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Lobinstown Quarry

Environmental Impact Assessment Report

Section 4

Population & Human Health

2024

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4 POPULATION AND HUMAN HEALTH

4.1 INTRODUCTION

This section of the Environmental Impact Assessment Report (EIAR) describes the human environment in the area of the proposed development for continuance, extension and deepening of the existing quarry at, Heronstown, Lobinstown, Navan, Co. Meath. 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 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, Keeran River and ultimately the Dee River is ongoing in compliance with existing trade effluent discharge licence consent (Ref. 20/01).

All projects and developments that require EIA *by virtue of their nature, size and location*, have the potential to have an impact on the environment. The following sub-sections are intended to assess and describe specific areas of the existing baseline environment, to identify potentially significant impacts of the proposed development in respect of these areas, and to detail any proposed mitigation measures and on-going monitoring programmes, where appropriate.

The impact of proposed developments on human beings form one of the most important aspects to be considered in an EIAR. Any likely significant impact on human beings, including their community and activities, must therefore be comprehensively addressed. The principal concern in respect to this proposed development is that human beings should experience no significant unacceptable diminution in an aspect, or aspects of 'quality of life' as a consequence of the construction and operation of the proposed development.

This section of the EIAR has been prepared to establish the human environment in the vicinity, and to assess the potential impact, if any, of the proposed development at Lobinstown on the existing environment in respect of human beings. Matters related to water, air quality, noise, landscape and other such environmental impacts are not considered here, as these are more appropriately dealt with in their respective sections. Thus, the impacts of the proposed development on human beings in relation to particular issues are addressed in the following sections:

Table 4.1 Environmental Topics Relating to Humans

Section	Topic
5	Biodiversity
6	Land, Soils & Geology
7	Water
8	Climate
9	Air
10	Noise & Vibration
11	The Landscape
12	Cultural Heritage
13	Material Assets
14	Roads & Traffic

The issues considered here include land use, population, economy & employment, social infrastructure, amenity, tourism and recreation and health and safety. The potential impact on human beings resulting from the proposed development is assessed, and possible mitigation measures proposed to reduce any significant impacts.

4.2 METHODOLOGY

The human environment was assessed by undertaking a desktop study and conducting visits to the site and the area. The desktop study was undertaken to compile, review and interpret available information and data pertaining to the human environment of the site and area.

Breedon, the operator of Lobinstown Quarry, is seeking planning permission for 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, and a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35 m OD. 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.

This EIAR accompanies the corresponding planning application being submitted to Meath County Council by Breedon under Section 34 of the Planning and Development Act 2000, as amended. A copy of the existing planning permission for the quarry (P.A. Ref. LB200106) is included in Appendix 2.

The desktop study involved the assessment of all relevant demographic and socio-economic data for the area, much of which was sourced from the Central Statistics Office (CSO). The Meath County Development Plan (CDP) (2021–2027) was also reviewed. There are no plans for towns, villages or local areas relevant to the proposed development site. A recently completed EIAR on the Lobinstown Quarry (SLR 2022) provided much of the site-specific information. In addition, the desktop study used: (a) maps and site layout plans of the existing quarry development; (b) a copy of the current planning permission for the quarry (P.A. Ref. LB200106, ABP 309109-21); and (c) Eastern & Midland Regional Spatial Economic Strategy (RSES) 2019-2031 (EMRA 2019).

In early 2018, the government published “Project Ireland 2040”, the new overarching public policy initiative, which consists of the National Planning Framework to 2040 and the National Development Plan 2018-2027 (DoHPLG 2018), which replaced the revoked NSS and the Infrastructure and Capital Investment Plan 2016-2021, respectively. This represents an alignment of the investment strategy with the strategic planning policy, to create a unified and coherent plan, which will drive the long-term economic, environmental and social progress across all parts of the country over the next ten years. This ultimately informs the planning processes by incorporation into the RSES, with which the Meath CDP (2021–2027) is in conformance.

In preparing this section, regard was given to the relevant guidelines and recommendations set out in the ‘Guidelines on the Information to be contained in Environmental Impact Statements’, (EPA 2022) and ‘Advice Notes on Current Practice in the preparation of Environmental Impact Statements’, Draft (EPA 2015).

It is considered that there is a significant volume of available data and information, which is sufficient to adequately assess the local environment with respect to human beings.

The assessment of impacts on the human environment were considered using criteria such as: (a) location of nearest sensitive receptors; (b) disturbance to the general amenity of the local environment; and (c) pre-existing use of the land and area. The construction, operational and decommissioning phases of the proposal were all considered. In carrying out the assessment, both positive and negative impacts were considered, and the significance of the

impacts are rated as being either: imperceptible; not significant; slight; moderate; significant; very significant or profound (See Appendix 3).

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4.3 BASELINE DESCRIPTION OF RECEIVING ENVIRONMENT

In this section, land use, recent demographic trends, economic activity, social consideration, amenity and tourism, and health are examined.

4.3.1 LAND USE

The proposed quarry development is located within the Townland of Heronstown, at Irish Transverse Mercator (ITM) Grid Ref. E690900, N781500, 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 (Refer to Figures 1.1 & 1.2).

The applicant, 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.

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 pavement in the vicinity of the existing quarry is in good condition. 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 (Refer to Figures 1.1 & 1.2). The Slane Road is a two-way single carriageway road approximately 6 m wide.

The L1604 is a local road that intersects the L1603 at McEntagart's Crossroads junction to the north of the site access. The road is approximately 10 km in length and runs in an east-west direction, extending from the N52 in the west to Leaby Cross in the east. The L1604 is known as the Collon Road to the east of the McEntagart's Crossroads junction. The Collon Road is a two-way single carriageway road approximately 5.5 m wide.

The existing quarry is surrounded by agricultural fields, mostly pasture, with minor levels of scrub and forestry plantation in the wider area, although a large tract of mature afforestation lies c. 75 m to the east of the site bordering the landholding. The topography of the region is characterised by relatively flat to undulating landform to the northwest, which is relatively typical of the lowlands in County Meath. However, 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 southeastern boundary and 225 m OD at Slieve Bengh, c. 2.5 km to the southeast. The lands overlie Palaeozoic rocks of the Longford-Down Massif, close to the northeastern limit of the Carboniferous limestone terrain of the Irish Midlands, where elevations typically vary from 90 to 200 m OD.

As the quarry has been developed into ground that rises to the southeast, there are a series of 10 -15m high benches currently developed in the southeastern corner of the extraction area. It is proposed to deepen the quarry within the current permitted extraction area by 1 no. 15 metre bench

from 50 m OD to 35 m OD. 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). Development of the quarry at depth below the current floor will require increased dewatering of rainfall-runoff and groundwater infiltration and discharge to surface water in order to maintain a dry working environment on the floor of the quarry.

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 (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment system (settlement lagoons) to the Killary Stream.

In June 2022, Breedon were granted planning permission to develop a readymix concrete plant in the northern section of the quarry (P.A. Ref. 22/328). However, the development of this readymix concrete batching plant has not commenced to date.

In December 2023, Breedon were granted planning permission for construction of a new single storey office building and associated ancillary works (P.A. Ref. 23/917) adjacent to the quarry entrance onto the L1603 local road. The internal access road extends from the site entrance from the L1603 local road on the southern boundary around the western perimeter, connecting to the northern part of the quarry. The portacabin office, wheelwash and weighbridge are located adjacent to the internal access road on the western side of the quarry. The application area under consideration will require no new access roads and can be accessed from the internal routes already established within the quarry.

The existing quarry is bounded by thick, mature hedgerows on all boundaries (Refer to Figure 1.3). Perimeter earthen berms will be constructed from the stripped overburden and seeded on the boundaries of the proposed extension area and site of the readymix concrete batching plant in the field north of the Killary Stream.

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 quarrying, the lands would have been kept in agriculture use (Refer Figure 11.8).

The land in the wider area surrounding the quarry is typically agricultural land with dispersed farmsteads and sporadic ribbon development along roadsides. Land-use in the area consists of a patchwork of variably small to large agricultural fields, which are predominantly held in pasture (CORINE Class 231) with lesser non-irrigated arable land (211), mixed forest (313) and broad-leaved forest (311) (Refer Figure 11.8). Therefore, tillage is the second most abundant land use, while forest, woodland and natural vegetation is the third most abundant land use, largely as afforestation, but also restricted to the hedgerows and river and stream corridors.

SLR (2020a) note that the quarry has been in operation since the commencement of the operation in 1958. Thus, the area has 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 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 a Soil Recovery Facility (SRF), at Mullaghduff 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 site is located on lands immediately north of local road L1603. The internal access road extends from the processing area in the existing quarry passed the office, along the western boundary to the main entranceway on southern boundary with the L1603. The section of the internal access road extending c. 350 m from the main entrance along the southern and western boundaries to the site office is paved. The access road is c. 8.5-9 m wide with an asphalt surface and accommodates two-way HGV traffic flow. The main entranceway has a well spayed, paved and secure entrance fitted with a large, heavy-duty, lockable, gate.

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 2020a). 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.

Outside of the immediate environs of the nearby urban areas of Ardee, Collon and Slane, and rural villages such as Lobinstown, Nobber and Drumconrath, the settlement pattern in the area can be described as low-intensity rural settlement, with some diffuse ribbon development closer to the towns. 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. 8.5 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).

4.3.2 POPULATION

In view of the Covid-19 pandemic, the Government decided, on advice of the Central Statistics Office (CSO), to postpone the 2021 census until 2022, which the CSO was able to undertake. The comprehensive, inclusive and safe census was conducted on 3rd April 2022. As a consequence, the first tranche of final results (i.e., Census 2022 Summary Report) will not be published until April 2023, with only preliminary data available at the time writing.

Thus, the data presented below are based on censuses up to and including the 2016 census as published by the Central Statistics Office (CSO). As the 2011-2016 inter-censal period records the changes since the depths of the recent economic crisis, commonly called the

“Great Recession”, which bottomed-out in the middle of 2011, it is more perceptive to examine a longer period, such as the 2002-2016 period, in order to discern more meaningful long-term trends in the censal population data. Thus, trends in the population will be discussed here typically by reference to censal data spanning the 15-year period 2002-2016.

Analysis of the 2016 Census indicates that in the 2011–2016 period, Meath experienced a moderate population increase (i.e., from 184,135 to 195,044 or 5.92 %) compared to the 26 counties (i.e., 3.78 %), and the second highest rate of increase in Leinster after Fingal (i.e., 8.41 %), which is the fastest growing county in the State.

Meath is the third most populace county in Leinster after Dublin (i.e., 1,347,359) and Kildare (i.e., 222,504). A population of 134,005 was recorded in 2002, 162,831 in 2006, 184,135 in 2011, and 195,044 in 2016, representing increases of 17.7 %, 13.1 % and 5.97 %, respectively, for the three inter-censal periods. The average inter-censal increase in population is 15.2 %, whilst annual rate of population growth in the period was 3.04 %. Births far outpace deaths, which for example were 2,805 versus 866 in 2016, adding 1,939 annually to the population. Thus, the increase in the population of Meath between 2002 and 2016 (i.e., 61,039) is comprised of comparable components due to natural increase (births over deaths) and net migration (i.e., both approximately 2,000–2,500 annually over the period).

Since 2002, the population of Leinster increased by 25.1%, while the population of the State increased by 21.6%. Thus, despite this significant population growth in both the Province and State, the population growth of Meath (45.6 %) was the highest in the period, followed by Laois (i.e., 44.1%) and Kildare (i.e., 35.7 %). Consequently, Meath’s share of the provincial population grew from 6.36 % in 2002 to 7.40 % in 2016.

Meath, along with Dublin, Louth, Kildare and Wicklow, comprise the “Functional Area of the Dublin City Region” (FADCR; Walsh & McNicholas 2009), and with a population of c. 2.0 million, accounts for 42.8 % of the population of the State. The FADCR, including the Dublin Metropolitan Area, is the primary economic engine of the state. The latter authors noted a contrast between areas of population decline in the inner suburbs of Dublin and various rural parts, compared to areas of high increase in southeast Meath, northeast Kildare and Fingal. This is reflected in County Dublin having the lowest population growth rate (i.e., 20 %) in Leinster over the 2002-2016 period, whilst the population of the FADCR increased by 24.4 % in the same period. Meath’s population represents an increasing proportion of the population of the FADCR from 8.19 % in 2002 to 9.58 % in 2016. Similarly, Meath’s population as a percentage of the population of the Greater Dublin Area (GDA – includes Dublin, Meath, Kildare and Wicklow, but excludes Louth), also increased to 10.2 % in 2016.

In 2016, there were thus fifteen towns (pop. > 1,500) with legal defined boundaries and which are classified for the purpose of the census as urban settlements. The total urban population was 113,929, while the rural population was 81,115, giving a rural/urban divide of 1.40.

There are numerous large to medium towns with legally defined boundaries in Co. Meath, namely Navan (pop. 30,173), Ashbourne (pop. 12,679), Laytown-Bettystown-Mornington (pop. 11,872), Ratoath (pop. 9,533), Trim (pop. 9,194), Dunboyne (pop. 7,272), Southern environs of Drogheda (pop. 6,859), Kells (pop. 6,135), Duleek (pop. 4,219), Dunshaughlin (pop. 4,035), Stamullen (pop. 3,360), Enfield (pop. 3,239), Athboy (pop. 2,445), Ballivor (pop. 1,809) and Longwood (pop. 1,581). There are several other census towns (pop. > 1,500), including the census towns of Southern Environs of Drogheda (i.e., 5,000), and a host of

smaller towns and villages, including Stamullen, Enfield, Athboy, Oldcastle, Slane, Ballivor and Longwood. Although Drogheda is in Co. Louth, and hence in the Border Region, its development is strongly influenced by its relative proximity to Dublin, and it along with Navan, Kells and Duleek are proximate to Lobinstown, and are thus also considered here. Notably, the nearest town to Lobinstown Quarry is Ardee, Co. Louth, which is defined as a Self-Sustaining Growth Town in the settlement hierarchy presented in the Louth County Development Plan (2021-2027). Although Slane, which is closer at c. 8.75 km southeast of Lobinstown Quarry, is only classed as a village in the Meath County Development Plan (2021-2027).

In their settlement hierarchy, the Eastern & Midland Regional Assembly designated Navan as a Key Town (EMRA 2019). This designation sits within a wider settlement hierarchy which consists of seven settlement tiers as follows; Dublin City and Suburbs; Regional Growth Centres; Key Towns; Self Sustaining Growth Towns; Self Sustaining Towns; Towns and Villages; Rural. Key Towns are large economically active service and/or county towns that provide employment for their surrounding areas and with high-quality transport links. This tier consists of Bray, Maynooth and Swords in the Dublin Metropolitan Area, Navan, Naas and Wicklow-Rathnew in the Core Region, and Graiguecullen (Carlow), Longford, Mullingar, Tullamore, and Portlaoise in the Gateway Region. Importantly, Tier I consists of Dublin City and suburbs, while Tier II consists of the Regional Growth Centres Drogheda, Dundalk and Athlone, where Drogheda and the southernmost outskirts of Dundalk are located within the 25 km market for Lobinstown Quarry.

Because of differences in the way boundaries between urban and rural areas are incorporated into the 2002-2016 censuses, it is often difficult to give a consistent statement on the population growth of these towns. Nonetheless, it is apparent that the population growth in the 2002-2016 period for Navan was 55.4 % (i.e., 12,810 versus 30,173) compared to Ashbourne at 99.3 % (i.e., 4,999 versus 12,679), Laytown-Bettystown-Mornington at 112.1 % (i.e., 3,678 versus 11,872), Rathoath at 151.3 % (i.e., 1,061 versus 9,533), Trim at 535.4 % (i.e., 1,740 versus 9,194), Kells at 143.3 % (i.e., 2,152 versus 6,135), Southern environs of Drogheda at 221.6 % (i.e., 768 versus 6,859), Duleek at 94.2 % (i.e., 1,731 versus 4,219) and Dunshaughlin at 31.7 % (i.e., 2,139 versus 4,035). These data suggest that proximity to Dublin and the multi-modal transport corridors of the M1, M2, M3, M4 and the Dublin-Belfast and Dublin-Galway railway corridors are probably the principal determinants in the population growth. However, it does not explain the lower growth rates of Navan and Dunshaughlin, indicating that other factors have a major influence on the relative growth rates of towns in County Meath.

The nearest town to Lobinstown Quarry is Ardee c. 10 km to the northeast, Navan c. 14.5 km south-southwest, Dunleer c. 16 km to the east, Kells c. 17 km to the west, Drogheda c. 19 km to the east-southeast, Duleek c. 19 km to the southeast, Kingscourt c. 19 km to the northwest, c. 21 km east of Mullagh, Carrickmacross c. 23 km to the north, Bettystown-Laytown-Mornington c. 25 km to the southeast, Clogherhead c. 25 km to the east, and southernmost outskirts of Dundalk c. 25 km to the northeast. The quarry lies c. 95 km northeast of the other Regional Growth Centre, Athlone, and c. 53 km north northwest of Dublin City Centre. There are also several nearby villages or hamlets, such as Lobinstown c. 2 km to the northwest, Nobber c. 9.5 km to the northwest, Drumconrath c. 8.75 km to the north, Rathkenny c. 4.1 km

to the southwest, Wilkinstown c. 7 km to the southwest, Slane c. 8.75 km to the southeast, and Collon c. 9 km to the east.

EMRA (EMRA 2019) designated the county town of Navan a Key Town, and as such, is an important driver for local economies in the area that are comparatively more remote from the main population centres of the region. It has the critical mass to support its own services and industry, and functions as a support to the development of the adjacent Tier II Regional Growth Centre of Drogheda as well as the Tier I of Dublin City and suburbs. Navan is located on a strategic multi-modal transport corridor (i.e., M3 and planned Dublin-Navan rail line).

Meath County Council designated Navan and Drogheda Environs as Large Growth Towns I, which are key destinations in the GDA. The policy of the Development Plan is to promote them as economically active towns supporting the surrounding area, and maximising their location on multi-modal corridors (Meath 2021). The plan to construct the rail line between Dublin and Navan has been approved at Cabinet and is expected to be completed in 2036. Thus, Navan and the Drogheda Environs as the primary growth centres in County Meath, whose function includes acting as regional economic drivers in the GDA and will accommodate significant new investment in transport, in economic and commercial activity and in housing. Planning for Navan and Drogheda Environs should take cognisance of accommodating an ultimate population of 50,000 persons in those towns. This is critical as it will contribute to achieving critical mass in these centres and becoming self-sustaining towns in the long-term.

Meath County Council designated Dunboyne and Maynooth as Large Growth Towns II (Meath 2021). These settlements are smaller in scale than Growth Town I but are strong active growth towns that are economically vibrant with high quality transport links to larger towns/city. In addition, Ashbourne, Trim, Kells, Dunshaughlin and Kilcock are designated as Moderate Sustainable Growth Towns, which are towns that are 10 km from large towns on public transport corridors and serve rural hinterland as market towns. The remaining settlements are designated Small Towns or Villages.

The vast majority of County Meath is located in the Hinterland Area outside of the Dublin Metropolitan Area. The large towns in the Hinterland will absorb most of the new population growth and will continue to act as major service centres for adjoining towns and the surrounding rural area. All other towns and villages should grow at a sustainable and self-sustaining scale.

Drogheda is the nearest Regional Growth Centre to Lobinstown (i.e., c. 19 km to Drogheda vs c. 52 km to Dublin City Centre). Drogheda is the fastest growing town in the State in the most recent 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. Key priorities are to promote the continued sustainable and compact growth of Drogheda as a regional driver of city scale with a target population of 50,000 by 2031. The objective is to provide for the regeneration of the town centre, the compact planned and co-ordinated growth of the town's hinterland along with enhancing Drogheda's role as a self-sustaining strategic employment centre on the Dublin-Belfast Economic Corridor.

There is a lack of urban centres within northeastern County Meath, and thus the complete paucity of towns north of a line joining Drogheda, Slane, Kells and Oldcastle. The historically strong agriculture and natural resources sector has supported an extensive village structure throughout the County. Demand for housing within easy reach of larger towns can be

harnessed positively to strengthen the residential and other functions of the villages of Lobinstown (pop. unknown), Nobber (pop. 344), Drumconrath (pop. 345), Carlanstown (pop. 664), Slane (pop. 1,369) and Collon (pop. 896).

Lobinstown Quarry is located near the northeastern limit of the Irish Midlands limestone terrane within an area bounded by four national and regional roads (i.e., N2, N3/M3, N51 and N52). It is interposed between the two arterial road corridors of the N2 (Dublin-Monaghan National Route) c. 9 km to the east at Collon and the N3/M3 (Dublin-Cavan National Route) c. 17 km to the southwest at Kells, as well as the N52 (Dundalk-Nenagh National Secondary Road) c. 17.5 km to the southwest also at Kells, and the N51 (Drogheda-Delvin National Secondary Road) c. 8 km to the south at Slane.

The largest residential settlement close to the site is Slane c. 9 km to the southeast. The site is 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 (Refer to Figure 1.1 for location). There are also several other nearby villages or hamlets, such as Rathkenny c. 4 km to the southwest, Castletown c. 6 km to the west, Wilkinstown c. 7 km to the southwest, Drumconrath c. 9 km to the north, and Nobber c. 9.5 km to the northwest. Residential development in the surrounding countryside consists of isolated farm dwellings and owner-occupied bungalow/houses along public roads with some ribbon development on the approach roads to the larger settlements (Refer to EIAR Figures 1.2, 1.3 & 4.1).

Lobinstown Quarry falls within the natural catchment of these settlements. However, with fuel prices forecasted to follow an overall upward trajectory in the long-term, the practical limit for transport of stone and aggregate will continue to contract the natural catchment area of individual quarries.

Lobinstown Quarry is also located within the minor swathe of northeast Meath that is identified as a Strong Rural Area, and almost exclusively enveloped in an area identified as Low Development Pressure Area; See Map 9.1 Meath CDP 2021). This area is underpinned primarily by relative levels of residential stability within a well-developed town and village structure and in the wider rural area around them. This stability is supported by a traditionally strong agricultural economic base and the level of individual housing development activity in these areas tends to be lower than those Areas Under Strong Urban Influence and confined to certain areas. This area encompasses rural areas along a spine from the north of the county east of and including Kells as far as Oldcastle, including the environs of Slane. This area has less of a tradition of urban settlement.

County Meath is a predominantly rural county in terms of land use, with a large rural population. The rural areas within Meath are home to a diverse range of uses ranging from agriculture and equine industries, centres of local food production, recreational and tourist activities, established villages and one-off rural housing. Ensuring the continued vitality and viability of the rural area presents a significant challenge in terms of how best to manage sometimes competing social, economic and environmental considerations. Thus, it is the goal of the Council in terms of Rural Development Strategy to “encourage the continued

sustainable development of rural communities without compromising the physical, environmental, natural and heritage resources of the County”.

The Council also recognises the long tradition of people living in rural areas and promotes sustainable rural settlement as a key component of delivering more balanced regional development. Rural development should be consolidated within existing villages and settlements that can build sustainable rural communities as set out in the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy for the Eastern and Midlands Region (RSES).

In terms of rural development, it is a strategic objective of Meath County Council:

RUR DEV SO 3 To identify and protect known or potential aggregate resources, where feasible, from development which would prejudice their sustainable future usage.

Therefore, extension and deepening of Lobinstown Quarry would be beneficial in this regard by optimising resource use and supporting local employment, strengthening the local community and helping stem migration out of the area.

Lobinstown Quarry is located in the townland of Heronstown, which is in the Electoral Division of Killary, the Civil Parish of Killary, and the Barony of Lower Slane. Killary ED has an area of 50.0 km² (5,001 ha or 12,359 acres) (Refer to Figure 4.2) and includes 40 townlands. The townland of Heronstown has an area of 2.459 km² (245.9 ha or 607.7 acres).

The Killary ED has an area of 50.0 km² and a population of 1,248 persons, which translates into a low population density of 24.96 persons per km². This compares to the population densities of 83.3, 133.0, and 67.8 persons per km² for County Meath, Leinster, and the State, respectively, which themselves constitute low population densities relative to those in the UK (i.e., 255 persons per km²), although not compared with Europe (i.e., 112 persons per km²). The surrounding Electoral Districts within County Meath that make up the Local Area for the purpose of this study, include Drumcondra, Posseckstown, Nobber, Castletown, Rathkenny, Stackallan, Slane and Grangegeeth, whilst in the broader context, Killary is located in an otherwise relatively weakly populated area of northeastern County Meath.

The Electoral District has a sex ratio of 1.039 (i.e., 636 males versus 612 females). The lower number of females, who in general preferentially migrate to the towns, results in the characteristic pattern of rural areas, and reflects the absence of urban areas in the Killary ED.

The average age of the population in Meath was 35.2 in 2016, which is slightly lower than the national average (i.e., 37.4). However, the average age in the Killary ED was 39.7 in 2016 (Refer to Figure 4.3). The proportion of the population aged 65 years and older in the Killary ED was 15.7 % in 2016 (i.e., 196 persons), which compared with 10.7 % for Meath and 19.1 % for the State. The ‘Old Dependency’ ratio, the ratio of persons aged +65 to working persons, in County Meath was 16.6 % in 2016, which was lower than the average of 20.4 % for the State. Similarly, the ‘Young Dependency’ ratio, the ratio of persons aged 0-14 to working persons, in County Meath was 39.0 % in 2016, which is significantly higher than the average of 32.3 % for the State. Thus, the ‘Total Age Dependency’ ratio in County Meath was 55.6 % in 2016 compared to 52.7 % in the State, due largely to a younger population. In the Killary ED, the ‘Old Dependency’ ratio was 24.5 %, while the ‘Young Dependency’ ratio was 31.7,

giving a very high 'Total Age Dependency' ratio of 56.2 %, again due largely to a young population.

Table 4.2 gives population data for the electoral districts in the vicinity of Killary, as well as for County Meath, Dublin & Mid-East Region, and the State from 2002-2016 (CSO 2022). Notably, the population of the nine electoral districts that together comprise the local area shows a moderate double-digit growth of 17.9 % (1.28 % annually). Meath and Region both show very strong population growth (i.e., 45.6 and 24.2 %, respectively), while the State shows lower growth (i.e., 21.6 %) in the same period. Indeed, the weak population growth of the local area can be largely attributed to the lack of large urban settlements, despite the presence of villages such as Slane, Nobber, Drumconrath and Lobinstown. The two most northeasterly and rural electoral district, Drumcondra and Killary, exhibit populations that are growing more weakly or are essentially stagnant. The trend of lower population growth in the most rural parts of the local area is consistent with increasing urbanisation and migration to urban areas, towns and cities, whereby lower population growth has occurred in villages and rural areas instead of within the main urban areas. The urban population now amounts to 62.7 % of the population of the State, up 4.9 % since 2011. Significantly only one of the EDs in the local area (i.e., Drumcondra ED) showed negative population growth over the three intercensal period from 2002 to 2016.



Table 4.2 Population in the Local Area 2002-2016

District	2002	2006	2011	2016	%Change 2002-2016
Drumcondra	1310	1291	1290	1303	-0.53
Posseckstown	174	172	198	222	27.6
Nobber	619	652	748	763	23.3
Castletown	902	1,007	1,017	995	10.3
Lobinstown	1,145	1,185	1,221	1,248	9.00
Rathkenny	537	556	618	635	18.3
Stackallan	586	582	620	661	12.8
Slane	1,336	1,587	1,834	1,853	38.7
Grangegeeth	465	541	594	659	41.7
Total Local Area	7,074	7,573	8,140	8,339	17.9
County Meath	134,005	162,831	184,135	195,044	45.5
Dublin & Mid-East Region	1,535,446	1,662,536	1,804,156	1,907,332	24.2
State	3,917,203	4,239,848	4,588,252	4,761,865	21.6

Note: Data from CSO (2023).

4.3.3 ECONOMY & EMPLOYMENT

Meath is a largely inland county in the northeast midlands with a short section of coast (i.e., c. 10 km) from the Boyne River Estuary to the Delvin River at Knocknagin, just south of Gormanston. The county covers an area of 2,342 km², which equates to 3.33 % of the national landmass.

Historically, Meath's location within the Pale, access to the ports of Dublin and Drogheda, and abundance of productive agricultural land bestowed great advantage on Meath. Today Meath's strategic advantage is its proximity to Dublin and location within the capital city region or GDA, which is the most economically dynamic and progressive area of the country. Meath benefits from this proximity to Ireland's primary economic hub and National Gateway, and the largest market in the State. Meath also benefits from its strategic location on the Dublin-Belfast international corridor linking both capital cities and international airports. The excellent, multi-modal transport infrastructure which provides ready access to Dublin Airport and Dublin Port also delivers strong connectivity throughout the county with four national primary routes, three of which are motorway (i.e., M1, N2, M3 and M4). The fertile soils of Meath also provide the basis for a thriving agricultural and food sector that can support the rural economy and communities.

With its rich array of cultural and heritage assets, such as the World Heritage Site of *Bru Na Boinne*, *Hill of Tara*, the seat of the High Kings, *Loughcrew Cairns*, the *Battle of the Boyne* site, *King John's Castle*, Trim, *Bective Abbey*, and the *Kells Crosses*, Meath has positioned itself as the '*The Heritage Capital*' of Ireland. Cultural tourism has been identified as a potentially significant driver of the county's modern economy. Meath County Council (2013) recognises that the sustainable development of green infrastructure and natural heritage and

the maintenance and improvement of the unique rural and urban built heritage present strong attractions.

Meath is the second most affluent local authority area in the Mid-East Region, and sixth most in the State, and in general is not characterised by particular extremes of affluence or deprivation (Haase, 2007). The most affluent areas are situated in the southeast of the county, which lie within easy commuting distance to Dublin.

Meath shares borders with six adjoining counties — Louth, Cavan, Westmeath, Offaly, Kildare and Dublin. Meath occupies a strategic position within the GDA and includes part of the Dublin Metropolitan Area (i.e., Dunboyne and environs), which is the National Gateway and the economic engine of the State, accounting for over 40 % of the national GDP, as well as being the largest market in the State. The county's proximity to the capital has had a major effect on both the nature and extent of development and the associated traffic movements. In particular, the southern tract of the county, containing the M2/N2, M3 and M4, is increasingly coming under the influence of the Dublin Metropolitan Area.

The excellent, multi-modal transport infrastructure (i.e., M2/N2, M3/N3 and M4 and Dublin-Belfast and Dublin-Galway mainline railways) provides ready access to Dublin Airport and Dublin Port, as well as to other regional growth centres of Drogheda, Dundalk and Athlone, and neighbouring county towns, also delivers strong connectivity for the county.

Meath is relatively well-connected in terms of internet connectivity, with approximately 73.4 % and 82.0 % of all households in the county having broadband or other internet connection, respectively. This compares unfavourably with the Dublin and national average rate of internet connection of 96 % and 93 %, respectively, and likely reflects remote rural areas that are without broadband service.

County Meath hosts a diverse low-lying topography, ranging from extensive rich pastures throughout the Boyne and Blackwater River valleys, some drumlin hills in the north of the county, tracts of peatlands and raised bog in the southwest and a coastline of 10 kilometres in the east. Most of the county (i.e., central and southern parts) comprises a low-lying limestone plain, which is interrupted by upland areas overlying Ordovician and Silurian rocks of the Longford Down Massif (Inlier) north of the aforementioned line connecting Drogheda-Slane-Kells-Oldcastle as well as the minor Balbriggan Inlier. This broad limestone plain provides abundant fertile agricultural land and contributes to Meath's landscape being largely rural in character.

The drainage pattern of the county is dominated by the River Boyne and its tributaries, including the Blackwater River, while the Delvin and Nanny Rivers drain the southeast part of the county. Land reclamation and improvement for agriculture has severely reduced the extent of bogland in the county. The county is largely devoid of lakes, except for the two major lakes of Lough Sheelin and Lough Bane, which straddle the borders with County Cavan and County Westmeath, respectively.

The 16 Regional Strategic Outcomes (RSO) set out in the RSES are aligned with international, EU and national policy and which in turn set the framework for city and county development plans. The first three of these RSOs are particularly relevant here and are as follows:

1. *Sustainable Settlement Patterns*

Better manage the sustainable and compact growth of Dublin as a city of international scale and develop Athlone, Dundalk, Drogheda and a number of key complementary growth settlements of sufficient scale to be drivers of regional growth.

2. *Compact Growth and Urban Regeneration*

Promote the regeneration of our cities, towns and villages by making better use of under-used land and buildings within the existing built-up urban footprint and to drive the delivery of quality housing and employment choice for the Region's citizens.

3. *Rural Communities*

Support sustainable rural development and strengthen rural networks, economies and communities. Manage urban generated growth in areas under strong urban influence and encourage sustainable growth in areas that have experienced decline or stagnation.

In addition, the economic strategy set out in the RSES identified development of a strong economic base that is supported by enterprise, innovation and skills. The aim is for a vibrant and diversified enterprise base with strong and healthy clusters bringing disruptive technology innovations to national and global markets, with a responsive and efficient labour market. The focus of the RSES along multi-modal growth corridors connecting the economic growth centres within the region favours Drogheda and Dundalk, both of which are located in Co. Louth and along the M1 road corridor and Dublin-Belfast railway corridor, as well as both having ports on the Irish Sea. The Dublin-Belfast Economic Corridor is the largest economic agglomeration on the island of Ireland, and with the cities and towns along the Corridor, it is home to a population of around 2 million people and offers an opportunity to develop critical mass and enhance potential.

Meath lies adjacent to and partly overlapping with the Dublin Metropolitan Area (i.e., Dunboyne and environs). None of the designated 'Regional Growth Centres' in the Eastern & Midland Regional Area (EMRA) (i.e., Drogheda, Dundalk and Athlone) are located in Meath, although the Southern Environs of Drogheda are in Meath. In contrast, Navan is designated as a 'Key Town', which are described as "large economically active service and/or county towns that provide employment for their surrounding areas and with high quality transport links and the capacity to act as growth drivers to complement the Regional Growth Centres". Thus, Navan offers a population centre of a sufficient scale that it can offer a viable alternative employment base to Dublin in the region. Navan is also the closest urban centre to Lobinstown, and is an important driver for local economies in the area that are comparatively more remote from the main population centres of the region.

Meath is the second most affluent local authority area in the Mid East Region, and the sixth most affluent county in the country (Trutz Haase 2008). Relative to the national average, Meath has a slightly younger aged population (mean = 35.2 vs 37.4 years), and higher labour-force participation rates (65.8 % vs 61.9 % for the State), the seventh highest county rate in the State. Almost 65% of the county's population is of working age (persons aged 15 to 64). As of 2016, the largest cohort of the population was aged 30 to 39, representing almost 16 % of the total population. This would indicate a County with a strong working age population, essential for a thriving economy. There is a large proportion of younger residents, with 25.1

% of residents aged 0 to 14 years old, indicating the relative youthfulness of Meath (Meath 2021), which bodes well for the economy going forward.

Similar to national trends, the services sector in Meath continues to grow its share of the local economy in employment and productivity terms. Meath provides a strong economic centre for the region, with employment largely centred in Commerce and Trade, Professional Services and Manufacturing Industries. The retail/wholesale trade is the biggest employer in both the county and State, while employment in manufacturing in Meath is 14.2 %, which is high relative to the national average of 12.2 %. Industrial estates and business parks are located in Navan, Ashbourne, Dunshaughlin, Trim, Dunboyne, Kells, Dunshaughlin, Duleek, Stamullen (City North Business Park), Athboy and Oldcastle, as well as the Barstown Commercial Park near Blackhall c. 8 km west of Dunboyne.

Navan, the Southern Environs of Drogheda, and Dunboyne are strategically located settlements within the County and are important centres for enterprise and employment. These settlements have the potential to make a significant contribution to the delivery of housing in the County in the medium term with a substantial quantity of “ready to go” serviced lands available for development. An incremental, sequential approach will be taken to the development of these settlements that will support the long-term objective of achieving a population of 50,000 in Navan and Drogheda and 25,000 in Dunboyne.

The future expansion of the Self-Sustaining Growth Towns other than Dunboyne will be more moderate than Navan and Drogheda and will focus on the delivery of social and physical infrastructure in tandem with residential growth and employment. Ashbourne and Dunshaughlin are two Self-Sustaining growth settlements that have the capacity to absorb further growth. Ashbourne’s link to Dublin Airport and Dublin City Centre provides a solid basis for the settlement continuing to expand. There will be a stronger emphasis on the provision of employment and necessary social and physical infrastructure with any continued residential growth. Dunshaughlin is strategically located along the route of Phase II of the Dublin-Navan Rail Line. In this regard, it is considered appropriate to provide for the future growth and expansion of the town on the basis that it will be located along a sustainable rail based corridor in the future.

Thus, the major economic centres in County Meath are Navan, Southern Environs of Drogheda, Dunboyne, Ashbourne and Dunshaughlin. Excluding Navan, none of these are located within the 25 km market of Lobinstown Quarry, while only the southernmost outskirts of Dundalk (i.e., Cocklehill and Greengates) are located within the 25 km market of Lobinstown Quarry. Thus, Dunboyne, Ashbourne, Dunshaughlin and Dundalk are not considered further.

Navan

Navan is the county town and administrative centre of County Meath and is located in the heart of the Boyne Valley c. 14.5 km south-southwest of Lobinstown Quarry. Navan is designated as a Tier III Key Town by EMRA (2019). It evolved as a market town at the meeting point of the Boyne and Blackwater rivers and today is a vibrant business centre and shopping destination. The town has seen its population grow rapidly to c. 30,000 currently, as many people have recognised the benefits of country living within easy reach of a large city.

Navan is situated on one of the principal arterial motorways to Dublin the M3, which links to the M50, the Dublin Orbital Motorway, at 36 minutes and Dublin Airport at 42 minutes. Navan

is also located on the N51, a national primary route which links the town going east with the N2 to Derry and the M1 motorway to Belfast and going west with the N4/N5 and the M6 motorway to Galway.

Navan functions as a dynamic urban centre and the focal point for the economic, cultural and social development of County Meath. As a Key Town, it has the capacity and future growth potential to accommodate above average growth coupled with the requisite investment in employment creation, services, amenities and sustainable transport. It is one of the fastest growing towns in the State, with a young and diverse population of over 30,000 people in 2016. Navan is located on the M3 corridor and is well served by a local and regional public transport bus service including a frequent express service to Dublin. As the County Town, Navan acts as a key employment centre with potential to further strengthen the retail, employment and service functions of the town through the consolidation and expansion of the town centre along with new strategic development areas, and to improve connectivity, sustainable transport and public realm.

There is a need to create a modern and attractive urban environment in Navan. This is being delivered through the implementation of the Public Realm Strategy 'Navan 2030' and the Active Land Management Strategy for the town. The funding allocated through the Urban Regeneration and Development Fund will assist in the rejuvenation of the urban core and built fabric of the town. Key parts of the town that have suffered from underinvestment and have high levels of vacancy will be targeted for renewal and regeneration. This will improve vibrancy in the urban core and assist in the creation of a more compact settlement.

The sustainable development of vacant residential and regeneration sites in the town centre in conjunction with the implementation of the public realm and movement plan 'Navan 2030' will assist in reinvigorating the urban core of the town. Navan has a number of strategic sites including the former County Council Offices at Railway Street, which has potential for mixed use development, and the town expansion area to the south, which has also been identified as the preferred location for a future train station. Other strategic lands include a residential Strategic Development Zone (SDZ) at Clonmagadden and a development opportunity at Farganstown that is expected to result in the creation of a 'live-work' community.

Navan is the primary centre of employment in Meath with a range of retail and services including two retail parks, an acute hospital, health centres, court service and a number of primary and post primary schools. Although there are industrial and business parks in the town, outbound commuting for employment remains an issue. There are a number of industrial estates, including an IDA Business and Technology Park providing employment in sectors such as manufacturing, logistics, medical devices, services and communication. In addition, the Boyne Valley Food Hub, with approved state funding, aims to develop an innovation-rich enterprise support system in Navan to intensify growth in food and drinks. There is continued demand for workspaces by entrepreneurs, start-ups and established businesses at the Navan Enterprise Centre. Strategic lands are also reserved for the future development of a Regional Hospital for the northeast of the country. The future re-development of Páirc Táihteann is significant in the context of Navan 2030 and the vision of an enhanced town centre.

Planned upgrades of infrastructure in and around Navan include delivery of the distributor road at Farganstown, a link road between the Dublin and Trim Roads and a new road and

Blackwater bridge linking the SDZ lands at Clonmagadden, along with a new bridge over the Boyne and the southwestern section of the Navan outer orbital subject to feasibility. There is potential to improve public transport as part of the delivery of Phase 2 of Navan Rail project, subject to feasibility. The provision of additional road capacity around the town offers an opportunity for improved public transport, walking and cycling networks, through relocation of road space within the town. The confluence of the Rivers Boyne and Blackwater in the town offer potential to improve amenity and recreational use including the further development of the Boyne and Navan Greenways.

The major employer in Navan is Tara Mines, while others include Navan Hospital and Meath County Council. There are also Courts Service, which facilitates hearings of the District and Circuit Courts, the Health Service Executive, which oversees the operation of Navan Hospital and the Civil Registration Office, the Probation Service at Athlumney House, the Garda Civilian Human Resources Directorate, the Coroner's Service Implementation Team, the Revenue Commissioners and the Property Services Regulatory Authority. Other significant employers include Xtratherm, Lir Chocolates, Timoney Technology, Welch Allen Ltd., Utmost Pan Europe, Emeri Nutrition, Future Plastics, Enoinvest, Bective Automation, Flexibus and many more.

The following are significant employment centres in Navan:

- Mullaghboy Industrial Estate;
- Balmoral Industrial Estate;
- Liscarton Industrial Estate;
- Beechmount Homepark;
- IDA Business & Technology Park;
- Blackwater Retail Park;
- Navan Retail Park;
- Navan Town (Shopping) Centre; and
- Johnstown Shopping Centre.

Drogheda

The Southern Environs of Drogheda (pop. 6,859) is considered a major urban and economic centre in County Meath, which is c. 19 km east-southeast of Lobinstown Quarry. Although the town of Drogheda (pop. 40,956) is located in County Louth, it is the largest town in Ireland and is designated a Tier I Regional Growth Centre by EMRA (2019). As such, it is the dominant economic driver within the natural catchment of the Lobinstown Quarry (<25 km), whereas the other major economic centres in County Meath, namely Dunboyne, Ashbourne and Dunshaughlin, are located outside (>25 km) the natural catchment of the quarry and will not be considered further here.

Drogheda is identified as the fastest growing town in the State, whose location on the Dublin-Belfast Economic Corridor, combined with its existing physical, economic and social asset base, provides significant sustainable growth potential. Key priorities are to promote the continued sustainable and compact growth of Drogheda as a regional driver of city scale with

a target population of 50,000 by 2031. The objective is to provide for the regeneration of the town centre, the compact planned and co-ordinated growth of the town's hinterland along with enhancing Drogheda's role as a self-sustaining strategic employment centre on the Dublin-Belfast Economic Corridor.

The town and its environs lie within the combined functional area of two local authorities. Therefore, Louth and Meath County Councils have jointly undertaken preparation and adoption of a statutory Joint Urban Area Plan (UAP). The revitalization and redevelopment of the town centre will be prioritised in the UAP, including the regeneration of opportunity sites and their surrounding areas.

The physical, economic and social regeneration of the Heritage Quarter is promoted including the renewal of the Westgate area, as provided for in the townscape recovery guide 'Westgate Vision', which has secured funding under the Urban Regeneration and Development Fund. This vision supports the adaptation and reuse of vacant buildings, the sensitive redevelopment of vacant lands for new homes and businesses within a dynamic public realm investment program to provide an attractive and well-designed urban district. Additional regeneration opportunities such as the regeneration of the Drogheda Docklands will be identified in the joint UAP. The UAP will ensure that a coordinated approach is taken to future compact growth, sustainable development and investment to enhance Drogheda's role as a compact Regional Growth Centre. Key to the success of Drogheda as a self-sustaining regional growth centre is targeted compact growth through the renewal and regeneration of underused, vacant and/or derelict town centre lands for residential and commercial development facilitated through the joint UAP.

Drogheda at the gateway to the Boyne Valley is of international significance in terms of its historical narrative, archaeology, architecture and urban heritage. It offers significant heritage and tourism potential, both within the town itself where the town's rich urban heritage is evident in the archaeology and architecture within the historic town core, and also as a gateway to heritage sites outside the town in the Boyne Valley. The River Boyne is the most important natural amenity of Drogheda and should be central to any future strategy for the town and its regeneration. Enhancing and developing the existing parklands and open space to the west of the town will provide an important new link to Brú na Boinne and beyond.

Drogheda is strategically located between the Dublin and Belfast Metropolitan areas with access to the deep labour markets in both the Dublin and Belfast city regions. Further development of the Dublin-Belfast Economic Corridor providing improved accessibility for setup or relocation of indigenous businesses and FDI will enhance Drogheda's role as a key regional economic driver. Drogheda has developed a strong and broad employment base in the range of services and manufacturers it supports, principally in the financial, payment, shared services and food technology sectors. The Mill in Drogheda hosts numerous start-up companies and will continue to support and develop the existing pool of entrepreneurial talent. There is potential with the Drogheda Institute of Further Education (DIFE), enhancing the educational offer in the Northeast. Our Lady of Lourdes Hospital is a significant employer and centre of excellence in health in the region.

Drogheda will benefit from the proposed DART expansion identified in Project Ireland 2040, which will provide for a fast, high-frequency electrified rail service to the town to enhance the existing heavy rail service. The existing McBride Rail Station will continue to be the main

public transport hub for Drogheda and its environs. However, accessibility to the station will need to be improved, and stronger linkage should be forged between rail and bus services in the town. The planning and delivery of the Drogheda Flood Relief Scheme will protect existing development and future growth. Drogheda Port is of regional significance, and its potential for relocation and the future development of the Port Access Northern Cross Route (PANCR) are significant.

Major local employers include Coca-Cola International Services, State Street International Services, Yapstone Inc., Nature's Best Holdings Ltd., Boyne Valley, Nature's Best Ltd., Waterwipes, Innovative Products Ltd., Sino Foods Ltd., Irish Cement Ltd., Boylan Group Ltd., International Beverages, Clearpower Developments Ltd., Premier Periclase Ltd., Multi-Color Labels Ireland Ltd., Drogheda Hire & Sales Ltd., Boyne Valley Honey, Anglo Printers Ltd., I.D. Technology Ltd., Adams Cider Company Ltd., Rawlplug Ireland (Export) Ltd., Amphenol Tcs Ireland Ltd., Cali Cali Foods, Aromatics Holdings Ltd., Canada Dry Corporation Ltd., Connemara Mountain Water Teoranta, Irish Cement Holdings Ltd., Becton Dickinson Ltd., and many more. In addition, other significant employers are Our Lady of Lourdes Hospital and affiliated Drogheda Department of Psychiatry (DDOP), Drogheda Port Company, Irish Cement's Platin Cement Plant and Quarry, Premier Periclase's Magnesia Plant, Iarnród Éireann's MacBride Railway Station and Service Depot, Glanbia and Flogas.

The following are significant employment centres in Drogheda:

- Donore Roads Industrial Estate;
- Greenhills Industrial Village;
- Boyne Business Park;
- East Coast Business Park;
- Newgrange Business Park;
- Drogheda Retail Park;
- M1 Retail Park;
- Scotch Hall Shopping Centre;
- Laurence Shopping Centre;
- Drogheda Town (Shopping) Centre.

Kells

Kells (pop. 6,135) is a town in County Meath that is designated as a Self-Sustaining Growth Town, and is located c. 17 km west of Lobinstown Quarry and hence within its 25 km market. Kells is a town of historic importance with significant heritage which makes it a unique settlement in the County. This history and heritage makes it an important tourist destination in 'Ireland's Ancient East' and the Boyne Valley.

Located adjacent to the M3 Motorway, the town is also a busy local service centre with a strong and diverse economy that makes it a key economic and employment centre in the north of the County. The recent designation of the Kells Municipal District as a Regional Economic Development Zone (REDZ) has made the town a more attractive location for investment.

Kells is an attractive historic town characterised by a medieval street pattern with buildings of significant heritage quality. Population and residential growth in the town has been modest in recent years. The future development of Kells will focus on consolidation of the existing urban footprint and the provision of a balanced and well-connected environment that has an appropriate mix of housing and uses.

The influence of Kells reaches beyond its immediate hinterland to neighbouring Westmeath, Cavan and Louth. Additional employment lands were provided in the town in 2017 as part of Variation No. 1 of the Kells Development Plan 2013-19. Land to the south of the Navan Road was zoned for a strategic employment use, including high end technology and major campus style office-based development as well as to facilitate logistics, warehousing, distribution, and supply chain management. Additional lands were zoned adjacent to the Kells Business Park and off the Cavan Road. These zonings will ensure adequate lands are available to meet the employment needs during the lifetime of the Plan.

The main employment centre is the Kells Business Park, including the Kells Enterprise & Technology Centre.

Bettystown-Laytown-Mornington

Bettystown-Laytown-Mornington (pop. 11,872) is a town in County Meath that is designated a Self-Sustaining Town, and is located c. 25 km southeast of Lobinstown Quarry and hence within its 25 km market.

Bettystown/Laytown/Mornington has developed mainly on the basis of dormitory town and is facilitating commuting primarily to Dublin, as well as a centre for holiday homes, chalets, mobile homes and caravans. Growth in local employment and services has not matched the growth in population. There is limited employment outside of the retail core of Bettystown, including the Neptune Beach Bar and B&B, Village Hotel, Triton Casino, Fantasia Fairground, Tesco, as well as Colaiste na hInse and Scoil Oilibheir Naofa, and to a lesser extent several retail and hospitality outlets on the sea front at Laytown.

Duleek

Duleek (pop. 4,219) is a town in County Meath that is designated as a Self-Sustaining Town, and is located c. 19 km southeast of Lobinstown Quarry and hence within its 25 km market. Duleek is an historical town situated in the east of the County, strategically positioned and in proximity to larger settlements including Drogheda (Louth) and Balbriggan (North Dublin). The town is within easy reach of the M1, Dublin – Belfast Corridor via the R150 regional road.

The town functions as a local service centre. Its attractive and historical, rural setting aligned with its location within the Greater Dublin area, has resulted in significant commuter development and changes to the local community and character of the town. Originally developed around a central town green with attractive, narrow roads and streets, more recent development has seen the town expand to the north and west, with significant industrial and employment growth to the east.

The range of commercial and retail services are local in nature, reflective of its function as a local service centre and its proximity to Drogheda. There is a notable business and industrial base operating within Duleek Business Park, on the eastern environs of the town, benefitting from proximity to the Drogheda Environs on the M1/E1 International Corridor. n via the national

and regional road network. There is capacity available in the Business Park to accommodate further enterprise and employment. There are a number of other significant employers located outside of the town boundary in the Carranstown/Platin area off the R152 (e.g., Irish Cement's Platin Quarry and Cement Plant, which provides significant employment to Duleek and surrounding area.

Slane

Slane (pop. 1,369) is a village in County Meath that is designated as a Village, and is c. 9 km southeast of Lobinstown Quarry and hence within its 25 km market. Slane is renowned for its rich and varied cultural and built heritage. It is located adjacent to the River Boyne, an area of outstanding natural beauty which is a designated Special Area of Conservation and Special Protection Area, and is the gateway to the World Heritage Site, Bru na Bóinne. Much of Slane's charm derives from its geographical setting, its iconic formal set piece of the octagon and the use of stone in its architecture. The village, Slane Castle Demesne and Slane Mill are designated Architectural Conservation Areas (ACAs).

The village has primarily grown northwards and out from the crossroads. The village has a broad offering of hotels, shops, restaurants and pubs. Residential development has taken place on the outskirts of the village boundary along the approach roads.

Slane Castle with its attractive setting and historic surrounds provides a unique tourist offering, attracting many visitors to the area. The castle grounds are a world renowned venue for many concerts, while the Castle open for tours and is used as a wedding venue and provides restaurant and bar facilities. In addition, the Slane Distillery has recently opened in the grounds of Slane Castle adding further to Slane's tourist attraction.

Slane is therefore developing as an employment centre for the area with a diverse offering of tourist related uses, artisan foods, craft shops and community uses. The retail core has a high occupancy rate among the retail and commercial units. There are also a few significant employers within Slane and its environs. There is a large fertiliser plant (Grassland Fertilizers Ltd.) at the northern edge of the village and the Newmill Industrial Estate adjacent to Slane Mill, which contains a number of industrial units and piping manufacturers. Slane Castle and Slane Distillery has an important employment role in the village.

Carrickmacross

Carrickmacross (pop. 5,032) is a town in County Monaghan that is designated as a Tier II Strategic Town, and is c. 23 km north of Lobinstown Quarry and hence within its 25 km market. It is the second largest town in Monaghan. Although County Monaghan is in the Northern and Western Regional Assembly (NWRA) area, the NPF also recognises that it is part of a North East functional area, where a key driver is the Dublin- Belfast economic corridor.

Carrickmacross is a strategic growth centre given its proximity to the M1 motorway and the Greater Dublin Area and continues to thrive with on-going population growth. It also acts as a driver for local economies in southern County Monaghan with well-established economic, administrative and social functions. The town performs important retail, residential, service and amenity functions for local rural hinterlands. Strong emphasis will be placed on the growth of the local economy and developing its links with the adjacent EMRA area, particularly the Regional Growth Centre of Dundalk.

The town has a firm commercial and industrial base and its strategic location has attracted significant inward investment resulting in a buoyant local economy, strong growth and demand for residential and retail development. The provision of the N2 Carrickmacross by-pass to the east of the town has relieved the town centre of the traffic congestion that was limiting its function and attractiveness as a retail and commercial centre.

Carrickmacross has a number of industries and the major employers in the town are Rye Valley Foods (Kerry Group), Farney Foods, C&M Coldstores & Gernord. Existing employment in the town is concentrated in the IDA Industrial Park, Carrickmacross Industrial Estate and Steadfast Industrial Estate. A total of 115 hectares of land has been zoned for industry, enterprise and employment development in Carrickmacross, which will provide sufficient capacity for the development of the town's industrial base.

Ardee

Ardee (pop. 4,928) is a town in County Louth that is designated as a Tier II Self-Sustaining Growth Town, and is c. 10 km northeast of Lobinstown Quarry and hence within its 25 km market. Ardee is the closest town to Lobinstown Quarry. The town is an important local service centre in mid-Louth providing a range of services and employment to an extensive catchment that extends into parts of Meath and Monaghan. In 2016 there were over 1,700 jobs in the town and together with its high Job: Workforce ratio, which was 0.93 in 2016, is an indication of the strong employment base in the town.

Ardee's connectivity and accessibility due to its location along the national road network makes it an attractive location for growth and investment. This connectivity includes access to the Dublin-Belfast Corridor via the M1 (i.e., 7.5 km to the east), the north-west of the country via the N2, and access to local centres of employment in the Eastern and Midland Region via the N52.

Any expansion of the town shall be complementary to the development of the Regional Growth Centres of Drogheda and Dundalk. As part of the strategy of promoting town centre renewal, high quality development that results in the development of vacant or under-utilised lands that will improve the vibrancy of the town centre and create a more compact settlement will be supported. There are proposals to upgrade the N2 and N52 that will involve a by-pass of Ardee along both of these routes. These projects would transform Ardee town centre as it would remove through traffic from the urban core of the town and provide opportunities for investment in the public realm that would give greater priority to walking and cycling.

Ardee's strategic location, in addition to the availability of lands for employment uses, places Ardee in a strong position to accommodate employment growth. Existing employment in Ardee is concentrated in Ardee Business Park, Farrell's Business Park and Curraghbeg Industrial Estate. There are also a number of individual businesses operating in various parts of the town. St. Brigid's Hospital, which is a HSE residential facility, is located on the N52.

Kingscourt

Kingscourt (pop. 2,499) is a town in County Cavan that is designated as a Tier III Self-Sustaining Town, and is c. 19 km northwest of Lobinstown Quarry and hence within its 25 km market.

Kingscourt has experienced high levels of population growth and requires targeted levels of investment to become more self-sustaining. The current Jobs: Workforce ratio is only 0.603, indicating a high level of commuting out of the town. The town has a number of large and smaller employment providers, including Kingspan, O'Reilly's Concrete, Gypsum Industries, Kingscourt Bricks and Paramount Roller Doors, all of which are situated east of the town centre off the R165. There is also an Enterprise Centre on the Kells Road, as well as other services provided within the town core area. The Town Centre Regeneration project received funding in 2020 and the town has potential to further build on its employment base.

Clogherhead

Clogherhead (pop. 2,145) is a town in County Louth that is designated as a Tier III Self-Sustaining Town, and is c. 25 km east of Lobinstown Quarry and hence just within its 25 km market. Clogherhead is an attractive seaside town with a picturesque setting. The headland area is designated as an Area of Outstanding Natural Beauty. The town traditionally relied on fishing (Port Oriel continues to function primarily as a fishing port) and to a lesser extent tourism for employment, in more recent years it has developed as a commuter settlement.

As a self-sustaining town, Clogherhead has had high levels of population growth but a weak employment base, and is reliant on other areas for employment and/or services. Clogherhead has a very low Job: Workforce ratio of 0.17, indicating that a very high proportion of the residents in the town commute outside the settlement for employment. The harbour area was recently upgraded providing facilities for large fishing fleets and sea anglers.

There are opportunities to build on the strengths of the settlement, including its setting, blue flag beach and links to the fishing industry. The Council proposes to upgrade the coastal path from Clogherhead to Port Oriel and develop a loop back to the town. Improvements to tourism accommodation, including campervan facilities, the upgrade of caravan parks and conversion of vernacular buildings into holiday accommodation, will make Clogherhead a more appealing visitor destination.

Dunleer

Dunleer (pop. 1,822) is a town in County Louth that is designated as a Tier II Self-Sustaining Growth Town, and is c. 16 km east of Lobinstown Quarry and hence within its 25 km market.

Dunleer is a small settlement to the immediate east of the M1 between Drogheda and Dundalk. The R169 links Dunleer to the motorway at Junction 12, providing excellent connectivity via the Regional and National road network. The town has a strong employment sector, with more jobs (i.e., 800) than resident workers in 2016, resulting in a Jobs: Workforce ratio of 1.10 — the highest rate in the County.

The development strategy is for economic and residential growth in the town to be complementary to the development of the Regional Growth Centres of Drogheda and Dundalk. Consolidation of the urban core and the development of vacant or underutilized infill and brownfield lands will be supported. Economic and employment related development shall be concentrated in the established employment areas in the town. Existing employment in Dunleer is concentrated in the IDA Business Park and at Glen Dimplex off the R170 immediately east of the town.

Mullagh

Mullagh (pop. 1,348) is a town in County Cavan that is designated as a Tier IV Medium Town, and is c. 21 km west of Lobinstown Quarry and hence just within its 25 km. Mullagh is located in the southeast of County Cavan, near to the border with County Meath. The town grew by a significant 18% between 2011-2016 due to its proximity to the N3 (i.e., c. 5.5 km). Local employment opportunities within the town consist mainly of Wellman's International, with just under 500 employees, Intercool Engineering and Boylan Engineering, as well retail and services provided within the town core, two small abattoirs and agriculture.

Collon

Collon (pop. 896) is a village in County Louth that is designated as a Tier IV Small Town or Village, and is c. 9 km east of Lobinstown Quarry and hence within its 25 km market. Collon is located at a crossroads on the N2 (Dublin-Derry) national primary road and is set in a natural scenic landscape, which is designated as an Area of High Scenic Quality (AHSQ). The River Mattock to the south of the village centre was the source of water power, which led to the development of Collon as a model industrial village.

The settlement has an important function in supporting local growth. The Job: Workforce ratio of 0.31 indicates that the settlement has a weak employment base and is dependent on outbound commuting for employment. Employment opportunities are mainly in the community, education, and retail/service sector, which include Mellifont Abbey, Collon National School, and the retail and hospitality outlets. Employment opportunities are also available in the Collon Business Park c. 1.5 km west of the town and the partially developed Collon Industrial Park c. 1 km south of the town.

County Meath

County Meath covers an area of 234,490 hectares and is the second largest county in Leinster. The county enjoys a diverse low-lying topography, ranging from extensive rich pastures throughout the Boyne and Blackwater River valleys, some drumlin hills in the north of the county, tracts of peatlands and raised bog in the southwest, beautiful 12 km coastline in the east, and the central upland area that includes the Hill of Tara.

Meath is known as the Royal County because many centuries ago aspiring High Kings of Ireland came to the Hill of Tara for their coronation. Meath is also home to one of three UNESCO World Heritage Sites in Ireland — the passage tombs of Brú na Bóinne (Newgrange and Knowth). The Boyne Valley is home to the largest concentration of megalithic carved stone art in Western Europe and can be best seen at the Loughcrew Cairns and at Brú na Bóinne.

Meath has a population of over 195,044 people accommodated in a network of attractive towns, villages and the rural area. It is located to the northwest of, and partly overlapping with, the Dublin Metropolitan Area. This geographical proximity and the strong functional relationship between the two counties confers a significant locational advantage on the county. Meath is traversed by four of the 6 spoke motorways radiating out from the capital and is supported by a well-developed road and rail infrastructure system that provides access to international transport networks at Dublin Airport and Dublin Port and the remainder of the country. The county benefits from a wealth of natural and man-made resources.

County Meath is a predominantly rural county in terms of land use, with a large rural population. The rural areas are home to a diverse range of land uses including agriculture, the primary land use, and equine industries, centres of local food production, recreational and tourist activities, established villages and rural housing. The fertile soils in Meath provide the basis for a thriving agricultural and food sector, and the natural and built heritage enhances the quality of life for the people of the county and has long enticed visitors to the county.

A total of 197,366 hectares in the county is in agricultural use, equating to 84.17%. The land is predominantly held in pasture with lesser amounts of arable land and land principally occupied in agriculture with significant natural vegetation. Specialist beef production and intensive dairying are the most common types of farming.

Meath is the country's second most important centre for the bloodstock industry, after County Kildare and boasts the 3rd highest number of stud farms after counties Kildare and Tipperary. It is home to the only official strand races in Europe, which take place on Laytown Beach each year. Racing at nearby Bellewstown has taken place for almost 300 years, with the first recorded race taking place in 1726. The equine industry is important both economically and culturally. Fairyhouse Racecourse, Navan Racecourse and Tattersalls Bloodstock Auctioneers are highly prominent enterprises in the area. Bloodstock and sport-horse enterprises generate employment directly and also through other associated enterprises and sectors such as tourism.

The other important land uses are peat bogs, which cover 4.4% of County Meath, while the county has the lowest percentage of forest cover in Ireland at 4%, which includes coniferous, broadleaf, transitional and mixed forest.

Under half of Meath residents live in rural areas (i.e., 41.6%) giving an urban/rural divide of 1.40 compared to the average of 1.68 for the State. There has been a decline in employment within the agricultural sector in recent decades. The 2016 Census again recorded a decrease of the working population within the county were engaged in full-time employment in agriculture, forestry or fishing from previous intercensal period (i.e., 3,717 persons or 5 % of the working population). Nonetheless, agriculture remains an important part of the economic life of the county. In addition to its productive employment aspect, the practice of agriculture still largely manages the rural environment and landscape and provides an amenity for the enjoyment of the general population.

The tourism sector in Ireland is now one of our largest national indigenous industries, supporting an estimated 270,000 jobs. Ireland is promoted here and abroad using 'Brand Ireland', under which four distinct experience propositions are used to define the appealing characteristics of each region.

Meath has much to offer as a tourist destination, in particular its rich heritage, quality rural landscape, attractive towns and villages, and its appealing coastline. In particular, Meath is located within one of these regional experience brands, namely 'Ireland's Ancient East'. The Boyne Valley is identified as the birthplace of Ireland's Ancient East and the Meath in particular is the gateway to this destination, with its unique collection of pre-historic sites and monuments in particular the Brú na Bóinne UNESCO World Heritage Site. The County is marketed by Fáilte Ireland as a destination to tell the story of Ireland through a diverse range of authentic and exciting visitor experiences.

While Meath is a particularly attractive location for day-trippers, given its proximity to Dublin, additional enhancement of the visitor experience is needed to increase dwell time to ensure the County fully benefits from growth in the tourism sector. Annual visitors to the county reached 385,000 in 2017, of which 162,000 were overseas visitors and 223,000 were domestic visitors. Amongst the 32 counties, these visitor numbers rank Meath as 17th in terms of overseas and 19th in terms of domestic visitors.

It is proposed to promote and facilitate the development of sustainable tourism and recreation, and support the development of the Boyne Valley Bucket list through the provision of a diverse range of activities, historic sites and accommodation types within the County. Fáilte Ireland has launched the 'Ancient' Destination Experience Development Plan (ADEDP), which is a five-year destination development plan intended to develop world-class experiences focused on the region's rich ancient heritage (Failte Ireland 2021). The ADEDP is primarily focused on the area known as the Boyne Valley extending across counties Meath and South Louth but will extend into North Louth and parts of Cavan, Monaghan and Westmeath with relevance to the Ancient proposition. Although the Brú na Bóinne visitor experience, a UNESCO World Heritage Site, has been a central focus, an additional range of emerging opportunities have been identified with the ability to deliver some of the most experiential ancient experiences in the world.

In line with the Ireland's Ancient East brand, Meath not only offers Brú na Bóinne, but also Loughcrew Cairns, Hill of Tara, Slane Castle, Hill of Slane, Hill of Ward, Battle of the Boyne site at Oldbridge, King John's Castle in Trim, St. Columba's Church, Market High Cross and Spire of Lloyd in Kells, Bective Abbey near Trim, and Four Knocks near Naul. Other heritage attractions include accommodation at Bellinter House, Navan and Ross Castle, Lough Sheelin, weddings and special events at Slane Castle, Ballinlough Castle and Killeen Castle, and guided tours of Slane Whiskey Distillery, Francis Ledwidge Museum, Slane, Loughcrew Estate & Gardens, Oldcastle, to name a few.

Greenways offer a unique opportunity to develop a further strand in tourism for the County, through the provision of infrastructure for adventure tourism which has demonstrable economic benefits. The Council will work with other agencies and stakeholders to develop a coordinated approach to the selection, delivery and servicing of future greenways, blueways, trails and routes throughout the County. The Council will endeavour to assist in the delivery of such routes and, in particular, the delivery of the Royal Canal Greenway, which is largely completed, the Boyne Valley Greenway (Trim – Navan – Slane – Drogheda – Newbridge House) and the Boyne Valley - Lakelands Greenway (Navan – Kingscourt – Monaghan).

The Royal Canal Greenway, at 130 km is the longest off-road Greenway in Ireland, running along the towpath of the Royal Canal which was constructed between Dublin and Longford at the turn of the 18th century to connect the River Liffey to the River Shannon. To date, Waterways Ireland have developed the Greenway for recreation purposes between Maynooth in Co. Kildare to Longford Town and Cloondara by the Shannon. Approximately 22 km of the Royal Canal Greenway runs through County Meath, with the main access points at Enfield, Longwood and the Hill of Down. The Council have recently installed storyboard signage at these points which provide information on the natural and cultural heritage of the areas.

Although urban areas are home to a greater fraction of the population of Meath (i.e., 113,929 or 58.4 % in 2016), rural areas are still home to a substantial population (i.e., 81,115 or 41.6

% in 2016). This urban/rural divide in Meath (i.e., 1.40) is lowest of any county inside the GDA, and contrasts with that of the State and Mid-East Region (i.e., 1.68 and 1.82, respectively). Although rural areas account for 41.6 % of the population, only 4.48 % are employed in agriculture, forestry and fishing in 2016. Nonetheless, agriculture is the primary land-use in the county, but the economy is only moderately reliant on this sector.

There are a few cutaway peatlands in the county, mainly situated in a large tract running southwest from Athboy along the southwestern border with County Westmeath. There are a few smaller tracts at Girley Bog, Jamestown Bog, Tullaghstown Bog, Killyconny Bog and unnamed bogs at Mooneystown and Clonberton. These offer potential for tourism, amenity, educational and research purposes. They could also potentially accommodate large scale alternative energy production in the form of solar and wind. Peatlands are one of the world's most important ecosystems in that they are long-term carbon sinks in the terrestrial biosphere. Rewetting and restoration of peatland has the potential to secure existing carbon stock and reinitiate the carbon sequestration capacity of degraded peatlands. Bord na Mona is moving from "brown" to "green". The rewetting bogs is already underway and carbon sequestration has significant potential for employment and income generation on a long-term basis.

Forests and woodlands play an important role in supporting rural employment and rural diversity, climate change management and carbon sequestration, biodiversity and as a source of renewable/alternative energy sources. Forests and woodlands have a significant recreational and amenity value. The use of native species or broadleaf/conifer mixture and age class diversity can enhance the visual impact and biodiversity of forests. There are several areas of commercial forestry in the county but it is not currently a widespread land use. In 2017, there were c. 13,326 ha of forest in County Meath, amounting to 5.72 % forest cover (DoAFM 2020). In addition, there were 24,000 ha of non-forest hedgerow, scrub and woodland (HSW), amounting to a further 10.2 % cover under HWS. While the forests provide timber and other wood-based products, the bogs, forests and woodlands also provide recreational and tourism amenities for local communities and visitors.

Of the 90,634 workers recorded in 2011, 74,342 were at work, giving a nominal, non-seasonally adjusted unemployment rate of 18.0 % at the height of the recession, compared to the national average of 19.0 %. In 2016, of the 92,690 workers recorded, 83,259 were at work, giving a nominal, non-seasonally adjusted unemployment rate of 10.2 %, amounting to a 43.3 % reduction and indicating significant economic recovery.

Examination of the CSO Live Register figures for County Meath during the recession (CSO 2023) shows that unemployment levels rose dramatically from the end of 2007 to 2013 and remained a factor of about 4 times the pre-recession levels, essentially fluctuating around 12,000 during 2010 and 2013 (See Figure 4.4). In the 2011 census, at the height of the recession, unemployment stood at 18.0 % in Meath, compared to 19 % nationally. The dramatic increase in unemployment was largely associated with the collapse of the construction industry and the associated service industries. The unemployment level in Meath began to fall gradually in 2013 and fell below the 10,000 mark in October 2013. The level of employment has continued to improve steadily, reflecting a broad economic recovery. In February 2023, there were only 3,768 on the live register in County Meath, while nationally, there were 183,401 on the live register. The national and Meath figures indicate almost a complete recovery in employment from the Financial Crash, albeit tempered by the Covid-19

pandemic in 2020-2022. This is reflected in the data bracketing the 2011-2016 inter-censal period alone, which show that Meath had even by then experienced a very significant economic recovery.

From Table 4.3, it is apparent that the dominant employment sectors in Meath are commerce and trade (26.1 %), professional services (24.2 %), and manufacturing (14.2 %), with all other sectors combined accounting for only 35.5 %. Importantly, approximately a quarter of the total workforce living in Meath worked outside the county by commuting to Dublin City and suburbs in 2016 (i.e., 21,808 or 26.2 %) (CSO 2023).

'Commerce and Trade' is the largest sectoral employer (23.8 %) in the Killary ED, with 'Professional Services' being the second largest sectoral employer (17.3 %), while 'Agriculture' is the third largest sectoral employer (15.2 %). Given the percentage of the workforce in Meath works outside of county, and given the distance of the Killary ED to Dublin, it is probable that the importance of 'Commerce and Trade' and 'Professional' reflects the large fraction of the workforce in the Killary ED that works outside both the electoral division, in Navan for example, and outside the county in towns such as Drogheda and Balbriggan, as well as the Dublin Metropolitan Area. The fourth most important sector is 'Manufacturing' (13.4 %), followed by 'Other' (10.4 %), 'Building and Construction' (8.72 %), 'Public Administration' (5.94 %), while 'Transport and Communications' (5.38 %) is the smallest employer (See Table 4.3).

Historically, agriculture and businesses supporting agricultural production would probably have been the main source of employment in the area and nearby villages and towns. Today, the nearby settlements of Lobinstown, Slane and Collon still offer few employment opportunities, whereas Ardee, Kells, Navan, Drogheda, Dundalk and the Dublin Metropolitan Area offer significant employment opportunities. There would also be some opportunities on nearby farms, golf courses, nurseries, and quarries.

The average journey times to work, school or college was c. 34 minutes for residents of the Killary ED in 2016, whereas 70 % of the journey times are 54 minutes. Journey times of 34 minutes are consistent with commuting to work in Drogheda or Navan, while those of c. 54 minutes are consistent with commuting to work in Dublin northern suburbs. Approximately 24 % of the commuter journeys were 60 minutes or longer, which would be consistent with commuting into Dublin City. The N2/M2 is accessible at Slane directly via the L1603, while the M1 is accessible from a node at Drogheda via the L1604 and R168.

The quarry will continue to employ 4 staff members and it is not anticipated that these numbers will increase. Indirect employment will continue for several sub-contractors e.g., local hauliers and crushing contractors.

Table 4.3 Employment by industry in County Meath and Killary ED in 2016

Industry	County Meath		Killary ED	
Agriculture, forestry and fishing	2,862	7.37 %	82	15.21 %
Building and construction	1,719	4.43 %	47	8.72 %
Manufacturing	5,514	14.20 %	72	13.36 %
Commerce and trade	10,137	26.11 %	128	23.75 %
Transport and communications	1,832	4.72 %	29	5.38 %
Public administration	2,398	6.18 %	32	5.94 %
Professional services	9,376	24.15 %	93	17.25 %
Other	4,984	12.84 %	56	10.39 %
Total	38,822	100.00 %	539	100.00 %

Note: Data from CSO (2017).

4.3.4 SOCIAL CONSIDERATION

The townland of Heronstown is located in a rural area, which is defined as a Rural Area under Strong Urban Influence, and as stated above, has experienced a population growth of 23% during the 2002-2016 period. Such areas occur in the hinterland of larger settlements and are prone to ribbon and over spill development from these urban areas.

Residential development in the area consists of dispersed farmsteads and diffuse or sporadic ribbon development along roadsides and around towns and villages. 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 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.

There are many residential settlements close to the site, with the settlement of Lobinstown c. 2 km to the northwest. The site is also 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.

There are also several nearby villages or hamlets, such as Lobinstown c. 2 km to the northwest, Nobber c. 9.5 km to the northwest, Drumconrath c. 9 km to the north, Rathkenny c. 4 km to the southwest and Wilkinstown c. 7 km to the southwest. Residential development in the surrounding countryside consists of isolated farm dwellings and owner-occupied bungalow/houses along public roads with some ribbon development on the approach roads to Lobinstown and other large settlements (Refer to EIAR Figures 1.2, 1.3 & 4.1).

Of the larger residential settlements, Drogheda, Dunleer and Dundalk lie on the M1, Slane, Collon, Ardee and Carrickmacross lie on the N2, Navan and Kells lie on the M3. Thus, the bulk of the large settlements in the 25 km market of Lobinstown Quarry lie a Strategic Radial Transport Corridor, while Duleek, Kingscourt, Mullagh, Bettystown-Laytown-Mornington and Clogherhead lie on regional roads. The concentration of towns, many of which are large, in the region reflects the higher population densities in the Northeast.

The nearest Post Office outlet is An Post, Lobinstown, c. 2 km to the northwest, while the next nearest Post Office is the Rathkenny Post Office. Lobinstown offers a minimal range of services.

The nearest childcare facility is Bashford Pre-School, Lobinstown, Moynihan Montessori, Glackenstown, Wondertots Pre-school, Drumconrath, Acorn Academy Kindergarten, Slane, Kilberry School of Montessori and Kilberry Tus Maith Pre-School, Collon.

The nearest primary schools are:

- Scoil Naisiunta Mhuire (Heronstown National School), Lobinstown, c. 627 m to the north of the extraction area (c. 450 m west of McEntegart's Crossroads on the L1604), with enrollment of the primary education of 51 boys and 42 girls. Catholic.
- St Louis National School, Rathkenny c. 4 km to the southwest, with enrollment of approximately 20 boys and 11 girls. Catholic.
- Newtown National School, Newtown, c. 5 km to the north, with enrollment of approximately 48 boys and 32 girls. Catholic.
- St. Patrick's National School, Castletown-Kilpatrick, c. 5.75 km to the west, with enrollment of approximately 45 boys and 39 girls. Catholic.
- Ballapousta National School, Smarmore, Ballapousta, Co. Louth, c. 6.3 km to the northeast, with enrollment of approximately 99 boys and 90 girls. Catholic
- St. Scoil Naomh Barra, Wilkinstown, c. 7 km to the southwest, with enrollment of approximately 120 boys and 110 girls. Catholic.
- Collon National School, Collon, Co. Louth, c. 9 km to the east, with enrollment of approximately 94 boys and 101 girls. Catholic.

The nearest secondary schools are:

- O Carolan College, Nobber, c. 9.5 km to the northwest, with an enrolment of 305 boys and 261 girls. Inter Denominational.

- Ardee Community School, Ardee, c. 10 km to the northeast, with an enrolment of 642 boys and 545 girls. Inter Denominational.
- Loreto Secondary School, St Michaels, Navan, c. 14 km to the south-southwest, with an enrollment of 862 girls. Catholic.
- St Patrick's Classical School, Moatlands, Navan, c. 14.5 km to the southwest, with an enrolment of 923 boys. Catholic.
- St Joseph's Mercy Secondary School, Mercy Convent, Navan, c. 14.5 km to the southwest, with an enrolment of 754 girls. Catholic.
- Colaiste Na Mi, Johnstown, Navan, c. 14.5 km to the south, with an enrolment of 481 boys and 328 girls. Inter Denominational.
- Beaufort College, Trim Rd, Navan, c. 15 km to the south-southwest, with an enrolment of 552 boys and 238 girls. Inter Denominational.

The nearest third level Institutions are:

- Dundalk Institute of Technology, Dundalk
- Blanchardstown Institute of Technology (or BIT), Blanchardstown
- Dun Laoghaire Institute of Art, Design & Technology (or IADT), Dun Laoghaire
- Institute Technology Tallaght (or ITT), Tallaght

The nearest universities are:

- Dublin City University (DCU) in Glasnevin, Dublin City
- University College Dublin, Trinity College Dublin (TCD), Dublin City
- Technological University of Dublin (TUD) (formerly DIT), Dublin City
- Royal College of Surgeons in Ireland in Dublin City
- National University of Ireland, University College Dublin (UCD) at Belfield, Dublin City

Other Further Education facilities are:

- Continuing Education Centre, Drogheda
- Cavan Institute, Cavan Town

The nearest Roman Catholic churches are:

- Church of the Holy Cross, Lobinstown
- Church of St. Brigid, Grangegeeth
- St. Catherine's Church, Kilpatrick, Co. Louth
- Church of Mary Immaculate, Collon
- Church of St Louis & St Mary, Rathkenny

The nearest Church of Ireland churches are:

- St David's, Syddan, Kingscourt
- Collon Church of Ireland, Collon

The nearest churches or houses of worship of other major denominations are:

- Presbyterian: Ervey Presbyterian Church, Kingscourt
Presbyterian Church, Kells
- Methodist: Skerries Methodist Church, Skerries
Blanchardstown Methodist Church, Tyrrelstown
- Baptist: Navan Baptist Fellowship, Navan
Woodlands Christian Centre/Carrick Baptist Church, Carrickmacross
- Jewish: Dublin Hebrew Congregation, Rathfarnham, Dublin
- Islam: Navan Muslim Community Centre, Navan
Drogheda Islamic Centre, Drogheda
- Jehovah Witness: Kingdom Hall of Jehovah's Witnesses, Navan
Kingdom Hall of Jehovah's Witnesses, Kingscourt

There is also the Christian Congregation in Ireland in Ballyjamesduff, Co. Cavan, which is a non-sectarian, non-denominational fellowship of Christian assemblies.

The nearest Primary Health Care Centre is Slane Health Centre, Slane. The Drumconrath Health Centre is located c. 8.5 km to the north in Drumconrath, while the next nearest Health Centre is in Nobber c. 10 km to the northwest. There is a multitude of Health Centres in Navan c. 14 km to the southwest and Drogheda c. 18.5 km to the southeast. The nearest public hospital is the Our Lady's Hospital, Navan, which provides general acute hospital services, followed by Our Lady of Lourdes Hospital, Drogheda, which provides acute medical and surgical services as well as maternity services. The next nearest hospital is Louth County Hospital, Dundalk.

The nearest nursing home is Beaufort House, Woodland House and Millbury nursing homes, in Navan, while others in the wider area are Kilmainhamwood Nursing Home, Kilmainhamwood, St. Colmcille's Nursing Home, Kells, and Moorhall Lodge Nursing Home, Ardee.

The nearest Fire Station is located in Navan, while the next closest is the Drogheda Fire Station, where both stations are retained services. The Meath Fire Service is headquartered at the Navan Station.

The nearest Garda Station is located on Main Street in Slane, followed by the Navan Garda Station, Ardee Garda Station, Dunleer Garda Station, Kells Garda Station, and Drogheda Garda Station. These stations fall within the Meath/Westmeath Division of An Garda Síochána's Eastern Region headquartered in Mullingar, and the Cavan/Monaghan/Louth Division of the An Garda Síochána's Northwestern Region headquartered in Drogheda. Other facilities in the wider area, include the community centres and sports and leisure centres in the larger settlements.

The Syddan GAA Club is located in Devonstown north of Lobinstown and c. 2 km northwest of the site. Other local GAA clubs in the area include the Castletown GAA Club, Knock, Castletown, Mattock Rangers GAA Club, Collon, St. Michael's (Meath) GAA Club,

Carlanstown, Wolfe Tones GAA Club, Kilberry, Slane GAA Club, Slane, St Marys (Louth) GAA Club, Mullameelan, Ardee, and Nobber GAA Club, Nobber.

Soccer clubs are located nearby at Newtown United, Drumconrath, Rathkenny Rivers FC, Rathkenny, Toro United AFC, Kilberry, Slane Wanderes, Slane, Electro Celtic FC, Marhill, Nobber, and Ardee Celtic FC, Townparks, Ardee and Square Utd AFC, Ardee. Rugby clubs are located at Ardee Rugby Club, Ardee, North Meath RFC, Kells and Navan Rugby Football Club, Navan. There is also the Navan Hockey Club at Convent of Mercy, Navan and the Boyne Hockey Club (Drogheda Grammar School), Drogheda. There are cricket clubs at Knockharley Cricket Club, Kentstown and Dundalk Cricket Club, Dundalk.

There are several golf clubs located in the wider area, including Headfort Golf Club, Kells, Royal Tara Golf Club, Tara, Ardee Golf Club, Ardee, Bellewstown Golf Club, Bellewstown, and County Louth Golf Club, Baltray. The nearest pitch & putt is at Killeneer Pitch & Putt Club, Drogheda and Skryne Pitch and Putt, Skryne.

Tennis is available at the Collon & District Tennis Club, Collon, Ardee Tennis Club, Ardee, Stackallen Lawn Tennis Club, Stackallen, Navan Tennis Club, Navan, and Kells Tennis Club, Kells.

Indoor swimming is available at Kells Swimming Pool, Kells, Aura Leisure, Navan and the Aura Drogheda Leisure Centre, Drogheda, while outdoor swimming is available at Salterstown Bay Beach or Pier, Clogherhead Beach or Pier, Port Beach, north of Clogherhead, Termonfeckin Beach, and Bettystown Beach.

Gym training is available at Fit Factory, Gravelstown, Zoo Fitness, Ardee, Club Active and Titan Strength & Fitness, both at Kells, Ben Dunne Gym, Snap Fitness, Feel Fit Gym, Club Active Gym and BtFitness, all at Navan, and Gym Plus, Energie Fitness, FBT Gym, and Boyneside Gym, all at Drogheda, while Boxing is available at Ardee Boxing Club, Navan Boxing Club, Johnstown Amateur Boxing Club, Navan and Holy Family Drogheda Boxing Club, while martial arts are available at Royal Grappling Academy, Navan and SBG, Drogheda.

Other facilities in the region include community centres and halls, some of which are stand-alone or are associated with local GAA grounds.

Most residential properties in the area are serviced by private bored wells, mainly due to the limited coverage offered by the Uisce Éireann mains network. Most houses are also serviced by septic tank systems and proprietary effluent treatment systems.

Power to local residences is provided by overhead lines. In 2016, a total of 67.5% of residences in the Killary ED had internet access—55.1% by broadband.

4.3.5 TOURISM & AMENITY

Meath is named after the ancient Kingdom of Meath and is also known colloquially as the “Royal County”, because of its history as the seat of the High King of Ireland. It was also part of the area known as “The Pale”, which was under the direct control of the English establishment during the Middle Ages. The area of County Meath is very much defined by the Boyne River Catchment, and it is the Boyne Valley that is home to the megalithic tumuluses at Brú na Bóinne, the Hill of Tara, and the source of the ABradan Feasa or ASalmon of



Knowledge of Cú Chulainn mythology (spoken mythology). With its numerous ancient monuments, ruins, castles, battlefields and Landed Estates (or Demesnes) with their Great Houses, Meath is a county steeped in history.

In particular, the passage tombs of Brú na Bóinne (Newgrange, Knowth and Dowth) constitute one of the three UNESCO World Heritage Sites in Ireland. The Boyne Valley is home to the largest concentration of megalithic carved stone art in Western Europe and can be best seen at the Loughcrew Cairns and at Brú na Bóinne.

The government is seeking to expand on this growth through the marketing of 'Ireland's Ancient East' as a tourist destination. The Boyne Valley is identified as the birthplace of Ireland's Ancient East and the County in particular is the gateway to this destination, with its unique collection of pre-historic sites and monuments. The County is marketed by Fáilte Ireland as a destination to tell the story of Ireland through a diverse range of authentic and exciting visitor experiences.

Meath is located to the northwest of, and partly overlapping with, the Dublin Metropolitan Area. This geographical proximity and the strong functional relationship between the two counties confer a significant locational advantage on the county. Meath is traversed by four of the 6 motorways radiating out from the capital and is supported by a well-developed road and rail infrastructure system that provides access to international transport networks at Dublin Airport and Dublin Port and the remainder of the country.

County Meath enjoys a diverse low-lying topography, ranging from extensive rich pastures throughout the Boyne and Blackwater River valleys, some drumlin hills in the north of the county, tracts of peatlands and raised bog in the southwest, beautiful 12 km coastline in the east, and the central upland area that includes the Hill of Tara.

County Meath is a predominantly rural county in terms of land use, and the rural areas are home to a diverse range of land uses including agriculture, the primary land use, and equine industries, centres of local food production, recreational and tourist activities, established villages and rural housing. The fertile soils in Meath provide the basis for a thriving agricultural and food sector, and the natural and built heritage enhances the quality of life for locals and visitors to the county.

Meath is the country's second most important centre for the bloodstock industry, after County Kildare and boasts the 3rd highest number of stud farms after counties Kildare and Tipperary. It is home to the only official strand races in Europe, which take place on Laytown Beach each year. Racing at nearby Bellewstown has taken place for almost 300 years, with the first recorded race taking place in 1726. The equine industry is important both economically and culturally. Fairyhouse Racecourse, Navan Racecourse and Tattersalls Bloodstock Auctioneers are highly prominent enterprises in the area. Bloodstock and sport-horse enterprises generate employment directly and also through other associated enterprises and sectors such as tourism.

Heritage attractions in east Meath include: the World Heritage Site and visitor centre at Brú na Bóinne; Loughcrew Cairns; Four Knocks Passage Tomb; Hill of Tara; Hill of Slane; St Columbas Church and Monastic Site with St. Colmcille's House, Round Tower and High Crosses at Kells; Bective Abbey, Bective; King John's Castle, Cathedral of St Peter and St Paul and Priory of St. John The Baptist, all at Trim; Donaghmore Round Tower near Navan;

Battle of the Boyne Site, Oldbridge; Slane Castle; Donore Castle; Ardbraccan House; Loughcrew Estate and Gardens; and many more. Meath also offers many other tourist attractions, including: Tower of Lloyd, Kells; 8 heritage trails; numerous walking and hiking trails; water sports at Rathbeggan Lakes and on the miles of sandy beaches at Bettystown-Laytown; adventure centre at Loughcrew, Oldcastle; angling on the famous Boyne and Blackwater Rivers; golfing; horse racing; and numerous festivals such as Moynalty Steam Threshing; Tattersalls International Horse Trials and County Fair; and the Slane Castle Music Festival.

The growing trend towards activity-based tourism and adventure tourism also provides a significant opportunity, and the county can capitalise on the growing demand for experiential holidays in a perceived 'wild' setting. Participation in adventure activities is becoming increasingly popular amongst visitors and includes the popular activities such as: walking and cycling; game and coarse angling; kayaking & canoeing; and golf and equestrian pursuits.

Greenways are trails developed for use exclusively by cyclists, pedestrians and other non-motorised transport. They are generally traffic-free routes, and as such are generally safer and can be enjoyed by most members of society. Greenways have become very popular on old disused railway lines, along rivers and canal tow paths. There is currently only one greenway developed in the county, the Royal Canal Greenway, while the Boyne Valley to Lakelands County Greenway covering 30 km between Navan and Kingscourt is due for completion in early 2024, with c. 65% currently completed. In addition, development of the Boyne Greenway & Navigation Restoration covering the 26.5 km between Navan and Oldbridge has been proposed.

There are numerous walking and cycling trails, including Mullaghmeen Forest Loop; Girley Bog; Broadboyne Bridge, Navan; Loughcrew Cairns; Hill of Tara; Porchfield Loop; Summerhill Woods; Little Forest Loop; Royal Canal Way (Enfield to Moyvalley); Porchfield and Talbot's Castle Loop; Jamestown Bog Walk; Balrath Woods Nature Trail; Slane Boyne Footpath Trail; Slane Castle Loop and many more.

There are no harbours or piers along the Meath coastline, such that sailing/yachting, boat trips and cruises off the coastline are only potentially available from the nearby piers of Balbriggan, Skerries and others. Similarly, there are also few locations for sea angling along the coastline, although sea angling is available on the stretch of coastline from Mornington to Laytown and at the mouth of the Boyne.

Fresh water angling is concentrated the River Boyne and its tributaries, which hold extensive stocks of wild brown trout. The River Boyne also has a run of Atlantic salmon and sea trout. The best salmon and sea trout fishing is during the summer months.

Courtough Shooting Grounds, Balbriggan is Ireland's premier shooting grounds, and provides all weather facilities where several shooting disciplines, such as Clay Pigeon and Target, as well as archery, can be enjoyed.

The main local GAA clubs in the area are: Syddan GAA Club in Devonstown; Castletown GAA Club, Castletown; Mattock Rangers GAA Club, Collon; St. Michael's (Meath) GAA Club, Carlanstown; Wolfe Tones GAA Club, Kilberry; Slane GAA Club, Slane; St Marys (Louth) GAA Club, Ardee; and Nobber GAA Club, Nobber. Additional sports facilities are scattered around the region, such as outdoor soccer pitches at Balbriggan, Balrothery, Skerries, Ashbourne,

and indoor soccer at Santry, Dublin 9. Rugby clubs are located at Balbriggan, Skerries, Swords, Malahide and Sutton. Soccer clubs are located nearby at Drumconrath, Rathkenny, Kilberry, Slane, Nobber and Ardee. Rugby clubs are located at Ardee, Kells and Navan.

Golf enthusiasts visiting the area can enjoy a wide choice of excellent golf courses within short driving distance, including numerous links and heathland courses. There are several golf clubs located in the wider area, including Headfort Golf Club, Kells, Royal Tara Golf Club, Tara, Ardee Golf Club, Ardee, Bellewstown Golf Club, Bellewstown, Seapoint Golf Club, Termonfeckin and the championship course at County Louth Golf Club, Baltray, the perennial home of the East of Ireland Pro-Am Tournament. Pitch & putt is also available at Castletown Pitch & Putt Club, Castletown, Gaeil Colmcille Pitch & Putt Club, Kells, Navan Pitch & Putt Club, Navan, and Skryne Pitch and Putt, Skryne.

Indoor swimming is available at Kells Swimming Pool, Kells, Aura Leisure, Navan and the Aura Drogheda Leisure Centre, Drogheda, while outdoor swimming is available at Salterstown Bay Beach or Pier, Clogherhead Beach or Pier, Port Beach, north of Clogherhead, Termonfeckin Beach, and Bettystown Beach.

Located c. 24 km from the east coast, water sports are also popular in the region, such as swimming, windsurfing and sailing, where the latter is served by several yacht / sailing clubs in Balbriggan and Skerries. The Royal Canal traverses parts of the south of the county, and the route can be travelled by boat, bike or foot.

Horse racing is also popular at the annual Laytown Beach Races in September, at the Bellewstown racecourse, Navan Racecourse and Fairyhouse, home of the Irish Grand National. There are equestrian activities at nearby equestrian centres at: Glen Stables, Lobinstown; Grangeclare Paddocks Riding School, Mooneystown; Carlanstown Cross Country, Carlanstown; Kells Equestrian Centre, Normanstown, Kells; Ardmulchan Stud, Ardmulchan, Navan; Flyhigh Stud, Ardagh, Kingscourt; and Railings Riding School, Hunterstown, Ardee.

The Lobinstown Quarry is located in northeast Meath 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, c. 25 km southwest of the most southerly outskirts of Dundalk, and c. 45 and 55 km from Dublin Airport and Port, respectively.

There are no community facilities near Heronstown, except for Scoil Naisiunta Mhuire primary school, c. 375 m to the north (c. 450 m west of McEntegart's Crossroads on the L1604). The nearest such facilities are located in the village of Lobinstown c. 2 km northwest of the site, which consist of a Post Office, public house and creche. There are numerous community and recreational facilities in the nearby villages and small towns of Castletown, Rathkenny, Carlanstown, Nobber, Slane, Collon and Drumconrath.

Lobinstown benefits from the many amenities and attractions located within the county, as well as being within easy reach of the vibrant Capital City of Dublin (i.e., 55 km). The area contains numerous historical and archaeological sites, with recorded monuments and protected structures distributed throughout the Boyne Valley. The Boyne Valley is home to

the largest concentration of megalithic carved stone art in Western Europe, particularly at Loughcrew Cairns and Brú na Bóinne. Other heritage attractions, including monuments, castles, abbeys, monasteries, churches, round towers, high crosses and other protected structures, are clustered in Drogheda, Slane, Kells and Trim.

Activity centres are available at Rathe House, Kilmainhamwood; Crystal Maze, Kilmainhamwood, Causey Farm, Navan; The Zone, Navan; Navan Adventure Centre, Navan; Huckleberrys Den, Navan; Funtasia Theme Park, Drogheda; Celtic Adventures, Clogherhead; Mellows Adventure and Childcare Centre, Athboy; and Emerald Park, Ashbourne. A range of other activities are available at: Urban Assault Adventure Gibbstown Demesne; Elite Force Paintball, Collon; Millhill Clay Pigeon Shooting Club, Glenkieran; Cregg Wood Clay Pigeon Club, Cloughrea; Ardee Archery Club, Ardee; Wilkinstown Target Shooting Club, Wilkinstown; and Sim-Tac Airsoft, Gibbstown. Gymnastics is available at: Illusionz Gymnastics Studio, Ardee; Fun Gymnastics, Ardee; Impulse Gymnastic Club, Navan; Fun Gymnastics, Drogheda; and DP Gymnastics, Drogheda.

White River Karting, Collon; the Zone, Navan, and the Athboy Karting Centre, Athboy offer activities for motor enthusiasts.

There are a numerous festivals and events held throughout the year in Meath and Louth, which act as significant visitor and tourism attractions, including the following notables:

- Féile na Tána, Cooley Peninsula, February
- The Fairyhouse Easter Festival, Fairyhouse Racecourse, Ratoath, April
- Carlingford Oyster Festival, Carlingford, May
- Sheridans Annual Irish Food Festival, Virginia Road Station, May
- Vantastical Music and Campervan Festival, Drogheda, June
- Slane Castle Concert, Slane, June
- Hinterland Festival Kells, June
- SoFFT Nights, Dunderry Park, June
- Boyne Musical Festival, Drogheda, July
- Otherside Music & Arts Festival, Rock Farm, Slane, July
- Boyne Valley International Film Festival, Drogheda, August
- Lady Well Fete at Slane Castle, August
- Moynalty Steam Threshing Festival, Kells, August
- Another Love Story Festival, Killyon Manor, August
- O'Carolan Harp, Cultural & Heritage Festival, Nobber, September
- Spirits of Meath, Hill of Ward, Athboy, October
- Púca Halloween Festival, Multiple venues in Meath, October
- Enchanted Garden (Loughcrew's Lightscape Festival), November
- Winter Solstice, Newgrange, Brú na Boinne, December

The Meath Landscape Character Assessment (Refer to Vol. 5. Appendix A.05 2021-2027 CDP) does not appear to designate areas of high amenity or high natural beauty. Nonetheless, Lobinstown is located in Landscape Character Area (LCA) 3 North Navan Lowlands, and is considered to be of Moderate Landscape Value, Medium Landscape Sensitivity, and Regional Landscape Importance. In addition, six designated Views and Prospects (i.e., Nos. 24 to 28 and 76) are located nearby in the Rathkenny area. 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 Cross Roads 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) Cross Roads which is c. 500m north of the quarry entrance along the L1603 local road to McEntegart's Crossroads and northwards via Hurlstown towards Ardee.

Land use in the LCA is characterised by predominantly large agricultural fields, with a mix of pasture and arable crops. There are several quarries and pits in the LCA, while Tara Mines, located northwest of Navan and one of the largest lead-zinc mines in Europe, is also located in the LCA. The potential capacity of the LCA to accommodate quarries is not specified, although there is medium potential capacity to accommodate the development of wind farms and individual turbines because there are few long-range views.

The quarry site has restricted views from the surrounding countryside, namely limited middle-distance views from the north along a section of the L1604 local road west of the Scoil Mhuire primary school. No sites of archaeological importance, national monuments or protected structures listed in the Meath 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.

4.3.6 HUMAN HEALTH

This section describes the existing human environment in terms of the health and safety of the receiving population, as well as that of the workforce of the application site, which are protected by employment legislation, including principally the provisions of the “Safety, Health and Welfare at Work Act, 2005”, and amendments and regulations made thereunder.

The constitution of the World Health Organization (WHO) defines health as ‘a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity’ (WHO 2018). Thus, any assessment of a proposed development should consider the potential impacts on physical, mental, and social health (IPH 2009). Public health pertains to the promotion and protection of health and well-being, prevention of ill-health, and prolongation of life, and emphasises a collective responsibility for the health of the population.

Health is determined by access to quality healthcare services, lifestyle choices, and the socioeconomic conditions in which people live (IPH 2009). The latter include many factors that lie outside the healthcare sector, such as housing, education, employment, transport, drinking water and sanitation, and access to high quality food. Thus, policies in ostensibly non-healthcare sectors can have a significant impact on the health and well-being of a population. There may also be significant health inequalities within a population, in that there are arbitrary disparities in health outcomes depending on socio-economic status. Individuals in higher socioeconomic groups are more likely to live longer and to experience good health longer than those in lower socioeconomic groups, while men and women experience notable differences in health outcomes. From a public policy perspective, addressing the social determinants of health can have positive impacts on health inequalities, and thus should inform the planning and development process.

Common concerns in terms of human health, particularly to vulnerable sections of the receiving population, with respect to developments such as the proposed project, are generally associated with noise, air quality, water contamination, traffic safety, and accidents and disasters. Consequently, human health impacts are assessed through these environmental factors, such that the human health of the receiving environment is primarily addressed here under the individual chapters dedicated to each of the relevant factors. Thus, in respect of human health, the baseline conditions associated with soil and land are described in Section 6, with groundwater in Section 7, with dust and air quality in Section 9, with noise and vibration in Section 10, and with roads & traffic in Section 14.

The primary residential and commercial receptors have been outlined in preceding sections. The immediate receptors were identified to determine the number of residential and commercial addresses within the vicinity of the proposed development. The residential development in the vicinity of Heronstown is low density, diffuse to clustered, consisting predominantly of owner-occupied bungalow/houses and farm dwellings along public roads and lanes.

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 located c. 627 metres north of the extraction area (Refer to Figure 4.1).

There are no commercial properties within 1 km of the site, although there are numerous farms and the local primary school. The local farms are significant environmental receptors, not simply by way of being local residents, but also as land uses/economic enterprises.

In addition to Breedon Ireland's Lobinstown Quarry at Heronstown, there are active quarrying operations at Roadstone's Slane Quarry, c. 2.5 km west of Slane, O'Reilly Concrete Lobinstown Quarry c. 1 km west of Lobinstown, an unidentified quarry at Knockmooney on the N2 c. 2.7 km north of Slane, and a disused quarry, now operating as an SRF, at Mullagh Dillon north of Slane c. 6 km to the southeast. The only other extractive operation in the vicinity is Tara Mines' extensive tailings storage facility (TSF) at Randalstown, Simonstown, Windtown and Nevinstown c. 5 km north of Navan. The TSF covers c. 171 ha, is 1.35 km north-south and 1.6 km east-west and is enclosed by levies or earth filled embankment walls extending up to 22 m in height. In 2017, planning permission was granted by An Bord Pleanála (ABP) for an extension to the TSF of c. 40 ha.

Other industrial and commercial developments in the wider area include:

1. Meade Farm food production facility c. 2 km east of Lobinstown and c. 1.2 km northwest of the site;
2. PS Supplies have a small commercial unit in Lobinstown Village;
3. Industrial/warehouse estate at Grangegeeth containing Hibernia Steel Products Ltd; Dagget Bricks; R&M Buckets; WK Composites; and Dawn Paper & Tissue Manufacturing, as well as MTM Engineering nearby.
4. Industrial/warehouse estate at Rathlust, Anaglog Cross c. 4 km south of Ardee containing Dawn Paper, Goulding Chemicals, and Barcrete;
5. Grassland Agro at Slane;
6. Complete Composites Ireland at Slane;
7. Clarke Rewinds at Drumconrath;
8. Michael Tighe Engineering Limited at Summerhill c. 2 km southwest of Drumconrath.
9. Small industrial/warehouse estate at Gibbstown containing Novelplast Teoranta and Adtec Aeroauto Limited.
10. Small industrial/warehouse estate at Oristown containing Natural Stone Ireland CarTakeBack, Oristown Auto Recyclers Ltd. and Calinan Engineering.

There is also a stud farm and equestrian complex at Noel Meade Racing, Tu Va Stables, Painestown, Castletown Kilpatrick.

In order to ascertain the socio-economic and health status of the population in the local area around Heronstown, relevant statistics from the 2016 census have been compiled in Table 4.4 and Table 4.5. The socioeconomic group of the reference person per household in the Killary ED and County Meath have been compiled in Table 4.4. The most striking feature of the table is the low level of employment in agriculture (i.e., 2.9% and 0.8%, respectively) despite the rural character of the Killary ED and county. It is apparent that the employer, managerial and

professional groups represent 23.3 % of the population in the Killary ED, which compares with 36% in County Meath. This demonstrates that only approximately a quarter of the population of the Killary ED are from higher socioeconomic groups, which are typically advantaged in terms of education, housing, diet, lifestyle and access to healthcare services. Therefore, in view of the well-established correlation between socioeconomic status and good health, it would be expected that the population of the Killary ED would have moderate to good health.

From Table 4.5, it is apparent that persons with either good or very good health comprise 89.7 % of the population in the Killary ED, which is similar to the 89.6 % for County Meath. In addition, the old age dependency ratio of 24.9 % and average age of 39.0 for the Killary ED compares with 19.7 % and 36.8, respectively, for the county and 20.4 % and 37.4, respectively, for the State. These data indicate that the population of Killary is slightly, but significantly, older than that of the county and State. Furthermore, population growth in the Killary ED has been modest, having increased from 1,107 in 2002 to 1,341 in 2016—an increase of 21.1 % compared to 23.5 % for Meath (one of the lowest rates in Leinster) and 21.6% for the State in the same period. Thus, the population of Killary ED is slightly older yet relatively healthy and likely to be almost as resilient as the populations of County Meath and the State.

The receiving environment of the development is therefore characterised by a moderately slow growing population with a higher proportion of an older age cohort (24.5%) compared to county and national averages (16.6% and 20.4%, respectively), but who are in good health.

Table 4.4 Socioeconomic Group of Reference Person in Household

Socio-Economic Group	Killary ED			County Meath		
	House-holds	Persons	%	House-holds	Persons	%
Employers and managers	47	134	10.7	10,985	36,270	18.7
Higher professional	13	42	3.3	3,671	12,085	6.2
Lower professional	38	117	9.3	7,153	21,671	11.1
Non-manual	54	155	12.3	11,904	35,489	18.3
Manual Skilled	65	199	15.8	6,685	21,187	10.9
Semi-skilled	37	106	8.4	5,343	16,473	8.5
Unskilled	20	52	4.1	2,246	6,539	3.4
Own account workers	30	99	7.9	3,688	11,979	6.2
Farmers	74	201	16.0	2,843	8,192	4.2
Agricultural workers	11	37	2.9	550	1,490	0.8
All others gainfully occupied and unknown	55	115	9.1	9,166	23,025	11.8
Total	444	1,257	100.0	64,234	194,400	100.0

Table 4.5 Populations by General Health and Age Dependency

Health	Killary ED	(%)	County Meath	(%)
Very Good	753	60.3	123,170	63.1
Good	367	29.4	51,649	26.5
Fair	91	7.3	13,037	6.7
Bad	15	1.2	2,019	1.0
Very Bad	2	0.2	395	0.2
Not Stated	20	1.6	4,774	2.4
Total	1,248	100.0	195,044	100.0
Average Age	39.7		35.2	
Young Dependency	31.7		39.0	
Old Dependency	24.5		16.6	
Total Age Dependency	56.2		55.6	

4.3.7 SENSITIVE RECEPTORS

The surrounding lands are largely agricultural and held in pasture, although there are forestry plantations to the east and northeast. 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. These 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).

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.

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.

4.4 ASSESSMENT OF IMPACTS

The impact on human beings 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 this EIAR.

The operation of Lobinstown Quarry at Heronstown 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 the aspirations and material progress of humans and their settlements and infrastructure.

Potential negative impacts on human beings and amenity of the area arising from the development relate mainly to nuisance from noise, dust, water pollution, traffic and visual intrusion. The following sections of this report provide detailed information on these potential impacts and mitigation measures proposed.

The existing road network around the quarry comprises rural local roads. The site is situated c. 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 site lies within a catchment area with numerous small to large settlements, such as Slane, Collon, Ardee, Navan, Dunleer, Kells, Drogheda, Duleek, Kingscourt, Mullagh, Carrickmacross, Bettystown-Laytown-Mornington, Clogherhead and the most southerly outskirts of Dundalk (Refer to Figure 1.1).

The following Impact Assessment matrix (Refer Table 4.6) provides an indication of the significance of potential effects arising during the life cycle of the development not accounting for any mitigation measures.

Table 4.6 Population & Human Health - Impact Matrix

'Do Nothing' Impacts	●		
Factors	Construction	Operation	Decommissioning
Direct Impacts	X	●	●
Indirect Impacts	X	●	X
Cumulative Impacts	X	●	X
Residual Impacts	X	●	X
'Worst Case' Impacts	X	●	●
None/imperceptible: X ; Slight: ●; Moderate: ●; Significant/Very significant: ●. Refer to Appendix 3 for definition of Significance			

There are a number of potential environmental impacts associated with the quarry that may directly, or indirectly, affect the local "human" environment. These potential impacts and the mitigation measures proposed are described in the following sections of this report under the headings detailed below:

- Biodiversity – Section 5
- Land, Soils & Geology – Section 6
- Water – Section 7
- Air Quality – Section 9
- Noise & Vibration – Section 10
- Landscape – Section 11
- Cultural Heritage – Section 12
- Material Assets – Sections 13
- Traffic & Roads – 14

4.4.1 '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. 200106) 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. 200106 and operations would cease thereafter. The site would then be restored as per the requirements of the existing planning permission (P.A. Ref. 200106).

Terminating the operation of the quarry would miss the opportunity to maintain local jobs in the area, and thus would have a direct negative impact on the local human environment.

4.4.2 DIRECT IMPACTS

Potential impacts on human beings will arise out of the continued operational and decommissioning phases of the quarry, and these include noise & vibration, dust, water quality, visual impact, traffic and safety (Refer to Table 4.7). As Lobinstown Quarry is an established quarry and the infrastructure is already in place, negligible construction is expected. The proposed site layout is shown on the attached Site Plan EIAR Figure 3.1)

4.4.2.1 Land Use

The quarry has been in operation since its commencement in 1958. Thus, the area has 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.

Thus, this represents a not significant impact in the context of change in land use. The quarry has a number of mitigation measures with respect to screening and landscaping, phasing, environmental management and monitoring is in place to ensure that operations do not result in significant impacts on the surroundings, including the human environment.

On completion of site activities, the site of the quarry will be decommissioned, restored and left safe and secure. This will result in the site being reinstated in accordance with an approved restoration scheme, and thus integrated back into the surrounding landscape with the attendant improvement to the visual amenity of the area.

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 surrounding environment due to the extraction and removal of the sandstone/siltstone 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 landscaping & restoration scheme.

The restoration of the site will result in a likely, slight, positive effect in the long-term.

4.4.2.2 Population and Settlement

It is not anticipated that the quarry operations will result in any change in population. However, by supporting and maintaining the workforce living in the area, it is considered that the development will have a likely, moderate, positive, long-term effect on sustaining the population.

4.4.2.3 Economy & Employment

The quarry has contributed indirectly to sustaining and developing the local and regional economy through the supply of building products, and has provided employment for local people, both directly and indirectly.

The quarry directly employs 4 people, while indirect employment, including local hauliers and contractors, is also generated. It is anticipated that indirect employment (i.e., those people who rely directly upon the quarry and the associated business for their earnings, amounts to a further 4 people.

The continuance of employment of the existing workforce in the locality is considered a positive, significant, long-term effect.

4.4.2.4 Social Consideration

The quarry operations at Heronstown have provided a valuable and necessary resource to the county and wider region.

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.

There are no community facilities near the site, the nearest being the Scoil Naisiunta Mhuire (Heronstown National School) primary school c. 627 metres north of the extraction area on the L1604 local road (Refer to Figure 4.1). There are no other community facilities within close proximity of the quarry, with the next nearest being those in Lobinstown c. 2 km northwest of the site. Thus, it is expected that there will be a likely, not significant, long-term effect on local community facilities as a result of the development.

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 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 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. However, the increase in RFC and delay 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.

4.4.2.5 Amenity, Tourism & Recreation

There are no views and prospects 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) Cross Roads which is c. 500m north of the quarry entrance along the L1603 local road to McEntegart's Crossroads and northwards via Hurlstown towards Ardee.

Traffic entering and leaving the site will use the established quarry site access. The L1603 local road servicing the site is generally in good condition and has been assessed as adequate for the expected volumes of HGV traffic. The site entrance has been adequately set-back and splayed to the satisfaction of the Planning Authority. Further details with respect to the impact and mitigation of traffic are contained within this report (Refer to Section 14).

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 to reduce visual impact, while impacts due to noise and dust are substantially attenuated.

As the quarry is well screened by mature vegetation and has been developed into rising ground at the foot of the slope upon which the viewpoint No.24 is located, it is considered that the development will not have any significant visual impact on any of the views and prospects in the county.

Consideration has been given through preparation of the quarry design with respect to preservation of perimeter hedgerows, provision of screening berms, phasing, direction of working and restoration of the residual quarry faces (particularly the southern face) to ensure there are no significant views of the site. It is considered that there will be a likely, not significant, long-term effect with respect to visual impact from this vantage.

A working scheme has been designed for the quarry that provides for the sequence and direction of working. The objective of this scheme is to reduce as far as possible the overall visual impact of the workings (Refer to EIAR Figures 3.1 to 3.3). The existing workings have been incorporated into the overall phasing of the scheme to ensure a consistent approach to landscaping and restoration within the entire project area.

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).

The visual impact of the quarry is discussed in more detail in Section 11 - Landscape. However, upon decommissioning, the site will be restored in accordance with an approved restoration scheme for the quarry so that the site is assimilated in a planned manner back into the landscape in the long term.

4.4.2.6 Property Values

The site has a history of quarrying extending back to 1958, having co-existed with other land uses in the area, such that property values should be unaffected by the continuation of quarrying.

The quarry directly employs 4 people, while indirect employment, including local hauliers and contractors, is also generated. It is anticipated that indirect employment, i.e., those people who rely directly upon the quarry and the associated business for their earnings, amounts to a further 4 people.

The continuance of employment of the existing workforce in the locality is considered a positive, significant, long-term effect.

On completion of site activities, the site of the quarry will be decommissioned and left safe and secure. Furthermore, the quarry will be restored in accordance with an approved restoration scheme, and thus integrated back into the surrounding landscape with the attendant improvement to the visual amenity of the area.

4.4.2.7 Human Health

Common concerns in terms of human health, particularly to vulnerable sections of the receiving population, with respect to developments such as the proposed project, are generally associated with noise & vibration, air quality, water contamination, traffic safety, and accidents and disasters. Any impacts arising with respect to these environmental factors are addressed under the relevant chapters where relevant. i.e.

- Land, Soils & Geology – Section 6
- Water – Section 7
- Climate - Section 8
- Air Quality – Section 9
- Noise & Vibration – Section 10
- The Landscape – Section 11
- Cultural Heritage – Section 12
- Material Assets – Section 13
- Roads & Traffic – Section 14

In the context of human population and health, the receiving environment of the development is characterised by a moderately slow growing population with a higher proportion of an older age cohort (24.5%) compared to county and national averages (16.6% and 20.4%, respectively), but who are in good health. It can be assumed that this population is both active and resilient, has a demand for active outdoor recreational amenities, and would be sensitive to any diminution in both the visual or recreational amenity of the local area. It is considered that there will be a likely, neutral, medium-term effect with respect to human health.

Industrial accidents involving dangerous substances pose a significant threat to humans and the environment, both on and off the site of the accident. The Seveso Directive (Directive

82/501/EEC) was adopted in 1982 for the purpose of prevention and control of such major accidents and was amended in 1996 (Seveso II Directive 96/82/EC) and again in 2012 (Seveso III Directive 2012/18/EU). The Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the "COMAH Regulations"), implement the Seveso III Directive. Under the Regulations, there are two tiers of establishment, i.e., upper tier and lower tier, which are related to the quantities of dangerous substances present and allow tiered controls on the operators of establishments subject to the regulations.

There are two upper tier establishments in County Meath, namely Boliden Tara Mines DAC at Knockumber Road, Navan, and Irish Industrial Explosives Ltd. at Clonagh, Enfield, although the manufacturing facility is in County Kildare c. 46 km to the south. Tara Mines' TSF is c. 10 km south-southwest of the site. The only upper tier establishment in County Louth is the Flogas Ireland Ltd., Drogheda Marine Terminal, Marsh Road, Drogheda, c. 20 km to the southeast.

There are three lower tier establishments in County Meath, namely Grassland Agro, Pound Road, Slane, Great Northern Distillery, Cloncowan, Kill, Trim, and Unilin Insultation Ireland Limited, Liscarton Industrial Estate, Kells Road, Navan, all of which are greater than 8 km from the site. There are also two lower tier establishments in County Louth, namely BAK Bulk Services, Red Barns, Drumcar Road, Dunleer, and Cooley Distillery, Riverstown, Cooley, both of which are greater than 15 km from the site.

It is considered that at these large stand-off distances, the Lobinstown Quarry is not at risk of such accidents. Furthermore, the quarry lies in a sparsely populated, rural area, where the nearest significant industrial development is the industrial/warehouse estate at Grangegeeth c. 4.5 km to the southeast, indicating that the site is not vulnerable to major accidents or disasters.

The COMAH Regulations also do not apply to the quarry site itself, as the proposed development only relates to the extraction and processing of inert materials. Details with respect accident and emergency response are addressed in EIAR Section 3.3.5 and mitigation measures are proposed (Refer to EIAR Section 4.5 below).

The greater risk of accident probably arises from the nature of the quarrying activities on-site. However, the design, construction and operation of the proposed development will be carried out in accordance with all relevant Irish and European legislation/regulations governing safety in the workplace. In particular, specific regard will be given to the regulations implemented under the Safety, Health & Welfare at Work Act 2005 and amendments and regulations made thereunder, including the Safety, Health & Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013), as amended. A 'Health & Safety Plan' has been implemented for the development in accordance with the regulations.

A copy of the Company's Health Safety and Wellbeing Policy Statement is also attached (Refer to Appendix 5). Breedon are committed to preventing injuries and work-related ill-health by achieving and maintaining the highest standards of health, safety and wellbeing, through continuous improvement and the promotion and sharing of good practice.

On completion of site activities, the quarry site will be decommissioned and 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). The restoration of the site to beneficial after-use will result in a moderate, positive effect in the long-term.

It is considered that following restoration and the mitigation measures incorporated in the design that there will be no significant effects in terms of human health. It is considered that following final restoration of the site to beneficial after-use, there will be a likely, direct, positive, slight, permanent effect on the human population of the area.

4.4.2.8 Other

There are no recorded archaeological, architectural or cultural heritage features within the area of land take.

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

Table 4.7 Direct Impacts by Stage of Development

Environmental Attribute/ Receptor	Significance / Sensitivity of Impact	Description of Impact	Overall Significance of Impact	Construction Stage	Operational Stage	Decommissioning Stage	Post Closure Stage
Human Health (Employment)	Low	Negligible	imperceptible		Likely, direct and indirect, positive, imperceptible, long-term effects for employees, hauliers and local economy.	Likely, direct, positive, imperceptible, short-term effects for employees, contractors and local economy for duration of decommissioning works.	Likely, direct and indirect, negative, moderate, permanent effects due to closure and loss to employment and local economy.
Human Health (Safety)	Medium	Low	Imperceptible		Unlikely, direct, neutral, imperceptible, long-term effects due to quarrying operations.	Unlikely, direct, negative, imperceptible, short-term effects due to demolition and removal of plant and infrastructure off-site.	Likely, direct, positive, imperceptible, permanent effects due to closure with cessation of all works and establishment of flora, fauna and local amenity.
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.
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.
Water Quality	Medium	Medium	Significant		Unlikely, direct, constantly, Long-term (Reversible) effects on third party wells due to dewatering. Groundwater quality at the site complies with the European Communities Environmental Objectives (Groundwater) Regulations 2010 (as amended 2011, 2012, 2016) and discharge of these waters will not have a detrimental impact on receiving waters.	Unlikely, direct, constantly, short-term (Reversible) effects on third party wells due to cessation of dewatering. Groundwater quality at the site complies with the European Communities Environmental Objectives (Groundwater) Regulations 2010 (as amended 2011, 2012, 2016) and discharge of these waters will not have a detrimental impact on receiving waters.	Likely, direct, positive, slight, permanent effect due to closure
Noise & Vibration	Medium	Low	Slight		Likely, direct, negative, slight, long-term effects due to quarrying and HGV traffic.	Likely, direct, negative, slight to not significant, short-term effects due to decommissioning and restoration works.	Likely, direct, positive, slight, permanent effects due to closure and cessation of all works.
Air (Dust)	Medium	Low	Slight		Likely, direct, negative, brief slight, long-term effects due to general activities, such as extraction, crushing, concrete manufacture, movement of materials and site traffic on access roads in dry weather.	Likely, direct, negative, slight, brief, effects due to decommissioning and restoration works during dry weather.	Likely, direct, positive, slight, permanent, effects due to closure and cessation of all works as well as final restoration to beneficial after-use as agricultural land/amenity.
Landscape Visual Amenity	Medium	Medium	Slight to Moderate		Likely, direct, negative, slight to moderate, long-term effects as southern face is open to intermittent	Likely, direct, positive, slight to, moderate, short-term effects due to	Likely, direct, positive, moderate, permanent effects due to closure with final restoration to beneficial after-use

Environmental Attribute/ Receptor	Significance / Sensitivity of Impact	Description of Impact	Overall Significance of Impact	Construction Stage	Operational Stage	Decommissioning Stage	Post Closure Stage
					views from section of Local County road L1604 .to the north	final restoration to beneficial after use as wildlife amenity.	as wildlife amenity use with ongoing establishment of biodiversity.
Traffic (on Local Road Network)	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.

4.4.3 INDIRECT IMPACTS

Indirect Impacts, also known as Secondary Impacts, are defined as impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway (See Appendix 3).

The main indirect impact during the construction and operation stages will be traffic to and from the site. This has been studied in detail in Section 14. The volume of traffic generated by the proposed development will result in an increase in the total daily vehicle flow to 66 vehicles, resulting in 132 daily trips. It has been shown that this increase can be accommodated by the local road network.

Apart from the direct impact of the deposition of particulate material, there may be an associated indirect, negative, brief, slight, long-term visual impact with fugitive dust generation due to general activities and site traffic on access roads in dry weather. This impact will be minimised by both the mitigation measures described to minimise dust in EIAR Section 9.6, and those described to minimise visual impacts in Section 11.

4.4.4 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 Mullaghduff 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 the human environment 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 4.5 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.

4.4.5 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 population and human health.

4.4.6 RESIDUAL IMPACTS

Residual impacts refer to the degree of environmental change that will occur after the proposed mitigation measures have taken effect. Assuming implementation of the mitigation measures described below, the majority of residual impacts on the human environment during all stages are assessed to be unlikely and imperceptible.

Consideration has been 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. The visual impact is likely to be a direct, positive, moderate, permanent effect due to closure with final restoration to beneficial after-use as agricultural and/or amenity use with ongoing establishment of biodiversity.

As a result of the proposed mitigation and enhancement measures incorporated in the design, no significant, negative residual impacts are predicted in terms of Population and Human

Health on the local residences, their property, livestock or amenity during the operational phase.

Following full restoration and closure of the site that there will also be no significant negative impacts in terms of the Population and Human. The restored quarry will provide a more quiescent 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.

4.4.7 '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 because of the mitigation measures, there will be an improvement from moderate to slight negative effects with respect to local amenity and residential receptors as a result of the continued quarrying and ancillary activities at Lobinstown.

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.

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).

4.5 MITIGATION & MONITORING

With regard to the human beings, there are no mitigations proposed beyond normal site management including phasing, screening and site restoration of the quarry. Mitigation measures with regard to environmental issues, such as water quality, air quality, noise & vibration, traffic and visual impacts, will be provided for and are described in detail under the relevant sections (See list in Table 4.1 above). Any impact on the natural environment will be mitigated to the greatest degree practical, thereby minimising any associated impact on the “human” environment.

The mitigation measures that relate to the human environment, and the sensitive receptors in particular, mainly involve water, air, noise and vibration, landscape and traffic. As the proposed development relates to the continuation of extraction at an existing quarry, with extension laterally and to depth, there will be a minimal requirement for a construction stage and attendant mitigation measures. During the operational stage, mitigation measures proposed by the operator and those conditioned by the Planning Authority will be in effect and controlled and monitored by the Environmental Management System (EMS) and environmental monitoring programme. During the closure and decommissioning stage, the site will be restored to beneficial after-use, and no additional mitigation measures are proposed.

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 3.3.3.3). 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 and Appendix 13).

A copy of the Company’s Health Safety and Wellbeing Policy Statement is also attached (Refer to Appendix 5). Breedon Ireland are committed to preventing injuries and work-related ill-health by achieving and maintaining the highest standards of health, safety and wellbeing, through continuous improvement and the promotion and sharing of good practice.

The applicant, Breedon, 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.

The development will be controlled in accordance with the scheme as outlined in this document, through continued environmental monitoring and by planning conditions imposed by the competent authority. The proposal will have no major and/or long-term effect on the human environment.

It is, and has been, the policy of the operator to ensure the health and welfare of its employees by maintaining a safe, clean and tidy working environment, and employing safe working procedures that accord with the requirements of employment legislation, regulations, and best work practices in the industry.

Access to the site has and will be controlled at all times, and all visitors and contractors will undergo a site induction before entering the site. The wearing of protective clothing, such as footwear, helmets and high visibility clothing, will be mandatory in operational areas. Careful attention will be paid to safe practices when carrying out machinery maintenance and ensuring appropriate guarding of moving parts.

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

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

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4.7 FIGURES

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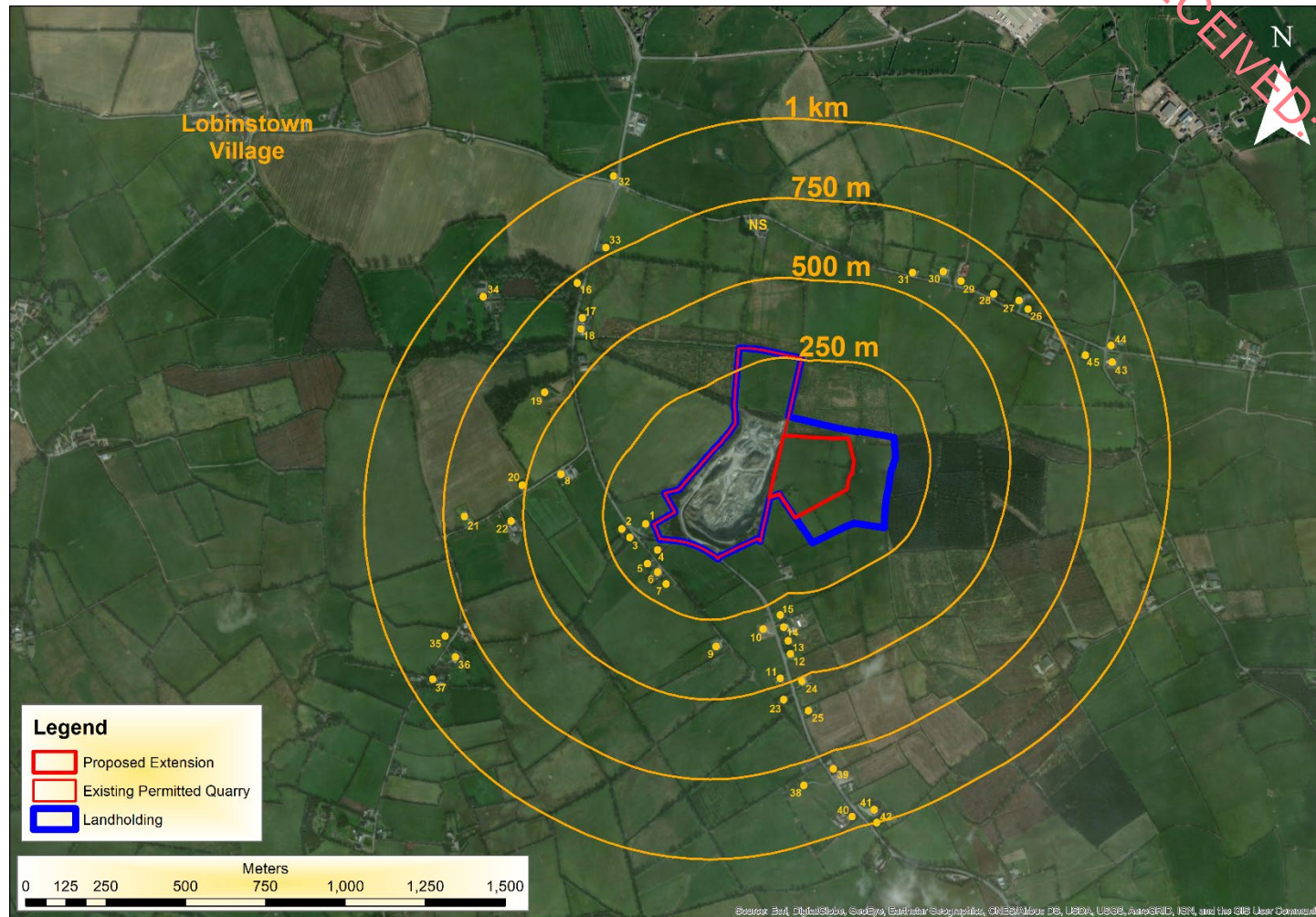


Figure 4.1 Aerial Image of Area around Lobinstown Quarry.

The landholding is outlined in blue, existing permitted quarry in red (thin line) and proposed extension in red (thick line). Yellow dots denote residences within 250 m ($n = 7$), 500 m ($n = 15$), 750 m ($n = 31$) and 1 km ($n = 45$) limits. Note location of Lobinstown Village at upper left. Rendered in ArcGIS 10.3.1 using aerial image from ESRI's world imagery.

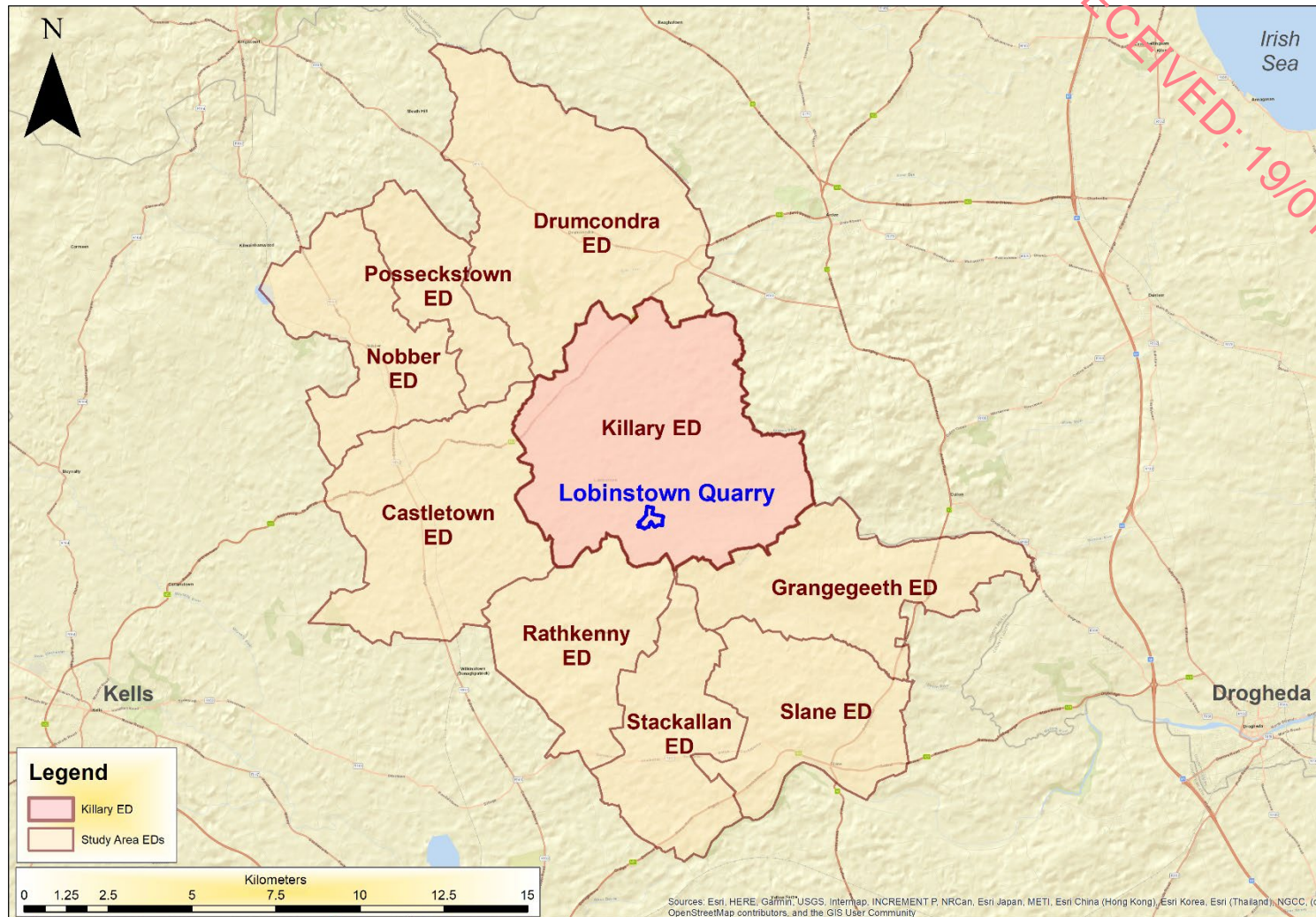


Figure 4.2 Map of Killary Electoral Division (ED) and Local Area comprised of Surrounding EDs.

Rendered in ArcGIS 10.3.1 using aerial image from ESRI's world imagery and data from CSO.

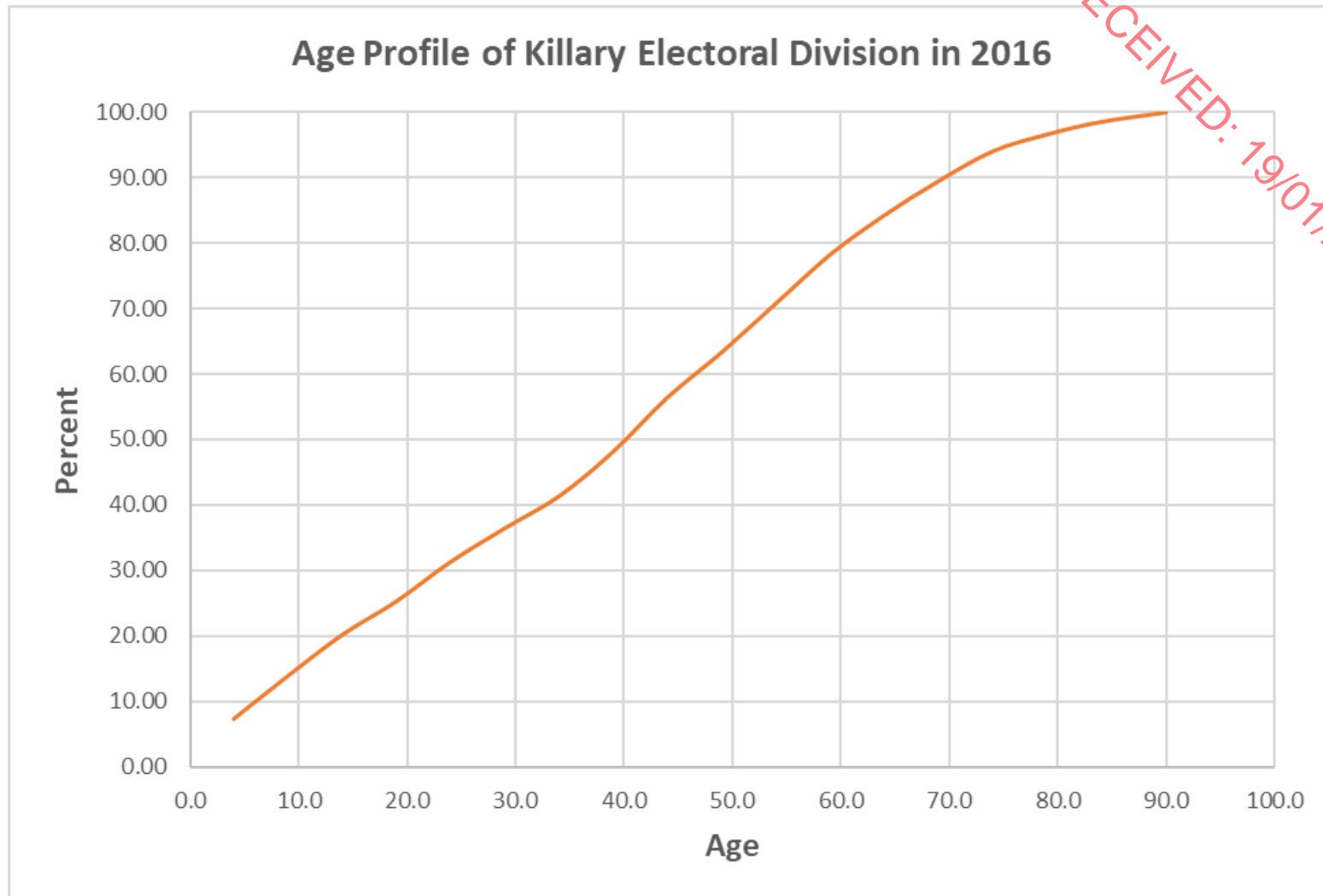


Figure 4.3 Age Profile of Killary Electoral Division in 2016.

Note average age of 39.7 at the 50 percentile. Data from CSO.

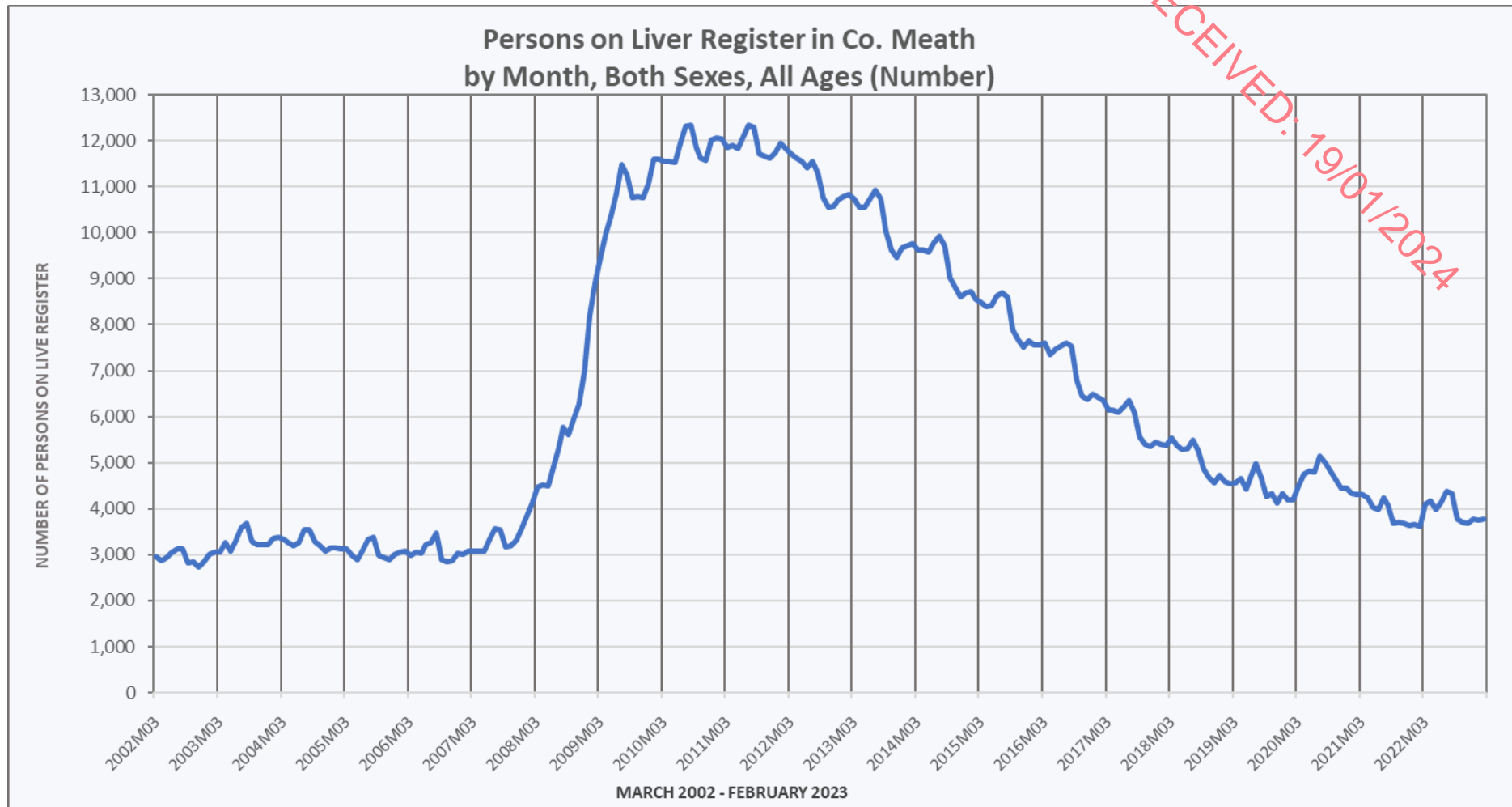


Figure 4.4 Chart showing Profile of Live Register for County Meath

Data spans period from March 2002 to February 2023, including Global Financial Crisis and Covid-19 Pandemic. Data from CSO.