT TO FUTURE WASTE LICENCE APPLICATIONS
- PROCESSING AREA, DISTURBED GROUND & OVERBURDEN AREAS TO BE LEVELLED AND RESTORED TO AGRICULTURAL LAND
- QUARRY AREA TO BE INFILLED AND RESTORED TO CALCAREOUS GRASSLAND SUBJECT TO FUTURE WASTE LICENCE APPLICATIONS
- PROPOSED HEDGEROWS IN THE APPROXIMATE LOCATIONS OF FORMER BOUNDARY LINES
- RETAINED QUARRY FACE FOR EXISTING PERIGRINE FALCONS ON SITE
- RETAINED QUARRY FACE FOR FUTURE ACCESS TO VIEW TOBER COLLEEN FORMATION OVERLAYING WAULSORTIAN LIMESTONE
- RETAINED INTERNAL ACCESS ROAD TO VIEW QUARRY FACE

SLR CONSULTING IRELAND
7 DUNDUM BUSINESS PARK
WINDY ARBOUR
DUBLIN 14
T: +353-1-2964667
F: +353-1-2964676
www.slrconsulting.com

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HUNTSTOWN WASTE RECOVERY FACILITY
NORTH ROAD, FINGLAS, DUBLIN 11

RESTORATION PLAN
HUNTSTOWN QUARRY COMPLEX

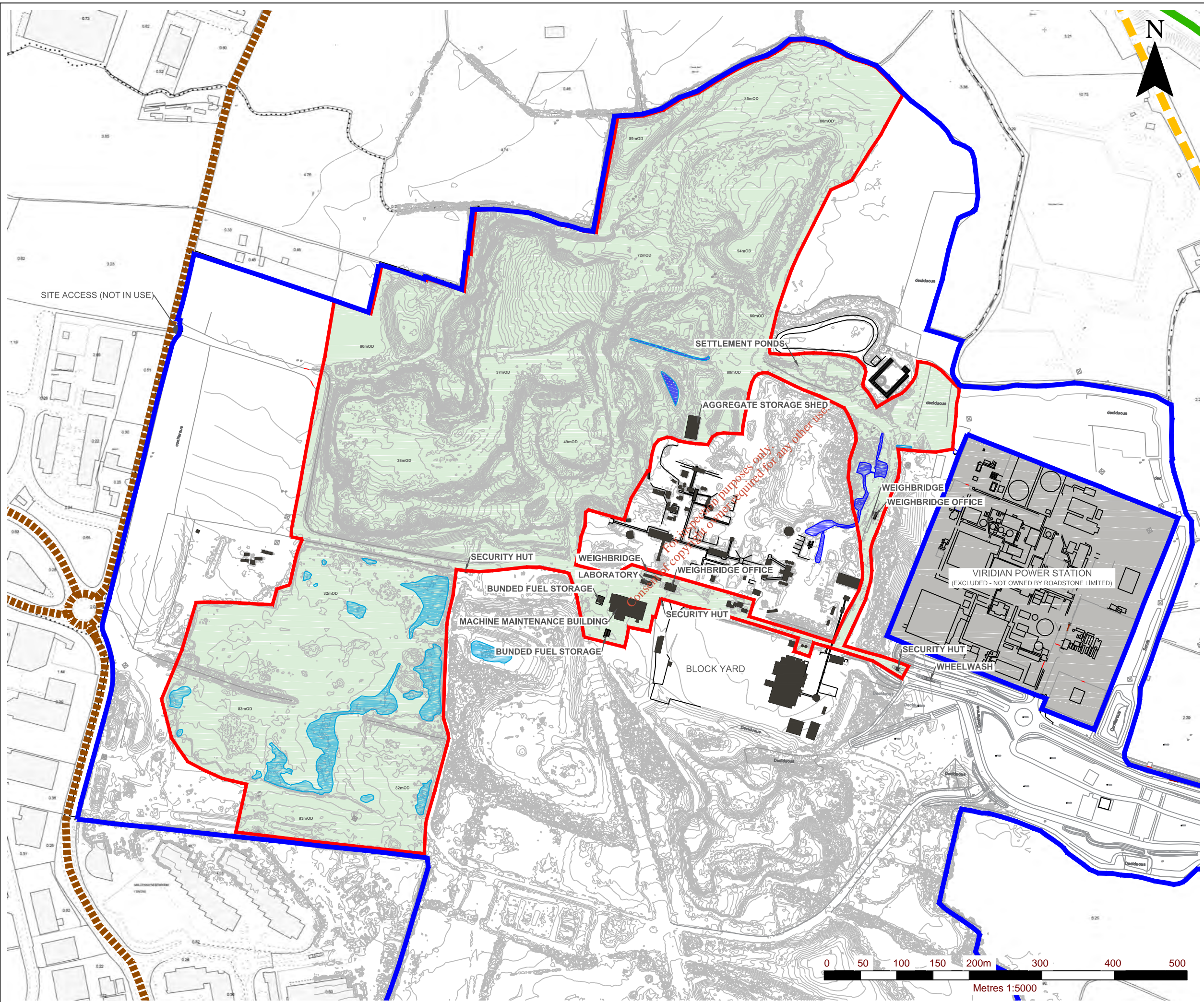
FIGURE NTS-3

Scale 1:5,000 @ A2 Date AUGUST 2016



0180.00152.0.FIG_2-2_Restoration Plan - Huntstown Quarry Complex.dwg

0180.00152.0.FIG_NTS-4_Existing Site Layout Map.dwg



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. ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000716 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND

LEGEND

	ROADSTONE LIMITED LAND INTEREST (c. 200.3 ha)
	APPLICATION AREA (c. 48.65 ha)
	N2 DUAL CARRIAGEWAY
	NORTH ROAD (R135)
	LOCAL ROAD
	SEMI-PERMANENT / EPHEMERAL PONDS IN WEST QUARRY (JUNE 2016)

SLR global environmental solutions

SLR CONSULTING IRELAND
7 DUNDUM BUSINESS PARK
WINDY ARBOUR
DUBLIN 14
T: +353-1-2964667
F: +353-1-2964676
www.slrconsulting.com

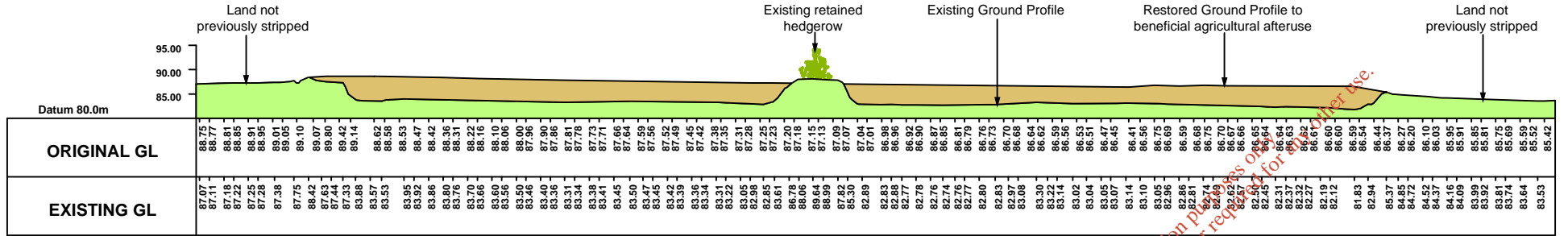
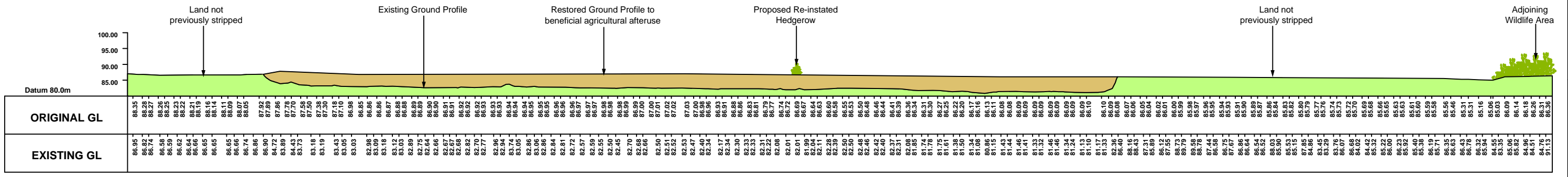
ROADSTONE LIMITED
ENVIRONMENTAL IMPACT STATEMENT
HUNTSTOWN WASTE RECOVERY FACILITY
NORTH ROAD, FINGLAS, DUBLIN 11
EXISTING WASTE RECOVERY FACILITY LAYOUT

FIGURE NTS 4

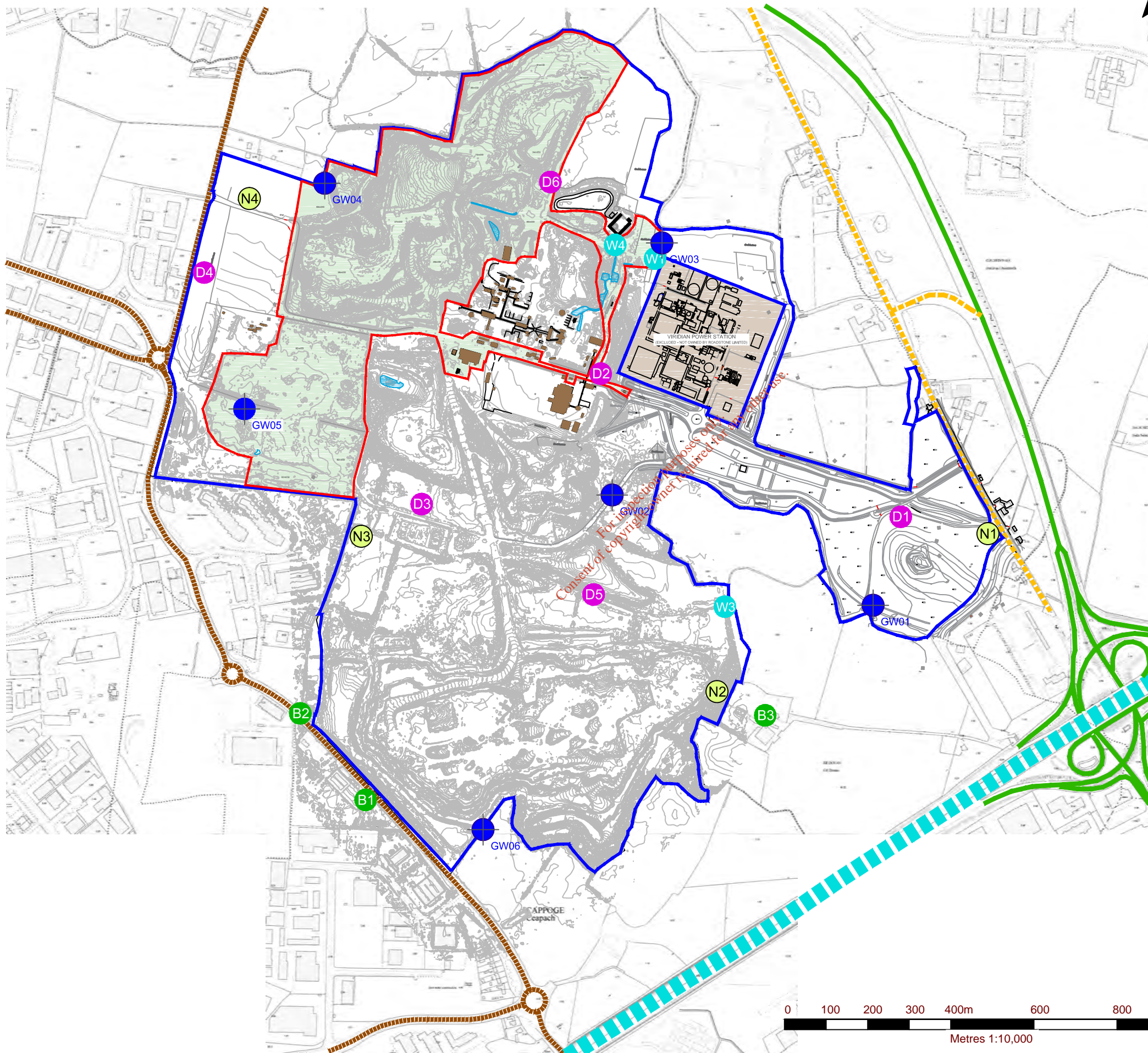
Scale 1:5,000 @ A3 Date AUGUST 2016



NOTES
1. REFER TO **FIGURE NTS-3** FOR LOCATIONS OF CROSS SECTIONS



0180.00152.0.FIG_NTS-7.Environmental Monitoring Locations.dwg



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. ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000716 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND

LEGEND

	ROADSTONE LIMITED LAND INTEREST (c. 200.3 ha)
	APPLICATION AREA (c. 48.65 ha)
	N2 DUAL CARRIAGEWAY
	NORTH ROAD (R135)
	LOCAL ROAD
	M50 MOTORWAY
	NOISE MONITORING LOCATION
	DUST MONITORING LOCATION
	GROUNDWATER MONITORING WELL LOCATION
	SURFACE WATER MONITORING LOCATION
	BLAST MONITORING LOCATION

SLR global environmental solutions
 SLR CONSULTING IRELAND
 7 DUNDUM BUSINESS PARK
 WINDY ARBOUR
 DUBLIN 14
 T: +353-1-2964667
 F: +353-1-2964676
 www.slrconsulting.com

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HUNTSTOWN WASTE RECOVERY FACILITY
 NORTH ROAD, FINGLAS, DUBLIN 11
 ENVIRONMENTAL MONITORING LOCATIONS

FIGURE NTS 7
 Scale 1:10,000 @ A3
 Date AUGUST 2016