

## Chapter 14

## Landscape and Visual Impact

### 14.1 Introduction

This chapter addresses the potential landscape and visual impacts of the proposed development.

The methodology for the assessment is in accordance with the Landscape Institute *Guidelines for Landscape and Visual Impact Assessment*, Second Edition, 2002 (hereafter referred to as the LVIA Guidelines). The assessment has also taken into account the following documents:

- *Consultation Draft of Guidelines for Landscape and Landscape Assessment*, 2000, published by the Department of Environment, Heritage and Local Government (DEHLG);
- *Guidelines on the Information to be Contained in an Environmental Impact Statement*, 2002, published by the Environmental Protection Agency (EPA);
- *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*, 2003, published by the EPA;
- *Kildare County Development Plan 2011–2017* (Kildare CDP);
- *A Guide to Landscape Treatments for National Road Schemes in Ireland*, published by the National Roads Authority.

### 14.2 Methodology

#### 14.2.1 Introduction

The LVIA Guidelines prescribe that landscape and visual impacts be assessed by separate, although linked procedures. Landscape assessment considers the effects deriving from alterations to the elements and characteristics of the landscape, which may give rise to changes in its character, how it is experienced and hence the ascribed value of the landscape. Visual assessment is concerned with changes that arise in the composition of available views, the response of people to these changes and the overall effects on the area's visual amenity.

#### 14.2.2 Assessment of Landscape Impacts

The assessment of potential landscape impact considers the likely nature and scale of changes to individual landscape elements and characteristics, and the consequential effect on landscape character and value. Existing trends of change in the landscape are taken into account. The potential impact is assessed based on measurement of the landscape sensitivity against the magnitude of change which would result from the development:

- *Landscape sensitivity* is a function of its land use, landscape patterns and scale, visual enclosure and distribution of visual receptors, and the value placed on the landscape.

Landscape sensitivity is classified as *high* (exhibits a very strong positive character with valued elements and characteristics that combine to give an experience of unity, richness and harmony, therefore particularly sensitive to change in general), *medium* (exhibits positive character but has evidence of alteration to/degradation/erosion of elements and characteristics resulting in an area of mixed character, therefore potentially sensitive to change in general), or *low* (exhibits generally negative character with few valued elements or characteristics).

- *Magnitude of landscape change* is a measure of the degree of change to the elements and characteristics of the landscape which would result from the proposed development.

Magnitude of landscape change is classified as *high* (total loss of or major alteration to the key elements or characteristics of the landscape, and/or introduction of elements considered totally uncharacteristic in the context of the receiving environment's landscape character), *medium* (partial loss of or alteration to one or more key elements or features, and/or introduction of elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic in the context of the receiving environment), *low* (minor loss of or alteration to one or more key elements or characteristics, and/or introduction of elements that may not be uncharacteristic in the context), or *negligible* (very minor loss, alteration or introduction of elements of the landscape).

For both landscape and visual amenity (refer to **Section 14.2.3** below) the significance of the impacts is classified as high, medium or low based on measurement of the magnitude of change against the sensitivity of the landscape or view, using the following guide:

**Table 14.1 Assessment/Grading of Impact Significance**

		Sensitivity				
		H	M	L		
Magnitude	H					High Significance
	M					Medium Significance
	L					Low Significance
	N					

For landscape, the predicted impact is also classified as beneficial, neutral or adverse based on an evaluation of the likely impact on identified landscape values. This is not an absolute exercise; it is a professional judgement informed by the process of landscape character assessment, particularly landscape values assessment (promoted by the DEHLG *Consultation Draft of Guidelines for Landscape and Landscape Character Assessment*), also taking into account relevant planning policies.

### 14.2.3 Assessment of Visual Impacts

The assessment of potential visual impact considers the likely changes to the component elements of views, the character of the views, and the visual amenity experienced by visual receptors.

The assessment is made for a number of viewpoints (and visual receptors) selected to represent the receiving environment, and to address any relevant visual amenity policy for the area such as protected views and prospects. For road schemes it is the norm to assess the impact on residences within a defined distance of the centreline of the proposed road – for this LVIA a distance of 250m to either side of the road has been used. Where a cluster of houses is grouped closely together (i.e. where the residents experience similar views and visual amenity), they are assessed as a single viewpoint.

The potential visual impact on each viewpoint is assessed based on a measurement of the viewpoint sensitivity against the magnitude of change which would result from the development:

- *Viewpoint sensitivity* is a function of the location and context of the viewpoint, the expectations and occupation or activity of the visual receptor, and the importance of the view.

Viewpoint sensitivity is classified as *high* (e.g. users of outdoor recreation facilities or centres of activity focussed on the landscape, and occupiers of residential properties with views affected by the development), *medium* (e.g. people travelling through or past the affected landscape in cars or on public transport, i.e. viewing but not focussed on the landscape), or *low* (e.g. people at their place of work or engaged in similar activities such as shopping, etc., whose attention will be focussed on these activities).

- *Magnitude of change to the field of view* (towards the site) takes into account the extent of the view that would be occupied by the intrusion, e.g. full, partial, glimpse, etc. including the distance of the viewpoint from the development and its effect on the importance of the development in the field of view, the proportion of the development or particular features that would be visible, and whether the view of the development would be static, or a sequence or transient (as seen from a moving vehicle).

The magnitude of change to each view is classified as *high* (total loss of or major alteration to the key elements or characteristics of the view, and/or introduction of elements considered totally uncharacteristic in the context of the view), *medium* (partial loss of or alteration to one or more key elements or features, and/or introduction of elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic in the context of the view), *low* (minor loss of or alteration to one or more key elements or characteristics, and/or introduction of elements that may not be uncharacteristic in the context), or *negligible* (very minor loss, alteration or introduction of elements of the view).

For visual amenity the classification of an impact as positive, neutral or negative is an inherently subjective exercise. Visual receptors' attitudes to development including roads will vary, and so will their perception of their visual impact. These qualitative impacts are defined as:

Adverse – Scheme at variance with landform, scale, pattern. Would degrade, diminish or destroy the integrity of valued features, elements or their setting or cause the quality of the landscape (townscape)/view to be diminished.

Neutral – Scheme complements the scale, landform and pattern of the landscape (townscape)/view and maintains landscape quality.

Beneficial – improves landscape (townscape)/view quality and character, fits with the scale, landform and pattern and enables the restoration of valued characteristic features or repairs / removes damage caused by existing land uses.

Impacts are also categorised according to their longevity or timescale:

This LVIA seeks as far as possible to be objective in the classification of impacts, and to provide a robust justification for the conclusions drawn.

### 14.3 Description of the Proposed Scheme

The proposed development involves the addition of a third lane to each carriageway of the M7 motorway between Junction 11 at Great Connell and Junction 8 at

Johnstown, and the construction of a new interchange at Newhall. For a detailed description of the proposed development refer to Chapter 4 of the EIS. For the purpose of this assessment the following is pertinent:

### **14.3.1 Widening of the Motorway**

#### **Road Pavement**

Throughout the full length of the scheme all of the widening is proposed to be constructed within the existing median. The existing median is 10m wide (at least) and covered in grass, with a trimmed hedge running for most of its length in addition to a wire rope safety barrier. The proposed development would reduce the median to a width of 4.3m. The grass strip, hedge and wire rope safety barrier would be removed. Two concrete safety barriers would run along the outer edges of the reduced median. The strip between the barriers will be filled with free draining granular material.

#### **Drainage and Landform**

The widened road will follow the alignment of the existing road both horizontally and vertically. The existing embankments (where these exist) and vegetation outside of the verges would largely be unaffected by the proposed development.

Upgrading of the road drainage to accommodate additional run-off from the widened road pavement and the new interchange would require work within the existing verges either side of the road, and the construction of a number of new attenuation ponds alongside the existing road corridor. A 2.4m high security fence would be erected around the attenuation ponds.

#### **Noise Barriers**

Noise barriers varying in height from 2.0m to 2.5m will be provided at various locations along the scheme as detailed in Chapter 15 of this EIS and shown on **Figures 15.1 – 15.9 of EIS Volume 3**. Barriers will be located either along the edge of the road (outside the verge) or at the top of the road cutting embankment on the boundary of the motorway corridor, depending on where they would provide maximum benefit.

### **14.3.2 Newhall Interchange**

It is proposed to replace the existing Newhall interchange with a new interchange a short distance to the west/south, where the R445 overpasses the M7 at an acute angle to the motorway.

The new interchange would comprise of two new roundabouts on the R445 either side of the M7, with on-and off-ramps connecting the roundabouts to the motorway. The on- and off-ramps and roundabouts would be built on earth embankments.

The land take to the north and south of the existing M7 and R445 would be primarily from the existing motorway corridor, extending somewhat into the adjacent agricultural fields, which are mostly zoned NE 1: Industry / Warehousing. The off-ramp from the south/west bound lanes of the motorway rising to the new roundabout south of the M7 would traverse a field adjacent to and associated with a number of houses in the strip of land east of the R445 overpass, between the R445 and the M7.

The existing west-bound on-ramp onto the M7 (named Due Way) would be realigned to disconnect from the motorway and instead lead to a new roundabout at the northern end of Newland North/Rathasker Road.

Vegetation would be removed from the existing motorway corridor, and from the field boundaries dividing fields where the proposed development would encroach on the adjacent agricultural lands. The potentially affected motorway corridor vegetation is mostly semi-mature woodland species (predominantly birch and alder) densely planted at the time of the motorway's construction to provide visual screening. Any hedgerows affected would be hawthorn dominated but with a high proportion of mature trees of various species.

## 14.4 Description of the Receiving Environment

### 14.4.1 Overview

The stretch of the M7 which is the subject of this study (hereafter referred to the 'motorway') passes through the 'Northern Lowlands – Naas and Environs' landscape character area in the north east of County Kildare.

The M7 is the main road artery connecting Dublin to the south and west. It is a substantial piece of infrastructure which carries a large volume of traffic. The motorway is one of the defining elements of its context landscape – it forms a physical and visual barrier in the landscape, and, particularly in the vicinity of Naas (as far west and beyond the Newhall interchange) it determines the adjacent land use.

The character of the landscape changes from east to west. It is peri-urban in character towards the east where the motorway skirts the Naas urban area and crosses numerous radial roads accessing the town. The landscape is cluttered with infrastructure and diverse development from residential to large scale retail, commercial and industrial, but retains some rural elements (fields and tree lines) particularly north of the road. To the west of the Newhall interchange the motorway passes through a rural landscape characterised by fields divided by hedgerows, and dispersed housing. Towards the western end of the study area at the M7-M9 junction the proportion of built elements in the landscape increases. There are a number of clusters of houses close to the motorway.



**Photograph 14.1** At the eastern end of the study area the landscape around Naas is peri-urban in character, and relatively cluttered with infrastructure and diverse development.



**Photograph 14.2** The central part of the study area, in the vicinity of Lewistown and Ladystown, is rural in character.



**Photograph 14.3** At the western end of the study area there are several clusters of houses in the otherwise rural landscape around the M7-M9 junction.

#### 14.4.2 Topography

The topography of the receiving environment is flat to gently undulating. The Liffey River follows a meandering path roughly parallel to the motorway several kilometres to the north, except near Halverstown where a loop in the river approaches to within 350m of the road. For most of its length the motorway is separated from the broad floodplain of the river by a row of low hills which lie parallel to the road approximately 1km to the north. A local road follows the gently undulating ridgeline of the hills giving access to the townlands of Osberstown, Halverstown, Ladytown, Lewistown and Clownings.

The lands to the south are flat as far as the Grand Canal which follows a path roughly parallel to the motorway, running within 100m of the road for a stretch west of Hoare's Bridge. The land rises gently beyond the canal towards the distant Eastern Uplands of Kildare.

Towards the western extent of the study area, just to the west of the M7/M9 junction there is a steep-sided linear hill which lies perpendicular to the alignment of the M7. The townlands of Hillsborough and Greatconnell occupy this hill, accessed by a local road which follows the ridgeline. The M7 cuts through the hill in a deep cutting.



**Photograph 14.4** At Greatconnell the M7 passes through a hill in a deep cutting. The houses of Hillsborough on the ridgeline overlook the M7/M9 junction.

#### 14.4.3 Vegetation and Habitats

The majority of the study area landscape outside of the motorway corridor (road reservation) remains in agricultural use. The landscape is composed of generally angular grassland fields of various size divided by well-tended hedgerows.

There are three areas of intact planted woodland close to the motorway in the eastern part of the study area. These are the demesne woodlands of Palmerstown House (now forming the woodland framework of Palmerstown golf course), the woodlands surrounding Roseborough House, and a small woodland and mature tree lines around Osberstown House.

Other than these sites, and the vegetation alongside the Corbally Branch of the Grand Canal, there are few notable woodlands, wetlands or other habitats (of landscape scale/significance) of note in the study area.

#### 14.4.4 Land Use, Settlement and Potential Visual Receptors

The landscape towards the western end of the study area is predominantly rural in character. However there are urban-generated elements which dilute this character to some extent.

- Chainage 0+300 - 0+600 - There is an isolated residential estate (Old Abbey Manor) north of the motorway at Greatconnell where the M7 passes through a deep cut beneath the Hillsborough Road. Due to the topography the houses are not exposed to change of the nature proposed.
- Chainage 0+600 – 0+700 – There are three houses north of the M7 on the Hillsborough Road, above the steep, vegetated embankment where the M7 cuts through a hill.
- Chainage 0+600 – 0+800 – There is an almost continuous row of houses along the Hillsborough Road to the south of the M7. The road runs along a ridgeline perpendicular to the motorway. Due to their elevation, aspect and position relative to the motorway, the houses along this road are potentially exposed to any change in the motorway corridor.
- Chainage 1+700 – 1+900 - There is a cluster of houses to the north of the M7/M9 junction where a local road crosses the motorway giving access to

Corbally to the south. Despite some screening vegetation, due to their proximity these houses are exposed to change in the motorway corridor.



**Photograph 14.5 A cluster of houses north of the M7/M9 junction is potentially exposed to change in the motorway corridor.**

- Chainage 1+900 – 2+300 - The Corbally Branch of the Grand Canal terminates at the (derelict) Corbally Harbour approximately 800m south of the motorway. There are a number of houses beside the Corbally Road. The nearest of these is some 250m from the motorway but the surrounding landscape, apart from garden vegetation is relatively open (free of hedgerows).

The landscape north and south of the motorway between the M7/M9 junction (and Corbally) and the Newhall Interchange is predominantly rural in character, and zoned to remain in agricultural use.

- Chainage 2+950 – 3+450 - A local road runs alongside the Grand Canal Corbally Branch only 100m south of the motorway. There is a row of five houses in the narrow strip of land between the canal and the motorway west of Hoare's Bridge. Due to their proximity (55m) these houses are potentially exposed to change in the motorway corridor despite being sheltered by maturing tree belts.
- Chainage 4+000 – 4+100 - Some distance east of Hoare's Bridge there is a row of three houses beside the canal-side road. These houses are further from the motorway (175m+) and benefit from the screening provided by mature hedgerows in the intervening landscape.
- Chainage 4+800 – 5+350 - A spur off the Ladytown Road which runs parallel to the motorway (approximately 500m to the north) gives access to a large cluster of houses around a farm beside the motorway. These properties are potentially exposed to change in the motorway corridor.
- The houses dispersed along the Ladytown Road are generally too far from the motorway, and buffered by hedgerow vegetation in the intervening agricultural landscape, to be significantly affected by change of the nature proposed in the motorway corridor. A number of houses on the Ladytown Road south of the motorway (and the R445 crossing, part of the Newhall Interchange) are similarly protected by intervening vegetation.

The lands around the Newhall Interchange north and south of the motorway are zoned for industry and warehousing, as well as retail. Some development has taken place, including the Newhall Retail Park to the south and the M7 Business Park to

the north. This is the start of an emerging commercial/industrial corridor with the M7 at its centre in the Naas environs.

- Chainage 7+000 – 7+350 - There are a number of houses located in the narrow strip of land between the motorway and the R445 (south of the motorway). These houses are enclosed by mature garden vegetation but close to the motorway therefore potentially exposed to change.

To the north of the motorway between the Newhall Interchange and the Osberstown Wastewater Treatment Plant (WWTP) the M7 Business Park is being developed. To the south of the motorway between the Newhall Interchange and the R407 (at Monread) the lands are zoned for enterprise and employment. Some of this development has taken place (Millennium Park) initiating the transformation of the landscape, but significant change is yet to take place. In time there will be a continuous corridor of business campus-type landscape to the south of the motorway. By contrast the lands north of the motorway along this stretch (east of the Osberstown WWTP) will remain in agricultural use.

- The Osberstown Road runs parallel to the motorway 300-400m to the north. There are several houses along this road including a linear cluster just to the east of the WWTP (Chainage 9+200 – 9+500). The motorway is generally screened from their view by vegetation on the garden boundaries, and by the hedgerow on the motorway corridor boundary.
- Chainage 9+600 – 10+000 - There are two farm houses situated in the fields off the Osberstown Road, closer to the motorway. Although potentially more exposed (than the houses along the road) they are well sheltered by hedgerow vegetation in the surrounding landscape.
- Chainage 10+500 – 10+700 - Osberstown House, a protected structure, is situated in a designed parkland landscape which extends to the edge of the motorway. The house itself is situated 300m from the motorway, and the road is screened from the house by the mature parkland trees and hedgerows. However changes to the motorway corridor, particularly any loss of vegetation from the corridor, may be perceivable from parts of the property (i.e. the 'curtilage' of the protected structure).
- Chainage 11+200 – The motorway crosses over the Grand Canal Corbally Branch. The canal corridor is enclosed by belts of mature woodland restricting lateral views. There is a local road on the towpath. South of the motorway the canal traverses the emerging Millennium Park business campus.
- Chainage 11+300 – There are a house and a creche houses off the Osberstown Road in the field beside east of the canal. The houses are 175m north of the motorway. An existing hedgerow defining the boundary of the road reservation screens the motorway from these houses. Were the hedgerow to be disturbed they would be exposed.
- Chainage 11+500 – 11+700 - There is a residential estate (Osberstown Cottages) immediately to the north of the motorway and west of the R407. The vegetation on the property boundaries and in the motorway corridor limits the visual effect of the M7 on the properties but the southernmost houses are somewhat exposed and therefore potentially affected by changes to the motorway corridor.



**Photograph 14.6** The houses of Osberstown Cottages are mostly sheltered from the effects of the motorway by mature vegetation on the property boundaries.

The R407 overpasses the motorway at Monread and (in landscape terms, as perceived from the motorway) defines the edge of the Naas urban area. The landscape east of the R407 is distinctly peri-urban in character. No development fronts onto the motorway but there is a relatively high density of development, including residential, large-scale retail, commercial, industrial use and a quarry, along the lesser roads to north and south of the M7.

- Chainage 11+750 - There is a single house off the R407 some 75m north of the bridge over the M7. The property is enclosed by a belt of mature planting around the property boundaries.
- Chainage 11+900 – There is a single house some 40m north of the motorway (accessed off the R407) directly opposite the Tesco. This property is exposed to any change in the motorway corridor.



**Photograph 14.7** An isolated house close to the motorway at Monread North is exposed.

- Chainage 11+700 – 11+900 - There is a row of houses towards the western end of the Monread Road (west of Tesco) within 100m from the motorway. The motorway is thoroughly screened by a broad strip of mature vegetation on the property boundaries.

- The strip of land between Monread Road and the motorway, apart from the few remaining residential properties, is zoned for a mix of industry, warehousing and retail use.
- Chainage 13+100 – 13+450 - There is an apartment development, a nursing home and a row of several houses towards the eastern end of Monread Road, approximately 200m south of the motorway. These properties are separated from the motorway by a strip of grassland fields divided by mature hedgerows (which screen the motorway presently). The fields are zoned for industrial development.
- Chainage 14+600 – 15+000 – There are a number of houses among the more recent commercial developments along the Johnstown Road south of the motorway at the eastern extent of the study area. These houses (e.g. the Johnstown Cottages) are within 100m of the motorway and are among the most exposed to any change in the motorway corridor.
- There are numerous houses along the Johnstown Road to the north of the motorway (west of where the two routes cross). Despite the elevation of the road most of these houses are too far removed (and buffered by the intervening rural landscape which includes an extensive woodland) to be affected by change of the nature proposed.
- Chainage 14+400 – 14+600 – There are several houses closer to the motorway towards the eastern end of the Johnstown Road (east of Roseborough House). These are exposed to a greater degree due to their proximity to the motorway.
- Chainage 14+200 – Roseborough House is situated some 200m north of the motorway east of the Maudlings Interchange in a demesne landscape. The belts of mature woodland around the boundaries screen the motorway from the house.

#### 14.4.5 The Motorway Corridor

The motorway is a large piece of infrastructure and a distinct landscape in itself. Due to its function (carrying a high volume of traffic with associated visual, noise and air quality effects) the motorway corridor is generally designed to separate the road from the context landscape as far as possible. The motorway corridor landscape generally includes:

- A central median between the two carriageways. The median is generally covered in grass with a central clipped hedge alongside a steel cable barrier. (There is one short stretch where there is a row of mature conifers at the centre of the median.) In places the median is hard surfaced.
- A grass verge. Along sections where there is a level change in or adjacent to the verge (e.g. a drainage ditch at the foot of an embankment) there is a barrier in the verge. The signage and lighting masts are located in the grass verge.
- A vegetated strip of varying width. The path of the motorway is generally flat so the surface is level with the lands outside of the road reservation. There are sections where the road is lower than the adjacent lands and enclosed by shallow embankments. Where the motorway passes beneath an underpass the embankments can be wide and steep. The strip is generally densely planted with birch or alder (in places there is greater variety in the species). Along some sections the strip is grassed as far as a hedgerow marking the boundary of the road reservation.



**Photograph 14.8** The typical treatment of the motorway landscape corridor. The outer vegetated strip provides visual screening of the road and traffic.

## 14.5 Policy Context – Kildare County Development Plan 2011-2017

The Kildare CDP (Section 3.4.1) identifies Naas as the county's single 'Large Growth Town I' (potential population of up to 50,000): *"Large Growth Towns... are designated to act as important self-sustaining regional economic drivers, accommodating significant new investment in transport, housing, economic and commercial activity, while capitalising on international connectivity and high quality connections to Dublin City Centre."* (own emphasis).

The Preferred Development Strategy of the CDP identifies a Strategic Development Corridor (CDP Map 2.5) associated with a corridor of more robust environmental conditions (i.e. a *"concentration of high capacity public transport routes, a high density of serviced lands and a lower density of ecological and landscape designations"*), with the motorway at its centre.

This is reflected in the Core Strategy of the CDP (see Map 2.6) which identifies a broad 'Multi-modal Transport Corridor' incorporating the motorway and parallel railway line, with Naas the primary development node (Large Growth Town I).

The strategic policy is in turn reflected in the land use zoning objectives of the CDP and the Naas Town Development Plan. Large tracts of land adjacent to the motorway (north and south) as it skirts Naas and some distance to the west (extending beyond the Newhall Interchange) are zoned 'Enterprise and Employment' and 'Industry and Warehousing'. This indicates that the landscape corridor of which the motorway is the central feature is in the process of transition.

The strategic policies also indicate that the landscape of the study area can be considered robust, or of relatively low sensitivity, particularly in relation to the nature of development proposed.

#### **14.5.1 Landscape Character Assessment and Landscape Sensitivity**

A landscape character assessment (LCA) was carried out for County Kildare in 2004, and is included in Volume II of the CDP. The LCA informs the policies and objectives regarding the landscape and views contained in Chapter 14 of the CDP.

The study area falls into the 'Northern Lowlands – Naas and Environs' landscape character area (see CDP Map 14.1). The critical landscape factors of the area are identified as (a) the smooth terrain, (b) undulating topography, (c) low vegetation, (d) shelter vegetation, (e) localised river and canal views. The predominant land use is pasture, but the proximity of the area to Dublin is noted as a determinant in the settlement pattern; the area has the highest density of population in the county.

The area is identified as being of low landscape sensitivity (see CDP Map 14.2), 'tolerant to change', with the 'ability to accommodate development pressure'. This is corroborated by the Strategic Environmental Assessment (SEA) for the CDP. The SEA outlines the macro level environmental sensitivities of the county, and the study area falls into an area characterised as 'Most Robust; Most Populated' (CDP Map 2.4).

#### **14.5.2 Landscape and Visual Amenity Policy**

In this section a selection of Kildare CDP policies considered most relevant to the assessment are directly quoted. Commentary is included in places.

##### ***14.4.2 Impact of Development on Landscape***

*"In order to determine the likely perceived impact of a particular development on the landscape, the potential impact of the development must be viewed in light of the sensitivity of the area. However, all developments are unique and at micro / local level landscapes vary in terms of their ability to absorb development and each site should be assessed on its individual merits.*

This suggests that despite the proposed development being located in a landscape of low sensitivity, there may be sensitivities at a local level which require consideration. This is relevant to the residential properties in close proximity to the motorway, broadly identified in 14.4.4 above. Changes to the motorway corridor have the potential to affect the landscape and amenity of these houses.

##### ***14.5.4 The Grand and Royal Canal Corridors***

*"...The Grand Canal flows in an east to south-west direction and divides at Sallins into the Naas and Corbally Branch.... The canal corridors and their adjacent lands have been landscaped and enhanced along the sections where the canals flow through urban areas... The smooth terrain, generally gentle landform and low canal bank grassland that characterize the canal corridors, allow vistas over long distances without disruption, where the canal flows in a straight-line direction. Consequently, development can have a disproportionate visual impact along the water corridor and can prove difficult for the existing topography, to visually absorb development. The occurrence of natural vegetation, coniferous and mixed plantations adjacent to the water corridors can have shielding and absorbing qualities in landscape terms, by providing natural visual barriers.*

*“Canal corridors are potentially vulnerable linear landscape features, as they are often highly distinctive in the context of the general landscape. In some cases landscape sensitivities may be localised or site-specific.”*

The motorway crosses the Corbally Branch of the Grand Canal near Osberstown, and west of Hoare’s Bridge near Lewinstown the motorway approaches to within 100m of the canal for a stretch of approximately 1km. At these locations changes in the motorway corridor have the potential to affect the landscape and amenity of the canal corridor.

#### **14.6 Scenic Routes and Protected Views**

*“Scenic routes and protected views consist of important and valued views and prospects within the county... protected views [are located] particularly along water corridors and to and from the hills in the countryside.*

*“The Council recognises the need to protect the character of the county by protecting views and scenic routes. However, it is acknowledged that in certain circumstances, some development may be necessary. In this regard, appropriate location, siting and design criteria should strictly apply. All proposals should be assessed taking into account the overall character of the scenic route and the character of the landscapes through which the route passes.”*

There are no scenic routes/roads potentially affected by the motorway. There are five scenic/protected views in the vicinity of the motorway, all related to the Grand Canal Corbally Branch. These are GC7 (Connaught Bridge, Newtown) and GC30-33 (Tandy Bridge, Abbey Bridge, Ploopluck Bridge and Limerick Bridge, all in Naas). All of these locations are too distant from the motorway to be affected by any change to the motorway corridor.

#### **14.8.1 General Landscape Policies**

*“It is the policy of the Council:*

*LA 1: To ensure that consideration of landscape sensitivity is an important factor in determining development uses. In areas of high landscape sensitivity, the design, type and the choice of location of proposed development in the landscape will also be critical considerations.”*

*“LA 2: To protect and enhance the county’s landscape, by ensuring that development retains, protects and, where necessary, enhances the appearance and character of the existing local landscape.*

*“LA 3: To require a Landscape/Visual Impact Assessment to accompany significant proposals, located within or adjacent to sensitive landscape. This assessment will provide details of proposed mitigation measures to address negative impacts.*

*“LA 4: To seek to ensure that local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development.”*

The proposed development would take place in a landscape of low sensitivity. Design options (location, materials, etc.) are imposed by the nature of the development. Nonetheless the development should seek to protect and where possible enhance the appearance and character of the existing local landscape.

Mitigation measures would be limited to the retention (where possible) of existing woody vegetation in the motorway corridor, replacement (where necessary), or supplementation of this vegetation. Mitigation measures should in particular be designed to protect valuable local landscape features.

The vegetation within the motorway corridor (described in **14.4.5**) can be considered a valuable landscape feature. It constitutes a visual and acoustic screen between the road and the adjacent lands; it functions as a localised green lung; it provides habitat, and for the road users it provides visual amenity. The proposed development would result in the loss of a proportion of this vegetation, some to be replaced following the construction phase but some effectively replaced by the broadened road surface. This local landscape impact should be considered in the context of the development policies for the wider landscape corridor of the M7.

The majority of hedgerows, tree lines, shelter belts or walls on the private lands outside of the road reservation, defining the boundary, are only as old as the motorway itself. The motorway was built on a new alignment as opposed to a pre-existing road; therefore there was no pre-existing roadside vegetation. However where it exists in proximity to a house or another sensitive landscape feature (e.g. a cultural heritage site), its loss or disturbance would constitute a significant landscape and visual amenity impact locally.

In the cultural heritage chapter of the EIS two sites are identified as being potentially vulnerable to landscape (setting) and visual amenity impacts as a result of the removal of vegetation from the motorway corridor. These are Osberstown House (Record of Protected Structure Ref.: RPS B19-14) which lies 300m north of the motorway in the townland of Osberstown, and a ringfort (RMP KD019-035) immediately to the east of the motorway in the townland of Ladystown.

## **14.6 Proposed Landscape and Visual Impact Mitigation**

### **14.6.1 Mitigation Proposals – M7 Widening**

The predicted landscape and visual impacts of the M7 widening scheme, discussed in 14.7 and 14.9, below are generally of low significance. The permanent physical effects of the proposed development would be restricted to the reduction in width of the central median – a feature of limited landscape and visual value in the wider context. The reduction in the width of the median would entail the removal of a 10m wide grass strip, a hedge and a wire rope safety barrier, and their replacement with two concrete safety barriers. No mitigation is proposed for this change.

There would be temporary impacts on the grass verges adjacent to the pavement during the construction period, as part of works to provide additional drainage capacity. The grass verges would be restored after the works. No mitigation is required. The proposed attenuation ponds would occupy portions of fields adjacent to the motorway corridor, extinguishing their agricultural use but having no significant effect on the landscape character or value. No mitigation is required.

The proposed development would not have any impact on the existing embankments and vegetation outside of the grass verges except temporary localised disturbance where it is proposed to install noise barriers.

Regarding mitigation of the visual impacts on residential properties alongside the motorway, it is generally the case that where houses are so close to the motorway that the changes to the pavement and median might be seen, it is proposed as part

of the scheme to install a noise barrier between the house and the development (refer to **Chapter 15 of this EIS** and **Figures 15.1 – 15.9 of EIS Volume 3**). The 2m - 2.5m noise barrier would in those cases largely screen the changes to the motorway from view. Where the barrier is to be installed on the shared boundary between the motorway and the property, i.e. in the foreground of views from the property, there would be a change in the composition and character of the view. The change could be considered to have a neutral or beneficial impact by at least partly screening the motorway and traffic. Any vegetation retained or planted outside (house-side) of the barrier would in time soften its presence in the view with additional beneficial effect. It is recommended that wherever a noise barrier is to be installed, if existing vegetation will be lost or disturbed as a result, then opportunities should be sought in the immediate vicinity to compensate for the loss with new planting (preferably by planting new vegetation outside (house-side) of the barrier).

The following locations would benefit from site specific mitigation planting in combination with the proposed noise barriers:

**Table 14.2: Site Specific Mitigation Planting in combination with noise barriers**

Visual Reference Point No.	Noise Assessment No.	Chainage (approx.)	Mitigation description
VRP2	R04	630 - 730	Installation of the noise barrier on the motorway-side of the existing hedgerow on the boundary, so that the hedgerow is retained, screening the barrier.
VRP4	R08, R09	1630 - 1900	Planting between the M9 noise barrier and the residential property boundaries, to soften the presence of the barrier.
VRP6	R11-15	2950 - 3500	Replacement planting of any hedgerow or trees/woodland lost as a result of the barrier, to be located outside of the barrier (on the house-side), i.e. screening the barrier from the houses.
VRP10	R25-30	6950-7350	Subject to the agreement of the owner/s of the adjacent fields, planting of a tree line on the field/house-side of the barrier. (Planting here would take further land from the fields, which would already have been reduced to accommodate the west-bound off-ramp to the new interchange.) Since the houses are separated from the motorway by the fields and by their garden boundary vegetation, only trees along the barrier, once matured, would have any direct visual effect.
VRP18	R43-46	11550-11650	The noise barrier should be located inside (motorway-side) of the existing hedgerow on the motorway corridor boundary, to soften its presence in views from the houses. If this requires moving the barrier down the embankment it could be made taller to achieve the required noise screening effect.
VRP21	R51	11900	The noise barrier should be located inside of the motorway corridor boundary, to preserve the hedgerow that exists along a section of the boundary. A new hedgerow should be planted outside (house-side) of the barrier along the section of the boundary where there is currently no hedgerow.

Two locations do not have noise barriers proposed in their vicinity but would benefit from mitigation planting for visual screening:

**Table 14.3: Site Specific Mitigation Planting**

Visual Reference Point No.	Noise Assessment No.	Chainage (approx.)	Mitigation description
VRP13	n/a	9550-9700	Supplementary planting to fill any gaps in the motorway boundary hedgerow would completely screen the development from view.
VRP17	R42	11200-11350	Supplementary planting on the wide embankment where a belt of woodland could be established and screening improved substantially.

Noise assessment locations are presented on **Figures 15.1 – 15.9, EIS Volume 3**.

#### 14.6.2 Mitigation Proposals – Newhall Interchange

A landscape mitigation plan has been prepared for the proposed new Newhall Interchange (refer to **Figure 14.1, EIS Volume 2**).

The main objective of the mitigation plan is to visually screen the interchange from its receiving environment by enclosing and interspersing the interchange landscape with belts of native woodland vegetation (only native species should be planted, to maximise the ecosystem services of the planting as well providing screening). The woodland belts are bordered by strips of shrub planting on the road-side, to step down in height to the grass verges of the road/s.

The mitigation plan recommends the retention of as much existing vegetation in and around the interchange site as possible, including vegetation within the existing motorway corridor and the affected hedgerows and treelines dividing the adjacent agricultural fields.

Formal or feature planting is proposed only on the roundabouts and on the approach to the roundabouts on the R445 (in the form of avenues of trees), to indicate arrival at an urban location. The realigned Due Way, linking the industry/warehousing zoned lands south and east of the interchange to the Newhall Retail Park, is also given an urban style landscape treatment.

#### 14.7 Predicted Landscape Impact – M7 Widening

The assessment of potential landscape impact considers the likely nature and scale of changes to individual landscape elements and characteristics, and the consequential effect on landscape character and value. Existing trends of change in the landscape are taken into account. The potential impact is assessed based on measurement of the landscape sensitivity against the magnitude of change which would result from the development.

##### 14.7.1 Landscape Sensitivity – M7 Widening

The motorway corridor as a distinct landscape with a primary function of road transportation, is also of low sensitivity to change of the nature proposed.

The wider landscape corridor/receiving environment is identified in the Kildare CDP as the Strategic Development Corridor of the county. The connectivity that the

motorway provides to Dublin and beyond is one of the main attributes that justifies Naas's classification as the county's only Large Growth Town I. The motorway is the driver of the 'Enterprise and Employment' and 'Industry and Warehousing' zoning objectives which cover extensive parts of the adjacent lands. This area can be considered of low sensitivity to change of the nature proposed.

#### **14.7.2 Magnitude of Landscape Change – M7 Widening**

The proposed development involves the addition of a lane in each direction to the existing motorway. The new lanes would be accommodated in the existing median and would result in the loss of grass cover, a hedge and a wire rope safety barrier from the median. Two concrete barriers would be introduced to enclose the narrower median. There would be no significant permanent changes outside of the motorway median and pavement.

Considering the potential effect of this change on the main elements and characteristics of the landscape, and its overall character and value, the proposed development would constitute a negligible magnitude of change. This is defined in the LVIA Guidelines as follows: Very minor loss of, alteration or introduction of elements to the landscape.

During the construction phase the landscape change would be of greater magnitude but still limited to a distinct, contained landscape element – the existing motorway corridor.

#### **14.7.3 Predicted Landscape Impact – M7 Widening**

It is predicted that during the operation phase the landscape impact would be of low significance and neutral. During the construction period the landscape impact would be of low significance and adverse.

### **14.8 Predicted Landscape Impact – Newhall Interchange**

#### **14.8.1 Landscape Sensitivity – Newhall Interchange**

Due largely to the existing motorway and the related strategic location of the Newhall interchange (in terms of transport connectivity) – which have determined the landscape character and the land use planning/zoning objectives of the lands surrounding the interchange, the landscape of the wider receiving environment is generally of low sensitivity to development of the nature proposed.

However, as recognised in the Kildare CDP, within that context at micro / local level landscapes vary in terms of their ability to absorb development.

The residential properties remaining in close proximity to the Newhall interchange are of higher sensitivity to change in the landscape and particularly changes in views and visual amenity. These include:

- R25-30. These properties are located in a row in a narrow strip of land between the M7 and the R445, where the two roads run parallel approximately 100m apart for a stretch to the east of the R445 overpass. The residential properties are buffered from the M7 by a number of small grassland fields. The properties are accessed by a narrow road adjacent to the R445. Towards the eastern end of the strip of land a number of the houses have been converted for commercial use. These lands – the residential and commercial properties and the fields – are not subject to any land use zoning objectives in the Kildare CDP.

- R31. This is a single residential property north of the M7 beside the existing interchange roundabout on the old Newbridge Road, opposite the entrance to the M7 business park. The residential property and a strip of grassland fields beside the existing east-bound off-ramp from the M7 are zoned NE 1: Industry / Warehousing.

A number of residential properties further from the proposed development, for example to the north/west of the M7 along the R445 and along the Newland North/Rathasker Road, are also sensitive to change.

#### 14.8.2 Magnitude of Landscape Change – Newhall Interchange

The magnitude of change which would result from the development should be considered at two scales – the wider landscape and the local landscape.

Considered at the wider scale the proposed development involves the introduction of elements of an interchange (the roundabouts and on- and off-ramps, built on earth embankments) to a landscape already dominated locally by road infrastructure. Due to the R445 bridge already being in place and the acute angle of its alignment over the M7 there would be relatively little land take from outside of the existing motorway corridor. Where the proposed land take does encroach beyond the existing motorway corridor it would affect mostly agricultural fields zoned NE 1: Industry / Warehousing. There would be a loss of semi-mature vegetation from the motorway corridor, and short sections of hedgerow with mature trees from the affected agricultural lands. Where possible, this vegetation would be replaced by woodland vegetation planted in the somewhat enlarged motorway corridor as part of the development (refer to **Figure 14.1, EIS Volume 3**).

At the wider scale, considering the potential effects of this change on the main elements and characteristics of the landscape, and its overall character and value, the proposed development would constitute a low magnitude of change. This is defined in the LVIA Guidelines as follows: Minor loss of or alteration to one or more key elements or characteristics, and/or introduction of elements that may not be uncharacteristic in the context.

At the local scale, the strip of land east of the R445 overpass between the R445 and the M7 (occupied by several houses, small businesses and fields) can be considered a distinct landscape resource. The proposed new west-bound off-ramp rising on an embankment to meet the new roundabout on the R445 would traverse a field beside the southernmost house (R25). A large part of the field would be incorporated into the motorway corridor. The strip of semi-mature trees along the existing motorway between residential properties R25 and R26 would be removed. New vegetation planted as part of the development along the roads and on the embankments would take time to achieve maturity and form an effective visual screen. Traffic movements in the area would be altered, with an increase in the volume of traffic on the R445 passing to the east/south of the lands and around the new, elevated roundabout to the south.

While the changes would not substantially alter the main elements and characteristics of the landscape, or its character, the cumulative effects of the proposed development with previous developments of the motorway and environs should be recognised. The domestic environment of the houses in this strip of land (R25-R30) would be further altered and the change can be considered of medium magnitude (definition derived from the LVIA guidelines: partial loss of or alteration to one or more key elements or features, and/or introduction of elements that may be

prominent but not necessarily substantially uncharacteristic in the context of the receiving environment). During the construction phase the magnitude of change would be high.

### 14.8.3 Predicted Landscape Impact – Newhall Interchange

For the wider receiving environment of the Newhall interchange it is predicted that during operation the landscape impact would be of low significance and neutral. There would be a temporary impact of medium significance during construction.

For the area between the M7 and R445 east of the R445 overpass it is predicted that during construction the impact would be of high significance and adverse, and for the short to medium term thereafter (up to approximately 10 years) the significance of the impact would be medium. The impact would continue to lessen over time as new planting in the motorway corridor matures.

### 14.9 Predicted Visual Impacts – M7 Widening

The potential visual receptors of the proposed development are identified in **Section 14.4.4** above.

The methodology for assessment of potential visual impact involves the selection of a number of viewpoints (or visual reference points – VRPs) representative of the receiving environment, and the assessment of the likely changes to the views and visual amenity at those locations.

The assessment (and the selection of viewpoints) has prioritised residential locations/properties in the receiving environment of the motorway. Business locations, etc. of which there are numerous in the receiving environment and for which extensive areas alongside the motorway are zoned for development, are considered not to be sensitive to the type and scale of development proposed.

In **Table 14.4**, below, 25 no. VRPs are individually assessed to inform an assessment of the proposed development's impact on views and the visual amenity of the receiving environment generally.

The assessment of potential visual impact on each VRP takes account of two main factors, the magnitude of change to the view (in terms of its composition of elements, its character and quality), and the sensitivity of the visual receptors who would experience that change. Using **Table 14.1** as a guide, measurement of the magnitude of change against the viewpoint sensitivity allows for the significance of the impact on each viewpoint to be classified.

The magnitude of change and impact significance are considered for several stages of the lifetime of a development, namely the construction phase, the short term (for the purpose of this assessment 0-3 years following construction, medium term (3-10 years) and long term (>10 years).

In the VRP Description column of **Table 14.4** the houses are sometimes identified by code number, e.g. R01, R02. These codes correspond with the reference codes used to identify 'Receiver Locations' in the Noise and Vibration chapter of the EIS and **Figures 15.1 – 15.9, EIS Volume 3**. The VRP locations can therefore be identified on these drawings.

**Table 14.4 Assessment of Visual Impact on Selected Viewpoints – M7 Widening**

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
1	Old Abbey Manor estate (R01, 02), north of the M7 at Greatconnell.	300-600	100m +	n/a	No change	n/a	-	-	-	-	High	-	-	-	-
2	Three houses (R04, etc.) on the Hillsborough Road north of the M7, above the motorway embankment.	630-730	45m +	House adjacent the embankment: There is a mature hedgerow along the boundary between the house and the embankment/motorway corridor, which completely blocks the M7 from view.	A noise barrier is proposed on the boundary between the house and the embankment/motorway corridor. The hedgerow would be disturbed, possibly lost as a result of the installation of the barrier. The existing birch woodland on the embankment would form a backdrop to the barrier, softening its presence.	Installation of the noise barrier on the motorway-side of the existing hedgerow on the boundary, so that the hedgerow is retained, screening the barrier.	Low	Low	Low	Low	High	Med	Med	Med	Med
3	Row of houses (R05-07, etc.) on the Hillsborough Road south of the M7.	600-800	50m +	The houses, where not enclosed by shelter belts, have panoramic views east with the M7/M9 junction and corridors prominent in an otherwise rural landscape.	The reduction in the width of the median (currently grassed) and corresponding increase in pavement width would be discernible. The pavement/median is however a minor element of the view.	Planting in the reduced median.	Neg	Neg	Neg	Neg	High	Low	Low	Low	Low
4	Cluster of houses (R08, 09, etc.) north of the M7/M9 junction and west of the Corbally Road which overpasses the	1630-1900	90m +	The east-bound carriageway of the M9 joining the M7 passes just to the south of the houses. There is a wooded	Two noise barriers are proposed, along the verge of the M7 and along the top of the embankment of the M9 east-bound	Planting between the M9 noise barrier and the house property boundaries, to	Med	Low	Low	Neg	High	Med	Low	Low	Low

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)				
							C	S	M	L		C	S	M	L	
	M7/M9. Three of these houses are located alongside the motorway corridor.			strip of land between the M9 carriageway and the M7 which largely screens views of the M7 directly south and west. Views east are blocked by the Corbally Road which rises on a tall, steep, vegetated embankment.	carriageway. The latter being on or close the house property boundaries, would be prominent, blocking any view of the motorways (including changes to the pavement and median) and the traffic, and the landscape beyond. Some existing vegetation on the M9 embankment would be lost to accommodate the barrier. The remaining vegetation would form a backdrop to the barrier in the view from the houses, softening its presence.	soften the presence of the barrier.										
5	Houses (R10, etc.) along the Corbally road south of the M7.	1900-2300	280m +	n/a	No change	n/a	-	-	-	-	High	-	-	-	-	
6	Dispersed row of houses (R11-15) along the road adjacent and north of the Grand Canal, west of Hoare's Bridge.	2950-3500	55m +	There is a mature hedgerow on the edge of the motorway corridor – in places broadening into a narrow wooded belt, and additional vegetation on the residential properties in the low lying landscape, which largely screens the	A noise barrier is proposed at the outer edge of the verge along the stretch in the vicinity of the houses. The 2-2.5m structure will require the removal of some or all of the hedgerow. The barrier will completely screen	Replacement planting of any hedgerow or trees/woodland lost as a result of the barrier, to be located outside of the barrier, i.e. screening it from the houses.	Low	Low	Neg	Neg	High	Med	Med	Low	Low	

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)					
							C	S	M	L		C	S	M	L		
				road and traffic from view.	the motorway (including changes to the pavement and median) and traffic.												
7	Houses (R16 etc.) along the road adjacent and north of the Grand Canal, east of Hoare's Bridge.	4000-4100	200m +	n/a	No change	n/a	-	-	-	-	High	-	-	-	-		
8	Large cluster of houses (R18-21) and farm buildings off the Ladytown Road, north of the motorway.	4850-5350	100m +	The recent development of a number of houses around an existing cluster of houses and farm buildings has lent the area a suburban character. The road is slightly below grade along this section. There is an embankment outside of the verge and a narrow belt of woodland vegetation maturing on the top of the embankment, as well as a hedgerow on the motorway corridor boundary. This screens the motorway in views from the houses.	No noise barrier is proposed along this stretch. Any changes to the motorway pavement and median would be screened by the existing vegetation. Construction activities on the motorway would be visible through gaps in the motorway boundary vegetation from R19. An attenuation pond is proposed north/west of the motorway two fields away from the southernmost house (R19). This would result in no significant change in views from the house.	n/a	L	-	-	-	High	M	-	-	-		
9	Dispersed houses (R22, 24) along the Ladytown Road,	5500-6400	340m +	n/a	No change	n/a	-	-	-	-	High	-	-	-	-		

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)				
							C	S	M	L		C	S	M	L	
	parallel to and north of the M7.															
10	Houses (R25-30) situated between the M7 and the R445, south of the motorway at the Newhall interchange.	6950-7350	60m +	The houses are all largely enclosed by mature garden vegetation. A hedgerow on the motorway corridor boundary (and a broadening belt of woodland on the embankment as the motorway approaches the underpass) provides additional screening of the motorway from the houses.	A noise barrier is proposed inside of the motorway corridor boundary along the stretch in the vicinity of the houses. The 2-2.5m structure may require the removal of some of the hedgerow. The barrier, in addition to the remaining vegetation in the landscape, will completely screen the motorway (including changes to the pavement and median) and traffic.	Replacement planting of any hedgerow or trees/woodland lost as a result of the barrier, to be located outside of the barrier, i.e. screening it from the houses.	Neg	Neg	Neg	Neg	High	Low	Low	Low	Low	
11	Houses off the R409 north and south of the M7, between Halverstown and Ploopluck (R32-36).	8400-8700	85m +	The houses are enclosed by vegetation on the property boundaries. Belts of maturing woodland vegetation outside of the verges on both sides of the M7 further restrict visibility of the motorway from the houses.	No change	n/a	-	-	-	-	Med	-	-	-	-	
12	A row of houses (R37, 38, etc.) on the Osberstown Road just east of the WWTP.	9250-9450	280m +	The houses are partially enclosed by garden and boundary vegetation, and are some distance away from the M7 across	No change	n/a	-	-	-	-	High	-	-	-	-	

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
				large grassland fields. A mature hedgerow on the motorway corridor boundary further restricts visibility of the motorway.											
13	An isolated farm house off the Osberstown Road, between the road and the M7.	9650	230m	The newly built house is less enclosed by vegetation than houses in more mature gardens in the area, and the hedgerows of the adjacent fields are relatively sparse. There is therefore a relatively unobstructed view towards the M7 although a (hawthorne dominated) hedge on the motorway corridor boundary does provide some screening.	The reduction in the width of the median (currently grassed) and corresponding increase in pavement width may be discernible (from the 2 <sup>nd</sup> floor windows of the house). However the pavement/median, where visible at all, is a minor element of the view.	Supplementary planting to fill any gaps in the motorway hedgerow would completely screen the development from view.	Neg	Neg	Neg	Neg	High	Low	Low	Low	Low
14	An isolated farm house (R39) off the Osberstown Road, between the road and the M7.	9950	170m	The house, part of an old farm, is well enclosed by hedgerow vegetation and farm buildings.	No change	n/a	-	-	-	-	High	-	-	-	-
15	Osberstown House, a protected structure, and a residence (R40).	10650	300m	The house is situated in a designed parkland landscape which extends to the edge of the motorway. The M7 is	No change	n/a	-	-	-	-	High	-	-	-	-

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)				
							C	S	M	L		C	S	M	L	
				screened from the house by the mature parkland trees and hedgerows within and around the boundaries of the property.												
16	House (R41) west of the Grand Canal on the Osberstown Road north of the M7.	11100	175m	The house is completely enclosed by mature vegetation around the property boundary, and along the Grand Canal. There is no view of the M7.	No change	n/a	-	-	-	-	High	-	-	-	-	
17	House (R42) and crèche off the Osberstown Road east of the Grand Canal and north of the M7.	11300	200m	The house and crèche are recently built and as yet are not enclosed by garden or boundary vegetation. There are no hedgerows between the properties and the M7 other than the hedgerow on the boundary of the motorway corridor. (The hedgerow along this section is sparse.) The motorway is elevated at this point as it overpasses the Grand Canal, and is therefore quite exposed.	Although the existing hedgerow on the motorway corridor boundary, combined with the elevation of the motorway, will screen changes to the pavement and median from view (except the construction activity), the existing and any additional traffic will be exposed.  An attenuation pond is proposed north of the motorway at the far side of a large field adjacent to the house R42. The pond and in particular the fencing around the pond may be perceivable from	Supplementary planting on the wide embankment where a belt of woodland could be established and screening improved substantially.	Low	Neg	Neg	Neg	High	Med	Low	Low	Low	

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
					the house.										
18	Osberstown Cottages (R43-46, etc.) north of the M7 and west of the R407 (Sallins Road).	11500-11670	60m +	The houses are on elevated land above the M7 as it underpasses the R407. The houses are partially enclosed by their garden vegetation and there is a hawthorne hedgerow on the motorway corridor boundary, which further restricts visibility of the motorway. However due to their elevation and proximity the houses/properties are somewhat exposed to the motorway, in particular the traffic.	A noise barrier is proposed along the motorway corridor boundary in the vicinity of the houses. The 2-2.5m structure may require the removal of some of the hedgerow. The barrier, in addition to the remaining vegetation in the landscape, will completely screen the motorway (including changes to the pavement and median) and traffic.	The noise barrier should be located inside of the existing hedgerow on the motorway corridor boundary, to soften its presence in views from the houses. If this requires moving the barrier down the embankment the structure could be made taller to achieve the required noise screening effect.	Med	Low	Low	Low	High	High	Low	Low	Low
19	House (R50) off the R407 (Sallins Road) north of the M7.	11750	95m	The house is completely enclosed by mature vegetation on the garden boundary. There is no view of the M7.	No change	n/a	-	-	-	-	High	-	-	-	-
20	Row of houses (R47-49, etc.) off Monread Road to the west of Tesco, south of the M7.	11700-11800	75m +	The houses are completely enclosed by mature garden vegetation and a high wall, and separated from the motorway pavement by a broad area of unused land.	No change	n/a	-	-	-	-	High	-	-	-	-
21	House (R51) east of the R407 (Sallins	11900	55m	The house is on land somewhat elevated	The reduction in the width of the median	There is an embankment of	High	Low	Low	Low	High	High	Med	Med	Med

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
	Road) and north of the M7.			above the level of the motorway. The garden is hard surfaced, providing no vegetative screening. There is little or no vegetation within or on the motorway corridor boundary to screen it from the property. Due to their relative level the house is one of very few from which the pavement and median can be seen.	(currently grassed) and corresponding increase in pavement width will be visible from the house. The motorway is a key element of views from the house.	sufficient width between the verge and the motorway corridor boundary to establish a vegetation screen between the house and the motorway.  If blocking sunlight to the house is a concern (the motorway passes to the south) then species of limited height could be selected.  Alternatively a barrier such as the noise barriers proposed elsewhere in the scheme could be installed on the motorway corridor boundary for full screening of the development.									
22	An apartment development, a nursing home and a row of houses (R53, 53, etc.) on Monread	13150-13450	200m +	The houses are set in mature gardens which provide some screening. The fields between the	No change would be visible from the houses and nursing home.	n/a	Neg	Neg	Neg	Neg	<b>Med</b>	Low	Low	Low	Low

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
	Road east, to the south of the M7.			houses/nursing home and the M7 are internally divided by hedgerows providing additional screening. There is also a mature hedgerow on the motorway corridor boundary.	There may be some change discernible from the upper floors of the apartment development, but the effects would be minor. The lands between the M7 and houses, nursing home and apartments, are zoned for industrial development.										
23	Two houses (R55 and one other) on the Johnstown Road west of the village centre opposite Johnstown Living, a commercial premises (conservatories).	14550-14700	70m	The houses orientate north towards the M7. In the foreground across the street is the Johnstown Living premises and beyond that the motorway infrastructure is visible including a transparent noise barrier and a pedestrian bridge, etc. The motorway pavement and median can be seen but are a minor element of a complex urban landscape characterised by infrastructure.	A noise barrier is proposed along the motorway corridor boundary in the vicinity of the houses, which will screen the changes to the motorway pavement and median from view.	n/a	Neg	Neg	Neg	Neg	Med	Low	Low	Low	Low
24	A row of houses and apartments (R56-58, etc.) east of the village centre between Johnstown Road and the M7.	14800-15000	30m +	These properties are among the closest to the M7 and most exposed to the effects of the motorway and to change except for	No changes are proposed to the motorway pavement and median along this section as there already are three lanes in both	n/a	High	Neg	Neg	Neg	Med	High	-	-	-

VRP No.	VRP Description	Chainage (Approx.)	Dist from centre-line	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
				the existing timber noise barrier which screens the motorway pavement from view.	directions. A new noise barrier is proposed replacing existing timber barrier.										
25	House (Twin Oakes, R54) at the Johnstown crossroads, Kerdiffstown, north of the M7.	14500	95m	The house is situated in a large lawned garden with little vegetative screening, and orientates east towards the M7. The view from the house is dominated by the motorway including a footbridge over the motorway. There is no noise barrier directly in front of the house, but there is a row of maturing trees beside the motorway.	A new noise barrier is proposed along the boundary of the motorway corridor in front of the house. This will screen the existing motorway. (No changes to the pavement and median are proposed along this section as it is already three lanes in both directions.)	n/a	Med	Neg	Neg	Neg	<b>Med</b>	Med	Low	Low	Low

C = construction phase, S = short term (0-3 years), M = long term (3-10 years), L = long term (>10 years). R01, R02, etc. are the reference codes used to identify Receiver Locations in Chapter 7.3 Noise and Vibration, Drawing No.s 7.3.1-9.

### 14.9.1 Summary of Visual Impact Assessment – M7 Widening

25 no. visual reference points (VRPs) were selected for assessment of the potential impact on views and visual amenity in the receiving environment. The assessment (and the selection of viewpoints) prioritised residential locations/properties. Business locations, etc. of which there are numerous in the receiving environment and for which extensive areas alongside the motorway are zoned for development, are considered not to be sensitive to the type and scale of development proposed.

Generally, the proposed changes to the motorway pavement and median would result in negligible or no change to the composition, character and quality of views. The existing vegetation within and along the boundary of the motorway corridor, in addition to any garden vegetation and boundary walls of the affected properties, will screen the changes from view. This is the case for Osberstown House (a protected structure); as with the majority of houses in the vicinity of the road, the widening would not result in any significant change to the views from the house, and no mitigation is required.

Generally, where houses are so close to the motorway that the changes to the pavement and median might be seen, it is proposed as part of the scheme to install a noise barrier alongside the motorway, either outside the verge or on the motorway corridor boundary (refer to **Figures 15.1 – 15.9, EIS Volume 3**). The 2 - 2.5m noise barrier would in those cases screen the changes to the motorway pavement and median. The installation of a barrier (in the foreground of views from the houses) will result in a change to the composition and character of the affected views. However, the change could be considered to have a neutral or beneficial impact by at least partly screening the motorway and traffic. Any vegetation that will be planted outside of the barrier would in time soften its presence in the view with additional beneficial effect. It is proposed that wherever a noise barrier is to be installed, if existing vegetation will be lost or disturbed as a result, then opportunities should be sought in the immediate vicinity to compensate for the loss with new planting (e.g. by planting new vegetation outside of the barrier).

A number of locations would benefit from such site specific mitigation planting in combination with the proposed noise barrier:

- VRP2 (R04);
- VRP4 (R08, R09);
- VRP6 (R11-15);
- VRP 10 (R25-30); and
- VRP18 (R43-46).

Three locations, namely VRP13, VRP17 (R42) and VRP21 (R51) do not have noise barriers proposed in their vicinity but would benefit from mitigation planting for visual screening. Planting within the existing road verge is therefore proposed to provide an element of visual screening for these properties.

It is proposed that any new planting be of native species which will be locally sourced.

In summary, with mitigation planting in place, the proposed development will result in a low magnitude of change to views from sensitive locations in the receiving environment. The potential impact on visual amenity overall will be of low significance, and generally neutral.

## 14.10 Predicted Visual Impacts – Newhall Interchange

The zone of visual influence and potential visual receptors of the new Newhall Interchange differ from the M7 widening element of the development. The height of the structures (the on- and off-ramps and the roundabouts, built on earth embankments) and the loss of existing vegetation from the locally widened motorway corridor would generate a wider receiving environment in the vicinity of the interchange.

The potential visual impact on the residential properties in the wider receiving environment is assessed in **Table 14.5** below. 12no. visual reference points (VRPs) are assessed (refer **Figure 14.2, EIS Volume 3**). Each VRP represents one or more houses at which residents might experience change in their views and in the visual amenity of their 'home environment' or neighbourhood.

The VRPs are numbered separately from the numbering used for the assessment of the impacts of the M7 widening development (**Table 14.4**). The VRP numbers in **Table 14.5** include the letters NI to indicate their relevance to the Newhall Interchange specifically.

**Table 14.5 Assessment of Visual Impact on Selected Viewpoints – Newhall Interchange**

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
NI-1	Two houses (R25, R26) between the M7 and R445 closest to the R445 overpass.	7000-7100	<50m	Refer to Photograph 14.9 and 14.10 below. The houses are both enclosed by mature vegetation on their garden boundaries, screening the nearby roads from view. There is a strip of semi-mature planting on the M7 corridor boundary which provides further screening. In front of the houses, across their access road, there is a hedge between the access road and the R445. From the access road on approach to the houses the R445 can however be seen rising in the middle distance to bridge the M7.	The west-bound off-ramp would pass nearby to the rear of R25 in particular, rising on an embankment towards the new roundabout which would occupy part of the field adjacent to the house. The motorway screen planting would be lost. A section of the field boundary planting would be lost. Due to the screening of the garden boundary vegetation these changes – and the new roundabout on the R445 - would not be directly visible from within the properties. Approaching the houses on the access lane the new roundabout and traffic on the R445 would be visible in the middle distance. The increase in traffic on the R445 directly in front of the houses may be perceivable. The lights of traffic at night, and any overhead lighting of the new interchange, may be perceivable from	Where possible retain the existing M7 corridor boundary vegetation, and the hedgerow on the boundary of the field adjacent to R25. Reinstate/supplement any disturbed or lost vegetation. Plant the widened motorway corridor –the area adjacent to and around the west-bound off-ramp and the new roundabout south/east of the M7 - with a mix of woodland species (i.e. shrub and tree canopies). The wider the corridor of vegetation the more effective the screening. Supplement	H	M	M	L	High	H	H	H	M

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
					the houses/gardens.	the hedgerow between the houses' access lane and the R445.									
NI-2	Four houses (R27-30) further from the R445 overpass, between the M7 and the R445.	7200-7350	200m +	The houses are enclosed by mature vegetation on their garden boundaries, screening the nearby roads from view. There is a strip of semi-mature planting on the M7 corridor boundary – widening towards the existing interchange to the north/east - which provides further screening. In front of the houses, across their access road, there is a hedge between the access road and the R445. From the access road on approach to the houses the R445 can however be seen rising in the distance to bridge the M7.	Approaching the houses on the access lane the new roundabout and traffic on the R445 would be visible in the distance. The increase in traffic on the R445 directly in front of the houses may be perceivable. The lights of traffic at night, and any overhead lighting of the new interchange, may be perceivable from the houses/gardens.	Planting in the widened motorway corridor –the area adjacent to and around the west-bound off-ramp and the new roundabout south/east of the M7 - with a mix of woodland species (i.e. shrub and tree canopies). The wider the corridor of vegetation the more effective the screening. Supplement the hedgerow between the houses' access lane and the R445.	Med	Low	Low	Low	High	Med	Low	Low	Low
NI-3	A house (R31) beside the existing roundabout on the Newbridge Road north/west	7350	50m+	Refer to Photograph 14.11 below. The house is enclosed by a hedge on the garden boundary which	The entire development would be screened by existing vegetation in the landscape, notably the hedgerows and	None necessary.	Neg	Neg	Neg	Neg	Med	Low	Low	Low	Low

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
	of the M7.			restricts views of the surrounding landscape. However from the 2 <sup>nd</sup> storey windows and from the domestic environment of the house views towards the existing motorway are available. The motorway is entirely screened by the maturing vegetation in the motorway corridor.	treelines that divide the fields to the south of the house alongside the motorway. These fields – and the house itself – are zoned NE 1: Industry / Warehousing in the Kildare CDP. There would be a reduction in the volume of traffic in the immediate vicinity of the house.										
NI-4	Linear cluster of houses along the Newbridge Road north of the M7.	7300-7600	500m +	The houses are generally enclosed by garden vegetation, and this along with hedgerows and treelines on field boundaries, and recent industrial/warehousing development in the intervening landscape restricts views of the motorway corridor.	The development would largely be screened by existing vegetation in the landscape, and a row of new industry/warehouse development along a road to the south of the houses. Elements of the proposed development may be discernible from 2 <sup>nd</sup> floor windows or locations in gardens at gaps in boundary vegetation, but the composition and character of the views would not be significantly altered.	None necessary.	Neg	Neg	Neg	Neg	Med	Low	Low	Low	Low
NI-5	House on a local road (Newhall)	6500	500m	Refer to Photographs 14.12 and 14.13	The development would require the	Planting in the motorway	Med	Low	Low	Neg	Med	Med	Low	Low	

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
	Road) west/north of the M7. This is the only occupied residential property along the road; Newhall House a short distance to the east is now part of an agricultural complex.			below. The house is separated by a large tillage field from the R445-M7 overpass. (The field is zoned NE1: Industry/Warehousing.) The garden is partially enclosed by boundary vegetation but some views from the property towards the motorway are afforded. The motorway is screened by existing vegetation in the intervening landscape and along the motorway corridor boundary. The R445 is visible in the middle distance to the right of the field of view, rising towards the bridge, partially screened by maturing vegetation on the embankment. This is part of a broad panorama to the south and east, which includes several large buildings near the existing interchange.	removal of the maturing vegetation on the embankment of the R445 as it rises to bridge the M7, and some of the vegetation in the M7 corridor. This would expose some the works for the construction of the new roundabout north/west of the M7 to view. On completion the revised road infrastructure – and increased traffic - would be somewhat more prominent in the view but new mitigation planting would in time screen the change. The change would occupy only a small part of the panoramic view which already includes a variety of development associated with the M7.	corridor, particularly around the new roundabout north/west of the M7 - with a mix of woodland species (i.e. shrub and tree canopies). The wider the corridor of vegetation the more effective the screening.									
NI-6	Row of houses north of the R445 junction with	6300-6400	700m +	The houses orientate south west, away from the proposed	The construction works may be discernable but due to the distance and	Planting in the motorway	Low	Neg	Neg	Neg	Med	Low	Low	Low	Low

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
	Newhall Road, north of the M7.			development. From their front gardens and the road in front of the houses there is a view south east towards the site. There is a small utility site at the junction of the R445 and Newhall road in the foreground, and the broad R445 corridor dominates the view, rising in the distance to bridge the M7, which is screened by vegetation. The lands north/east of the R445 (to the left of the R445 in the view) are zoned NE1: Industry/Warehousing.	features in the intervening landscape once operational the composition and character of the views would not change substantially.	corridor.									
NI-7	House adjacent to the R445 (north of the R445) north of the M7.	6400	250m	Refer to Photograph 14.14 below. The property is enclosed by tall vegetation which completely screens the surrounding landscape from the house and garden. From the R445 outside of the property there is a view along the road as it rises to bridge the M7. The M7 is	No change would be visible from within the property. From the R445 outside the property the removal of existing vegetation from the R445 embankments would be visible. The works for the construction of the new roundabout and on- and off-ramps would be visible, as would the structures during operation. In time they	Planting in the motorway corridor, particularly around the new roundabout and on- and off-ramps north/west of the M7 - with a mix of woodland species (i.e. shrub and tree canopies). The wider the	Low	Neg	Neg	Neg	Med	Low	Low	Low	Low

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)				
							C	S	M	L		C	S	M	L	
				screened by the topography and vegetation of the motorway corridor. The field surrounding the house (to the west, north and east) is zoned NE1: Industry/ Warehousing.	would be partially screened by new planting in the motorway corridor. The composition would be altered but the character of the view would be unaffected.	corridor of vegetation the more effective the screening.										
NI-8	House adjacent to the R445 (south of the R445) north of the M7.	6350	300m	Refer to Photographs 14.15 and 14.16 below. The property is enclosed by a hedgerow which limits visibility of the surrounding landscape. The house orientates south east along the axis of its driveway and the site of the proposed interchange is visible in the distance through the gate. This view is dominated by the broad R445 corridor as it rises towards the bridge over the M7 in the distance.	The removal of existing vegetation from the R445 embankments would be visible in the distance. The works for the construction of the new roundabout and on- and off-ramps would be visible, as would the structures during operation – all framed by the garden vegetation in the foreground. In time the development would be partially screened by new planting in the motorway corridor. The composition would be altered but the character of the view would not be substantially affected.	Planting in the motorway corridor, particularly around the new roundabout and on- and off-ramps north/west of the M7 - with a mix of woodland species (i.e. shrub and tree canopies). The wider the corridor of vegetation the more effective the screening.	Med	Med	Med	Low	High	Med	Med	Med	Low	
NI-9	House (R24) on Ladytown Road, adjacent to the R445, north of the M7.	6350	300m	The east façade of the house (orientated towards the R445 and the proposed development site) is unenclosed by	From the east façade windows and from parts of the garden the removal of existing vegetation from the R445 embankments	Planting in the motorway corridor, particularly around the new roundabout	Med	Med	Med	Low	High	High	Med	Med	Low	

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
				garden boundary vegetation, although there is a hedgerow along the R445. The R445 rising to bridge the M7 is prominent in the view (behind/above the hedgerow). The M7 is screened by the topography and vegetation of the motorway corridor.	would be visible in the distance. The works for the construction of the new roundabout and on- and off-ramps would be prominent, as would the structures and increased traffic during operation. In time the development would be partially screened by new planting in the motorway corridor. The composition would be altered but the character of the view would not be substantially affected.	and on- and off-ramps north/west of the M7 - with a mix of woodland species (i.e. shrub and tree canopies). The wider the corridor of vegetation the more effective the screening.									
NI-10	A house beside Ladytown Road, towards the north/east end of the road west, west of the M7.	6100-6200	500m	To the east of the house (in the direction of the proposed development) there is a stand of mature woodland and beyond that several fields enclosed by mature hedgerows. The M7 and the site are not visible.	None.	None necessary.	n/a	n/a	n/a	n/a	High	n/a	n/a	n/a	n/a
NI-11	Two northernmost houses (including R23) west of Newland North/Rathasker Road, south of	6500	30m	Refer to Photograph 14.17 below. Except along the road frontage the gardens are enclosed by tall, dense vegetation on	Despite its proximity to the houses none of the elements of the new interchange would be visible (the M7 and R445 overpass are currently not visible).	None necessary.	Low	Neg	Neg	Neg	Med	Low	Low	Low	Low

VRP No.	VRP Description	Chainage (Approx.)	Dist from devt.	Existing View Description	Proposed Change to View	Mitigation	Magnitude of Change (with mitigation)				VRP Sensitivity	Impact Significance (with mitigation)			
							C	S	M	L		C	S	M	L
	the M7.			the boundaries, and there is a mature hedgerow across the road. The vegetation completely blocks views of the surrounding landscape, including a commercial property/yard adjacent to the north and the fields to the east and north across the road. These lands are zoned NE1: Industry/Warehousing.	The northern end of Newland North/Rathasker Road would be given a new treatment, terminating in a roundabout closer to the houses as opposed to Due Way (the current west-bound on-ramp onto the M7), and linking to Newhall Retail Park by a realigned Due Way. The new roundabout and the proposed urban-type treatment of the roads (grass verges and avenue of trees) would be visible from the road in front of the houses.										
NI-12	Houses further south along Newland North/Rathasker Road.	6500-6700	380m	The hedgerows bounding the surrounding fields along with the garden vegetation of the properties restricts views of the surrounding landscape including the M7. The fields to the north (between the houses and the M7) are zoned NE1: Industry/Warehousing.	Elements of the proposed development may be discernible from 2 <sup>nd</sup> floor windows or locations in gardens at gaps in boundary vegetation, but the composition and character of the views would not be significantly altered.	None necessary	Neg	Neg	Neg	Neg	<b>Med</b>	Low	Low	Low	Low

C = construction phase, S = short term (0-3 years), M = long term (3-10 years), L = long term (>10 years). R01, R02, etc. are the reference codes used to identify Receiver Locations in Chapter 7.3 Noise and Vibration, Drawing No.s 7.3.1-9.



**Photograph 14.9** A view from the access road to the lands between the M7 and the R445 east of the R445 overpass (refer to NI-1 and NI-2, Table 14.5). The R445 rising to bridge the M7 is visible in the middle distance. The screening effect of the hedge between the access road and the R445 – to the left of the field of view – is apparent.



**Photograph 14.10** The houses along the road (refer to NI-1 and NI-2, Table 14.5) are generally enclosed by tall, dense vegetation along the property boundaries, restricting views of the surrounding landscape.



**Photograph 14.11** The house adjacent to the existing roundabout north of the M7 (refer to NI-3, Table 14.5) is enclosed by a mature hedgerow, and the east-bound off-ramp nearby is additionally screened by vegetation in the motorway corridor. The house and the adjacent fields are zoned for industrial/warehousing development.



**Photograph 14.12 and 14.13**

**Within a broad panorama to the south and east from the house on Newhall Road (refer to NI-5, Table 14.5) the R445 is visible rising to bridge the M7, partially screened by vegetation on the embankment. Photographs 14.12 and 14.13 are taken from the local road nearby the house.**



**Photograph 14.14** The house north of the R445 (refer to NI-7, Table 14.5) is completely enclosed by tall, dense vegetation on the garden boundary. This screens the surrounding landscape from view. From the R445 outside the property the road rising towards the bridge is prominent.



**Photograph 14.15** The house south of the R445 (refer to NI-8, Table 14.5) orientates south east along its driveway. The site of the proposed interchange is visible through the gateway into the property. The photograph is taken from a position beside the gate.



**Photograph 14.16** A view back towards the house (refer to NI-8, Table 14.5) from the direction of the proposed development.



**Photograph 14.17** The view along Newland North/Rathasker Road in front of the two northernmost houses (refer to NI-11, Table 14.5), showing the visual enclosure generated by the vegetation in the landscape.

#### **14.10.1 Summary of Visual Impact Assessment – Newhall Interchange**

The proposed interchange site is situated in a peri-urban environment, in which both urban-generated and typically rural land use patterns can be found. There is extensive commercial development around the existing interchange, and large areas of currently agricultural land alongside the M7 and R445 zoned for industry and warehousing. Within this evolving landscape there is a quite sparse settlement pattern, with houses located singly or in small linear clusters along the roads.

Generally, due to the relatively flat topography, the hedgerows and treelines dividing the agricultural fields, and the mature garden vegetation of the residential properties, the extent of visibility of the wider landscape from the houses is limited.

12 no. visual reference points (VRPs) were selected for assessment of the potential impact on views and visual amenity in the receiving environment. The assessment (and the selection of viewpoints) prioritised residential locations/properties. Business locations, etc. of which there are several in the receiving environment and for which extensive areas around the proposed interchange site are zoned for development, are considered not to be sensitive to the type of development proposed.

Of the 12 no. VRP assessed it is predicted that three would experience greater than a low magnitude of change to their views (towards the site) after the construction period. (During construction the removal of vegetation, the construction of earth embankments for the road infrastructure, and construction activities - especially at night - would be conspicuous.). The composition of the views would be altered, although the character and quality of the views, already characterised by the presence of road infrastructure and traffic, would not be substantially affected. In the medium to long term (within 10 years) the changes to the views would largely be screened or softened by the maturing vegetation to be planted as part of the development. The visual impacts on these properties can be classified as of medium to high significance and adverse in the short to medium term, reducing to low significance and neutral over time.

The houses closest to the proposed new interchange and potentially the most affected are those in the strip of land between the M7 and R445 east of the R445 overpass. The west-bound off-ramp from the M7 to the new roundabout on the elevated R445 south/east of the M7 would be located in the field adjacent to two of the houses. While the development would be screened in views from the houses by their garden boundary vegetation, their domestic environment would nonetheless be altered. The cumulative impact of road infrastructure development in the immediate environs of these houses over the last two decades must be recognised. The houses' location adjacent to a major existing motorway junction in a strategic development corridor is also significant however.

The other nine VRPs assessed would experience no greater than a negligible to low magnitude of change in their views. The composition, character and quality of the views would not be substantially affected, and the impact significance on these residential properties can be classified as low, and neutral.

## **14.11 Conclusions**

### **14.11.1 Landscape Impact – M7 Widening Including Attenuation Ponds**

The assessment of potential landscape impact considers the likely nature and scale of changes to individual landscape elements and characteristics, and the consequential effect on landscape character and value. Existing trends of change in the landscape are also taken into account.

The motorway corridor is a contained element within a wider landscape of diverse and in places changing character and quality. The motorway corridor as a distinct landscape in itself, with a primary function of road transportation, is of low sensitivity to change of the nature proposed. The wider landscape corridor is also of low sensitivity. It is identified in the Kildare CDP as the Strategic Development Corridor of the county. The connectivity that the motorway provides to Dublin and beyond is

one of the attributes that justifies the designation of Naas as the county's only Large Growth Town. The motorway is also the driver of the 'Enterprise and Employment' and 'Industry and Warehousing' zoning that covers extensive lands adjacent to the motorway.

Following construction, the proposed widening of the motorway will have only minor effects on the main elements and characteristics of the landscape (of both the motorway corridor and the wider receiving environment). The grass cover and hedge will be lost from the median to accommodate the wider road pavement but these elements are of limited value in terms of landscape function/ecosystem services (such as habitat provision and visual amenity). The magnitude of change can be classified as negligible. (During the construction phase the landscape change will be of greater magnitude but still largely limited to a distinct, contained landscape element – the existing motorway corridor).

The proposed widening of the M7 would have no significant effect on the overall character and value of the landscape. The impact would be of low significance and neutral.

#### **14.11.2 Visual Impact – M7 Widening Including Attenuation Ponds**

29 no. visual reference points were selected for assessment of the potential impact on views and visual amenity in the receiving environment.

The assessment found that generally the proposed changes to the motorway pavement and median will result in negligible or no change to the composition, character and quality of views. The existing vegetation within and along the boundary of the motorway corridor, in addition to any garden vegetation and boundary walls of the affected properties, will screen the changes from view.

For a limited number of houses close to the motorway from which the proposed changes to the pavement and median might be seen, it is proposed as part of the scheme to install a noise barrier alongside the motorway, either outside the verge or on the motorway corridor boundary (refer to **Figures 15.1 – 15.9, EIS Volume 3**). The 2-2.5m barrier will in those cases screen the changes from view (and also at least partly screen the traffic).

In summary, the impact of the road widening on views and visual amenity will be of low significance and neutral (with the possibility of positive impact where traffic is screened). It is recommended that wherever possible the proposed noise barriers should be located on the motorway-side of any existing vegetation (e.g. that on the motorway corridor boundary).

#### **14.11.3 Landscape Impact – Newhall Interchange**

Due largely to the existing motorway and the related strategic location of the Newhall interchange (in terms of transport connectivity) – which have determined the landscape character and the land use planning/zoning objectives of the lands surrounding the interchange, the landscape of the wider receiving environment is generally of low sensitivity to development of the nature proposed.

However, as recognised in the Kildare CDP, within that context at micro / local level landscapes vary in terms of their ability to absorb development. The residential properties in close proximity to the Newhall interchange are of higher sensitivity to change in the landscape.

The magnitude of change which would result from the development should be considered at two scales – the wider landscape, and the local landscape.

Considered at the wider scale the proposed development involves the introduction of elements of an interchange (the roundabouts and on- and off-ramps, built on earth embankments) to a landscape already dominated locally by road infrastructure. There would be relatively little land take from outside of the existing motorway corridor. Where the proposed land take does encroach beyond the existing motorway corridor it would affect mostly agricultural fields zoned NE 1: Industry / Warehousing. There would be a loss of semi-mature vegetation from the motorway corridor, and short sections of hedgerow with mature trees from the affected agricultural lands. This vegetation would be replaced by woodland vegetation planted in the locally widened motorway corridor as part of the development. These changes would have limited effect on the main elements and characteristics of the landscape, and its overall character and value. The magnitude of change would be low, and the impact would be of low significance, and neutral.

At the local scale, the strip of land east of the R445 overpass between the R445 and the M7 (occupied by several houses, small businesses and fields) can be considered a distinct landscape resource. The proposed new west-bound off-ramp rising on an embankment to meet the new roundabout on the R445 would traverse a field beside the southernmost house (R25). A large part of the field would be lost to the motorway corridor. The strip of semi-mature trees along the existing motorway between residential properties R25 and R26 would be removed. New vegetation planted as part of the development would take time to achieve similar maturity. Traffic movements in the area would be altered, with an increase in the volume of traffic on the R445 passing to the east/south of the lands. While the changes would not substantially alter the main elements and characteristics of the landscape, or its character, the cumulative effects of the proposed development with previous developments of the motorway and environs should be recognised. The domestic environment of the houses in this strip of land (R25-R30) would be further altered and the change can be considered of medium magnitude. It is predicted that during construction the impact would be of high significance and adverse, and for the short to medium term thereafter (up to approximately 10 years) the significance of the impact would be medium. The impact would continue to lessen over time as new planting in the motorway corridor matures.

A landscape mitigation plan has been prepared for the proposed new Interchange (refer to **Figure 14.1, EIS Volume 3**). The main objective of the mitigation plan is to visually screen the interchange from its receiving environment by enclosing and interspersing the interchange landscape with belts of native woodland vegetation (only native species should be planted, to maximise the ecosystem services of the planting as well providing screening). The woodland belts are bordered by strips of shrub planting on the road-side, to step down in height to the grass verges of the road/s.

The mitigation plan recommends the retention of as much existing vegetation in and around the interchange site as possible, including vegetation within the existing motorway corridor and the affected hedgerows and treelines dividing the adjacent agricultural fields.

Formal or feature planting is proposed only on the roundabouts and on the approach to the roundabouts on the R445 (in the form of avenues of trees), to indicate arrival at an urban location. The realigned Due Way, linking the industry/warehousing zoned

lands south and east of the interchange to the Newhall Retail Park, is also given an urban style landscape treatment.

#### **14.11.4 Visual Impact – Newhall Interchange**

The proposed interchange site is situated in a peri-urban environment, in which both urban-generated and typically rural land use patterns can be found. There is extensive commercial development around the existing interchange, and further lands currently in agricultural use alongside the M7 and R445 are zoned for industry and warehousing. Within this evolving landscape there is a quite sparse settlement pattern, with houses located singly or in small linear clusters along the roads. Generally, due to the relatively flat topography, the hedgerows and treelines dividing the agricultural fields, and the mature garden vegetation of the residential properties, the extent of visibility of the wider landscape from the houses is limited.

12 no. visual reference points (VRPs) were selected for assessment of the potential impact on views and visual amenity in the receiving environment.

Of the 12 no. VRP assessed it is predicted that three would experience greater than a low magnitude of change to their views (towards the site) after the construction period. (During construction the removal of vegetation, the construction of earth embankments for the road infrastructure, and construction activities - especially at night - would be conspicuous.). The composition of the views would be altered, although the character and quality of the views, already characterised by the presence of road infrastructure and traffic, would not be substantially affected. In the medium to long term (within 10 years) the changes to the views would largely be screened or softened by the maturing vegetation to be planted as part of the development. The visual impacts on these properties can be classified as of medium to high significance and adverse in the short to medium term, reducing to low significance and neutral over time.

The houses closest to the proposed new interchange and potentially the most affected are those in the strip of land between the M7 and R445 east of the R445 overpass. While the development would be screened in views from the houses by their garden boundary vegetation, their domestic environment would nonetheless be altered. The cumulative impact of road infrastructure development in the immediate environs of these houses over the last two decades must be recognised. The houses' location adjacent to a major existing motorway junction in a strategic development corridor is also significant however.

The other nine VRPs assessed would experience no greater than a negligible to low magnitude of change in their views. The composition, character and quality of the views would not be substantially affected, and the impact significance on these residential properties can be classified as low, and neutral.