11 Landscape and Visual

11.1 Introduction

This Remedial Landscape and Visual Impact Assessment (rLVIA) has been prepared to accompany a substitute consent application for a disused quarry located in the townland of Coolsickin or Quinsborough, Monasterevin, Co. Kildare.

This substitute consent application will be accompanied by an application under Section 37L of the Planning and Development Act 2000 as amended for the restoration of the quarry footprint to land contours similar to previous topographical levels and to agricultural use.

The Substitute Consent application relates to works that have taken place from 1 January 2000–31 December 2006, which are illustrated and described in detail in Chapter 2 (Project Description) of this rEIAR.

Landscape Impact Assessment (LIA) relates to assessing effects of a development on the landscape as a resource in its own right and is concerned with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

Visual Impact Assessment (VIA) relates to assessing effects of a development on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements.

11.1.1 Statement of Authority

This rLVIA was prepared by Zeba Haseeb, B.S., M.S. in Environmental Science, an LVIA consultant with Macroworks. Zeba has contributed to numerous projects, and worked on feasibility studies, constraints assessments, and the preparation of LVIA chapters for a range of developments. Richard Barker, MLA, PgDip Forestry, BA Environmental, MILI. has over 20 years' experience in LVIA and has worked on the Landscape and Visual Assessment for a vast range of developments throughout Ireland, including wind and solar energy, infrastructure, quarry developments, flood relief, residential and recreation projects.

11.1.2 Technical Scope

Production of this rLVIA involved:

- A desktop study to establish an appropriate study area, relevant landscape and visual designations in the expired, but relevant Kildare County Development Plan 1999 and Kildare County Development 2005-2011.
- Fieldwork to establish the landscape character of the receiving environment and to confirm and refine the set of representative viewpoints to be used for the rLVIA visual assessment stage;

- Assessment of the significance of the landscape impact of the Project as a function of landscape sensitivity weighed against the magnitude of the landscape impact;
- Assessment of the significance of the visual impact of the Project as a function of visual receptor sensitivity weighed against the magnitude of the visual impact. This aspect of the assessment is supported by photomontages prepared in respect of the selected viewpoints.

For more detailed information on the Landscape and Visual Impact Assessment Criteria, as well as assessment methodology used in this appraisal, please see section 11.4.

11.1.3 Geographical and Temporal Scope

The historical arial mapping and documentation held by Kildare Country Council indicates extraction of aggregates within the Substitute Consent Application Site (referred to as 'Application Site' or 'Site') is estimated to have commenced within 2000 and the operation had ceased within 2006. Accordingly, the baseline for this rEIAR has been set to 01 January 2000, and the rEIAR process has assessed environmental impacts from that date to 31 December 2006 (see Chapter 2 Project Description for detail). This assessment period equates to approximately five years and is identified as 'short-term' duration (those lasting one to seven years *sensu* EPA 2022).

The geographical study area for the assessment covers the physical extent of the EIA boundary for the Site as shown in Figure 11-2 and the assessment area has been extended as appropriate to identify the relevant Population and Human Health receptors surrounding the Project (the Study Area is within a 5 km buffer of the rEIAR Boundary). In the context of this rEIAR, the Substitute Consent Application Site boundary is located entirely within the EIA Boundary and contains lands which form the historical extraction area and quarry working areas (i.e. the historical stockpile areas). The Substitute Consent Application Site boundary is shown in Figure 11-1.

Figure 11-1 - Substitute Consent Application Area (shown by red line) and EIA Boundary (shown by red line).

Study Area

A 5 km radius study area has been selected for this impact assessment (See Figure 11-2 below). This strikes a balance between potential significant impacts to have occurred (most potential within 2 km) and the need to examine a number of sensitive receptors such as settlements, amenity areas and scenic designations within the wider landscape context.

Figure 11-2 - 5 km study area extents map (outermost red line is the study area).

11.2 Project Description Summary

The Project seeking substitute consent consists of extraction of sand, gravel and rock over an area of 7.87 ha through blasting, mechanical excavation and rock breaking along with aggregate processing and stockpiling. The Project was operational between the years 2000-2006.

A full project description is presented in Chapter 2 (Project Description).

11.3 Legislative and Policy Context

11.3.1 Legislation

The role of landscape and protection of its character through establishing planning policies and designations as part of the decision making at national through to county council level is governed by the Planning and Development Act 2000 (as amended).

The Planning and Development Act (as amended) has applied the same meaning to landscape as in Article 1 of the European Landscape Convention (ELC) 2000, ratified by Ireland in 2004, which states Landscape as being an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. The Irish Government has produced the National Landscape Strategy 2014-2025 to implement the ELC which aims to implement six core objectives through decision making including recognise landscape in law, national landscape character assessment, landscape policies, increased landscape awareness, education and public participation.

The general EIA legislation and guidance documents are listed in Chapter 1 (Introduction) of this rEIAR.

11.3.2 Relevant Policies and Plans

This section reviews landscape related planning policies within the County Development Plans (CDPs) of Kildare County Council (KCC), as the Project falls within the jurisdiction of Co. Kildare. The review includes expired CDPs, given that this rEIAR baseline assessment covers the period from 1st January 2000 to 31st December 2006.

The study area extends beyond Co. Kildare, encompassing areas of two other counties. The Laois County border is located approximately 600m to the west, while the Offaly County border lies about 2.7km to the north of the substitute consent application site.

A review of the Laois County Council website indicates that the earliest available online County Development Plan (CDP) dates from 2011, while for County Offaly, the earliest accessible plan begins in 2021. As the development plans for the baseline assessment period for these counties are not available online, they have not been considered in this review.

Accordingly, this assessment focuses on the following expired CDPs relevant to the baseline period:

- Kildare County Development Plan 1999 (expired), and
- Kildare County Development Plan 2005-2011 (expired).

The local planning and other policies from the above development plans are reviewed, which identify key relevant development objectives and policies.

Kildare County Development Plan 1999 (expired)

The rEIAR is retrospective in description of Project and context and therefore a review of previous County Development Plans for baseline has been undertaken.

Landscape Character Assessment

A 1999 Landscape Character Assessment of County Kildare identified the Landscape Character Area in which the site was located as 'The Plainlands of Kildare'. These plainlands were divided into further three categories with the site located in 'The Plain of Central and Southern Kildare'. This area was defined in Kildare CDP 1999 as:

"*This plain varies from very flat to strongly undulating topography which has been formed on rocks of the Carboniferous Limestone series and the variable covering of bounder clay, and sand and gravel, that overlies them throughout most of the area. the southern part of this area is underlain by granite around Castledermot. These lands are mainly well drained with only isolated areas of badly drained land.*

This lowland area has been the most important area of settlement in the country since at least prehistoric times. This prosperous and well-ordered rural landscape, with its wide roads, large farms, and extensive regularly shaped fields enclosed by a combination of ditches and hedgerows, is a legacy of the agricultural improvements sponsored by the landowners of the 18th and 19th centuries. Recent landscape changes, especially towards the south of the county, have seen the removal of many of the hedgerows and the amalgamation of fields into larger units, mainly for tillage enterprises."

Areas of High Amenity

Section 1.23 of the Kildare CDP 1999 stated:

"The valley of the River Barrow is of great amenity and recreational value in the country and the region. The river has great tourist potential and is linked to the Grand Canal mainline system at Lowtown. The main recreational use of the Barrow is for game and coarse fishing, picnicking and swimming. The river also has development potential for boating, canoeing and cruising as part of the Barrow navigation System. The tributaries of the Barrow and the canal system also have good fishing."

Policies – General Landscape

Section 2.23 of Kildare CDP 1999 stated for Areas of high Amenity:

"It is the Council's policy to exclude from this area any development which would be prejudicial to its natural beauty, amenity, or recreational capacity. It is council's policy to co-operate with appropriate authorities in preparing a water quality management plan which would ensure the monitoring and protection of water quality and the conservation of fish stocks. The minimum flow of water necessary for the conservation of the river's ecology will be identified by a study, and it will be the Council's policy to maintain that flow".

Section 2.24 stated in relation to views and prospects:

"In general, it is the policy of the council to preserve, improve and open up places or areas from which views or prospects of high amenity value may be enjoyed by the public. Parking places and viewing places will be constructed and any walls, fences, hedges or other

obstruction s to these views will be lowered or removed. It is intended to exclude from these areas and development which would be prejudicial to their natural beauty.

The environmental setting and environs of all buildings, features and items listed for preservation are considered to eb views which are themselves worthy of preservation. Such views are considered to be of special amenity value and/or special interest."

Section 2.29.1 stated in relation to Sand and gravel and rock quarrying:

- *"It is policy of the Council that a survey and examination of both existing pit areas and potential sand and gravel deposits in the country be undertaken and to assess the interactions between the development of these deposits in the country be undertaken and to assess the interactions between the development of these resources and future land uses. To assist in the survey, it is intended that an aerial survey of all sand and gravel workings in the country will be made. This will stablish the current extent of existing workings and will pinpoint areas where rehabilitation s needed. The survey results could be used as evidence against any future unauthorised sand and gravel developments. It is intended that this survey would be continually updated.*
- *No sand and gravel extraction will be permitted under Class A soils, in areas of high amenity (as defined in this plan) and their environs, or where conflict with the bloodstock industry might arise. Apart from these exclusions, sand and gravel extraction will be considered on its merits elsewhere within the county having regard to the policies of this plan. Within the East Kildare Upland Area, sand and gravel extraction will be permitted only in areas zoned for that purpose.*
- *It is the policy of the council to ensure that all existing workings shall be rehabilitated to suitable land uses and that all future extraction activities will allow for the rehabilitation of pits and proper land use management. The use of landfilling with waste, other than topsoil, subsoil, and builders' rubble, is not considered to be an acceptable method of rehabilitation of pits.*
- *It is the policy of the council to ensure that the full cost of road improvements where is necessitated for this industry shall be borne by the industry itself.*
- *It is the council policy to ensure that rock quarry workings should not detract from the visual quality of the landscape. It is council policy that all such workings should be subjected to landscaping requirements, similar to those for sand and gravel workings and that worked out quarries should be rehabilitated".*

Scenic Routes and Viewpoints (Kildare CDP 1999)

Within the study area, Kildare County Development Plan (CDP) identified five designated scenic viewpoints:

Scenic Viewpoints – Grand Canal

- GC1 – Macartney's Bridge, Coolsickin or Quinsborough
- GC25 – Wilson's Bridge, Kiltaghan North

- GC26 – Ummeras Bridge, Ummeras More
- GC28 – High Bridge, Oldgrange
- Barrow Bridge – Monasterevin

Scenic Viewpoints – River Barrow

- RB6 – Pass Bridge, Passlands

Scenic Routes

- No designated scenic routes were present within the 5 km study area.

Kildare County Development Plan 2005-2011 (expired)

A review of the Kildare County Development Plan (2005-2011) indicates that the plan categorised Landscape Character Areas (LCAs) into five categories. The Project was situated within the Lowlands Area. Furthermore, the LCAs were subdivided into Landscape Units, with the development situated within the Southern Lowlands.

The Lowlands Areas were defined in the Kildare County Development Plan (2005-2011) as:

"Plains of County Kildare principally comprise fertile lands with relatively high levels of local population and intensive land management. The slope and topography of such units occurs in a shallow/gradual transition; the area is generally characterised by flat terrain and low vegetation. Concentrations of tillage lands in this lowland area tend to be characterised by extensive views across large fields with low and highly maintained hedges".

The Southern Lowlands were described in CDP 2005-2011 as:

"This landscape character unit comprises an extensive lowland area to the south-west of the County, the River Barrow and the Grand Canal running along its western quarter. This area is characterised by generally flat terrain and open lands with regularly shaped large field patterns. Hedgerows are well maintained and low, with scattered trees along the field boundaries that partially screen the lowest lying areas. Nevertheless, the generally flat topography and the low lying vegetation allow long-distance and extensive visibility. Distant views include the skylines of the Eastern Kildare Uplands, the Newtown and Hughstown Hills and the Wicklow Mountains to the east, the Chair of Kildare hilltops to the north-east and the neighbouring hills of County Laois to the south-west".

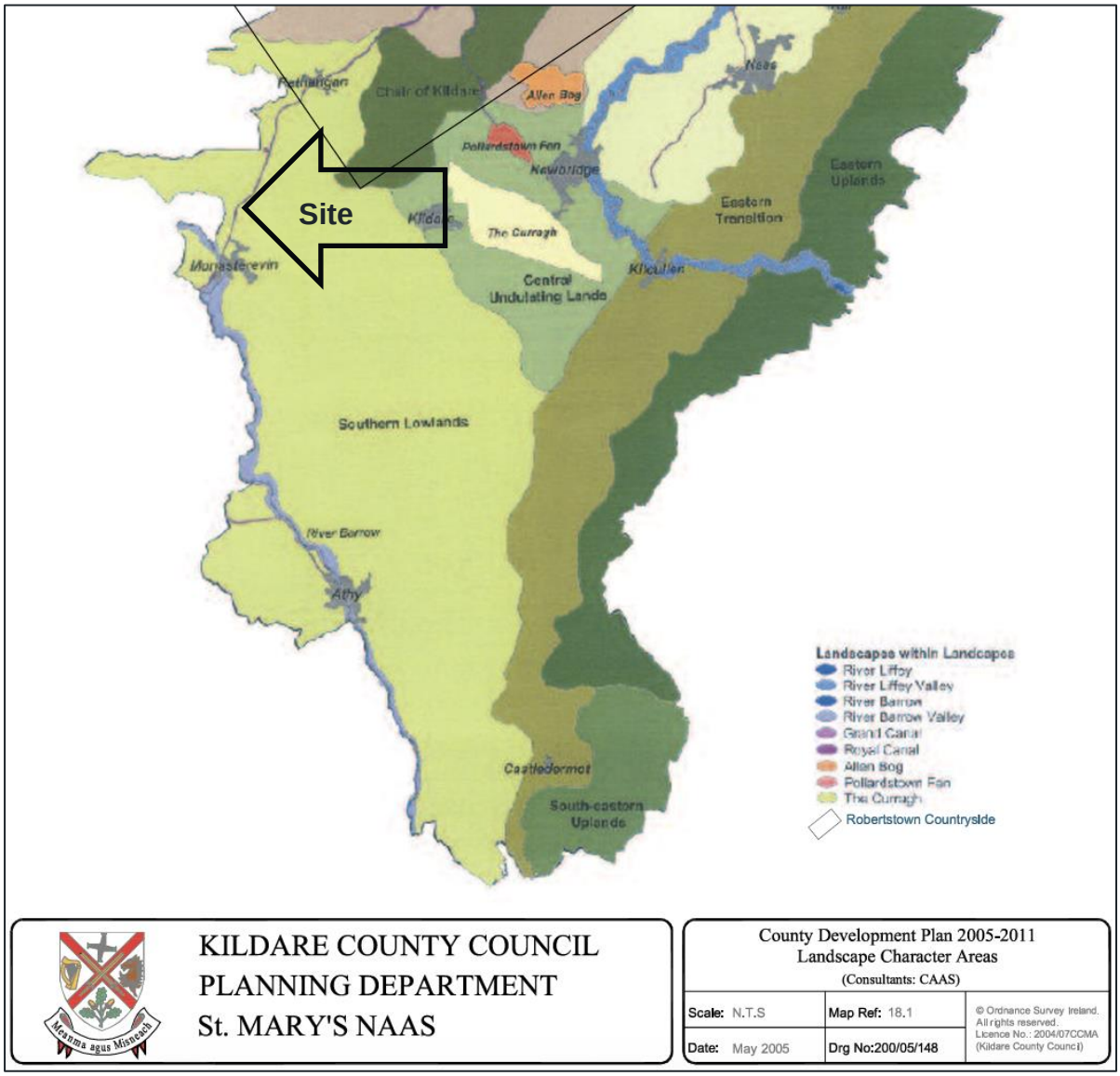

Figure 11-3 Kildare CDP 2005-2011 Landscape Character Areas Map

According to the Kildare CDP 2005-2011 *"The Development Impact Potential Table summarises the major landscape impact issues associated with a number of development types. The Landscape Area Sensitivity is determined by the vulnerability and landscape factors within the identified Landscape Character Areas.*

In all cases on table 18.8, the top left-hand corner of the shaded boxes relates to the impact of a particular type of development, while the bottom right-hand corner relates to the sensitivity of particular landscape character area."

Table 18.8 **Likely Perception of Landscape Impacts** - Perception of Landscape Visual/Landscape Impacts versus Sensitivity of Landscape Character Area

Impact / Sensitivity	Perception Landscape Impact	Northern Lowlands	Western Boglands	North-Western Lowlands	Northern Hills	Chair of Kildare Lands	Southern Lowlands	Central Undulating	Transition Lands	Eastern Uplands	South-Eastern Uplands	Water Corridors
Landscape Sensitivity		10	14	11	17	20	12	14	16	20	18	18
Wind Farms	17	H / L	H / M	H / L	H / H	H / H	H / M	H / L	H / M	H / H	H / H	H / H
Bog/Peat Extraction	12	NA / L	L / M	L / L	NA / H	NA / H	L / L	L / M	L / M	NA / L	NA / L	L / H
Forestry	14-20	MH / L	MH / M	MH / L	MH / H	MH / H	MH / L	MH / M	MH / M	MH / H	MH / H	MH / H
Telecom. Structures	16	M / L	M / M	M / L	M / H	M / H	M / L	M / M	M / M	M / H	M / H	M / H
Extractive Industry	17	H / L	H / M	H / L	H / H	H / H	H / L	H / M	H / M	H / H	H / H	H / H
Roads	13	L / L	L / M	L / L	L / H	L / H	L / L	L / M	L / M	L / H	L / H	L / H
Rural Housing	10-14	LM / L	LM / M	LM / L	LM / H	LM / H	LM / L	LM / M	LM / M	LM / H	LM / H	LM / H

Figure 11-4 Likely Perception of Landscape Impacts in Kildare CDP 2005-2011

The Project fell within the extractive industry category and was situated in an area classified as high impact and low sensitivity. Additionally, the Project was located in close proximity to the Grand Canal pNHA.

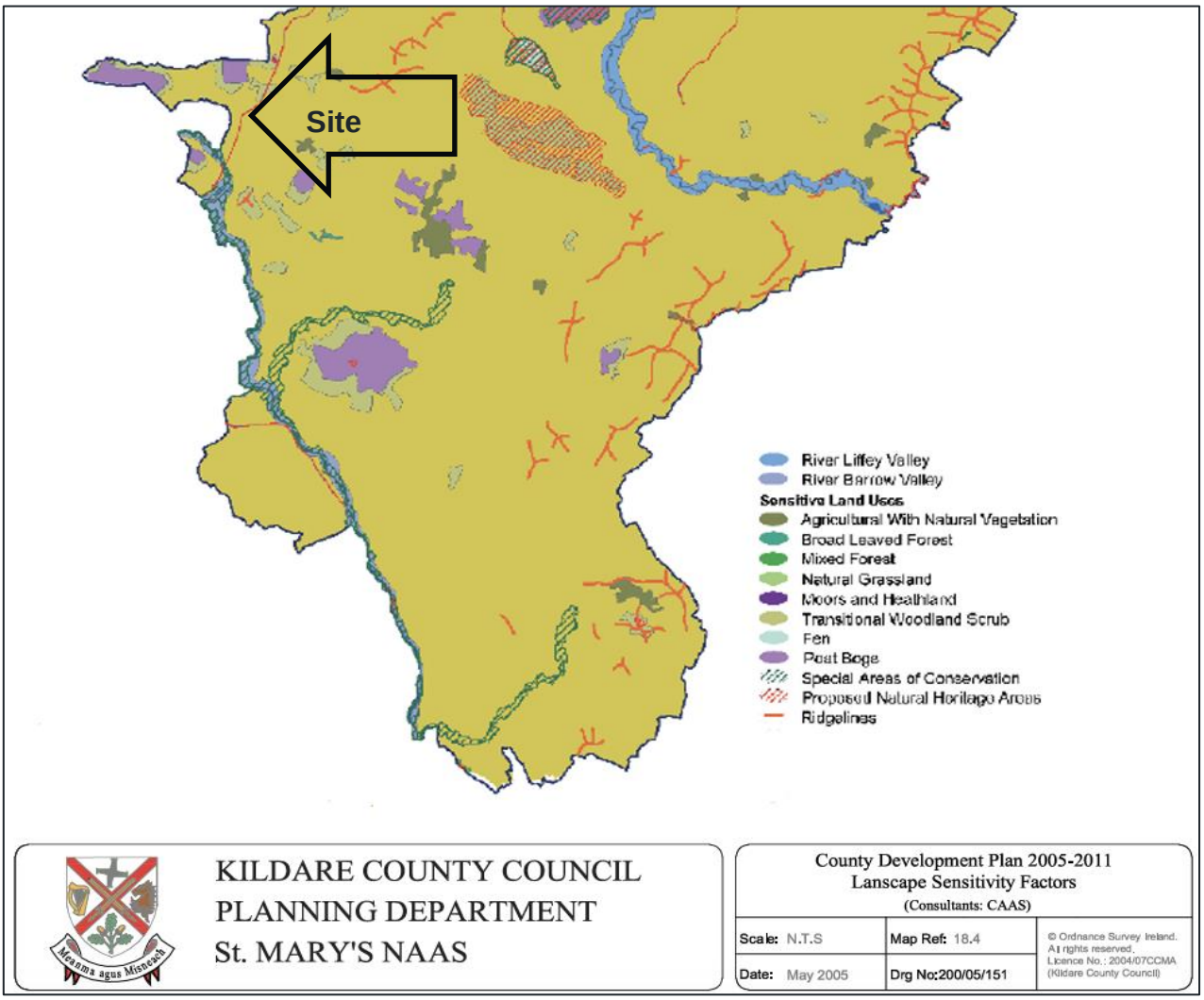

Figure 11-5 Kildare CDP 2005-2011 Landscape Sensitivity Factors

Scenic Views and Routes (Kildare CDP 2005-2011)

In the 2005-2011 Kildare CDP, several scenic viewpoints were identified within the study area, while no designated scenic routes were present within the 5 km buffer.

The designated scenic viewpoints within the study area in the 2005-2011 period were:

Scenic Viewpoints – Grand Canal

- GC1 – Old Grange Bridge, Old Grange (Previously Macartney's Bridge, Coolsickin, or Quinsborough in 1999)
- GC25 – Wilson's Bridge, Kiltaghan North
- GC26 – Ummeras Bridge, Ummeras More
- GC28 – High Bridge, Old Grange
- GC35 – Clogheen Bridge, Monasterevin

Scenic Viewpoints – River Barrow

- RB8 – Baylough Bridge, Monasterevin

Scenic Routes

- No designated scenic routes were present within the 5 km buffer.

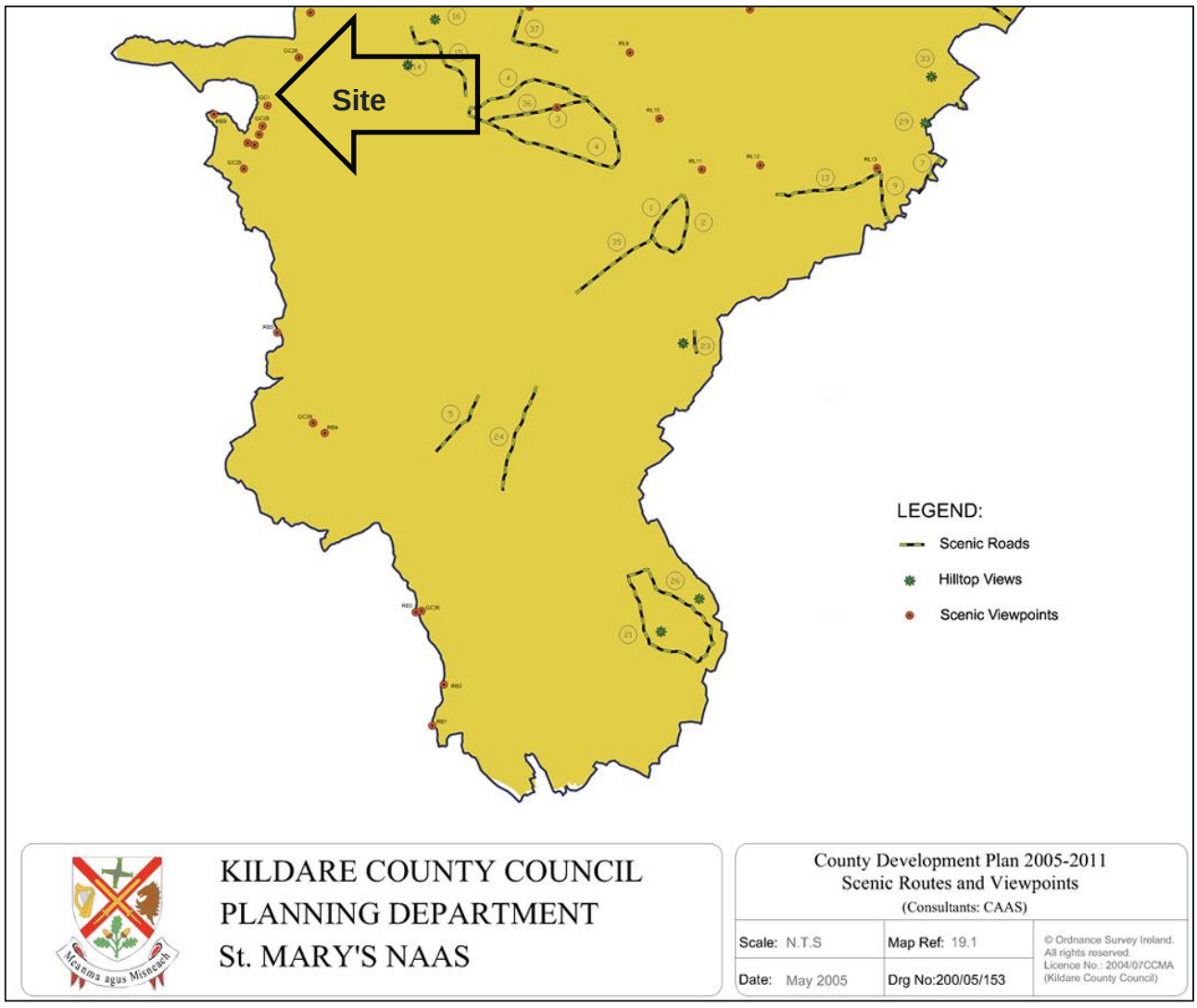

Figure 11-6 Kildare CDP 2005-2011 Scenic Routes and Viewpoints Map

11.3.3 Relevant Guidance

This LVIA uses methodology as prescribed in the following guidance documents:

- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (2022); and,
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (2013).

11.4 Assessment Methodology and Significance Criteria

This document uses methodology as prescribed in the previously mentioned GLVIA3, which follows the European Landscape Convention (ELC) definition of landscape:

"Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (Council of Europe, 2000). Thus, GLVIA-2013 covers all landscapes from "high mountains and wild countryside to urban and fringe farmland (rural landscapes), marine and coastal landscapes (seascapes) and the landscapes of villages towns and cities (townscapes)" - whether protected or degraded".

11.4.1 Landscape Impact Assessment Criteria

Landscape Sensitivity

The sensitivity of the landscape to change is the degree to which a particular setting can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics. In accordance with GLVIA3, the sensitivity of a landscape receptor (Landscape Character Area or feature) is derived from combining judgements in relation to its susceptibility to change and its value. The judgement reflects such factors as its quality, value, contribution to landscape character and the degree to which the particular element or characteristic can be replaced or substituted. Landscape Sensitivity is classified using the following criteria set out in Table 11-1.

Table 11-1 - Landscape Value and Sensitivity

Sensitivity	Description
Very High	Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character.
High	Areas where the landscape character exhibits a low capacity for change in the form of development. Examples of which are high value landscapes, protected at a national or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character.
Medium	Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
Low	Areas where the landscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated landscapes that may also have some elements or features of recognisable

Sensitivity	Description
	quality, where landscape management objectives include, enhancement, repair and restoration.
Negligible	Areas of landscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the development proposals. Management objectives in such areas could be focused on change, creation of landscape improvements and/or restoration to realise a higher landscape value.

Magnitude of Change – Landscape

The magnitude of change is a product of the scale, extent or degree of change that is likely to have been experienced as a result of the Project and to a lesser extent the duration and reversibility of that effect. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that extends beyond the immediate setting that may have an effect on the landscape character. Table 11-2 outlines criteria used to inform this judgement.

Table 11-2 - Magnitude of Change – Landscape

Criteria	Description
Very High	Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an extensive change of the landscape in terms of character, value and quality.
High	Change that would be more limited in extent and scale with the loss of important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to a considerable change of the landscape in terms of character, value and quality.
Medium	Changes that are modest in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to noticeable changes in landscape character, and quality.
Low	Changes affecting small areas of landscape character and quality, together with the loss of some less characteristic landscape elements or the addition of new features or elements that would lead to discernible changes in landscape character, and quality.

Criteria	Description
Negligible	Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable leading to no material change to landscape character, and quality.

11.4.2 Visual Impact Assessment Criteria

This part of the LVIA provides an assessment of how the introduction of the Project affected views within the landscape. It therefore needs to consider:

- Direct impacts of the Project upon views through intrusion or obstruction;
- The reaction of viewers who may be affected, e.g. residents, walkers, road users; and
- The overall impact on visual amenity.

It has been deemed appropriate to structure the assessment around a series of representative viewpoint locations. All viewpoints are located within the public domain and are representative of views available from main thoroughfares and pedestrian areas within the vicinity of the Project. The selected viewpoints are considered to be comprehensive in communicating the variable nature of the visual effects.

When assessing the potential visual effects of the Project, the sensitivity of the visual receptor is weighed against the magnitude of the visual impact to determine the significance of the visual effect. Criteria outlined below are used to guide these judgements.

Sensitivity of Visual Receptors

As with landscape sensitivity, the sensitivity of a visual receptor is categorised as Very High, High, Medium, Low, and Negligible. Unlike landscape sensitivity however, the sensitivity of visual receptors has an anthropocentric (human) basis. It considers factors such as the perceived quality and values associated with the view, the landscape context of the viewer, the likely activity the viewer is engaged in and whether this heightens their awareness of the surrounding environment.

A list of the factors considered by the assessor in estimating the level of sensitivity for a particular visual receptor is outlined below to establish visual receptor sensitivity at each viewpoint location.

Susceptibility of Visual Receptors to Change

In accordance with GLVIA3, visual receptors most susceptible to changes in views and visual amenity are:

- *"Residents at home;*

- *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area;*
- *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened".*
- *Visual receptors that are less susceptible to changes in views and visual amenity include;*
- *"People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape;*
- *People at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life".*

Values attached to Views

The value attached to a view is determined by considering the following:

- Recognised scenic value of the view (Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Developments Plans, for example, a public consultation process is required;
- Views from within highly sensitive landscape areas. These are likely to be in the form of Architectural Conservation Areas, which are incorporated within the Development Plan and therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them;
- Primary views from residential receptors. Even within a dynamic city context, views from residential properties are an important consideration in respect of residential amenity;
- Intensity of use, popularity. This relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at a national or regional scale;
- Provision of vast, elevated panoramic views. This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas;
- Sense of remoteness and/or tranquillity. Receptors taking in a remote and tranquil scene, which is likely to be fairly static, are likely to be more receptive to changes in the view than those taking in the view of a busy street scene, for example;
- Degree of perceived naturalness. Where a view is valued for the sense of naturalness of the surrounding landscape it is likely to be highly sensitive to visual intrusion by distinctly manmade features;

- Presence of striking or noteworthy features. A view might be strongly valued because it contains a distinctive and memorable landscape / townscape feature such as a cathedral or castle;
- Historical, cultural and / or spiritual significance. Such attributes may be evident or sensed by receptors at certain viewing locations, which may attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings;
- Rarity or uniqueness of the view. This might include the noteworthy representativeness of a certain landscape type and considers whether the receptor could take in similar views anywhere in the broader region or the country;
- Integrity of the landscape character. This looks at the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components;
- Sense of place. This considers whether there is special sense of wholeness and harmony at the viewing location;
- Sense of awe. This considers whether the view inspires an overwhelming sense of scale or the power of nature.
- Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity, and no relative importance is inferred by the order of listing.

It is recognised that a viewer's interpretation and experience of the landscape can have preferential and subjective components. Where relevant, judgements are made on those elements of the landscape that are considered to contribute more prominently and positively to the visual landscape resource as well as those elements that contribute negatively. Overall sensitivity may be a result of a number of these factors or, alternatively, a strong association with one or two in particular.

Magnitude of Change – Visual

The magnitude of change is again a product of the scale, extent, or degree of change that is likely to be experienced as a result of the Project. This is directly influenced by its 'visual presence / prominence', as experienced by visual receptors in the landscape. These terms are somewhat quantitative in nature, and essentially relate to how noticeable or 'dominant' the proposal is within a particular view. Aside from the obvious influence of scale and distance, a Project's visual presence is influenced by the extent and complexity of the view, contextual movement in the landscape, the nature of its backdrop, and its relationship with other focal points or prominent features within the view. It is often, though not always, expressed using one of the following terms: Minimal; Sub-dominant; Co-dominant; Dominant; Highly dominant. Criteria used to inform judgements are provided in Table 11-3.

Table 11-3 - Magnitude of Change – Visual

Criteria	Description
Very High	Complete or very substantial change in view, dominant, involving complete or very substantial obstruction of existing view or complete change in character and composition of baseline, e.g., through removal of key elements.
High	A major change in the view that is highly prominent and has a strong influence on the overall view. This may involve the substantial obstruction of existing views or a complete change in character and composition of baseline, e.g. through removal of key elements or the introduction of new features that would heavily influence key elements.
Medium	Moderate change in view: which may involve partial obstruction of existing view or partial change in character and composition of baseline, i.e., pre-development view through the introduction of new elements or removal of existing elements. Change may be prominent but would not substantially alter scale and character of the surroundings and the wider setting. View character may be partially changed through the introduction of features which, though uncharacteristic, may not necessarily be visually discordant.
Low	Minor change in baseline, i.e. pre-development view - change would be distinguishable from the surroundings whilst composition and character would be similar to the pre change circumstances.
Negligible	Very slight change in baseline, i.e. pre-development view - change would be barely discernible. Composition and character of view substantially unaltered.

11.4.3 Significance of Effect

The significance of a landscape or visual effect is based on a balance between the sensitivity of the receptor and the magnitude of change, and is categorised as Profound, Substantial, Moderate, Slight, or Imperceptible. Intermediate judgements are also provided to enable an effect to be more accurately described where relevant. 'No Effect' may also be recorded as appropriate where the effect is so negligible it is not noteworthy.

The significance category judgement is arrived at using the Significance Matrix at Table 11-4 as a guide. This applies the principle of significance being a function of magnitude weighed against sensitivity, but employs slightly different terminology that avoids the potentially confusing use of the term 'significant' (as recommended by GLVIA3 Statement of Clarification 1/13 (Landscape institute, 10th June 2013)).

Table 11-4 - Significance Matrix

	Sensitivity of Receptor				
Magnitude	**Very High**	**High**	**Medium**	**Low**	**Negligible**
Very High	Profound	Profound-substantial	Substantial	Moderate	Slight
High	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
Medium	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
Negligible	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Indicative criteria descriptions used in relation to the significance of effect category are presented at Table 11-5.

Table 11-5 - Indicative significance of effect criteria descriptions

	Landscape	Visual
Profound	There are notable changes in landscape characteristics over an extensive area or a very intensive change over a more limited area.	The view is entirely altered, obscured or affected.
Substantial	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the landscape. There are notable changes in landscape characteristics over a substantial area or an intensive change over a more limited area.	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the visual environment. The proposal affects a large proportion of the overall visual composition, or views are so affected that they form a new element in the physical landscape.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends. There are minor	An effect that alters the character of the visual environment in a manner that is consistent with existing and emerging trends. The proposal affects an appreciable segment of the

	Landscape	Visual
	changes over some of the area or moderate changes in a localised area.	overall visual composition, or there is an intrusion in the foreground of a view.
Slight	An effect which causes noticeable changes in the character of the landscape without affecting its sensitivities. There are minor changes over a small proportion of the area or moderate changes in a localised area or changes that are reparable over time.	An effect which causes noticeable changes in the character of the visual environment without affecting its sensitivities. The affected view forms only a small element in the overall visual composition or changes the view in a marginal manner.
Imperceptible	An effect capable of measurement but without noticeable consequences. There are no noticeable changes to landscape context, character or features.	An effect capable of measurement but without noticeable consequences. Although the development may be visible, it would be difficult to discern resulting in minimal change to views.

It is important that the likely effects of the proposals are transparently assessed and understood in order that the determining authority can bring a balanced, well-informed judgement to bear when making a planning decision.

As such, whilst the significance matrix and criteria provide a useful guide, the significance of an effect is ultimately determined by the landscape specialist using professional judgement, and also in the context of occasionally using hybrid judgements to account for nuance.

Effects assessed as 'Substantial' or greater (shaded red cells) are considered to be the most notable in landscape and visual terms, and may be regarded as 'Significant', albeit it is important to note that this is not a reflection on their acceptability in planning terms.

11.4.4 Quality of Effects

In addition to assessing the significance of landscape and visual effects, the quality of the effects is also determined. Within this LVIA, effects are described as negative/adverse, neutral, or positive/beneficial, and the following criteria has been used to guide these judgements.

- Positive/beneficial - A change which improves the quality of the environment, enhancing the existing view/landscape;
- Neutral - No effects or effects that are imperceptible, within normal bounds of variation e.g. will neither detract from nor enhance the existing view/landscape;
- Negative/adverse - A change which reduces the quality of the environment, detracting from the existing view/landscape.

In the case of new energy / infrastructure developments within rural and semi-rural settings, the landscape and visual change brought about by an increased scale and intensity of built form is seldom considered to be positive / beneficial. Effects in these contexts are generally considered to be adverse in nature, or neutral, where the effect has little influence on the landscape/views.

11.4.5 Timescale of Effects

In accordance with EPA guidance, impacts / effects are also categorised in terms of their timescale as follows;

- Temporary – Effects lasting one year or less
- Short Term – Effects lasting one to seven years
- Medium Term – Effects lasting seven to fifteen years
- Long Term – Effects lasting fifteen to sixty years
- Permanent – Effects lasting over 60 years

11.5 Baseline Conditions (at 1 January 2000) and Existing Conditions (at 31 December 2006)

Landscape character is described in terms of 'landform and drainage', 'vegetation land use', 'centres of population and houses', 'transport routes' and 'recreation and public amenities.'

11.5.1 Landform and drainage

The site was situated in an area where the topography ranges from 71-80m AOD, with low-lying terrain to the north, south, and west, while to the northeast, the land rise towards Red Hill (194m AOD), located just outside the study area. Bordering the site to the north-northwest, the River Barrow Way (Grand Canal) follows the natural contour of the land. The terrain slopes downward towards the Grand Canal, while the Figile River flows north to south about 750m west of the site.

During the baseline time (1 January 2000), the site was in agricultural use, characterised by relatively level terrain. However, as quarrying activities commenced and progressed through to the existing condition timeframe (31 December 2006), the landform underwent major modification, transitioning into a worked-out quarry, as detailed in Section 10.6.

In addition, the adjacent quarry to the west also experienced changes over this period, with expansion in certain areas. These landform alterations are illustrated in Section 10.6 and within the Project Description (Chapter 2).

11.5.2 Vegetation and Land Use

While the study area featured a variety of land uses, pastoral farmland was the most dominant, followed by tillage, with medium-to-large fields enclosed by mature field boundaries. The landscape also included small settlements, villages, and some quarrying activities, with scattered areas of forestry.

Approximately 2.3 km to the south, Monasterevin represented the largest urban area in the study area, featuring residential and commercial land uses. In the northern portion of the study area, a commercially exploited bog was a notable land use feature.

The quarry had been in operation since the early 2000s. Initially, the Application Site was agricultural land given over to tillage, but by the end of 2006, extraction of rock had created a quarry void and overburden stockpiles. The application site was primarily enclosed by hedgerows, canal-side vegetation and areas of scrub. To the west, another quarry was present, while adjacent lands remained in agricultural use for tillage and pasture. A minor change in hedgerow cover occurred between the baseline and existing conditions, specifically with the removal of a section of hedgerow on the eastern side of the site to facilitate truck and plant access.

11.5.3 Centres of Population and Houses

The site was situated approximately 2.3 km south of Monasterevin. During the assessment period the study area maintained a modest rural population, Monasterevin was the primary population centre within it. The rest of the study area consisted of a dispersed rural population, including small linear clusters of dwellings, crossroad settlements, and isolated farmsteads.

The nearest dwellings to the substitute consent application site over the assessment period were approximately 50 m to the west, with several more located within 500 m along local roads.

11.5.4 Transport Routes

The notable transport route in the study area included the R414, approximately 750 m east of the site, and the R445, about 4.1 km east.

The study area also encompassed the rail line which was divided at Cherryville, just outside the study area. One rail line was located approximately 1.7 km to the east-southwest, forming a transport corridor that connected Dublin to Limerick Junction. Another rail line, approximately 4.9 km east, connected Dublin to Kilkenny.

The area also featured a dense network of interconnecting local roads, some of which passed near the site. The Grand Canal (Barrow Line) bisected the study area in a southwest–northeast direction.

All traffic accessing the quarry during the operational period (2000–2006) entered via the adjoining quarry from the L6030, utilising internal informal haul routes within the quarry.

HGVs traveling to and from the site during this period primarily used the L7049 eastward to join the R424, continuing onto regional routes before merging with the R445.

11.5.5 Recreation & Public Amenities

The Barrow Way (The Grand Canal) was located at the north-western boundary of the site. Other amenity areas within the study area included Moore Abbey Woods, approximately 3.6 km south of the site. The Monasterevin Aqueduct was located about 2.6 km southwest.

Apart from the services available in Monasterevin, there did not appear to be any other significant public amenities or facilities within the study area.

11.6 Selection of Sensitive visual Receptors

The selection of visual receptors is based on the process outlined in the methodology section and relies on representation of a range of receptors types, distance and viewing angles for a robust assessment. More sensitive visual receptors include those involved in recreation, or at amenity areas where there is a focus on a scenic landscape, or residents with views of scenic quality. Less sensitive receptors would include those driving at higher speeds or those engaged in activities where there is not a focus on the landscape and where the views are not considered of high quality.

The selected viewpoints are listed in Table 11-6 and mapped in Figure 11-7 below. The potential impact of the Project upon these receptors are assessed in the visual assessment section.

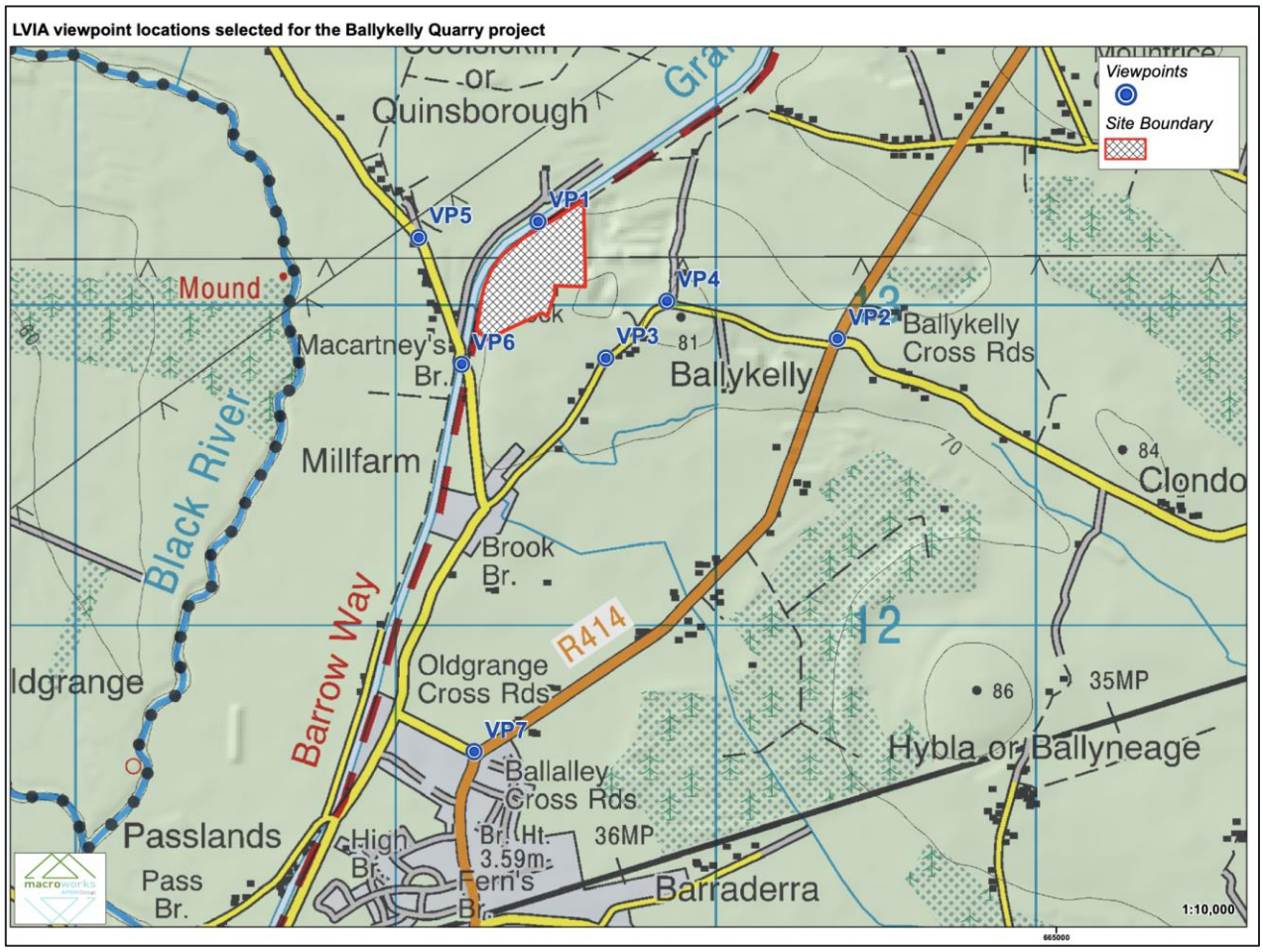

Figure 11-7 Viewpoint Locations Map

Table 11-6 Selected Viewpoints for Visual Impact Assessment

VRP No.	*Location*	*Direction of view*
VP1	Barrow Way (The Grand Canal) adjacent to the western boundary of the site	E-SE
VP2	R414 at Ballykelly	W
VP3	Local road at Coolsickin (approximately 230m east-southeast)	W-NW
VP4	Local road at Coolsickin (approximately 260m east)	W
VP5	L1002 at Coolsickin	E-SE
VP6	McCartney's Lock Bridge - L1002 at Coolsickin	NE
VP7	R414 at Old grange	N

Figure 11-8 Viewpoint 1

Figure 11-9 Viewpoint 2

Figure 11-10 Viewpoint 3

Figure 11-11 Viewpoint 4

Figure 11-12 Viewpoint 5

Figure 11-13 Viewpoint 6

Figure 11-14 Viewpoint 7

11.7 Characteristics of the Project

The Project is described in Chapter 2 (Project Description) and includes aerial imagery showing the development of the Project at the Application Site over the assessment period (see section 2.3 in Chapter 2 of this rEIAR). The following are the key characteristics of the changes to the quarry in the temporal time frame from 1 January 2000 to 31 December 2006 that relate to landscape and visual effects:

- Development of quarry on agricultural fields, and
- Topographical changes onsite resulting from extraction of rock/sand/gravel and from overburden stockpiling. The highest topographical levels on the Application Site were 77 mOD at baseline conditions and 79 mOD at existing conditions following site closure. The highest topographical levels on the Application Site were 67 mOD at baseline conditions and 55 mOD at existing conditions following site closure.

11.8 Potential Effects

11.8.1 Landscape Effects

Landscape Sensitivity

A review of the landscape setting of the study area over the assessment period indicates that the sensitivity of both the immediate site context and the wider study area did not materially change. While landscapes, particularly anthropogenic rural ones, naturally evolve over time, these changes typically occur gradually. The southern portion of the study area was influenced by the settlement of Monasterevin, whereas the majority of the area remained predominantly rural in character.

The Kildare CDP 2005-2011 classified the site within the Lowlands Area, specifically within the Southern Lowlands Landscape Unit, which was designated as having low landscape sensitivity. Given that quarrying activity had been present within the surrounding area prior to 2000, the overall landscape context was already influenced by extractive industry.

While the wider study area encompassed recreational amenities such as the Grand Canal, which serves both boaters and walkers along its towpaths, the quarry itself was largely enclosed and visually contained. Other notable infrastructure, including the **R414 regional road** and the **Dublin–Cork rail line,** contributed to the area's working rural character.

At a local scale, elements of moderate landscape value included field boundaries and hedgerows within and adjacent to the site. However, as the quarry works were confined to a specific area and situated next to another quarry, the sensitivity of these features is considered Medium-Low.

Given the factors above, the overall **landscape sensitivity deemed Medium-Low** throughout the retrospective assessment period.

Landscape Effects that have occurred between January 2000 - December 2006

The magnitude of change that occurred within the landscape was largely confined to the **Application Site itself,** with **minimal impact on the wider landscape character**. The quarrying process, including excavation, material processing, and transportation off-site, stayed consistent with similar activities in the adjoining quarry.

The primary changes within the site included change of agricultural land to quarry pit, increase in depth of the quarry floor along with removal of some hedgerows and stockpiling at the site perimeter.

At the **wider landscape level**, the key characteristics of the study area remained unchanged, with no fundamental alteration to its overall topography or rural setting. The area continued to function as a **working rural landscape**, characterised by agricultural fields, quarrying activity, peat extraction, and woodlands. The principal amenity within the study area was the Grand Canal and its associated bridges and structures. While the **Grand Canal corridor** retained its importance as a recreational and heritage asset, its immediate surroundings were always influenced by various productive activities. Beyond the canal corridor, the landscape consists of typical productive and extractive land uses without particular rarity at a local or regional scale. The presence of transport routes, including the M7, **R414 and Dublin–Cork railway**, also reinforced the area's established pattern of land use.

At the **local scale**, the magnitude of change was more pronounced due to direct alterations to the site's landform. The transition from **agricultural land to an expanded quarry pit,** along with the introduction of **stockpiles and berms**, represents a **stark change of use within the site itself**. However, due to the **quarry's largely enclosed nature**, these changes were **not widely perceptible beyond the immediate vicinity.**

Indirect landscape changes were limited to the continued movement of vehicles to and from the quarry from January 2000-2006, in conjunction with activities at the adjoining quarry. However, this represented an extension of traffic activity rather than a significant intensification.

Overall, it is considered that the magnitude of landscape change within and immediately surrounding the quarry is deemed to be **High**. When combined with the **Medium-Low** sensitivity of the immediate landscape context, the significance of effect is assessed to have been **Substantial-moderate**, of a **Permanent** duration and a '**Negative**' quality. While in the wider study area (beyond 500 m of the site) the magnitude of landscape change is deemed to be **Medium**, combined with **Medium-Low** sensitivity, the significance of effect is assessed to be **Moderate-slight** but reducing quickly within increase distance beyond 500 m as the quarry became a smaller and less distinct feature of the broader landscape context and visibility of it became more limited. These are not considered to be a significant effect in EIA terms.

11.8.2 Visual Effects

This rLVIA include an assessment of visual effects that is based on seven representative viewpoints. The aerial OSI maps baseline during all these years has been presented to assess the visual impact.

Visual Receptor Sensitivity

The study area presents a typical rural landscape, though some receptors within it exhibit slightly heightened sensitivity due to elevated terrain that affords expansive views across the wider working landscape. Despite this, the study area does not have a sense of rarity or distinctiveness in terms of the visual context .

The principal source of visual amenity within the study area related to the Grand Canal, and its immediate environs, and to views to and from the canal bridges. The portion of the canal and associated ancillary structures that occurred within the study area are representative of an historical legacy of industrial and transport activity across the country which was connected by the canal network. Beyond the canal corridor, the remainder of the study area was not particularly rare, in either a regional or local sense as it comprised of typical productive and extractive land uses.

Views of the agricultural landscape are generally pleasant, characterised by undulating pastoral fields, hedgerows, and vegetation that create a sense of natural containment. However, the landscape was also influenced by anthropogenic elements such as major transport routes, urban settlements, and commercial developments. As a result, visual receptor sensitivity typically ranged between **High-medium** and **Medium-low**, with the **High-medium** sensitivity applying to designated scenic prospects in the Kildare County Development Plan 1999 and 2001-2006 and views from the Grand Canal in general.

Visual Impact Assessment

Visual impacts would have arisen from both the physical excavation of the site and from the movement of machinery and vehicles associated with it. During quarry operations, site activity involved workers and earth-moving machinery, but most of this remained below surrounding ground levels, limiting visibility. As a result, the magnitude of visual effects from on-site activities was deemed Low. Additionally, HGV movements transporting quarried material and excavated soil along local roads introduced momentary visual impacts, though such traffic is a common feature in productive rural areas engaged in forestry, peat extraction, agriculture, and quarrying.

A visual impact assessment of the quarry excavation between the 2000-2006 is contained in Table 11.7, which is based on current day visibility using photography captured in February 2025. Whilst this does not provide the exact retrospective viewing context, it allows the opportunity to understand if the quarry is likely to have been visible or not from each receptor locations.

Table 11-7 Visual Impact Assessment across Substitute consent period

VRP No.	Location	VP Sensitivity	Change in view of Quarry	Change Significance/Quality/Duration of impact
VP1	Barrow Way (The Grand Canal) adjacent to the western-northwestern boundary of the site This view would have represented The Barrow Way users, local community, and road users.	High-medium	This is a view from the Grand Canal towpath. Between 2000 and 2006, visible changes occurred in the agricultural landscape, primarily due to the formation of an open quarry void. At the start of excavation works, the canal-side vegetation was continuous, as shown in the historic aerial images. However, by 2006, a gap had emerged which would have allowed a brief but open view of site workers, machinery, and stockpiles through the opening in the vegetation. Within the context of the generally screened Grand Canal towpath, these changes were unlikely to highly alter the visual setting.As indicated by the OSI maps from 1996-2000, 2001-2005, and 2006-2011 (see Figures in Section 10.6), the dense vegetation along the canal corridor would have largely obscured views of the quarry excavation and associated activity except for the brief break in the vegetation described above.	Moderate / Negative/Long-term (Narrow geographical extent of effect in terms of the visibility through the gap in the canal-side vegetation) Other enclosed sections of the canal would have experienced **Slight** or **Imperceptible** visual effect depending on the season.

VRP No.	Location	VP Sensitivity	Change in view of Quarry	Change Significance/Quality/Duration of impact
			For these reasons, the magnitude of visual impact is considered **Medium** at the vegetation break illustrated as a worst case by VP1, but would have been Low or Negligible otherwise depending on the season and visibility through a dense veil of winter branches.	
VP2	R414 at Ballykelly (approximately 800m east) This view would have represented the local community and regional road users.	Medium-Low	As shown in the baseline years OSI maps, this section of the R414 regional road was bordered by roadside and intervening field hedgerows, though with less dense cover compared to later periods. Fleeting glimpses of the site would have been possible from elevated sections of the road. However, due to the intervening terrain and the vegetation screening, the site would have been difficult to discern. In the background, a screening berm within the quarry was identifiable. As seen in the 2000 map, these berms were located along the ridge within the quarry site. However, the combination of intervening terrain and vegetation would have likely obscured direct views of the excavation area. Given these factors, the magnitude of visual impact is considered **Negligible**.	Imperceptible/Neutral/Long-term

VRP No.	Location	VP Sensitivity	Change in view of Quarry	Change Significance/Quality/Duration of impact
VP3	Local road at Coolsickin (approximately 240m east-southeast) This view would have represented the local community, quarry workers, and road users.	Medium-Low	1996-2000  2006-2011 	Imperceptible/Neutral/Long-term

VRP No.	Location	VP Sensitivity	Change in view of Quarry	Change Significance/Quality/Duration of impact
			As shown in the OSI 1996-2000, 2001-2005 and 2006-2011 maps, the site was fully enclosed by hedgerows, with all excavation works contained below surrounding ground levels within the quarry. The intervening terrain, which gently rose and then dipped where the site was located, would have further obscured views of the quarry, making any changes unlikely to be discernible during this period. By 2001-2005, historical maps indicate that the hedgerow along the south-eastern boundary had been removed. However, the working area of the site remained enclosed by the eastern hedgerow, which would have continued to screen views of the site works from this viewpoint. Given these factors, the magnitude of visual impact is considered **Negligible**.	
VP4	Local road at Coolsickin (approximately 260m east) This view would have represented	Medium-Low	Clear views of the excavation work in the northern section of the site would have been afforded from this location. To the east-southeast, works of the adjoining quarry would have also been visible and distinguishing between the works associated with each quarry section would have been challenging. Given that this view was located in the close vicinity of	Slight- /Negative/Long-term

VRP No.	Location	VP Sensitivity	Change in view of Quarry	Change Significance/Quality/Duration of impact
	the local community, quarry workers, and road users.		the site, it naturally afforded more open and unobstructed views of the site. However, the intervening vegetation to the west would have obscured views of the site, apart from the northern section. The views that would have been afforded would primarily have included glimpses of machinery, workers and stockpiles. For the reasons outlined above, the magnitude of visual impact is deemed to be **Low**.	
VP5	L1002 at Coolsickin (approximately 270m west) This view would have represented the local community and local road users.	Medium-low	As indicated by the OSI maps from 1996-2000, 2001-2005, and 2006-2011, the site was well screened due to dense vegetation along the Grand Canal towpath. Hence, the Project would not have been visible from this location. By default, the magnitude of visual impact is deemed **Negligible**.	Imperceptible/Neutral/Long-term
VP6	McCartney's Lock Bridge - L1002 at Coolsickin (approximately 102m southwest)	Medium-Low	From this Kildare CDP scenic viewpoint, the site would have been entirely screened by the dense vegetation along the Grand Canal, obstructing any views of the site. Hence, the Project would not have been visible from this	Imperceptible/Neutral/Long-term

VRP No.	Location	VP Sensitivity	Change in view of Quarry	Change Significance/Quality/Duration of impact
	This view would have represented the Kildare CDP Scenic view, local community, and bridge users.		location. By default, the magnitude of visual impact is deemed **Negligible**.	
VP7	R414 at Old grange (approximately 1.2km south) This view would have represented the local community, and regional road users.	Medium-Low	This view was located approximately 1.3km from the site, and due to the intervening vegetation and the ground-based nature of the works, they would not have been visible from this location. By default, the magnitude of visual impact is deemed **Negligible**.	Imperceptible/Neutral/Long-term

As can be seen from the assessments contained in Table 1.7, even when there might had discernible changes to the quarry face or stockpile configuration, none of the views had materially changed. Such effects are mostly **Imperceptible**, and of a **Neutral-Negative quality**. This is not a significant effect in EIA terms.

11.9 Remedial Mitigation and Monitoring

No remedial measures relating to landscape and visual effects are required. Accordingly, no monitoring is not required.

11.10 Residual Effects

In this instance there were no remedial measures relating to landscape and visual effects required, therefore residual effects will be the same as assessed in Section 11.8..

11.11 Cumulative Effects

As there were no material changes to the landscape and visual effects of the quarry across the substitute consent period, there is also no change to its contribution to any cumulative effects.

11.12 Difficulties Encountered

As this application is for retrospective planning permission through the substitute consent process, it has been necessary to undertake a review of historic data, where available, that have relevance to the landscape and visual baseline extending between the period of 2000 to 2006. This was done by reviewing the landscape baseline by the use of aerial mapping and capturing present day photography around the site and comparing that to historic aerial images.

11.13 References

- Kildare County Development Plans 1999 and 2001-2006
- Department of the Environment, Heritage and Local Government (April 2004) Quarries and Ancillary Activities - Guidelines for Planning Authorities. Dublin: https://www.gov.ie/en/publication/a61d3-quarries-and-ancillary-activities/
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