



10.0 MATERIAL ASSETS

10.1 Introduction

This Chapter of the EIAR addresses the impacts of restoration activities at the Application Site on material assets located in the vicinity of the quarry. Material assets comprise the physical resources in the environment, which may be of human or natural origin. The objective of the assessment contained in the following sections is to ensure that these assets have been used in a sustainable manner with respect to operations at the Application Site.

10.2 Methodology

The information for the assessment of the impacts of the Application Site was obtained from:

- Site visits to the area; and
- Kildare County Council Development Plan (2017 - 2023).

During the assessment, due regard has been given to aspects such as infrastructure and economic activities in the vicinity of the Application Site, and the impacts of restoration activities. The study has also had regard to the EPA publication 'Revised Guidelines on the Information to be contained in Environmental Impact Statement' (Draft, September 2015). The material assets, which have been identified as being within and adjacent to the Application Site and which may be directly affected by the Application activities are addressed in the following sections in terms of existing environment, impacts and mitigation measures.

10.3 Existing Environment

The material assets that have been identified within the Application Site and in the surrounding landscape are listed below:

- Geological Resource and Local Economy;
- Land Resource, Water Resources and Local Agriculture;
- Road Network and Access;
- Scenic Routes;
- Geological Heritage;
- Property Values; and
- Public Utilities.

The road network is addressed in detail within this EIAR in Chapter 3 (Population and Human Health, including Traffic) and is not considered further here.

10.3.1 Geological Resource and Local Economy

The geology of the Application Site is described in detail in Chapter 5.0 (Soils and Geology). As outlined previously, the activities undertaken at the Application Site included the extraction and processing of sand and gravel for general use primarily in the construction industry. There are two further gravel extraction and processing facilities located to the immediate west and south-west of the Application Site. There is no further planned extraction at the Application Site prior to restoration. There is an abattoir, Moyvalley Meats, located to the north-east of the Site.

10.3.2 Land Resource, Water Resources and Local Agriculture

The Application Site is described in detail in Chapter 2 (Site Description), Chapter 4 (Biodiversity) And Chapter 6 (Water). The Application Site comprises approximately 13.9 ha. Lands in proximity to the Application Site are largely rural in nature, with a mixture of farmland and ribbons of residential developments along adjacent roads. Agricultural land is used as both tillage and pasture. Some isolated residential units are also found throughout the landscape, and in close proximity to the Site boundary.



There are a number of surface water features, such as ponds, and the Rivers Glash and Boyne and Balrinnet Stream in close proximity to the Site.

10.3.3 Road Network and Access

The Application Site is to be accessed from the L1002 Local Road, with the R148 likely to act as the main traffic route to the L1002. The L1002 Local Road runs in a north to south direction from its junction with the R148 at its northern extent to its junction with the L1006 at the Calfstown Crossroads at its southern extent, with a priority crossroad junction located at Tanderagee (L1002/L5004/L5005 junction). The entrance to the site is located approximately 200 m south of the Tanderagee Crossroads.

At the quarry access, the L1002 is 7 m wide and has a relatively straight alignment, although visibility improvements are required by the cutting of vegetation and installation of stop signs. There are narrow grassed verges on both sides of the carriageway, but no hard shoulder or hard strip at the edge of carriageway. Boundary hedges run along the back of the verge on the eastern side of the L1002. There is a ditch and stream which runs along the western side of the carriageway at the back of the verge, travelling beneath the paved access to the quarry. The L1002 crosses the M4 Motorway just south of the L1002/R148 junction.

The R148 is a wide single carriageway Regional Road. There is a long right turn lane, approximately 100 m in length, provided for vehicles turning right into the L1002. There is a left turn lane provided from the R148 and an auxiliary lane is provided on the R148 for left turning vehicles exiting the L1002. The L1002 is very wide on the approach to the junction, the approach lane measuring 7m.

At Tanderagee Crossroads, the L5004 forms the western arm at the crossroads and is approximately 6 m wide. The L5005 forms the eastern arm at the crossroads and is approximately 6 m wide. There are residential properties on the L5004 and L5005 close to the crossroads and there is a cluster of residential properties on both sides of the L1002 to the north of the crossroads. There is a wide, raised grass verge on the southern side of the L5005 immediately upstream of the junction. There is evidence of rutting at the exit from the junction from large left-turning vehicles. The Stop line and road markings at the junction are faded and the carriageway is in poor condition on both corner radii of the junction. The carriageway is also in a poor condition at the Stop line.

The road network and access to the Site are fully described in Chapter 3.0 (Population and Human Health).

10.3.4 Scenic Routes

There are a number of scenic views, routes and hilltop views located within the study area. Those that are relevant to the Application have been included within the visual impact section of the EIAR's Landscape chapter. One scenic route (SR) was identified at views from county roads (L5017 & L26) of Carbury Castle and Hill: Teelough road junction with the R402 and upland area at Mylerstown.

10.3.5 Geological Heritage

Section 13.9 of the Kildare County Development Plan 2017-2023 identifies the Carbury Castle as a site of geological importance due to its Lower Carboniferous age Limestone.

10.3.6 Property Values

Property values reflect current local market trends.

10.3.7 Public Utilities

An overhead electrical line operated by ESB Networks which provides a local supply of electricity to the area runs in a northeast-southwest direction through the site, with one pylon situated on the site. There are two private groundwater supply wells located along the immediate boundary of the Site to the north-east and north-west of the Site, and a public supply well providing water to 14 homes in Clonuff, approximately 1.5 km to the north-east of the site.

10.4 Impacts

The impacts of the Application Site are discussed below with regard to material assets.



10.4.1 Geological Resource and Local Economy

Extraction in the vicinity of the Site is currently present at the two neighbouring quarrying sites to the west and south-west. The County's Development Plan recognises that the aggregate and concrete products industry contributes to the development of the national and local economies by the proper use and management of natural resources for the benefit of the community and the creation of employment opportunities. The extraction industry is a very significant industry serving the construction, industrial, agricultural and energy sectors, the quarrying of aggregate is considered an acceptable use of these resources.

The Application Site is planning to move into the backfilling and restoration phase of works; a move which is perceived to provide a net gain to the local area. Provided the design and mitigation measures outlined in Chapter 2.0 (Project Description), Chapter 4.0 (Biodiversity), Chapter 5.0 (Soils and Geology) and Chapter 9.0 (Landscape), there is no anticipated to be no long term deleterious effects on the remaining overburden caused by the activities on-Site. The proposed development will maintain the viability of the operations in this area (Chapter 2.0 Project Description) and will contribute significantly to local and regional economies. Thereby contributing to the direct employment of two people at the Site and creating indirect employment in a number of service areas and industries.

10.4.2 Land Resource, Water Resources and Local Agriculture

Given the prevalence of agricultural land in the area, the final restoration plan has been proposed to return the Site to agricultural land for pasture and tillage. This will create a landform more in keeping with the surrounding landscape, and is likely to significantly improve biodiversity potential as presented in Chapter 4.0 (Biodiversity).

The farmland within the immediate vicinity of the proposed development consists of good grazing and arable land. With the implementation of widely accepted mitigation measures at the Site the proposed works will have no impact on the agricultural resource of the area, but in fact act as a positive net gain.

As detailed in Chapter 6, Water, backfilling and restoration works are due to occur within both the saturated and unsaturated zones. However, following the design and mitigation measures outlined in Chapter 2.0 (Project Description), Chapter 5.0 (Soils and Geology) and Chapter 6.0 (Water) there will be no impact of site activities on the downgradient groundwater and surface water environment; nor will there be any impact to local water supplies.

10.4.3 Road Network and Access

Impacts to the road network have been discussed in Chapter 3.0 (Population and Human Health).

Link capacity analysis was carried out on the L1002 (North and south of the Tanderagee Crossroads), the L5004 (west of the Tanderagee Crossroads), the L5005 (east of the Tanderagee Crossroads), the R148 (east and west of the R148/L1002 junction) and the L1002 (south of the R148/L1002 junction). In all cases, it was determined that the roads will continue to operate within capacity for each of the assessment years 2019, 2024 and 2034.

Junction capacity analysis at the Tanderagee Crossroads, the L1002/R148 junction and the site access junction indicate that they will continue to operate within capacity for each of the assessment years 2019, 2024 and 2034.

The traffic generated by the proposed development represents between 7.08% and 8.66% of total traffic on the L1002 between 2018 and 2034.

10.4.4 Scenic Routes

The Application Site is located within an area of 'Low' sensitivity as designated in the Kildare County Development Plan (Figure 14.2 - KCC County Development Plan 2017-2023). Six viewpoints were selected within the study area to represent a range of viewing distances, angles and receptor types. One of these viewpoints aris located along the scenic route (SR28) from county roads (L5017 & L26) of Carbury Castle and Hill: Teelough road junction with the R402 and upland area at Mylerstown.

The primary means of mitigation for this project is the progressive restoration of the quarry as phased works are completed, in order to achieve a restoration of the Application Site.



Visual impacts at the viewpoints were assessed for the restoration of the proposed development.

Visual impacts have been assessed from 6 no. representative viewpoints using photomontages that depict the end use, grassed mound. In all instances, the effect on infilling and restoring the existing quarry to agricultural grassland is deemed to result in an **Imperceptible / Positive** significance of impact.

10.4.5 Geological Heritage

Due to the proximity of the Application Site (1.5 km to the north), proposed traffic route and the proposed restoration plan, there will be no impacts on the Carbury Castle geological Heritage area.

10.4.6 Property Values

Property in the locality of the Site largely consist of agricultural land and ribbon development on local roads. There will be no significant adverse impact on the property values of the adjacent holdings due to the proposed restoration activities. Impacts from the proposed restoration works are predicted to be not significant; the general character of the immediate surrounding lands consists of both agricultural and sand and gravel extraction, therefore the character of the area will not be altered.

Furthermore, due to the nature of the proposed development there will be no blasting activities occurring on site. Therefore there will be no impacts to surface structures from vibration effects.

10.4.7 Public Utilities

Previous extraction activities at the Site were planned so that there was no extraction underneath, or within close proximity of, the electrical supply line; any subsequent backfilling and restoration works will not require activity close to the line and therefore there are anticipated to be no impacts upon this electrical supply line.

Following the design and mitigation measures outlined in Chapter 2.0 (Project Description), Chapter 5.0 (Soils and Geology) and Chapter 6.0 (Water) there will be no impact of site activities on the downgradient groundwater and therefore no impact to local potable water supplies.

10.5 Mitigation

Mitigation measures to be implemented during the restoration of the quarry will involve minimising any impacts on surrounding sensitive receptors. These measures are discussed in respective Chapters of this EIAR, and relevant measures relating to material assets, including the road network, geological and land resources are summarised below:

- Measures to minimise Groundwater, Air Quality and Noise impacts at nearby residences will continue to be implemented as per Chapters 6.0, 7.0, and 8.0;
- Mitigation measures for environmental indicators are already in place at the Site and included in the Environmental Management Plan (EMP). The effective implementation of these mitigation measures will continue to be monitored;
- Any processing plant and / or mobile plant on the Site be regularly maintained and kept in good working order;
- Utilise only uncontaminated materials comparable to that of virgin ground in restoration activities; and
- Qualified site staff will ensure compliance with relevant safety and statutory legislation and best practices recommended by Waste Management (Licensing) Regulations, 2004 to 2011.

10.6 Residual Impacts

Mitigation measures have been undertaken to minimise any impacts associated with the land resource / material assets at the Application Site, such as planned restoration to land use and topography sympathetic to the surrounding landscape, and use of only uncontaminated materials comparable to that of virgin ground in restoration activities.

As a result of the mitigation measures at the Application Site, it is considered that any impacts associated with backfilling and restoration works undertaken at the Application Site will not contribute to any residual impacts on material assets in the surrounding environs.



10.7 Cumulative Impacts

As no significant impacts on material assets were identified, there is no potential for cumulative impacts as a result of other activities being undertaken within the vicinity of proposed Site.



10.8 References

EPA. 2015. Draft - Revised Guidelines on the Information to be contained in Environmental Impact Statement. Environmental Protection Agency, Johnstown Castle Estate, Co. Wexford, Ireland. Prepared by - CAAS Environmental Services Ltd., 6 Merrion Square, Dublin 2.

EPA. 2015. Draft – Advice Notes For Preparing Environmental Impact Statements. Environmental Protection Agency, Johnstown Castle Estate, Co. Wexford, Ireland. Prepared by - CAAS Environmental Services Ltd., 6 Merrion Square, Dublin 2.

Kildare County Development Plan 2017-2023

<http://www.kildare.ie/CountyCouncil/Planning/DevelopmentPlans/KildareCountyDevelopmentPlan2017-2023/Volume1/>