6.0 BIODIVERSITY

6.1 Introduction

This Biodiversity Chapter describes the habitats, flora and fauna present at the site of the proposed continuation and extension to an existing quarry at Bellewstown, Co. Meath. Ecology Ireland Wildlife Consultants Ltd. (Ecology Ireland) completed a comprehensive desktop review and detailed field surveys to inform this ecological impact assessment of the proposed development.

The subject site is Bellewstown Quarry and proximate agricultural land in Co. Meath located in the townlands of Bellewstown, Hilltown Little, Gafney Little and Hilltown Great. The site comprises the existing rock quarry and a portion of land extending to the northeast on which it is proposed to deliver a new dedicated quarry access road. The quarry area extends to approximately c. 39.4 hectares. The overall site size (development boundary) is 47.3 hectares, which includes an area of 7.9 hectares to accommodate the new access road to serve the quarry.

Quarrying commenced at the site prior to October 1964 (shows up on Ordnance Survey Maps from over 100 years ago) and the site was first registered under the s.261 process in August 2004. Kilsaran Concrete acquired the site in 2006 and received substitute consent for the ongoing quarrying activities (under s.177E of the *Planning and Development Acts, 2000* (as amended)) in October 2018. The continued extraction at the quarry and its expansion to the north and west of the existing void area was also permitted by An Bord Pleanála under Ref. No. PL17.QD0013 (in accordance with section 37L of the *Planning and Development Acts, 2000* (as amended) in October 2018. This grant of planning limited the number of truck movements to a maximum of 32 loads per day. The s.37L application was accompanied by an Environmental Impact Statement and Natura Impact Statement. A suite of field surveys were completed as part of that application (2010-2015) and these data were reviewed as part of the desktop review of ecological information relevant to the development site.

The current development proposal consists of the continued extraction of the quarry within the area previously permitted by An Bord Pleanála (under Ref. No. PL17.QD0013). A new access road of c. 1.7km in length is proposed which will along with the proposed traffic management changes move traffic away from the local concentration of residential premises. This new road will reduce the impacts on the local community by redirecting the HGVs away from Bellewstown Village. The new road will cross the Mullagh Road and fields in a northeast direction away from the quarry. The road has a minimum width of c. 6m increasing to up to 9.25m wide on some internal bends. The new link road will also be used by the farmer whose lands it crosses, to provide internal access to their farm for agricultural purposes. This road will allow an average number of 81 No. daily loads from the quarry to facilitate an extraction level of approximately 450,000 tonnes per annum. The total extraction period proposed is 25 years, with an additional year required to facilitate restoration works.

Assessment of the potential impacts on the existing ecology of the study area (i.e. proposed development site and surrounding area) arising from the proposed development was subsequently made, and appropriate mitigation measures to reduce potential negative impact(s) to an acceptable level were considered.

This EcIA has been prepared using *Guidelines on the Information to be contained in Environmental Impact Assessment Report (EIAR)* (EPA 2022).

The main objectives of this EcIA were to:

- Undertake a detailed desktop review of available ecological data of the study area, including a review of designated nature conservation sites in the adjacent hinterland
- Describe the baseline ecological field surveys and assessments of the study area which were carried out in order to assess the existing flora and fauna
- Evaluate the ecological significance of the study area
- Assess potential impacts on the existing ecology that could arise from the proposed development
- Develop avoidance and mitigation measures to eliminate or reduce potential negative impact(s) on the existing local ecology arising from the continuation and extension of quarry operations and phased restoration of lands at Bellewstown, Co. Meath.

6.2 Statement of Authority

This report has been prepared by Dr. Gavin Fennessy with input from a team of specialist ecologists including Dr. John Conaghan, Tom O'Donnell, Éinne Ó'Cathasaigh and Athena Michaelides. Field surveys and *Post hoc* analysis were carried out by Dr. Gavin Fennessy (B.Sc. PhD MCIEEM), Dr. John Conaghan (BSc PhD MCIEEM) and Tom O'Donnell (B.Sc. M.Sc. CEnv MCIEEM) with the assistance of Éinne Ó'Cathasaigh (B.Sc. M.Sc.).

Dr. Fennessy is a highly experienced ecologist with over 20 years of experience in consultancy. He is Principal Ecologist and Managing Director of Ecology Ireland Wildlife Consultants Ltd. He is a member of the Irish Policy Group of the CIEEM and is a guest lecturer at University College Cork. He and his team have prepared numerous ecological impact assessments, for all types of projects and plans throughout Ireland. Dr. John Conaghan is one of Ireland's most experienced botanists and was responsible for the habitat and botanical assessments at the site. Tom O'Donnell is an experienced field ecologist and carried out a range of ecological studies at the site, including mammal and bird surveys, assisted by his associate Éinne Ó'Cathasaigh. Athena Michaelides (BSc) is an ecologist with nearly 5 years post-graduate experience and she assisted in the preparation of this report.

6.3 Quarry Operation

6.3.1 Planning History

Bellewstown quarry commenced operation prior to 1st October 1964. The location of a quarry is clearly marked on the Ordnance Survey map from 1909 and the revision of that map made between 1958 and 1982. Activities at the quarry have continued to this day. This is illustrated by Ordnance Survey aerial photographs flown in 1973, 1995, 2000 and 2004.

Meath County Council operated the quarry in the early 1960s. The quarry was subsequently operated by a number of parties up to the time a former owner, Mr. John Gallagher purchased the quarry in 1982 and operated it from 1982 to 2006. It was purchased at auction from Mr. Gallagher by Kilsaran. Kilsaran has operated the quarry from 2006 to date.

A change made to the *Planning Acts* introduced a requirement for the owner or operators of certain quarries to apply for registration under section 261. An application for registration was made on 27th August 2004 by the then owner John Gallagher. No conditions were issued by the Planning Authority within the statutory period under section 261.

Under Section 261A (3)(a) of the *Planning and Development Acts 2000* (as amended), Meath County Council, directed the quarry owner/operator to apply to An Bord Pleanála for substitute consent in respect of the quarry under section 177E of the *Planning and Development Acts 2000* (as amended). The substitute consent application was submitted to An Bord Pleanála on the 3rd June 2014 (PL17.SU0101) and was accompanied with a remedial Environmental Impact Statement and a remedial Natura Impact Statement. An Bord Pleanála granted substitute consent in an *Order* dated 24th October 2018.

Section 37L (of Part 21) of the *Planning Acts* made provision for applications to be made to An Bord Pleanála in conjunction with an application for substitute consent for further development of a quarry as a quarry. A Section 37L application, which included an Environmental Impact Statement (EIS) and Natura Impact Statement (NIS), was lodged with An Bord Pleanála on 14th January 2016.

The scheme proposed the horizontal and vertical extension of quarrying within the substitute consent area (ABP Ref. PL17.SU0101) and beyond into adjacent agricultural land. The development proposed comprised the extension of the existing quarry extraction area to c. 17.3 ha, the deepening of the quarry floor to 98mAOD using conventional blasting techniques, the processing of extracted material using mobile crushing and screening plant, product stockpiles, proposed landscaped overburden and topsoil storage/screening berms, landscaping and rehabilitation plan, and ancillary site works including a new wheelwash, a new septic tank and two bunded fuel tanks within a planning application area of c. 39.4 hectares. Permission was sought for a period of 25 years. An Bord Pleanála granted permission for the development by *Order* dated 24th October 2018 subject to 18 No. conditions.

6.3.2 Existing Quarry Operations

Bellewstown is an existing rock quarry, with associated extracted void, previously stripped reserves areas, perimeter landscaped screening mounds and ancillary facilities which includes office accommodation, workshops, weighbridge and fuel storage tanks. In a field to the south of the quarry a discharge water treatment facility has been constructed. Rock is extracted using explosives to blast exposed rock faces in a controlled manner. The excavation currently comprises two benches, the lowest is generally at c. 116 metres above Ordnance Survey Datum (mAOD) and the second higher bench is at an elevation of c. 128mAOD. Within the quarry void blasted rock is processed using mobile crushing and screening plant to produce various aggregate grades for sale to the construction industry. The existing quarry void extends to a little over 8ha.

A sump is located at the lowest part of the lowest bench to collect surface and groundwater, which is then periodically pumped to the constructed discharge water treatment facility located at the southern boundary of the property. This treatment facility comprises a lined settlement pond discharging through a hydrocarbon interceptor to a constructed horizontal flow reed bed before discharging treated water over a V notch weir, where discharge volumes are recorded by a calibrated water level gauge.

Processed aggregates are either loaded directly onto waiting haulage trucks or temporarily stockpiled within the quarry void. At present, access to the quarry is via an entrance (large double gate with palisade fencing) on to what is locally called The Mullagh road, turning right (south) only towards the Carnes Road and onwards. It is company policy that is rigidly adhered to that left turning from the quarry entrance by haulage vehicles is prohibited.

The further development of the quarry as a quarry under s.37L included a proposed extension area located to the north and west of the then existing quarry. The application site comprises a number of small fields currently in an agricultural use for grazing and/or tillage. In addition, a new access road is proposed taking traffic away from the quarry to the northeast.

6.3.3 Study Area

The application site is 47.3ha in area. The quarry area extends to approximately c. 39.4 hectares with an additional area of 7.9 hectares to accommodate the new private access road to serve the quarry (Figure 6.1). There are screening lines of broadleaved trees to the south of the extractive area. The application boundary also includes areas of scrub and some arable crop. The site is located southeast of the village of Duleek (Figure 6.1).

There are no rivers, streams or lakes within the boundary of the quarry application site area. Surface water within this part of the site is captured at the quarry sump. Water is pumped intermittently from the sump (manually controlled) through a discharge water treatment facility to a specific discharge point. The discharged water flows via a culvert under the Carnes Road into a land drain that in turn flows into Lunderstown Stream, which in turn flows into the Nanny River. The discharge is strictly controlled, and regular monitoring of water quality is undertaken according to the discharge license from Meath County Council. At the proposed entrance to the new private access road the Gafney Stream runs south to north direction parallel to the L1615. The Gafney Stream then flows in a northwest direction towards the River Nanny. It is proposed to pipe the Gafney Stream at the new entrance location onto the L1615.

As described in Chapter 8 of the EIAR, Water (Surface and Groundwater) the site is located within the River Nanny catchment. The majority of the quarry site, including the extension area and the proposed access track are located in the Nanny SC_020 sub-catchment. All surface water within the quarrying area flows towards the sump and pumped onwards from there to a settlement pond, hydrocarbon interceptor and reedbed prior to discharge. Recharge to local groundwater is minimal due to local geology. The surface water discharge location is into the Lunderstown Stream c. 1km south of the quarry site and the discharge volume is according to EPA licence (10/02). Chapter 8 provides further details on the local hydrology and hydrogeology.