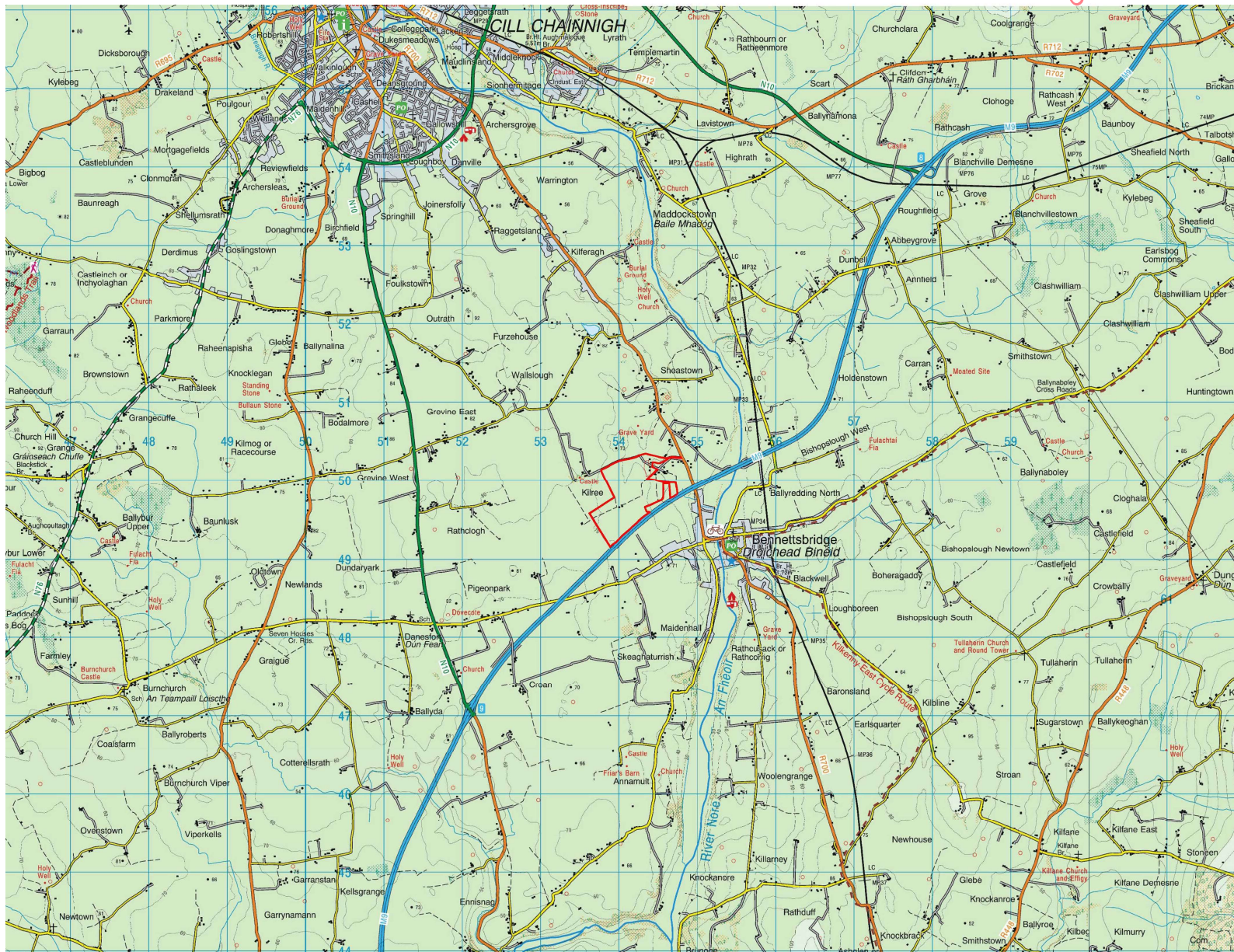


CHAPTER 15

MATERIAL ASSETS

RECEIVED: 19/08/2025



JULY 2025

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CHAPTER 15: Material Assets

Introduction

- 15.1 The purpose of this chapter is to evaluate the potential impact of the proposed development on Material Assets.
- 15.2 Material assets of natural origin and the existing quality of natural resources such as land, soil & geology, water, air and landscape are discussed in depth in the Chapters 7, 8, 10 and 12 of the EIAR. Material assets of human origin such as roads and traffic, archaeological /architectural heritage and flood protection are discussed in Chapters 13, 14 and 8.
- 15.3 The material assets of human origin that are included in this assessment comprise:
- Land Use.
 - Property.
 - Transport Network.
 - Recreational Facilities & Amenities.
 - Public Utilities.
- 15.4 The material assets of natural origin that are included in this assessment comprise:
- Land Resources.
 - Geological Resources.
 - Natural Resources.
 - Raw Materials & Waste.
- 15.5 This Chapter considers the effects on material assets and not the people using the assets. People along with issues and impacts are discussed in Chapter 5 (Population and Human Health).

Professional Competence

- 15.6 This Quarry Consulting undertook the impact assessment presented in this chapter on behalf of Bennettsbridge Limestone. The lead consultant for the EIAR was Peter Kinghan (Chartered Mineral Surveyor), Post Graduate Diploma in Environmental Engineering. This chapter and the associated assessment has been completed by Irene Curran who is a chartered town planning consultant (MRTPI) with over 20 years' experience. Irene's qualifications are as follows:
- BSc Environmental Science (Honours) – University of Limerick – 1997.
 - MSc Town and Country Planning (Distinction) – Queens University Belfast – 2000.
 - Dip Field Ecology - University College Cork – 2014.

Legislative and Policy Context

Relevant Legislation

- 15.7 The European Union Directive 85/337/EC required that certain private and public projects which are likely to have significant resultant environmental impacts are subject to a formalised Environmental Impact Assessment prior to their consent. This Directive was subsequently amended by the EU through three amendments: 97/11/EC, 2003/4/EC and 2009/31/EC and then codified in Directive 2011/92/EU. Subsequently, on 16 April 2014, Directive 2011/92/EU

was amended by Directive 2014/52/EU. Directive 2011/92/EU, as amended by Directive 2014/52/EU, will be hereafter referred to as the 'EIA Directive'.

- 15.8 Article 3 of the EIA Directive sets out the factors that should be identified, described and assessed in terms of direct and indirect significant effects of a project. Material assets are included as one of these factors. Annex IV of the EIA Directive sets down the minimum information to be supplied in an EIAR and also makes specific reference to material assets as a factor that should be described if it is likely to be significantly affected by the project.
- 15.9 The 2014/52/EU Directive was transposed into Irish law through European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018) which amended the Planning and Development Act, 2000, and the Planning and Development Regulations, 2001.

Relevant Policy & Guidelines

- 15.10 There is no specific Irish guidance for the assessment of material assets in the context of EIA. The 2015 EPA *Advice Notes for Preparing Environmental Impact Statements* defined Material Assets as "resources that are valued and that are intrinsic to specific places". The EPA *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (2022), discuss material assets as follows:

"In Directive 2011/92/EU this factor included architectural and archaeological heritage. Directive 2014/52/EU includes those heritage aspects as components of cultural heritage. Material assets can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes transport infrastructure. Sealing of agricultural land and effects on mining or quarrying potential come under the factors of land and soils."

- 15.11 The EPA Guidelines (2022) lists three broad headings under which Material Assets should be evaluated. These are set out below, with the "typical topics" associated with those headings:

- Roads & Traffic – Operational Phase, Unplanned Events (i.e. Accidents).
- Built Services – Electricity, Telecommunications, Gas, Water Supply Infrastructure, Sewerage.
- Waste Management – Operational Waste.

- 15.12 The 2017 EC Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report, includes a review checklist, of which 2.13 and 3.14 relate to Material Assets:

2.13. *Have any material assets in that area that may be affected by the Project been described? (including buildings, other structures, mineral resources, water resources).*

3.14. *Have the direct, primary effects on material assets and depletion of natural resources (e.g. fossil fuels, minerals) been described?*

- 15.13 Materials are defined in the IEMA guide to Material and Waste in Environmental Impact Assessment," (2020) as substances used in each lifecycle stage of a development, with a particular focus on the construction, operation and maintenance, and decommissioning or 'end of first life' phases. Wastes are defined in accordance with the Waste Framework Directive (Directive 2008/98/EC) as 'any substance or object which the holder discards or intends or is required to discard'.

15.14 IEMA (2020) outlines the following definitions of sensitive receptors

- Materials: *“Consuming materials impacts upon their immediate and (in the case of primary materials) long term availability, this results in the depletion of natural resources and adversely impacts the environment”.*
- Waste: *“The sensitive receptor is landfill capacity. Landfill is a finite resource, and hence – through the ongoing disposal of waste – there is a continued need to expand existing and develop new facilities. This required the depletion of natural and other resources which, in turn, adversely impacts the environment”.*

Assessment Methodology and Significance Criteria

15.15 The effects of the proposed development on the Material Assets are assessed in compliance with the EIAR Guidelines as outlined in Chapter 2 (EIA Report Methodology).

Study Area

15.16 The site is within the within the Aughrim Electoral Division (ED). The following Electoral Divisions (ED's) are within a 5km radius of the application site, these Electoral Divisions have been selected as the study area, unless stated otherwise in this chapter and with the exception of materials and waste:

- Outrath
- Dunbell
- Bennettsbridge
- Danesfort
- Ennisnag
- Kells
- Burnchurch
- Grange
- Kilkenny Rural
- Clara

15.17 In respect of materials, the study area is defined by the regional supply of resources.

15.18 In respect of waste, the study area is defined by the existing waste infrastructure in the Southern Waste Region.

Sources of Information

15.19 A desk-top study of the proposed development site and the surrounding study area was undertaken in September 2024. The desktop study included consultation with publicly available environmental and planning datasets:

- Environmental Protection Agency database (<https://gis.epa.ie/EPAMaps/>)
- Geological Survey of Ireland database (www.dcenr.maps.arcgis.com)
- Ordnance Survey Ireland (<https://store.osi.ie/> & <http://map.geohive.ie/mapviewer.html>)

- Catchments website (<https://www.catchments.ie/maps/>)
- Kilkenny County Council Planning database (<https://planning.kilkennycoco.ie/searchtypes>)
- Property Registration Authority (PRA) land registry services (<https://www.landdirect.ie/>)

15.20 A site visit undertaken in April 2025 to verify the findings of the desk study and to obtain an understanding of the site and the wider study area.

Identification and Description of Potential Effects

15.21 The characteristics of the proposed development were considered and the changes occurring as a result of aspects of the construction, operation and restoration of the proposed development were identified. The impact of these effects on material assets (beneficial and adverse) were consequently identified and assessed.

15.22 The criteria used to describe the predicted effects across land use, social and health considerations are adapted from Table 3.4 of the EPA Guidelines (EPA, 2022).

Table 15.1
Description of Effects

Description of Effects		
Quality of Effects	Positive Effects	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative/Adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Extent and Context of Effects	Extent	Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of Effects	Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Duration & Frequency	Momentary Effects	Effects lasting from seconds to minutes.
	Brief Effects	Effects lasting less than a day.
	Temporary Effects	Effects lasting less than a year.
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years.

	Long-term Effects	Effects lasting fifteen to sixty years.
	Permanent Effects	Effects lasting over sixty years.
	Reversible Effects	Effects that can be undone, for example through remediation or restoration.
	Frequency of Effects	Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
Direct/Indirect	Direct Effects	Effects that result directly from the proposed development or project.
	Indirect Effects	Defined by the EC as 'Impacts on the environment, which are not a direct result of the project, often produced away from (the site) or as a result of a complex pathway.'
Cumulative Effects	Cumulative Effects	The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects

Significance of Effects

15.23 The assessment process evaluates how the proposed development impacts on baseline environmental and social factors and considers whether the effects that are associated with positive or negative outcome for the material assets of natural and human origin. The significance of an effect is informed by the description of the effects.

15.24 Table 15.2 below provides the significance criteria that were used to determine the significance of an effect on material assets excluding materials and waste (based on Table 3.4 of the EPA Guidelines (EPA, 2022)).

Table 15.2
Significance Criteria

Description of Significance of Effects		
Significance	Imperceptible	An effect capable of measurement but without significant consequences.
	Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
	Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
	Profound	An effect which obliterates sensitive characteristics.

15.25 For the significance of effects associated with materials and waste, in addition to the EPA EIAR Guidelines (EPA 2022), the IEMA Guide to: Materials and Waste in Environmental Impact Assessment (IEMA 2020) (hereafter referred to as the IEMA Guidance) was used. Table 15.3 sets out a sensitivity value, Table 15.4 sets out a magnitude value and Table 15.5 evaluates the significance based on these values.

Table 15.3
Sensitivity Criteria – Materials (IEMA 2020)

Value	Description
	On balance, the key materials required for construction of a development....
Very High	Are known to be insufficient in terms of production, supply and / or stock; and / or Comprise no sustainable features and benefits compared to industry-standard materials*.
High	Are forecast (through trend analysis and other information) to suffer from some potential issues regarding supply and stock; and / or Are available comprising some sustainable features and benefits compared to industry-standard materials*.
Medium	Are forecast (through trend analysis and other information) to suffer from some potential issues regarding supply and stock; and / or Are available comprising some sustainable features and benefits compared to industry-standard materials*.
Low	Are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock; and / or Are available comprising a high proportion of sustainable features and benefits compared to industry-standard materials*.
Negligible	Are forecast (through trend analysis and other information) to be free from known issues regarding supply and stock; and / or Are available comprising a very high proportion of sustainable features and benefits compared to industry-standard materials*.
*Subject to supporting evidence, sustainable features and benefits could include, for example, materials or products that: comprise reused, secondary or recycled content (including excavated and other arisings); support the drive to a circular economy; or in some other way reduce lifetime environmental impacts.	

Table 15.4: Magnitude criteria – Materials (IEMA 2020)

Value	Description
	The assessment is made by determining whether through a development, the consumption of...
Major	...one or more materials is >10% by volume of the regional* baseline availability
Moderate	...one or more materials is between 6-10% by volume of the regional* baseline availability
Minor	...one or more materials is between 1-5% by volume of the regional* baseline availability
Negligible	...no individual material type is equal to or greater than 1% by volume of the regional* baseline availability
No change	...no materials are required
* or where justified, national.	

Table 15.5: Determining Significance – Materials (IEMA 2020)

		Magnitude of Impact				
Sensitivity (or Value) of Receptor		No Change	Negligible	Minor	Moderate	Major
	Very High	Neutral	Slight	Moderate or Large	Large or Ver Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

Baseline Conditions – Material Assets of Human Origin

Land Use

- 15.26 Bennettsbridge Limestone is located in the townland of Kilree, Bennettsbridge, Co. Kilkenny, situated approximately 0.8km north-west of the village of Bennettsbridge and approximately 7km south of Kilkenny City. The site is approximately 32km south-west of Carlow town, 38km north of Waterford City and 44km east of Enniscorthy.
- 15.27 The existing quarry is located approximately 230m to the west of the R700, from which access is gained via an access road approved under 03/75. The L26322 is located immediately to the south of the existing quarry access road and both roads have a shared junction with the R700. The M9 motorway forms the southernmost boundary of both the existing quarry and the application site.
- 15.28 The application site (the site) comprises the existing quarry and a c. 24.5 Ha lateral extension to the west of existing limestone quarry.
- 15.29 The existing quarry extends to an area of c. 36.5 ha and comprises the following:
- Office building, weighbridge and wheelwash located near the entrance to the quarry.
 - Processing infrastructure (crushing, screening & lime plant).
 - Precast manufacturing facility, and associated ancillary works for the manufacturing of concrete products, batching of lime products.
 - General storage of products and plant.
 - Asphalt plant operated by Lagan Macadam (within the landholding).
 - Limestone extraction area.
 - Existing quarry boundaries, mainly defined by fencing and screening berms.
- 15.30 The extension area is broadly rectangular in shape and presently comprises a mix of commercial forestry (6.8ha) and agricultural land, including land used for a mix of pasture and tillage farming. The site also includes two existing slatted sheds. The existing site boundaries are mainly defined by a mix of hedgerows, fencing and screening berms.
- 15.31 Beyond the site, the landscape is rural in character, consisting primarily of agricultural land interspersed with some areas of forestry. The main land use in the study area is agricultural, with dairy farming being the predominant sector. Fields are typically medium to large and regularly shaped. Field boundaries are typically defined by hedgerows, however these may be gappy or replaced with post and wire fencing in places. Tree cover is typically associated with field boundaries, farm-steads, domestic properties and some small areas of commercial forestry.
- 15.32 There are two other operational quarries located within 5 km of the application site. P. Hennessy & Company Ltd. (Hennessy Concrete) operate a sand and gravel pit approximately 750m to the north-east of the site. Roadstone operate a dolomitic limestone quarry approximately 1.8km to the north-east.
- 15.33 Residences within the general area typically consist of one-off rural houses and ribbon development along the local road network. The nearest dwelling to the site comprises a detached house, approximately 329m to the north-west, beyond which are a number of additional dwellings. There are approximately 53 dwellings within 500m of the site. As stated above, Bennettsbridge is situated 1.5km south-east of the site.

Property

15.34 Bennettsbridge Limestone are the owners and operators of the site on which the proposed development is located.

15.35 Bennettsbridge Limestone specialise in extracting bulk limestone which is used in a range of materials produced at the site including aggregates, lime and asphalt.

15.36 The quarry has been in operation since the 1980's when it was granted planning permission as a 3.5-hectare quarry by Kilkenny County Council (85/719). A summary of the planning history of the site is provided below:

85/419: Granted on 16th January 1987 for extraction of rock within a 3.5ha site area over a 10 year period.

433/89: Provided for the retention of office accommodation – namely offices, canteen facilities, staff washrooms and associated septic tank.

99/1161: Granted in March 2001 for retention and proposed 30.8ha extension and additional site infrastructure comprising a wheel-wash; landscaped berms and boundary treatment; lime and asphalt plants; and crushing plant on the floor of the quarry.

ABP Reference 10/120270: Following a third party appeal on 99/1161, An Bord Pleanála upheld the decision of Kilkenny County Council and granted permission to 31st December 2018

01/726 and 04/129: modified the opening hours of the Irish Asphalt facility permitted under Kilkenny County Council Reg. Ref. 99/1161; ABP Reference 120270;

03/75: Permission granted for the development of a pre-cast concrete manufacturing facility (production building, casting machine, batching plant, and associated works). The development included a new access road, separating residential and quarry traffic, and associated embankments, landscaping and planting.

03/1532: Permission granted for amendments and alterations to 03/75 precast concrete manufacturing facility, including an extension to the production building and new adjacent building for concrete storage and curing.

04/1806: Permission granted for the creation of a new stockyard for the storage of precast concrete products, involving semi-hardcore covering approx. 4.75ha and the use of a mobile crane (13m tall), along with associated site works and landscaping. This permission was not acted upon and has ceased to have effect in 2009.

05/127: Permission granted for retention of a landscaped screening mound adjacent to the quarry lagoon in a different location to that previously approved under Reg. Ref. 99/1161 (ABP P10.120270), and retention of constructed mound, concrete pathway and mechanical equipment installed on the eastern boundary.

PL10QV.0244: An Bord Pleanála confirmed the determination of the Planning Authority under S261(a)(i) and (ii) and Section 261A(3)(a). The effect of the Bord's order was to direct the quarry owners to apply for substitute consent.

An Bord Pleanála Ref. SU10. SU0122:

Substitute consent was granted for an area of approximately 9.5Ha.

An Bord Pleanála Ref. QD10.QD0001

Refused: Section 37L application for the deepening of existing quarry, modifications to Condition No. 2 of PL 10.120270.

17/316: Permitted the continuation of quarrying and extraction of rock

18/150: Permitted Lagan Macadam to operate an asphalt plant at the quarry.

18/858: Permission granted for a total area of 36.5 Hectares comprising of the following: Deepening of 13.4 hectares which was previously subject to rock extraction down to 12mOD; Removal of overburden, construction of screening berms and extraction of rock down to 30mOD from a greenfield area consisting of 8.5 hectares; Continuation of use of 11.6 hectares consisting of processing infrastructure (crushing, screening & lime plant), offices, workshop, canteens and toilet facilities, weighbridges, wheelwash facilities, fuel storage area and switch room, settlement lagoons, entrance, haul roads, ESB sub-station and all other ancillary facilities; Continuation of use of existing pre-cast manufacturing facility and associated ancillary works for manufacturing of concrete products, batching of lime products and general storage of products and plant on an area of 3.0 hectares; Landscaping and restoration of the site and all associated ancillary facilities/works. Granted 11/06/2019 for a period of 20 years.

20/891: The development consists of a Planning Application for the removal of existing office cabins and the proposed erection of a new office structure, the erection of entrance walls and signage and all associated ancillary facilities within an existing quarry complex. Granted 10/05/2021.

Transport Network

15.37 The existing quarry is located approximately 230m to the west of the R700, from which access is gained via an access road approved under 03/75. The L26322 is located immediately to the south of the existing quarry access road and both roads have a shared junction with the R700. This access arrangement was implemented as part of the realignment of the R700 by Kilkenny County Council. The M9 motorway forms the southernmost boundary of both the existing quarry and the application site.

15.38 Public transportation in the area is relatively limited, however Bus Eireann operates bus service no. 882 from Kilkenny to Inistioge which runs along the R700 east of the site, with a stop in Bennettsbridge. Bus Eireann service no. 73 from Athlone to Waterford, also runs along the R700, with a stop in Bennettsbridge. Other bus services are available from Kilkenny City. An Irish Rail intercity line is situated approximately 1.5km east of the site, with services from Kilkenny to Waterford, the nearest train station is located in Kilkenny City.

Recreational Facilities & Amenities

15.39 Tourist and amenities in the study area include, but are not limited to:

- National Reptile Zoo (7.5km north of site).
- Tullaherin Round Tower and Monastic Site (4.5km south-east of application site).
- Mount Juliet Estate (Golf Course) – 5.5km south of the application site at its nearest point.
- Nore Valley Walk (0.95km east of the site at its nearest point).

15.40 Bennettsbridge offers other recreational and community facilities and amenities including GAA clubs, shops, community hall and churches.

15.41 Kilkenny City is outside of the study area, however it is noted that the city offers a wide range of tourist and recreational attractions, most notably Kilkenny Castle, Smithwicks Experience, the National Reptile Zoo and a range of golf courses. Kilkenny City also has a number of recreational walks including the Castle Park and Lacken Walk and the Nore Valley Walk: Kilkenny to Bennettsbridge, which comprises one of three sections of the Nore Valley Walks, following the River Nore. The Nore Valley Walk is the flagship project of Trail Kilkenny. The walk stretches from Kilkenny city to Inistioge and follows the River Nore. The walk is divided into three sections:

- a. Kilkenny to Bennettsbridge.
- b. Bennettsbridge to Thomastown.
- c. Thomastown to Inistioge.

Public Utilities

Electricity Network

15.42 There are two 38kV 50Hz lines within the study area: the Kilkenny – Ballyhale 38KV minor line and the Kilkenny – Callan 38KV minor line. The Kilkenny – Great Island Power Station 110KV line runs along the eastern part of the study area, 5.5km from the application site.

15.43 The application site benefits from a connection to the electricity grid via an overhead line.

Gas Network

15.44 The application site does not overlap with any existing gas pipelines. The following gas pipelines are located within the study area:

- Transmission Pipe (High Pressure) – at its nearest point, this pipeline is located 2km north of the application site.
- 180 PE-80 4 bar, distribution pipeline – at its nearest point, this pipeline is located 1.4km east of the application site.

Water Supply

15.45 The proposed site is not located inside any mapped GSI Public Source Protection Areas (PWS) or National Federation Group Water Scheme (NFGWS) groundwater protection zones. The following PWS and NFGWS Source Protection Areas are located within the study area:

- Maddockstown NFGWS (2.8km north-east of the application site).
- Dunbell NFGWS (3.27km north-east of the application site).
- Bennettsbridge PWS (4.7km south of the application site).

15.46 There is an existing water supply to the quarry which services the canteen and sanitary facilities on site.

Wastewater Supply

15.47 There is an existing wastewater treatment system on the application site.

Communications Infrastructure

15.48 Communications infrastructure comprise local network wires, cables, poles and masts for the provision of telephone, internet, mobile phone, television and radio services. Communications infrastructure is present throughout the study area.

15.49 There is no telecommunication infrastructure within the application site. The existing quarry benefits from existing telecommunication connections.

Baseline Conditions – Material Assets of Natural Origin

Land Resources

15.50 The application site comprises an existing operational limestone quarry, including all existing associated uses and activities, which includes:

- Office building, weighbridge and wheelwash located near the entrance to the quarry.
- Processing infrastructure (crushing, screening & lime plant).
- Precast manufacturing facility, and associated ancillary works for the manufacturing of concrete products, batching of lime products.
- General storage of products and plant.
- Asphalt plant operated by Breedon Group.
- Limestone extraction area of 13.4 ha to 12m OD (Ordnance Datum).
- Existing quarry boundaries, mainly defined by fencing and screening berms.
- The proposed development also includes a lateral extension to the south, north and east of the existing quarry. The total area of the proposed extension is 24.5ha, these lands presently comprise agricultural fields and a slatted shed.

15.51 As stated above, the surrounding area comprises a mix of agriculture and residential uses, with the M9 motorway also comprising a dominant feature in the local landscape.

15.52 The site is not located within any designated European sites, however the following designated sites are located in the study area:

- River Barrow and River Nore SAC 002162 – located 600m east of the application site at its nearest point.
- River Nore SPA 004233 – 660m east of the application site at its nearest point.

15.53 The following NHAs and pNHA's are located in the vicinity of the application site:

- Mount Juliet proposed NHA – 5.1km south of the application site at its nearest point.

15.54 The nearest section of the Wicklow National Park is 64km to the north-east of the application site.

Geological Resources

15.55 According to the Geological Survey of Ireland (GSI) Spatial Resources, there are no geological heritage sites within the application site. The following geological heritage sites are situated within the study area:

- KK021: Bennettsbridge M9 Cutting.
- KK022: Danesfort M9 Cutting.
- KK010: Bennettsbridge Quarry
- KK023: Dunbell M9 Cutting
- KK026: King's River M9 Cutting
- KK007: Archersgrove Quarry

15.56 The GSI Aggregate Potential Mapping highlights the area as having very high potential for "crushed rock aggregate potential".

Natural Resources

Woodland

- 15.57 As stated above, tree cover in the vicinity of the site is limited to field boundaries, farm-steads, domestic properties and some small areas of commercial forestry. The largest area of commercial woodland within the study area comprises a plantation of predominately Sitka Spruce at The Commons, approximately 4km east of the application site. The nearest Coillte Woodland is at Danesfort, approximately 7km west of the application site.
- 15.58 The application site includes 6.8ha of mixed broadleaved woodland, comprising an inverted L-shape block of forestry woodland with an estimated age of around 20 years. The woodland has been planted in diagonal strips predominately consisting of Ash (*Fraxinus excelsior*) but also includes relatively narrow strips dominated by Sycamore (*Acer pseudoplatanus*), Beech (*Fagus sylvatica*) and Pedunculate Oak (*Quercus robur*). Other woody species present include Common Hawthorn (*Crataegus monogyna*), Copper Beech (*Fagus sylvatica purpurea*), Wild Privet (*Ligustrum vulgare*), Grey Poplar (*P. x canescens*), Cherry (*Prunus* sp.), Grey Willow (*Salix cinerea*), Elder (*Sambucus nigra*) and Wych Elm (*Ulmus glabra*). All the Ash exhibit signs of infection from *Hymenoscyphus fraxineus* and are in poor condition.

Raw Materials & Waste

Raw Materials

- 15.59 As the existing use comprises an operational quarry that extracts limestone, it is removing the raw material from its point of origin. The nature of the use is however highly efficient, as all of the resource is either sold directly to the public as building stone or it is used in a range of materials produced at the site including aggregates, blocks, ready mixed concrete and asphalt.

Waste

- 15.60 The existing / historic use of the site for limestone extraction and the extension area for agriculture and forestry generates very low waste volumes and comprise waste types typical of those uses. Almost all products and by-products arising from the aggregate processing have commercial value. Any waste materials from the site are stored, collected, recycled and/or disposed of in accordance with any requirements of Kilkenny County Council.
- 15.61 Potential waste produced and the measures used to control it are described as follows:
- Scrap metal – these materials are chiefly produced from the maintenance of the processing plants and can cause a nuisance if allowed to build up in an uncontrolled manner. A designated scrap metal area is demarcated on site and the build-up of scrap is controlled by the regular removal by licensed scrap metal dealers.
 - Used Oil and Oil Filters – any waste oil/oil filters that arise from servicing of fixed or mobile plant are removed from the site by a licensed waste contractor.
 - Used Batteries – similarly all used batteries are removed from site for collection and recycling by a licensed waste contractor in accordance with the Waste Management Regulations.
 - Domestic Style Waste (Canteen Waste) – domestic waste generated at the offices and employee's facility is collected by a licensed waste collection contractor.

Assessment of Potential Effects – Material Assets of Human Origin

- 15.62 The proposed development comprises the continued extraction of limestone from an existing quarry and the extension of the existing extraction area into lands to the west of the site.
- 15.63 The following assessment considers the construction, operational and post-operational stages of the proposed development.
- 15.64 The construction phase is limited to considering the effects associated with the demolition of the existing slatted sheds within the extension area. In addition, the construction phase will consider the effects associated with soil removal within the proposed extension area as well as the felling of 6.8ha of commercial forestry.
- 15.65 The operational phase considers effects associated with excavation of limestone from the proposed extension area as well as the continuation of all existing activities within the red-line area.
- 15.66 The post-operational phase considers the effects associated with decommissioning the quarry and restoring it to natural habitat uses.

Land Use

Construction Phase

- 15.67 The construction phase of the proposed development would change the existing land-use from agricultural and forestry to disturbed ground, with the removal of the existing slatted sheds, woodland and removal of soils. All topsoil and subsoil stripped from the extension area will first be used in-situ for the formation of the new boundary screening berms. Any remaining engineered fill material (excess subsoil) will be sold off-site for use as certified engineered fill in third-party projects. No construction compound will be needed, as personnel will utilise existing facilities within the Quarry, including the carpark, canteen, and welfare facilities.

Land-use	Quality	Negative
	Extent	6.81 Ha of woodland. Two slatted sheds removed. Top soil cleared from 18.2 ha.
	Probability	Likely
	Frequency	Constant
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	Two slatted sheds, three agricultural fields and 6.8ha of woodland directly affected.
	Significance	<i>Slight Effects: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.</i>

Table 15.6: EPA Description of Effects – Land-use, construction phase

Operational Phase

- 15.68 The proposed development would not significantly alter the existing land use of the site as the entire site is presently either part of the existing extraction area or visually associated with it. The lands to the west which are presently utilised for agricultural purposes including two slatted sheds, three agricultural fields used for a mix of pasture and tillage farming and 6.8ha of woodland would be directly affected by the proposed development and incorporated into the extraction area. In visual impact terms, Chapter 12 assesses the effect as no greater than

Moderate to the west and north, Moderate-slight to the east and south, with the remainder of the 3km radius LVIA study area likely to experience Slight or Imperceptible landscape impacts.

Land-use	Quality	Negative
	Extent	6.81 Ha of woodland. Two slatted sheds removed. Top soil cleared from 18.2 ha. Activities at existing quarry site have an extended duration.
	Probability	Likely
	Frequency	Constant
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Two slatted sheds, three agricultural fields and existing quarry area directly affected.
	Significance	Slight Effects: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities. The proposed development would change the nature of the land-use, however this is consistent with the existing uses of the site.

Table 15.7: EPA Description of Effects – Land-use, operational phase

Post Operational Phase

15.69 The post operational phase comprises the restoration of the application site. The restoration proposals seek to create a lake from the quarry void, with additional woodland/scrub planting along the site boundaries.

Land-use	Quality	Positive
	Extent	Total 61ha application site area.
	Probability	Likely
	Frequency	Constant
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Total 61ha application site area directly affected.
	Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i> The use of the land would be altered, however it would remain as a post-quarried use and allowed to vegetate and the void to fill with water. This would offer significant biodiversity net gain.

Table 15.8: EPA Description of Effects – Land-use, post-operational phase

Property

Construction Phase

15.70 The site is in the ownership of the applicant therefore third party land is not required. The construction phase of proposed development would have no effect on property ownership.

15.71 The construction phase of proposed development is not predicted to have any negative effects on local property values as the area has a long association with extraction which provides a valuable source of direct and in-direct employment in the area, with additional trickle down benefits for the local economy.

15.72 Screening is primarily provided by landform. In this instance, vegetative screening is secondary to the limited visibility allowed by the surrounding terrain. Where vegetative screening obscures

views of the development, the level of visual effect and mitigation is deemed to be comparable in winter vegetation or full leaf due to the density of vegetation across the study area, particularly across layered field boundaries and the Nore River Corridor.

15.73 Chapters 10 and 11 provide additional information in respect of the potential effects on Air and Noise, which have the potential to undermine the residential amenity of neighbouring properties which could in turn affect property values. These chapters indicated that the associated effects of the proposed development would not be significant.

15.74 During the construction phase there is very limited potential for impacts on the residential amenity of the local population. The overall effect is considered to be “not significant” due in part to the short-term duration of the construction, and the relatively small size of the area affected. The effects would be primarily relating to noise, dust and traffic, however these are not anticipated to be significantly above baseline levels and therefore not significant.

Land-use	Quality	Negative
	Extent	Two slatted sheds removed. Top soil cleared from three agricultural fields and 6.8ha of felled woodland. Potential effects on noise and atmosphere may extend beyond site boundaries.
	Probability	Likely
	Frequency	Constant
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	No direct effect on population and settlement patterns. Use is consistent with adjoining established uses at the site. Indirect affects associated with noise, vibration and dust are consistent with existing uses and although may extend beyond site boundaries, are unlikely to significantly increase baseline levels. No additional traffic movements associated with site preparation or removal of slatted sheds.
	Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i> The construction phase activities would not significantly alter the nature or extent of emissions from the application site above baseline levels.

Table 15.9: EPA Description of Effects – Land-use, construction phase

Operational Phase

15.75 The continued operation and extension of the quarry would not have any affect on the distribution of population within the study area as it does not include a housing element and the number of individuals employed would not be altered.

15.76 Key pathways for potential effects on residential amenity in this instance are air, traffic and noise & vibration. As with potential effects on human health, these pathways (other than traffic) are controlled by thresholds established by planning conditions and continuously monitored at the site. These pathways have also been assessed in the respective chapters of this EIA and it has been determined that there would be no magnitude of change associated with the continuation of the existing quarry. The combined effect of these potential effects on amenity is therefore anticipated to be negligible. Given that human beings are considered to be a high sensitivity receptor, it is determined that the overall effect would be “not significant”.

15.77 A full assessment/review was carried out on the impact of traffic on the R700 and L26322 and their link capacity (Link Capacity is the assessment of the available carrying capacity of a road

based on its characteristics). The assessment concluded that there is significant spare capacity on both routes in all assessment years.

15.78 There are no proposals to increase the number of employees and hence all staff parking shall continue to be accommodated within the quarry site.

15.79 In visual impact terms, Chapter 12 assesses the effect as no greater than Moderate to the west and north, Moderate-slight to the east and south, with the remainder of the 3km radius LVIA study area likely to experience Slight or Imperceptible landscape impacts.

15.80 Chapters 10 and 11 provide additional information in respect of the potential effects on Air and Noise, which have the potential to undermine the residential amenity of neighbouring properties which could in turn affect property values. These chapters indicated that the associated effects of the proposed extension would not be significant.

Property	Quality	Negative
	Extent	Total application site area 61ha directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries. Traffic effects would affect the site access and local road network.
	Probability	Likely
	Frequency	Daily – traffic, noise & atmospheric emissions. Vibration one / two days per month
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	No direct effect on property. Potential effects on noise and atmosphere may extend beyond site boundaries. Traffic effects would affect the site access and local road network.
	Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences</i> <i>Changes would not be significantly above the baseline levels.</i> <i>The nature or extent of emissions from the application site would not be significantly altered above baseline levels. .</i>

Table 15.10: EPA Description of Effects – Property, operational phase

Post Operational Phase

15.81 As stated above, the post operational phase comprises the restoration of the application site. The restoration proposals offer the potential for biodiversity gain. The effect on property would however be neutral as the changes would not be perceptible compared to the baseline.

15.82 Following restoration, the potential effects on air, noise, and traffic would cease owing to the cessation of extraction including the cessation of machinery operation and the returning of the site to natural uses. Following the cessation of the proposed works, the appearance of the application site will have been altered with a return of the landscape to the pre-extracted agricultural and natural uses.

Property	Quality	Positive
	Extent	Total application site area 61ha directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries. Traffic effects would affect the site access and local road network.
	Probability	Likely
	Frequency	Daily – traffic, noise & atmospheric emissions. Vibration: one / two days per month
	Duration	Short-term
	Reversibility	Reversible

	Direct/Indirect	61ha application site area directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries. Traffic effects would affect the site access and local road network.
	Significance	Not significant - an effect which causes noticeable changes in the character of the environment but without significant consequences.

Table 15.11: EPA Description of Effects – property, post-operational phase

Transport Network

Construction Phase

15.83 Chapter 13 provides a detailed assessment of the effect of the proposed development of the existing transport network and traffic volumes.

15.84 The construction phase of proposed development would not generate significant traffic volumes. Demolition materials, such as steel and wood, would be associated with the demolition of the existing slatted sheds and the extraction of ~6.8 ha of commercial forestry. Any demolition waste would be sent to a waste facility using a licenced contractor or recycled on site. Traffic volumes associated with this would be minimal. Timber will be loaded onto 18 t timber lorries and exported via the existing quarry entrance onto the L26322 and R700. All loads will use the permitted quarry access and adhere to the site's Traffic Management Plan. Traffic volumes are considered to be minor compared to baseline quarry HGV volumes and will have an imperceptible effect on local traffic flow.

Land-use	Quality	Neutral
	Extent	At site access and local road network.
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	Direct effect on site access and local road network
	Significance	Imperceptible: An effect capable of measurement but without significant consequences.

Table 15.12: EPA Description of Effects – Transport, construction phase

Operational Phase

15.85 Chapter 13 provides a detailed assessment of the effect of the proposed development of the existing transport network and traffic volumes.

15.86 The results of the traffic and transport assessment confirm that the development would not have a significant effect on traffic flows due to the background traffic volumes, the volumes of traffic being generated during the operational phase and the capacity of the road network.

Transport	Quality	Neutral
	Extent	At site access and local road network.
	Probability	Likely
	Frequency	Frequently
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Direct effect at site access and local road network.
	Significance	Not significant - an effect which causes noticeable changes in the character of the environment but without significant consequences.

Table 15.13: EPA Description of Effects – Transport, operational phase

Post Operational Phase

15.87 Traffic associated with this stage would be minimal and predominately associated with the removal of equipment from the site.

Transport	Quality	Neutral
	Extent	At site access and local road network.
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	Direct effect at site access and local road network..
	Significance	<i>Imperceptible: An effect capable of measurement but without significant consequences.</i>

Table 15.14: EPA Description of Effects – Transport, post-operational phase

Recreational Facilities & Amenities

Construction Phase

15.88 The construction phase proposed development is not predicted to have any negative effect on recreational facilities and amenities identified above as the site is distant from the majority of those resources and the site itself is in private ownership and not used for recreational purposes. The site is not visible from any existing recreational resources and noise associated with the proposed development would not be heard from these any recreational facilities or tourist attractions.

Land-use	Quality	Negative
	Extent	Total application site area 61ha directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries.
	Probability	Likely
	Frequency	Daily –Noise & atmospheric emissions.
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Total 61ha application area directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries.
	Significance	Not significant - an effect which causes noticeable changes in the character of the environment but without significant consequences.

Table 15.15: EPA Description of Effects – Recreation, construction phase

Operational Phase

15.89 The operational phase proposed development is not predicted to have any negative effect on recreational facilities and amenities identified above as the site is distant from the majority of those resources and the site itself is in private ownership and not used for recreational purposes. The site is not visible from any existing recreational resources and noise associated with the proposed development would not be heard from these any recreational facilities or tourist attractions.

Recreation	Quality	Negative
	Extent	Total 61ha application area directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries.
	Probability	Likely

Frequency	Daily –Noise & atmospheric emissions. Vibration: one/two days per month.
Duration	Long-term
Reversibility	Reversible
Direct/Indirect	Total 61ha application area directly affected. Potential effects on noise and atmosphere may extend beyond site boundaries.
Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i>

Table 5.16: EPA Description of Effects – Recreation, operational phase

Post Operational Phase

15.90 Restoration of the site would similarly not have any negative effects on recreational facilities and amenities identified above as the site is distant from the majority of those resources and the site itself is in private ownership and not used for recreational purposes.

15.91 The effects of the proposed development would be long-term due to the design life of the proposed development, however the quarrying activity is a long established land use in the area and has not impacted on the recreational amenity of the study area.

Recreation	Quality	Neutral
	Extent	No effect
	Probability	Unlikely
	Frequency	No effect
	Duration	No effect
	Reversibility	No effect
	Direct/Indirect	No effect
	Significance	Imperceptible

Table 5.17: EPA Description of Effects – Recreation, post-operational phase

Public Utilities*Construction Phase*

15.92 The construction phase proposed development is not predicted to have any negative effect on public utilities as no existing utilities cross the site.

Land-use	Quality	Neutral
	Extent	No effect
	Probability	Unlikely
	Frequency	No effect
	Duration	No effect
	Reversibility	No effect
	Direct/Indirect	No effect
	Significance	Imperceptible

Table 15.18: EPA Description of Effects – Public Utilities, construction phase

Operational Phase

15.93 The operational phase proposed development is not predicted to have any negative effect on public utilities as no existing utilities cross the site. The existing utilities within the study area have existed in tandem with the existing quarry with no effects observed.

15.94 The existing electricity connection, water supply and communications arrangements would not be altered by the proposed development.

Public Utilities	Quality	Neutral
	Extent	No effect
	Probability	Unlikely
	Frequency	No effect
	Duration	No effect
	Reversibility	No effect
	Direct/Indirect	No effect
	Significance	Imperceptible

Table 5.19: EPA Description of Effects – Public Utilities, operational phase

Post Operational Phase

15.95 The restoration of the site would not have any effect on existing public utilities.

Public Utilities	Quality	Neutral
	Extent	No effect
	Probability	Unlikely
	Frequency	No effect
	Duration	No effect
	Reversibility	No effect
	Direct/Indirect	No effect
	Significance	Imperceptible

Table 5.20: EPA Description of Effects – Public Utilities, post-operational phase

Assessment of Potential Effects – Material Assets of Natural Origin

Land Resources

Construction Phase

15.96 Chapter 6 provides a detailed assessment of the effect of the proposed development on biodiversity and Chapter 12 assesses the landscape and visual effects of the proposed development. No significant direct or indirect effects on land resources are anticipated.

15.97 The proposed development will not have any direct or indirect effects on any known cultural heritage sites, archaeological remains, or buildings of heritage significance within the application area or its surrounding area.

Land Resources	Quality	Negative
	Extent	Total 61ha application site directly affected. Potential effects associated with dust deposition may extend beyond site boundaries.
	Probability	Likely
	Frequency	Daily
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Total 61ha application area directly affected. Potential effects associated with dust deposition may extend beyond site boundaries.

Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i>
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Table 15.21: EPA Description of Effects – Land resources, construction phase

Operational Phase

15.98 Chapter 6 provides a detailed assessment of the effect of the proposed development on biodiversity and Chapter 12 assesses the landscape and visual effects of the proposed development. No significant direct or indirect effects on land resources are anticipated.

Land Resources	Quality	Negative
	Extent	Total 61ha application site directly affected. Potential effects associated with dust deposition may extend beyond site boundaries.
	Probability	Likely
	Frequency	Daily
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Total 61ha application area directly affected. Potential effects associated with dust deposition may extend beyond site boundaries.
	Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i>

Table 15.22: EPA Description of Effects – Land resources, operational phase

Post Operational Phase

15.99 See Chapter 6 and 12 above, no significant adverse direct or indirect effects on land resources are anticipated. The restoration proposals include the flooding of the quarry and planting of mix of native tree species. The restoration proposals include opportunities for biodiversity net gain.

Land Resources	Quality	Negative
	Extent	Total 61ha application site directly affected. Potential effects associated with dust deposition may extend beyond site boundaries.
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	Total 61ha application site directly affected. Potential effects associated with dust deposition may extend beyond site boundaries.
	Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i>

Table 15.23: EPA Description of Effects – Land resources, post-operational phase

Geological Resources

Construction Phase

15.100 The proposed development will require the removal of topsoil and overburden which will be used on the site for construction of landscaped screening berms or sold as engineered fill.

Geology	Quality	Negative
	Extent	18.2ha extension area directly affected as top-soils and overburden would be removed.
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	Direct effect on 18.2ha extension area.
	Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i>

Table 5.24: EPA Description of Effects – Geology, construction phase

Operational Phase

- 15.101 The quarry will extract of an estimated 17 million tonnes of mineral reserves over an operational period of 25 years. The limestone resource would be utilised for a range of purposes including as construction aggregates. The removal of the material will have a “permanent” effect on the existing limestone resource, however as this resource is presently sub-surface, the impact of the loss would not be perceptible. Nevertheless, the extracted material will be utilised in the local construction industry as well as in the agricultural sector, benefiting both private and public sector projects and thereby making a positive contribution to the economy at the local, regional, and national levels.
- 15.102 To minimise the effect of the proposed development on soil resources, re-fuelling of equipment will take place in designated areas wherever possible. A fuel handling protocol will be put in place to minimise the risk of fuel spills and to advise on actions in the event of spillages.
- 15.103 Given the distance between the application site and the geological heritage sites identified above, there is unlikely to be any significant effects.

Geology	Quality	Negative
	Extent	18.2ha extraction area directly affected as geological resource would be removed.
	Probability	Likely
	Frequency	Daily
	Duration	Permanent
	Reversibility	Irreversible
	Direct/Indirect	Direct effect on 18.2ha extraction area.
	Significance	<i>Moderate - An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.</i>

Table 5.25: EPA Description of Effects – Geology, operational phase

Post Operational Phase

- 15.104 The restoration of the site would not have any effect on existing geological resources as it is proposed to flood the quarry and introduce additional planting onto the site. No further disturbance of the sub-surface geology is proposed at this phase.

Geology	Quality	Neutral
	Extent	No effect
	Probability	Unlikely
	Frequency	No effect
	Duration	No effect
	Reversibility	No effect
	Direct/Indirect	No effect
	Significance	Imperceptible

Table 5.26: EPA Description of Effects – Geology, post-operational phase

Natural Resources

Construction Phase

15.105 The construction phase proposed development will require the removal 6.8 hectares of woodland, comprising predominately Ash, Sycamore, Pedunculate Oak and Beech. The trees were planted in 2007 as a commercial forestry. The trees that would be felled as part of the site clearance operation would be sold as commercial timber to be used in the construction and craft sectors. chapter 6 – Biodiversity and has described the woodland as *“a relatively large but isolated block of woodland that is of low value, predominantly due to its age and to the presence of ash dieback caused by the Hymenoscyphus fraxineus fungus affecting the dominant canopy tree species. Nonetheless provides opportunities for a range of resident species, i.e. birds and invertebrates and which may be used as a stepping stone between the River Nore valley and other features of higher value in the surrounding landscape”*.

Natural Resources	Quality	Negative
	Extent	6.8ha of woodland
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Reversible
	Direct/Indirect	Direct effect on 6.8ha of woodland.
	Significance	Slight Effects: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

Table 5.27: EPA Description of Effects – Natural Resources, Construction phase

Operational Phase

15.106 The operational phase of proposed development would not require the removal of any additional trees, hedgerows or other natural features. There is potential for dust deposition on the remaining trees which could potentially affect their photosynthetic ability. This is evaluated in chapter 6 Biodiversity.

Natural Resources	Quality	Negative
	Extent	Potential effects on noise and atmosphere may extend beyond site boundaries.
	Probability	Likely
	Frequency	Daily
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Potential effects on noise and atmosphere may extend beyond site boundaries.

Significance	Not significant - <i>an effect which causes noticeable changes in the character of the environment but without significant consequences.</i>
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Table 5.28: EPA Description of Effects – Natural Resources, Operational phase

Post Operational Phase

15.107 See Chapter 6 and 12 above, no significant adverse direct or indirect effects on land resources are anticipated. The restoration proposals include opportunities for biodiversity net gain.

Natural Resources	Quality	Neutral
	Extent	Total 61ha application site
	Probability	Likely
	Frequency	No effect
	Duration	Long-term
	Reversibility	Reversible
	Direct/Indirect	Direct effect 61ha application site
	Significance	Imperceptible

Table 5.29: EPA Description of Effects – Natural Resources, post-operational phase

Raw Materials & Waste

Construction Phase

15.108 The construction phase of the proposed development will involve the demolition and removal of two existing slatted sheds. Waste arisings are expected to be minimal and will be managed in strict compliance with Article 27 of the EU Waste Framework Directive (2008/98/EC) and the Irish Waste Management Acts. All demolition materials (e.g. timber, steel, masonry) will be classified on-site, consigned under the statutory duty-of-care system, and removed by licenced hauliers to appropriately permitted C&D recycling or recovery facilities.

15.109 The construction phase will require the felling of 6.8ha of woodland. The “waste streams” generated by this operation all have an identified end-use including the use of the wood within the construction and craft sectors.

Waste Volumes	Quality	Negative
	Extent	County
	Probability	Likely
	Frequency	One-off demolition of Slatted Sheds & felling of 6.8ha of woodland
	Duration	Short-term
	Reversibility	Irreversible
	Direct/Indirect	Direct effect on capacity of landfill sites
	Significance	Imperceptible (EPA) Neutral (IEMA 2020)

Table 5.30: EPA Description of Effects – Waste, post-operational phase

15.110 The construction phase would not generate a requirement for any significant volumes of materials and the type of operation is consistent with that undertaken at the existing quarry, with similar materials required, e.g. diesel. As stated above, the felling of 6.8ha of woodland would provide additional raw materials for the construction and craft sectors.

Raw Materials	Quality	Negative
	Extent	County
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Irreversible
	Direct/Indirect	Direct effect on supply of materials such as fossil fuels (diesel)
	Significance	Neutral (IEMA 2020)

Table 5.31: EPA Description of Effects – Raw Materials, post-operational phase

Operational Phase

15.111 Waste volumes associated with the Operational Phase of the proposed development are anticipated to be very low and significantly less than 0.1% of the available landfill capacity of the Southern Region. There are existing waste management arrangements in place in relation to general waste, ancillary generation of operational waste (e.g. batteries, tyres, waste oil). These arrangements will remain in place for the duration of the operational stage.

Waste Volumes	Quality	Negative
	Extent	County
	Probability	Unlikely
	Frequency	Rarely
	Duration	Long-term
	Reversibility	Irreversible
	Direct/Indirect	Direct effect on capacity of landfill sites
	Significance	Imperceptible (EPA) Neutral (IEMA 2020)

Table 5.32: EPA Description of Effects – Waste, operational phase

15.112 Materials such as lubrication oils and fuel oil, will be required during the Operational Phase of the proposed development. The anticipated volumes used on site are predicted to be significantly less than 1% by volume of the regional baseline availability.

15.113 The proposed development will result in the extraction of limestone which is a valuable raw material for the construction industry.

Raw Materials	Quality	Positive
	Extent	County
	Probability	Likely
	Frequency	Daily
	Duration	Long-term
	Reversibility	Irreversible
	Direct/Indirect	Direct effect on supply of limestone aggregates
	Significance	Neutral (IEMA 2020)

Table 5.33: EPA Description of Effects – Raw Materials, operational phase

Post Operational Phase

15.114 The restoration of the proposed development will require minimal raw materials and would generate minimal waste streams. Fertiliser will be used during the re-planting process,

however the volumes will be carefully managed to ensure that excessive amounts are not utilised. No other raw materials or waste will be used or generated during the restoration process.

Waste & Raw Materials	Quality	Negative
	Extent	County
	Probability	Likely
	Frequency	Daily
	Duration	Short-term
	Reversibility	Irreversible
	Direct/Indirect	Direct effect on capacity of landfill sites & supply of limestone aggregates.
	Significance	Neutral (IEMA 2020)

Table 5.34: EPA Description of Effects – Waste & Raw Materials, post-operational phase

Cumulative Effects / Synergistic Effects

15.115 In the assessment of cumulative effects other permitted and proposed developments in the study area have been considered where they have the potential to generate cumulative effects with the proposed development. Chapter 2 sets out the methodology for identifying those developments which have the potential to cause cumulative effects. It excluded developments that were already constructed as these are already assessed as part of the baseline. Also excluded were small scale developments that would not have the potential to cause cumulative effects. The following developments were short-listed as having the potential to result in cumulative effects:

- 21508: P Hennessy and Co Ltd, Sheastown, Bennettsbridge, Co. Kilkenny: the development consists of a total area of 15.7 Hectares comprising of the following: Continuation of use of the existing pit consisting of 6.8 Ha. as previously granted planning permission under P04/136, P10/601 and P12/604; Extension of the pit into an adjoining greenfield area consisting of 8.9 Ha. which will be subject to extraction and occasional processing of material: Continuation of use of the existing processing infrastructure (crushing, screening and washing plant), concrete batching plants, garage, workshop, fuel storage shed, wheelwash, office/laboratory and all other ancillary facilities; Landscaping and restoration of the site including construction of berms and all associated ancillary facilities/works; The applicant is seeking a 25 year permission as part of the planning application. The application is accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement.: Granted Conditional 07/12/2021
- 2560187: Rohan Dairies Ltd. Kilree, Sheastown, Co. Kilkenny, R95XTK2: construction of 2 no. agricultural sheds consisting of cubicles, feeding area and underground slatted slurry storage tanks and construction of 2 no. silage pits and all associated site works: Further information received 16/07/2025.

Cumulative Effects – Material Assets of Human Origin

Land Use

15.116 There are no potential cumulative effects of the proposed development with other developments on property. The ownership of the above developments would not be affected by the proposed development.

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Property

15.117 There are no additional cumulative effects of the proposed development with other developments on property. The ownership of each of the above respective developments would not be affected by the proposed development.

Transport Network

15.118 The above development is considered as part of the baseline assessment for traffic, which has concluded that the existing junctions and road network can continue to operate without significant effects.

Recreation & Amenity

15.119 No significant adverse cumulative effects on recreation and amenity are anticipated due to the operation of the above development as it comprises an existing operation.

Public Utilities

15.120 No significant cumulative effects on public utilities are anticipated due to the operation of the above development.

Cumulative Effects – Material Assets of Natural Origin

Land Resources

15.121 See Chapter 6 and 12 above, no significant adverse cumulative effects on land resources are anticipated.

Geological Resources

15.122 Both quarries have been longstanding features in the landscape. No additional significant adverse cumulative effect is therefore likely to occur.

Natural Resources

15.123 Each of the above sites has been assessed in terms of their potential effects on ecological and landscape resources and have been determined as acceptable. No potential cumulative effects with the proposed development are anticipated.

Raw Materials & Waste

15.124 The proposed development offers potential material supply for groundworks associated with other small developments in the area. No other potential cumulative effects have been identified.

15.125 Waste volumes associated with the above development are not likely to be substantial and therefore no potential cumulative effects are anticipated.

Transboundary Impacts

15.126 It is not anticipated that the impacts of the proposed development would have any significant transboundary effects on material assets.

Interaction with Other Impacts

15.127 It is not anticipated that the effects of the proposed development on material assets would interact significantly with other impacts.

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Do Nothing Scenario

- 15.128 Under the 'do-nothing' scenario, the existing quarry would continue to operate the quarry as permitted under 18/858.
- 15.129 In the short-term period, there would be no change in the operations at the site and consequently no changes in emissions to soil, water, air or noise and vibration. In the medium term the quarry would be forced to close and there would be a reduction in emissions associated with the operation of the quarry, which would correspondingly result in a reduction in any potential effects on human receptors.
- 15.130 However the opportunities for local employment and the associated revenue within the local economy would not be realised. Furthermore, there would be a reduction in the volume of material available to the construction sector locally.
- 15.131 The application site is situated in a part of County Kilkenny that is relatively free from constraints such as nature conservation designations, in addition it is located relatively near to a number of urban centres and sources of demand. The do-nothing scenario could result in pressure for alternative, less suitable locations being proposed for quarries to address this short-fall in supply.

Mitigation Measures

- 15.132 Reference should be made to the following chapters of this EIAR for detailed mitigation measures to address the potential pathways for effects on material assets of human origin:
- Chapter 5: Population and Human Health.
 - Chapter 13: Traffic.
 - Chapter 14: Cultural Heritage.
- 15.133 Reference should be made to the following chapters of this EIAR for detailed mitigation measures to address the potential pathways for effects on material assets of natural origin:
- Chapter 7: Land, Soils and Geology.
 - Chapter 8: Water.
 - Chapter 10: Air Quality.
 - Chapter 11: Noise.
 - Chapter 12: Landscape.
- 15.134 The following waste management procedure should be extended to include waste generated at the application site:
- A. Categorise waste according to type - hazardous/non-hazardous, recyclable, non-recyclable, compostable.
 - B. Store waste appropriately - waste should be stored and labelled according to categories set out above. All waste containers should be stored on an Impermeable surface and protected from the risk of accidental leaks.
 - C. Transport & Disposal: An appropriately licenced and trained operator should be responsible for the transport and disposal of all waste generated at the site. If

hazardous waste is being disposed off, a hazardous waste Identification number must be assigned.

- D. Plan for emergencies: Maintain spill and appropriate emergency response equipment In an accessible area.
- E. Training: All employees and contractors should be trained In the waste management procedure, including the plan for emergencies.
- F. Keep records: Records should be kept to ensure that waste Is stored, transported and disposed of according to the procedures set out in the waste management plan.

Residual Impact Assessment

Operational Stage Impacts

15.135 Following the implementation of mitigation measures identified above and in other chapters of this report, no residual impacts on material assets are anticipated in the operational phase of the development.

Post Operational Stage Impacts

15.136 Following the implementation of mitigation measures identified above and in other chapters of this report, no residual impacts on material assets are anticipated in the post-operational phase of the development.

Monitoring

15.137 Monitoring is not proposed in relation to material assets.

Difficulties Encountered

15.138 No significant difficulties were encountered.

References

Catchments website (<https://www.catchments.ie/maps/>)

Environmental Impact Assessment of Projects. Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission 2017).

Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2022).

Environmental Protection Agency database (<https://gis.epa.ie/EPAMaps/>)

Kilkenny County Council Planning database

Geological Survey of Ireland database (www.dcenr.maps.arcgis.com)

http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/Key-Tourism-Facts-2018.pdf?ext=.pdf

[http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/2_Regional_SurveysReports/2017-topline-regional-performance-\(003\).pdf?ext=.pdf](http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/2_Regional_SurveysReports/2017-topline-regional-performance-(003).pdf?ext=.pdf)

https://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/4_Visitor_Insights/Key-Tourism-Facts-2019.pdf?ext=.pdf

<https://www.failteireland.ie/Research-Insights/Activities/visitor-numbers-to-attractions-dashboard.aspx>

IEMA guide to Material and Waste in Environmental Impact Assessment," IEMA , 2020.

IEMA Guide to: Materials and Waste in Environmental Impact Assessment (IEMA 2020)

Implementation Of Directive 2001/42 On The Assessment Of The Effects Of Certain Plans And Programmes On The Environment

Ordnance Survey Ireland (<https://store.osi.ie/> & <http://map.geohive.ie/mapviewer.html>)

Waste Framework Directive (Directive 2008/98/EC)