



# CONTINUANCE OF USE

AT HUNTSTOWN QUARRY

FINGLAS, DUBLIN 11

ENVIRONMENTAL IMPACT STATEMENT

NON-TECHNICAL SUMMARY

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# NON TECHNICAL SUMMARY

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## INTRODUCTION

- 1.1 This Non-Technical Summary of the Environmental Impact Statement (EIS) provides supporting information to accompany a Planning Application to the Planning Authority by Roadstone Wood Limited in respect of the continuance of use of the existing limestone quarry including continuance of use of all ancillary, processing and manufacturing facilities at the existing Huntstown Quarry Complex, North Road, Finglas, Co. Dublin, beyond October 2014 as permitted by the existing planning permission, P. Ref. F03A/1430 (ABP PL06F.206789).
- 1.2 The location of the application site is indicated on an extract from the 1:50,000 scale Ordnance Survey Discovery series map of the area, reproduced as Figure NTS 1.

## THE APPLICATION SITE

- 1.3 The site to which this Planning Application refers is located within the townlands of Coldwinters, Kilshane, Huntstown, Johnstown, Grange and Cappogue, Co. Dublin. The site is located 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 Wood Ltd. is outlined in blue on a 1:10,000 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.

## THE APPLICANT

- 1.4 Roadstone was founded by the Roche Brothers in the 1930's and became part of Cement Roadstone Holdings (CRH) plc in 1970, following the merger of Roadstone and Cement Ltd.
- 1.5 Roadstone Wood was formed in 2009 by the amalgamation of the three construction materials businesses operated by CRH in Ireland, Roadstone Dublin Ltd., Roadstone Provinces Ltd. and J.A. Wood Ltd. The company is Ireland's leading supplier of aggregates, construction and road building materials and employs several hundred people at 65 locations throughout the country.
- 1.6 Roadstone Wood Ltd. presently operates Huntstown Quarry within guidelines of the Irish Concrete Federation and current best practice for the quarrying industry as set out in the DoEHLG (2004) and EPA (2006) guidelines for the sector. The Applicant is committed to achieving and maintaining environmental standards that can be considered world standard. To this end, the company have established environmental monitoring systems and procedures for all of their operations. ISO 14001 Accreditation was gained by the company on the 4<sup>th</sup> September 2002. The Applicant has endeavoured to maintain a good relationship with the neighbouring community, local businesses and local authorities.

## EXISTING DEVELOPMENT

- 1.7 The site is a working quarry, which was first granted permission in the 1970's. The site can be divided in five separate areas. There are four quarry / extraction areas, described as the north quarry, the south quarry, the central quarry and the western quarry, refer to Figures NTS 2 and NTS 3. The fifth area is the central plant area, which contains offices, workshops, block plant, concrete and tarmacadam plants, block storage areas, all associated with the extraction and processing operations. Mobile processing plant is also located on the floor of the south quarry.
- 1.8 Each of the quarry areas currently being excavated (i.e. the south, north and central quarry areas) are worked on a bench system, whereby the levels are reduced in steps or benches up to 18m in height by means of in-situ blasting of the rock. The material is then moved to the central processing area for crushing and screening or in the case of the south quarry this is carried out by mobile plant on the quarry floor.
- 1.9 All overburden associated with accessing the in-situ rock at each of the extraction locations has already been stripped from the north, south and western quarry areas. This material has been utilised in the existing screening berms around the periphery of the site to screen the site and aid in the reduction of noise and dust impacts on the surrounding area. Further overburden / topsoil stripping is required in the central quarry area. This material will be utilised in ongoing restoration works at the site.
- 1.10 The north quarry and the south quarry are the most worked out to-date, having reached their third level. Extraction in recent years has mainly been concentrated on in the south quarry with smaller volumes being extracted from the north and central quarries. The north quarry has undergone progressive restoration over a number of years with material from the Dublin Port Tunnel and other infrastructure / commercial activities used to restore the eastern part to original ground level.
- 1.11 The main site access runs broadly from the central processing area in a west-east direction to the North Road (R135). To the north of this access road is the Viridian Huntstown Power Station site. The site has a Gas Fired Combined Cycle Gas Turbine Electricity Generating Station. This site is excluded from the application landholding.

## PROPOSED DEVELOPMENT

- 1.12 proposed development will comprise of the continuance of all existing authorised facilities and activities within a planning application area of c.167 hectares as followings:
- Extraction, crushing, screening and processing of rock (authorised by Reg. Ref. No. F03A/1430 / PL06F.206789) from the Northern, Western, Central and Southern Deposits for a period of 35 years.
  - Total extraction area of c.55.9 hectares within a total landholding of c.211 hectares
  - Crushing, Screening and Processing Plant

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- Block Manufacturing Facility
- Block Yard
- Paving Display Centre & Offices
- Machinery Maintenance Building
- Offices
- Staff Facilities
- Laboratory
- Concrete Batching Plant & Associated Plant
- Asphalt Plant & Associated Plant
- Stockpile Materials Shed associated with Asphalt Plant, granted under P. Reg. Ref. F06A/0923 (*ABP Ref: PL06F.219655*).
- Weighbridge, Bunded Fuel Storage & Oil Interceptor
- Security Huts (3 no.), Truck Wash Bays & HGV Load Spray Bars (P. Ref. FW09A/0099 in respect of amendment to Condition 14 of F03A/1430)
- Bord na Mona Moving Bed Biological Reactor & Percolation Area
- Stockpiles Storage Areas
- Plant Storage Yard
- Stables (22 no.) & Horse exercise paddock
- Existing Site Accesses (2 no.) onto the R135 North Road (Revised Entrance P. Ref. F06A/0164 & *ABP Ref: PL06F.217413P*) & Kilshane Road.
- Restoration of any worked out extraction areas, including for 5 years after the cessation of quarrying activities.
- All other ancillary buildings, plant and facilities for the production of building products, including aggregates, ready-mix concrete, asphalt, tarmacadam and architectural blocks and all ancillary site works.
- To extend the current operational hours at the site by an additional one hour in the morning resulting in a commencement time of 06.00 hours.
- The applicant would propose that as part of this planning application that all existing ancillary facilities be retained indefinitely for the duration of extraction operations at the site. Therefore, any future planning applications would relate only to the extraction areas and be controlled by a time limit as imposed by way of a planning condition.
- The proposed continuance of the above activities will be carried out at the existing Huntstown Quarry Complex, located in the townlands of Coldwinters, Kilshane, Huntstown, Johnstown, Grange and Cappogue, Finglas, Co. Dublin.

### EXTRACTION ACTIVITIES

- 1.13 Extraction and processing of rock at Huntstown Quarry is typically carried out as follows:
- 1.14 Where still in-situ, overburden is stripped in advance of rock blasting in accordance with the quarry development plan. Stripped overburden is used to construct screening berms at the periphery of the quarry in order to screen the quarry workings.

- 1.15 Limestone is extracted using conventional blasting techniques. Prior to drilling, the face is surveyed in order to ensure safe and efficient blasting. Drilling is then carried out in accordance with the blast design. Finally, the holes are filled with bulk emulsion explosives and the blast is carried out. All blasting is carried out in accordance with the health & safety regulations, and environmental guidelines for the sector.
- 1.16 The fragmented rock is processed using both mobile and fixed processing plant located within the quarry.
- 1.17 The aggregate products are stored in stockpiles located within the quarry.

### **BLASTING ACTIVITIES**

- 1.18 Blasting will continue to be used within the quarry to fragment the stone prior to processing (crushing / screening etc.). A programme of mitigation measures will continue to be implemented to ensure that the blasting operations do not result in any significant impact on residential amenity of the area, refer to EIS Section 9 – Noise & Vibration.
- 1.19 The blasting practices used for blasting operations at Huntstown Quarry are currently in line with best industry practice. Roadstone Wood Ltd. employs a dedicated blasting team who ensure that all new technologies are used where appropriate.
- 1.20 There are currently no proposed changes to working operations at Huntstown Quarry.
- 1.21 Each working area will continue to be worked in a manner that minimises the risk of any potential flyrock.
- 1.22 The quarry development will continue to monitor groundborne vibration and air overpressure emission limit values applied at the nearest sensitive location (e.g. residential property), as set out in the DoEHLG (2004) and EPA (2006) guidelines for the sector, refer to EIS Section 9.
- 1.23 Historically, blasting at the site would have been carried out 1 – 2 times per week. Owing to more efficient blasting procedures implemented at the site, blasting is now carried out less frequently.

### **QUARRY DESIGN**

- 1.24 The proposed quarry extraction areas cover approximately 55.9 hectares.
- 1.25 The quarry is being developed over four operational quarry areas designated as the northern, western, central and southern deposits, refer to Figure NTS 3.
- 1.26 The quarry faces will be divided into a number of benches with a width of 5 to 10 metres and a maximum height of 20m.

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- 1.27 The proposed quarry floor levels for each of the four quarries will be north quarry c.23mOD; west quarry c.25mOD; central quarry c.18mOD and the southern quarry c.-65mOD.
- 1.28 The boundaries of the four working quarries are already defined at Huntstown and are shown on Figure 2-1. Quarrying will continue in these established deposits using the same extraction methods in accordance with the quarry production plan. In terms of the overall volumes, it is anticipated that an average of c.1 million tonnes will be extracted annually over the life of the development of 35 years, subject to market conditions.

### SITE ACCESS

- 1.29 Vehicular access into Roadstone Wood's landholding at Huntstown is primarily via an access road on the eastern site boundary 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.
- 1.30 A new site entrance was granted permission in 2006 (P. Reg. Ref. F06A/0164 & ABP Ref. PL06F.217413 for a new 7.3m wide vehicular access located approx. 140 metres to the north of the old permitted access at North Road. The new access is now used by quarry traffic and Huntstown Power Plant traffic with the former access onto the North Road now closed.
- 1.31 Access to the site can also be made via a local (county) road, known locally as the Kilshane Road, to the west of the landholding, refer to Figure NTS 2.

### SITE SECURITY

- 1.32 Access to the existing quarry and construction materials production facilities is controlled by security barriers along both the access roads leading off the North Road and Kilshane Road. These barriers are manned by security staff on a 24 hour, 7 day a week basis.
- 1.33 At the present time, Roadstone Wood's property boundary is closed off by post and wire fencing and/or hedgerows. Regular inspections of the entire property boundary are undertaken and where necessary existing fencing is repaired and/or replaced and hedgerows are strengthened or fortified by additional planting.

### TRAFFIC CONTROL

- 1.34 Traffic to and from the site at present travel along the North Road (the R135 Regional Road and former N2 National Primary Road). Traffic coming from Dublin City Centre or the nearby M50 Motorway turns onto the N2 Dual Carriageway and travels a short distance before turning (west) off a dedicated slip road onto the North Road. 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. Traffic travelling south from Ashbourne to the site exits the N2 Dual Carriageway at the Cherryhound Interchange and continues south along the North Road until it turns right (west) onto the access road leading

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into the Huntstown Quarry complex. Existing notices along the North Road and Kilshane Road provide advance warning to drivers that there is an existing quarry facility entrance ahead.

- 1.35 Internally, within the Huntstown Complex, warning notices, direction signs and speed restriction signs are in place along paved and/or unpaved roads leading to and from the central infrastructure and production area. Additional direction and speed restriction signs are erected between this area and the active quarry extraction areas.
- 1.36 All HGV traffic entering and egressing the application site are required to pass over the existing weighbridge facility which is located along the access road and shown on Figure NTS 2.
- 1.37 Provision for employee and visitor car parking is currently provided on a paved ground area surrounding the existing office building at the central infrastructure and production area in the centre of the Huntstown quarry complex. Existing paved and unpaved haul roads across the site are indicated on the existing site layout plan in Figure NTS 2, together with the location of the car parking area.
- 1.38 The access road and car parking areas surrounding the office building are sealed by concrete. Surface water falling across these areas is currently intercepted by drains which ultimately discharge via the existing settlement ponds to a tributary stream of the Ward River, to the north of the central processing / infrastructure area.

### **WEIGHBRIDGE**

- 1.39 All heavy good vehicles (HGVs) accessing the site are required to pass over the existing weighbridge which is located at the infrastructure and production area in the centre of the Huntstown quarry complex.
- 1.40 In order to track and record the amount of material leaving the application site, all loaded HGV traffic is again directed to the existing weighbridge. Records of all loaded HGV traffic is maintained for company auditing purposes.

### **FUEL STORAGE**

- 1.41 Fuels for the existing site operations are stored in existing fuel storage tanks within the Huntstown facility which are bunded to provide a storage volume equivalent to 110% of the tank storage volume. These tanks are constructed on a sealed concrete surface.
- 1.42 A small bunded area for waste oils is provided within the maintenance shed. Oil collected in tanks will be emptied at intervals by a licensed waste contractor and disposed off-site at a suitably licensed waste facility.

### **SITE ACCOMMODATION**

- 1.43 The existing site office and canteen at Huntstown will continue to be used. All administration and management functions for the site are based at the site



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office. Staff changing, washing and cooking facilities are provided at the separate canteen facility, located east of the site office and weighbridge.

### SITE SERVICES

- 1.44 Electric power, lighting and heating are all currently provided via the electricity network to existing site offices and staff welfare facilities at Huntstown.
- 1.45 There are existing toilets, washbasins and sink units at the site offices in the central infrastructure area at Huntstown Quarry. There are further toilets, washbasins and sink units at the canteen facility. Wastewater from both these locations is currently collected and fed via a sewerage pipe to the on-site effluent treatment system (Bord na Mona MBBR Aeration System) which services the Huntstown Complex.
- 1.46 A potable water supply is provided to the site office, canteen and construction materials production facilities via a Local Authority water main.
- 1.47 High voltage overhead electricity transmission cables (38kV) traverse the application site, 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.
- 1.48 A gas pipeline runs to the nearby electricity generating plant operated by Huntstown Power (Viridian), though this does not cross the application site.
- 1.49 A range of fire extinguishers (water, foam and CO<sub>2</sub>) are kept at the site office to deal with any localised small scale fires which might occur. Additional fire-fighting capacity is provided by storing water in a mobile bowser at the central infrastructure area.

### OPERATING HOURS

- 1.50 The current operational hours at the site are 07.00 hours to 18.00 hours each weekday (Monday to Friday) and on Saturdays. These operating hours are consistent with the operational hours set by Condition 11 of the 2004 planning permission for quarrying and production of construction materials at the Huntstown Quarry complex.
- 1.51 As part of this planning application the applicant would seek to extend the current operational hours at the site by an additional one hour in the morning resulting in a commencement time of 06.00 hours.

### SEWERAGE & SURFACE WATER DRAINAGE

- 1.52 Existing site staff at the Huntstown complex use toilet, hand washing and welfare facilities provided at the existing site offices or staff canteen.
- 1.53 The only surface water drainage infrastructure at the site exists across the central infrastructure area where aggregate processing and concrete production activities are currently concentrated. Rain falling across the remainder of the application area either:

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- a) runs over unsealed ground into the existing quarry void and a small pond on the eastern side of the quarry floor;
  - b) percolates down through the existing soil / rock at the ground surface as recharge to groundwater, at which point it joins groundwater flow toward the quarry face.
- 1.54 At the present time, groundwater levels at the North Quarry are lowered by means of sumps in the quarry floor. Surface water and dewatered groundwater are collected in the pond on the quarry floor and pumped to the ground surface via an existing pipe network.

### ENVIRONMENTAL MANAGEMENT SYSTEM & MONITORING

- 1.55 Roadstone Wood Ltd. has implemented an EMS at Huntstown Quarry. This includes the ongoing environmental monitoring programme.
- 1.56 Roadstone Wood Ltd. is a member of the Irish Concrete Federation (ICF), and complies with the requirements of the ICF Environmental Code (October 2005).
- 1.57 In addition, Roadstone Wood Ltd. and Huntstown Quarry comply with all relevant statutory and regulatory guidelines in terms of environment and health and safety. This includes implementation of current best practice mitigation measures as set in the DoEHLG (2004) and EPA (2006) guidelines.
- 1.58 There is an existing environmental monitoring programme in place at Huntstown Quarry covering:
- Dust deposition
  - Noise
  - Blasting
  - Surface water
  - Groundwater

### RESTORATION PROPOSALS

- 1.59 The extraction of aggregates is essentially a temporary use of lands, which ceases when the deposit is fully exhausted or it is no longer economically viable to continue extraction. Upon the cessation of extraction operations the opportunity arises to return the worked lands to a beneficial after-use by infilling of the quarry voids to original ground levels, thereby eliminating the presence of large open water areas that could create a potential increase in bird numbers in the area and subsequent hazard to Dublin Airport.
- 1.59 The backfilling of the ultimate quarry voids will be through the importation of inert soils and stone which is deemed to constitute inert waste recovery through deposition for the purposes of land improvement or restoration. These recovery operations will be through the issuing of a waste licence from the Environmental Protection Agency (EPA).

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- 1.60 A current waste licence application has been submitted to the EPA for an exhausted portion of the north quarry, outside the proposed ultimate extraction footprint for the north quarry (EPA Ref. No. W0277-01).
- 1.61 The proposed recovery of inert soils at the four quarry areas will provide for complete backfilling of large open voids above the groundwater table, facilitate the restoration of the worked out lands to agricultural use and improve protection of the underlying groundwater resource, which is currently classified as 'extremely vulnerable' due to the absence of any protective soil cover.
- 1.62 Whilst the restoration plan describes the general pattern quarry reinstatement and the associated physical processes of restoring ground levels over the site, it does not address the issue of a post quarrying use of the said lands. Given the close proximity of the quarry site to Dublin, the M50, M1, M2 and M3 Motorways, the site lends itself to a possible future use of light industrial / science and technology park / business campus development similar to existing land zoning around the periphery of the site.
- 1.63 Given the longevity of the proposed quarrying operations and the current available reserves at the site, any final post-quarrying plan will be prepared as the quarry enters into the final phase of its working life and the current restoration plan will form the basis for the post-quarrying land-use plan.
- 1.64 Backfilling of the quarry void spaces will progress upwards from the former quarry floor and on completion; the restored site will be returned to its original ground level and will merge back into the surrounding pastoral landscape.
- 1.65 An outline of the proposed restoration scheme and the final ground level contours are shown in Figure NTS 4. In addition to imported materials, some soil in existing screening berms and/or stockpiles across the existing site will be used to backfill the quarry. The worked out areas of the quarry will be restored to a beneficial agricultural after-use using imported inert soils, and overburden and topsoil stored on site from previous stripping operations.
- 1.66 On final completion of the restoration, a cover layer of subsoil (approximately 350mm thick) and topsoil (approximately 150mm thick) will be placed and graded across the backfilled mineral soil. This will then be rolled and planted with grass in order to promote stability and minimise soil erosion and dust generation. The proposed restoration scheme also envisages that hedgerows will be planted across the restored areas in an effort to re-establish some of the former field boundaries which pre-dated the development of the site as a quarry.

## HUMAN BEINGS

- 1.67 The most critical sensitive receptors in the vicinity of the application site comprise of thirteen private residential properties, along with the Millennium Business Park which lie within 250m of the application site boundary. Eleven other residential properties, a dog kennelling business along with the Northwest and Rosemont Business Parks are located at a greater distance from the application site (up to 500m).

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- 1.68 Quarrying and concrete production activities have been undertaken across Roadstone Wood's existing landholding at Huntstown for approximately 40 years. As this planning application is for the continuance of use of the existing operation, the impact of the continued activities on human beings, principally those arising from rock extraction, processing operations and haulage of materials off-site will be similar to those already being experienced.
- 1.69 The need for the continued operation of the quarry development is driven by the continued demand for the company's aggregate products. The continued operation of the quarry development, beyond 2014 as permitted by planning permission F03A/1430 / PL06F.206789, will have a positive impact by providing continued long term sustainable employment for a work force of c.49 personnel directly employed at the site and a further 12-15 personnel employed in associated and downstream activities.
- 1.70 The continued operation of the development will make a significant positive contribution to the local economy in terms of economic development and investment, both in terms of employment and ongoing servicing and maintenance.
- 1.71 Potential negative impacts on human beings and amenity of the area arising from the continued development relate mainly to potential nuisance from noise, dust, traffic, and visual issues.
- 1.72 The site boundaries together with perimeter screening berms and the separation distances between dust and noise sources and receptors provide significant attenuation of dust and noise generated by operations and therefore minimise the potential impacts that may be experienced at nearest sensitive receptors.
- 1.73 The Traffic Assessment provided in Section 13 of the EIS has concluded that the application site is well located in terms of access to the strategic highway network and all HGV traffic would be routed on roads considered suitable and which already accommodate frequent HGV movements.
- 1.74 The vast majority of the proposed extraction works will take place within the existing footprints of the north, western, central and south quarry of the Huntstown complex. The impact on the landscape will therefore be minor.
- 1.75 None of the extraction works will be visible from any location outside the development site and there will therefore be no visual impact on any views from the surrounding landscape.
- 1.76 The proposed restoration of the quarry voids by infilling with inert material and returning the site to a beneficial agricultural and ecological land use will have a positive impact on the landscape in the long term.

### ECOLOGY (FLORA & FAUNA)

- 1.77 Baseline ecological data was collated through a combination of desk-based study and field surveys consistent with current standard methodologies and published good practice guidelines.

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- 1.78 The desk-based study was undertaken and involved collating data from a number of organisations and examining published data relating to the application site and in a defined search area centred on this site. Data included details statutory and non-statutory designated nature conservation sites and protected and notable species within a 2km radius of the site.
- 1.79 Specialist surveys were carried out during 2010 and 2011 for habitats and for the collection of data on the presence of, and/or the habitat potential for, protected species of fauna.
- 1.80 The proposed development site is not subject to any statutory nature conservation designation and there are no such sites within a 2km radius of the development site.
- 1.81 The majority of woodland on the quarry site consists of areas of broadleaved plantation woodland typically consisting of relatively young fast growing species including alder, ash, sycamore and some willow planting that is supplemented in places with further planting of predominantly broadleaved species such as birch, common hawthorn, blackthorn, dogwood, sessile oak and whitebeam as well as some conifers particularly along the south-eastern boundary of the South Quarry. These plantation woodlands provide screening of the quarry from the surrounding land and from within operational areas inside the quarry site.
- 1.82 Natural regeneration of scrub is evident across the site predominantly consisting of ash, common hawthorn and goat willow particularly on the lower slopes of older spoil mounds.
- 1.83 Grassland habitats are widely distributed across the site consisting of broad range of grassland communities.
- 1.84 During the habitat surveys of the development site no protected or rare species of flora were recorded on, or immediately adjacent the development site.
- 1.85 Huntstown Quarry does not have any statutory designations and no such sites lie within a 2km radius of the quarry site.
- 1.86 The quarry site covers a large area of land that supports a wide range of habitats most of which have low overall ecological value except for areas of dry calcareous and neutral grassland, that typically support a good diversity of species and hedgerows most of which are species poor but fundamentally are a resource with ecological value. Based on the size of the site, the habitats present and the known and potential species that it supports it is considered that Huntstown Quarry at least “Local” value with component calcareous grassland of up to “District” value.
- 1.87 Due to the fact that the proposed development is for a continuation of quarrying and associated operations only, and providing all existing measures and controls relating to this site are maintained, no additional mitigation measures to those already in place at the site are proposed or deemed necessary.

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- 1.88 Areas of high ecological value and those currently managed for wildlife will continue to be monitored on a regular basis to determine whether the continuation of quarrying is having negative effects and to ensure appropriate management of these areas is undertaken to maintain their biological interest.
- 1.89 The continuation of quarrying and associated operations at Huntstown Quarry will not require any further taking of land outside the already active permitted operational areas and as such is unlikely to have significant ecological impact on the existing baseline ecological conditions within the application site, or on the wider surrounding area, over and above the impacts already experienced both temporally or spatially from the operations of the quarry.

### SOILS & GEOLOGY

- 1.90 Topsoil (the upper layer of soil capable of sustaining vegetation and crop growth) was previously stripped from the site in order to facilitate the continued development of the quarry and is currently stockpiled in mounds across and around the existing quarry site. The only remaining in-situ soil to be stripped at a future date relates to that of the central quarry.
- 1.91 Soil mapping indicates that the lands surrounding the Huntstown Quarry complex comprise well-drained soils which are suitable for a wide range of agricultural activity, generally grassland or tillage and some poorly drained soil which have more restricted uses, principally as seasonal grassland.
- 1.92 Site inspections indicate that the subsoil profile comprises a significant amount of Made Ground (soil disturbed or placed by human activity) over limited thickness of glacial till and/or rock. There is no evidence of soil contamination at the site.
- 1.93 Most of the Made Ground arises from historical and ongoing extractive activity, principally overburden removal and stockpiling or installation of fixed plant and infrastructure. The effect of this is that few areas of undisturbed soil or subsoil remain across the Huntstown Quarry complex.
- 1.94 Published geological maps indicate that the rock around the application site comprises limestones of the Lucan, Feltrim, Malahide and Tober Colleen Formations.
- 1.95 Information on the solid and drift geology of the Huntstown area and its surrounds was collated and evaluated. Subsequent to this data compilation and review site visits were undertaken to review the solid and drift geology in the existing quarries and adjacent areas.
- 1.96 A drilling program was carried out in July 2010 to install six groundwater monitoring wells. Rock chip samples from this drilling were collected and have been examined to assist in assessing the geology in the Huntstown area.
- 1.97 The GSI 1:100,000 geology map sheets 13 and 16 show a complex geology. The site is underlain by the Malahide Formation in the southern part of the

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site. This is overlain to the northwest by Waulsortian Limestones of the Feltrim Limestone Formation which is, in turn, overlain to the northwest by the Tober Colleen Formation. The Tober Colleen Formation is in faulted contact with the Malahide Formation to the northwest, the Malahide Formation in this area reverse faulted to the south over the Tober Colleen.

- 1.98 The Geological Survey of Ireland has advised 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, to the south of the application site has been identified for future designation as a geomorphological / geological Natural Heritage Area (NHA). This geological contact will not be impacted by the proposed development.
- 1.99 The nature of the development will entail blasting and removal of bedrock. The existing quarry footprints will not be significantly extended, therefore no large-scale removal and placement of soil and overburden is anticipated. Thus there will be a direct and irreversible impact on the existing in situ bedrock.
- 1.100 The development will not have an indirect impact on the geological aspects of the environment outside the footprint of the quarry area. Groundwater aspects of the quarry development are assessed in Section 6 of the EIS.

### WATER

- 1.101 Bedrock aquifer maps indicate that the Huntstown Quarry complex straddles bedrock formations which are generally considered to be locally important karstified aquifers. Of the three bedrock formations exposed at Huntstown, both the Waulsortian and Malahide Formations are considered to be locally important aquifers, while the Tober Colleen Formation is considered to be a poor aquifer.
- 1.102 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 bedrock aquifer. Recent groundwater sampling and testing indicate that groundwater quality at the site is generally good, with quarry operations shown to have had no significant impact on existing groundwater quality.
- 1.103 The existing water management system is an integral part of the quarry operation. The water management system is divided into six main components, which are detailed below:
- a) Two surface watercourses drain from the site. One stream drains the southern part of the site to the Tolka River and the other stream drains the northern part of the site to the River Ward.
  - b) Rainfall infiltrates to ground across the majority of the site. Rainfall from roadways, hard standing and roof areas all run-off is allowed to infiltrate to ground. Rainfall incident to the quarry excavations is routed via channels to main quarry sumps. Some rainfall incident with excavations infiltrates to ground.

## NON TECHNICAL SUMMARY

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- c) Groundwater input to excavation areas is routed by channels and collected central sumps. From the sumps water is pumped to settlement lagoons for treatment prior to being discharged.
  - d) Process water is used in crushers to assist crushing and prevent dust generation. Process water for crushing, screening and washing and is sourced at the quarry sumps. Process water for concrete products is sourced from the northern surface water discharge.
  - e) An existing proprietary treatment system and percolation area treats foul water from the site. It is proposed to continue using this wastewater treatment system for the development.
  - f) General water supply for the quarry offices and canteen facilities is from a mains supply.
  - g) An oil interceptor has been installed adjacent to the bunded fuel storage in the central processing area, with the clean outfall directed to the central quarry void area.
- 1.104 The potable water demand at Huntstown Quarry is satisfied by a Local Authority mains supply. All other water requirements at the site (i.e. for concrete, aggregated washing and processing) are sourced from sumps on the quarry floor which collect groundwater ingress and run-off water.
- 1.105 At the quarry itself, water abstraction for the concrete, aggregate washing and processing is sourced from sumps on the quarry floor that collect groundwater ingress and run-off water. These sumps are pumped when required to maintain dry conditions on the quarry floor.
- 1.106 There will be no significant residual impacts with respect to groundwater and/or surface water provided the appropriate mitigation measures outlined in Chapter 6 of the EIS are implemented at the site. It is therefore considered that the proposed development, with mitigation measures, will have no significant adverse impact on groundwater and/or surface water.

### CLIMATE

- 1.107 The development is not of sufficient scale to have any direct impacts on the regional or local climatic conditions. Conversely, the development is not affected to any significant degree by the prevailing weather conditions of the area.
- 1.108 There is no requirement to carry out mitigation measures or monitoring within, or in the vicinity of the development, in relation to climate.

### AIR QUALITY

- 1.109 The principal sources of existing air and dust emissions in the receiving environment around the site of the facility are those associated with:



## NON TECHNICAL SUMMARY

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- a) quarrying of limestone bedrock;
  - b) aggregate processing activities (crushing and screening);
  - c) readymix concrete and asphalt production plant;
  - d) road traffic along the local road network, and the N2 Dual Carriageway and M50 Motorway in particular.
- 1.110 The dust from quarry operations is fine particles of soil, clay and the principal rock type. The dust can be described as inert and harmless in the chemical context. In particular, they would not include any harmful compounds.
- 1.111 The impact, if any, will be direct, temporary and non-cumulative and largely confined to the quarry area. The potential for dust impact will be low due to the natural attenuation provided as dust falls out of suspension and is deposited on the ground.
- 1.112 A dust deposition monitoring program has been established at the site. This comprises five “Bergerhoff-Type Dust Deposit Gauges” located around the site.
- 1.113 The results of dust deposition monitoring to date show that the dust deposition levels at the existing quarry generally comply with the DoEHLG (2004) / EPA (2006) recommended dust deposition limits.
- 1.114 A number of mitigation measures are / will be put in place to minimise the generation / migration of fugitive dust and to ensure that the site development, extraction, processing and restoration operations comply with the recommended emission limit value stated above. These mitigation measures are in accordance with the ‘*best practice / mitigation*’ measures described in Section 3.3 of the DoEHLG (2004) guidelines and include:
- 1.115 Stone Extraction / Processing:
- a) Mobile processing plant (crushing, screening and washing) is used in the existing quarry. These plants are located within the quarry close to the extraction area thereby minimising the internal haulage requirements.
  - b) The quarry faces act as screening barriers and minimise the migration of any fugitive dust arising from the processing activities within the quarry extraction area.
  - c) The mobile crushing and screening plant is fitted with dust suppression systems.
  - d) All plant and machinery are regularly maintained.
  - e) Dust suppression (e.g. water bowser) is utilised to suppress dust on internal haul road surfaces, in dry weather.
  - f) Existing site boundary hedgerows will be retained. These together with the existing vegetation and landscaped screening bunds will eliminate /

## NON TECHNICAL SUMMARY

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minimise migration of dust beyond the site boundary (refer to EIS Section 10).

- g) Where necessary, stockpiled products will be sprayed with water in periods of dry weather.
- h) Overburden storage areas and landscaped screening berms will be constructed with relatively low slope angles to reduce wind turbulence along their surface. The mounds will be re-vegetated as quickly as possible and will further mitigate against the migration of dust beyond the site boundary.
- i) Internal haul roads will be maintained to minimise dust generation.
- j) Vehicle speeds will be controlled on all internal haul roads.

### 1.116 Site Entrance / Access

- a) The internal road between the weighbridge and the entrance is paved.
- b) Vehicle speeds are controlled on the access road.
- c) If necessary, the section of public road in the vicinity of the site entrance will be cleaned regularly using a vacuum road sweeper.

1.117 Roadstone Wood Ltd. will continue to carry out the dust deposition monitoring programme on site on a monthly basis.

1.118 The results of the monitoring will be submitted to Fingal County Council on a regular basis. These records will be available for inspection at the offices of the planning authority by interested third parties.

## NOISE & VIBRATION

1.119 The principal noise sources generated by quarrying activities at Huntstown with respect to the nearest residences are machinery (excavators and loading shovels), the processing plant, loading and transport of aggregates and drilling of blast holes.

1.120 The existing environment is characterised by undertaking baseline measurement surveys at a number of locations at and immediately beyond the application site.

1.121 The purpose of the baseline study is to assess the existing levels of noise and vibration at the site. This data was collected using noise monitoring surveys and blast monitoring records for previous blasts. This data was then analysed to determine the current noise and vibration conditions at the site.

1.122 Noise surveys were undertaken on the 19<sup>th</sup> April 2010 and 9<sup>th</sup> June 2011 as part of the baseline study. Continuous noise monitoring was undertaken by Roadstone Wood Ltd in accordance with International Standard ISO 1996: *Acoustics Description and Measurement of Environmental Noise*.

## NON TECHNICAL SUMMARY

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- 1.123 Blasting operations at the existing quarry are monitored. Groundborne vibration and air overpressure levels are measured and recorded for each blast.
- 1.124 The following mitigation measures are / will be put in place at the quarry and are in accordance with the '*best practice / mitigation*' measures described in Section 3.2 of the DoEHLG planning guidelines and Section 3.5 of the EPA Environmental Management Guidelines.
- a) Provision of landscaped screening berms provides acoustic as well as visual screening.
  - b) Regular maintenance of all plant and haulage vehicles is an integral part of site management and is important in helping to minimise noise impact.
  - c) Stripping of topsoil / overburden materials only takes place during quarry operating hours.
  - d) Preservation of existing external hedgerows and site topography provides acoustic as well as visual screening.
  - e) Internal haul roads and access roads have as low a gradient as possible to reduce engine / brake noise from heavy goods vehicles, and the access road from the site entrance to the weighbridge office is paved.
  - f) Use of mobile processing plant enables the processing activities to be carried out within the quarry excavation area, where the quarry faces will provide additional acoustic screening.
  - g) Enclosing plant / machinery where possible.
- 1.125 The following measures have been / will be implemented at Huntstown Quarry to minimise disturbances due to blasting operations. These mitigation measures are in accordance with the '*best practice / mitigation*' measures described in Section 3.2 of the DoEHLG (2004) guidelines.
- a) Blasting is carried out between the hours of 09:00 hrs to 18:00 hrs from Monday to Friday (except in emergencies or for health and safety reasons beyond the control of the operator. A blast must be carried out on site on the specified day as concerns over security does not allow for explosives to be stored on site. In exceptional circumstances, due to unforeseen circumstances (e.g. late delivery or security) a blast may be delayed or brought forward).
  - b) There is no blasting carried out on Saturdays, Sundays or public holidays.
  - c) Inhabited dwellings within 500 metres of a blast will be given advance notice when blasting operations are due to take place.
  - d) All blasting operations are carried out by a certified 'shotfirer'.
  - e) The optimum blast ratio will be maintained and the maximum instantaneous charge will be optimised.

## NON TECHNICAL SUMMARY

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- 1.126 There is an existing noise monitoring programme in place at the site. Noise monitoring will continue to be carried out at the site at four locations. The results of the noise monitoring will be submitted to Fingal County Council for record purposes. The scope of the noise monitoring will be reviewed annually, and subject to agreement of Fingal County Council, it may be amended in the light of previous monitoring results.
- 1.127 Monitoring of blasts (both for groundborne vibration and air overpressure) will continue to be carried out at the nearest inhabited dwelling (subject to permission). The blast monitoring results will be submitted on a regular basis to Fingal County Council for record purposes. The scope of the blast monitoring will be reviewed annually, and subject to agreement of Fingal County Council.

### LANDSCAPE & VISUAL EFFECTS

- 1.128 Landscape and visual effects are independent but related issues; landscape effects are changes in the landscape, its character and quality, while visual effects relate to the appearance of these changes and the resulting effect on visual amenity. Wherever possible, identified effects are quantified, however the nature of landscape and visual impact assessment requires interpretation by professional judgement. In order to provide a level of consistency to the assessment, the appraisal of sensitivity and the prediction of magnitude and assessment of significance of the residual landscape and visual effects have been based on pre-defined criteria, as described further preceding the relevant sections of this report.
- 1.129 The landscape and visual baseline study has involved a desktop study, field work, data processing and analysis.
- 1.130 The Huntstown Quarry complex is fully located within the Low Lying Agriculture Character Type. This LCT is described as: *'an area characterised by a mix of pasture and arable farming on low lying land with few protected views or prospects. The area has an open character combined with large field patterns, few tree belts and low roadside hedges. ...'*
- 1.131 Mature hedgerows mark almost all boundaries surrounding the development site as well as some of the boundaries within the quarry complex. In some places, in particular along the boundaries with the Kilshane Road and Cappagh Road, dense screen planting blocks and screening berms block views into the site.
- 1.132 The landscape surrounding the site comprises a mix of small to medium sized agricultural fields bound by mature hedgerows, as well as numerous industrial estates and business parks. There are a number of isolated private properties along local roads surrounding the site, however any larger residential areas are located at a minimum distance of 2km, to the southeast across the M50 Motorway (in Finglas West) and to the southwest at Corduff.
- 1.133 The generally flat landscape around Huntstown does not include any unique or highly scenic features.

## NON TECHNICAL SUMMARY

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- 1.134 The Fingal Landscape Character Assessment states that the Low Lying Character Type, within which the site is located, is of low sensitivity. The site survey confirmed that the landscape immediately surrounding the development site is of low quality and it is not protected by any landscape designations. It is therefore considered that the site and area surrounding it is of LOW sensitivity to change.
- 1.135 Apart from a section of the site for the western quarry, the screening berms and boundary vegetation are the only parts of the development site visible in views from the roads surrounding the site. The site for the western quarry, which has been previously stripped but not yet quarried, can currently be glimpsed through a small section of the boundary railings along Cappagh Road. The existing voids of the north, central and south quarries cannot be seen from anywhere in the surrounding landscape, due to topography and intervening vegetation.
- 1.136 Due to the flat topography of the general area in combination with the many mature hedgerows, as well as the large buildings within the neighbouring industrial estates/business parks, views within the study area are generally restricted to the nearest obstacle. The only slightly elevated vantage points within the study area are a number of flyovers, e.g. the N2 over North Road to the northeast of the development site and Cappagh Road over the M50 to the south. However, the existing quarry voids cannot be seen, even from these more elevated viewpoints.
- 1.137 The vast majority of the proposed extraction works will take place within the existing footprints of the north, central and south quarry, as well as the western quarry footprint of the Huntstown complex, as indicated of Figure NTS 3. The impact on the landscape will therefore be minor.
- 1.138 None of the extraction works will be visible from any location outside the development site. Only the construction of a screening berm and planting works along parts of the western boundary will temporarily be visible from a small number of viewpoints. However, these works will ensure that all extraction works will be permanently screened from public areas and the additional planting will have a positive effect on views from adjoining roads.

## CULTURAL HERITAGE

- 1.139 This study is an assessment of the known cultural heritage including the archaeological, structural and historical resource within a specified area consisting of a collation of existing written and graphic information in order to identify the likely context, character, significance and sensitivity of the known or potential cultural heritage, archaeological and structural resource using an appropriate methodology (EPA 2002 and 2003).
- 1.140 The overall study area extends out from the application area encompassing a large area of 9.2 km<sup>2</sup>. It was examined using information from:
- a) The Record of Monuments and Places (RMP) for County Fingal;
  - b) The Archaeological Survey for County Fingal online version;

## NON TECHNICAL SUMMARY

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- c) The Fingal County Development Plan 2011 - 2017;
  - d) Aerial photographs;
  - e) Previous excavations;
  - f) Cartographic; and
  - g) Documentary sources.
- 1.141 A field inspection and assessment was undertaken in June 2011 to identify and assess any previously unknown archaeological sites, structures and previously unrecorded cultural heritage and possible finds within the proposed development.
- 1.142 There is one Protected Structure listed in the Fingal County Development Plan 2011-17 situated within the application area but not within any of the areas proposed for continued extraction. No. 663 Kilshane Church (in ruins) and Holy Well off North Road, Kilshane. Ecclesiastical remains, church possible, graveyard, holy well (RMP DU014-012). The church does not exist and the area has been extracted to geological levels. The well will not be impacted by the current proposal.
- 1.143 There are no Protected Structures situated within 300m of any of the areas proposed for continued extraction.
- 1.144 There are 8 other structures within the study area at a distance greater than 400m from the areas proposed for continued extraction identified as Protected Structures in the Fingal County Development Plan 2011-2017. However, all the Protected Structures are archaeological sites and monuments included in the Record of Monuments and Places.
- 1.145 Due to the possibility of the survival of sub-surface archaeological deposits or finds in the un-stripped areas of the central and west quarries it is recommended that topsoil stripping of the remaining un-stripped areas within the application area be archaeologically monitored.

## MATERIAL ASSETS

- 1.146 The principal transport infrastructure in the vicinity of the site at Huntstown is the N2 Dual Carriageway and the R135 Regional Road (also known as the North Road, the former N2 National Primary Road) to the east of the site and the M50 Motorway to the south. There is also a local road to the west of the site, the Kilshane Road.
- 1.147 The route of the proposed Metro West urban light rail transport system runs parallel to the M50 Motorway beyond the southern boundary of the quarry landholding.
- 1.148 There are several isolated residential properties in the vicinity of the site, mainly located along the North Road and Kilshane Road.

## NON TECHNICAL SUMMARY

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- 1.149 A Combined Cycle Gas Turbine (CCGT) power plant, operated by Viridian, is located immediately east of the application site. Several electricity power-lines (10Kv, 38Kv, 110Kv and 220Kv) traverse the quarry landholding, mainly to the south and east. The quarry landholding also straddles a locally important aquifer.
- 1.150 A gas pipeline serving the Huntstown power plant traverses the route of the Kilshane Road to the west of the application site. A gas pipeline crosses the planning application area and the Roadstone Wood landholding in a west-east direction running along the paved central access road and around the block yard north of the Central Quarry.
- 1.151 Telecommunication services (fixed line telephone and broadband) are available at the Huntstown Quarry.
- 1.152 The Huntstown and Kilshane areas are supplied with potable water from Ballycoolin reservoir, approximately 2km west of the application site. The North Fringe Water Supply Scheme completed in 2007 involved the construction of a water tower, ground level reservoir and 36km of water mains, adjacent to the M50 Motorway at Sillogue, approximately 3.5km east of the application site. This scheme improved both the water supply and the pressure in the North City and South Fingal areas.
- 1.153 The area surrounding Roadstone Wood'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.
- 1.154 A large proportion of the lands around Roadstone Wood's landholding which are currently used for agricultural purposes are zoned for future development by the current Fingal County Development Plan 2011-2017.
- 1.155 An existing hard rock quarry is currently operated at Bay Lane, approximately 1km to the north-west of the Roadstone Wood Ltd. landholding boundary.
- 1.156 The Fingal County Development Plan (2011 - 2017) does not indicate the existence of any tourist areas in the vicinity of the subject site.
- 1.157 As the application site has functioned as a limestone quarry for many decades, it is considered that its continued operation is unlikely to give rise to any additional short-term impacts on material assets, over and above those which have arisen up to the present.
- 1.158 Dublin Airport is Ireland's busiest airport and is also amongst the ten busiest airports in Europe. Dublin Airport manages an average of 60,000 passengers per day, rising to 80,000 during the peak season, and more than 600 aircrafts movements every day. Passenger numbers peaked at 23.4M in 2008 with the figure for 2010 at 18.4M.
- 1.159 The airport is located in the townland of Collinstown, approximately 10 km north of Dublin City in a once-rural area near Swords. The site boundary lies c.2.5km to the west of the end of runway 10/28.

## NON TECHNICAL SUMMARY

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- 1.160 Where not already in place, warning notices, speed restriction signs and construction traffic signposting will be established along the existing local road network. Internal signposting will also be erected along paved and unpaved roads within the Huntstown Quarry complex in order to maintain a safe and orderly traffic regime.
- 1.161 Measures to minimise groundwater, noise and dust impacts at nearby residences will be implemented: refer to Sections 6, 7 and 8 of this Environmental Impact Statement.
- 1.162 All necessary health and safety precautions will be implemented when plant and machinery are operating immediately under or in the vicinity of the overhead power lines crossing the site.

### TRAFFIC

- 1.163 Huntstown Quarry is currently accessed via the primary entrance located on the eastern boundary of the site, served off the North Road. The access road leading from the North Road into Huntstown Quarry is shared by quarry traffic and traffic to and from Huntstown Power Station. The access road is approximately 7.3m wide at the site entrance and divides as it runs towards the quarry. The width of both the inbound (westbound) and outbound (eastbound) lanes is approximately 3.7m wide.
- 1.164 The existing North Road entrance was granted planning permission in 2006. It was constructed and opened in 2008 and lies approximately 140m north of the former entrance which was used up to that time. The North Road entrance was relocated in order to reduce perceived environmental impacts of traffic movements on residences located immediately opposite the former site entrance.
- 1.165 The western entrance to Huntstown Quarry, from Kilshane Road, is a 6m wide 'rural' county undivided road leading to the Ballycoolin Industrial Estate. Hedgerows and small trees line both sides of the road. The gated entrance is approximately 8m wide and is set back from the running carriageway by 10m. The entrance is flared to approximately 45m at the running carriageway edge. Visibility sightlines in both directions are satisfactory and comply with the current design standards for stop control.
- 1.166 As the planning application relates to the continuance of use of the existing quarrying operation, the proposed development will continue to utilise the primary site entrance accessed off North Road located on the eastern edge of the site. The secondary entrance accessed off Kilshane Road located on the western edge of the site will also remain operational.
- 1.167 The application site at Huntstown is located north-east of Blanchardstown and to the north of Finglas. The existing road network around the site is defined by:
- the R135 Regional Road to the east, which previously served as the N2 National Primary Road (up to May 2006). This road is also known as the North Road. It intersects with the N2 Dual Carriageway at the Cherryhound Interchange to the north and is severed by the M50 Motorway to the south;



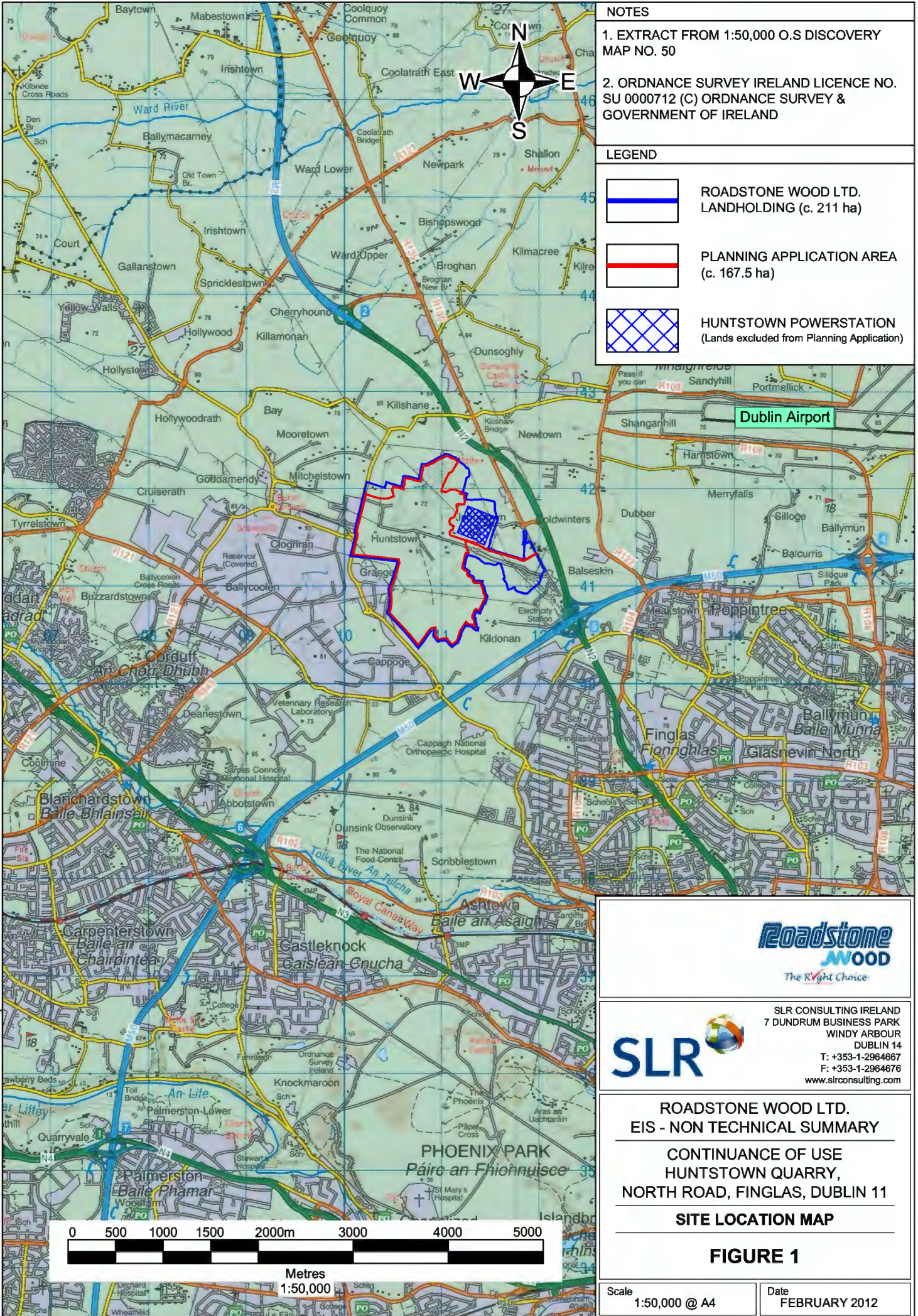
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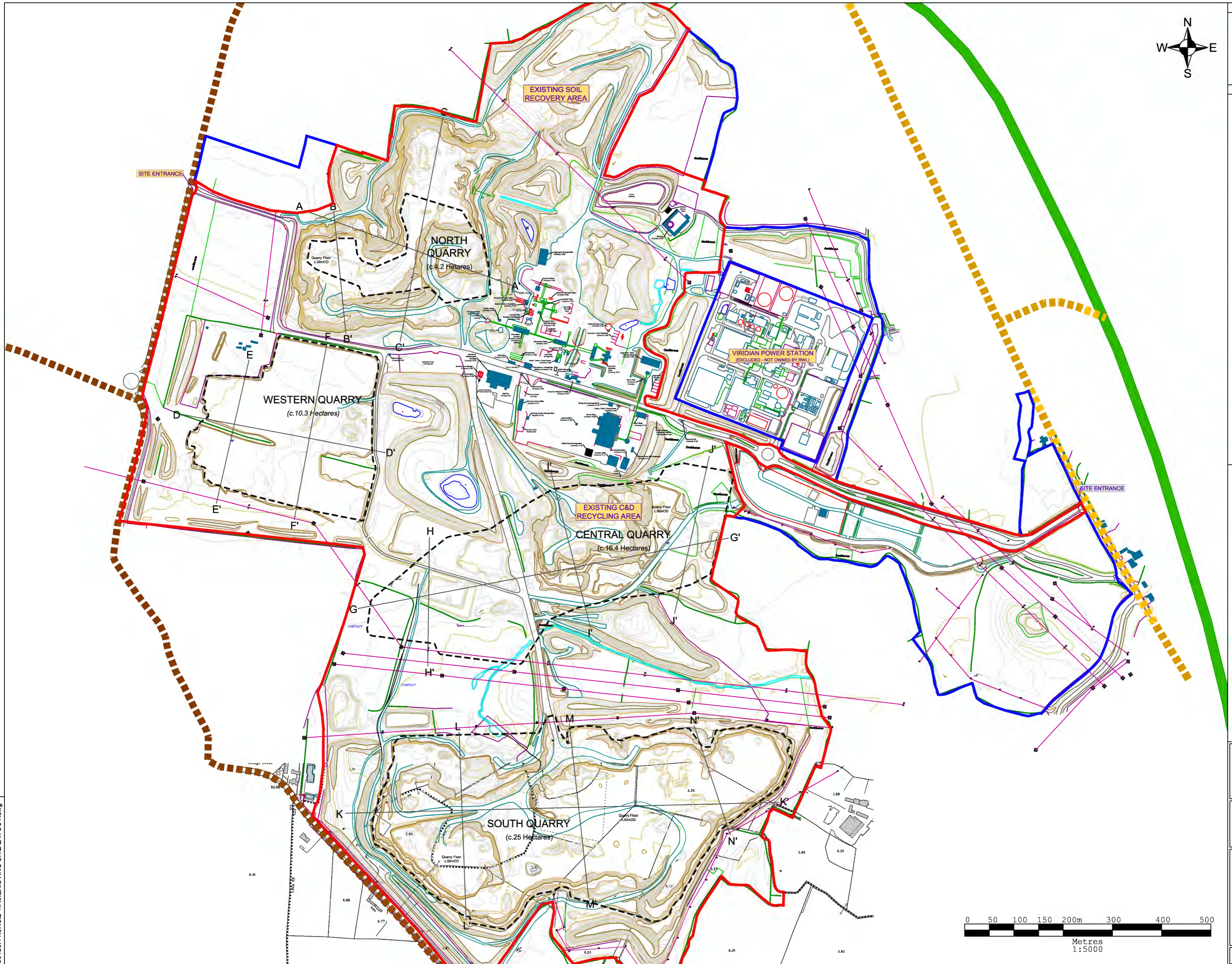
- a local road, known as the Kilshane Road (or Cappagh Road) to the west and north of the quarry; and
  - the M50 Motorway which lies south of the existing quarry.
- 1.168 Much of the road network around the application site has only been upgraded in recent years. The N2 Dual Carriageway/M2 Motorway opened in May 2006 and led to a large and immediate reduction in traffic levels along the former N2 National Primary Road (now the R135 Regional Road) immediately east of Huntstown Quarry. Upgrading of the M50 to provide three lanes of traffic in both directions was also completed in 2010, as was the upgrading of the interchange with the N2 Dual Carriageway to provide for a free flow interchange.
- 1.169 As part of this environmental impact assessment, traffic counts were undertaken on the North Road was undertaken north at the N2 off-slip and on the Kilshane Road approximately 30m north of the secondary quarry access.
- 1.170 The application site is well located in terms of access to the strategic highway network and all HGV traffic would be routed on roads considered suitable to accommodate frequent HGV movements.
- 1.171 Traffic generated by the proposals will depend upon economic demand / market conditions. The existing operation is currently operating under full capacity, traffic surveyed arriving and departing from the application site determined that 804 vehicle movements (422 arrivals and 382 departures) occurred on a typical weekday. Of these vehicular movements 138 arrivals and 167 departures were classified as HGV.
- 1.172 It has been demonstrated that the surrounding highway network will operate adequately in the future situation and development traffic will have minimal impact, with both North Road and Kilshane Road already experiencing established HGV use.
- 1.173 Overall, it is considered that the development proposals would have a minimal impact in terms of highways and transport. 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    Existing Site Layout**
- Figure NTS 3    Proposed Site Layout**
- Figure NTS 4    Proposed Restoration Layout**



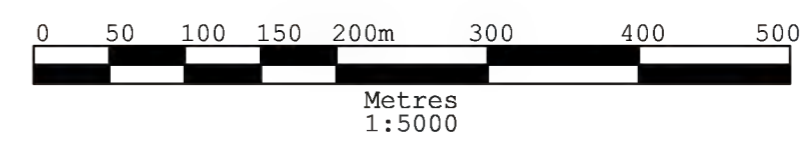
00180.00011.18.1-1.R0.SITE LOCATION MAP.dwg



- 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 0000712 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND
  3. TOPOGRAPHIC SURVEY PREPARED BY FUGRO BKS BASED ON MAY 2009 AERIAL PHOTOGRAPHY

- LEGEND**
- ROADSTONE WOOD LTD. LANDHOLDING (c. 211 ha)
  - PLANNING APPLICATION AREA (c. 167.5 ha)
  - PROPOSED OVERALL EXTRACTION AREAS (55.9 HECTARES)
  - N2 NATIONAL PRIMARY ROUTE (DUAL CARRIAGEWAY)
  - NORTH ROAD (R135)
  - LOCAL ACCESS ROAD
  - WASTE LICENCE APPLICATION AREA - W0277-01 (c.35.9 ha)
  - X OVERHEAD POWER LINES & PYLONS
  - 1M CONTOURS
  - WATER DRAINAGE CHANNEL

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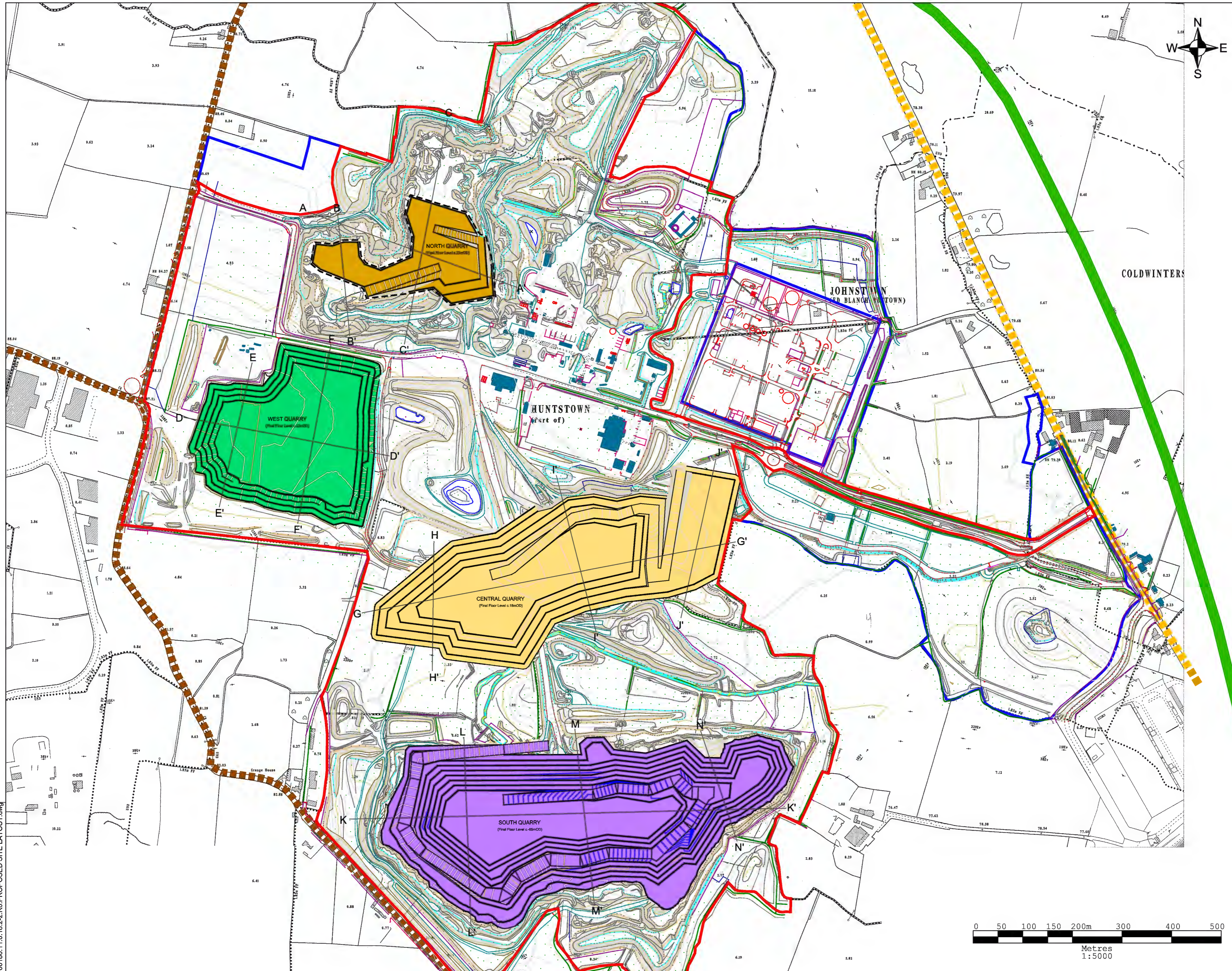


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**ROADSTONE WOOD LTD.**  
**EIS - NON TECHNICAL SUMMARY**  
CONTINUANCE OF USE  
HUNTSTOWN QUARRY,  
NORTH ROAD, FINGLAS, DUBLIN 11  
**EXISTING SITE LAYOUT**

**FIGURE 2**

Scale 1:5,000 @ A2 Date FEBRUARY 2012



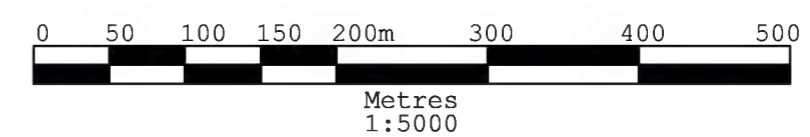
**NOTES**

- 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
- ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000712 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND
- TOPOGRAPHIC SURVEY PREPARED BY FUGRO BKS BASED ON MAY 2009 AERIAL PHOTOGRAPHY

**LEGEND**

	ROADSTONE WOOD LTD. LANDHOLDING (c. 211 ha)
	PLANNING APPLICATION AREA (c. 167.5 ha)
	N2 NATIONAL PRIMARY ROUTE (DUAL CARRIAGEWAY)
	NORTH ROAD (R135)
	LOCAL ACCESS ROAD
	NORTH QUARRY EXTRACTION AREA
	WEST QUARRY EXTRACTION AREA
	CENTRAL QUARRY EXTRACTION AREA
	SOUTH QUARRY EXTRACTION AREA

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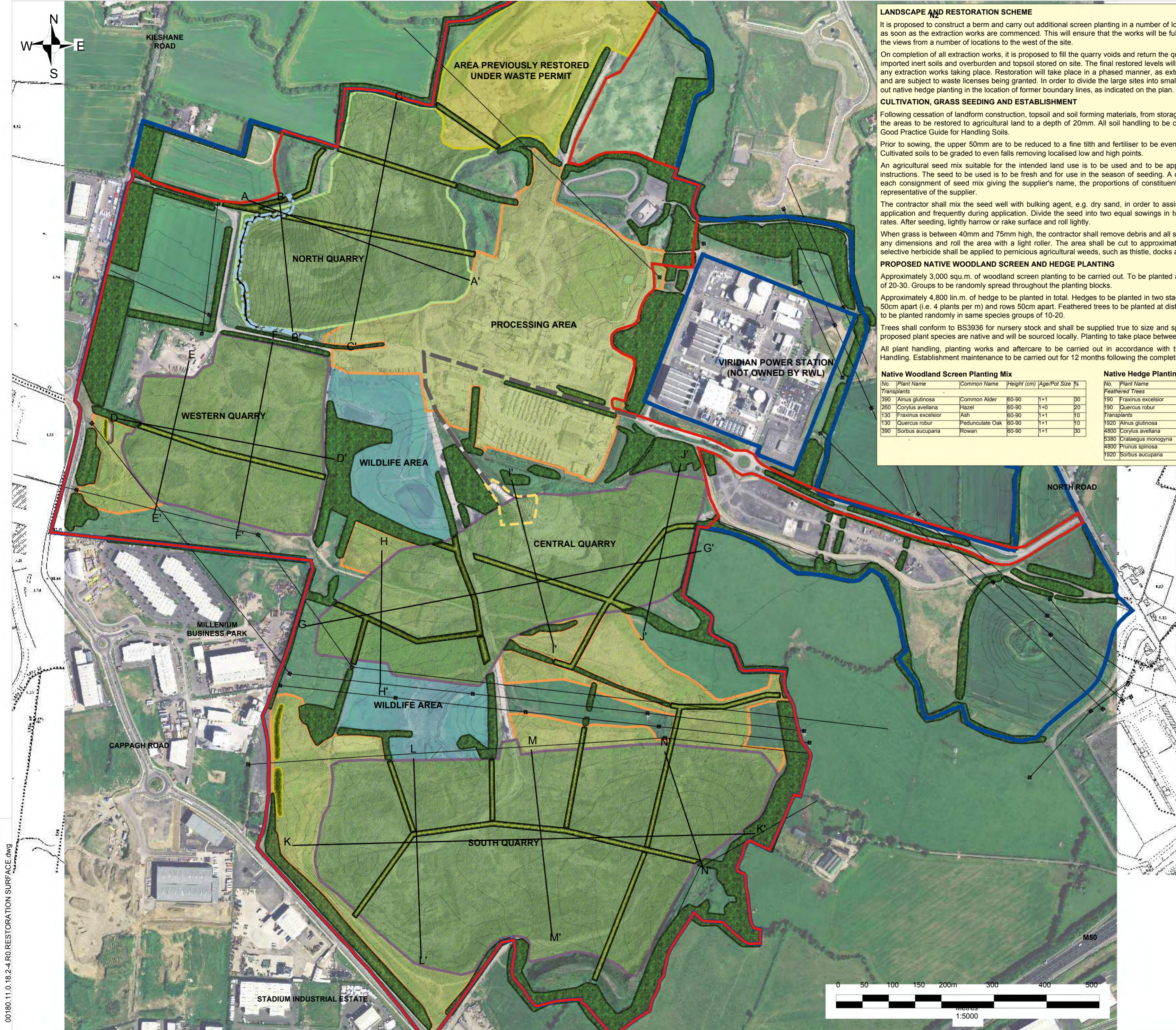
**ROADSTONE WOOD LTD.**  
EIS - NON TECHNICAL SUMMARY

CONTINUANCE OF USE  
HUNTSTOWN QUARRY,  
NORTH ROAD, FINGLAS, DUBLIN 11

**PROPOSED FINAL  
EXTRACTION LAYOUT**

**FIGURE 3**

Scale 1:5,000 @ A2 Date FEBRUARY 2012



**LANDSCAPE AND RESTORATION SCHEME**

It is proposed to construct a berm and carry out additional screen planting in a number of locations along the western site boundary, as soon as the extraction works are commenced. This will ensure that the works will be fully screened at all times and will improve the views from a number of locations to the west of the site.

On completion of all extraction works, it is proposed to fill the quarry voids and return the quarry areas to agricultural after-use using imported inert soils and overburden and topsoil stored on site. 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.

**CULTIVATION, GRASS SEEDING AND ESTABLISHMENT**

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 agricultural land to a depth of 20mm. All soil handling to be carried out in accordance with the MAFF Good Practice Guide for Handling Soils.

Prior to sowing, the upper 50mm are to be reduced to a fine tilth and fertiliser to be evenly distributed, as required, and raked in. Cultivated soils to be graded to even falls removing localised low and high points.

An agricultural seed mix suitable for the intended land use is to be used and to be applied at rates as per the manufacturer's instructions. 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 and even distribution. Mix well before application and frequently during application. Divide the seed into two equal sowings in two transverse directions at the specified rates. After seeding, lightly harrow or rake surface and roll lightly.

When grass is between 40mm and 75mm high, the contractor shall remove debris and all stones and clay balls larger than 40mm in any dimensions and roll the area with a light roller. The area shall 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.

**PROPOSED NATIVE WOODLAND SCREEN AND HEDGE PLANTING**

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

Approximately 4,800 lin. m. of hedge to be planted in total. Hedges 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 table below. All proposed plant species are native and will be sourced locally. Planting to take place between the months of November and March.

All plant handling, planting works and aftercare to be carried out in accordance with the CPSE Recommendations for Plant Handling. Establishment maintenance to be carried out for 12 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	<i>Alnus glutinosa</i>	Common Alder	60-90	1+1	30
260	<i>Corylus avellana</i>	Hazel	60-90	1+0	20
130	<i>Fraxinus excelsior</i>	Ash	60-90	1+1	10
130	<i>Quercus robur</i>	Pedunculate Oak	60-90	1+1	10
390	<i>Sorbus aucuparia</i>	Rowan	60-90	1+1	30

**Native Hedge Planting Mix**

No.	Plant Name	Common Name	Height (cm)	Age/Pot Size	%
<i>Feathered Trees</i>					
190	<i>Fraxinus excelsior</i>	Ash	200-250	2+TR	1
190	<i>Quercus robur</i>	Pedunculate Oak	150-175	2+TR	1
<i>Transplants</i>					
1920	<i>Alnus glutinosa</i>	Common Alder	60-90	1+1	10
4800	<i>Corylus avellana</i>	Hazel	60-90	1+0	25
5380	<i>Crataegus monogyna</i>	Hawthorn	60-90	1+1	28
4800	<i>Prunus spinosa</i>	Blackthorn	60-90	1+0	25
1920	<i>Sorbus aucuparia</i>	Rowan	60-90	1+1	10

**NOTES**

- EXTRACT FROM 1:2,500 ORDNANCE SURVEY DIGITAL SHEET NOS: 3062-A, 3062-B, 3062-C, 3062-D, 3063-A, 3063-C, 3130-A & 3130-B
- ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000712 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND
- TOPOGRAPHIC SURVEY PREPARED BY FUGRO BKS BASED ON MAY 2009 AERIAL PHOTOGRAPHY
- ALSO REFER TO DRAWINGS PLO6 A, B & C AND PLO7 A & B: LANDSCAPE & RESTORATION PLAN AND RESTORATION SECTIONS

**LEGEND**

- ROADSTONE WOOD LTD. LANDHOLDING (c. 211 ha)
- PLANNING APPLICATION AREA (c. 167.5 ha)
- EXISTING FEATURES TO BE RETAINED
- HEDGEROWS AND SCREEN PLANTING BELTS
- WILDLIFE AREAS
- AREA PREVIOUSLY RESTORED UNDER EXISTING WASTE LICENCE PERMIT
- ELECTRICITY LINES CROSSING OVER THE APPLICATION SITE
- PROPOSED LANDSCAPE FEATURES (to be carried out at the beginning of the extraction works)
- PROPOSED SCREENING BERM TO WEST OF WESTERN QUARRY
- PROPOSED WOODLAND SCREEN PLANTING ALONG PARTS OF WESTERN BOUNDARY
- PROPOSED RESTORATION FEATURES (to be carried out on completion of all extraction works)
- PROPOSED RESTORATION CONTOURS
- QUARRY AREAS TO BE INFILLED AND RESTORED TO AGRICULTURAL LAND SUBJECT TO PENDING WASTE LICENCE APPLICATION (REF: W0277-01)
- QUARRY AREAS TO BE INFILLED AND RESTORED TO AGRICULTURAL LAND SUBJECT TO FUTURE WASTE LICENCE APPLICATIONS
- PROCESSING AREA, DISTURBED GROUND & OVERBURDEN AREAS TO BE LEVELED AND RESTORED TO AGRICULTURAL LAND
- 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

00180.11.0.18.2-4-R0-RESTORATION SURFACE (DWG)



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ROADSTONE WOOD LTD.  
EIS - NON TECHNICAL SUMMARY

CONTINUANCE OF USE  
HUNTSTOWN QUARRY  
NORTH ROAD, FINGLAS, DUBLIN 11

**LANDSCAPING & RESTORATION PLAN**

**FIGURE 4**

Scale: 1:5,000 @ A2      Date: FEBRUARY 2012