

## CONTENTS

INTRODUCTION .....	1
RECEIVING ENVIRONMENT .....	1
Outline and Methodology of Baseline Study .....	1
Site Context.....	1
Infrastructure .....	2
Dublin Airport.....	3
Existing and Future Land Use .....	4
Extractive Industries .....	4
Housing .....	4
Groundwater.....	4
Heritage.....	5
Amenity Areas .....	5
POTENTIAL IMPACTS OF THE CONTINUANCE OF USE .....	6
Traffic .....	6
Dublin Airport.....	6
Housing .....	7
Groundwater.....	7
Heritage.....	7
Interaction with other Environmental Receptors.....	8
MITIGATION MEASURES .....	8
Dublin Airport.....	8
Traffic .....	8

## FIGURES

- Figure 12-1 Material Assets Map
- Figure 12-2 Land Zoning Map

## APPENDICES

- Appendix 12-A NSF Wildlife Management Report - Assessment of Bird Hazard Risk at Huntstown Quarry from Existing / Future Development



## INTRODUCTION

- 12.1 This chapter of the Environmental Report addresses the impact on surrounding material assets of the proposed continuance of use of the existing quarrying operations by Roadstone Wood Ltd at its Huntstown Quarry complex at Finglas, Dublin 11.
- 12.2 In undertaking this study, due regard has been had to aspects such as infrastructure, economic activities and property values in the vicinity of the site, and the impact of the continued operation of the quarry. The study has also had regard to the EPA publication '*Guidelines on the Information to be contained in Environmental Impact Statement*' (EPA, 2002).

## RECEIVING ENVIRONMENT

### Outline and Methodology of Baseline Study.

- 12.3 The baseline study of the area with regard to material assets involved a general assessment of the local road network around the application site economic activities, commercial properties and residential housing in the area. Information presented is based primarily on observations made during site visits to the area in 2010 and 2011 and information obtained from local sources, including the internet.

### Site Context

- 12.4 The quarry complex at Huntstown operated by Roadstone Wood Ltd. straddles several townlands, principally Kilshane and Huntstown, in north-west County Dublin. The site is located approximately 2.5 km northwest of the Dublin suburb of Finglas, 2km north-west of the interchange between the N2 dual Carriageway and the M50 Motorway and 3.5km north-east of Blanchardstown village, Dublin 15. The site is currently accessed from the R135 Regional Road, known locally as the North Road (the former N2 National Primary Road), to the east and the Kilshane Road to the west.
- 12.5 A small number of existing residences are located in close proximity to the existing site boundary. These residential properties are located along the public road network consisting of the Kilshane, Cappagh and North roads; refer to Figure 12-1.
- 12.6 The Regional Planning Guidelines for the Greater Dublin Area 2004-2016 indicate that the existing site lies within the 'Metropolitan' area. Given its location along designated Transportation Corridors, specifically the N2 Dual Carriageway and the M50 Motorway, the existing site also lies in close proximity to, and within easy reach of, designated 'Consolidation Towns' within the Metropolitan Greater Dublin Area.

## Infrastructure

### Roads

- 12.7 Traffic to and from the site will generally 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.
- 12.8 Traffic travelling south from Ashbourne to the site exits the N2 Dual Carriageway at the Cherryhound Interchange and continues south along the North Road, through Kilshane Cross, to the right-turn junction with the access road into the Huntstown Quarry complex.
- 12.9 Huntstown Quarry is primarily 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.
- 12.10 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. This entrance is in periodic use and is dependent upon market demand and delivery destination.
- 12.11 The main road arteries in the area immediately around the Huntstown Quarry complex are :
- North / North-west Kilshane Road
  - South-west Cappagh Road
  - South M50 Motorway
  - East R135 Regional Road (North Road)  
N2 Dual Carriageway / N2 National Primary Road

### Metro West

- 12.12 The proposed route of the Metro West urban light rail transport system runs parallel to the M50 motorway beyond the southern boundary of Roadstone Wood's landholding, as indicated on Figure 12-1. The proposed light rail scheme will link the principal towns/suburbs along the western fringes of Dublin (beyond the M50 Motorway) including Tallaght, Lucan and Blanchardstown to the proposed Metro North scheme serving Dublin Airport and Swords.
- 12.13 Metro West will not encroach on Roadstone Wood's landholding, or the planning application area. The continued operation of the existing quarry will not have any impact on the construction or operation of the Metro West scheme. The proposed route is located in excess of 350m at its closest point to the south-eastern boundary of the South Quarry extraction area.

### Utilities

- 12.14 A Combined Cycle Gas Turbine (CCGT) power plant, operated by Viridian, is located within the Huntstown Quarry complex, immediately east and north of the application site. The access road from the North Road used by quarry traffic at Huntstown is shared with the power plant.
- 12.15 The combined output of the Huntstown Power Plant is 747MW which provides up to 20 per cent of the total electricity fed into the national transmission grid system. With the introduction of the Single Electricity Market, all power from the plants is sold into the wholesale electricity market servicing all electricity customers on the island.
- 12.16 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.
- 12.17 Telecommunication services (fixed line telephone and broadband) are available at the Huntstown Quarry.
- 12.18 Several electricity power-lines (10Kv, 38kV, 110Kv and 220Kv) traverse the Roadstone Wood landholding, with the main concentration of lines traversing in an east – west direction between the existing Central and South quarry extraction areas, refer to Figure 12-1. All power lines crossing the landholding run to the adjoining ESB 220Kv sub-station located immediately north-west of the M50 / N2 Motorway Interchange.
- 12.19 A potable water supply is provided to the existing site office, canteen and construction materials production facilities via a Local Authority water main.
- 12.20 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.
- 12.21 Sewage from the existing facilities at Huntstown is treated at an existing effluent treatment plant located in the centre of the Huntstown Quarry complex. Wastewater from aggregate processing and concrete production processes are managed in-situ either by recycling or by passing through silt traps, settlement ponds and/or oil interceptors prior to discharge to local watercourses.

### Dublin Airport

- 12.22 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.

- 12.23 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.

## Existing and Future Land Use

- 12.24 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.
- 12.25 A limited amount of low density residential housing is present along the local road network and some small scale local enterprises are located along the North Road (R135 Regional Road) as indicated on Figure 12-1.
- 12.26 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.
- 12.27 The Roadstone Wood landholding itself is zoned as both RU 'to protect and promote in a balanced way, the development of agriculture and rural-related enterprise, biodiversity, the rural landscape, and the built and cultural heritage' and HI 'to provide for Heavy Industry', refer to Figure 12-2.
- 12.28 In the current County Development Plan 2011-2017, the majority of lands to the west, south and east are predominantly zoned GE to facilitate opportunities for general enterprise and employment. Further to the east of the North Road the lands are zoned WD to provide for distribution, warehouse, storage and logistics facilities which require good access to a major road network within a good quality environment.

## Extractive Industries

- 12.29 An existing hard rock quarry is currently operated at Bay Lane, approximately 1km to the north-west of the Roadstone Wood Ltd. landholding boundary.

## Housing

- 12.30 Residential housing in the area immediately surrounding the application area comprises one-off houses located along the local road network. Most housing in the study area has been established for several (>5) years. No lands within the vicinity of the site are zoned for residential purposes on the current Fingal County Development Plan (2011-2017). The nearest large scale settlements to the application site are at Finglas, approximately 2.5km to the south-east, and Blanchardstown, approximately 4km to the west.

## Groundwater

- 12.31 Bedrock aquifer maps published on the GSI website 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 (Boston Hill) Formations are considered to be locally important aquifers, while the Tober Colleen Formation is considered to be a poor aquifer, refer to Chapter 6 of this Environmental Report.

### Heritage

- 12.32 There is one Protected Structure listed in the Fingal Co. 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.
- 12.33 There are no Protected Structures situated within 300m of any of the areas proposed for continued extraction.
- 12.34 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, refer to Chapter 9 of this Environmental Report.

### Amenity Areas

#### *Tourist*

- 12.35 The Fingal County Development Plan (2011 - 2017) does not indicate the existence of any tourist areas in the vicinity of the subject site.

#### *Scenic*

- 12.36 The Fingal County Development Plan (2011 - 2017) indicates that the site is classified within the Low Lying Agricultural (LLA) landscape character area. This landscape character area is bounded to the south-west by the River Valleys / Canals (RVC) landscape character area.
- 12.37 There are no protected views or prospects into or out of the application site identified in the Plan.

## POTENTIAL IMPACTS OF THE CONTINUANCE OF USE

### Traffic

- 12.38 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.
- 12.39 The proposed development will comprise of the continuance of all existing authorised facilities and activities with the extraction, crushing, screening and processing of rock (authorised by Reg. Ref. No. F03A/1430 / PL06F.206789) from the northern, central, western and southern deposits for a period of 35 years; the continued use of the stockpile materials shed associated with Asphalt Plant, granted under P. Reg. Ref. F06A/0923 (ABP Ref: PL06F.219655); and 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.
- 12.40 The anticipated average annual output is 1 million tonnes which is in line with the current annual output from the quarry. This rate of extraction, coupled with the export off site of concrete and blacktop products and the import of raw material such as sand and cement is equivalent to approximately c.42 HGV (two-way) movements per hour for the whole site.
- 12.41 The projected level of traffic is not anticipated to increase as a result of this planning application for the continuance of use of the quarry and will therefore not have any adverse impact on existing traffic capacity along the existing road network, refer to EIS Section 13 Traffic.

### Dublin Airport

- 12.42 Due to its proximity to the climb out and approach to runway 10/28 at Dublin Airport, the Dublin Airport Authority (DAA) were consulted and advised of the proposed planning application to continue quarrying operations at Huntstown. The DAA have highlighted the concern of attracting large numbers of birds in close proximity to the airport by way of creating large standing water bodies, in particular when quarrying operations cease. This matter has been addressed in the restoration / closure scheme for the quarry, refer paragraph 12.57.
- 12.43 In consultations with Aer Rianta and the IAA on previous planning applications for continuance of use at the site in 1994 and 2003, concerns were raised with respect to attracting large numbers of birds and in particular larger birds such as wildfowl and gulls which have the potential to endanger aircraft.
- 12.44 The wildlife areas which have been developed at the site were designed at the time by Coveney Wildlife Consulting not to be attractive to large gulls, wildfowl and waders. The ponds are small in size and enclosed with considerable planting to deter these birds from congregating.
- 12.45 As part of the planning application for continuance of use in 2003 (P. Ref. No.

## MATERIAL ASSETS 12

F03A/1430) – Response to Further Information, a report on the ‘Assessment of Bird Hazard Risk at Huntstown Quarry, Finglas, Co. Dublin From Existing and Future Development’ was prepared by NSF Wildlife Management. A copy of this report is provided in Appendix 12-A. The report noted in Section 5 – Conclusion:

*‘All those involved in the quarry operations seem informed of the potential problem in allowing any part of the site to become an attraction for large numbers of birds that could cause a risk to aircraft so that any extraction areas not infilled will be pumped to ensure that they remain free of any areas of standing water.*

*With continued ecological development and monitoring of the site it should be possible to develop the site along the lines proposed without increasing the bird hazard on the approach and climb out to runway 10/28 at Dublin Airport’.*

- 12.46 Ecological survey monitoring undertaken at Huntstown Quarry (refer to Chapter 4) as part of this current planning application would indicate that there has not been any significant alteration in the assemblages of species or on the overall populations of birds present and using Huntstown Quarry as a result of existing quarrying operations since the previous planning application was submitted in 2004.
- 12.47 It is considered that due to this planning application being one for continuation of existing quarrying operations at the site that there will not be any significant impact on any individual population of bird species or on the overall bird assemblage at this site.
- 12.48 With continued development and ecological monitoring, and the continued management of water at the site, it is considered that the ongoing operation of the existing quarry as set out in this planning application will not increase the bird hazard on the approach and climb out to runway 10/28 at Dublin Airport.

### Housing

- 12.49 Residential housing in the area immediately surrounding the application area comprises one-off houses located along the local road network. Most housing in the study area has been established for several (>5) years. No lands within the vicinity of the site are zoned for residential purposes on the current Fingal County Development Plan (2011-2017). The nearest large scale settlements to the application site are at Finglas, approximately 2.5km to the south-east, and Blanchardstown, approximately 4km to the west.

### Groundwater

- 12.54 The continued quarrying activity at the site presents a number of risks to groundwater including fuel spillage, increases in suspended solids in surface water run-off. These risks are assessed in more detail in Chapter 6 of this Environmental Report.

### Heritage



- 12.55 There are a number of recorded monuments and protected structures in the vicinity of the Huntstown Quarry complex and the application site. These are identified and discussed in detail in Chapter 9 of this Environmental Report.

## Interaction with other Environmental Receptors

- 12.56 There are no additional interactions, over and above those identified and discussed in the text above.

## MITIGATION MEASURES

### Dublin Airport

- 12.57 A number of measures are and will continue to be implemented at the quarry to minimise the risk of bird hazard in relation to Dublin Airport. These measures include:

- The proposed post-quarry restoration / closure plan is to infill the worked out quarry voids to original ground level with the re-instatement of hedgerows, thereby creating a beneficial agricultural afteruse – refer to EIS Figure 2-4.
- Restoration works are to be carried out on a progressive basis in tandem with extraction and processing operations by infilling with inert soil and materials imported to the site. These works have already commenced in the North quarry, reducing the areas for any potential standing water.
- Infilling of the exhausted quarry voids will be, as stated, on a progressive, long-term basis. Should it arise that a period of time elapses between the ceasing of extraction operations and the commencement of in-filling operations, the quarry voids will continue to be pumped to prevent the formation of any large areas of standing water. Pumping requirements will diminish in line with infilling operations.

### Traffic

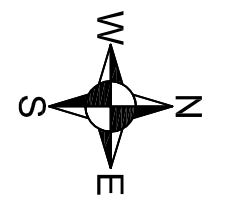
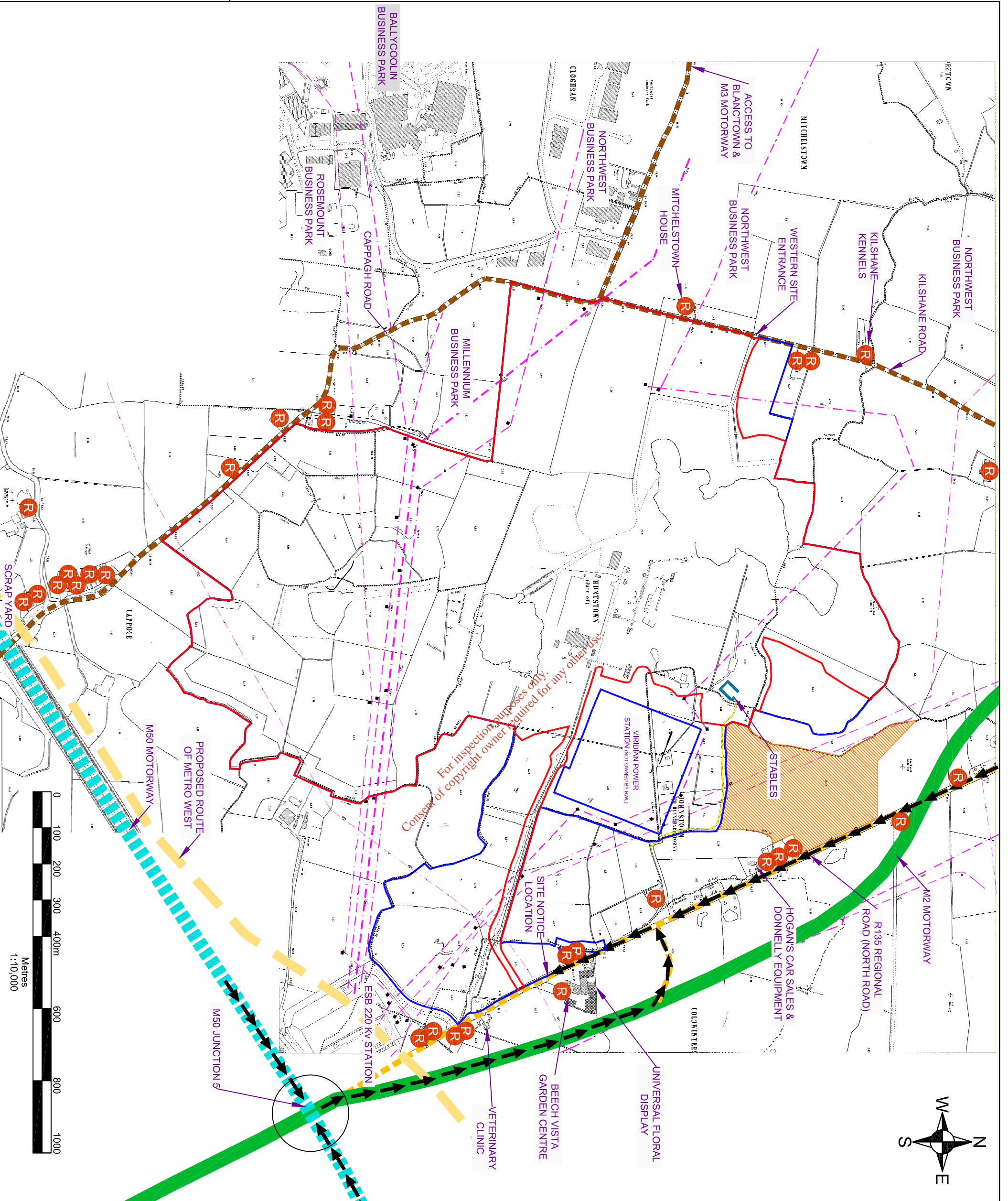
- 12.58 Where not already in place, warning notices, speed restriction signs and construction traffic signposting will be established along the existing local road network. Internal signposting will also be erected along paved and unpaved roads within the Huntstown Quarry complex in order to maintain a safe and orderly traffic regime.
- 12.59 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.
- 12.60 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.

## FIGURES

Figure 12-1 Material Assets Map

Figure 12-2 Land Zoning Map

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- 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

**LEGEND**

	ROADSTONE WOOD LTD. LANDHOLDING (c. 211 ha)
	PLANNING APPLICATION AREA (c. 167.5 ha)
	M50 MOTORWAY
	N2 DUAL CARRIAGEWAY
	LOCAL ROAD
	NORTH ROAD (R135)
	RESIDENTIAL LOCATIONS
	HGV ACCESS ROUTES TO SITE
	OVERHEAD POWERLINES 10kV / 38 kV / 110kV / 220kV
	POSSIBLE ROUTE OF PROPOSED METRO WEST
	KILSHANE CROSS RECYCLING PARK

**Roadstone WOOD**  
The Right Choice

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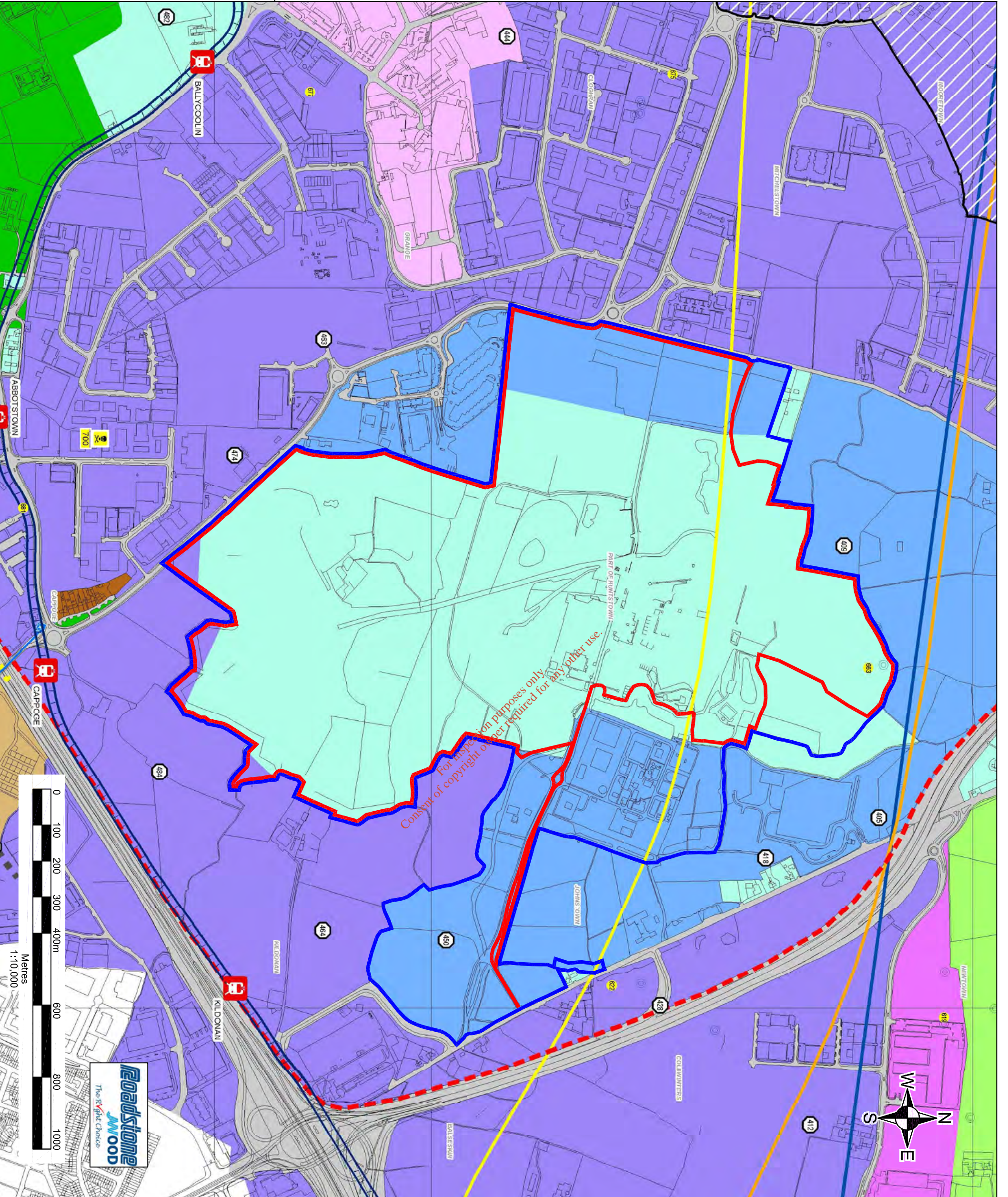
**SLR**

ROADSTONE WOOD LTD.  
ENVIRONMENTAL IMPACT STATEMENT  
CONTINUANCE OF USE  
HUNTSTOWN QUARRY,  
NORTH ROAD, FINGLAS, DUBLIN 11

**MATERIAL ASSETS MAP**

**FIGURE 12-1**

Scale 1:10,000 @ A3  
Date FEBRUARY 2012



**NOTES**  
 1. EXTRACT FROM FINAL COUNTY DEVELOPMENT PLAN (2011-2017) ZONING OBJECTIVES  
 MAP - MAP NO. 12.BLANCHARDSTOWN NORTH  
 2. ORDNANCE SURVEY IRELAND LICENSE NO. 30/00007H (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND

**LEGEND**

	PLANNING APPLICATION AREA (c. 167.5 ha)
	ROADSTONE WOOD LTD. LANDHOLDING (c. 211 ha)

**ZONING OBJECTIVES**

	Objective C1	Provide for and protect local, regional, community, education, health care and social infrastructure
	Objective C2	Protect and provide for a Greenbelt
	Objective C3	Provide opportunities for general enterprise and employment
	Objective C4	Protect and enhance high amenity areas
	Objective C5	Provide for heavy industry
	Objective C6	Provide for office, research and development and high technology/high technology manufacturing type enterprises in a high quality built and landscaped environment
	Objective C7	Protect, provide for and improve local centre facilities
	Objective C8	Remove and provide for open space and recreational amenities
	Objective C9	Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure
	Objective C10	Provide for and facilitate non-related business which has a demonstrated need for a rural location
	Objective C11	Provide for residential development and protect and improve residential amenity
	Objective C12	Protect and promote in a balanced way, the development of agriculture and rural related enterprises, businesses, the rural landscape, the built and cultural heritage
	Objective C13	Protect and promote the character of the Rural Village and promote vibrant community in accordance with an approved local area plan, and the availability of physical and community infrastructure
	Objective C14	Provide for distribution, warehouse, storage and logistic facilities which require good access to a major road network within a good quality environment

**SPECIFIC OBJECTIVES**

	Indicate Metro Stop
	Provide for residential development at a density per hectare as shown
	Shows site and consultation distances (meters)
	Proposed School
	Provide for Traveler Accommodation
	Protect & preserve trees, woodlands and hedgerows
	Recorded Monuments
	Local Objective

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**ROADSTONE WOOD LTD.**  
 ENVIRONMENTAL IMPACT STATEMENT  
 CONTINUANCE OF USE  
 HUNTSTOWN QUARRY,  
 NORTH ROAD, FINGLAS, DUBLIN 11

**CURRENT LAND ZONING MAP**

**FIGURE 12-2**

Scale 1:10,000 Date FEBRUARY 2012

## APPENDIX 12-A

### NSF Wildlife Management

Assessment of Bird Hazard Risk at Huntstown Quarry from Existing / Future Development

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# N.S.F.

## Wildlife Management

Est. 1991

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falcon@nffs.com



Nature's An-  
swer to a Man-

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### ASSESSMENT OF

### THE BIRD HAZARD RISK

### AT HUNTSTOWN QUARRY, FINGLAS,

### CO. DUBLIN

### FROM EXISTING AND

### FUTURE DEVELOPMENT.

February 2004

### Executive Summary

Due to its proximity to the climb out and approach to runway 10/28 Aer Rianta, operators of Dublin Airport and the Irish Aviation Authority have expressed concern over the development of the Huntstown Quarry Site with regard to its potential to increase the risk to aircraft from Bird Strikes.

There are two main areas of concern; the current ecological development of the site and in particular the Wetland Area and Wildlife Area, and the long-term future development of the site as the quarry deposits are worked out.

The site operators, Roadstone Dublin Ltd, employ the services of Coveney Wildlife Consulting to undertake the ecological management of the site. John Coveney of Coveney Wildlife has an extensive knowledge of the flora and fauna both on the site and in the surrounding area and the ecological development of the quarry property is being undertaken to maintain a natural balance with the surrounding area. He is also acutely aware of the necessity to mitigate any risk to air safety by developing the site in such a way as to be unattractive to large numbers of bird species widely accepted to be the greatest potential risk to aircraft.

There are no large areas of standing water and the ponds within the wildlife area are being constructed to include the use of bunds to break up the surface and outline of the water. Of the priority species noted in the area surrounding the quarry and Dublin Airport only very few of these have actually been seen on the site itself. Lapwings and Black Headed Gulls are numerous in the fields around the airport yet have only been seen on the site on a few occasions, under exceptional circumstances. A few Mallard and Teal are present on the site, in very small numbers and also the occasional Heron. These numbers are similar to those present around the airport. They do not have any regular flight path to and from the quarry. In the unlikely event that numbers were to increase on the site the facility exists to lower the water levels in the Wildlife and Wetland areas to deter their presence.

This form of habitat management is one of the solutions put forward by the Bird Management Unit of the Central Science Laboratory, UK in resolving the Hazard Conflicts for Land Use Planning near Airports.

The presence of the Peregrines in the North Quarry and the potential for increase in their numbers will also have a positive effect on deterring birds, in particular Duck, from the site.

The other main concern is the future development of the site as the four quarries are gradually worked out and specifically the potential for the quarry voids to be allowed to flood and form large lakes, which could attract large numbers of birds, in particular Gulls, to the area subsequently increasing the hazard to aircraft as they fly across the climb out and approach to runway 10/28.

Roadstone Dublin Ltd are appreciative of the necessity to prevent the formation of large areas of standing water and are therefore prepared to invite a planning restriction which specifically excludes this possibility. In order to achieve this they are prepared to enter into a bond to ensure the maintenance of a long term pumping operation for the site until such time as material can be sourced to restore the excavated areas to ground level.

## 1. INTRODUCTION

- 1.1 NSF Wildlife Management was established in 1991. As a field ornithologist and practising falconer of over 20 years I have a broad knowledge of many bird species. We are a falconry based bird control and wildlife management company, utilising the added benefits of birds of prey to augment the traditional methods of bird and wildlife control methods.
- 1.2 The company provides services for a range of clients; such as deterring Pigeons from factories and feed mills or Gulls from Landfill sites and NSF has particular expertise in airport bird control. Since 1992 NSF has provided teams of birds and trained personnel to both Teesside and Leeds Bradford International Airports on a daily basis as well as providing shorter-term cover and advice for other airports.
- 1.3 At Teesside and Leeds Bradford Airports where the company operates every day throughout the year, as well as providing practical bird control on the airfield we are also responsible for bird activity within the 13km Hazard Safeguarding Area. This has involved setting up an ongoing monitoring and survey operation to identify bird concentrations within this area together with those transiting the area, establish patterns of behaviour taking into account seasonal, daily and environmental effects and putting forward and implement agreed proposals for mitigating any potential hazard to aircraft.
- 1.4 Typically, where a potential hazard is identified, NSF Wildlife Management becomes involved in the negotiations between the airport authorities and the parties to ensure that any existing or potential development would not result in an increased risk to aircraft.
- 1.5 In response to the local Planning Authority's request for Further Information NSF Wildlife Management was invited to carry out an independent assessment of the existing and potential risk of the proposed development at Huntstown Quarry, Finglas, Co. Dublin in providing an attraction for birds that could constitute a hazard to aircraft from Dublin Airport, particularly on the approach and climb out to Runway 10/28.

## 2. THE EXISTING SITE

- 2.1 The application site is a working quarry with extraction taking place in 4 separate areas known as the North, South, Central and West Quarries. Any area where quarrying is taking place must be kept clear of water and as the extraction proceeds below the water table this is achieved by an extensive pumping operation. During my site inspection, I saw no large areas of standing water in any of the 4 extraction areas that might be considered a potential attraction to birds.
- 2.2 It is my understanding it is a condition of the current planning consent that the site be managed in such a way as to retain as much of the natural flora and fauna as possible outside of the extraction zones to facilitate suitable

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regeneration of the site at the end of its working life. Coveney Wildlife Consulting undertakes this ecological management of the site on behalf of Roadstone Dublin Limited.

2.3 John Coveney of Coveney Wildlife Consulting has carried out extensive research at the site, extending back to before the time he was appointed, and his knowledge of the flora and fauna on the site, together with the potential impact of operations on their preservation is comprehensive. John Coveney briefed me fully in relation to these matters and he accompanied me on a tour of the quarry property on Wednesday, January 28<sup>th</sup>, 2004.

2.4 Coveney Wildlife also demonstrates a good understanding of the need to manage the ecological development of the site in such a way as to deter the attraction of birds that have the potential to be a hazard to aircraft from Dublin Airport and this has been continually reaffirmed throughout our discussions and in his contributions to the Environmental Impact Statement produced in November 2003.

2.5 Browse Partners is Roadstone's aviation consultant at Huntstown. Coveney Wildlife has worked closely with Julian Browse, who also has extensive knowledge of bird control regulations and requirements at airports, in familiarising himself with the requirements of Dublin Airport in relation to potential bird hazard. To assist in the wildlife and habitat management at the site without increasing the potential hazard to aircraft Coveney Wildlife initiated a survey of bird concentrations and behaviour patterns in the immediate vicinity of the airport and at the Huntstown quarry with a view to identifying and mitigating any potential for increase in the existing population of priority species.

2.6 Through its agent, Coveney Wildlife Consulting, Roadstone Dublin Ltd. is committed to the ecological development of the site with due regard to the safety of aircraft movements at Dublin Airport. It is evident throughout the already established conservation and preservation areas within the quarry and it is particularly evident in the management and development of the Wetland and Wildlife areas, which are probably the areas most likely to have the potential for attracting potentially hazardous birds.

2.6.1 The Wetland Area near the South Quarry is a naturally occurring area of the site and is preserved and managed to maintain the area in its natural state. It consists of a stream, pumped through the area as part of the drainage of the South Quarry with grassland to either side. The watercourse is thickly covered by reeds and rushes which leaves very little in the way of open expanses of water, even during particularly wet periods. The area is attractive to such birds as Moorhens, which are unlikely to provide a hazard to aircraft. It occasionally attracts small numbers of Teal and Mallard (less than 10) and one or two Herons. In view of the distance from the airport and the numbers involved these are not considered to be a bird strike hazard.

2.6.2 The Wildlife Area between the Central and Western Quarries is an area of native woodland, semi-natural grassland, and ponds. The wildlife area is an ongoing project and still under construction in certain areas.

2.6.3 In particular the main pond is not yet fully developed. The main pond is located to the north of the Wildlife Area at the pre-existing ground level. Once constructed, this pond will be steep sided and heavily planted to the northern side. There will also be 2 bunds constructed from the edges of the pond to break up the surface area of the water. Therefore, whilst it may be a source of attraction to the small amount of ducks in the area it is unlikely to be a particular attraction for Gulls, given there is much more suitable and plentiful habitat on the coast, e.g. at the Rogerstown Estuary, Broadmeadow Estuary and Bull Island.

2.6.4 The smaller pond around the grass island is likely to be more of an attraction to Ducks and Moorhens rather than Gulls.

2.6.5 At the southern part of the Wildlife Area, there are a number of very small pools designed to encourage colonisation by such species as newts and the blue-tailed damselfly, and a small pond, dominated by a sloped island, on top of a mound. These are located around the smaller pond.

### 3.0 Assessment of Birds and Bird Strike at Huntstown.

3.1 Coveney Wildlife has carried out in depth surveys of the site to monitor the numbers and species of flora and fauna including detailed knowledge of the bird population frequenting the site. A summary of these data is included in the Environmental Impact Statement, November 2003 Volume 2, Appendix 5.1, Chapter 10, Appendix 3, 10.2.

3.2 Whilst all birds including any of those listed have the potential to cause a bird strike, it is essential to balance that with their location in relation to Dublin Airport. Given that the Huntstown quarry is 3.2km from the end of runway 10/28 the main threat to aircraft on departure or approach must be a bird or flock of birds transiting the approach/climb out. Many of the smaller birds noted on the site are only present in small numbers and are common to the surrounding fields, hedges and grasslands. Most of these would not be expected to flock to transit between roosting and feeding areas and therefore cannot be considered a high risk to aircraft in the sensitive area.

3.3 However, there have been sightings of several bird species that are widely accepted to be a concern and likely to be a risk to aircraft if not controlled most of which would be classified as priority species.

3.4.1 Lapwings have been the subject of extensive research by many organisations involved in aircraft safety and the prevention of Bird Strikes. In addition to areas of wetland lapwings like the open expanses of short grass found on airfields and often surrounding farm land where they can find ample quantities of food. They also like to roost on bare, broken or ploughed

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ground. The daily movements of lapwings tend to only cover a few miles, but their style of flight results in a swirling flock, which can be an uncontrollable hazard on the approaches and climb out. Typically these birds are present in lowland areas in large numbers during the winter, dispersing to higher ground or even migrating during the warmer months to breed.

3.4.2 My field observations of the quarry and the surrounding area confirm that no Lapwings were present on the site or in close proximity to the site, however large concentrations were seen in the immediate vicinity of the airfield. I am informed there was an instance of 2-3 pairs of Lapwings attempting to roost on an area at the Western Quarry, which had a small area of standing water for a short time (circa 2001). Coveney Wildlife highlighted this problem during routine monitoring, the area was then drained and the birds were successfully dispersed.

3.4.3 All areas of the site and particularly the small areas of wetland are managed and designed in such a way as not to provide open areas of damp grassland and broken ground which these birds find attractive.

3.4.4 Ringed Plover have also been sighted in the Western Quarry under similar circumstances to the Lapwings. Both species are members of the Plover family and their requirements and behaviour patterns are quite similar. The Ringed Plovers were dispersed in the same way as the Lapwings and were not as numerous in the area.

3.4.5 Herring Gulls and Black Headed Gulls have been recorded on the site. Herring Gulls and Black Headed Gulls occasionally roosted at the Western Quarry around the same period as the Lapwings. Similarly, they largely stopped using the area once it is kept drained. In January 2004, Black Headed Gulls were noted in one of the fields used for horse grazing when bread was briefly used to supplement the grass feed. When the ecologist observed this occurrence the Quarry Manager was immediately informed who in turn immediately instructed all horse graziers to use only hay for supplementary feeding. Within a few days the Gulls stopped coming to this field confirming the effectiveness of current monitoring. Other than that very few sightings of Gulls have been recorded on the quarry site.

3.4.6 Any species of Gull, large or small, is regarded as a high risk to aircraft. They flock together in huge colonies and commute daily to and from feeding and roosting areas, and they can cover distances of up to 30 miles. They are not only coastal dwellers but also roost and feed inland and their patterns of behaviour are greatly influenced by environmental changes such as weather and agricultural activities. Typically most species of Gull would be attracted to large expanses of standing water however the ecological management of the site is such that the area has only recorded a small number of Gulls.

3.4.7 Stock Doves and Woodpigeons are very common both on the site and in the surrounding area. They are very similar in their habits and are seedeaters and browsers. They like well-wooded farmland and may be seen on airfields if food supplies are short. They do not adopt a daily flight pattern, and these

are very much subject to the variation in food availability. Their style of flight and patterns of behaviour should not increase bird activity on the approach or climb out of Runway 10/28 at Dublin Airport.

3.4.8 Swallows, Swifts and Martins are summer visitors and flock together, often in large numbers feeding constantly on the wing. These are present on the site, however given that the site is being managed to retain the ecological balance of the surrounding area, these birds would be feeding in this area naturally and their activities are very much subject to the cycle of insect hatch and food availability, which is realistically beyond reasonable control. If an area were cleared in isolation of all food sources, yet surrounded by areas where the food source bred readily, then the insects would simply recolonise the cleared area with every hatch. It would not be reasonable to conclude that the application site accounts for the presence of these birds any more than any of the surrounding areas.

3.4.9 Jackdaws are not considered to be a high risk to aircraft and statistically they are responsible for very few bird strikes. There are no more than 50 birds seen on the site and they do nest there because they like areas of cliffs and woodland. Jackdaws flock and like to soar and glide: however no flight path has been identified and their presence on the site is fairly constant.

3.4.10 Rooks are very common in the area but are responsible for only about 1% of bird strikes. Their presence is noted in the quarry but there are no rookeries on site. However, there are several rookeries in the surrounding area and daily flight paths over the site, but not affecting the site have been observed. Rooks were also attracted to the bread described at para. 3.4.5 above and they responded similarly once the food source was eliminated.

3.4.11 Starlings are only responsible for around 2% of bird strikes and tend to be an intermittent problem on airfields because their activities are subject to seasonal changes, breeding and food supply. They may flock together in large numbers and can travel anything up to around 25 miles between roost and feeding areas. They can be a problem on the approach and climb out particularly during their pre-roost gathering when they swirl and glide en masse for up to half an hour before dispersing to their roosts.

3.4.12 Starlings are numerous on the site from time to time, but do not roost there and there is no evidence of pre-roost gathering over the site. It is however, highly unlikely that any pre roost gathering activity over the site would cause a major hazard to aircraft on the approach or climb out to runway 10/28, because of the distance from the end of the runway to the quarry. Since Starlings are common in the area it could not reasonably be claimed that their presence on the site is in anyway out of balance with the natural occurrence of these birds in the immediate vicinity.

3.4.13 Ducks and Swans have been recorded on the site. Up to four Swans were seen in the Western Quarry when the Lapwings were breeding there. They have not been seen since the area was kept drained. There are a number of different species none of which are present in large numbers and no flight

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paths or patterns have been established to and from the site that could be considered a particular risk to the approach and climb out of runway 10/28.

**3.4.14** **Pereregrines** have established a nest site in cliffs at the North Quarry. At present there is one pair that has successfully reared young. These birds are naturally occurring in the area and have the potential to actually assist in the control of the bird population on the site.

**3.4.15** Peregrines will catch a wide range of quarry from small birds like pipits up to much larger species like pigeons and ducks. These falcons require large amounts of food to feed hungry young and once the young have fledged they will be taught the skills of hunting by their parents and could also hunt in the quarry. There is also the potential for the young to return and establish further breeding sites at Hunistown.

#### **4.0 Future Development of the Site**

**4.1** I've reviewed the planning documents including the Environmental Impact Statement accompanying the application. It is evident from the lodged plans that the site at Hunistown is intended to continue as a working quarry for the next 20 years together with a programme of progressive restoration of the extracted areas, which is being implemented contemporaneously with on-going extraction, processing and related activities.

**4.2** The documents indicate that permission is sought to continue restoration for 5 years after the cessation of quarrying. The restoration and after-use plan comprises a number of elements. Once extraction ceases, it is planned to source large volumes of suitable material to fill the worked out quarry voids, together with the on-going ecological development of the subject site to maintain a balance of naturally occurring flora and fauna. Restoration has already commenced in the northern part of the North Quarry and the main landfillform construction process will continue in this area because this deposit will be the first quarry area to be completely worked out in or about 2007.

**4.3** Infilling the exhausted quarry voids is a long-term project. The possibility exists for extraction to have ceased in an area and for that area to be empty pending the identification of a suitable amount of infill material. Indeed, there may be periods of filling followed by periods of no activity whatsoever depending upon the availability of material.

**4.4** As is stated in the application, these extraction areas will not be allowed to fill with water to create lakes that would be an attraction for a variety of birds including gulls. Instead, until sufficient fill material can be sourced, it is proposed to reduce water levels in the excavated areas by the continuation of the existing pumping operation in the long-term thereby preventing the formation of any large areas of standing water. As filling takes place over time the pumping requirement will consequently diminish. If adequate volumes of material cannot be found, pumping will continue indefinitely and the applicant company is prepared to enter into a bond to this effect.

**4.5** The Wildlife and Wetland areas are currently being developed in such a way that they will not become an additional attraction for priority species in the area and these will continue to be developed and managed in the same way. Other conservation and preservation areas on the site are monitored for bird and wildlife activity, just as thoroughly as the Wetland and Wildlife areas, but they do not have a significant potential to be attractive to the types of birds that are likely to increase the bird hazard risk to aircraft.

**4.6** The commitment to the preservation of the Peregrines in the North Quarry will assist the long-term control of bird species on the site. Peregrines are territorial and if they leave the breeding area, invariably return to the same site year after year, for as long as they are capable of so doing. They are a natural predator and can effectively deter some bird species and control the numbers of others through predation.

#### **5. Conclusion**

**5.1** There are several species of birds documented on the application site that could reasonably be considered to have the potential to provide a hazard to aircraft on the approach and climb out for runway 10/28 at Dublin Airport. However, field investigations suggest the concentration of these birds on the site is no greater than any other area in the vicinity of either Dublin Airport or the quarry site. Indeed, there is evidence of potentially more hazardous concentrations of these birds outside of the immediate locality of the site.

**5.2** In my opinion this may be due at least in part to the careful way in which the ecological development and management of the site has taken place, with particular awareness of the requirements for air safety and in circumstances where the company is actively cultivating an area that will not be attractive to potentially hazardous bird species.

**5.3** Roadstone Dublin Ltd. and its agents involved in the development of the site are acutely aware of the potential risk to aircraft from birds and they have demonstrated an ongoing commitment to mitigate that risk on the Hunistown site. Existing monitoring procedures have detected birds on this site under various conditions leading to the implementation of effective mitigation measures to eliminate the source of attraction and disperse the birds. Bird populations on the quarry site and in the surrounding area should continue to be monitored so that if an area of the site proves to be attracting any of the species particularly sensitive to aircraft safety, steps can be taken to redress this. The current monitoring programme should continue.

**5.4** Provided the ecological development of the quarry site continues as it has been, remaining in balance with the natural development of the surrounding environment and its flora and fauna, the main concern regarding the future development is the potential for the exhausted extraction areas to be allowed to fill with water before being filled. However, the applicant explicitly ruled out this possibility because it is committed to long-term permanent pumping of these voids until such time as they are filled.

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5.5

All those involved in the quarry operations seem informed of the potential problem in allowing any part of the site to become an attraction for large numbers of birds that could cause a risk to aircraft so that any extraction areas not infilled will be pumped to ensure that they remain free of areas of standing water.

5.6

With continued ecological development and monitoring of the site it should be possible to develop the site along the lines proposed without increasing the bird hazard on the approach and climb out to runway 10/28 at Dublin Airport.

## 6. REFERENCES

- CAP 384 *Bird Control on Aerodromes*
- CAP 680 *Aerodrome Bird Control*
- CAA Paper 87015 *Lapwings and Bird Strikes*
- Central Science Laboratory, Bird Strike Avoidance Team, *An Assessment of the Hazard on UK Civil Aerodromes*
- Roadstone Dublin Ltd *Environmental Impact Statement November 2003 Volumes 1-3*
- Coveney Wildlife Consulting  
Site Visit

Report compiled by Gil Cree  
2<sup>nd</sup> February 2004

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