

CONTENTS

INTRODUCTION	1
METHODOLOGY.....	1
RECEIVING ENVIRONMENT	2
Site Context.....	2
Buildings and Structures.....	3
Land Use.....	3
Infrastructure	4
Cultural Resources.....	5
IMPACT OF PROPOSED DEVELOPMENT	6
Settlements	6
Buildings and Structures.....	7
Existing and Future Land Uses.....	7
Infrastructure Assets.....	7
Cultural Resources.....	8
MITIGATION MEASURES	8

FIGURES

Figure 12-1 Surrounding Land Use

*For inspection purposes only.
Consent of copyright owner required for any other use.*



INTRODUCTION

- 12.1 This chapter of the Environmental Impact Statement (EIS) addresses the effect on material assets of an inert soil and stone waste recovery facility at Calary Quarry, Killough Upper, Kilmacanogue, Co. Wicklow. The proposed recovery facility will provide for the restoration of a large quarry void by backfilling it to former ground level using imported inert soil and stone waste and establishing a heathland / grassland habitat similar to that which existed prior to quarrying. The EIS is to be submitted in support of planning and waste licence applications by Roadstone Ltd. for the proposed recovery facility.
- 12.2 According to the EPA (EPA (2003) *Advice Notes on Current Practice*),
“Resources that are valued and that are intrinsic to specific places are called ‘material assets’. They may be of either human or natural origin and the value may arise for either economic or cultural reasons”.
- 12.3 The scope of an assessment on material assets will vary according to the type of assets relevant to the proposed development. For economic assets, the scope may relate to ensuring equitable and sustainable use of resources; the assessments of cultural assets are more typically concerned with securing the integrity and continuity of both the asset and its necessary context.

METHODOLOGY

- 12.4 This material assets impact assessment comprises a process of considering existing cultural or economic resources pertinent to the proposed development and/or the application site and the likely development effects on those resources.
- 12.5 At the national level, Section 2 of *Advice Notes on Current Practice* (EPA: 2003) sets out some considerations for completion of a material assets impact assessment. It refers to the following topics which may be examined under this heading:
- transportation infrastructure (roads, railways, airports etc);
 - assimilation capacity of the surrounding natural environment;
 - major utilities (water supplies, sewage, power systems etc);
 - cities, towns and nearby settlements;
 - non-renewable resources / natural resources of economic value;
 - ownership and access;
 - architectural and and archaeological heritage.
- 12.6 The scope of this material assets assessment takes into account qualitative and quantitative analysis, a review of relevant literature and professional judgement in relation to impact on material assets, encompassing economic and cultural assets. Where relevant, this approach is adopted and included in the following stages in the assessment methodology.

Stage 1: The Baseline Assessment

- 12.7 This assessment has been informed by consideration of the characteristics of the surrounding area, which has been prepared by way of a desk-based study using published information from a range of sources that are referenced throughout this chapter. The baseline assessment has sought to:
- (i) describe the location and extent of material assets within the development boundary and extending beyond the site.

- (ii) describe the nature and use of the asset and to consider whether.
- it is exploited, used or accessible
 - it is renewable or non-renewable.

Stage 2: Assessment of Effects

- 12.8 To support the assessment, expected impacts on material assets have been quantified where possible, at each stage of the development. Through a combination of qualitative and quantitative assessment, this stage describes the activities, areas, infrastructure and resources likely to be affected and changes in overall land-use.
- 12.9 The magnitude of impacts have been assessed in a qualitative manner based on the predicted nature (beneficial / adverse) of the change, the magnitude of the change (negligible, minor, moderate or major) and the sensitivity or value of the resource or receptor (low, medium, high or very high).

Stage 3: Mitigation Measures

- 12.10 On completion of Stage 2, measures are proposed, if necessary, to avoid and / or reduce any identified effects on sensitive or scarce.
- 12.11 The impacts of the proposed waste recovery facility on natural resources of economic value (e.g. soil, minerals, water, air and landscape amenity) are identified and discussed in detail in the following chapters of this EIS:
- Chapter 5 – Soil and Geology
 - Chapter 6 – Surface Water and Groundwater
 - Chapter 8 – Air Quality
 - Chapter 10 -- Landscape and Visual Impact
- 12.12 Impacts on architectural, archaeological and cultural heritage features are assessed in detail in Chapter 11 of this EIS and impacts in relation to road and transportation infrastructure are assessed in Chapter 13.
- 12.13 This chapter of the EIS addresses other relevant material assets, including:
- settlements;
 - buildings and structures;
 - existing and future land uses;
 - infrastructure and utilities.

RECEIVING ENVIRONMENT

Site Context

- 12.14 The application site lies in the townland of Killough Upper, in the electoral division of Powerscourt and within the administrative area of Wicklow County Council.
- 12.15 There are no villages or towns in the immediate vicinity of the site. The site is located approximately 2.3km south-west of the nearest settlement, at Kilmacanogue village. It is also located 6.5km south-west of Bray town centre and 6.5km north-west of Greystones town centre.

Buildings and Structures

- 12.16 The area surrounding the application site is rural in character and there are relatively few residential dwellings or rural based enterprises in the immediate vicinity or along the local road network.
- 12.17 A plan showing surrounding land use and the location of existing dwellings and commercial properties in the vicinity of the application site is provided in Figure 12-1, based on a review of Ordnance Survey maps and aerial photography and an inspection of the area from the local road network.
- 12.18 There are three dwellings located to the south of the site, identified as Kilmac Farm, Bellevue Cottage and Sugar Loaf Farm. There are a further six dwellings and a commercial property (garage) located along a minor road running c. 200m to the west of the R755. There are approximately 25 No. dwellings to the north of the site along the R755 before its junction with the R760 Regional Road to Enniskerry at Rocky Valley. In total, there are an estimated 10 No. dwellings with 500m of the application site boundary, as indicated on Figure 12-1.
- 12.19 The village of Kilmacanogue is located approximately 2.3km to the north-east of the application site, on the eastern flank of the Great Sugar Loaf and the western side of the N11 National Primary Road. There are residential clusters and housing estates, as well as a number of retail businesses, offices and a business park located in the village. There are also a number of public / community buildings and facilities in the village, including the church and graveyard, St. Mochanog's National School, Kilmacanogue GAA club (at Pairc Fitzsimon) and a soccer club.

Land Use

- 12.20 A review of planning and land use designations published on the website¹ www.myplan.ie by the Department of Environment, Community and Local Government website indicates that:
- much of the Great Sugarloaf to the east of the application site is a proposed Natural Heritage Area (pNHA). This proposed designation does not, however, extend to the application site;
 - the nearest Special Protection Area is the Wicklow Mountains National Park to the west.
 - the nearest entry in the National Inventory of Architectural Heritage is a post box on R775, to the north of the application site.
 - the nearest sites scheduled for protection by the National Monuments Service comprise a cairn on the northern spur of the Great Sugarloaf and a cairn on the northern slopes of the Great Sugarloaf;
 - there is no potential for flooding to arise at the site. The nearest areas at risk of flooding are a watercourse along the N11 to the east and a watercourse to the west of the application site and the R755.
- 12.21 The Wicklow County Development Plan (CDP) 2010-2016 indicates that
- the application site is located in a proposed Natural Heritage Area (Schedule 17.2 and Map 17.02);

¹ As of 08/10/2015

- the Great Sugarloaf is a site of geological and geomorphological interest due to its scree slopes (Schedule 17.7, Map 17.07);
- consideration will be given to applying a Special Amenity Area Order (SAAO) to the Great Sugarloaf (Map 17.08).
- the application site is located in a designated Area of Outstanding Natural Beauty (Map 17.09);
- there are a number of views of special amenity value or special interest in the site vicinity, specifically those numbered 7, 8, 9 and 35 (on Map 17.10);
- there are a number of prospects of special amenity value or special interest in the site vicinity, specifically those numbered 4, 5, 9,10 and 11 (on Map 17.11);
- the groundwater in the area is indicated to be 'extremely vulnerable' (on Map 17.12).

12.22 A proposed draft Special Amenity Area Order for the Great Sugar Loaf was rejected by local councillors in Wicklow County Council in September 2011.

Infrastructure

Road Infrastructure

- 12.23 Calary Quarry is accessed via the N11 National Primary Road, a grade separated interchange at Kilmacanogue village and a section of the R755 Regional Road which runs approximately 3.8km west of the N11 junction, through Kilmacanogue village.
- 12.24 The R755 Regional Road is of single carriageway construction and climbs west of Kilmacanogue village before turning south to run along the western flank of the Great Sugar Loaf and continuing on to the Wicklow Mountains National Park and the villages of Roundwood and Laragh, Co. Wicklow.
- 12.25 The R760 Regional Road is another road of single carriageway construction which runs initially south from Enniskerry before turning east and terminating at a junction with the R755 at Rocky Valley, approximately 2.1km north of the application site. It is one of the main access routes to Powerscourt House and Powerscourt Waterfall, two significant tourist attractions in north Co. Wicklow.

Public Transport Infrastructure

- 12.26 There is no public transport infrastructure, such as railway or tramlines, in the vicinity of the application site. According to the Bus Éireann network map, the local area is not served by Bus Éireann. It is understood that a private bus service travels from Kilmacanogue to Glendalough via the R755 Regional Road. There are no bus stops in the vicinity of the application site.

Utilities

- 12.27 Apart from the N11 and regional road network, the most notable infrastructure in the vicinity of the application site is the high voltage (220kV) power cables which run north-south through Kilmacanogue village along the eastern flanks of the Sugar Loaf.
- 12.28 Overhead electricity transmission cables also run along the floor of the valley immediately west of Calary Quarry, with a spur line running east and upslope to the transformer hut at the quarry. As part of the proposed development, new power connections will be made from the existing transformer hut to the

MATERIAL ASSETS 12

proposed site office, weighbridge office, staff welfare facilities and proposed wheel wash and fuel storage facilities.

- 12.29 There are no Local Authority water mains in the vicinity of the application site. The national well database maintained by the Geological Society of Ireland (GSI) indicates that there a number of wells in the immediate vicinity of the application site (<1km) and it is likely that these are associated with domestic dwellings in the surrounding area. Potable water will be provided to the site via a pre-existing groundwater supply well (designated GW3).
- 12.30 There is no wastewater / sewerage infrastructure in the vicinity of the application site. Wastewater arising at the application site in Calary Quarry is treated by way on an existing on-site effluent treatment and disposal system. It is understood that other private residential properties in the vicinity of the development site are all serviced by private wastewater treatment systems.
- 12.31 Fixed telephone lines run along the western side of the Roadstone landholding, along the side of the R755 Regional Road.
- 12.32 There is no gas distribution infrastructure in the vicinity of the application site.

Cultural Resources

- 12.33 The principal cultural assets in the vicinity of the application site are an enclosure in Ballyremon Commons townland approximately 600m south-west of the application area, identified as a deserted, possibly medieval settlement. There are several other monuments nearby, within the same townland, including a mound, a barrow and another deserted settlement.
- 12.34 There are two hilltop cairns approximately 7m and 15m diameter respectively located 800m north and east of the application site boundary, at an elevation of approximately 400-450mOD, on the north-eastern shoulder of the Sugar Loaf. These monuments provide commanding views of the coastline to the east and Bray Head to the north-east.
- 12.35 There are no protected structures identified in the current Wicklow County Development Plan within or immediately adjacent to the application site at Calary Quarry. The closest protected structures to the site are located along the R755 Regional Road and in Kilmacanogue village and comprise
- (i) a hexagonal postbox in Rocky Valley, in Glencormick South townland;
 - (ii) a ruined church, known as Kilmacanogue Old Church, located in Kilmacanogue village and
 - (iii) St Mochoemog's Catholic Church in Kilmacanogue village.
- 12.36 The Great Sugar Loaf and its environs are designated as a proposed Natural Heritage Area (pNHA) under the Wildlife (Amendment) Act of 2000. The western boundary of the proposed NHA extends up to and runs along the eastern boundary of the Roadstone property at Calary Quarry. Although the current county Development Plan indicates that the Great Sugar Loaf is to be considered for a potential Special Amenity Area Order (SAAO), local councillors rejected this proposal in September 2011.
- 12.37 The principal tourist attractions in the area surrounding the application site are the village of Enniskerry and Powerscourt House and Gardens, located over 3.5km to the north, and Powerscourt Waterfall, located over 3km to the west.

IMPACT OF PROPOSED DEVELOPMENT

12.38 The proposed inert soil recovery facility at Calary Quarry, Killough Upper, Kilmacanogue, Co. Wicklow provides for :

- Use of approximately 3,280,000 tonnes of imported inert natural materials, principally excess soil, stones and/or broken rock, to restore a large existing quarry by backfilling it to former ground level;
- Installation of temporary site infrastructure and services including, site office, staff welfare facilities, weighbridge (with dedicated office), wheelwash, settlement ponds, pumphouse, hardstand areas, fuel and water storage tanks, waste inspection and quarantine facility and storage sheds;
- Separation of any construction and demolition waste (principally concrete, metal, timber, PVC pipes and plastic) inadvertently imported to site prior to removal off-site to authorised waste disposal or recovery facilities;
- Temporary stockpiling of topsoil pending re-use as cover material for final restoration of the site;
- Restoration of the backfilled void (including placement of cover soils and seeding) and establishment of a heathland / grassland habitat similar to that which existed prior to quarrying;
- Environmental monitoring of noise, dust, surface water and groundwater for the duration of the site restoration works and for a short period thereafter.

12.39 It is anticipated that the effects of the proposed waste recovery activities will be less than those generated by, or experienced during, the recent operation of the application site as a quarry, particularly in respect of noise and vibration where impacts will be lower in the absence of quarry related activities, such as drilling, blasting, rock crushing and screening etc. Potential impacts on material assets surrounding the application site are considered in detail in the sections below.

12.40 It should be noted that many of the impacts identified would be largely temporary in nature, arising for the duration of the proposed recovery operations, but effectively ceasing on the completion of the quarry backfilling and restoration works at the quarry.

12.41 Over the longer term, the backfilling of the quarry to its former ground level and its restoration to a heathland / grassland habitat, similar to that which originally existed prior to quarrying, is likely to have a positive and beneficial impact on the surrounding landscape and the visual amenity of the local area.

12.42 By improving the visual appearance of an open void in a scenic landscape, the proposed development will at least have a neutral, though possibly minor positive, impact on local land values and/or residential property values.

Settlements

12.43 It is expected that the vast bulk, if not all, of the inert soil and stones to be imported to the proposed recovery facility would be transported there via the N11 National Primary Road and the R755 Regional Road through Kilmacanogue village. This is the same, established route which had been used for many years up to relatively recently, when the application site operated as a quarry.

MATERIAL ASSETS 12

12.44 Given that the access route to be used by HGVs is well established and previously accommodated comparable traffic levels without significant adverse impact, it is considered unlikely that the resumption of HGV traffic movements to and from the application site will generate any significant adverse effects on local settlements. Any potential impacts which may arise would cease upon completion of the proposed works and would be intermittent, temporary and short-term in nature.

Buildings and Structures

12.45 A number of temporary structures at the application that are ancillary to the operation of the site as a quarry, such as offices, canteen and toilet facilities will be removed as part of the final restoration of the site.

12.46 As previously noted, there are a number of residential properties and farm enterprises in the vicinity of the application site, principally to the south. These structures would not be directly impacted by the proposed development.

12.47 Any potentially indirect impacts on residential amenity, such as dust and noise, would be monitored and mitigated in accordance with the recommendations detailed in Chapters 7 (Air Quality) and 8 (Noise) of this EIS. In the unlikely event that residual impacts on residential amenity do arise, it is expected that these will not be significant and that any such impacts would cease on completion of the development and would be intermittent, temporary and short-term in nature.

Existing and Future Land Uses

12.48 The proposed development is located in a rural area and the surrounding uses comprise largely of agricultural land and upland / mountainous land. There is a limited number of dwellings and a small number of farm related enterprises in the vicinity. The proposed development would be the subject of suitable monitoring and mitigation, as outlined by this EIS, to ensure that there are no significant adverse effects on these uses.

12.49 It is considered that the future use of much of the land in the vicinity of the application site is unlikely to change significantly as a consequence of the proposed development. There is no zoned land in the surrounding area and any development would, therefore, be the subject to the rural development policies outlined in the Wicklow County Development Plan.

12.50 It is considered that the proposed development would not result in significant adverse effects on existing or future land uses and that mitigation measures can be employed to reduce any residual adverse effects. As previously noted, over the longer term, the backfilling of the quarry to its former ground level and its restoration to a heathland / grassland habitat, similar to that which originally existed prior to quarrying, is likely to have a positive and beneficial effect on the surrounding landscape and visual amenity of the local area.

Infrastructure Assets

Roads

12.51 Provided works are undertaken to improve sightlines around the existing site entrance, the proposed development will have minimal impact on the safety and capacity of the existing road network.

MATERIAL ASSETS 12

12.52 A detailed assessment of the proposed traffic and transport impacts of the proposed development is provided in Chapter 13 of this EIS.

Public Transport

12.53 The proposed development will not have any impact on existing public transport infrastructure.

Utilities

12.54 The proposed development will not result in any significant adverse direct or indirect impacts on existing utilities.

Cultural Resources

12.55 There are no national monuments or protected structures within the application site, although a number of features and structures of archaeological or architectural interest are located at some distance, typically in excess of 600-800m away.

12.56 The proposed development will have no direct or indirect impact on any structures of archaeological or architectural interest. A detailed assessment of the potential impacts of the proposed recovery facility on such features is presented in Chapter 11 of this EIS.

12.57 The western boundary of the proposed Great Sugar Loaf Natural Heritage Area (NHA) however does extend up to, and runs along the existing eastern boundary of the Roadstone property at Calary Quarry. This pNHA is designated a geological heritage site on two grounds, its physical weathering features (under the Quaternary Geology theme) and its scree slopes (under the Fluvial and Lacustrine Geomorphology theme).

12.58 The proposed development will have no direct or indirect impact on any geological or physical features for which the adjoining site was designated a pNHA and no activity or emission associated with it will adversely affect the existence, presentation or interpretation of these features. Over the longer-term, the infilling an open void and the associated reduction of ground disturbance within a scenic landscape, may enhance in a minor way the presentation of the Great Sugar Loaf pNHA.

MITIGATION MEASURES

12.59 The mitigation measures outlined elsewhere in this EIS would ensure that effects on built structures, residential amenity, natural and environmental features of cultural environment and the local road network are minimised.

12.60 It is considered that no additional mitigation measures are required to minimise the effect on buildings and structures, settlements, infrastructure and existing and proposed land uses.

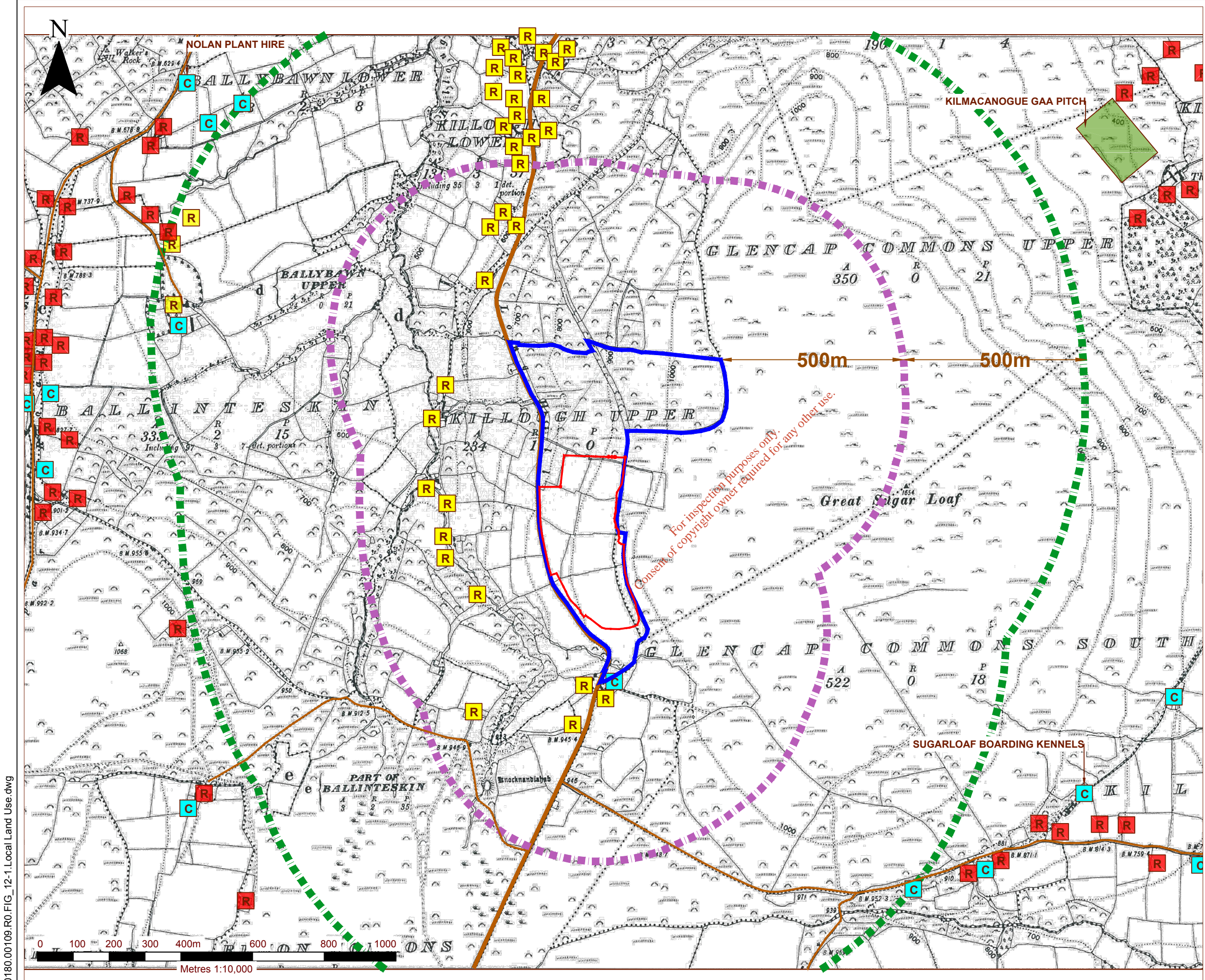
MATERIAL ASSETS 12

*For inspection purposes only.
Consent of copyright owner required for any other use.*

FIGURES

Figure 12-1 Surrounding Land Use

*For inspection purposes only.
Consent of copyright owner required for any other use.*



NOTES

1. ORDNANCE SURVEY IRELAND LICENCE NO. SU 0000716 (C) ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
2. EXTRACT FROM ORDNANCE SURVEY IRELAND 6 INCH DIGITAL MAPPING MAP NO. WW007

LEGEND

	ROADSTONE LIMITED LAND INTEREST (c.25.4 Hectares)
	PLANNING APPLICATION AREA (c.9.1 Hectares)
	1km BUFFER FROM LAND INTEREST BOUNDARY
	500m BUFFER FROM LAND INTEREST BOUNDARY
	RESIDENTIAL PROPERTIES WITHIN 1km OF THE APPLICATION SITE
	RESIDENTIAL PROPERTIES OUTSIDE 1km OF THE APPLICATION SITE
	COMMERCIAL PROPERTIES / FARM YARDS ETC.
	LOCAL ROAD NETWORK

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

ROADSTONE LIMITED ENVIRONMENTAL IMPACT STATEMENT
INERT SOIL WASTE RECOVERY FACILITY
 CALARY QUARRY,
 KILMACANOGUE, CO. WICKLOW

LOCAL LAND USE
FIGURE 12-1

Scale 1:10,000 @ A3 Date MAY 2016

00180.00109.R0.FIG_12-1_Local Land Use.dwg