9 LANDSCAPE

9.1 INTRODUCTION

This section of the Environmental Impact Assessment Report addresses the landscape and visual aspects of the proposed flood relief scheme for the River Deel in Crossmolina, Co. Mayo. The Study Area is described with reference to Landscape Character and Landscape Type, as well as the relevant landscape policy recommendations that have been set out in the Mayo County Development Plan 2014-2020 in terms of landscape and visual characteristics.

A number of photomontages are included to assist the assessment of landscape and visual impacts. This chapter should be read in conjunction with the drawings for the proposed drainage scheme in Appendix 3A.

9.2 PROPOSED WORKS

The proposed works for the River Deel Certified Drainage Scheme comprise works at a variety of locations, as set out in detail in Chapter 3. The main works which are relevant from a landscape and visual point of view are described as follows:

- Site investigation;
- Site preparation and clearance;
- Construction of a new grass lined diversion channel commencing at the River Deel/ L1105 and terminating in the townland of Mullenmore to the East of the R315 Crossmolina to Castlebar Regional Road;
- Construction of a new reinforced concrete intake structure and spillway on the banks of the River Deel at the upstream end of the abovementioned grass lined channel complete with an adjustable steel plate at the top of the 70m reinforced concrete intake structure;
- Construction of a new river flow control structure incorporating adjustable steel plates. The structure will consist of a series of precast box culverts and will be located approximately 155 metres downstream of the intake structure;
- Construction of an earthen embankment and reinforced concrete retaining walls/ steel sheet piling at the river flow control structure;
- Construction of a new reinforced concrete energy dissipation structure within the proposed diversion channel to the south east of the R315;
- Construction of two new bridges, one each on the R315 (Mullenmore Bridge) and L1105 (Pollnacross Bridge);
- Raising the L1105 at the approach to the new bridge;
- Realignment of the Lake Road and creation of a new junction with the R315. This will necessitate the closure of a section of the existing road;
- Realignment and raising of existing avenues connecting the Lake Road to properties to the South;
- Creation of washlands between the termination point of the new channel and Lough Conn;
- Removal of existing access points/ access routes and creation of new access points;

- Construction of an access track along the top of the channel between the L1105 and the R315. An access track will also be constructed alongside the intake structure linking the L1105 to the river bank. This will be used for maintenance purposes;
- Localised regrading of ground levels, erection of fencing and access gates, to facilitate pedestrian/ vehicular access to and around flood defences, or to redirect overland surface water flow paths;
- Utility diversions where required;
- Maintenance activities and other non-structural measures.

An outline of the proposed Scheme is provided in Figure 3.1 in Chapter 3.

9.3 METHODOLOGY

This section broadly outlines the methodology used to undertake the landscape and visual assessment of the proposed development, and the guidance used to in the preparation of each section. There are four main sections to the assessment:

- Outline of guidance followed
- Baseline landscape and visual assessment
- Nature and visibility of the proposed development
- Assessment of likely direct and indirect significant effects
- Assessment of proposed mitigation measure
- Residual effects post mitigation,
- Post consent monitoring measures
- Cumulative impact assessment.

In 2002, Ireland signed and ratified the European Landscape Convention (ELC), which introduces a pan-European concept which centres on the quality of landscape protection, management and planning. The Department of Arts, Heritage and the Gaeltacht has published a National Landscape Strategy for Ireland in 2015. The Strategy aims to ensure compliance with the ELC and contains six main objectives, which include developing a national Landscape Character Assessment and developing Landscape Policies.

Although the DoEHLG 2000 guidance remains in draft form, this section of the EIAR has been informed by the landscape assessment guidelines presented in the DoELHG document, as well as a range of other guidelines which include:

- Guidelines for Landscape and Visual Impact Assessment (The Landscape Institute/Institute of Environmental Management and Assessment, UK, 2013)
- EPA Guidelines on the information to be contained on Environmental Impact Statements (EPA 2002)
- EPA Draft guidelines on the information to be contained on Environmental Impact Statements (EPA 2017)
- EPA Advice Notes on Current Practice in the preparation of Environmental Impact Statements (EPA, 2003).

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft August 2017 '(EPA 2017).
- Landscape and Landscape Assessment: Consultation Draft of Guidelines for Planning Authorities' (Department of the Environment and Local Government, 2000)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018)
- Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017)
- Mayo County Development Plan 2014-2020 (Mayo County Council, 2014)
- Landscape Appraisal of County Mayo (Mayo County Council, 2014)

9.3.1 Study Area

As stated in the Landscape Institute 2013 *Guidelines for Landscape and Visual Impact Assessment* '*the study area should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner*'. These guidelines also propose that the level of detail in the landscape baseline study should be "*appropriate and proportionate to the scale and development*". The guidelines further state that for the landscape baseline the aim is to provide an understanding of the landscape in the area that may be visually affected. To this end the study area for the Landscape and Visual Assessment was defined following a desk study and refined after the site visit as well as the examination of the proposed works.

The study area includes the relevant section of the River Deel near where the proposed weir and spillway are located, and the agricultural land through which the channel and access road are proposed to pass. The study area also includes the wetlands and wooded areas which lead to the shores of Lough Conn, where the water from the channel is proposed to discharge.

The study area therefore includes the southern outskirts of Crossmolina town, through the townland of Cartrongilbert, where the River Deel flows adjacent to Church Road. The river is close to the western end of the study area. The proposed channel extends eastwards through agricultural land, and southwards to the townland of Mullenmore North. The study area extends eastwards as far as the shores of Lough Conn, where the water from the channel will discharge into the existing area of wetland and woodland.

Due to the flat and gently undulating nature of the landscape, and the fact that the lake cannot be seen from the majority of the study area, the views of the scheme will be very localised and are not likely to be experienced from viewers outside the immediate vicinity of the site.

9.3.2 Baseline Landscape Assessment

One of the first stages of carrying out a Landscape and Visual Impact Assessment is to establish the baseline landscape and visual conditions. In order to carry out this assessment, an initial desk study was undertaken which identified relevant policies and guidelines, both at national and local level. This includes any relevant policies on landscape and landscape character, designated landscapes and scenic routes set out in the Mayo County Development Plan 2014-2020 (CDP).

The study area consists of the areas described in Section 9.3.1 and are described in general terms of Landscape Character Areas and types as identified 'Landscape and Landscape Assessment: Consultation Draft of Guidelines for Planning Authorities' (Department of the Environment and Local Government, 2000), and as defined in the Mayo County Development Plan 2014-2020. In addition, field visits were undertaken in Autumn 2015 and Sping 2020 to assess the landscape character and elements both in the Study area and in the wider landscape.

This chapter incorporates a description of the policies and objectives of CDP with regards to the Landscape Appraisal, including Landscape Character Units, Scenic Routes and Protected Views, Landscapes, with specific reference to the Study Area location. The primary sources of information are:

- Mayo County Development Plan 2014-2020
- Landscape Appraisal for County Mayo attached to the CDP

Two site visits were conducted, consisting of an initial survey of the wider area to gain familiarity with the Study Area and ascertain the limits of the visual unit, and a walkover survey of the Study Area to assess the landscape character of the Study Area and the potential landscape and visual effects of the proposed works. Photographs illustrating the landscape attributes of the study area were taken and notes were taken on landscape features in the Study Area. In addition, 8 No. of photomontages representing the likely visual effects of the development were prepared. All the photomontages can be found in the accompanying booklet in Appendix 9A.

9.3.3 Visibility of the Proposed Development

The locations of viewpoints for photographs (described further in Section 9.5) were informed by the nature of the proposed development, and the landscape context, maps and aerial images, with actual visibility being verified on the ground by a site visit.

In addition, 8 No. verified photomontages representing the likely visual effects of the development were prepared.

These were taken at varying locations within the study area. Locations were selected for greatest potential visibility of the proposed development and therefore locations that might experience the greatest visual effects. The selection of photo locations is also designed to give a representative range of views of the proposed development site and the choice of viewpoints (photo locations) is influenced by both the view available and the type of viewer. Due to the site location and the nature of the proposed development, visibility by the general public will be possible only in certain areas.

9.3.4 Assessment of Potential Impacts:

Landscape and Visual Impact Assessment

Landscape and Visual Impact Assessment, though related, can be described separately. Descriptions based on the LI/IEMA Guidelines on Landscape and Visual Impact Assessment (2013) define each as follows:

The potential impacts of the proposed development in terms of visual and landscape impact are informed by both the desktop study, the site visit which outlines current visibility from chosen viewpoints, and study of the proposed works. The impact assessment is also assisted by the production of photomontages or artist's impressions which show the likely appearance of the proposed works.

The assessment of impacts is assessed using the terminology recommended by the Draft EPA 2017 EIAR guidelines as set out in Chapter 1 Introduction.

The assessment of both landscape and visual impacts involves the assessment of sensitivity of the resource/receptor, which is a combination of the value and the sensitivity of the receptor, as set out in the Tables below. This is then assessed in combination with the magnitude of the change.

Landscape Impact Assessment: This can be described as deriving from changes to the physical landscape, and which may result in changes to the landscape character and how it is experienced, as well as changes to the landscape as a resource.

Susceptibility of landscape to change	Description and example criteria
High	This includes landscapes where the overall landscape character or condition is highly susceptible to change, and where the landscape receptor has a low ability to accommodate the proposed development without undue consequences for the maintenance of the landscape character and the achievement of planning policies/strategies.
Medium	This includes landscapes where the overall landscape character has a moderate ability to accommodate the proposed development without undue consequences for the maintenance of the landscape character and the achievement of planning policies/strategies.
Low	This includes landscapes where the overall landscape character has a strong ability to accommodate the proposed development without undue consequences for the maintenance of the landscape character and the achievement of planning policies/strategies.
Value attached to Landscape elements	Description and example criteria
High	This includes landscapes which are designated as high value, or are designated as (e.g. Areas of Amenity, Scenic Routes/Views) in the Development Plan, or areas designated at a national or International level.
Medium	This includes landscapes where value is not formally designated, but are of value as they display good examples of good quality, intact landscapes, and areas deemed to be of relatively high scenic quality, landscapes which contains some rare elements, which have areas which are wild or have a sense of naturalness, strong cultural associations or which have recreational value.
Low	This includes landscapes which are not formally designated and which are considered to be modified. These include areas which do not have particular scenic qualities and do not include rare elements or landscape features and do not have strongly evident cultural or heritage associations.

Table 9.1 Assessing Landscape Sensitivity

Visual Impact Assessment: The assessment relates to the changes in the composition of views (magnitude of change, see Table 9.2 below) available to the viewer and the sensitivity of this viewer (visual receptor sensitivity, see Table 9.3 below). Both factors combined inform the visual impact assessment.

Magnitude of Change	Description and example criteria
High	Instances where the proposed development results in a large-scale change of the view and its composition or contrasts significantly with its surroundings. This includes viewpoints where the proposed development is fully or almost fully visible over a large proportion of the view or is at close proximity to the viewer. The effects are long term or permanent and have a low level of reversibility.
Medium	Viewpoints where the proposed development results in a moderate level of change of the view and or contrasts moderately with its surroundings. This includes viewpoints where the development is partially visible over a medium proportion of the view and which are not in close proximity to the development.
Low	Viewpoints where the proposed development results in a low level of change in the view and its composition or contrasts insignificantly with its surroundings. This includes viewpoints where the development is partially or barely visible and over a small proportion of the view and includes viewpoints at a distance from the proposed development.

Table 9.2 Magnitude of Change Assessment Criteria

Susceptibility of visual receptor	Description and example criteria
High	These include viewers at designated views or landscapes; Viewers such as residents which are focussed to a large extent on the development due to location in close proximity; viewers at well-known heritage or popular tourist or recreational areas, viewers along scenic or tourist routes
Medium	These include viewers who may have some susceptibility to a change in view, such as those from views which are not designated but may have local recreational uses or those travelling along routes or at view which are considered moderately scenic.
Low	These include viewers engaged in activities where the focus is not on the landscape or view. These including those travelling along a busy route, viewers at work or engaged in sport not related to views or experience of the landscape.

Table 9.3 Assessing Visual Receptor Sensitivity

9.4 RECEIVING ENVIRONMENT

9.4.1 Mayo County Development Plan 2014-2020

The Mayo County Development Plan 2014-2020 (CDP) refers to policies and objectives for landscape in Chapter 4 Environment, Heritage and Amenity. The Landscape Appraisal of County Mayo is referred to in the Plan and is discussed in greater detail below. Relevant Plan policies are as follows:

Landscape Protection

- LP-01 It is an objective of the Council, through the Landscape Appraisal of County Mayo, to recognise and facilitate appropriate development in a manner that has regard to the character and sensitivity of the landscape and to ensure that development will not have a disproportionate effect on the existing or future character of a landscape in terms of location, design and visual prominence.
- LP-02 It is an objective of the Council that all proposed development shall be considered in the context of the Landscape Appraisal of County Mayo with reference to the four Principal Policy Areas shown on Map 3A Landscape Protection Policy Areas and the Landscape Sensitivity Matrix provided such policies do not conflict with any specific objectives of this Plan. These Policy Areas are shown in Figure 9.1.
- LP-03 It is an objective of the Council to protect the unique landscape of the County which is a cultural, environmental and economic asset of inestimable value.

Map 3A in the CDP, showing the Landscape Protection Policy Areas, divides the County into four 'Policy Areas' relating to landscape protection. Further detail on these is included in the landscape Appraisal of County Mayo. Further detail along with the 'Landscape Sensitivity Matrix', which links the Policy Areas to several types of development is outlined in Section 9.4.3, below. The Landscape Protection Policy Areas are illustrated in Figure 9.1. Other landscape designations such as Scenic Routes and Views outlined in the CDP and Landscape Character Units identified in the *Mayo Landscape Appraisal* are discussed below.

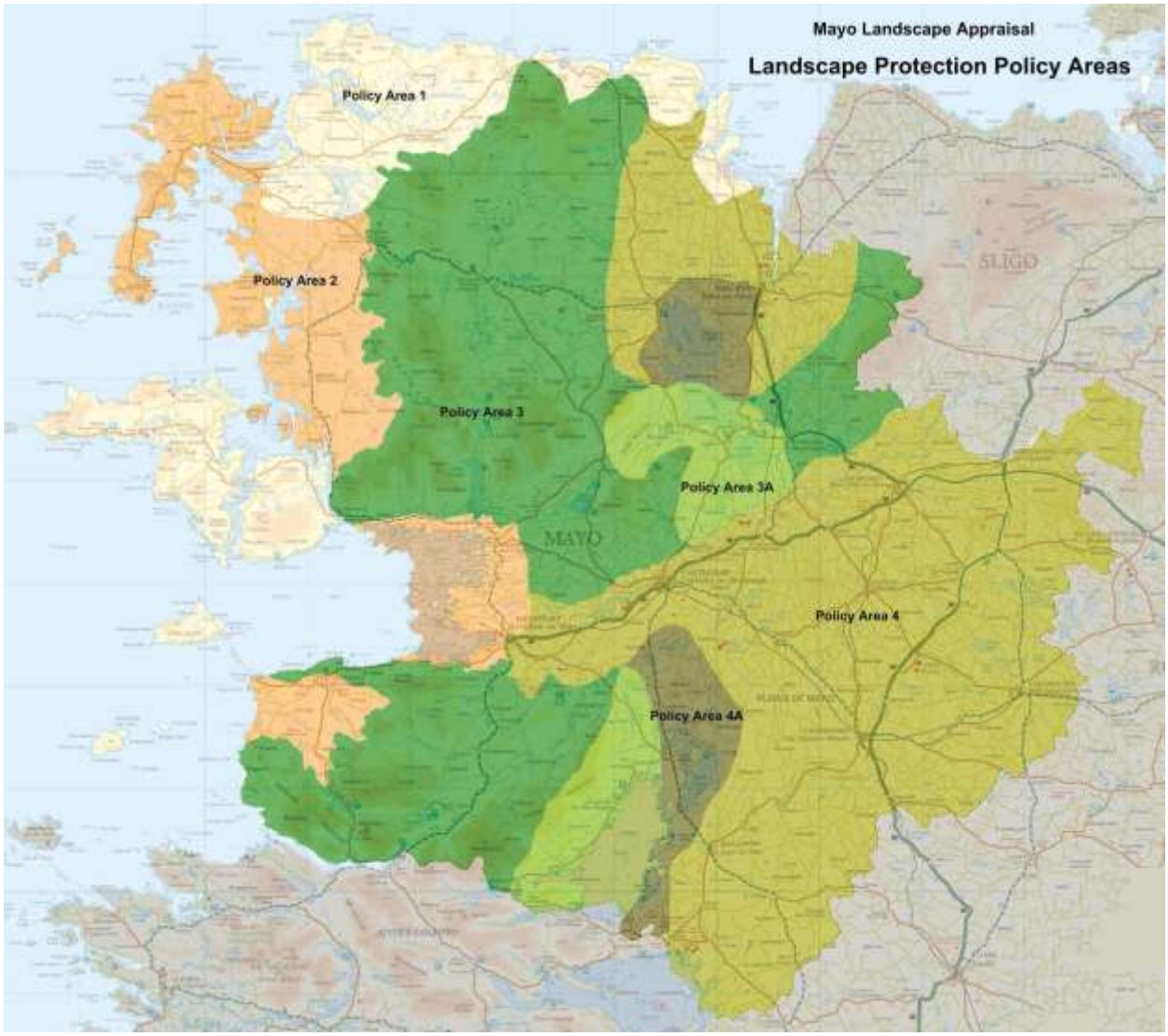


Figure 9.1 Landscape Protection Policy Areas in Co. Mayo (Mayo Landscape Appraisal)

9.4.2 Scenic Routes and Protected Views

Scenic Routes and Protected Views within the county are designated in the CDP. There are no scenic routes in the Study Area. Outside of the study area boundary, there are a number of scenic routes. These are located to the south west, along the south western shores of Lough Conn, and also a section along the eastern shore. The closest scenic route is approximately 6 kilometres to the east, on the opposite shore of Lough Conn. Policy contained in the CDP with regard to scenic routes and views is as follows:

- VP-01 It is an objective of the Council to ensure that development does not adversely interfere with views and prospects worthy of preservation and protection as outlined on Map 4, or on the views to and from places and features of natural beauty or interest (e.g. coastline, lakeshores, protected structures, important historic sites) when viewed from the public realm.

There are no protected views within the study area, or within the vicinity of the study area. The closest protected view lies approximately 11.3 kilometres to the southwest of the proposed works and the works will not be visible from this location.

There will be no visibility of the proposed development from any of these protected scenic routes or scenic routes.

9.4.3 Mayo County Landscape Character Assessment

The Mayo County Landscape Appraisal was carried out according to the Department of the Environment's 2000 guidelines and stresses the distinctiveness of differing kinds of landscape and how different types of development can best be integrated within them. The results of the assessment are set out in the Landscape Appraisal which is a supporting document to the Mayo County Development Plan 2014-2020.

A four-phase methodology was used in the landscape character assessment, as follows:

1. **Identification of Landscape Character Units (LCUs).** The county is divided into 16 units of landscape, defined by the physical characteristics that contribute or define their character.

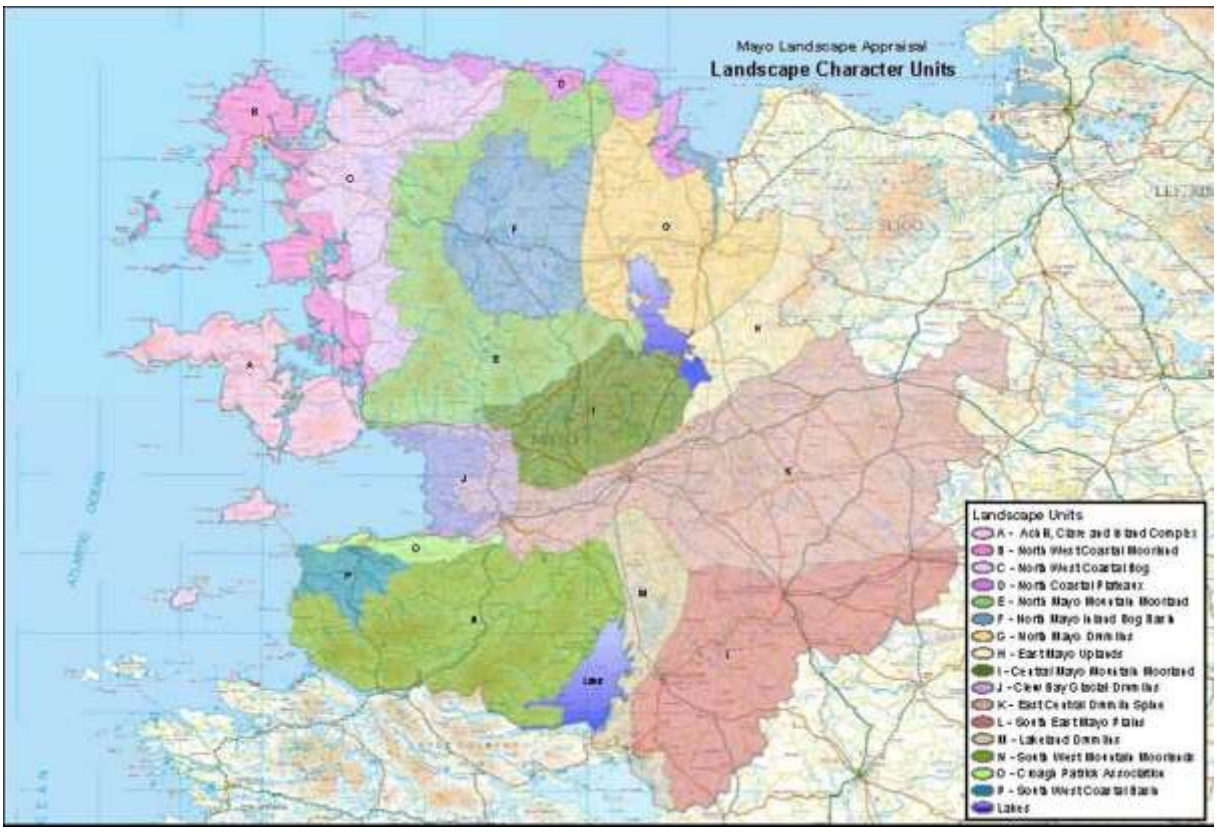


Figure 9.2: Landscape Character Units in Co. Mayo (Mayo Landscape Appraisal)

2. **Determination of Landscape Sensitivities.** The sensitivity of the different landscape types in terms of accommodating development, is identified through the evaluation of the area's capacity to absorb development and evaluate visual impacts. In this regard, areas are designated as one of several types - either vulnerable (e.g. lake shores, coastlines, skylines,) sensitive (e.g. natural grassland, peatland, broad leaved forest, water courses), normal (e.g. Pasture lands, coniferous forest), robust (e.g. Urban areas, leisure facilities), degraded (e.g. Mineral extraction), or scenic routes/highly scenic vistas.

Landscape Sensitivity Matrix

The Landscape Sensitivity Matrix is contained both in the Development Plan and in some more detail in the Landscape Appraisal. The Matrix is described in the Landscape Appraisal as a quick reference guide for planners and developers to determine the likely success of a planning application for a particular land use in a particular area, but acknowledges that it is a guidance and decision supporting tool, and not a

decision making tool. The Matrix provides a high-level review of a number of project types within the four Policy Areas. In the table below, an element of the proposed development would fall under 'road projects' while the landscape Policy Protection Area would be Policy Area 4 or 4A, so according to this table, the proposed road realignment would have Low to Medium potential to create adverse impacts. The diversion channel element of the project may fall under 'extraction' but this is on a smaller scale than most quarrying. (It is however important to note that landscape sensitivity, as defined by the GLVIA (2013) guidelines, is related directly to the type of development proposed.)

The Matrix is included in Figure 9.3 below:

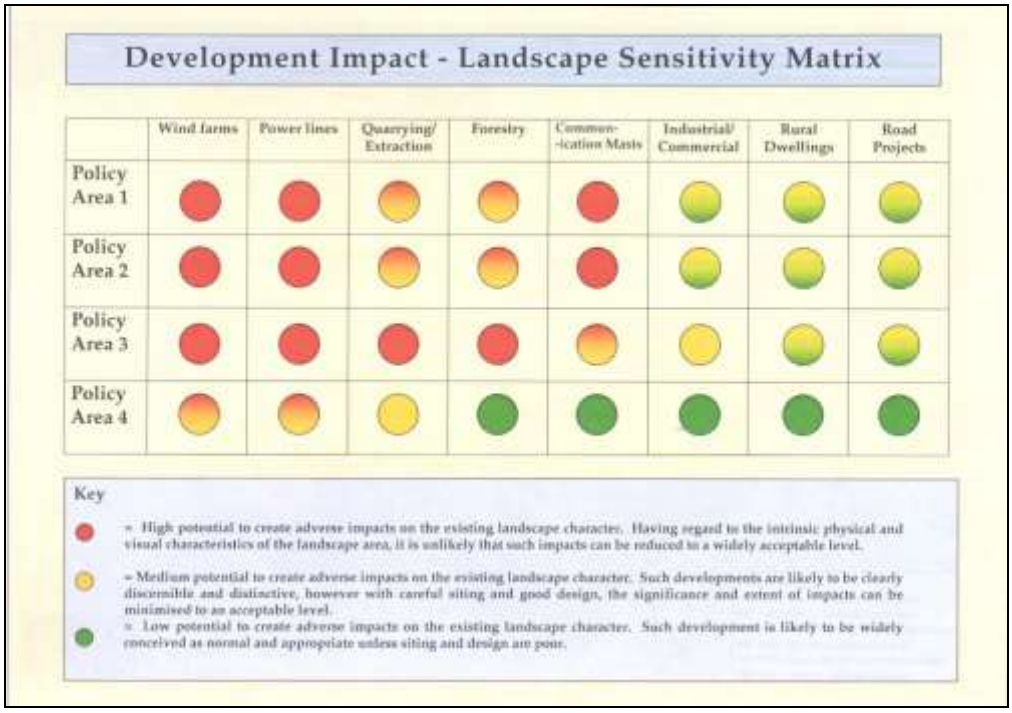


Figure 9.3: Landscape Sensitivity matrix (Source: Mayo County Development Plan)

3. **Designation of Principle Policy Areas.** This relates to the grouping of landscape character units that have similarity of landscape types, into larger areas. Four such categories were identified for Mayo County as follows:

- Montaine Coastal
- Coastal
- Uplands, moors, heath or bog
- Drumlins/pasture/woodland

From inspection of Landscape Protection Policy Areas Map, the site of the proposed development lies on the boundary between Area 4 (Drumlins and Inland Lowlands) and Area 4A (Lakeland Sub-policy Area.

A set of indicative policy responses are then provided for each 'Principle Policy Area relating to the landscape attributes, robustness, and sensitivities of each area. The relevant findings of the Landscape Appraisal for the study area with regards to these three stages are set out below.

Policy Area 4:

- Policy 21: Recognise that these areas are made up of a variety of working landscapes and contain the vast proportion of the County's population within principle towns and on rural holdings. These also incorporate all of the major national primary and regional roads, and railways.
- Policy 22: Continue to permit development that can utilise existing infrastructure, whilst taking account of absorption opportunities provided by the landscape and prevailing vegetation.
- Policy 23: Encourage development that will not significantly interfere or detract from scenic Lakeland vistas, as identified in the Development Plan, when viewed form areas of the public realm.
- Policy 24: Encourage development that will not result in detrimental impacts (through excessive bulk, scale or appropriate siting) on the landscape at a local or micro level as viewed from areas of public realm.

Policy Area 4A:

- Policy 25: Ensure all new development utilised the existing infrastructure of the policy area in a manner which can best be visually absorbed.
- Policy 26: Ensure development will not take place on steep slopes which will have a strong visual impact on the surrounding landscape when viewed from areas of the public realm.

Landscape Character Unit G - North Mayo Drumlins

Landscape character refers to the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how people perceive this. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement, and creates the particular sense of place found in different areas. The identification of landscape character as outlined in the DoEHLG Guidelines (2000) comprises the identification of primarily physical units (areas defined by landform and landcover) and, where appropriate, of visual units.

The study area is located within LCU G North Mayo Drumlins, as shown in Figure 9.2 above. The Landscape Appraisal of County Mayo notes that this landscape unit is characterised by low lying drumlins at the southern end, near Lough Conn, while steeper drumlins are found in the foothills of the mountains to the northwest and also in the Ox Mountains which lie to the east. To the north, the Landscape Character Unit merges into coastal topography near Killala bay. Land Uses for LCU G include agriculture (livestock production), with the land cover comprising areas of pasturelands and some areas of bog. There are a number of settlements including the larger town of Ballina.

The topography is generally gently undulating, and can result in a more contained, smaller scale landscape. Views from this landscape unit include views to the ridges of the Ox Mountains. A large part of Lough Conn is included in this LCU, although most views to the lake are low level views so views tend to be localised, due to the topography and also to intervening vegetation.

Determination of Landscape Sensitivities

The Landscape Appraisal includes a map of Scenic Evaluation – Vulnerable Features - which identifies a number of vulnerable features in the county consisting of coastal areas, rivers and lake shores. Within the

study area, there are a number of vulnerable areas mapped. The vulnerable features within the Study Area include the River Deel itself, the northern shores of Lough Conn and the Castlehill River. Within 10km of the Study Area, other rivers including the Cloonaghmore, Rathroe and Owenmore and Duvowen river are mapped, as well as the shores of Lough Conn.

Various sensitive areas are mapped on the Scenic Evaluation – Sensitive Areas Figure (contained in the Mayo Landscape Appraisal) are found in the study area. These include small areas of peat bogs, which lie to the east of the Study Area, and are east of Crossmolina town.

Principle Policy Area

The study area is located within principle policy area 4/4a which are broadly described as undulating areas of pasture, woodland and forest.

Physical Unit

The topography, vegetation and anthropological features on the land surface in an area combine to set limits on the amount of the landscape that can be seen at any one time. These physical restrictions form individual areas or units, known as physical units, whose character can be defined by aspect, slope, scale and size. A physical unit is generally delineated by topographical boundaries and is defined by landform and landcover.

The physical landscape unit in which the Study Area is located contains the lower stretches of the River Deel and is an area of primarily flat pasture land which is close to the shore of Lough Conn, which provides a definition to the physical unit. To the west, the physical unit boundary is defined by a larger area of peat bogs, while the River Deel provides a natural boundary to the south. To the north the boundary is less distinct and can be defined by the road network while to the east, although landcover changes to include more bog and woodland areas, the flat lands surrounding the River Deel as it enters Lough Conn, provides a natural boundary.

The site of the proposed works lies to the south of Crossmolina town, and lies between the river Deel and the western shore of Lough Conn.

Landform

Present-day landscapes owe their form to the geological materials from which they were carved. Landform is the term used to describe the spatial and formal arrangement of landscape components as a natural product of geological and geomorphologic processes in the past, and refers primarily to topography and drainage.

Geological Processes

Bedrock in this area of North East Mayo is predominantly Limestone. To the south, the Nephin Beg range consists of quartzite and psammitic schists. The study area lies primarily within the Upper Ballina Limestone Formation, which is composed of grey limestone and thin shale. This area extends to the east, north and south and covers the land around the northern half of Lough Conn. A small portion of the west of the study are lies within a band of Lower Ballina Limestone Formation. More information on the Soils & Geology of the Study Area is available in the Soils & Geology Chapter of this EIAR.

Topography

The topography of the wider study area is primarily flat in nature, with some gentle undulations, and the study area is generally at an elevation of less than 50 metres OD, with many areas less than 30 metres

OD in elevation. The topography is gently undulating and almost flat in areas around the shores of Lough Conn, thus reducing visibility of the lake to areas very close to the shore.

The site of the proposed diversion channel is located on lands that range from approximately 10-20 metres OD. The land at the lakeshore lies at approximately 10 metres OD, rising gently to the west. The fields through which the proposed channel passes are undulating as seen in Plate 9.1 below.

Plate 9.1: Undulating landscape at western end of proposed works

Drainage

The River Deel rises in the Nephin Beg mountain range to the south west of the study area, and flows through Crossmolina town, into Lough Conn. It is joined by several tributaries including the Tooreen River. There are a number of smaller watercourses that also drain into Lough Conn within the Study Area. The proposed diversion channel runs from the River Deel to the east towards Lough Conn, and discharges into an area of woodland and wetland where there are several springs as well as a watercourse (Mullenmore Stream) that flows to Lough Conn.

Landcover

Landcover is the term used to describe the combinations of vegetation and land-use that cover the land surface. It comprises the more detailed constituent parts of the landscape and encompasses both natural and man-made features.

The landcover of the study area includes the River Deel to the south of Crossmolina town. In this area (the western portion of the study area) the river is lined with deciduous trees, and some lower bankside vegetation, and agricultural fields lie beyond this. The riverbanks are rural in character, as this area lies outside the town. Plate 9.2 below shows the river Deel and bankside vegetation in the location close to the proposed flow control structure and weir.

The landcover of the study area includes areas of river and riverbank, wet and agricultural grassland, road surfaces, and wetland (springs and fen habitat) and areas of woodland. The Habitat Map contained in Chapter 5 illustrates the habitat types. The main habitat types are wet grassland and improved agricultural grassland along the route of the proposed channel. Close to Lough Conn, there are areas of Wet grassland, Wet Willow Alder-Ash woodland and a small area of marsh near to the car park at the lake. There are also scattered dwellings close to the study area.

Plate 9.2: River Deel and riverbank at the location of proposed spillway, weir and flow control structure

Close to the bend in the River Deel, seen in Plate 9.2 above, lies the local road at Poullnacross. This is bordered to the east by undulating agricultural fields, some with areas of rushes and wet patches. There are hedgerows bordering the fields and some patched of scrub.

Plate 9.3: View from R315 showing hedgerows and fields with Nephin Mountain in the background

Further west, the landcover is similar, consisting of agricultural fields divided by hedgerows, as seen in Plate 9.3 above, with rushes indicating wet patches. The route of the proposed channel then crosses the Regional Road R315, as seen in Plate 9.4 below, where there is ornamental planting adjacent to the road.

Plate 9.4: View along Regional Road R315 towards proposed channel crossing

Plate 9.5: View along Regional Road R315 towards proposed entrance for access road

Plate 9.5 above shows a view along the R314 towards the current junction with Lake Road. Roadside vegetation here is predominantly tree lines along with shrubs and trees within residential properties seen behind stone boundary walls. The field where the proposed spillway will end can be seen in Plate 9.6 below.

Plate 9.6: View of field adjacent to the Regional Road R315 where the end of the spillway is to be located

Views and Visibility

The landscape of the study area is undulating in general. Due to the topography views of the lakeshore of Lough Conn are generally screened from the surrounding area and from Crossmolina and are only evident in close proximity to the shore, from the pier and the areas of wet grassland and fen and adjacent to the lakeshore.

Plate 9.7 View from the shores of Lough Conn towards Nephin Mountain

The hill of Nephin which lies to the southwest of the Study Area, is a distinctive landscape features that is visible from the study area, as well as the wider landscape, forming a distinctive image, as seen in Plate 9.7 above.

Landscape Value and Sensitivity of the Study Area

The sensitivity of a landscape to development and therefore to change varies according to its character and to the importance that is attached to any combination of landscape values. It also varies depending on the type of development that is proposed.

GLVIA (2013) guidance advises that landscape value and susceptibility can be combined to give an overall landscape sensitivity. Therefore, in order to determine the landscape sensitivity of the site to this type of development the elements which contribute to landscape value are listed below.

Feature	Description
Landscape Designations	The landscape within the study area is not the subject of designations. There are a number of scenic routes, but these are approximately 10 kilometres from the proposed development.
Landscape Quality/Condition	Parts of the study area are agricultural fields and have been modified by man, particularly to the west of the study area

Aesthetic Qualities	Feature of the landscape which could be described as distinctive include Lough Conn and the views of Nephin.
Wildness/Naturalness	A sense of popularity is created where landscape features are widely recognised or appreciated. The landscape in the wider vicinity is a popular base for angling tourists, as angling is available on the river Deel, the nearby Lough Conn and the River Moy.
Rarity/Conservation Interests	The entirety of the Deel River within the Study Area is included within the River Moy SAC, as is Lough Conn, into which the Deel River debouches. In addition, Lough Conn is also designated as part of the Lough Conn and Lough Cullin SPA/pNHA.
Cultural Meaning/Associations	A sense of cultural meaning arises where a site or features within a site are deemed to explain, represent or inspire cultural values. There are a number of recorded monuments in the Study Area which are detailed in the Cultural Heritage Chapter.
Recreation Value	A series of looped walks were developed, consisting of local town walks, woodland (heritage) walks and mountain walks. The website www.crossmolina.ie lists these as including the Gortnor Abbey walk, The Grange Walk and Deel Castle walks. All start at the playground in Crossmolina. The Gortnor Abbey Walk passes through the study area as it includes the Lake Road. The distances vary in length from 3km to 11 km. www.irishtrails.ie also lists the Enniscoe Loop Walk south of the proposed development.

Table 9.4 Indications of Landscape Value

9.4.4 Landscape and Site Context

This section of the EIAR describes the views of the surrounding landscape that are available from the Study Area. It also describes the existing views towards the Study Area from the surrounding area, with particular reference to the views from roads, houses, and areas of amenity value, and describes the areas of proposed works in more details.

Views from the Study Area

The topography of the study area and wider landscape is generally flat or undulating. Roadside vegetation and the built environment of Crossmolina results in restricted and intermittent views of the surrounding landscape, however distinctive views from the study area include views of Nephin from both the town and the surrounding landscape. Plate 9.8 below shows a view of Nephin Mountain from an area adjacent to the R315 regional road close to where the end of the diversion channel will be.

Plate 9.8: View on access road off the N59 to be rerouted for end of diversion channel

In general, views from the western end of the proposed channel include views of Nephin. Otherwise, views are over farmland and include views of the roads and of some dwellings. Plates 9.9-9.12 below indicate the views available from the study area.

Plate 9.9: Views from the western end of the study area at Pollnacross

Plate 9.10: Views from the River Deel banks at Pollnacross - trees restrict views

Plate 9.11: View across the proposed channel route over farmland

Plate 9.12: Views towards the shore of Lough Conn

9.5 VISIBILITY

Views Towards the Study Area

The study area which is to the south of Crossmolina town, lies largely in between two roads, the local road running through Poulnacross to the west of the study area (as seen in Plate 9.13 above) and the Regional Road R315 to the eastern end of the study area, close to Lough Conn. The Lake Road runs to the east of the 315 towards Lough Conn. Therefore, the main views are from the public roads.

Eight photomontages were taken to represent views towards the proposed development, and these are discussed below. These include views from local and regional roads, the Lake Road, and views close to residential areas. A view of the proposed spillway and weir is included. Views of the proposed channel, bridge, and realigned Lake Road are also included.

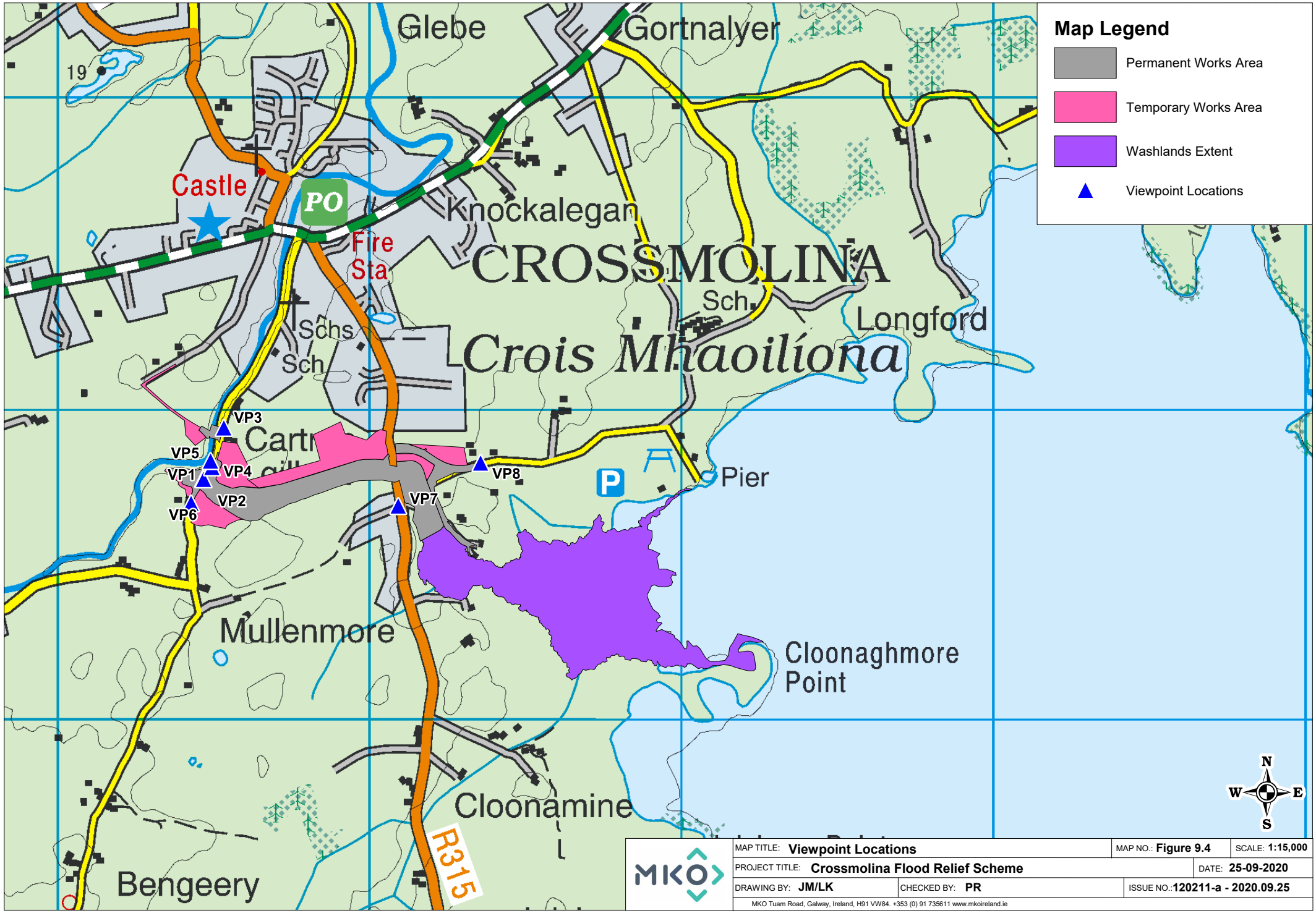
Photomontages

Photomontages are visualisations that superimpose an image of a proposed development upon a photograph or series of photographs. They are intended as graphical representations of how a proposed development will appear in the existing landscape, however there is some degree of interpretation on how certain elements (e.g. vegetation) will look.

Visualisations such as photomontages are tools that can represent the likely effect of a development at a particular time and are used to inform the viewer's prediction of how that development will appear. In terms of impact quality however, i.e. whether a visual impact is deemed to be positive, negative or neutral, this involves a degree of subjectivity.

A series of 8 photomontages has been prepared as part of the EIAR, which show the proposed scheme from different locations in the receiving environment. The photo-locations are illustrated in Figure 9.4. An existing view is shown from each photo-location to provide a representation of the current view, and then a proposed view is presented in order to illustrate the difference. A brief description of each view is also included. All of the views are in the vicinity proximity of proposed residences.

The photomontages represent views which may be available to a number of people from public areas such as roads, and represent views where the works will be evident, such as from the local road at Pollnacross to the west of the study area, and the proposed bridge and spillway at this location (View 1 and 2). Other views include views of the proposed channel (View 6) and the realigned Lake Road.



MAP TITLE: **Viewpoint Locations**		MAP NO.: **Figure 9.4**	SCALE: **1:15,000**
PROJECT TITLE: **Crossmolina Flood Relief Scheme**			DATE: **25-09-2020**
DRAWING BY: **JM/LK**	CHECKED BY: **PR**	ISSUE NO.: **120211-a - 2020.09.25**	

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Viewpoint 1

Plate 9.28: Existing View from local road at Pollnacross

Plate 9.29: Proposed View from local road at Pollnacross

Existing View

The existing view above shows a view elevated from the existing level to the proposed level of the local road at Pollnacross. The view shows an area of scrub that conceals the River Deel and most of the mid distance views behind. There is rough grassland in the foreground along with construction material and equipment.

Viewers from the road would be considered as viewers of Low to Medium sensitivity. Viewers from a nearby dwelling would be considered High. Together the visual receptor sensitivity is deemed **Medium**.

(Note that as the road is proposed to be raised, there is a difference in height between what a motorist or pedestrian would see today, and what they will see once the proposed development is completed. Therefore, the existing view was taken at a height so one can now compare the two views.

Proposed View

The proposed view shows the removal of the foreground vegetation, opening up partial views of the River Deel and the opposite riverbank as well as partial medium distance views to the fields beyond.

In the foreground, a large concrete spillway and weir are visible. The majority of the time this will be dry, and appear as in the image, but in times of flood there may be water in the spillway which will change the view. To the right there is a concrete retaining wall topped with railings.

The magnitude of the change is considered **High**.

With a **High** magnitude of the change and a **Medium** receptor sensitivity the overall visual impact is considered **Moderate to Significant**.

Viewpoint 2

Plate 9.26: Existing View from local road at Pollnacross (view from height above ground level)

Plate 9.27: Proposed View from local road at Pollnacross

Existing View

The existing view above shows a view elevated from the existing level to the proposed level of the local road at Pollnacross. The view looks over an upwards sloping agricultural field with a post and wire fence and wet grassland in the foreground and finishing in at hedgerows and intermittent tree lines at the far side. A ridge of higher ground is seen to the right at the rear of the image on which scattered trees and shrubs are visible.

Viewers from the road would be considered as viewers of Low to Medium sensitivity. Viewers from a nearby dwelling would be considered High. Together the visual receptor sensitivity is deemed **Medium**.

(Note that as the road is proposed to be raised, there is a difference in height between what a motorist or pedestrian would see today, and what they will see once the proposed development is completed. Therefore, the existing view was taken at a height so one can now compare the two views. This also applies to view 6 below.)

Proposed View

The proposed view shows the top of a bridge parapet, over which the stone covered and then grassed diversion channel with an access track to the left can be seen. The introduction of the channel introduces extensive landform changes. In particular the channel lowers the ground level of the field substantially and cuts through the elevated ground at the end of the field resulting in the removal of sections of hedgerows and tree lines. As a result of these changes in topography a middle-distance view to more distance fields and tree lines is opened up to the left of the image.

The magnitude of the change is considered **High**.

With a **High** magnitude of the change and a **Medium** receptor sensitivity the overall visual impact is considered **Moderate to Significant**.

Viewpoint 3

Plate 9.26: Existing View from local road at Pollnacross

Plate 9.27: Proposed View from local road at Pollnacross

Existing View

The existing view above looks diagonally across the local road at Pollnacross to the ivy-covered roadside wall and hedgerows and three lines behind. To the left of the image a roadside verge with moss and grass can be seen adjacent to the boundary wall of a residential property. There is also a telegraph line running along the opposite side of the road.

Visual receptors will be road users and nearby residents from a row of dwellings. Therefore, visual receptor sensitivity is considered **Medium**.

Proposed View

The proposed view shows a section of the existing wall replaced by a new wall. The hedgerows and treelines behind have been replaced with new mixed native hedgerow planting and native trees.

The magnitude of the change is considered **Low**.

With a **Low** magnitude of the change and a **Medium** receptor sensitivity the overall visual impact is considered **Not Significant**.

Viewpoint 4

Plate 9.18: Existing View - Local Road at Pollnacross looking south

Plate 9.19: Proposed View - Local Road at Pollnacross looking south

Existing View

The existing view above shows a road in the centre of the image with hedgerows on both sides. Some stretches of hedgerow are accompanied by tree lines. Through the roadside vegetation an agricultural field can be seen to the left and a residential property to the right. Although parts of Nephin Mountain are visible much of it is screened from view by the roadside vegetation.

Visual receptors will predominantly be road users along with nearby residents. Therefore, combined these visual receptors would be considered of **Low to Medium** sensitivity.

Proposed View

The proposed view shows existing hedgerows and trees removed on both sides of the road for most of the visible section of the road, opening up a clear view to Nephin Mountain to the left of the image. The existing vegetation is replaced with post and rail fencing and steel crash barriers to the front before and after the new bridge. The level of the road is slightly raised. To the right new native trees have been introduced, which partially screen railings along the spillway. Some new hedgerow planting can be seen further along the section of road.

The magnitude of the change is considered **Medium to High**.

With a **Medium to High** magnitude of the change and a **Low to Medium** receptor sensitivity the overall visual impact is considered **Moderate**.

Viewpoint 5

Plate 9.26: Existing view from the bank of the River Deel

Plate 9.27: Proposed view from the bank of the River Deel

Existing View

This view was taken from the bank of the River Deel. Looking downstream, the riverbank is mainly densely vegetated with trees. However, to the left of the image there is near to middle-distance view to an adjacent field.

There will be no visual receptors other than possibly anglers. Therefore, visual receptor sensitivity is considered **Low**.

Proposed View

In the proposed view the new river flow control structure can be seen in the river channel. The ground adjacent has been regraded and concrete retaining walls and railings have been introduced alongside. The addition of this structure will necessitate removal of some of the riverbank trees, but there will be no change to the fore and background of the view.

The spatial extend of the changes in the view are slight to moderate and therefore the magnitude of the change is considered **Medium to High**.

With a **Medium to High** magnitude of the change and a **Low** receptor sensitivity the overall visual impact is considered **Slight**.

Viewpoint 6

Plate 9.20: Existing view - local road at Pollnacross looking north

Plate 9.21: Proposed view - local road at Pollnacross looking north

Existing View

The existing view above shows a road in the centre of the image with intermittent hedgerows on both sides. In the foreground to the left, some trees and a low wall lead up the entrance to a residential property. To the right of the road two fields separated by hedges and tree lines are visible.

Visual receptors will predominantly be road users along with nearby residents. Therefore, combined these visual receptors would be considered of **Low to Medium** sensitivity.

Proposed View

The proposed view shows existing hedgerows and trees removed on both sides of the road for most of the visible section of the road and removal of the trees and wall to the left. The existing vegetation is replaced with post and rail fencing and steel crash barriers to the front before and after the new bridge. Additionally, the residential property access has been moved closer to the viewer. The level of the road is slightly raised. To the left new native trees have been introduced, which partially screen railings along the spillway. To the right of the road the upper part of the concrete retaining wall and adjacent access track are visible. Some new hedgerow planting can be seen along the new access tracks.

The magnitude of the change is considered **Medium**.

With a **Medium** magnitude of the change and a **Low to Medium** receptor sensitivity the overall visual impact is considered **Slight**.

Viewpoint 7

Plate 9.22: Existing view - junction of R315 and Lake Road

Plate 9.23: Proposed view - junction of R315 and Lake Road

Existing View

The existing view is across the R315 regional road to the junction with Lake Road. Lake Road veering to the right is lined by grass banks, hedgerows, telegraph poles, electricity lines and occasional trees. To the left is an undulating grassed field sloping up towards a tree line and to the right part of a residential property surrounded by a low wall can be seen.

Visual receptors will be road users and nearby residents from a row of dwellings. Therefore, combined these visual receptors would be considered of **Medium** sensitivity.

Proposed View

In the proposed view Lake Road and its junction with the R315 are removed and replaced in the foreground by post and rail fencing. Beyond this the grassed field has been extended to the right and the mature tree in the centre of the image is retained. The upper part, including the railing, of the energy dissipation unit stretch across the centre of the view. Behind this the grass embankment of the proposed channel is visible.

The magnitude of the change is considered **Medium**.

With a **Medium** magnitude of the change and a **Medium** receptor sensitivity the overall visual impact is considered **Moderate**.

Viewpoint 8

Plate 9.24: Existing view - Lake Road

Plate 9.25: Proposed view - Lake Road

Existing View

The existing view above shows a local road (Lake Road) with a dwelling boundary wall and lawn to the right of the image. To the left of this and further along the road there are tall hedgerows and to the right of the image a pastoral field slopes up to the horizon.

Visual receptors will be road users and nearby residents from a row of dwellings. Therefore, combined these visual receptors would be considered of **Medium** sensitivity.

Proposed View

The proposed view shows the realigned the Lake Road, which now veers to the right of the image. Footpath line the road and the existing streetlighting is extended to the length of the road. Much of the existing hedgerow to the left of the image is removed, opening up views to a dwelling in the distance. However, hedgerows along the old Lake Road will be retained.

The magnitude of the change is considered **Medium to High**.

With a **Medium to High** magnitude of the change and a **Medium** receptor sensitivity the overall visual impact is considered **Moderate to Significant**.

9.6 LIKELY SIGNIFICANT EFFECTS AND ASSOCIATED MITIGATION MEASURES

9.6.1 'Do-Nothing' Scenario

In the event that the proposed flood relief scheme were not to proceed, the landscape of the study area would evolve based on current trends. Views to and from the study area would remain unaltered. Should further major flood events occur, the visual amenity of the area would be temporarily affected due to flood levels increasing. Potential landscape impacts caused by flooding include flood damage to structures and vegetation as well as erosion in Crossmolina and its environs.

9.6.2 Impacts During the Construction Phase

Removal of trees, vegetation and bankside habitat

During the construction phase, trees and other vegetation will be removed from some parts of the riverbank in order to facilitate construction of flood defences. The main areas of vegetation removal will be as follows:

- At the proposed intake location at Pollnacross
- Sections of hedgerow along the route of the proposed channel
- Hedgerow along the realigned Lake Road
- Adjacent to the proposed river flow control structure

The effect of the hedgerow removal will be to open up views. In some cases this will have a negative impact on visual receptors as the hedgerows may be more visually aesthetic than the views beyond that will be gained. However, where views of Nephin are opened up these may be seen as a positive outcome. The removal of vegetation at the proposed spillway location along the banks of the River Deel will have a **Moderate Negative Landscape and Visual Effect** while in other areas such as along the roadsides the removal of vegetation will have a **Slight Negative Landscape and Visual Effect** as at these locations it will be over shorter areas.

Mitigation Measures

A total of 2445 linear metres of hedgerow or tree lines will be planted along the boundary of the development footprint. This will exceed the amount being lost (1471 linear metres) 974 linear metres, ensure hedgerow habitat is replaced and will assist in re-creating the natural patterns in the landscape. Similarly, the amount of woodland lost will be replaced through planting to screen the development. In particular, planting to screen the spillway form the residence at Pollnacross will lessen the visual effect as it matures. All planting will be native species that are found in the local area and shown in Appendix 3A.

Construction of channel and spillway

Visual and landscape effects vary depending on the location and type of works proposed. In terms of visual effects, the construction of the proposed spillway in combination with vegetation removal, road regrading and the proposed channel will result in **Moderate Negative Visual Effect** at the intake location at Pollnacross as the magnitude of the change is High, but it will only be perceived over a short section of road. The construction of the proposed grass lined channel will result in **Imperceptible to Slight Negative Visual Effects** over the remainder of the study area as it will not be visible from roads.

The landscape effects of the proposed channel and spillway also vary. The proposed spillway or intake structure and channel will have an effect on the fabric of the landscape. The proposed spillway will result in an extensive area of concrete adjacent to the riverbank, and therefore an impermeable surface, while the channel is to be grass lined, and therefore permeable. The eastern end of the channel, as it nears

Lough Conn, will be located close to an area of wet grassland with some woodland, which has a more naturalistic character. Overall, however the landscape effects will be localised and will not affect the wider landscape character. The landscape effects range from **Slight Negative Landscape Effects** in areas where the proposed channel cuts through agricultural grassland, to **Moderate Negative Landscape Effects** in areas where a combination of works will locally change the rural character and replace permeable surfaces with impermeable.

Mitigation Measures

Mitigation Measures which will reduce the landscape and visual effects include planting of vegetation as shown in Appendix 3A, which will reduce both landscape and visual effects.

Realignment of the Lake Road and raising of road levels

The realignment of the Lake Road, which is a known walking route, is likely to have **Temporary, Slight, Negative landscape and visual effects** during the construction phase, due to vegetation removal and earth movement as well as other ancillary, temporary landscape and visual effects seen during the construction phase. These will reduce once the proposed road is realigned and replanting has taken place as outlines on the scheme drawings. The raising of the road levels on their own will have a **Neutral Landscape and Visual Effect.**

Construction Works -Construction Traffic, Materials and Temporary Site Buildings

The construction phase of the proposed scheme will involve the movement of construction vehicles into and out of the working area, and a temporary construction works facility for storage of materials. Construction is expected to last approximately 48 months. These activities will have a **Moderate, Negative, Temporary Impact** on the surrounding area in terms of landscape and visual impact.

Mitigation Measures

Any negative impact associated with the proposed works on the visual amenity and landscape within the study area, will be minimised as described in Chapter 11 (Material Assets) and through the implementation of the Outline Construction and Environmental Management Plan (OCEMP). A construction compound will be used to house materials, plant and machinery, welfare facilities and site offices as part of the CEMP and traffic movements will be subject to regulation through the traffic management plan.

Best practice measures for noise control will be adhered to onsite during the construction phase of the proposed development, as described in Chapter 8 Air, Climate and Noise and Vibration. These measures will mitigate the slight short-term negative impact associated with construction phase noise.

Residual Impact of the Construction Phase

Due to the mitigation measures to be implemented, the residual impact will be a **Temporary to Short-Term, Slight, Negative Impact**

9.6.3 Impacts During the Operational Phase

Operational visual effects (after construction is complete), have been assessed from 8 viewpoints. In most cases, the visual impacts relate to changes arising from ancillary project elements, such as replacement of vegetation, road realignment, introduction of pavement or changes in landform, rather than the visibility of the flood control infrastructure which in themselves differ from the present, but may be in some cases be seen as improvements.

Two viewpoints were chosen to assess the visual effects arising from the proposed river flow control structure, one from the road and another in the river channel. Here the overall visual impact were found to

be **Not Significant** and **Slight,** respectively. It should be noted that there are likely to be very few, if any visual receptors from the river channel itself.

Four viewpoints were chosen to assess the proposed bridge and intake structure. Here the visual impacts ranged from **Slight** up to **Moderate to Significant**. The most significant of these was Viewpoint 1, due to the introduction of significant areas of concrete, where presently there is riverside shrubs and trees.

The visual effects arising from the proposed energy dissipation structure were assessed from two viewpoints, to the east and west. This proposed structure will not be visible from the east, but the road realignment and ancillary elements will result in a **Moderate to Significant** visual impact. The upper part of the proposed energy dissipation structure will be visible from Viewpoint 7 to the west, but the changes overall in this view will not be as great and result in a **Moderate** visual impact.

Mitigation Measures

Mitigation Measures which will reduce the landscape and visual effects include planting of vegetation as outlined above which will reduce the visual effects.

Residual Impact of the Operation Phase

As the remedial planting matures and becomes part of the surrounding landscape there will be a **Long-Term, Slight, Neutral to Negative Visual Impact**

9.6.4 Cumulative and In-combination Effects

Cumulative Effects

The interaction of the various elements of the proposed development was considered and assessed in this EIAR. The potential for each individual element of the proposed development on its own to result in significant effects on biodiversity was considered in the impact assessment. The entire project, including the interactions between all its elements, was also considered and assessed for its potential to result in significant effects on the landscape in the impact assessment presented above. The complex interactions between the requirement for large scale earthmoving and construction works at the intake, channel and spillway was considered cumulatively along with visual and landscape effects that will result from this. Any potential cumulative impacts were taken into account and any significant impacts avoided through a series of mitigation measures that are described above in this chapter. The requirement to minimise disturbance on humans, heritage and biodiversity was also considered and evaluated cumulatively in the landscape and visual assessment.

Following this cumulative assessment of the interactions between all aspects of the project, no additional effects were identified and a full and comprehensive cumulative assessment of the potential effects of the proposed development on the landscape has been achieved.

In-combination Effects

A list of relevant existing and approved projects that were considered in combination with the proposed development are provided in Chapter 2. These projects were also assessed in relation to landscape and visual effects. The main projects relevant to the landscape and visual chapter to the proposed development are:

- OPW drainage maintenance programme, which includes the River Deel up as far as the Jack Garrett Bridge in Crossmolina. OPW complete drainage maintenance operations on the lower reaches of the River Deel as part of their obligation under the 1945 Arterial Drainage Act. These works are undertaken following the OPW's Environmental Guidance. Additional works such as vegetation and gravel berm removal are from time to time undertaken.

- OPW/IFI/Mayo County Council, Japanese Knotweed eradication programme.

There will only be inter-visibility between these two OPW operations and the proposed development immediately around the intake structure. Furthermore, these operations are intermittently carried out and therefore cumulative effects will only occur briefly at certain intervals.

Other projects identified in the in the townlands of Cartrongilbert and Mullenmore North are all related to the construction works at dwelling houses as well as building work to a school house. All these projects are either not inter-visible with the proposed development or of such a minor nature as not to give rise to in-combination effects.

For the reasons stated above the in-combination effects are considered Slight, Temporary Neutral to Negative.

9.6.5 Conclusion

The proposed drainage scheme was assessed in terms of landscape and visual effects.

Summary of Landscape Effects

The landscape within the study area was assessed for value and sensitivity and it was found that the majority of areas that will be affected by the proposed development are neither of high value nor particularly sensitive to this type of development.

Landscape effects are considered to be localised, due to the flat and gently undulating nature of the landscape and are not likely to be experienced from viewers outside the immediate vicinity of the site, though more pronounced negative effects will occur in the vicinity of the Intake structure. The spillway channel will affect the landscape fabric (excavation of the channel will change the topography at a local level) but proposed planting will be a positive effect. The grass lined channel (apart from a small central channel known as a thalweg, which is hard surfaced) will be permeable and blend into the landscape. Landscape effects range from Slight to Moderate Negative Effects, though landscape effects on the wider landscape character areas are considered Imperceptible.

There will be no significant residual effect on the landscape character and any moderate effects will be very localised and minimised through remedial planting over time so that the long term residual effect will be slight.

Summary of Visual Effects

The proposed river flow control structure will have a Not Significant Neutral Visual Effect, as it will not be visible from the adjacent road and the changes arise only from replanting and replacement of a wall.

Due to the flat and gently undulating nature of the landscape, and the fact that the lake cannot be seen from the majority of the study area, the views of the scheme will be very localised and are not likely to be experienced from viewers outside the immediate vicinity of the site.

The main location where visual effects will arise will be the proposed intake structure and bridge at Pollnacross where the proposed spillway will be clearly visible, along with removal of vegetation and raising of the road level. Of the four viewpoints taken to assess this proposed structure the average of all four can be described as giving rise to a Moderate Negative Visual Effect. Tree planting will reduce visual effects for the nearby dwelling over time.

The proposed channel will be visible but only from the areas where it is near to roads or dwellings. Areas where it cuts through agricultural fields or wet grassland, there will not have a high number of viewers,

hence, this does not give rise to any notable visual effects. The proposed channel is grass lined which will minimise visual effect, illustrated by the photomontages.

The proposed energy dissipation structure, channel, road realignment will have visual effects from the R315 and along the realigned Lake Road these are considered Moderate Negative Visual Effects. Planting of hedgerows and trees will reduce visual effects over time. Vegetation is to be retained where possible. Overall visual effects range from Slight to Moderate, Neutral to Negative Visual Effects.

As the mitigation measures in the form of remedial planting matures there will be a **Long-Term, Slight, Neutral to Negative Visual Impact.**

In most cases, the visual impacts relate to changes arising from ancillary project elements, such as replacement of vegetation, road realignment, introduction of pavement or changes in landform, rather than the visibility of the flood control infrastructure. Despite the project covering a large area it will only be visible over very limited areas.