Lobinstown Quarry

Environmental Impact Assessment Report

Section 13

Material Assets

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13.1 INTRODUCTION

This section of the EIAR provides an overview of the material and amenity resources within the vicinity of the proposed development at an existing quarry at Heronstown, Lobinstown, Navan, Co. Meath, known as Lobinstown Quarry, coupled with an assessment of the potential impact, if any, of the development on the existing environment in respect of these assets.

The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50 m OD to 35 m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35 m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years in order to extract a known resource with a further 2 years to fully restore the site.

Blasting will continue to be used as the method of extraction, to fragment the rock prior to crushing, screening and aggregate washing using mobile plant on the quarry floor. The existing site infrastructure includes site entrance with c.350 m long paved internal roadway, internal access roads, weighbridge, wheelwash, portacabin office, car park, mobile crushing, screening and washing plant, settlement lagoon system, and other ancillaries, which will be retained for the duration of the works. An effluent treatment system also exists on-site (Refer to EIAR Figure 3.1). Discharge of water from the settlement lagoon at the northern boundary of the existing quarry into the adjacent Killary Stream, Keeran River and ultimately the Dee River is ongoing in compliance with existing trade effluent discharge licence consent (DL. 20/01).

The assessment of economic assets tends to be concerned with ensuring their equitable and sustainable use, whereas the assessment of cultural assets tend to be concerned with securing their integrity and continuity, and their necessary context. Key issues of residential development, amenity, land use, roads and utility services are addressed. Natural resources of economic value (Refer to Table 13.1 below) which are also considered as material assets, are dealt with where necessary in their respective EIAR sections (EPA 2015).

Material Assets is considered to include architectural and archaeological heritage and cultural heritage. For the purpose of this EIAR, an assessment of the potential impact, if any, of the development on the existing environment with respect to these assets is considered in EIAR Section 12 Section - Cultural Heritage.

Material assets may be defined as resources that are valued and that are intrinsic to specific places, and may be either human or natural origin, and the value may arise from either economic or cultural reasons (EPA 2015). The developments utilisation of, or proximity to, the area's material assets, can directly and indirectly result in potential environmental impacts. Therefore, the objective of this assessment is to identify the material assets of the area,

determine the potential impacts of the proposed continuance and extension of quarry operations at Lobinstown, including permitted concrete readymix activities, on these assets, and propose mitigation measures where necessary to ensure that they are addressed in an appropriate manner. This section also indicates the associated sections within the EIAR that consider these impacts and any proposed mitigation measures.

13.2 REGULATORY BACKGROUND

13.2.1 INTRODUCTION

There are no policies, plans, acts, regulations or technical standards that are specific to this chapter.

13.2.2 GUIDANCE

There is no specific guidance on Material Assets other than, in respect of the preparation of EIARs, the EPA's Draft Advice Notes for Preparing an Environmental Impact Statement (EPA 2015).

13.3 METHODOLOGY

The assessment of material assets has been prepared in accordance with the Advice Notes for Preparing Environmental Impact Statements, Draft, published by the EPA (EPA 2015). Table 13.1 outlines the categories of assets, which the EPA suggests may need to be examined as part of the material assets study.

On the basis of categories in and the nature of the proposed development, the material assets that could potentially be impacted by the quarry, and which have been identified for assessment are: (1) non-renewable resources (minerals, soils); (2) settlement - residential development; (3) land use; (4) transport infrastructure; (5) built services; (6) waste management infrastructure (7) cultural assets - archaeological, historic and architectural heritage; and (8) landscape and natural heritage. Most of these assets have been considered elsewhere within other sections of the EIAR, as indicated below:

- Non-renewable resources (minerals, soils) & Agronomy (Soil Management) are discussed in Section 6 – Land, Soils and Geology;
- Settlement, Commercial & Industrial Development, Property, Tourism & Recreational Infrastructure and land use are discussed in Section 4 – Population & Human Health;
- Land use is discussed in Sections 4 - Population & Human Health and 6 - Lands, Soils and Geology;
- Roads, as a component of Transport Infrastructure, are discussed in Section 14 – Roads & Traffic;
- Cultural assets are discussed in Section 12 - Cultural Heritage;
- Natural Heritage is discussed in Section 5 – Biodiversity; and
- Landscape is discussed in Section 11 – Landscape.

13.3.1 DESK STUDY

The study involved a virtual, but comprehensive, aerial examination of the study area and surrounding region using Google Maps, Google Earth Pro and available OSI maps to identify the material assets. All assets identified during this survey were interrogated, described and evaluated in terms of scale and significance prior to inclusion in the study.

The impact assessment, which determined the potential impacts of the proposed development on nearby material assets, was based on standard criteria issued by the EPA (2022) (Refer to Appendix 3).

13.3.1.1 Sources of Information

The main sources of information are listed in section 13.7 References.

Table 13.1 EPA's Classification of Types of Material Assets

Asset Type	
Economic Assets - Natural Origin	- Assimilative capacity (air, water) - Non-renewable resources (minerals, soils) - Renewable resources
Economic Assets - Human Origin	- Cities, towns, villages and settlements - Transport infrastructure (roads) - Major utilities (water, sewage, power, telecommunications) - Ownership and access - Agronomy - Commercial & Industrial Development - Property - Tourism & Recreational Infrastructure
Cultural Assets – Physical Type	- Archaeology - Architecture - Settlements - Monuments, features and landmarks - Historic sites and structures - Landscape - Geological heritage
Cultural Assets – Social Type	- Language and dialects - Folklore and tradition - Religion and belief - Literary and artistic association

13.4 BASELINE DESCRIPTION OF RECEIVING ENVIRONMENT

13.4.1 NON-RENEWABLE RESOURCES

The Meath County Development Plan 2021-2027 (Meath 2021) acknowledges the need for extractive industries in terms of supply of aggregate materials for the construction sector, delivering transport infrastructure projects, and for the export market. However, the potential for conflict in the operation of these industries with wider environmental issues needs careful consideration. Extractive industries by their nature, can if uncontrolled give rise to detrimental environmental and residential amenity effects including traffic generation, vibration, dust, noise, water pollution, visual intrusion and loss of ground water supplies.

Meath contains a variety of natural resources such as building raw materials in the form of sand, gravel, stone reserves including high purity limestones and shale used in cement and magnesia manufacture and base metal deposits. The potential of these resources to underpin construction output and provide employment and economic growth in the local and regional economy is recognised as is the need to exploit such resources in an environmentally sound and sustainable manner.

Development plans are required to map key natural aggregate resources. The wide distribution of resources is recognised and particular known deposits and sites have been mapped by Geological Survey of Ireland (GSI) in 2004. The GSI Aggregate Potential Mapping illustrates potential crushed rock and sand and gravel deposits and assesses the interactions between the development of these resources and future land uses. These maps are acknowledged as not being exhaustive and additional reserves may adjoin those shown on CDP Map 9.5 and 9.6. Guidelines for Planning Authorities on Quarries and Ancillary Activities were published by the DoEHLG in 2004. A number of other guidelines relating to quarrying have been produced by various bodies for example 'Geological Heritage Guidelines for the Extractive Industry' (GSI), 'Institute of Geologists of Ireland Environmental Impact Statements Guide' and 'Wildlife, Habitats and the Extractive Industry'.

Meath County Council has undertaken an examination of quarries within its administrative area in accordance with Section 261A of the Planning and Development Act 2000, as amended, to determine whether development was carried out which would have required Environmental Impact Assessment (EIA) or Appropriate Assessment (AA) having regard to the Environmental Impact Assessment Directive and the Habitats Directive (i.e., 14/52/EU and 92/43/EEC, respectively). The Department of Environment, Community and Local Government published Guidelines for Planning Authorities on Section 261A of the Planning and Development Act, 2000 and related provisions in January 2012.

The Goal of the Council is to facilitate adequate supplies of aggregate resources to meet the future growth needs of the County and the wider region while addressing key environmental, traffic and social impacts and details of rehabilitation.

It is a policy of the Council to:

RD POL 21 To ensure that projects associated with the extractive industry carry out screening for Appropriate Assessment in accordance with Article 6(3) of the E.C. Habitats Directive, where required.

RD POL 22 To facilitate the exploitation of the county's natural resources and to exercise appropriate control over the types of development taking place in areas containing proven deposits, whilst also ensuring that such developments are carried out in a manner which would not unduly impinge on the visual amenity or environmental quality in the area.

RD POL 23 To support the extractive industry where it would not unduly compromise the environmental quality of the county and where detailed rehabilitation proposals are provided.

RD POL 24 To seek to ensure that the extraction of minerals and aggregates minimise the detraction from the visual quality of the landscape and do not adversely affect the environment or adjoining existing land uses.

RD POL 25 To ensure that the extractive industry and associated development minimises adverse impacts on the road network in the area and that the full cost of road improvements, Meath County Development Plan Chapter 9 including during operations and at time of closure, which are necessary to facilitate those industries are borne by the industry itself.

RD POL 26 To ensure that all existing workings shall be rehabilitated to suitable land uses and that all future extraction activities will allow for the rehabilitation of pits and proper land use management. The biodiversity value of the site should be considered in the first instance when preparing restoration plans. Where landfilling is proposed, inert material is the preferred method. Each planning application shall be considered on a case by case basis and where relevant will be dealt with under the relevant regional Waste Management Plan.

RD POL 27 To ensure that development for aggregates / mineral extraction, processing and associated processes does not significantly impact in the following areas:

i. Existing & Proposed Special Areas of Conservation (SACs);

ii. Special Protection Areas (SPAs);

iii. Natural Heritage Areas and Proposed Natural Heritage Areas;

iv. Other areas of importance for the conservation of flora and fauna;

v. Areas of significant archaeological potential;

vi. In the vicinity of a recorded monument, and; Sensitive landscapes.

vii. World Heritage Sites

Refer to Appendix 1 for further details with respect to the Council's policies and objectives in the Meath County Development Plan 2021-2027 (Meath 2021).

There is a clear need for each county, including Meath, to make future provisions for the long-term supply of aggregates. These reserves are needed to meet the demand that is being placed on the extractives industry to supply raw materials for continued development within Meath. Thus, the proposed development is required to supply such materials for the continued social and economic growth of the region.

There is a paucity of mineral resources in the North Navan Lowlands LCA and the northeast of County Meath. The area has a remote character and low-density development. Using a combination of the GSI's online mapping website and virtual confirmation by Google Earth Pro shows that there are few active quarries in the area, and these are:

1. Breedon's Lobinstown Quarry, Heronstown, Lobinstown - sandstone;
2. Roadstones Barley Hill Quarry, Kingscourt - limestone;
3. Roadstone's Deerpark Quarry – c. 2.5 km west of Slane - basalt;
4. Unidentified quarry at Knockmooney c. 2.7 km north of Slane (just east of the N2) - greywacke; and
5. Doherty Quarries' at Cruicetown c. 3.75 southwest of Slane - sand and gravel.

Disused and/or recently closed quarries: (1) Sand and gravel quarry at Mullaghmore south of Kingscourt; (2) O'Reilly Concrete's quarry c. 1 km west of Lobinstown; and (3) Quarry at Mullaghdillon c. 2.5 km north of Slane.

By their nature, aggregates can only be worked where they occur. The products are generally of low unit value and the cost of haulage affects economic competitiveness in this sector. Thus, the most significant cost is transportation, and as a result most quarries typically operate within a c. 25 km radius of their market. Furthermore, local supplies of raw materials reduce transport distances, thereby reducing the carbon footprint.

The proposed development has the benefit of reasonable access to the regional and national road network to meet future demands for aggregates in the area. It will ensure the continued viability of the aggregate supply in County Meath.

Numerous towns and villages lie within the natural market of Lobinstown Quarry (i.e., < 25 km), and include Slane, Collon, Ardee, Navan, Dunleer, Kells, Drogheda, Duleek, Kingscourt, Mullagh, Carrickmacross, Bettystown-Laytown-Mornington, Termonfeckin, Clogherhead and southerly outskirts of Dundalk — listed by distance from the quarry. Thus, the quarry's market includes two county towns (Navan and Dundalk), ten urban towns (Ardee, Dunleer, Kells, Drogheda, Duleek, Kingscourt, Carrickmacross, Bettystown-Laytown-Mornington, Termonfeckin and Clogherhead), while Lobinstown, Slane, Collon and Mullagh are identified by the CSO as census towns or villages with populations of under 1,500 persons (in 2016).

The quarry at Lobinstown has an established history of quarrying using blasting techniques to break and extract the rock followed by crushing and screening to produce aggregate products. These activities have co-existed with other land uses in the area, including agriculture and silviculture, almost continuously since 1958.

The quarry has provided employment for local people, both directly and indirectly. The quarry operation directly employs 4 people. In addition to this, there is indirect employment provided which includes local hauliers and contractors.

Lobinstown Quarry is not designated by the GSI as a County Geological Heritage Site (CGS). The geological bedrock exposures within the existing quarry are considered of insufficient interest or importance to warrant designation or protection for earth science or geological heritage purposes.

CGSs do not receive statutory protection like Natural Heritage Areas (NHA), but receive an effective protection from their inclusion in the planning system, which should ensure that they are not inadvertently damaged or destroyed through lack of awareness.

The closest CGS mapped by the GSI are, as follows:

- At a distance of 3 km to the south, Rathkenny Subaerial Fan, Rathkenny Sandur (MH015). This is described as "Hummocky topography with gravel pit: an ice contact sub-aerial fan and glacial outwash deposits".
- At a distance of 4 km to the northeast, the most southerly boundary of the Ardee-Newtown Bedform Field (LH001). This is described as "Field of subglacial bedforms, which are features formed under the bed of an ice sheet, includes drumlins, crag-and-tails and ribbed moraines, and forms part of a small, discrete field of these features south and southwest of Ardee town. The field covers an area of 8 by 6 km and includes approx. 50 features. Some of the drumlins are superimposed on ribbed moraine features."

The relevant Geological Heritage Policy of Meath County Council set out in the County Development Plan 2021- 2027 are as follows:

HER POL 46 To maintain the geological and geomorphological heritage values of County Geological Sites listed in Table 8.7 and, through consultation with the Geological Survey of Ireland, protect them from inappropriate development.

The Geological Heritage of County Meath *(An audit of County Geological Sites in County Meath 2007*) notes that working quarries are often listed because they represent the best available sections in areas with otherwise poor exposure, and that no restriction is sought on the legitimate operation of the quarries. However, maintenance of exposure after quarry closure is generally sought in agreement with the operator and planning authority in such a case. Therefore, should features of potential geological interest be exposed during extraction, the operator could consult with the GSI in respect of retention of representative faces or features.

There are no designated sites, with respect to geological features, within the application area or within radius of influence of the proposed development. However the GSI have requested (Refer to EIAR Section 6.1.4.1) that the operator might assist the GSI's geological heritage goals with the following (and ideally this would be written into the restoration / closure plan) and be included as a condition of planning as deemed appropriate by the planning authority:

1. Allowing access to quarry faces by appropriate scientists (upon request and with due regards to Health and Safety requirements) during quarrying to check for interesting new stratigraphies / relationships as they might become exposed and to establish if the quarry site is worthy of recognition post extraction and through aftercare/restoration planning.
2. If deemed appropriate in (1) above, leaving a representative section of the quarry face at the end of the quarry life or inclusion of information panels to promote the geology to the public or develop tourism or educational resources if appropriate depending on the future use of the site. Natural exposures are few, or deeply weathered, such that

this measure would permit on-going improvement of geological knowledge of the subsurface.

These above mitigation measures have been incorporated into the quarry development scheme to address geological heritage (Refer to EIAR Table 6.7).

Should any significant bedrock exposures of importance be identified, Breedon will work with the GSI to find a mutually beneficial arrangement on how best they can be designed to remain visible as rock exposure rather than covered with soil and vegetated, in accordance with safety guidelines and engineering constraints. This measure would permit on-going improvement of geological knowledge of the subsurface and could be included as additional sites of the geoheritage dataset, if appropriate.

The final land restoration scheme will ultimately allow the site to be returned to a condition whereby there will be negligible residual impact on the geological heritage of the site and surrounding environment due to the excavation and removal of bedrock underlying the site. It is planned to minimise, eliminate or decrease long-term ecological and visual impacts on the environment through the implementation of the final restoration scheme.

The Geoheritage Programme tries to promote a partnership between geological heritage and active quarrying, with such measures as those outlined in the 'Geological Heritage Guidelines for the Extractive Industry'.

Mineral extraction by quarrying is defined as a heavy industry and requires the use of heavy plant and machinery, each of which are energy intensive. The crushing, screening and transport of rock and aggregates are typical examples of the use of machinery in quarry operations. Most plant used in the quarry runs on diesel, especially as the continued use of mobile crushing and screening plant is proposed.

13.4.2 SETTLEMENT

The site of the proposed development is located in rural northeast Meath near the northern end of the Midlands limestone terrane. The quarry is located on the north side of, and with direct access onto, the L1603 local road, which extends from the N52 south before crossing the L1604 local road (i.e., Collon Road) c. 1.2 km east of Lobinstown and continuing on to the N51 at Harlinstown Crossroads c. 1 km west of Slane. The L1603 is known as the Slane Road south of the intersection with the L1604 at McEntegart's Crossroads and in the vicinity of the site. Access to the N51 Delvin to Drogheda National Secondary Road is gained c. 1.5 km west of Slane (Refer to Figure 1.1).

The settlement pattern in the Heronstown area can be described as low-intensity rural settlement, commonly with clusters of houses, as well as some ribbon development, albeit peripheral to the nearby settlements of Slane, Collon and Ardee. Although the village of Lobinstown is located c. 2 km to the northwest, the nearest large residential settlement close to the site is Slane c. 9 km to the southeast, followed by the nearby settlements of Collon c. 9 km to the east, Ardee c. 10 km to the northeast, and Navan c. 14.5 km to the south. There is a lack of large settlements in northeastern County Meath, and a paucity of towns north of a line joining Drogheda, Slane, Kells and Oldcastle.

Residential property in the area typically comprises one-off single residences along public roads or farmsteads at the end of lanes off the latter (Refer to Figures 1.2, 1.3 & 4.1) . While residential development consists of individual, one-off residences, there are distinct clusters of residences that do not qualify as villages, but might constitute hamlets, crags or small settlements, such as at Castletown.

There are no occupied residences within the application site or landholding. The nearest residence is 120 m to the southwest of the permitted extraction area. There are 7 residences within 250 m, 15 within 500 m, 31 within 750 m and 45 within 1 km of the proposed extraction area. Heronstown National School is c. 627 metres north of the extraction area (Refer to Figure 4.1).

There has been a long historical association with quarrying at this location and consideration has been given to screening of the development, phasing and direction of working with respect to receptors so as to reduce visual impact, while impacts due to noise and dust are substantially attenuated. With the exception of the N52, N51 and N2 national roads, the roads in the area are of a local character and typical of a rural location.

Adequate fencing, signage and other barriers have been erected around the site for the safety of the general public and to prevent livestock straying into the development area. Large lockable gates are in place to guard against unauthorised and unsupervised entry to the site outside of working hours.

13.4.3 LAND USE

The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50 m OD to 35 m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35 m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years in order to extract a known resource with a further 2 years to fully restore the site.

A long history of quarrying exists at the site and Breedon have full control of the lands via a freehold interest in the c. 24.8 ha landholding that encompasses the existing quarry and proposed extension area (Refer to EIAR Figure 1.2 & 1.3).

The quarry is located on the north side of, and with direct access onto, the L1603 local road, which extends from the N52 south before crossing the L1604 Local Road (i.e., Collon Road) c. 1.2 km east of Lobinstown and continuing on to the N51 at Harlinstown Crossroads c. 1 km west of Slane (Refer to EIAR Figures 1.1 & 1.2).

The site is located in a rural area consisting mostly of agricultural fields with minor levels of scrub and forestry plantation in the wider area. The region is characterised by relatively flat to undulating landform to the northwest, which is relatively typical of the lowlands in County Meath, while a series of NE-SW trending hills, known as the Ferrard Hills are located c. 1 km southeast of the site. The lands in the vicinity of the site are typically at elevations of 85-120 m OD and gradually increase to

the southeast from c. 83 m OD at the northwestern boundary of the landholding to c. 111 m OD at the eastern boundary and 225 m OD at Slieve Bengh, c. 2. 5 km to the southeast.

The area is located within Landscape Character Area (LCA) 3: North Navan Lowlands, which consists of a large area of agricultural land to the north of Navan contained in the east and west by the Rivers Blackwater and Boyne, respectively, and to the north by a more complex hilly landscape along the north Meath border. It comprises a mixture of pasture and arable fields that have been enlarged by loss or removal of traditional boundaries, now often consist of post and wire or timber fences and drainage ditches along road corridors.

The quarry is located in a lowland area between the Northern Drumlin Belt and Ferrard Hills and occurs on gently rising ground towards Slieve Bengh of the Ferrard Hills to the southeast. The area northwest of the Ferrard Hills and including the Heronstown, is characterised by a dendritic drainage pattern that drains to the west and north. The site and surrounding area is situated in the Dee Sub-Catchment (Dee_SC_030), part of the WFD Catchment & Hydrometric Area HA 06: Newry-Fane-Glyde-Dee (Refer to EIAR Figure 7.4). The site lies near the headwaters of the Keeran River, which drains into Killary Waters and ultimately into the Dee River. No natural heritage sites are designated downstream of the site, except for Dundalk Bay SAC and SPA c. 21.5 km to the northeast — a downstream distance of c. 43 river km.

The predominant land use in the LCA is as large agricultural fields, with a mix of pasture and arable crops. The 2018 Corine (CORINE: Co-ORdinated INformation on the Environment) map (Refer to EIAR Figure 11.8) shows that the predominant land use within the Heronstown area is given as pasture (CORINE Class 231); non-irrigated arable land (211); mixed forest (313); and broad-leaved forest (311). The map shows that the predominant land use within the application site is pasture (231), although by definition it is mineral extraction related to the quarrying of sandstone and associated activities. Prior to the commencement of commercial quarrying in 1958, the lands had been kept in agriculture use. Ultimately, the site will be reclaimed in accordance with the approved quarry restoration scheme, and most probably undergo a change of land use to wildlife amenity.

Meath has very low forest cover with 5.9% forest cover in 2022. However, there is a relatively high level of forest cover in the Heronstown area, much of which is mono-type afforestation comprising scattered, rectilinear patches of coniferous forest, much of which has been recently planted, while there are a few planned landscapes or parkland of demesnes in the area. The dominant land use in the wider area of the quarry is clearly agricultural.

Field dimensions vary from small to very large, while hedgerows vary from over-grown to less commonly well-managed. The predominance of medium to large field sizes and managed hedgerows with some hedgerow trees tends to create a more open rural landscape, with some enclosed road corridors with restricted views. The area is generally characterised by rolling topography with poor drainage and poorly drained mineral soils. The land is mostly used for stock rearing with minor mixed tillage, with blocks of mixed and coniferous forestry.

Access to the site will be from the existing main entrance with direct access onto the L1603 local road.

As the proposed development will be located within the existing permitted quarry the only additional land take relates to an extension of c. 4.8 ha. This will result in the loss of some

pasture and hence a minor change in land cover, with a commensurate impact on agriculture. The total application area covers c. 18.5 ha of lands (Refer to EIAR Figures 1.2 & 1.3).

Sight distances at the site entrance of at least c. 160 m are achievable in both directions along the L1603 at a distance of 3 m back from the edge of the carriageway. The visibility to the north (right) and south (left) from the quarry access is considered adequate for the prevailing vehicle speeds on the L1603 (SLR 2022a). Hedges and trees near the quarry entrance will be maintained regularly in order to ensure that the sightlines at the access are kept clear at all times.

The general configuration of the site is that the quarry was excavated into the northern flank of a NW-SE oriented hill/ridge. To date, extraction has taken place to a depth of c. 65 m OD in the southern and central sections of the active, permitted quarry. The quarry comprises disturbed ground with a large, level processing area located in the central section of the site and an oval-shaped extraction area developed into the central and southern sections of the site. The northern section of the site accommodates the settlement pond and a screening embankment along the northern site boundary with the Killary Stream (Killary Water _010, IE_NB_06K010100). The site holds a valid, current Section 4 Discharge Licence (DL. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment system (settlement lagoons) to the Killary Stream.

The site is bounded by the L1603 to the south, the KIllary Stream to the north and agricultural lands, mostly pasture, to the east and west. Tracts of afforestation occur nearby to the east and to the north of the drainage ditch that traverses the site, except for the northern field which has been held in pasture. The boundaries of the existing quarry are lined by mature hedgerows, while the perimeter of the proposed extension crosses field boundaries and will require construction of screening berms.

The quarry area is largely dominated by bare, exposed ground with stockpiles of aggregate and an area of grassland, known here as the northern field, which accommodates the settlement pond and a screening embankment along the northern site boundary with the Killary Stream. Planning permission (P.A. Ref. 22328) for a concrete plant in the northern part of the site was granted on 16th June 2022. The overburden has been stripped from the southern and central sections of the site permitted under P.A. Ref. LB200106, and it is proposed to extend extraction to the east of this area.

The quarry has been worked below the water table, and in order to maintain a dry working environment on the floor of the quarry, some rainfall-runoff and groundwater is discharged from site in compliance with discharge licence Ref. 20/01.

The site will be worked from the existing quarry area in an easterly direction in a series of c. 15 m benches between c. 105 and 35 m OD (Refer to EIAR Figures 3.1 & 3.3). It is proposed to develop an additional extractive bench below the current quarry floor to 35 m OD. Development of the quarry at depth below the current floor will require continued dewatering of rainfall-runoff and groundwater and discharge to surface water in order to maintain a dry working environment on the floor of the quarry.

Discharge of water from the settlement lagoon at the northern boundary of the existing quarry into the adjacent Killary Stream and ultimately the Dee River is subject to the requirements of an existing trade effluent discharge licence (DL. 20/01) granted by Meath County Council on 16th November 2020.

The site has had a long history of quarrying, such that these activities have co-existed with other, predominantly agricultural, land uses in the area. The proposed land use on-site will continue the tradition of quarrying activities and associated operations.

There are no active quarrying operations within 5 km, as the O'Reilly Concrete Lobinstown Quarry c. 2.5 km to the northwest is currently in final stages of restoration. The nearest active quarry is Roadstone's Slane Quarry c. 7 km to the south, while a disused quarry is now operating as an SRF at Mullaghdillon c. 6 km to the southeast. The only significant industrial/commercial activity within 5 km of the site is the industrial/warehouse estate in Grangegeeth c. 4.5 km to the southeast.

Quarry workings have been a feature of this site since 1958. On completion of site activities, the quarry will be decommissioned and reinstated in accordance with the approved quarry restoration scheme, and thus integrated back into the surrounding landscape. It is envisaged that the quarry site will undergo a change of land use from mineral extraction to a beneficial after-use, most probably as a wildlife amenity.

13.4.4 TRANSPORT INFRASTRUCTURE

13.4.4.1 Roads

The existing road network around the quarry comprises rural local roads. The site is situated approximately 2 km southeast of Lobinstown Village with access to the N2, N51 and N52 National Roads provided via the L1603, which runs adjacent to the quarry site.

The application site is located c. 2 km southeast of Lobinstown on the L1603 local road. The quarry is located on the northern side of, and with direct access onto, the L1603, which extends from the N52 south before crossing the L1604 local road (i.e., Collon Road) c. 1.2 km east of Lobinstown and continuing on to the N51 at Harlinstown Crossroads c. 1 km west of Slane. The L1603 is known as the Slane Road south of the intersection with the L1604 at McEntegart's Crossroads and in the vicinity of the site. Access to the N51 Delvin to Drogheda National Secondary Road is gained c. 1.5 km west of Slane. Thus, the N2, N51 and N52 national roads, the principal transport arteries in northeastern County Meath, can be accessed within c. 8.5 km of the site (Refer to Figure 1.1 & 1.2).

The road network in the wider area comprises the two national secondary roads running with a roughly NNE-SSW orientation — the N51 to the southeast between Slane and Navan and the N52 to the northwest between Ardee and Kells, while the N2 primary national road follows a roughly N-S orientation to the east between Slane and Navan, and the N3/M3 primary national road follows a roughly NW-SE orientation to the southwest between Navan and Kells. The two national primary roads represent the arterial road corridors of the M2/N2 (Dublin-Ashbourne-Slane-Ardee-Carrickmacross-Castleblaynet-Monaghan national route), and the M3/N3 (Dublin-Navan-Kells-Cavan national route) that radiate out from Dublin. The two national secondary roads are the N51 (Drogheda-Slane-Navan-Delvin national route) and the N52 (Dundalk-Ardee-Kells-Mullingar-Tullamore-Birr-Nenagh national route). There are also several regional roads including the R162, R163, R165 and R147.

The proposed development is located c. 2 km southeast of Lobinstown, c. 9 km northwest of Slane, c. 9 km west of Collon, c. 10 km southwest of Ardee, c. 14.5 km north-northeast of

Navan, c. 16 km west of Dunleer, c. 17 km east of Kells, c. 19 km west-northwest of Drogheda, c. 19 km northwest of Duleek, c. 19 km southeast of Kingscourt, c. 21 km east of Mullagh, c. 23 km south of Carrickmacross, c. 25 km northwest of Bettystown-Laytown-Mornington, c. 25 km west of Clogherhead, and c. 25 km southwest of the most southerly outskirts of Dundalk, the quarry falls within the natural catchment of these settlements (Refer to EIAR Figure 1.1).

Of the larger settlements, Ardee lies on the N2 and N52, Navan lies on the N51 and M3, Kells lies on the N52 and M3, Drogheda lies on the N51 and M1, Carrickmacross lies on the N2 and Dundalk lies on the N52 and M1. It is expected that the site traffic serving the quarry will likely be: (1) on the L1603 from the N51 at Harlinstown Crossroads, originating in Navan and Drogheda; (2) on the L1603 and/or L1604 from the N52, originating in Kells, Ardee and Dundalk; and (3) on the L1604 and L1603 from the N2 at Collon originating from numerous smaller settlements in central County Louth.

With the exception of the national routes, the roads in the wider area are predominantly local character and typical of a rural location. These local roads consist of single surface dressed carriageways, generally connecting to other local roads or forming Cul De Sac's to service several houses or farmsteads. The concentration of villages and small towns, and paucity of large towns in the region, except Navan and Kells, reflects the lower population densities in northeastern County Meath.

The RSES for the Eastern & Midland Region (2019-2031) establishes Dublin as a city of international scale supported by the key Regional Growth Centres of Athlone, Dundalk and Drogheda, which form the upper two tiers in the settlement hierarchy. Drogheda and the southernmost outskirts of Dundalk lie within the 25 km market of the Lobinstown Quarry.

Drogheda was the fastest growing town in the Country in the 2011-2016 inter-census period. Drogheda's location on the Dublin-Belfast Economic Corridor, combined with its existing physical, economic and social asset base, provides significant sustainable growth potential. Dundalk was one of the fastest growing towns in the country in the 2011-2016 inter-census period, and with its status as a county town and its proximity to Newry, provides strong growth potential and enhanced cross-border interactions.

The RSES identifies a third tier of Key Towns, such as Navan, which are large economically active service and/or county towns that provide employment for their surrounding areas and with high-quality transport links. Navan is one of the fastest growing towns in Ireland and is situated c. 14.5 km south-southwest of Lobinstown, which falls within the natural market of the quarry. The fourth tier of Self-Sustaining Growth Towns, such as Kells, Ardee and Carrickmacross, are those with a moderate level of jobs and services – includes sub-county market towns and commuter towns with good transport links and capacity for continued commensurate growth to become more self-sustaining. It is clear from the above that many of the towns and urban centres are located on a national transport corridor and within 25 km of the site. These urban centres are located on major transport corridors and are the focus of strong growth and investment under the National Development Plan, in order to achieve sustainable development.

The significant roads in the region are summarised below:

- N2/M2 is the National Primary Road connecting Dublin to Ashbourne, Slane, Carrickmacross, Castleblayney and Monaghan Town. The road is a motorway from

the M50 to Ashbourne, after which it becomes single carriageway. It is also one of the strategic radial transport corridors identified in the RSES.

- N3/M3 is the National Primary Route connecting the capital city, Dublin to Dunshaughlin, Navan, Kells, Virginia, Cavan Town and Belturbet. The road is a tolled motorway between the M50 in Dublin and Kells, where it becomes dual carriageway as far White Gates, where it then becomes a single carriageway. It is one of the strategic transport corridors identified in the RSES for the Eastern & Midland Region (EMRA 2019).
- N51 Regional Road is a National Secondary Road connecting the M1 as it by-passes Drogheda, the N2 at Slane, the N3 as it by-passes Navan, and the N52 at the N52 in Delvin, where the N51 terminates. The road is a single carriageway that extends c. 53 km. It is not one of the strategic radial transport corridors, but is nonetheless a significant route connecting several large towns in the Midlands, not to mention the N6, N4 and N3 strategic transport corridors.
- N52 is a National Secondary Road connecting the M1 at Haynestown Bridge as it by-passes the outskirts of Dundalk with the M7 c. 2 km south of Nenagh. The road is a single carriageway that extends c. 178 km. It is not one of the strategic radial transport corridors, but is nonetheless a major route connecting numerous large towns in the Midlands (Dundalk-Ardee-Kells-Mullingar-Tullamore-Birr-Nenagh).
- R162 Regional Road is oriented roughly N-S, and connects Monaghan Town with Navan via Ballybay, Shercock, Kingscourt and Nobber. The road is a single carriageway that extends c. 80 km. The road is a c. 7 m wide, hot-rolled asphalt-surfaced, single carriageway roadway with no hard shoulders and grass verges typically of > 1.0 m in width.
- R163 Regional Road is oriented roughly E-W, and connects the N51 at Slane Castle with Kells and crossing the R162 at Kilberry. The road is a single carriageway that extends c. 36 km.
- R165 Regional Road is oriented roughly NW-SE, and connects Bailieborough with the with the N2 at Hunterstown Lane, south of Ardee, via Kingscourt and Drumconrath and crossing the N52 at Mandistown. The road is a single carriageway that extends c. 64 km.
- R147 Regional Road is oriented roughly NW-SE, and connects Phibsboro in Dublin with the N3 at Derver, via Ashbourne, Navan and Kells. The road was formerly the N3, prior to construction of the M3, and is thus a quality single carriageway that extends c. 70 km.
- L1603 is a local road running roughly NE-SW that connects the N52 at Woodtown Lower south to the N51 at Harlinstown Cross Roads c. 1.5 km west of Slane. It is known as the Slane Road along most of its length and in the vicinity of the site. The road is a single carriageway that extends c. 14 km.
- L1604 is a local road running roughly E-W that connects the N52 at Fringerstown to the N2 at Collon, via Lobinstown Village. The L1604 is known as the Collon Road and represents a transverse route across the northeastern part of County Meath. The road passes through Lobinstown Village and crosses the L1603 at McEntegart's Cross

Roads c. 650 m northwest of the quarry. In the vicinity of McEntegart's Cross Roads, the L1604 is a c. 6.5 m wide, unmarked, hot-rolled asphalt-surfaced, single carriageway.

There has been a long association with quarrying and quarry related traffic accessing the L1603 at this location. The L1603 has been the established haulage route for the movement of quarry products. At the quarry access junction on the L1603, when travelling to/from the quarry, it is anticipated that development traffic will be split 30:70 to the northwest and southeast for arrivals and departures. The site traffic can access the national and/or regional road network within c. 5 km to the northwest at the N52 in Fringerstown and c. 7–8 km to the southeast at the R163 and N51 near Slane. As such, site traffic will be able to use the regional and national road networks for the majority of the journeys to customer sites.

An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. A quarry of this size would be considered to be at the lower end of medium scale for quarry development. Permission is sought for a period of 20 years.

Recent traffic surveys and junction capacity analysis for the Slane Road and access junction has indicated that the roads can accommodate production volumes well in excess of what is proposed at the quarry (Refer to EIAR Section 14).

The capacity of the Slane Road at the quarry access junction is 5,000 AADT, and the existing and proposed volume on the Slane Road falls within this envelope of available capacity, with spare capacity available. Thus, no additional access requirements will be needed for the proposed development.

The traffic impact of the quarry site on the Slane Road will result in an increase in traffic on the network, but this increase is imperceptible. The projected increase in traffic due to the quarry site is between 3.6% and 6.6% of the total traffic on the Slane Road, given the present and forecasted levels of activity at the quarry (Refer to Tables 14.8 and 14.9). The existing capacity of the adjacent road network has been shown to be capable of accommodating these minor increases.

The site is serviced by an existing secured, high quality gateway with a paved apron and access road. The gate is set back to allow trucks awaiting entry to queue without obstructing traffic on the L1603. Provision will be made to facilitate entry of HGVs into the site to queue safely prior to gate opening times. This will ensure that the formation of a queue of HGVs awaiting entry to the quarry prior to opening does not occur along the L1603.

The entranceway has substantial splays providing good visibility with sight distances at the site entrance of at least c. 160 m achievable in both directions along the L1603 at a distance of 3 m back from the hard shoulder edge. This site entrance is the only entrance to the site and landholding, which has a c. 190 m frontage onto the L1603.

The junction is located within an 80 km/hr speed limit area. Hedge lines and verges will be regularly maintained by Breedon in order to maintain sufficient visibility at the site entrance.

The traffic impact on the Slane Road/Quarry Access junction will result in a slight increase in vehicles entering and exiting the quarry during the day. The increase in traffic at the Quarry Access Junction will result in a slight increase in capacity at the junction, from an RFC of 0.03

(2023) to 0.07 (2044). There will also be a slight increase in delay at the junction, of the order of approximately 0.5 seconds. The increase in RFC and delay, however, is considered to have an imperceptible impact on the operation of the junction, which is forecast to have spare capacity for the lifetime of the development.

13.4.4.2 Rail

Meath is serviced by Iarnrod Eireann's Dublin to Galway and Sligo mainline railway services. The mainline from Dublin meanders along the southern border of the county with Kildare serving Leixlip, Maynooth Kilcock, Enfield and Kinnegad. Meath is also serviced by Iarnrod Eireann's Dublin to Belfast mainline railway services which runs along the East Coast, as well as Dart services as far north as Drogheda.

13.4.4.3 Airports & Ports

Dublin Airport is the nearest airport at c. 46 km due southeast of the site, whilst Drogheda Port is the nearest port at c. 19 km to the east-southeast.

13.4.4.4 Waterways

The Boyne and Blackwater rivers, as well as the Royal Canal, which largely runs in parallel with the Dublin-Galway rail line and meanders along the Meath-Kildare border.

13.4.5 BUILT SERVICES

13.4.5.1 Electricity Network

Power to local residences is provided by overhead lines, which form part of ESB's country-wide, medium and low voltage, electricity distribution network. A 3-phase, 38 kV, overhead power line supplies electricity to the property, where a roadside pole-mounted distribution transformer steps down the voltage.

The transmission grid is somewhat concentrated in the Northeast, with four high voltage (HV) transmission lines running subparallel and roughly N-S within counties Meath and Louth. The eastern limit of the extension is restricted by the presence of the 220 kV transmission line that runs from Gorman Station (near Navan) to Louth Station (near Dundalk). A 10 and 20 m standoff will be maintained to the application and extraction areas, respectively (Refer to EIAR Figure 13.1 and 1.3).

EirGrid has rolled out GRID25, which sets out the development of the transmission infrastructure to ensure that grid reinforcements enable connection of significant amounts of renewable energy generation (i.e., target of 70% renewable electricity by 2030). There are no plans to reinforce the transmission grid in the wider area of Heronstown.

13.4.5.2 Gas Network

Indigenous natural gas is supplied from the Corrib Gas Pipeline, which comes ashore at Bellanaboy Terminal, County Mayo. The Kinsale Head Gas Pipeline, which came ashore at the Inch Terminal near Whitegate, County Cork has been decommissioned. Bord Gais also

have two subsea gas pipeline interconnectors with Scotland that come ashore near Gormanstown, County Meath and Loughshinny, County Dublin. These pipelines connect into the network, which in the east of Ireland consists of a main line running from Cork to Dublin and up the east coast to N. Ireland, with multiple spurs to supply towns on route, such as one to Virginia and Kells and another to Trim and Navan. The transmission pipeline network does not cross the northern Midlands, although a major transverse transmission line crosses from the Galway area to Loughshinny, and has numerous spurs. Thus, the gas pipelines do not pass within c. 5 km of Heronstown (Refer Figure 13.2).

13.4.5.3 Water Supply Infrastructure

There are no Public or Group Water Schemes (PWS) Source Protection Areas within 8 km of the site, the nearest being the Collon PWS, which is located c. 8.5 km east of the site, followed by Nobber PWS at c. 9 km to the northwest.

Most residential properties in the local area are serviced by private bored wells. Most houses are serviced by septic tank systems and proprietary effluent treatment systems. The water supply for operational uses in the quarry such as dust suppression on internal haulage roads and on crushing / screening / washing equipment is provided by the quarry sump, as this water does not need to be of potable quality. A production well adjacent to the portacabin offices is used to supply potable water for use in the office-canteen.

The site will be worked from the existing quarry area in an easterly direction in a series of c. 15 m benches between c. 105 and 35 m OD (Refer to EIAR Figures 3.1 & 3.3). It is proposed to develop an additional extractive bench below the current permitted quarry floor level to 35 m OD. Development of the quarry at depth below the current floor will require continued dewatering of rainfall-runoff and groundwater and discharge to surface water in order to maintain a dry working environment on the floor of the quarry.

Discharge of water from the settlement lagoon at the northern boundary of the existing quarry into the adjacent Killary Stream and ultimately the Dee River is subject to the requirements of an existing trade effluent discharge licence (DL. 20/01) granted by Meath County Council on 16th November 2020.

13.4.5.4 Telecommunications Network

An overhead telephone line serving the property runs along the verge of the L1603 to the site entrance and connects with the site office (Refer to Figure 1.3). The quarry is contactable by mobile phone and landline, while email and broadband connections to the site office are provided via a mobile network.

There are several mobile masts or base stations for the transmission and reception of mobile telecommunication in the region around Heronstown. These masts house both point to point microwave links and cellular technologies used in the provision of telecommunication services. The nearest cell mast to the quarry site is located c. 1.35 km southeast of the site close to the southern boundary of the townland of Heronstown (Site ID: MT0041). The next nearest cell mast is a set of three masts located in the townland of Headstone, c. 7.5 km northwest of the quarry site (Site IDs: MH031, MT0182 & MH4763).

In 2016, a total of 70.0% of residences in the Killary ED had internet access — 55.1% by broadband.

13.4.5.5 Sewerage System

An existing waste water treatment system (WWTS) and associated percolation area is maintained onsite.

13.4.6 WASTE MANAGEMENT INFRASTRUCTURE

Waste produced by the development is minimal. Almost all products and by-products arising from processing have commercial value. Any excess material produced as part of the extraction process (e.g., soil / overburden) will be utilised in the restoration process.

Waste oils, batteries, scrap metal, etc. are removed from site for recycling by approved contractors. A licensed waste collection contractor will remove any office/canteen waste requiring recovery/disposal to a licensed waste management facility. The proposed facility site layout is shown by EIAR Figure 3.1.

13.4.7 CULTURAL ASSETS

The proposed development was the subject of an assessment that involved the investigation of cultural heritage including the archaeological, structural and historical background of the application area and the surrounding area using a wide range of existing information, as well as a field assessment (Refer to EIAR Section 12).

No sites of archaeological importance, national monuments or protected structures listed in the Meath County Development Plan 2021-2027 (Meath 2021) are located within the proposed development area.

There is one Recorded Monument within the study area, a Ringfort – rath (RMP ME012-029---) in Rathbranchurch townland (See Appendix 12.1 for full description). This monument is located c. 1 km northwest of the application site and is considered too far distant to be impacted by the proposed development. There are no Sites and Monuments Records (SMRs) listed in the application area or the study area.

There are no Protected Structures situated within the application area. There are four Protected Structures listed within the study area (Refer to EIAR Figure 12.1 and Table 12.1). The closest Protected Structure to the application area is Milestone RPS MH012-116 in Parsonstown Demesne townland. This structure is situated 580 m northwest of the application area. This and the remaining Protected Structures in the study area are all considered to be too far distant to be directly or indirectly impacted by the proposal.

There are no structures included in the National Inventory of Architectural Heritage (NIAH) situated within the application area. There are two additional structures (Reg. Nos. 14401205 & 14401206) included in the NIAH situated just outside the study area — a house and outbuilding (See Table 12.2). These structures are situated 1.1 km south of the application area and are considered to be too far distant to be directly or indirectly impacted by the proposal.

There will be no direct or indirect impacts on any known items of archaeology, cultural heritage or buildings of heritage or special architectural interest in the application site or the vicinity.

The impact of extraction will not result in any significant loss of heritage values in the locality. In the medium to long term, the site will be restored in accordance with an approved restoration scheme for the quarry.

No direct impacts warranting specific mitigation were identified during the course of the cultural heritage assessment. Potential negative and permanent impact on unknown subsurface archaeological deposits or artefacts should be mitigated by monitoring of all topsoil-stripping by a qualified archaeologist. Any archaeological material identified during archaeological monitoring should be preserved *in situ* or by record as appropriate under licence from the National Monuments Service.

As a result of the proposed mitigation and enhancement measures incorporated in the design, no significant, adverse residual impacts on the archaeological, architectural or cultural heritage resource are predicted during the operational phase.

It is considered that following full restoration and closure of the site that there will be no significant, long-term, adverse impacts in terms of cultural heritage. The restored quarry will provide a more manageable environment than is currently the case, but with a change in land-use from the original agricultural use to mineral extraction to ultimately a future beneficial use as a wildlife amenity.

13.4.8 LANDSCAPES & NATURAL HERITAGE

County Meath is known as the Royal County as it is home to Tara - the ancient capital of Ireland, as well as the UNESCO World Heritage Site of Brú na Bóinne. The county has a rich and varied landscape with historic features dating back to prehistory and many well-known tourist attractions that are related to its heritage. Meath possesses a diverse range of landscapes, including coastline, drumlins in the north, rich pastures, tracts of peatland and raised bog in the southwest, and the central upland area.

Meath has a relatively flat-lying, undulating landform with limited topographic relief and containing a network of rivers, including the Boyne, Blackwater, Dee, Nanny and Delvin. The county consists mostly of lowlands belonging to the Carboniferous limestone terrain of the Irish Midlands. However, the northern half of the county contains two distinct blocks of Lower Paleozoic siliciclastic rocks, namely the Balbriggan-Bellewstown Block and Longford-Down Massif, which are more indurated and weather resistant and tend to manifest topographically as prominent hills.

Mineral extraction is a significant industry and demand for aggregates is certain to continue with increased development of the Greater Dublin Area (GDA). There are already a large number of quarries and pits in Meath and large areas identified as having high aggregate potential, particularly around Kells in the northwest. Any such future development must be carefully planned to avoid unnecessary adverse landscape impacts. It is likely that quarries and mines may be extended or new areas for mineral extraction created to meet demand (Meath CDP Appendix 5).

The Heronstown area is located within Landscape Character Area (LCA) 3: North Navan Lowlands, which consists of a large area of agricultural land to the north of Navan contained

in the east and west by the Rivers Blackwater and Boyne, respectively, and to the north by a more complex hilly landscape along the north Meath border. The LCA comprises a mixture of pasture and arable fields that have been enlarged by loss or removal of traditional boundaries, now often consist of post and wire or timber fences and drainage ditches along road corridors.

The topography is more undulating and the occurrence of trees is more common, particularly to the northeast near Heronstown. Road corridors often have quite an open character but the tertiary roads in the northeast are more enclosed by drumlin topography, trees and hedgerows, with views generally restricted to short and middle distances. Due to the variety of geological parent material there are several quarries and pits in the area. The LCA is dominantly a rural landscape that is generally in a degraded condition, and contains no specific attractions outside of Navan, although historic features are of interest.

The predominant land use in the LCA is as large agricultural fields, with a mix of pasture and arable crops. The 2018 CORINE map shows that the predominant land use within the Heronstown area is given as pasture (231); non-irrigated arable land (211); mixed forest (313); and broad-leaved forest (311) (Refer to EIAR Figure 11.8). The 2018 CORINE map shows that the predominant land use within the existing quarry was pasture, although by definition it should be defined as mineral extraction related to the hard rock quarrying of greywacke. Prior to the commencement of commercial quarrying, the lands had been kept in agriculture use. Ultimately, the site will be reclaimed in accordance with the approved quarry restoration scheme, and most probably undergo a change of land use to wildlife amenity.

Despite the low forest cover in Meath, there is a relatively high level of forest cover in the Heronstown area. Much of this is mono-type afforestation comprising scattered, rectilinear patches of coniferous forest, much of which has been recently planted. There are a few planned landscapes or parkland of demesnes in the LCA (e.g., Parsonstown, Tankardstown, Mullaghwillin, Gibbstown and Headfort Demesnes). The dominant land use in the wider area of the quarry is clearly agricultural, with some history of quarrying west of Lobinstown and at Mullaghdillon, Knockmooney and Deerpark near Slane.

The quarry at Heronstown is located within the Longford-Down Massif and on gently rising ground c. 1 km northwest of a series of NE-SW trending hills, known as the Ferrard Hills, where elevations typically vary from 90 to 200 m OD. The lands in the vicinity of the site are typically at elevations of 85–120 m OD and gradually increase to the southeast from c. 83 m OD at the northwestern boundary of the landholding to c. 111 m OD at the eastern boundary and 225 m OD at Slieve Bengh, c. 2.5 km to the southeast. The landscape of the quarry site at Heronstown is mainly disturbed ground resulting from the operation of quarrying, which is largely dominated by bare, exposed ground with stockpiles of aggregate and an area of grassland (i.e., the northern field and proposed eastern extension area).

The quarry is located in an area of undulating landform between Northern Drumlin Belt and the Ferrard Hills and is characterised by a dendritic drainage pattern. The NE-SW trending line of the Ferrard Hills forms the boundary between the Dee River and Boyne River subcatchments (Refer to EIAR Figure 7.4). The Keeran River, Killary Water and Dee River are all located within WFD Catchment & Hydrometric Area HA 06: Newry-Fane-Glyde-Dee. The site lies near the headwaters of the Keeran River, which drains into Killary Waters and ultimately into the Dee River, before discharging into the Irish Sea at Annagassan, Co. Louth. No natural heritage sites are designated

downstream of the site, except for Dundalk Bay SAC and SPA c. 21.5 km to the northeast — a downstream distance of c. 43 river km.

The topography in the area of the site is undulating and represents the northeastern limit of the general regional landform of the central plain, which opens out to the southwest and covers most of the county. This wider regional landscape is a relatively uninterrupted, flat to undulating broad lowland plain that covers much of the midlands, with the nearest higher ground at Slieve Bengh c. 2. 5 km southeast of the site. The Cooley Mountains lie c. 35 km to the northeast, the Dublin-Wicklow Mountains lie c. 62 km to the south-southeast, the Slieve Bloom Mountains lie c. 92 km to the southwest, while the Cuilcagh Mountains lie c. 76 km to the northwest. Thus, the surrounding area comprises relatively flat low-lying land at or below the elevation of the site, which is studded sporadically with prominent hills, but without mountains for at least 60 kms in all directions.

The quarry has been developed by excavating into ground that is gently rising to the southeast and as a result, the latter screens all views of the workings in an arc from the northwest anti-clockwise to the east. Presently, there are intermittent views of the workings along the L1603 and L1604 local roads from the north. There are no views of the workings at the quarry entranceway, with most views of the current quarry workings screened by the intervening topography and vegetation, as well as mature peripheral hedgerows and screening berms on the boundaries of the existing permitted quarry. There are limited, middle-distance views along the L1604 to the north, which generally amount to views of the upper benches of the southeast quarry face. The visual impact of the proposed development is discussed in more detail in Section 11 - Landscape.

The proposed development is situated within the North Navan Lowlands LCA (i.e., LCA3). The landscape sensitivity of the LCA is defined as medium and can thus accommodate a certain amount of change without affecting the overall character. There are unlikely to be large numbers of people using or viewing this landscape.

The LCA has a medium capacity to absorb development arising in part from its partially enclosed landscape with minimal long-distance views. The landscape can physically or visually absorb some development, mitigating the visual impact on the landscape, which can otherwise have a disproportionate visual impact. Thus, this rural landscape has some capacity to physically or visually absorb development, while the adjoining areas of high amenity would be of higher sensitivity. The locality is of a rural, pastoral character, and is defined as of Moderate landscape value and of Regional importance.

Six designated Views and Prospects (i.e., Nos. 24 to 28 and 76) are located nearby in the adjoining Rathkenny Hills LCA. However, none of these views and prospects are towards the proposed development at Heronstown with the nearest view No. 24 being views from an unnamed local county road linking Rathkenny Crossroads to Parsonstown (or Mullaghregan) Cross Roads to the west of the site. The protected views and prospects from this route, which also forms part of the Táin Trail, is to the west and northwest and not towards the quarry development. The Táin Trail continues on from Parsonstown (or Mullaghregan) Crossroads which is c. 500m north of the quarry entrance along the L1603 local road to McEntegart's Crossroads and northwards via Hurlstown towards Ardee.

The settlement pattern in the wider Lobinstown area can be described as low-intensity rural settlement, with several villages and graigues or hamlets. Residential property in the rural area typically comprises single or clusters of one-off residences along public roads, as well as

farmsteads along public roads or at the end of lanes. Many of the one-off residences are relatively new and lack the screening of mature hedgerows and vegetation, whereas the farmsteads tend to be relatively well screened by hedgerows.

Appropriate assessment was introduced by the EU Habitats Directive as a way of determining if a planned project is likely to have a significant effect on one of the Natura 2000 sites so far designated (i.e., the candidate SAC's and SPA's), or their conservation objectives. Screening for Appropriate Assessment was carried out with respect to the potential impact of the proposed development on designated European sites, including Dundalk Bay SAC and SPA (Refer to Appendix 11).

The site is not located within any designated areas, such as candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA) (i.e., Natura 2000 sites), nor any designated or proposed Natural Heritage Areas (NHA or pNHA, respectively).

The nearest European sites to the Proposed Development are associated with the River Boyne and include the River Boyne and River Blackwater SAC (Site Code 002299), which is located almost 8 km to the southeast, and the River Boyne and River Blackwater SPA (Site Code 004232), which is located approximately 8.3 km to the southeast. However, the Proposed Development lies in a separate hydrological catchment to the River Boyne and the associated sites referenced above, and there is no connectivity to these sites and the River Boyne.

The proposed development is located within the hydrological catchment of the Killary Water, a tributary of the River Dee, within an agricultural area of northeastern Co. Meath. The Killary Water flows into the River Dee almost 10 river kilometres downstream, which discharges into Dundalk Bay a further 30 river kilometres downstream.

There is no connectivity to the River Boyne or to the River Boyne associated European sites.

There are no predicted effects on any European sites given:

- A minor stream tributary of the Killary Stream has been excluded from the proposed extension area and there is no direct connectivity to the River Dee downstream.
- The existing water management system is considered appropriate and may be considered in the AA Screening under recent ECJ determination (Case Ref. C-721/21) as an existing design measure in the consideration of hydrology and the source-pathway-receptor model. It is addressed comprehensively in EIAR Water Chapter 7.
- Given the very large distance of removal from Dundalk Bay at over 40 km downstream, the possibility of a significant effect can be excluded.
- There are no predicted emissions to air, water or the environment during the construction or operational phases that would result in significant effects.

It has been objectively concluded that:

1. The proposed development is not directly connected with, or necessary to the conservation management of the European sites considered in the Screening for Appropriate Assessment.

2. The proposed development is not likely to either directly or indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in the Screening for Appropriate Assessment.
3. The proposed development, either alone or in combination with other plans or projects, is not likely to have significant effects on a European site.
4. It is possible to conclude that significant effects can be excluded at the screening stage.

It can be *excluded*, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site. An appropriate assessment is not, therefore, required. A final determination will be made by the competent authority in this regard.

There will be some change to the habitats on-site from the continued working and extension of the quarry. The main anticipated impact associated with the proposed quarry development, in relation to Biodiversity, relates to the cumulative removal of hedgerow of c. 340 m in length and a strip of mixed woodland of c. 190 m in length located between the existing quarry and proposed extension area. There are four remnant hedgerows extending into the footprint of the proposed extension area. These hedgerows are not well managed and the dominant species present are Hawthorn and Ash.

Improved grassland is the dominant habitat remaining in the proposed quarry extension area. This area comprises two fields in the north of the site. Improved grassland is also the dominant habitat comprising the northern most part of the lands which accommodates the settlement pond and screening embankment along the northern site boundary with the Killary Stream (KILLARY WATER_010, IE_NB_06K010100). Thes lands will also accommodate the proposed readymix concrete plant which was recently granted planning permission (P.A. Ref. 22/328).

Improved grassland is of negligible ecological value due to its impoverished flora, and with its low species diversity. The grassland areas were heavily grazed by cattle and the sward is much reduced.

The loss of improved grassland habitat will not result in a significant effect on biodiversity. The predicted direct effect on Woodland is negative, 'not significant' and permanent. The predicted direct effect on Hedgerow is negative, slight and permanent. These losses will eventually be reversed and improved upon by the establishment of a wildlife amenity.

Lobinstown Quarry is not mapped by the GSI as a County Geological Heritage Site (CGS). The geological bedrock exposures within the existing quarry are considered of insufficient interest or importance to warrant designation or protection for earth science or geological heritage purposes (Refer to EIAR Section 13.4.1 above).

13.4.9 SENSITIVE RECEPTORS

The site is located in a sparsely populated rural area of northeastern County Meath. The surrounding lands are largely agricultural and held in pasture, with scrub and forestry plantations in the wider area. There is a relatively high level of forest cover in the Heronstown area, much of which is mono-type afforestation comprising scattered, rectilinear patches of coniferous forest.

The existing quarry is bounded by thick, mature hedgerows on all boundaries (Refer to EIAR Figure 1.3), while the proposed extension is only partly bounded by field boundary hedgerows, while elsewhere it traverses open fields. The new boundaries will be secured with stock fencing and earthen berms will be constructed and planted. The eastern limit of the extension is restricted by the presence of a 220 kV transmission line suspended on pylons that traverses the eastern side of the landholding. A 10 and 20 m standoff will be maintained to the application and extraction areas, respectively.

The site is located on lands immediately north of, and with direct access onto, local road L1603. The internal access road extends from the main entranceway on southern boundary and runs along the southern and western boundaries passed the portacabin office and to the processing area in the north of the existing quarry.

Residential property in the area typically comprises one-off single residences and farmsteads along public roads and to a minor extent, along and at the end of lanes off the public roads.

The closest large residential settlement to the site is Slane, which is located c. 9 km to the southeast. There are no occupied residences within the application site or landholding. The nearest residence is 120 m to the southwest of the permitted extraction area. There are 7 residences within 250 m, 15 within 500 m, 31 within 750 m and 45 within 1 km of the proposed extraction area. Heronstown National School is c. 627 metres north of the extraction area (Refer to Figure 4.1). There are no community facilities near Heronstown, except for Scoil Naisiunta Mhuire primary school on the L1604), with the next nearest being those in Lobinstown (e.g., Post Office) c. 1.8 km northwest of the site.

There has been a long historical association with quarrying at this location and consideration has been given to screening of the development, direction of working and phasing of working with respect to receptors, in order to reduce visual impact, while impacts due to noise and dust are substantially attenuated.

There are no industrial or commercial developments within 1 km of the site, the nearest being a Meade Farm Food Packing, Storage and Distribution facility c. 1.25 km northeast of the site.

13.5 ASSESSMENT OF IMPACTS

The impact on material assets resulting from the proposed development is assessed here, and possible mitigation measures proposed to reduce any significant impacts. The general guidance on baseline environment and impacts given in Appendix 3 identifies the levels of impacts that are used here in order to evaluate the significance of potential impacts resulting from the proposed development. These impact ratings are in accordance with standard impact assessment criteria issued by the EPA (2015; 2022). Some of the key contents of the EPA Guidance (EPA 2022) are reproduced in Appendix 3 General Guidance on Baseline Environment & Impacts of the EIAR.

The following Impact Assessment Matrix provides an indication of the significance of potential effects arising during the life cycle of the development not accounting for any mitigation measures (Table 13.2).

Table 13.2 Material Assets - Impact Matrix

'Do Nothing' Impacts		●	
Factors	**Construction**	**Operation**	Decommissioning
Direct Impacts		●	X
Indirect Impacts		X	X
Cumulative Impacts		X	X
Residual Impacts		●	X
`Worst Case' Impacts		●	X

None/imperceptible: X; Slight: ●; Moderate: ●; Significant/Very significant: ●.
Refer to Appendix 3 for definition of Significance

The proposed development arises from the continued demand of human beings to have their buildings, roads and structures, modified and improved. The supply of construction materials is therefore essential to material progress of human society and their built environment.

The location of Heronstown in northeastern Meath and within 25 km of numerous towns and two county town (i.e., Navan and Dundalk, albeit the outskirts of the latter), renders the proposed quarry development well positioned to serve this vibrant construction market. The location of the quarry with reasonable access to Navan, Dundalk and Drogheda, three of the four largest towns in the State, should ensure access to a strong, growing market for good quality aggregate.

The impact on material assets resulting from the proposed development is assessed here, and possible mitigation measures proposed to reduce any significant impacts. It is expected that the potential negative impacts on material assets of the area arising from the quarry will relate primarily to nuisance from noise, dust and traffic. Indirect or cumulative impacts associated with other similar developments within the area are dealt with where necessary under the respective topic in the EIAR.

The potential impacts associated with the quarry and any proposed mitigation measures in relation to the material assets described above are covered under relevant sections of the EIAR in Table 13.3.

Table 13.3 Material Assets – Potential Impacts & Mitigation

Ref.	Material Asset	Relevant EIAR Section
13.4.1	Non-Renewable Resources	3.4.1, 6
13.4.2	Settlement - Residential Development	3.2.1, 4, 9, 10, 11
13.4.3	Land Use	3.2.1, 4, 5, 6, 11
13.4.4	Transport Infrastructure	3.3.3.15, 4, 14
13.4.5	Built Services	3.3.4
13.4.6	Waste Management Infrastructure	None
13.4.7	Cultural Assets	12
13.4.8	Landscape & Natural Heritage	3, 4, 5, 9,10, 11
13.4.9	Sensitive Receptors	3, 4, 7, 9, 10, 11, 12, 14

13.5.1 'DO NOTHING' IMPACTS

If the development did not proceed, the aggregate resource would continue to be worked within the confines of what is permitted under the current planning permission (P.A. Ref. LB200106) whilst the remainder of the proven mineral resource would remain unused in situ, and the local supply of quality aggregates would be more restricted. Under the 'Do Nothing' scenario, all quarrying and ancillary activities would be completed under P.A. Ref. LB200106, and operations would cease thereafter. The site would then be restored as per the requirements of the existing planning permission (P.A. Ref. LB200106).

As the quarry area is currently active, the absence of the proposed development would have significant impact on the material assets within the site, resulting in an identified and workable aggregate resource being left unworked.

The absence of the proposed quarry would have a likely, direct, neutral effect on the material assets in the area beyond the site.

13.5.2 DIRECT IMPACTS

As the proposed development relates to the continuation of extraction and extension to an existing quarry with all of its infrastructure in-situ, only a brief construction stage is envisaged. Thus, potential impacts on the material assets of the area can arise out of the minor construction stage and decommissioning stage, but particularly the operational stage of the quarry development (Refer to Table 13.4).

The quarry will enable the production of quality aggregates and concrete products for the Meath, Louth and surrounding region and thus help sustain economic development in the region. It is expected that the potential negative impacts on material assets of the area arising from the quarry, will relate primarily to nuisance from noise, dust and traffic.

The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50m OD to 35m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years in order to extract a known resource with a further 2 years to fully restore the site.

Blasting will continue to be used as the method of extraction, to fragment the rock prior to crushing and screening using mobile plant on the quarry floor and aggregate washing within the quarry site. The existing site infrastructure includes site entrance with c.350 m long paved internal roadway, internal access roads, weighbridge, wheelwash, portacabin office, car park, mobile crushing, screening and washing plant, settlement lagoon system, and other ancillaries, which will be maintained onsite for the duration of the works. An effluent treatment system also exists on-site (Refer to EIAR Figure 3.1). Discharge of water from the settlement lagoon at the northern boundary of the existing quarry into the adjacent Killary Stream, and ultimately the Dee River is ongoing in compliance with existing trade effluent discharge licence consent (DL 20/01).

There has been a long association with quarrying and quarry related traffic accessing the L1603 at this location. The L1603 has been the established haulage route for the movement of quarry products. At the quarry access junction on the L1603, when travelling to/from the quarry, it is anticipated that development traffic will be split 30:70 to the northwest and southeast for arrivals and departures. The site traffic can access the national and/or regional road network within c. 5 km to the northwest at the N52 in Fringerstown and c. 7–8 km to the southeast at the R163 and N51 near Slane. As such, site traffic will be able to use the regional and national road networks for the majority of the journeys to customer sites. The pavement of the roads in the vicinity of the existing quarry is in good condition and will be reviewed with the Roads Section of Meath County Council at an agreed frequency.

The traffic generated by the quarry site on the Slane Road will result in an increase in traffic on the network, but the impact of this increase is imperceptible. The projected increase in traffic due to the quarry site is between 3.6% and 6.6% of the total traffic on the Slane Road,

given the present and forecasted levels of activity at the quarry (Refer to Tables 14.8 and 14.9). The existing capacity of the adjacent road network has been shown to accommodate these minor increases.

Although the waste produced by the development will be minimal, waste bins are suitably positioned on site for the purpose of general waste management. A suitably licensed waste collection contractor removes any office, canteen or other general waste requiring recovery/disposal to a licensed waste management facility.

The potential impacts associated with the proposed development and any proposed mitigation measures in relation to the material assets described above are covered under relevant sections of the EIAR (Refer to Table 13.3 above). Human health risks will be managed by preventing public access to the site and having appropriate health and safety measures in place for staff working on the site.

On completion of site activities, the site of the quarry will be decommissioned, all infrastructure and plant will be removed, and the site left safe and secure. Furthermore, the site will be reinstated in accordance with the approved quarry restoration scheme, and thus integrated back into the surrounding landscape with the attendant improvement to the visual amenity of the area (Refer to EIAR Figures 3.1 to 3.3).

It is considered that following restoration and the mitigation measures incorporated in the design that there will be no significant adverse effects in terms of material assets, other than the inevitable but necessary loss of the mineral resource. The restoration of the site to beneficial after-use, most probably as a wildlife amenity, will result in a likely, direct, positive, slight, permanent effect on the material assets of the area.

13.5.3 INDIRECT IMPACTS

Indirect impacts are dealt with where necessary under the respective topic in the EIAR.

13.5.4 CUMULATIVE IMPACTS

Cumulative effects are defined as the addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects (See Appendix 3).

There are several quarries in the wider area, including O'Reilly Concrete Lobinstown Quarry c. 2.5 km to the west (currently in final stages of restoration), Roadstone's Slane Quarry, c. 7 km to the south, an unidentified quarry at Knockmooney on the N2 c. 8.5 km to the southeast, and a disused quarry, now operating as an SRF, at Mullaghdillon c. 6 km to the southeast. The only significant industrial/commercial activity within 5 km of the site is the industrial/warehouse estate in Grangegeeth, c. 4.5 km to the southeast.

The nearest substantial commercial activity is Meade Farm Group's Packing, Storage and Distribution facility c. 1.25 km northeast of the site at Braystown. The substantial facility employs c. 340 employees. Whites Auto Electrical have a small commercial unit in Matthews Transport Yard, Heronstown, c. 800 m north of the site on the L1603 (c. 185 m north of McEntegart's Cross Roads). PS Supplies, which is a company supplying doors and floors based in Navan, maintains a small commercial unit in Lobinstown Village, while Myles

Staircases Ltd. also maintains a workshop and showroom c. 785 m south of the site on the L1603.

There are also other developments nearby, including solar farms, both existing and proposed, that could give rise to potential cumulative impacts. However, these developments are subject to planning and/or the requirements for EIA and are subject to compliance with both planning and licensing conditions. There is no other significant industrial/commercial activity within a 5 km radius of Lobinstown Quarry.

It should also be noted that in preparation of the traffic assessment (Refer to EIAR Section 14), traffic counts would have taken into consideration existing traffic on the local and regional network, which would include traffic generated by other commercial and industrial operations in the area.

Given the nature of the proposed development, compliance with the mitigation measures specified in the EIAR and the best practice measures that will be implemented during the Construction, Operational and Decommissioning Stages of the proposed development, it is considered highly unlikely that any significant cumulative impacts will arise as a result of the proposed development. Thus, it is our assessment that there will be no significant cumulative impacts with respect to material assets resulting from the proposed development, in combination with other local existing developments, quarries, projects and plans.

An EMS which is accredited to ISO 14001 standard is in place at Lobinstown Quarry. It addresses monitoring of water, noise & vibration and dust, and may be revised to comply with any new condition of planning. The potential cumulative impacts will be assessed through the existing environmental monitoring programmes that have been established in compliance with the planning permission associated with the quarry. Mitigation measures are also in place at Lobinstown Quarry and included in the EMS. Continual monitoring and measurement will ensure the effective application of these mitigation measures and ensure that activity at Lobinstown Quarry should not result in any significant cumulative impact (Refer to Section 13.6 below).

Cumulative impacts associated with other developments within the wider area are dealt with where necessary under the respective topic in the EIAR.

A separate Cumulative Impacts Assessment has been included as Appendix 15, which provides an assessment of other projects located within the wider area that are potentially significant with respect to cumulative impacts.

13.5.5 TRANSBOUNDARY IMPACTS

The EIA Directive 2014-52-EU invokes the Espoo Convention on Environmental Impact Assessment in a Transboundary Context, 1991, and applies its definition of transboundary impacts. Given the location (c. 30 km from the border with N. Ireland), nature, size and scale of the proposed development, it is expected that the impacts of the development would not have any significant transboundary effects on material assets.

13.5.6 RESIDUAL IMPACTS

As a result of the proposed mitigation and enhancement measures incorporated in the design, there will be no significant, adverse residual impacts on the material assets of the area during the operational phase, other than the loss of mineral resources due to extraction.

It is considered that following full restoration and closure of the site, there will also be no significant, long-term, adverse impacts in terms of the material assets. The restored quarry will provide a more manageable and sustainable, long-term environment than is currently the case, with a change in land-use to a beneficial after-use as a wildlife amenity.

13.5.7 'WORST CASE' IMPACTS

A possible worst case impact would have been the significant long-term impact if the quarry was developed in an uncontrolled manner with no consideration given to screening of the development, phasing and direction of working, and progressive restoration of worked-out quarry sections with respect to receptors, so as to reduce the visual impact particularly from the Intermittent middle distant views from the north along a section of the L1604 local road east of the Scoil Mhuire primary school.

However, consideration has been given to screening, phasing and direction of working of both the existing quarry and proposed extension, as well as to the progressive restoration and final restoration of the quarry site once operations at the site cease (Refer to EIAR Sections 3.4 and 11.6 and EIAR Figures 3.1 to 3.3).

Cross sections through the site also illustrate the effectiveness of working the quarry top-down in successive benches, including provision of a temporary berm at 98m OD within the eastern extension area, with progressive restoration of the upper back southern face and existing stockpiling area to further reduce the visual impact of the development on the surroundings (Refer to EIAR Figures 3.1 to 3.3).

There has been a long historical association with quarrying at this location and consideration has been given to screening of the development and phasing and direction of working with respect to receptors, so as to reduce the visual impact, while impacts due to noise and dust are also substantially attenuated.

It is expected that in the absence of mitigation measures (primarily noise and dust) that there would be direct, negative, brief, slight, long-term effects with respect to local amenity and residential receptors as a result of the continuance of use of the quarry and permitted concrete plant at Lobinstown. Various mitigation measures will be implemented to minimise any impacts as much as practical to ensure the operation of the quarry will not result in any significant impact on residences or local amenities (Refer to EIAR Sections 9.6 & 10.6 respectively).

The visual impact of the site is considered to be direct, positive, slight to moderate, long term, as the site is progressively restored to beneficial after-use.

Table 13.4 Likely Direct and Indirect Impacts by Stage of Development

Environmental Attribute/ Receptor	Significance / Sensitivity of Impact	Nature of Impact	Overall Significance of Impact	Construction Stage	Operational Stage	Decommissioning Stage	Post Closure Stage
Non-Renewable Resources (Mineral Resources)	Medium	Medium	Moderate		Likely, direct, negative, moderate permanent effects due to removal of natural resources due to extraction.	None.	None.
Settlement - Residential Development	Medium	Medium	Slight to Moderate		Likely, direct, negative, slight to moderate, long-term effects due to noise & vibration, dust and traffic and visual intrusion on residential amenity.	Likely, direct, positive, slight to moderate, short-term effect due to final restoration.	Likely, direct, positive, slight to moderate, permanent effect due to cessation of all works with ongoing establishment of flora and fauna and improved local amenity.
Land Use	Medium	Medium	Moderate		Likely, direct, negative, moderate, permanent effect due to stripping of soils & extraction of rock. --- Likely, direct, positive, moderate long-term effect due to supply of materials for use in construction industry .	Likely, direct, positive, moderate, short-term effect due to cessation of extraction, removal of infrastructure and final restoration of site to beneficial land use as wildlife amenity use	Likely, direct, positive, moderate, permanent effect due to cessation of extraction and final restoration of site to beneficial land use as wildlife amenity use.
Transport Infrastructure	Low	Negligible	Imperceptible		Likely, direct, negative ,Imperceptible, long-term effects due to HGV entering/ exiting site.	Likely, indirect, negative, Imperceptible, short-term effects due to contractors entering/ exiting site during decommissioning works.	Likely, indirect, positive, slight, permanent effects due to closure and cessation of all works and associated HGV traffic.
Built Services	Negligible	Negligible	Imperceptible		None.	None.	None.
Waste Management Infrastructure on Site	Negligible	Negligible	Imperceptible		None.	None.	None.
Cultural Assets	High	Negligible	Imperceptible		No impact expected.	No impact expected	No impact expected
Landscape & Natural Heritage	Medium	Medium	Slight to Moderate		Likely, direct, negative, slight to moderate, long-term effects as southern face is open to intermittent views from section of Local County road L1604 .to the north	Likely, direct, positive, slight to moderate, short-term effects due to final restoration to beneficial after use as wildlife amenity.	Likely, direct, positive, moderate, permanent effects due to closure with final restoration to beneficial after-use as wildlife amenity-use with ongoing establishment of biodiversity
Sensitive Receptors	Medium	Medium	Slight to Moderate		Likely, direct, negative, slight to moderate, long-term effects due to noise & vibration, dust and traffic and visual intrusion on residential amenity.	Likely, direct, positive, slight to moderate, short-term effects due to removal of plant and infrastructure off-site and reduced HGV traffic.	Likely, direct, positive, slight to moderate, permanent effects due to cessation of all works with ongoing establishment of flora and fauna and improved local amenity.

13.6 MITIGATION & MONITORING

Potential impacts on the material assets of the area can arise out of the construction, operational, and decommissioning stages of the quarry, and different sets of mitigation measures may be required under each stage. As an existing quarry with all of the infrastructure, including mobile crushing and screening plant on-site, no construction phase is envisaged. The decommissioning stage will involve demolition and removal of infrastructure as well as landscaping, and thus will require mitigation measures largely relating to noise and dust suppression. The operational stage will require a full set of mitigation measures to mitigate the impacts of noise & vibration, dust, water quality, visual intrusion and traffic, particularly on sensitive receptors.

The Company has established an environmental management system (EMS) designed to comply with the environmental requirements of the ISO 14001:2015 standard and the Quality Management requirements of ISO 9001:2015 (Refer to EIAR Section 3.3.3.1.2). A copy of the Environmental Management Plan (EMP) for the Lobinstown Quarry is included in Appendix 13. This will be updated in accordance with any new planning consents or licences. The EMP addresses such matters as Emergency Preparedness & Response in dealing with accident and emergency situations resulting in effects on the environment (Refer to EIAR Section 3.3.5).

The applicant has established an environmental monitoring programme for the quarry site. The programme allows for on-going monitoring of environmental emissions (e.g., noise, dust, blasting and water) from the site, thereby assisting in ensuring compliance with requirements or regulations. The results of this monitoring will be made available to Meath County Council on a regular basis, where members of the public may examine it. The monitoring programme is sufficiently robust to ensure compliance with any conditions attached to a decision to grant planning permission.

This quarry is located in a rural area of low population density. The boundaries of the quarry are enclosed by a combination of berms, hedgerows and fencing, which is designed to blend into the surrounding landscape. There will be ongoing monitoring to ensure that site boundaries are maintained in a proper manner, and these include thickening of hedgerows, fencing of the landholding, provision and maintenance of quarry signage.

The development will be controlled and regularised in accordance with the scheme as outlined in this document, through continued environmental monitoring and by conditions imposed by the relevant regulatory authority. The development does not have a significant impact on lands, property or amenity within the area and hence there will be no significant effect on material assets, except the loss of the mineral resource that has been extracted.

For ease of reference, the mitigations measures contained in this EIAR are itemised in a compendium of mitigations, which is provided as Appendix 16 of the EIAR

13.7 REFERENCES

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13.8 FIGURES

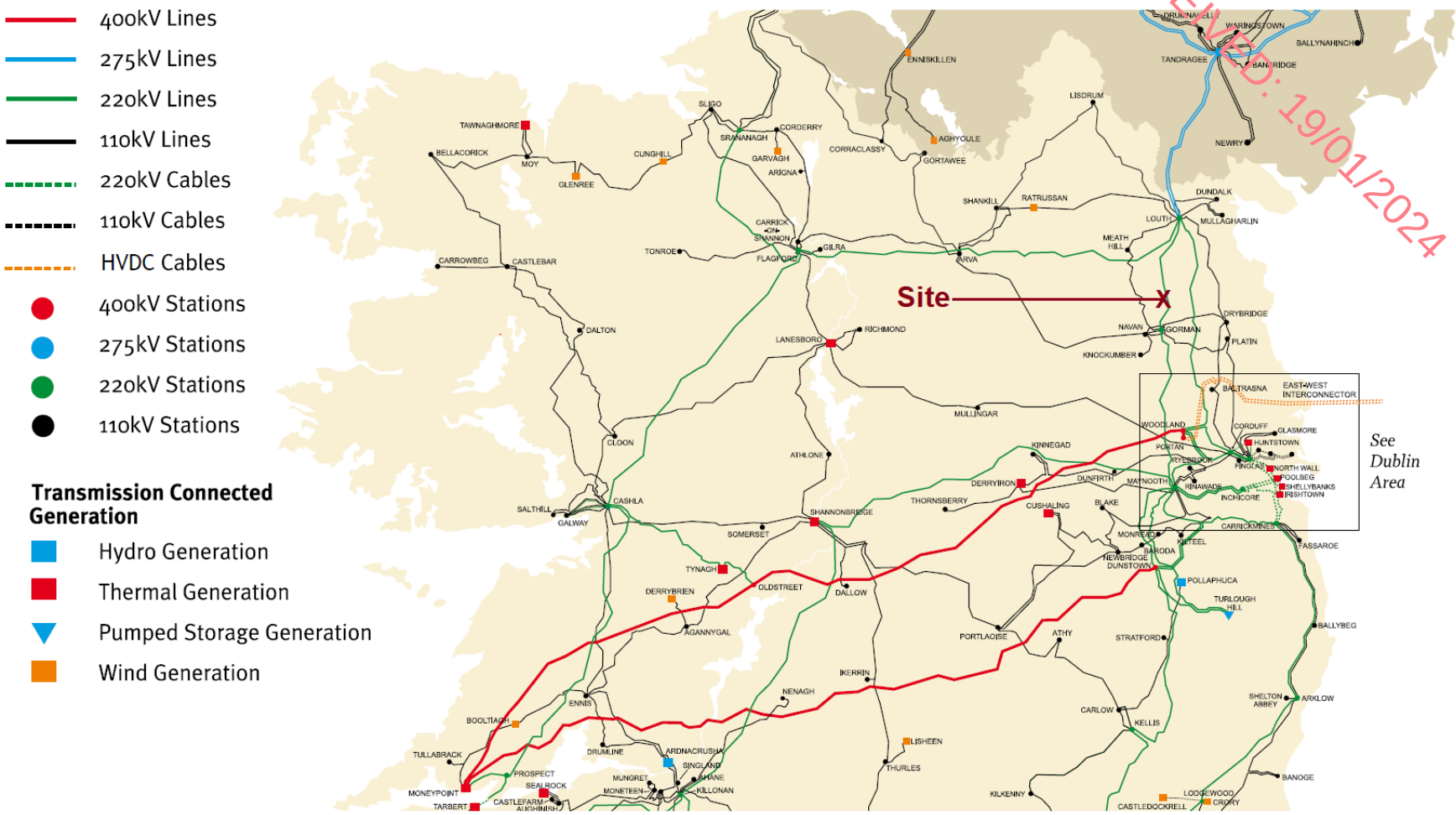

Figure 13.1 Eirgrid's Electricity Transmission Grid across central Ireland

Site located c. 13.5 km north-northeast of Navan. Scale: Horizontal Width of Field = 375 km. Extracted from Transmission System of Ireland (Eirgrid 2013).

JSPE

Figure 13.2 Bord Gais' Transmission and Distribution Gas Pipeline Network

Scale: Horizontal width of field = c. 350 km. Extracted from Bord Gais (2020).