

DESCRIPTION OF WASTE RECOVERY FACILITY 2

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EXISTING DEVELOPMENT

- 2.1 Planning permission was obtained in August 2014 (Fingal County Council Ref. No FW12A/0022, An Bord Pleanála Ref. No. 06F.241693) for the continuation of quarrying operations within the Roadstone landholding at Huntstown in North County Dublin. The planning permission also approved restoration of the quarry voids at the North, West and South Quarries by backfilling using imported inert naturally occurring materials, principally excess soil, stones and/or broken rock from construction and development sites. Permission was also granted for the restoration and backfilling of the planned future Central Quarry.
- 2.2 As backfilling and restoration of quarry voids with imported soil and stone is designated a waste recovery activity, the activity also requires a waste licence from the Environmental Protection Agency (EPA). A waste licence in respect of the existing waste recovery facility at Huntstown (Ref. No. W0277-01) was issued in February 2015 and recovery activity commenced in October 2015.
- 2.3 In addition to providing for the recovery of soil and stone through backfilling on land at the North Quarry, the waste licence also provides for:
- use of dedicated waste infrastructure and/or shared use of existing infrastructure with the established aggregate, concrete and asphalt production businesses which are co-located at the quarry;
 - restoration of the backfilled voids (including placement of cover soils and seeding) and its return to agricultural grassland; and
 - ongoing environmental monitoring of noise, dust, surface water and groundwater for the duration of the soil recovery / quarry backfilling works and for a short period thereafter.
- 2.4 Planning permission was granted in November 2016 for an increase in the rate of soil and stone importation from 750,000 tonnes per annum to 1,500,000 tonnes per annum (Fingal County Council Ref. No FW16A/0120). A waste licence review application to the EPA to provide for a similar increase in waste intake and an extension of the licensed area to include the West Quarry was submitted in November 2016 and is currently under consideration.
- 2.5 Immediately to the south and east of the soil recovery facility at Huntstown, there is an existing construction and demolition (C&D) waste recovery facility, located at the Central Quarry. It was established in 2004 on foot of planning permission Ref. F02A/0602. The principal construction and demolition wastes recovered at the facility comprise inert concrete (ready-mixed, blocks, slabs, reinforced), bricks and bituminous mixtures (principally hardened returns).
- 2.6 Up until recently, C&D waste recovery activity at the Central Quarry was regulated by way of a waste facility permit issued by Fingal County Council in accordance with the Waste Management (Facility Permit and Registration) Regulations of 2007 (Ref. No. FG-WFP-09-0006-01). The existing planning permission and the waste facility permit provided, in effect, for recycling of a maximum of 24,950 tonnes of C&D waste per annum.
- 2.7 The establishment of a licenced waste facility at the adjoining North Quarry in 2015 however meant that any future C&D waste recovery activity on Roadstone's property at Huntstown has to be regulated by way of an amended EPA waste licence rather than by a local authority waste facility permit.

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- 2.8 At the present time, there are extensive stockpiles of C&D waste awaiting processing and some recycled (processed) aggregate within the void at the Central Quarry, partly as a result of relatively low demand for recycled aggregate during the construction downturn after 2008 and more recently because of legislative restrictions on operating the permitted facility and the absence of any nationally recognised End of Waste criteria for recycled aggregates produced from C&D materials (in the absence of which, Fingal County Council has requested that Roadstone suspend waste recovery activity at the facility).
- 2.9 It is estimated that there is approximately 55,000m³ (110,000 tonnes) of unprocessed C&D waste held at the existing recovery facility. The current limit on the amount of C&D waste which may be recovered annually is considered to be overly restrictive, given the volume of C&D waste currently stockpiled and the recent uplift in the volume of construction and demolition related activity in the Greater Dublin Area.
- 2.10 Separately, as resource constraints elsewhere around the Huntstown Quarry Complex have brought forward planned future extraction at the Central Quarry, there will be no further C&D recovery activity at this location once existing stockpiles have been processed over the short term (2-3 years). As such, there is a requirement to re-locate the activity elsewhere within Roadstone's landholding.

PROPOSED DEVELOPMENT

- 2.11 This planning application provides for a proposed increase in the permitted intake of construction and demolition waste at the waste recovery facility at the Huntstown Quarry Complex at North Road, Finglas, Dublin 11, from a maximum of 24,950 tonnes per annum at the present time to a maximum of 95,000 tonnes per annum in future years.
- 2.12 No further C&D waste will be imported to the existing waste recovery facility, located on a 1.9 hectare site in the Central Quarry. The planning application provides for processing and off-site dispatch of C&D waste stockpiled at the existing facility in the near-term (2-3 years), following publication of End of Waste criteria for recycled aggregate. It also provides for
- (i) relocation of C&D waste recovery activities to a dedicated new long-term recovery facility on a 5.2 hectare site in the north-eastern corner of the Huntstown Quarry Complex and
 - (ii) construction of a hardstanding area, waste processing shed, surface water management infrastructure and upgraded internal access road at the new waste recovery facility.
- 2.13 The application site comprises two distinct areas within the Huntstown Quarry Complex; the established recovery facility at the Central Quarry and the proposed replacement facility in the north-eastern corner of the complex.
- 2.14 The plan extent of the application site and the existing site infrastructure layout is shown in Figure 2-1. The existing layout of the recovery area at the Central Quarry is shown in Figure 2-2, while that at the replacement facility to the north-east is shown in Figure 2-3. Details of the proposed landscaping works and long-term restoration plan at the relocated facility are indicated in Figure 2-4.

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- 2.15 In order to assist in the identification and assessment of impacts associated with the proposed intensification of C&D waste recovery activities and their planned future relocation to the north-eastern corner of the Huntstown property, details are provided below of existing waste facility infrastructure, waste operations and procedures and arrangements for environmental controls and monitoring.

SITE INFRASTRUCTURE

Site Access

- 2.16 Existing vehicular access to the waste recovery facility and other established businesses within the Huntstown Quarry Complex is via an extended internal paved access road which leads off the R135 Regional Road, known locally as the North Road (the former N2 National Primary Road between the M50/N2 Interchange at Finglas and Kilshane Cross). Aside from the access road, the Roadstone property boundary is closed off by post and wire fencing and/or hedgerow. There is no other access into the quarry complex.
- 2.17 At the present time, all heavy good vehicles (HGVs) importing inert C&D waste to the Central Quarry run westwards over a paved road surface up to the infrastructure area in the centre of the quarry complex. The HGVs continue past the blockyard on the left hand (southern) side and some existing site offices on the right hand (northern) side, before they turn through 180° and continue east up to the existing weighbridge to the rear of the site offices. After being weighed, the HGVs turn through 180° again after the weighbridge office and turn left (south) after the maintenance shed. They then continue on, taking the first left (east) turn thereafter and follow the descent road leading down to the Central Quarry.
- 2.18 In the medium-to-long term, once the C&D recovery facility has relocated to the north-eastern part of the landholding, HGVs importing inert C&D waste will turn right (north) immediately past the existing wheelwash and head north along an existing internal paved road, over the existing weighbridge and past the recovery facility offices and settlement ponds. Thereafter, it will continue northwards over an upgraded (paved) haul road to the planned new C&D waste recovery facility. A plan showing internal traffic routing to the existing recovery facility in the Central Quarry and the proposed new facility to the north-east of the quarry complex is presented in Figure 2-5.

Site Security

- 2.19 It is envisaged that inert C&D materials are / will be accepted at the waste recovery facility between 08.00 hours and 19.00 hours each weekday (Monday to Friday) and between 08.00 hours and 13.00 hours on Saturdays, consistent with working hours set by the recent grant of planning permission for increased waste intake to the soil recovery facility (Ref. FW16A/0120). No materials are accepted at any other time including Sundays and Public Holidays.
- 2.20 All access to the quarry, production facilities and recovery facility is controlled by a manned security post along the access road leading off the R135 North Road (shown on Figure 2-1). Security at the site is provided on a 24 hour, 7 day a week basis.

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Site Roads, Parking and Hardstanding Areas

- 2.21 Employee and visitor car parking in respect of the existing facility at the Central Quarry is currently provided on paved ground around the main office building at the central infrastructure area. Much of the access road to the existing facility and the car parking area is sealed by concrete or asphalt surfaces which will remain in place for the remaining duration of the C&D waste recovery activities. There are also extensive permanent concrete hardstanding surfaces located around production facilities in the central infrastructure area. Surface water falling across these surfaces drains via existing drainage networks and on-site settlement ponds to a tributary stream of the Ward River, to the north of the central infrastructure area.
- 2.22 In the medium-to-long term, employee and visitor car-parking will be provided on an existing hardstanding area in front of the dedicated waste office, on the eastern side of the access road leading to the soil recovery area and new C&D waste recovery area. Rain falling across this and other unpaved surfaces either percolates downwards into the underlying soil / bedrock or runs-off over the existing ground surface, toward existing ponds and/or quarry voids. These unpaved hardstanding areas are also occasionally used for the storage of site plant, equipment and/or materials required at the waste recovery facility.

Traffic Control

- 2.23 Internally, within the Huntstown Quarry Complex, direction signs, warning notices and speed restriction signs are in place along paved roads leading to and from the central infrastructure / production area and waste recovery facility.

Wheelwash

- 2.24 In order to prevent transport of soil out of the recovery facility onto public roads, an existing wheelwash facility is provided for all HGV's exiting along the paved access road which runs out to the R135 North Road. The location of the wheelwash is indicated in the layout plan shown in Figure 2-1.

Weighbridge(s)

- 2.25 In order to track and record the amount of material entering the application site, all HGV traffic importing C&D waste to the existing recovery facility is directed across an existing weighbridge at the central infrastructure area before then turning south towards the Central Quarry.
- 2.26 In the medium-to-long term, once the facility is relocated to the north-eastern corner of the Roadstone landholding, it will be directed across the weighbridge which currently services the soil recovery facility, along the internal haul road leading to the recovery area(s).
- 2.27 In addition to incoming wastes, any separated non-inert construction and demolition waste dispatched off-site (in skips) to other licensed waste disposal or recovery facilities will also be weighed out at the existing weighbridges.
- 2.28 Records of imported C&D waste tonnage are maintained for waste auditing purposes. At the weighbridge office, HGV drivers carrying C&D waste to the recovery facility identify themselves to site staff before proceeding to the recovery area. Site staff take a copy of the weigh docket, record the time and date of arrival, the nature and origin of the imported C&D waste, the customer / client, the truck licence plate number and waste collection permit details.

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- 2.29 CCTV cameras are installed around the weighbridges and used to inspect all C&D wastes being imported for recovery purposes. The CCTV images are relayed in real time to weighbridge offices where they are viewed by site staff.

Fuel and Oil Storage

- 2.30 Fuel for plant and equipment used at the C&D waste recovery facility is stored in existing fuel storage tanks at the central infrastructure and production area within the Huntstown facility. These tanks are constructed on sealed concrete surfaces and bunded to provide a storage volume equivalent to 110% of the tank storage volume.
- 2.31 The mobile plant and equipment undertaking the recycling works are generally refuelled over concrete surfaces around the fuel storage tanks, although on occasion, they may be refuelled from mobile, double skin fuel bowsers. When crushing plant is in place at the recycling facilities during intermittent crushing campaigns, it will be refuelled on hardstanding surfaces from mobile double skin tankers or bowsers.
- 2.32 Plant maintained on site principally comprises front end loaders and/or mechanical excavators. Oil and lubricant changes and servicing of wheeled plant is undertaken at the existing maintenance shed. A small bunded area for waste oils is provided within the maintenance shed. Oil collected in tanks is emptied at intervals by a licensed waste contractor and disposed off-site at an authorised waste facility.

Proposed C&D Waste Recovery Shed

- 2.33 It is proposed to construct a large roofed portal frame structure, open on two sides at the future site of the C&D recovery facility in the north-eastern corner of the Huntstown landholding. All future C&D waste processing, crushing and recovery will take place within this structure in order to reduce noise and fugitive dust emissions.
- 2.34 The proposed structure will be of portal frame steel construction and will have a plan footprint area of approximately 60m by 36m, with the long axis orientated in an north-south direction. The structure height will vary from 10m at the haunch (top of sidewall column supports) to a maximum of 12m at the roof apex.
- 2.35 The supporting columns for the proposed C&D waste recovery shed will be founded on pad foundations constructed on rock and will be cross braced along the long axis to provide lateral stiffness. The sides of the structure will comprise a concrete wall to 3.5m above ground, with the remainder of the side walls clad to haunch level by single skin steel wall panels supported on side rails. Roof panels will be carried on purlins. There will be further cross-bracing between structural frames at roof level to enhance lateral stiffness as required. Plans and elevations of the proposed recovery shed are shown in Figure 2-6.

Waste Inspection and Quarantine Shed

- 2.36 Any imported waste which, it is suspected, may not comply with waste acceptance criteria for the C&D waste recovery facility, is transferred across the application site to a pre-existing covered structure beyond the south-eastern corner of the North Quarry (refer to the layout plan in Figure 2-1). This shed is constructed over a sealed concrete slab. It serves as the dedicated waste inspection and quarantine facility for all waste recovery operations at Huntstown quarry.

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C&D Waste Recovery Infrastructure

- 2.37 Construction and demolition waste at Huntstown is recycled by passing it through mobile crushing plant which is brought to the facility periodically, once sufficient quantities of recyclable material has accumulated in stockpiles. Recovery activities produce a particulate, granular aggregate conforming to standard industry specifications which can be readily used to construct hardstanding areas or unpaved access roads on construction and development sites, on agricultural holdings, forest roads etc.
- 2.38 At the present time, all C&D waste recovery activity at the Central Quarry takes place in the open air, on the quarry floor. This will continue in the short term, albeit at an intensified rate, pending relocation of the facility to the north-east of the Huntstown Quarry Complex.
- 2.39 When recovery operations are established at the new facility, crushing plant will be placed on a hardstand surface within the proposed open-sided waste recovery shed. During recycling campaigns, C&D wastes will be transferred from external stockpiles to the mobile crusher within the covered shed. Once crushed and processed, the recycled material (secondary aggregates) will be moved out of the shed to external stockpiles pending testing, sale and export off site.

Equipment Storage Areas

- 2.40 At the present time, mobile plant and equipment used in C&D waste recovery activities is either held at the existing recovery facility in the Central Quarry or on the sealed hardstand area in the centre of the Huntstown Complex. Given the existing restriction on access to the Huntstown Complex, it is not considered necessary to provide a secure compound for plant and equipment servicing the waste recovery facility.
- 2.41 Any plant or equipment requiring specialist repair or overhaul is taken to the existing maintenance shed within the Huntstown Complex. Small items of mobile or hand-held plant and equipment are also stored as required in the existing maintenance shed.

Sewerage and Surface Water Drainage

- 2.42 At the present time, the only surface water drainage infrastructure at Huntstown exists across the central infrastructure area where aggregate processing and concrete production activities are currently concentrated.

Existing Recovery Facility – Central Quarry

- 2.43 Rain falling across the existing C&D waste recovery facility at the Central Quarry either
- runs over unsealed ground into the existing quarry void, to a small pond in the north-eastern corner of the quarry floor or
 - percolates down through the existing soil / rock at the ground surface as recharge to groundwater, at which point it joins groundwater flow through the ground.
- 2.44 At the present time, groundwater levels around the Central Quarry are depressed by dewatering activities at the North Quarry and South Quarry which are located on either side.

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- 2.45 Surface water run-off and any dewatered groundwater at the quarry collect in the pond on the quarry floor, from where it is pumped up to the ground surface to the existing water treatment infrastructure (settlement ponds) located on the eastern side of the central infrastructure area. Thereafter, the run-off is passed through an existing hydrocarbon interceptor and discharged to the Ballystrahan Stream and from there, to the Ward River which flows further to the north. The layout of the existing surface water management system is shown in Figure 2-7.

Replacement Recovery Facility – North Eastern Corner

- 2.46 At the present time, rain falling over the proposed replacement facility, at the north-eastern corner of the Roadstone landholding generally
- percolates down through soil at the ground surface and recharges to the underlying groundwater table or
 - runs south and west over the existing ground surface to a minor (seasonal) pond in the south-western corner.
- 2.47 It is envisaged that when the long-term recovery facility is in place, rainfall will continue to percolate through a layer of permeable hardstanding (crushed rock) placed over the mineral subsoil and down to the underlying groundwater table, as it does at present. It is envisaged that any surface water run-off which does arise will fall over the built-up / regraded ground surface toward an open collector channel running in a verge on the eastern side of the unpaved access road leading to the facility (and along the western side of the recovery facility).
- 2.48 Any surface water run-off will collect in an enlarged pond in the south-western corner of the facility, from whence it will be pumped across the licenced facility to the existing pond on the floor of the North Quarry and from there via existing piped infrastructure and intermediate ponds to the polishing pond (reed-bed) and hydrocarbon interceptor / grit trap before being discharged to the Ballystrahan Stream.

Proposed Waste Recovery Shed

- 2.49 Rain falling over the proposed portal frame structure will be collected by gutters along the eaves and flow to downpipes along the side of the structure. It will then flow via a network of buried stormwater drainage pipes around the shed to an open grassed channel (swale) running north-south along the eastern boundary of the application site. Thereafter the roof run-off will discharge to the channel of a former natural stream which runs east toward the Ballystrahan Stream (as indicated in Figure 2.3).
- 2.50 As roof-run-off from the proposed shed will be uncontaminated, there is no requirement to provide any treatment prior to its discharge off-site. Flood attenuation for roof run-off will be provided by fitting a flow control device / hydrobrake at the downstream end of the swale (and immediately upstream of the channel leading to the Ballystrahan Stream) in order to limit the maximum stormwater run-off to the existing greenfield rate. The layout of the proposed surface water management system at the replacement facility and around the proposed waste recovery shed is shown in Figure 2-7.

Waste Inspection and Quarantine Area

- 2.51 As previously outlined, any suspect contaminated waste imported to the proposed waste facility is transferred to a covered shed beyond the south-eastern corner of the North Quarry. As the floor of the shed is sealed by a concrete slab, and as no rainfall will come into contact with consignments of

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suspected contaminated waste, there is no requirement to install drainage infrastructure for the separate collection and storage of potentially contaminated surface water run-off at the waste inspection and quarantine facility.

Site Accommodation

- 2.52 All administration and management functions for the waste recovery facility are based at the existing waste facility office located along the eastern side of the access road leading to the existing soil recovery area and planned future C&D waste recovery facility. Staff changing, washing and cooking facilities are provided separately at the main canteen facility at Huntstown, located to the east of the office and weighbridge in the central infrastructure area.

Site Services

- 2.53 Electric power, lighting and heating are all currently provided via the electricity network to existing site offices and staff welfare facilities at Huntstown.
- 2.54 Site staff overseeing C&D waste recovery operations at the application site are contactable by mobile phone. Site staff are also contactable by fixed line telephone, fax and email facilities available at the waste facility office.
- 2.55 Site staff at the Huntstown C&D waste recovery facility use, and will continue to use, toilet, hand washing and welfare facilities provided at the main site offices and staff canteen at the central infrastructure area at Huntstown Quarry. Wastewater from these facilities is currently collected and fed via a sewerage pipe to an on-site permitted wastewater treatment plant (septic tank).
- 2.56 A potable water supply is provided to the main site office and canteen via a Local Authority water main.
- 2.57 High voltage overhead electricity transmission cables (110kV and 220KV) run to the east and south-west of the recovery facility, to and from the electricity substation north-west of the M50 / N2 Interchange. Lower voltage overhead cable and telephone cables also run across the Huntstown Complex.
- 2.58 A gas pipeline runs to the nearby electricity generating plant operated by Huntstown Power (Viridian). This pipeline runs from the western property boundary at Kilshane Road to the south of the existing blockyard and north of existing recycling facility. Thereafter it turns north and runs beyond the eastern side of the block yard, into the power station site.

SITE PREPARATION WORKS

Existing Recovery Facility – Central Quarry

- 2.59 C&D waste recovery activities will continue at the existing facility at the Central Quarry for a short-term period (of 2-3 years) pending re-location of the facility to the north-eastern corner of the Huntstown property.
- 2.60 Soil across much of this area has previously been stripped, leaving mineral subsoil / rock exposed at the ground surface. The area has been used intermittently for storage of rock, aggregate, C&D waste and recycled aggregates in the past. There are some pockets of mature / scrub vegetation adjoining the area and where these exist, efforts will be made to avoid damaging them.

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- 2.61 No site development works will be required for the established recovery facility, other than a possible re-grading of the ground surface to ensure that all surface water run-off is directed toward the quarry void and the pond / sump at the quarry floor.

Replacement Recovery Facility – North Eastern Corner

- 2.62 At the proposed replacement facility on greenfield, previously undeveloped, lands in the north-eastern corner of the Roadstone landholding, it is envisaged that the existing soil cover will be stripped and used to infill a gap in the existing perimeter screening berm along the northern / north-eastern boundary, to raise the existing berm height by up to 1m and to extend the crest width to a minimum of 2m wide. Any excess topsoil which is not used for these purposes will be used for ground surface restoration works at the adjoining soil waste recovery facility.
- 2.63 Some semi-mature deciduous trees which are currently growing in a thicket along the eastern boundary of the facility will be uprooted and transplanted along the northern slope / crest of the perimeter berm in order to soften the visual impact of the recovery facility and enhance the screening provided to it from distant viewing points to the north-east.
- 2.64 Following site stripping, crushed rock will be placed over the exposed mineral subsoil and/or weathered bedrock and compacted to form a hardstanding, typically 300mm to 500mm deep. The upper surface of the hardstanding will be graded so as to fall very gradually from east to west, toward an open grassed channel running along the western boundary of the facility, in a verge on the eastern side of the unpaved access road leading to the facility.
- 2.65 As previously outlined, an open collector channel will be constructed along the eastern verge of the unpaved access road and the western side of the recovery facility. The existing pond at the south-western corner will be deepened and enlarged in order to capture and retain any increased surface water run-off from the facility. A floating pump will be placed at the pond to transfer water intermittently across to existing settlement ponds when water levels rise to a prescribed level.
- 2.66 As was also outlined previously, it is intended to erect a recovery shed at the proposed replacement facility which will principally house C&D crushing plant in order to reduce noise and fugitive dust emissions. A network of buried drainage pipes will be installed around the shed and will be connected to an open grassed channel (swale) running north-south along the eastern boundary of the facility and discharge to the channel of a former natural stream which runs east toward the Ballystrahan Stream.
- 2.67 It is not proposed to seal / concrete any of the proposed hardstand area at the relocated facility as it is intended to facilitate continued diffuse input of surface water / rainfall into the underlying relatively permeable mineral soil and/or weathered rock. The of the proposed development at the relocated facility are provided in Figure 2-3.
- 2.68 It is anticipated that final formation levels across the proposed replacement recovery facility, at the top of the hardstanding surface, will be close to the existing average ground level, around 78mOD. The finished formation will also largely follow the fall of the existing ground surface, falling west and/or south at gradients of no more than 1:200.

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Material Requirements / Quantities

2.69 The proposed development works at the replacement recovery facility will entail excavation, handling or placement of the following quantities of materials

**Table 2-1
Material Requirements**

Material	Quantity
Excavated Soil	14,700 m ³
Modification of Perimeter Berms	20,200 m ³
Crushed Rock Hardstand (typically 6' or 200mmm down)	22,000 m ³
Sub-surface Drainage Pipework	230 m
Open Channel / Swale Construction	330m

WASTE OPERATIONS AND PROCEDURES

Capacity and Lifespan

2.70 While this application provides for an increase in the maximum permitted C&D waste intake from 24,950 tonnes per annum to 95,000 tonnes per annum. It is not however certain that the increased waste intake limit will be reached every year the facility continues in operation. There are many factors which will influence the C&D waste intake rate, including, but not limited to the:

- Availability of acceptable inert C&D materials from the adjacent production facilities and local construction sites;
- Publication of 'End-of-Waste' criteria for recycled aggregates produced from inert construction and demolition waste
- Prevailing economic climate and related construction industry output;
- Distance of construction projects from the facility (and scale or duration of activity);
- Logistical / programming constraints at sites generating inert materials;
- Disruptions along the existing local and national road network.

Waste Acceptance and Handling

2.71 Inert C&D waste is accepted at the Huntstown recovery facility between 08.00 hours and 19.00 hours each weekday (Monday to Friday) and between 08.00 hours and 13.00 hours on Saturdays. No materials are accepted at any other time including Sundays and Public Holidays.

2.72 Insofar as practicable, the source of each large consignment of C&D waste imported to the facility for recycling is identified in advance and subject to review (possibly including some characterisation testing) to confirm that they will be segregated at source and can be classified as inert. Ideally, and particularly for larger waste consignments, some characterisation testing will be undertaken in advance by customers / clients / contractors before consigning any waste to the facility.

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- 2.73 Operating procedures at the recovery facility require all C&D forwarded for recovery purposes to be pre-sorted at source, inert and free of non-inert waste, specifically inclusions such as plaster / plasterboard, metal, timber, plastic / PVC, rubber, wiring / cabling, metal or any non-hazardous / hazardous domestic, commercial or industrial wastes.
- 2.74 Separated C&D wastes will generally be sourced from the adjoining construction materials production operations or will be imported from external construction sites by HGV or tipper truck. Only in very exceptional circumstances, where a high degree of confidence exists about the source / prior segregation of the imported C&D waste, will skip waste be accepted at the facility.
- 2.75 CCTV cameras mounted around the weighbridge(s) and weighbridge office(s) are used to inspect all consignments being imported to the recovery facility. Any waste materials that are deemed to be unacceptable for recovery at the facility on the basis of a visual inspection at the weighbridge are rejected and directed to an alternative authorised waste recovery facility.
- 2.76 All inert C&D materials imported to the facility are unloaded (end-tipped) from HGVs / trucks to build up stockpiles of unprocessed waste within a defined outdoor stockpiling area on a hardstand surface. Waste consignments are visually inspected by site personnel at that point to confirm that there is no intermixed non-inert construction or demolition waste or inclusions of non-hazardous or hazardous waste placed within it.
- 2.77 If, following acceptance of waste, there is any subsequent grounds for concern about the nature of the C&D wastes imported to site, it is segregated and transferred to the waste inspection and quarantine area for closer inspection and classification. A detailed record will be kept of all such inspections.
- 2.78 A representative sample is taken from one in every 120 loads of inert C&D waste accepted at the facility and subjected to compliance testing by Roadstone. These data are used to confirm that the accepted soils are inert and comply with acceptance criteria.
- 2.79 Laboratory testing of C&D waste is undertaken off-site at an ILAB / UKAS accredited geo-environmental laboratory. All compliance / validation testing and laboratory testing required to confirm the inert classification of imported soil and stone waste soil is undertaken by an accredited laboratory.

Processing of Waste

- 2.80 The recovery of C&D waste is carried out on an intermittent (or 'campaign') basis, according as waste material accumulates in unprocessed stockpiles and demand for recycled product dictates. The size of unprocessed waste stockpiles therefore varies according to availability of waste, the stage of recycling operations and/or the demand for the finished recycled aggregate product.
- 2.81 It is estimated that up to 1 years annual C&D waste intake (ie. 95,000 tonnes) could be stored at the recovery facility over an area of 1.2 to 1.5 hectares. This suggests a maximum waste stockpile height of between 6m and 8m.
- 2.82 Construction and demolition waste held in 'unprocessed' stockpiles is recovered by excavating it using a loading shovel / front-end loader and tipping it into a mobile crusher (shown in Figure 2-8) in order to produce secondary aggregates of varying nominal size. At the present time, the crushing process is undertaken on the floor of the Central Quarry, but in the medium-to-long term, after the

DESCRIPTION OF WASTE RECOVERY FACILITY 2

recovery facility has been relocated to the north-eastern corner of the landholding, it will be undertaken within the planned recovery shed which will be open on two sides.

- 2.83 The recovered / recycled aggregates are then transferred by loading shovel / front-end loader from production stockpiles at the crusher to 'processed' stockpiles at a separate outdoor stockpiling area, also on a hardstand surface. They are then stored on-site pending their subsequent sale and export off-site.
- 2.84 As with unprocessed waste, it is estimated that up to 1 year's annual output of recovered / recycled aggregates (ie. 95,000 tonnes) could be stored at the recovery facility over an area of 1.2 to 1.5 hectares. This suggests a maximum processed stockpile height of between 6m and 8m.
- 2.85 The recovered / recycled (secondary) aggregate is transferred from processed stockpiles to HGVs using a loading shovel / front-end loader on an ongoing, intermittent basis as demand for recycled aggregates dictates. When not loading recovered aggregates, it is likely that the loading shovel will be assigned to other duties within the recovery facility or to other (non-C&D waste related) duties within the wider Huntstown Quarry complex.
- 2.86 No sorting of waste materials other than separation of reinforcement from concrete is undertaken at the recycling facility, as all imported waste is required to be sorted and segregated at source, before being brought to the waste recovery facility. Reinforcement separated from concrete is stored in skips at the recovery area before being transferred to the quarantine facility and/or removed off site by an authorised waste collector.

Removal of Materials Off-Site

- 2.87 Any non-hazardous or hazardous wastes identified within the inert C&D waste is separated and transferred to the waste inspection and quarantine shed, pending subsequent removal off-site to authorised waste disposal or recovery facilities by permitted waste collectors. On the basis of experience gained to date in operating this and other C&D waste recovery facilities in the Greater Dublin Area however, Roadstone anticipates that the quantities of such wastes requiring transfer / removal off-site are likely to be very low.
- 2.88 In addition to CCTV inspection at the weighbridge(s), visual inspection and in-situ monitoring of imported C&D waste materials is undertaken by site-based personnel overseeing operations at unprocessed stockpiles at the existing (and planned future) recovery area.
- 2.89 Should any non-inert or non-C&D waste be identified amongst incoming waste consignments, the entire waste consignment will be rejected and reloaded onto the HGV / tipper truck and the haulier directed to remove the waste off-site to another authorised (ie. permitted or licensed) facility.
- 2.90 In the unlikely event that suspected contamination is identified subsequently, during waste handling and processing / crushing, it will be segregated from the main waste stockpiles and transferred to the covered waste inspection and quarantine shed pending closer inspection and testing to establish whether it is inert or not. Suspect waste will be identified on the basis of visual inspection (unusual colour, intermixed wastes etc.) or by smell. Detailed records will be kept of all inspections and testing of suspect wastes.
- 2.91 Should inspections and/or testing of suspect C&D waste at the inspection and quarantine shed indicate it is non-inert and cannot be accepted or handled at

DESCRIPTION OF WASTE RECOVERY FACILITY 2

the C&D waste recovery facility, it will be placed in skips and/or covered pending removal off-site by permitted waste collectors to an authorised waste disposal or recovery facility.

- 2.92 Any occasional metal waste encountered amongst the waste is separated and placed in a skip pending removal off site to an authorised waste recovery facility. Other non-inert waste (timber, plastic etc.) is also be separated and placed in a skip pending removal to an authorised waste facility.
- 2.93 Any scrub vegetation or tress removed as part of the site clearance and site establishment works will be removed and mulched.
- 2.94 Only operators and/or haulage firms holding valid current waste collection permits will be engaged to transfer these waste streams to other waste disposal or recovery facilities.

EXISTING ENVIRONMENTAL CONTROLS

General

- 2.95 The recovery of C&D wastes at Huntstown requires a number of environmental controls to eliminate or minimise the potential nuisance to the public arising from the handling and processing of C&D waste and recovered / recycled aggregates. The environmental control measures outlined in the following sections are in place around the existing recovery facility at the Central Quarry and will continue in operation when C&D waste intake increases to 95,000 tonnes per annum and is eventually relocated to the replacement facility at the north-eastern corner of the landholding.
- 2.96 C&D recovery activities at the Central Quarry were previously regulated by way of a waste facility permit issued by Fingal County Council. Going forward, as waste recovery activity is intensified to 95,000 tonnes per annum in the short term and then ultimately relocated to the new facility, it will be regulated by way of a review of the existing waste recovery licence (Ref. W0277-01) issued by the Environmental Protection Agency (EPA).
- 2.97 Any additional control measures, over and above those already in place and/or outlined below, which may be instructed on foot of the proposed waste licence review to provide for the increased and/or relocated waste intake, will also be implemented.

Bird Control

- 2.98 As the C&D waste being stored / recovered at the Huntstown facility is free of putrescible (food / kitchen) waste, the on-site activities do not attract scavenging birds such as gulls and crows. Accordingly, there is no requirement to implement any specific bird control measures at the existing or planned facility.
- 2.99 In the unlikely event that any putrescible waste is identified among imported waste materials, it will be immediately removed to the waste quarantine area pending removal off-site to an authorised waste disposal or recovery facility.

Dust Control

- 2.100 In dry, windy weather conditions, the C&D waste recovery activities may give rise to dust blows across and beyond the existing or planned waste recovery facility. In order to control dust emissions, the following measures are / will be implemented:-

DESCRIPTION OF WASTE RECOVERY FACILITY 2

- water is sprayed from a tractor drawn bowser on dry exposed surfaces and waste stockpiles (paved roads, unsealed haul roads and hardstand areas);
 - at the proposed replacement facility, a sprinkler system will also be installed along the access road and around the northern and eastern boundary of the recovery facility to suppress dust rise from vehicles movements and fugitive emissions from stockpiles;
 - dust blows at the existing facility are largely screened by the 20m high side walls at the Central Quarry.
 - dust blows at the replacement facility will be partially screened by the perimeter screening berms along the northern and eastern boundaries and by perimeter planting which will establish over time.
 - areas of bare or exposed soils will, insofar as practicable, be kept to a minimum, and covered by rock fill / hardstanding materials (6" or 200mm down).
 - all HGV's exiting the recovery facility are routed through the existing wheelwash facility along the egress route to the R135 North Road (refer to traffic routing plan in Figure 2-5). This minimises the transport of fines by HGVs over the access / egress road and the public road network;
- 2.101 The amount of dust or fines carried onto the public road network is further reduced by periodic sweeping of internal paved site roads and surrounding public roads as required. It is possible that the increased waste intake may necessitate increased road cleaning effort when potentially adverse (dry, windy) weather conditions arise.

Traffic Control

- 2.102 The intensification of waste recovery activities at the existing facility (and planned replacement facility) will result in the importation of up to 95,000 tonnes of C&D waste, approximately 70,000 tonnes above the current C&D waste intake limit.
- 2.103 Assuming a maximum annual waste intake of up to 95,000 tonnes / year is approved, and that this was sourced entirely from off-site locations and projects, this would correspond to an average of 18 trips per day (equivalent to 36 movements per day), in and out of the Huntstown facility, an increase of 13 trips (or 26 movements) per day over the current permitted intake rate.
- 2.104 In addition, it is expected that the recovery facility will produce up to 95,000 tonnes of secondary aggregate per year, potentially generating a further 18 HGV trips (36 movements) in and out of the recovery facility each day.
- 2.105 It may be possible to reduce the number of additional traffic movements generated by the increased activity at the C&D waste recovery facility by encouraging "backloading", whereby trucks delivering aggregates / blocks from the adjoining facility will return with pre-sorted construction and demolition waste for the recovery facility. Recycled secondary aggregates may also be dispatched off-site in place of virgin aggregates from the adjoining quarry.
- 2.106 Notwithstanding the potential to reduce traffic movements by 'backloading' or substitute for output of virgin aggregates, the proposed increased intake / export rate to / from the C&D waste recovery facility would generate an average of 4 trips per hour in total over an 11 hour working day (equivalent to an average of 8 movements per hour).

DESCRIPTION OF WASTE RECOVERY FACILITY 2

- 2.107 The projected rate of intake / export compares with the existing maximum permitted intake rate of 1,500,000 tonnes / year to the adjoining soil waste recovery facility which corresponds to an average of 24 trips per working hour (equivalent to 48 movements per hour), in and out of the Huntstown facility.
- 2.108 The projected rate of intake / export to and from the C&D waste recovery facility also compares to a permitted export rate of up to 2 million tonnes per annum from the adjoining quarries / production facilities which corresponds to an average of 30 trips per working hour (equivalent to 60 movements per hour). Quarry / production output at the current time is however some way short of this level.
- 2.109 As indicated in Chapter 13 of this Environmental Impact Statement, intensification of operations at the waste recovery facility will have no adverse impact on traffic flows along the existing North Road (the former N2 National Primary Road) or the surrounding local road network.
- 2.110 Should it be necessary, Roadstone has contingency measures in place to ensure safe and orderly queuing of HGV traffic along the existing network of internal paved roads, should it be required if periods of intense or elevated demand at its recovery facilities occur.
- 2.111 Any roadside vegetation which could potentially impact on visibility splays will continue to be cut back as required in order to maintain visibility for HGV traffic exiting onto the R135 North Road.

Litter Control

- 2.112 As the C&D waste materials being imported to the recovery facility are largely free of litter, the recovery activities are unlikely to give rise to problems with windblown litter. Accordingly, there is no requirement to implement any specific litter control measures at the facility.
- 2.113 In the unlikely event that any litter waste is identified among the imported C&D waste, it will be immediately removed to the waste quarantine area pending removal off-site to an authorised waste disposal or recovery facility.

Odour Control

- 2.114 The C&D waste being imported and recovered at Huntstown is inert, inorganic and free of biodegradable material and/or organic contamination. It will not therefore break down and emit odorous gases over time.
- 2.115 In the absence of any organic waste, the recovery activities at the Huntstown facility are highly unlikely to give rise to odour nuisance and therefore no requirement to implement any specific odour control measures at the facility.
- 2.116 In the unlikely event that any organic and/or biodegradable waste is identified or suspected among imported waste, it will be immediately removed to the waste quarantine area pending removal off-site to an authorised waste disposal or recovery facility.

Vermin Control

- 2.117 As the C&D waste being recovered at the facility is free of putrescible (food / kitchen) waste, on-site activities will not attract vermin (rats) for the duration of the recovery operations. Accordingly, no specific vermin control measures are implemented at the facility.

DESCRIPTION OF WASTE RECOVERY FACILITY 2

2.118 In the unlikely event that any putrescible waste is identified among imported materials, it shall be immediately transferred to the waste quarantine area pending removal off-site to a licenced waste disposal or recovery facility.

Fire Control

2.119 As the C&D waste being recovered at the facility is free of flammable materials and biodegradable waste which could create a fire or explosion risk, on-site waste recovery activities will not present a fire risk for the duration of the recovery operations. Accordingly, there is no requirement to implement specific fire control measures at the facility.

2.120 Notwithstanding this, the following operational practices will be implemented in order to prevent fire at the facility:

- smoking at the waste office / weighbridge office and staff canteen is prohibited
- any biodegradable or flammable waste included in materials imported to site is immediately transferred to the waste quarantine area pending removal off-site to an authorised waste disposal or recovery facility
- plant and equipment is removed if they exhibit signs of overheating etc.

2.121 In the unlikely event that a fire does occur, the local fire stations in Finglas and Swords will be contacted and emergency response procedures will be implemented. Fire extinguishers (water and foam) are provided at all offices to deal with any small outbreaks which may occur.

EXISTING ENVIRONMENTAL MONITORING

General

2.122 There is an established programme of environmental monitoring in connection with ongoing rock extraction, aggregate processing, concrete production and waste recovery activities across the Huntstown Complex. This environmental monitoring programme complies with the requirements of existing planning permissions and effluent discharge licences in respect of these activities granted by Fingal County Council. The existing monitoring programme also complies with the requirements of the existing waste licence in respect of soil waste recovery activities issued by the EPA (Ref. W0277-01).

2.123 Roadstone operates an environmental management programme to monitor and manage emissions from its established on-site operations. Limit values for environmental emissions arising from these activities are identified by the EPA waste licence and other consents (as appropriate).

2.124 Environmental sampling, monitoring and testing is generally undertaken by Roadstone in-house personnel, with support from independent external consultants as and when required. Records of environmental monitoring and testing are held on-site and forwarded to the EPA and/or Local Authority as required under the terms of the waste licence and various consents.

DESCRIPTION OF WASTE RECOVERY FACILITY 2

Dust Monitoring

- 2.125 Dust emissions associated with established extraction, concrete and asphalt production and inert waste recovery activities within Roadstone's landholding at Huntstown are currently monitored on a monthly basis using Bergerhoff dust gauges at 5 No. locations (designated D1 to D5) shown on Figure 2-9. These gauges are located close to emission sources or potentially sensitive receptors located beyond Roadstone's property boundary.
- 2.126 It is proposed that the existing dust monitoring stations will remain in place and that one additional dedicated monitoring station (D6) will be established prior to commencement of C&D waste recovery activities at the replacement facility in the north-eastern corner of the Roadstone landholding (subject to EPA review). Monitoring will continue for the duration of the waste recovery activity and for a short duration thereafter, as required by the facility closure and aftercare plan.

Ecological Monitoring

- 2.127 Given the history of extractive activities at the Central Quarry and grazing activities on the seasonal grassland at the planned replacement facility and the absence of any rare or protected species across the application site, it is envisaged that there will be no requirement for ecological monitoring or reporting for waste recovery operations at either location.

Groundwater Monitoring

- 2.128 At the present time, there are 7 No. groundwater monitoring wells installed around the Huntstown Quarry Complex. Of these 1 No. is located in close proximity to the existing recovery facility at the Central Quarry (GW02), while 2 No others (GW03 and GW04) are located to the south-east and centre of the planned replacement facility, at the locations shown in Figure 2-9.
- 2.129 At the present time, groundwater sampling is undertaken on a quarterly basis. Testing of physical parameters is undertaken on collected samples on a quarterly basis, in accordance with the requirements of the existing waste licence (Ref. W0277-01) while testing of chemical parameters is undertaken on either a bi-annual or annual basis (depending on the parameter).
- 2.130 The principle objective of groundwater testing is to assess ground water quality and to confirm that on-going waste recovery activities are having no detrimental impact on groundwater quality. The groundwater wells will be monitored for the duration of the licensed waste recovery activities and for a short duration thereafter, as required by the facility closure and aftercare plan.
- 2.131 Groundwater levels are also recorded on a quarterly basis in accordance with waste licence requirements. Further detail on groundwater quality and testing is presented in Section 6 of this Environmental Impact Statement.

Meteorological Monitoring

- 2.132 No meteorological monitoring is undertaken at the existing C&D waste recovery facility. However, given that it is located 6km west of Dublin Airport, it is considered reasonable to refer to temperature, rainfall, sunshine, wind speed and direction records obtained at the weather station at Dublin Airport, as and if required.

DESCRIPTION OF WASTE RECOVERY FACILITY 2

Noise Monitoring

- 2.133 Noise emissions associated with ongoing rock extraction, aggregate processing, concrete production and waste recovery activities within Roadstone's landholding at Huntstown are monitored on a quarterly (ie. three monthly) basis at 4 No. locations (designated N1 to N4), all of which are located close to the Roadstone property boundary.
- 2.134 It is proposed that the existing noise monitoring stations will remain in place and that one additional dedicated monitoring station (N5) will be established prior to commencement of C&D waste recovery activities at the replacement facility in the north-eastern corner of the Roadstone landholding (subject to EPA review). Monitoring will continue for the duration of the recovery activities and will also continue for a short duration thereafter, as required by the facility closure and aftercare plan.
- 2.135 Noise monitoring is undertaken using a Larson Davis Model 824 Sound Level Meter, calibrated using a Larson Davies Acoustic Calibrator CAL 200 (or equivalent). Noise monitoring locations are indicated in Figure 2-9.

Odour Monitoring

- 2.136 As the materials being recovered at the facility are not organic or biodegradable and do not therefore emit odorous gases, the on-site recovery activities do not give rise to odour nuisance. Accordingly, no provision has been made for odour monitoring at the facility.
- 2.137 Site staff will report, record and investigate any odour emissions in the highly unlikely event that a complaint is ever made about odours emanating from the recovery facility.

Surface Water Monitoring

- 2.138 As required by the existing waste licence, surface water sampling at the existing recovery facility is currently undertaken on a weekly basis at monitoring location W4, immediately downstream of the dedicated polishing pond (reed bed) which treats waters emanating from soil recovery activities at the North Quarry and the planned replacement C&D recovery facility.
- 2.139 Testing of key chemical parameters is undertaken on collected samples on a weekly basis, while testing of other chemical parameters is undertaken on either a bi-annual or annual basis (depending on the parameter). Further detail on surface water quality and testing is presented in Section 6 of this Environmental Impact Statement.
- 2.140 As required by the existing effluent discharge licence, surface water sampling and testing is also undertaken at monitoring location W1, immediately downstream and east of the settlement lagoons which serve the central infrastructure area and existing recovery facility at the Central Quarry.
- 2.141 Surface water monitoring is also undertaken upstream and downstream of the discharge to the Ballystrahan Stream, a tributary stream of the Ward River, in accordance with the requirements of the existing Local Authority discharge licence in respect of quarry related activity (Ref. No WPW/F/008-01).
- 2.142 It is envisaged that surface water discharge from the Central Quarry will be sampled and monitored at location W2, immediately upstream of its confluence / discharge into the settlement lagoons which serve the central infrastructure

DESCRIPTION OF WASTE RECOVERY FACILITY 2

area. In this way, the environmental performance at the C&D waste recovery facility can be monitored independently of other site based activities at the quarry complex.

- 2.143 Occasional sampling and testing is / will also be undertaken on samples taken from any temporary surface water features or ponds which may either be created or form naturally at low points within the Central Quarry or at the replacement recovery facility (W5 and W6 respectively). These and other established surface water monitoring locations at the Huntstown facility are shown on Figure 2-9.
- 2.144 The principal objective of surface water monitoring is to assess water quality and to confirm there is no contamination associated with waste recovery activities on-site. Surface waters will be monitored for the duration of the C&D waste recovery activity and will also continue for a short duration thereafter, as may be required by the facility closure and aftercare plan.

PLANNED FINAL RESTORATION

Existing Recovery Facility – Central Quarry

- 2.145 On cessation of C&D waste recovery activity at the Central Quarry, any remaining stockpiles of unprocessed C&D waste will be crushed and added to processed waste stockpiles. These stockpiles will in turn be gradually run down as recycled secondary aggregate is sold to the market. All processing plant, machinery and/or related site infrastructure will be removed from the area.
- 2.146 No formal restoration works will be undertaken at the Central Quarry given the planned commencement of quarrying / rock extraction activities at this location following cessation and relocation of recovery activities. All processing plant, machinery and/or related site infrastructure will be removed from the area.

Relocated Recovery Facility – North-Eastern Corner

- 2.147 On cessation of C&D waste recovery activity at the north-eastern corner of the landholding, any remaining stockpiles of unprocessed C&D waste will be crushed and added to processed waste stockpiles. These stockpiles will in turn be gradually run down as recycled secondary aggregate is sold to the market.
- 2.148 The granular materials forming the hardstanding layer will be excavated in phases as space is freed up and will be recovered on site. It is expected that a minor residual volume of hardstanding material remaining at the end will either be re-used around the Huntstown Quarry Complex or recycled at an alternative, off-site C&D waste recovery facility.
- 2.149 The waste recovery shed will be dismantled to ground / foundation level and, insofar as possible, all structural elements (steelwork, wall cladding wall panels etc.) will be recycled and/or recovered. All processing plant and machinery will be removed and any related site infrastructure will be decommissioned and/or removed as appropriate.
- 2.150 As the hardstanding layer is excavated and recycled, a replacement cover layer comprising a combined 300mm of topsoil and mineral subsoil will be placed over the exposed in-situ soil. This material may be sourced from the perimeter screening berm around the recovery facility or from other soil stockpiles around the Huntstown Complex.

DESCRIPTION OF WASTE RECOVERY FACILITY 2

- 2.151 The upper surface of the reinstated ground will be graded so as to ensure that any surface water run-off will be intercepted and/or channelled southwards toward the existing stream channel which runs along the southern boundary of the recovery facility. This stream in turn will flow to the Ballystrahan Stream and onwards to the Ward River.
- 2.152 The surface will be seeded with a native grass mix in order to restore the land to seasonal grassland over time. Summary details of the proposed site restoration works are provided in Figure 2.4

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DESCRIPTION OF WASTE RECOVERY FACILITY 2

FIGURES

Figure 2-1
Existing Site Infrastructure Layout

Figure 2-2
Existing Recovery Facility Layout – Central Quarry

Figure 2-3
Replacement Recovery Facility Layout – North Eastern Area

Figure 2-4
Proposed Waste Recovery Shed – Plan and Elevations

Figure 2-5
Traffic Routing Plan - Existing and Replacement Facilities

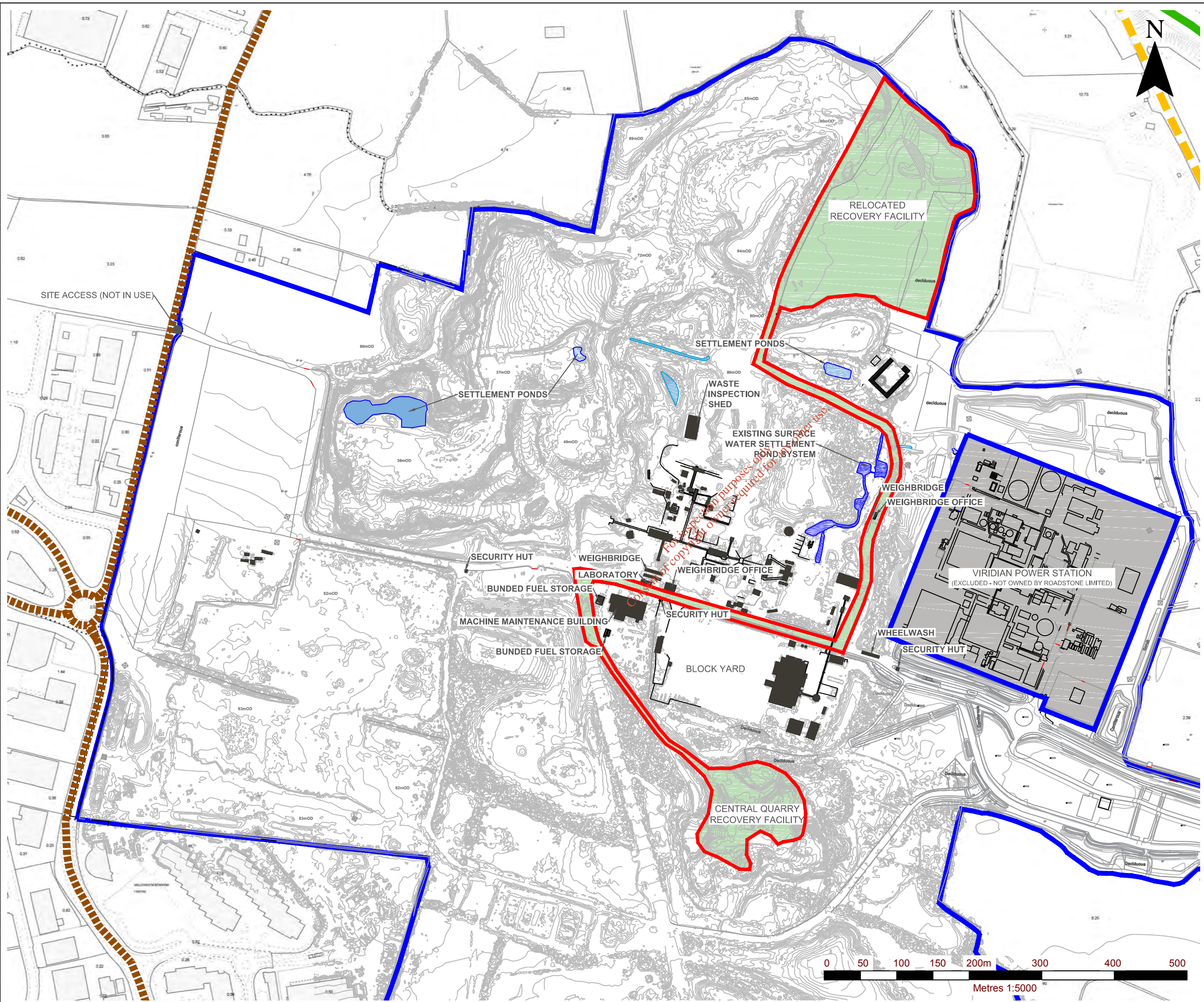
Figure 2-6
Surface Water Management System(s)

Figure 2-7
Crushing Plant

Figure 2-8
Environmental Monitoring Locations

Figure 2-9
Restoration Plan at Replacement Facility - North Eastern Area

0180.00166.0.FIG_2-1.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. 8.27 ha)
	N2 DUAL CARRIAGEWAY
	NORTH ROAD (R135)
	LOCAL ROAD
	SETTLEMENT PONDS

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ROADSTONE LIMITED
ENVIRONMENTAL IMPACT STATEMENT

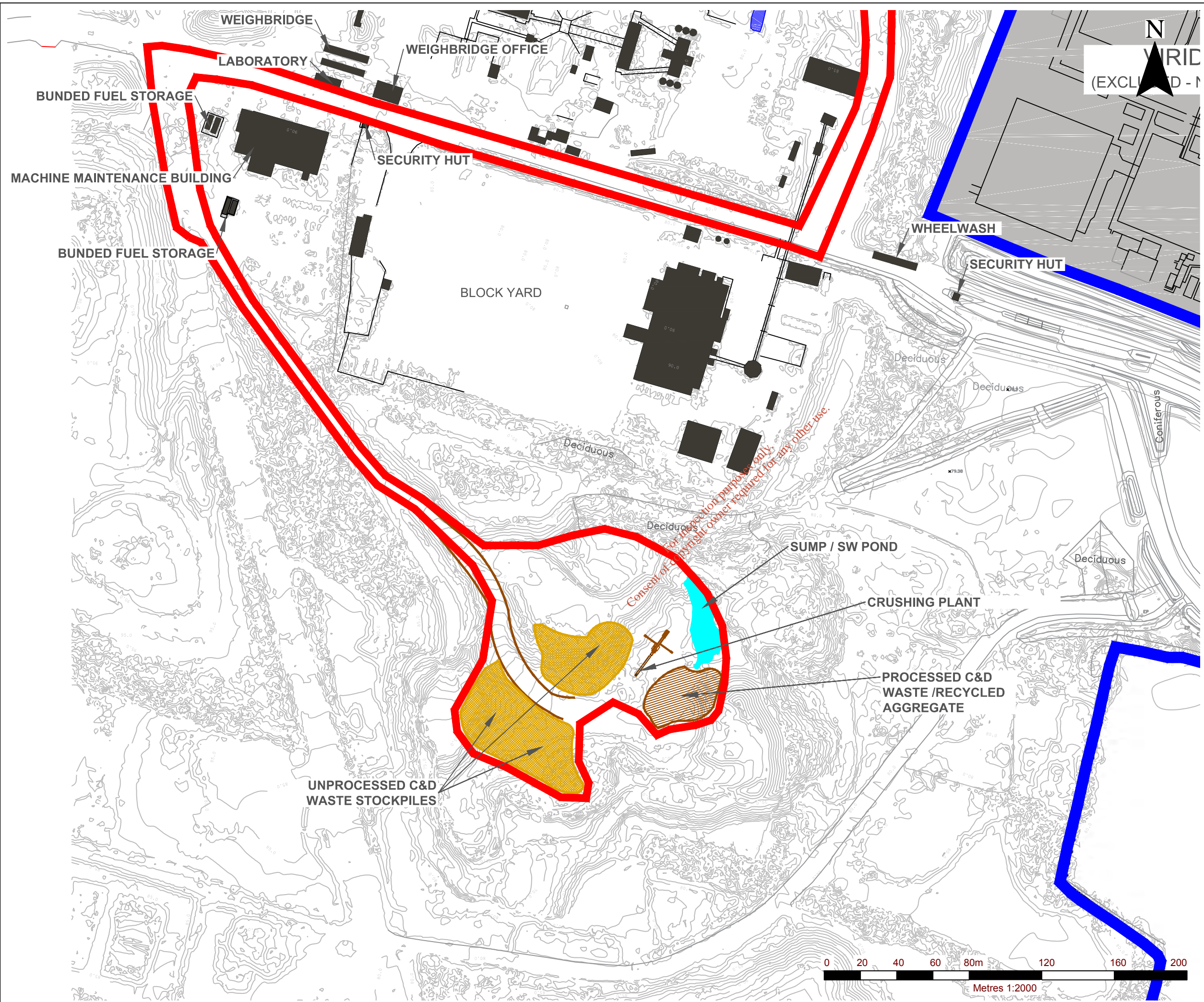
C&D WASTE RECOVERY FACILITY
HUNTSTOWN QUARRY, FINGLAS, DUBLIN 11

EXISTING WASTE RECOVERY FACILITY LAYOUT

FIGURE 2-1

Scale 1:5,000 @ A3 Date DECEMBER 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. 8.27 ha)

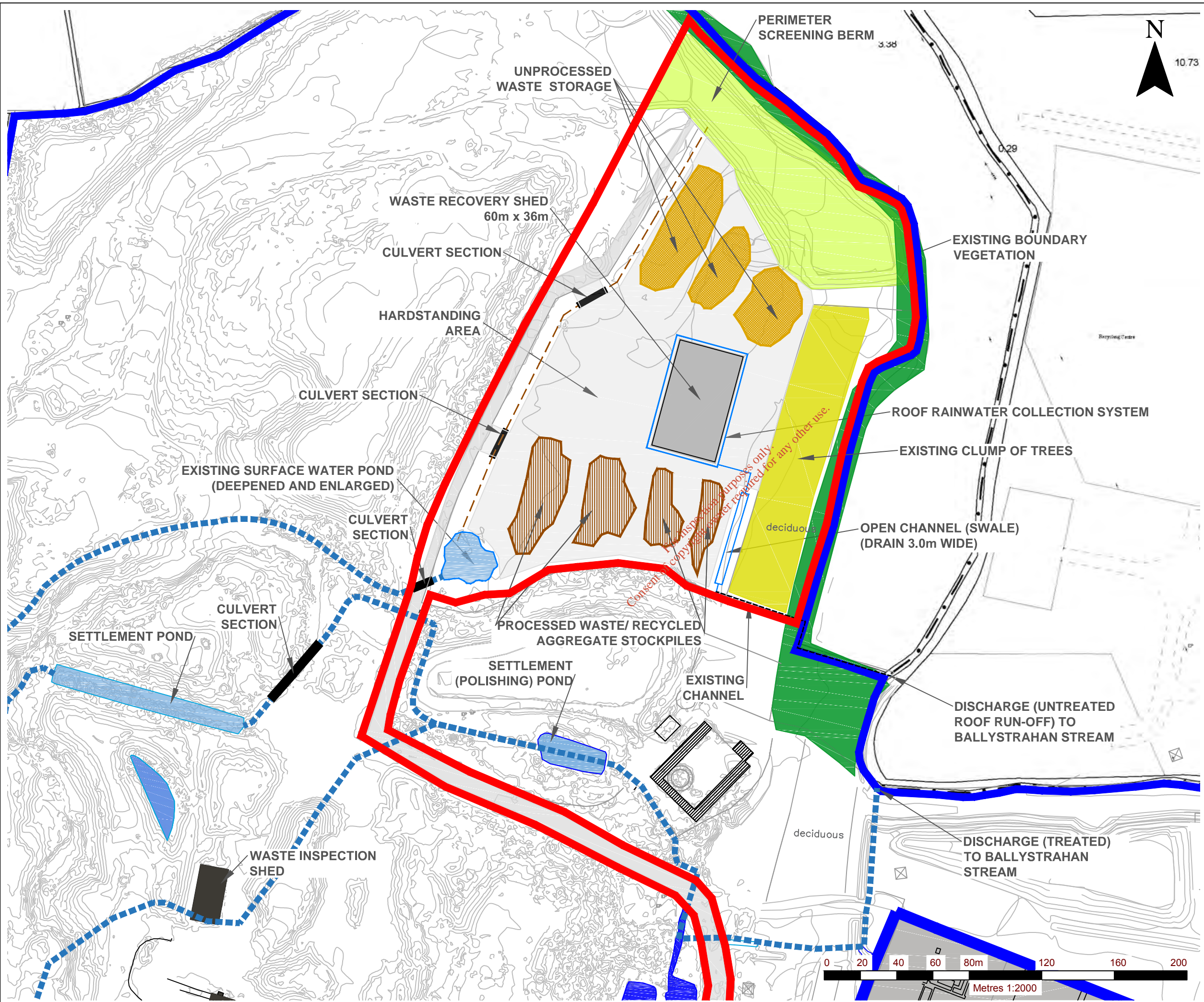
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ROADSTONE LIMITED
 ENVIRONMENTAL IMPACT STATEMENT
C&D WASTE RECOVERY FACILITY
 HUNTSTOWN QUARRY, FINGLAS, DUBLIN 11
CENTRAL QUARRY
C&D WASTE RECOVERY FACILITY

FIGURE 2-2
 Scale 1:2,000 @ A3 Date DECEMBER 2016

0180.00166.0.FIG_2-3.Relocated C&D Recovery Facility.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

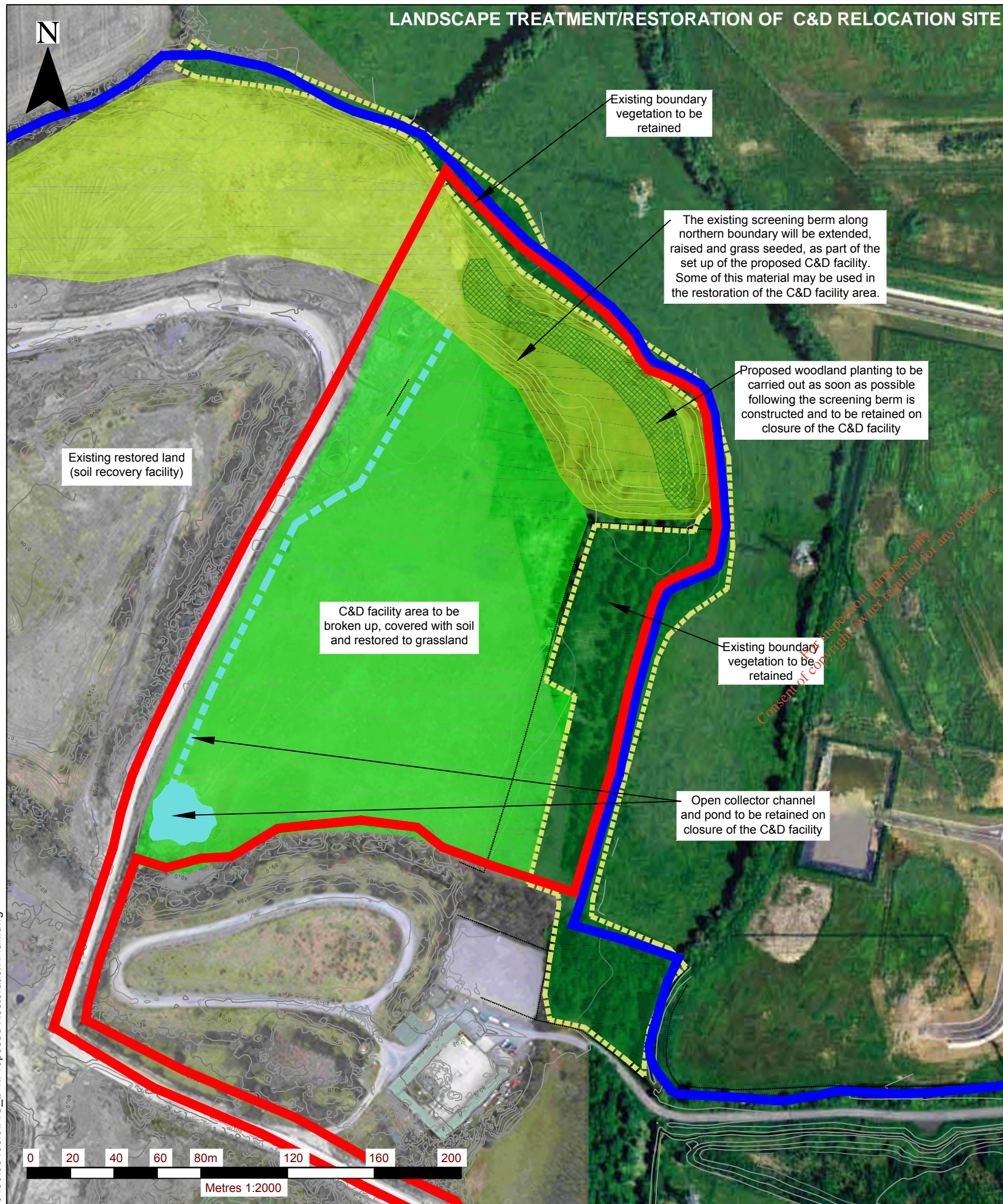
	ROADSTONE LIMITED LAND INTEREST (c. 200.3 ha)
	APPLICATION AREA (c. 8.27 ha)
	STORMWATER DRAINAGE (ROOF RUN-OFF)
	COLLECTOR CHANNEL FOR SURFACE WATER RUN-OFF (FROM HARDSTAND AREA)
	SURFACE WATER RUN-OFF (FOR TREATMENT)

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ROADSTONE LIMITED
 ENVIRONMENTAL IMPACT STATEMENT
C&D WASTE RECOVERY FACILITY
 HUNTSTOWN QUARRY, FINGLAS, DUBLIN 11
RELOCATED C&D RECOVERY FACILITY
 PROPOSED LAYOUT

FIGURE 2-3
 Scale 1:2,000 @ A3 Date DECEMBER 2016

LANDSCAPE TREATMENT/RESTORATION OF C&D RELOCATION SITE



Landscape Proposals (to be carried out as part of the setting up of the relocated C&D Facility):

- The existing berm along the northern boundary will be raised to a level of 83m AOD (note: existing level 82m AOD) and will be extended to meet the existing berm adjoining the western boundary of the application area, using the material to be stripped from the remainder of the site.
- Topsoil and subsoil will be stripped separately and the topsoil will be placed on the berm last. All areas of the berm, which were disturbed in the process, except for the woodland planting area, will be grass seeded.
- Woodland planting to be carried out on the northern slopes of the extended berm, as per the planting mix below. This planting will augment the existing vegetation present along the northern and eastern site boundary, in particular in height, and will help screen the vast majority of the proposed development in view from locations to the northeast (i.e. the elevated section of the N2 in particular).
- As an alternative to the tall feathered trees included in the below woodland mix, it will be attempted to transplant some of the semi-mature trees which are planted in 5 rows along the eastern site boundary onto the screening berm. About 20 trees will be taken from the two westernmost rows of trees, using suitable transplanting equipment for large trees (e.g. a tree spade), ensuring that large parts of the root system will be moved with the tree. This will leave a minimum of 3 rows of semi-mature trees along the eastern boundary intact, which provide effective screening in views from locations to the east.

Restoration Proposals (to be carried out on closure of the relocated C&D Facility):

- All stockpiles, the waste recovery shed and all processing plant and machinery will be removed from the site. The open water channel to the east of the access road along the western site boundary and the pond in the southwestern corner of the site will be retained.
- The hardstanding layer will be excavated and recycled. A replacement cover layer comprising a combined 300mm of topsoil and mineral subsoil will be placed over the exposed in-situ soil. This material may be sourced from the perimeter screening berm around the recovery facility or from other soil stockpiles around the Huntstown Complex.
- The whole area will be graded to fall gently towards the stream to the south of the site and grass seeded.

General Notes:

- All plant handling, planting and establishment works will be carried out in accordance with current best practice (e.g. CPSE - "Handling and Establishing Landscape Plants", available on gohelios.co.uk).
- Works are to take place in the appropriate planting season (e.g. bareroot planting: November to March only) and in favourable weather conditions.
- The tall feathered trees/transplanted semi-mature trees are to be staked appropriately.
- All transplants to be supplied with spiral guards.
- Planting will be carried out by a suitably qualified landscape contractor.
- Establishment maintenance will be carried out for 3 years following the planting works. This will include weed control, replacement planting where required and the adjustment/removal of tree ties and spiral guards.

NATIVE WOODLAND PLANTING MIX:

To be planted at 1.5m centres (2,250sq.m. in total = 1,000 plants). Tall feathered trees (if required, see text above) to be planted near the top of the berm in same species groups of 3. Transplants & container grown plants to be randomly planted in same species groups of 8-12.

No.	Plant Name	Common Name	Height (cm)	Age/Size	%
Tall Feathered Trees					
20	Betula pubescens	Downy birch	175-200	2xTr	2
20	Quercus robur	Pedunculate oak	175-200	2xTr	2
Transplants					
80	Betula pubescens	Downy birch	60-90	1+1	8
150	Corylus avellana	Hazel	60-90	1+0	15
150	Crataegus monogyna	Hawthorn	60-90	1+1	15
150	Ligustrum vulgare	Wild privet	60-80	1+1	15
100	Prunus padus	Bird cherry	60-90	1+0	10
150	Prunus spinosa	Blackthorn	60-90	1+0	15
80	Quercus robur	Pedunculate oak	60-90	1+1	8
Container Grown Shrubs					
100	Ilex aquifolium	Holly	60-80	2Lt	10

NOTES

- Orthomosaic produced from Aerial Photography flown March 2016 by SLR Consulting Ireland (IAA Permit No. 04/2015).
- Orthomosaic was merged with aerial from www.bing.com/maps to show wider area in October 2016.
- Orthomosaic produced using Ground Control Points; Related to Irish Transverse Mercator Coordinate System & OS Malin Head Level Datum.
- The accuracy of the orthomosaics and the digital elevation models (DEM) strongly depends on the flight height, lighting conditions, availability of textures, image quality, overlap, and type of terrain. Contours / 3D data relates to the surface model and not terrain levels. All Dimensions and Levels are to be checked on site. Any deviation or discrepancy from this Orthomosaic to be referred to SLR Consulting Ireland.

LEGEND

- ROADSTONE LTD. LAND OWNERSHIP BOUNDARY
- PLANNING APPLICATION AREA
- EXISTING DENSE VEGETATION ALONG NORTHERN AND EASTERN BOUNDARY TO BE RETAINED
- SCREENING BERM TO BE EXTENDED, RAISED AND GRASS SEEDED
- WOODLAND PLANTING ON NORTHERN SLOPES OF SCREENING BERM
- C&D FACILITY AREA TO BE CLEARED, COVERED WITH SOIL AND GRASS SEEDED
- OPEN COLLECTOR CHANNEL AND POND TO BE RETAINED



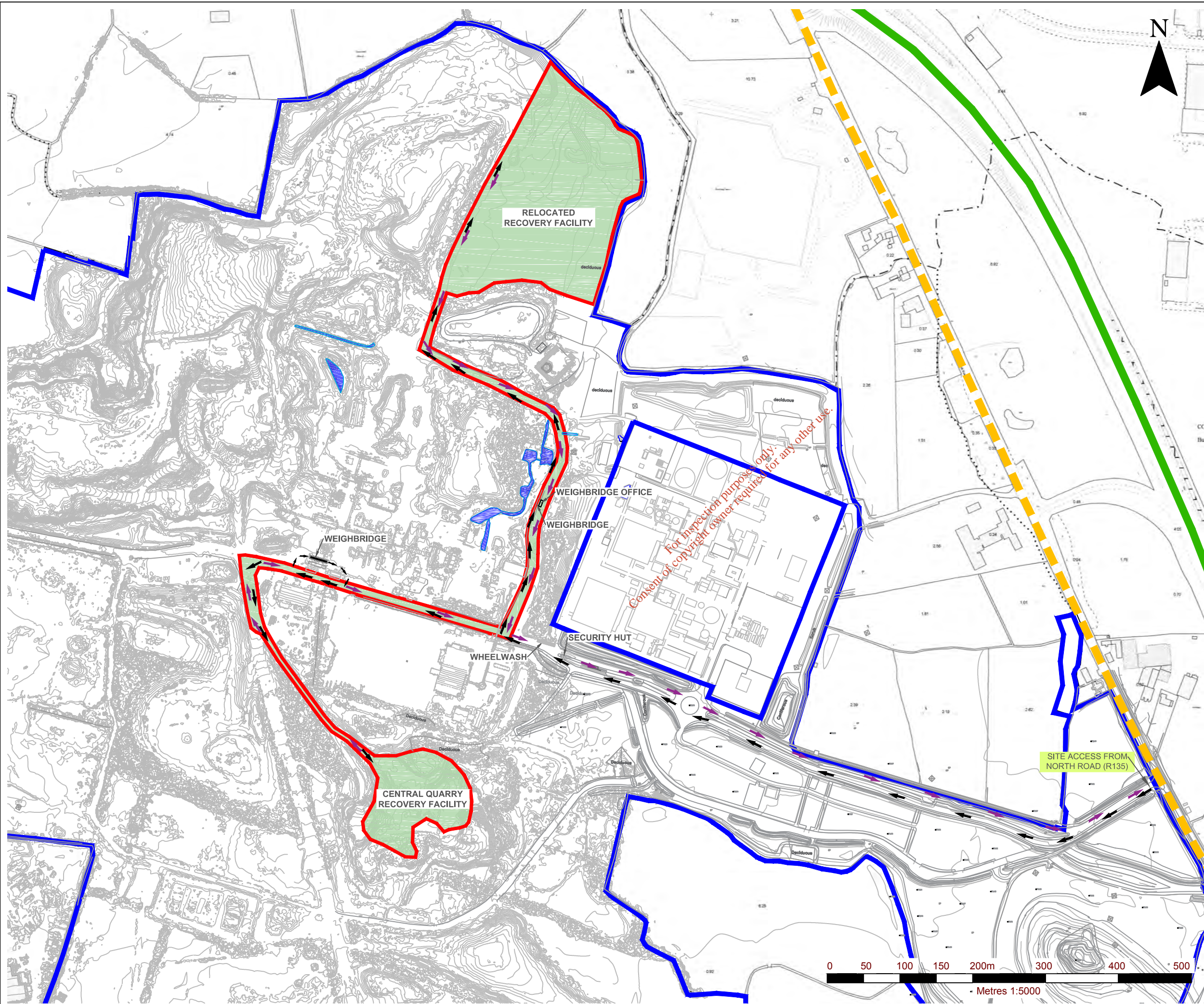
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ROADSTONE LIMITED
ENVIRONMENTAL IMPACT STATEMENT
C&D WASTE RECOVERY FACILITY
HUNSTOWN QUARRY, FINGLAS, DUBLIN 11
LANDSCAPE AND RESTORATION PLAN

FIGURE 2-4

Scale 1:2,000 @ A3 Date DECEMBER 2016

0180.00166.0.FIG_2-5.Internal Traffic Routing around Waste Recovery Facility.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. 8.27 ha)
	NORTH ROAD (R135)
	LOCAL ROAD
	HGV DIRECTION INBOUND
	HGV DIRECTION OUTBOUND

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SITE ACCESS FROM NORTH ROAD (R135)

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ROADSTONE LIMITED
ENVIRONMENTAL IMPACT STATEMENT

C&D WASTE RECOVERY FACILITY
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INTERNAL TRAFFIC ROUTING
AROUND WASTE RECOVERY FACILITY

FIGURE 2-5

Scale 1:5,000 @ A3 Date DECEMBER 2016