

12. Landscape and Visual

12.1 Introduction

As set out in Chapter 1 of this updated EIAR, this is an update to Chapter 12 of the EIAR submitted to An Bord Pleanála in October 2018 as part of the application for approval of the proposed N6 GCRR pursuant to Section 51 of the Roads Act 1993 (as amended) (the “Section 51 Application”). It forms part of the response to the request by ABP for further information in December 2023 where ABP (in addition to a number of other requests) requested GCC to “*Update the Environmental Impact Assessment Report*”. This chapter presents an appraisal of the Project under the heading of landscape and visual. Where there have been changes to the assessment and or updates since the 2018 EIAR these have been set out in this updated chapter.

This chapter initially sets out the methodology followed in carrying out the appraisal for this update (Section 12.2), describes the existing landscape and visual environment whilst noting any significant changes since the 2018 EIAR (Section 12.3), and summarises the main characteristics of the Project that are of relevance to landscape and visual aspects (Section 12.4). The evaluation of effects of the Project on the landscape and visual environment are described (Section 12.5), measures are proposed to mitigate these effects (Section 12.6), and residual effects are described (Section 12.7). Cumulative Impacts are presented in Section 12.8. The chapter concludes with a summary (Section 12.9) and reference section (Section 12.10).

This chapter has utilised the information gathered during the constraints and route selections studies for the proposed N6 GCRR, the studies to inform the 2018 EIAR, for the 2019 Response to Request for Further Information and for the oral hearing in 2020 plus data gathered during site visits undertaken in 2023/2024 to inform the landscape and visual impact appraisal for this updated EIRA. Sections 4.7, 6.5.5 and 7.6.5 of the Route Selection Report for the proposed N6 GCRR considered the landscape and visual constraints within the scheme study area and compared the potential landscape and visual impacts of the proposed route corridors respectively. These assessments and sections of the Route Selection Report contributed to the design of the Project which this chapter assesses.

The key changes to the chapter since the 2018 EIAR involve updating:

- The description of the receiving environment and impact assessments to take account of changes, new developments, etc.
- The description of the receiving landscape and visual planning environment to take account of the current Galway City and Galway County Development Plans, and changes to Local Area Plans (LAPs), etc.
- Appendix A.12.1 and Figures 12.1 series, 12.2 series and 12.3 series to take account of changes, new developments, etc., (including those above)
- To take account of points raised from the Brief of Evidence presented to An Bord Pleanála (ABP) at the oral hearing in 2020 and from the ABP Inspector’s Report dated June 2021

12.2 Methodology

12.2.1 Introduction

Landscape has two separate but closely related aspects. The first is **visual impact**, i.e. the extent to which new development can be seen in the landscape. The second is **impact on landscape character**, i.e. effects of new development on the fabric or structure of the landscape.

The visual impact assessment considers visual receptors along the Project. The majority of receptors involve residential properties, however, cultural and heritage properties, community facilities, e.g. churches, amenities and recreational facilities, open spaces, walkways, and other viewers within the environment are also considered.

Landscape character is derived from the appearance of the land and takes account of natural and man-made features such as topography, landform, vegetation, land uses and built environment and their interaction to create specific patterns that are distinctive to particular localities. Therefore, aspects such as landscape character and landscape designations are also considered in the description of the receiving landscape.

12.2.2 Legislation and Guidelines

The methodology has regard to Sections 50(2) and 50(3) of the Roads Act 1993 as amended, and the following guidance publications including new guidance since the 2018 EIAR, all of which remain relevant to the updated assessment:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports. EPA, 2022
- Guidelines for Landscape and Visual Impact Assessment, 3rd Edition. LI/IEMA, 2013
- A Guide to Landscape Treatments for National Road Schemes in Ireland. NRA, 2006
- Guidelines on the Implementation of Landscape Treatments on National Road Schemes in Ireland. NRA, 2012
- Guidelines for Protection and Preservation of Trees, Hedgerows and Scrub Prior to, during and Post Construction of National Road Schemes. NRA, 2006
- Design and Delivery of Soft Landscape Treatments in Urban Transport Environments (GE-ENV-03002). TII, 2024
- TII Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Specified Infrastructure Projects - Overarching Technical Document (PE-ENV-01101). TII, 2020
- Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Proposed National Roads – Standard (PE-ENV-01102). TII, 2020

12.2.3 Data Sources and Consultations

The findings and recommendations of other chapters of this updated EIAR have also been considered in the preparation of this assessment. Particular liaison and consultation has taken place with the relevant specialists in the project team in terms of the design for the Project and with particular respect to aspects such as Archaeological, Architectural and Cultural Heritage, Biodiversity, Noise and Vibration, Human Beings and Construction Activities.

12.2.4 Scheme Study area and Baseline Data Collection

The landscape setting for the Project covers a wide corridor comprising a part rural, part peri-urban and part suburban landscape extending from west of Bearna around the north and east of Galway City to a tie-in with the existing N6 between Dougishka and Coolagh-Briarhill. The corridor widens in certain areas to take account of elements such as mitigation planting areas at Menlough and the stables at Galway Racecourse.

Baseline data collection involved reviewing desktop information including statutory planning documents, landscape character assessments and other landscape and visual related publications and sources in order to identify likely significant and sensitive landscape and visual receptors. The findings of the desktop data collection stage was augmented, refined and verified during a series of survey visits, undertaken at different times during the year, including during 2024, to the landscape corridor of the Project. This has allowed for identification of visual receptors, landscape features, vegetation, and for analysis of local landscape and visual character.

12.2.5 Impact Assessment Methodology

The significance criteria as set out in the EPA Guidelines have been used for the purpose of this assessment, see Table 12.1 Landscape and Visual Impact Assessment Criteria.

The significance of landscapes is considered against their designation (i.e. national, county, local, etc.). Where not designated or otherwise protected, landscapes are considered as being of local significance. Therefore, landscape assessments take account of the receiving environment, its character and features, as well as landscape planning designations and listings.

Views from properties are all considered on an equal basis without varying degrees of significance or sensitivity. All properties located within 200m of the centreline of the proposed N6 GCRR are considered, together with any property outside of 200m, which for reasons of location relevant to the Project, visual openness, or otherwise, are considered to have potential for significant impact. For the most part, properties outside 200m of the centreline of the proposed N6 GCRR that have no potential for impact have not been included in the assessment. While these properties may have sight of the Project, due to a combination of distance, context, elevation or intervening topography, the Project comprises a small element of the overall panorama and will not give rise to an adverse impact. Visual impact from properties other than residences is also considered and as such, schools, community facilities and recreational and other amenities are also included.

Visual assessments for properties are tabulated in the Visual Impact Schedule (VIS) Tables in Appendix A.12.1 and are illustrated on the Landscape and Visual figures (Refer to Figures 12.1.01 to 12.1.15). The properties are numbered using sequential chainage-based references in approximate geographical order from west to east along the Project.

Visual impacts are assessed at three key stages:

Construction Stage: considers the period of active construction of the Project up to completion of the works.

Pre-establishment Stage: considers the period of initial operation of the Project where new landscape measures are unlikely to provide effective mitigation. All works, including new boundaries, barriers, screens, seeding, *etc.* are complete and while planting will be in place, it would require a period of time to establish as effective mitigation. The impact is assessed in the year the proposed N6 GCRR would open to traffic.

Post-establishment Stage: considers the impact after such time as proposed planting has established and is providing effective landscape and visual mitigation. This usually requires a period of five to seven years after planting. The impact is assessed c.15 years after the proposed N6 GCRR would open to traffic.

Table 12.1 Classification of Significance of Impacts

		Existing Environment			
		Significance / Sensitivity			
		High	Medium	Low	Negligible
Description of Impact Character / Magnitude / Duration / Probability/ Consequences	High	Profound	Very Significant	Significant / Moderate	Moderate / Slight
	Medium	Very Significant / Significant	Significant / Moderate	Moderate	Slight / Not Significant
	Low	Significant / Moderate	Moderate / Slight	Slight / Not Significant	Not Significant / Imperceptible
	Negligible	Slight / Not Significant	Not Significant	Not Significant / Imperceptible	Imperceptible

These impacts¹, which in quality may be positive, neutral or negative/adverse, are described as follows:

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

In terms of **duration**, landscape and visual effects are considered as:

- **Brief:** lasting up to one day
- **Temporary:** lasting up to one year
- **Short-term:** lasting one to seven years
- **Medium-term:** lasting seven to fifteen years
- **Long-term:** lasting fifteen to sixty years
- **Permanent:** lasting over sixty years

Further aspects including do-nothing, worse-case, cumulative, interactive, indirect and residual effects are also considered, where appropriate, in the assessment.

12.3 Receiving Environment

12.3.1 Landscape Context and Character

12.3.1.1 General

In general, the landscape overview is as presented in the 2018 EIAR. Galway City is situated on the River Corrib, a short c.6km river linking Lough Corrib in the north to Galway Bay in the south. The historic city and the city core is centred on the southern extent (mouth) of the river but the city has also extended significantly both eastwards towards Oranmore and westwards towards Bearna. While city expansion to the north has been constrained by Lough Corrib, development has extended along the corridors of the various national, regional and local roads that radiate out west, northwest, northeast and east from the city centre.

The landscape across the Project is divided into two distinct sections by the River Corrib at Dangan/Menlough. The west side of the river valley (along the existing N59 Moycullen Road) is also the boundary of a clear geographical divide between the underlying granite geology to the west and limestone to the east.

¹ It should be noted that throughout this chapter of this updated EIAR, the terms impact and effect are interchangeable and should be read to have the same meaning.

In general, the landscape to the west of the river is characterised by a pattern of irregular shaped, undulating enclosed fields delineated by drystone granite walls. Stretches of Blanket bog are also common and many fields, particularly in the vicinity of Bearna, are increasingly overgrown with scrub and bramble.

The landscape to the east is characterised by a pattern of larger, usually rectangular fields of improved grassland, with a large area of open grassland enclosed by Galway Racecourse and associated Stands at Ballybrit. While generally more open, notable exceptions are the overgrown and wooded demesne landscape of Menlo Castle, the areas of bare Limestone pavement with surrounding dense hazel scrub, and the presence of large limestone quarries at Coolough (Lackagh Quarry) and at Ballygarraun/Pollkeen (Roadstone Quarry, off the N83 at Twomileditch).

The landscape within the city and north along the wider River Corrib corridor is low-lying typically being lower than 30m above ordnance datum (OD). Within the extended city, the landscape rises gradually to the east to circa 70m OD at Briarhill (Dougishka) where the local high point is topped by a reservoir. To the west of the N6 / Bóthar na dTreabh, Dougishka includes established residential estates (Garrán Ard, Maigh Rua, Garran Íseal, Sraith Fhada, An Sean Bhaile) – many of which openly overlook the existing N6/Bóthar na dTreabh. To the east the landscape is open, rural and increasingly flat with limestone walls. The village of Coolagh-Briarhill lies to the immediate north of the existing N6 approach to the city.

To the northeast, the landscape undulates over shallow valleys and low ridges towards Lough Corrib. The ridges at Ballygarraun/Pollkeen and Ballindooley/Coolough are topped with limestone quarries and exposed limestone pavement and limestone walls are also a feature of the wider area from Ballindooley through to Menlough. Much of this area is covered with hazel scrub with limited tree cover. The villages of Castlegar and Coolough-Menlough retain a distinctive historic village character despite the increasing expansion of the city into their immediate context.

The ruin of Menlo Castle, cleared of ivy in 2022/2023, and its associated grounds provide an attractive landmark feature on the east side of the river close to where it leaves Lough Corrib. Menlough Village, also located on the east bank of the river, has an attractive and historic network of narrow rural roads with a dense network of individual and clustered residential properties.

North of the city the River Corrib forms a broad and attractive watercourse set within a landscape mosaic of grassland and marginal grassland, sports areas (e.g. University of Galway Sports Campus and Glenlo Abbey Golf Course) and areas of wetland/marsh (especially at the northern reaches of the river approaching Lough Corrib) scrub and woodland plantings. The entire valley is low-lying and the immediate river valley is below 10m OD.

West of the River Corrib, the landscape rises to the northwest of the city where a local high point at Tonabrocky (111m OD) is marked with telecommunication masts. From Tonabrocky the landscape falls gradually south and southwest to the coastal corridor extending either side of Bearna.

A large lake, Lough Inch, is located circa 1.5km northwest of Bearna. Large areas of bogs/peatlands are located west/northwest of Bearna, including around Lough Inch and at Tonabrocky Bog further north.

On-going residential development is a particular feature along the R336 Coast Road and along other local roads in the wider area around Bearna and northwest of Galway City.

Extensive residential, community and mixed developments is also a feature along the N59 Moycullen Road corridor extending northwest from the city. This includes developments such as Dangan Business Park, the University of Galway Sports Campus and the hotel and golf course resort at Glenlo Abbey.

12.3.1.2 Landscape along the Project

The overall length of the proposed N6 GCRR is c.17.5km and includes for other new and re-aligned link roads and realigned sections of existing roads, as well as for over 2.2km of N59 Link Road from Bushypark on the existing N9 Moycullen Road in the north, to the Rahoona Road in the south. Refer to Chapter 5, Project Description for further details.

With the exception of the modifications identified in Chapter 5, Project Description of this updated EIAR, the alignment of the proposed N6 GCRR remains as presented in the 2018 EIAR, and the overall landscape is as previously reported in the 2018 EIAR. The route skirts the peri-urban landscape that lies between the

developed western, northern and eastern suburbs of the city and the surrounding rural agricultural hinterland. Many sections of the route of the proposed N6 GCRR are overgrown with blackthorn, gorse and hazel scrub and bramble.

The landscape along the initial western section of the proposed N6 GCRR is a rugged lowland landscape of small fields, marginal grassland, extensive and increasing areas of scrub, granite stone walls in a variety of condition, and residential development prominently located along the main and local roads throughout.

To the northwest the route of the proposed N6 GCRR passes through Cappagh, Mincloon, Letteragh and Barnacranny on the exposed lower southern slopes of ground that rises gradually towards Tonabrocky Hill.

To the north of the city, the route of the proposed N6 GCRR leaves high ground at Dangan, which includes extensive areas of residential and recreational/sports development, and crosses the wide lowland valley of the River Corrib before moving onto gradually rising ground east of Menlo Castle. The castle ruin, located north of the proposed crossing location is a prominent landmark feature along the river corridor.

To the northeast the route of the proposed N6 GCRR crosses the rolling drumlin and valley landscape between Coolough (and Lackagh Quarry), Ballinfoile and Castlegar. The route passes immediately south of Ballindoooley Lough and through a residential area at Castlegar. The route is north of the defined settlement area of Castlegar Village, as identified on the Land Use Zoning and Specific Objectives Map of Galway City Development Plan 2023-2029. Residential development is a prominent feature in the existing landscape both where the proposed N6 GCRR crosses the N84 Headford Road at Ballindoooley and passes through Castlegar.

To the east of the city, the route of the proposed N6 GCRR passes to the immediate east of Galway Racecourse before turning south and east around the village of Coolagh-Briarhill to tie-in to the existing N6 and the R446 Bother na dTreabh south of the village and east of Dougishka.

The main landscape features along the proposed N6 GCRR include the diversity of ecological/landscape and cultural areas, the mosaic of open grassland, limestone pavement, marsh, wetland, river corridor/lake edge, scrub/and occasional tree plantings; the presence of significant recreational and sports grounds (including Galway Racecourse and University of Galway Sports Campus) and other open spaces; and the overall high quality of the landscape – especially along the River Corrib corridor and east through to Ballindoooley. These features add to overall diversity and interest of the landscape as well as to its sensitivity and significance.

As noted while there are extensive areas of scrub, including gorse and blackthorn to the west and hazel and blackthorn to the northeast, the plantings are generally low and the landscape is often visually open and tree and woodland planting is notably limited across the Project. The presence of mature trees and blocks of trees is most notable within the River Corrib valley, including around residential and sports facilities on the west bank of the river and on rising ground east of Menlo Castle.

Given the city edge location, the presence of residential properties is a notable and prominent visual feature along the entirety of the Project. In addition, there are a variety of community, recreational and social amenities as well as rural/city edge villages located close to the Project. Visual significance also applies to features of archaeological, architectural and cultural heritage, e.g. Menlo Castle, Bushypark House, etc., as described under Chapter 13, Archaeological, Architectural and Cultural Heritage.

12.3.1.3 Landscape Character Assessment

This description of the landscape character has been updated since the 2018 EIAR to reflect changes to the consideration/description of landscape character in the current Galway County Development Plan 2022-2028. The Landscape Character Assessment for County Galway² (2021) sub-divides the county into 10 large landscape character types (LCTs) and 30 landscape character units (LCUs) (29 landscape and 1 urban). Landscape sensitivity has also been applied to each of the LCTs.

² Included as Appendix 4 to Galway County Development Plan 2022-2028
(<https://consult.galway.ie/system/files/materials/17/Appendix%204%20Landscape%20Character%20Assessment.pdf>)

Small sections of the Project in the vicinity of the N83 Tuam Road Junction, the Parkmore Industrial Estate Junction and the Monivea Road lie outside the city boundary. However, while technically within LCU 6b. Southern River Clare Basin of LCT 6 Central Galway Complex, the area is adjacent and contiguous with the city area and its character is derived from the urban character. The western section of the Project – west of the city boundary – is located in a Galway County landscape character unit: i.e. LCU 1b. Cois Fharraige within LCT 1: Coastal, which is described as follows:

Landscape Character Type (LCT)	Landscape Character Unit (LCU)	Character	Sensitivity
1. Coastal	1b. Cois Fharraige	A long-established, densely occupied, narrow coastal plain - with little shore-line variability. Local enclosure afforded by scrub vegetation.	3. Special

The remainder of the Project is located within the boundary of Galway City and the current Galway City Development Plan 2023-2029 does not differentiate in terms of character units from the previous development plan referenced in the 2018 EIAR.

While somewhat distant from the immediate corridor of the Project, both Lough Corrib and Galway Bay are also considered waters of national tourism significance³.

For the purposes of this assessment the landscape along the route of the Project has been further sub-divided into Local Landscape Character Units (LLCUs), which highlight more immediate and distinctive landscapes characteristics, including within Galway City. The LLCUs are described in Table 12.2 and illustrated on Figures 12.2.01 and 12.2.02 Landscape Character and these are reflective of the updates in the consideration of landscape character since 2018.

³ Determination of Waters of National Tourism Significance and Associated Water Quality Status, Fáilte Ireland (2009)

Table 12.2 Landscape Character Types (LCTs) and Units (LCUs) and Local Landscape Character Units (LLCUs)

Landscape Character Area, Approx. Chainage & Length	Landscape Character Area (LCA) Description, Value and Sensitivity	Local Landscape Character Units (LLCU)	LLCU Landscape Description, Value and Sensitivity
LCT 1: Coastal LCU 1b.: Cois Fharraige Ch. 0+000 to Ch. 4+100 of the proposed N6 GCRR (c.4.1km)	Galway Bay Coast: This landscape includes some culturally distinctive, long-settled areas at very high densities of small-scale buildings – which continues today – centred on a number of separate settlements that include Bearna, Na Forbacha, An Spidéal, Indreabhán, Ros an Mhíl, Casla and An Cheathrú Rua. These types of landscapes are highly valued as ecological, scenic and recreational assets. Beyond settlement boundaries, these landscapes are generally unenclosed. Views are dominated by the sea and sky - producing extensive sky views. The coast is flat, comprising rocks and sand merging with natural grassland, towards the R336. The coast line commands striking views of County Clare and the Aran Islands. Further inland from the R336 route, areas of residential and some light industrial developments have lowered the scenic value of this area. High Landscape Value and High Landscape Sensitivity with parallel coastal strip of Special Sensitivity.	Coastal Fringe - Bearna: Ch. 0+000 to Ch. 0+250 of the proposed N6 GCRR (c.0.25km)	Open grassland with sea views and granite stone walls. Increasingly coarse-grained marginal grassland with extensive scrub north of the R336. Moderate Value and High Sensitivity north of R336. High Value and Special Sensitivity south of R336.
		Undulating Western Lowlands: Ch. 0+250 to Ch. 4+100 of the proposed N6 GCRR (c.3.85km)	Marginal coarse grassland / peatland with extensive scrub and overgrown granite stone walls. Moderate Value and Moderate Sensitivity.
N/A Ch. 4+100 to Ch. 6+300 of the proposed N6 GCRR (c.2.2km)	North Coast Landscapes: Beyond settlement boundaries, these landscapes are generally unenclosed. The landscape is gently rising/undulating with rough grassland, scrub and rocks/rock outcrop. Residential development is prominent along and off local roads. Medium Landscape Value and approximately half High Landscape Sensitivity and half Special Sensitivity.	Undulating Western Lowlands: Ch. 4+100 to Ch. 6+300 of the proposed N6 GCRR (c.2.2km)	Marginal coarse grassland / peatland with extensive scrub and overgrown granite stone walls with prominent residential development. Moderate Value and Moderate Sensitivity.

Landscape Character Area, Approx. Chainage & Length	Landscape Character Area (LCA) Description, Value and Sensitivity	Local Landscape Character Units (LLCU)	LLCU Landscape Description, Value and Sensitivity
N/A Ch. 6+300 to Ch. 8+000 of the proposed N6 GCRR (c.1.7km)	South foothills of east Connemara Mountains: The landscape of the foothills is undulating heath and scrubland with regular rocky outcrops. The area is generally undeveloped and has expansive views in a southerly direction across Galway Bay towards County Clare. Medium Landscape Value and approximately half High Landscape Sensitivity and half Special Sensitivity.	Open Western Uplands: Ch. 6+300 to Ch. 8+000 of the proposed N6 GCRR (c.1.7km)	Increasingly open and elevated landscape on rising slopes. Some granite stone walls and limited hedgerows. High Value and High Sensitivity.
N/A Ch. 8+000 to Ch. 11+200 of the proposed N6 GCRR (c.3.2km)	Lough Corrib and Environs: Lough Corrib is a wide, dramatic expanse of water including many islands supporting deciduous woodland. The land around the northern part of the lough is undulating heath bog and coniferous forestry whereas the land surrounding the southern section is flat, open grassland. The landscape of the lough and its surrounds is highly scenic and includes many facilities for visitors. Outstanding Landscape Value and Unique Landscape Sensitivity with pockets of High and Special Sensitivity.	West Galway Suburbs: Ch. 8+000 to Ch. 8+800 of the proposed N6 GCRR (c.0.8km)	Elevated lands dominated by residential (and some other) development. Moderate Value and Moderate Sensitivity.
		Institutional City Lands: Ch. 8+800 to Ch. 9+100 of the proposed N6 GCRR (c.0.3km)	Amenity, recreational and sports-related lands – with open public access. High Value and Special Sensitivity.
		Corrib River Valley: Ch. 9+100 to Ch. 9+900 of the proposed N6 GCRR (c.0.8km)	Broad lowland river with large expanse of slow-moving water fringed by mosaic of wetland, amenity, grassland and woodland landscapes. Accentuated by presence of significant castle ruin. High Value and Unique Sensitivity.
		Limestone Lowlands: Ch. 9+900 to Ch. 11+200 of the proposed N6 GCRR (c.1.3km)	Scrub dominated areas of limestone pavement, grassland and stone walls. High Value and Special Sensitivity.

Landscape Character Area, Approx. Chainage & Length	Landscape Character Area (LCA) Description, Value and Sensitivity	Local Landscape Character Units (LLCU)	LLCU Landscape Description, Value and Sensitivity
N/A Ch. 11+200 to Ch. 14+100 of the proposed N6 GCRR (c.2.9km)	Northeast Galway: Landscape is flat, fertile pastoral land bound with field hedgerows. There is little or no coniferous forestry or deciduous woodland. There are no areas of particular scenic value. Low Landscape Value and Low Landscape Sensitivity with pockets of Moderate Sensitivity.	Undulating Limestone Lowlands: Ch. 11+200 to Ch. 14+100 of the proposed N6 GCRR (c.2.9km)	Prominent rolling drumlin ridges and valley grassland landscape with hedgerows. Large limestone rock quarries on open ridges and lough with surrounding wetlands in valley. High Value and High Sensitivity.
N/A Ch. 14+100 to Ch. 17+540 of the proposed N6 GCRR (3.44km)	East Central Galway: The landscape is flat, coarse grassland, occasional clumps of coniferous forestry between 1–3km ² in size, and fields defined principally by stone walls. There are no areas of particular scenic value although the stone walls are quite distinct. Low Landscape Value and Low Landscape Sensitivity with pockets of Moderate Sensitivity.	East Galway Suburbs: Ch. 14+100 to Ch. 14+500 & Ch. 15+400 to Ch. 16+000 of the proposed N6 GCRR (c.0.4km + c.0.6km)	Lands dominated by residential and business park development. Moderate Value and Moderate Sensitivity.
		Galway Racecourse: Ch. 14+500 to Ch. 15+400 of the proposed N6 GCRR (c.0.9km)	Flat open landscape and significant city and region amenity. High Value and Special Sensitivity.
		Open Limestone Lowlands: Ch. 16+000 to Ch. 17+540 of the proposed N6 GCRR (c.1.54km).	Increasingly flat open grassland landscape with limestone walls and occasional mature trees. High Value and Moderate Sensitivity.

12.3.1.4 Galway City Development Plan 2023-2029

The provision of the proposed N6 GCRR is an integral part of the Galway Transport Strategy (GTS). The GTS, and hence the proposed N6 GCRR has also been incorporated into the Galway City Development Plan 2023-2029 which has been updated since the 2018 EIAR. Whilst the City Development Plan has been updated, the policies and objectives as set out in the 2018 EIAR are retained and are renumbered in the following to match the numbering in the current City Development Plan.

The provision of the proposed N6 GCRR as part of the integrated GTS is a stated objective of Galway City Development Plan. This objective is supported in particular by Policies 3.3, 4.1, 4.3, 4.4, and 4.6 as well as by the Specific Objectives outlined under Section 4.8 of the Plan. The corridor of the proposed N6 GCRR is also expressed on the Land Use Zoning and Specific Objectives Map of Galway City Development Plan and described as 'N6 Galway City Ring Road (N6 GCRR)'.

In terms of landscape and visual considerations, Chapter 3 of the Galway City Development Plan addresses **Housing and Sustainable Neighbourhoods** and sets out various policies and specific objectives to develop, enhance, protect and regenerate existing and proposed residential areas, including those within the outer suburbs (Section 3.5) and established suburbs (Section 3.6). Section 3.8 of Galway City Development Plan addresses **Village Envelopes/Areas**, and recognises four village settlement areas with distinct historic characters within the Plan area. These are Menlough, Castlegar, Coolagh-Briarhill and Coolagh-Menlough as shown on Figures 12.3.01 and 12.3.02 of this updated EIAR. Policy 3.9 seeks to strengthen the character of these villages and to protect and enhance their amenity and historic identity.

Chapter 5 of Galway City Development Plan sets out the policies and objectives in relation to **Natural Heritage, Recreation and Amenity**. The Plan identifies the green network of the city and the spaces that comprise this network (refer to Table 5.1 of Plan and to Plate 12.1 of this chapter of this updated EIAR). The network is promoted and supported by Policy 5.1.

The green network includes **protected spaces** (i.e. SACs, SPAs, NHAs, pNHAs and local biodiversity areas); **blue spaces** (Coastal area, River Corrib, canals and other waterways, Lough Corrib and lakes, enclosed marine and wetlands); **green spaces** (citywide and city centre parks and neighbourhood parks); **community spaces** (greenways, recreational facilities and playgrounds, and protected views of special amenity value and interest); and **open spaces** (which includes institutional open space, recreation and amenity zoned lands and agricultural and high amenity lands).

This green network includes the River Corrib, lands at Menlo Castle, Galway Racecourse, University of Galway Sports Campus, Cappagh Park, Ballinfoile Park, Ballindooley Lough as well as agricultural and high amenity zoned lands.

Plate 12.1 and Plate 12.2 provide an overlay of the Project onto the green network and green spaces/park network respectively. The Green Network (Plate 12.1) includes land zoned for open space, parks, recreation and amenity, agriculture and high amenity within the City Area. Further detail is also provided on Figures 12.3.01 and 12.3.02: Landscape Planning Aspects.

Section 5.6 of Galway City Development Plan discusses **Green Spaces** and Figure 5.3 of the Plan (refer to Plate 12.1 below) identifies the extent of parks (i.e. parks, open space spaces and recreation and amenity areas) within the city area.

To the northwest and north, most of the land outside of the developed city are identified as part of the green network. The majority of the Project is located within these areas.

These are also shown on Figures 12.3.01 and 12.3.02: Landscape Planning Aspects, which indicates that the proposed N6 GCRR crosses lands zoned for 'recreational and amenity use' along the Bearna Stream (Ch. 5+230 - between Cappagh and Ballymoneen Roads) and at University of Galway Sports Campus (Ch. 8+900) on the west side of the River Corrib. The proposed N6 GCRR also crosses a large area of land zoned for agriculture and high amenity on the east side of the River Corrib.

Section 5.6.1 **Urban Woodland Parks and Trees** and Policy 5.4 seeks to manage, develop and integrate existing trees and hedgerows, including on development sites.

Section 5.7.1 **Greenways, Boreens and Public Rights of Way** promotes the development of such linkages, including through the University of Galway campus on the west bank of the River Corrib, where existing footpaths are already in place. The proposed N6 GCRR would cross the existing paths and potential greenway and other such links proposed to the northwest of the city (refer to Figures 12.3.01 and 12.3.02).

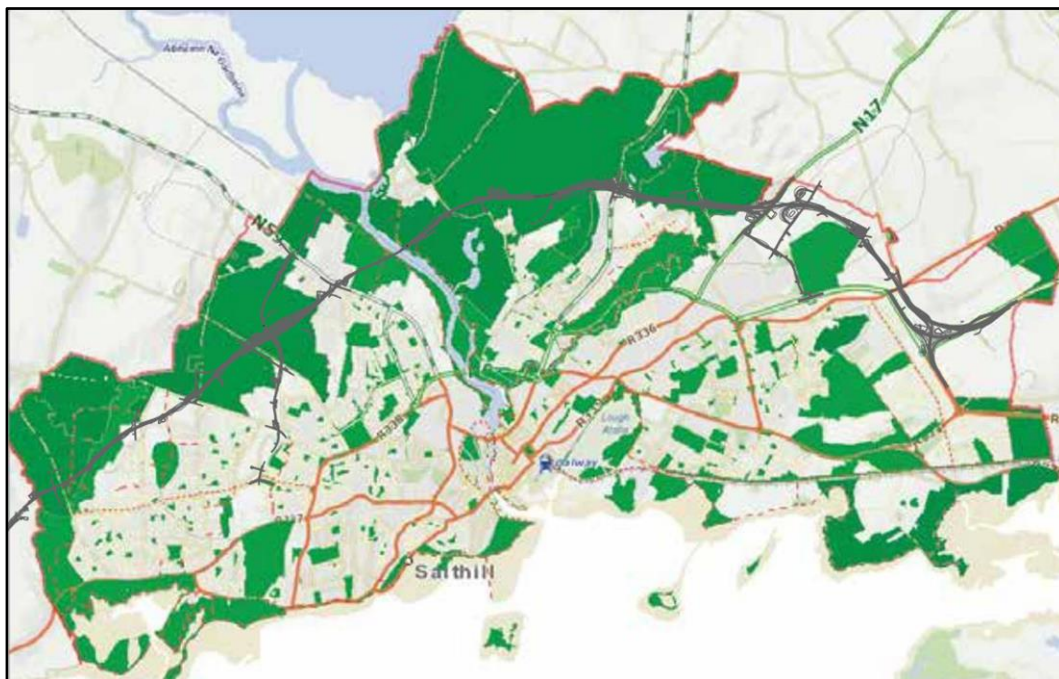


Plate 12.1 Green Network (within City Area) overlain with the proposed N6 GCRR (source: Figure 5.1 from City Development Plan with proposed N6 GCRR overlain in black)

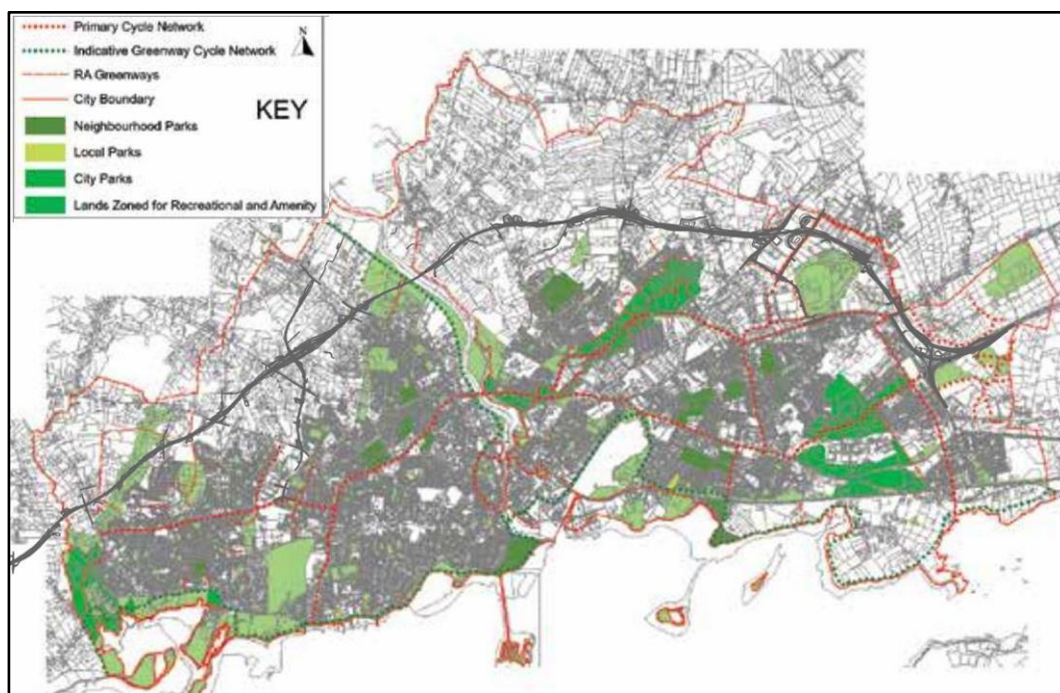


Plate 12.2 Park Network (within City Area) overlain with the Proposed N6 GCRR (source: Figure 5.3 from City Development Plan with proposed N6 GCRR overlain in black)

Section 5.7.3: **Views of Special Amenity Value and Interest**, identifies panoramic (V.1 to V.9) and linear protected views (V.10 to V.19). The location of the views relevant to the Project are shown on Figures 12.3.01 and 12.3.02 are listed in Table 12.3.

Table 12.3 Selected Panoramic Protected Views and Linear Protected Views

Panoramic Protected Views	
V.1	Panoramic views of the city and the River Corrib from Circular Road
V.2	Views from Dyke Road and Coolagh Road encompassing the River Corrib and Coolagh fen
V.6	Panoramic views of the city, and the Terryland Valley from parts of the Castlegar-Ballindooley Road
V.7	Views encompassing Lough Corrib from parts of the Quarry Road and Monument Road
Linear Protected Views	
V.10	Views from Galway-Moycullen Road (N59) of the River Corrib
V.14	Views northwards encompassing the River Corrib and adjoining lands from Quincentenary Bridge
V.19	Views encompassing Ballindooley Lough from parts of the Headford Road

Section 5.9: **Agricultural Lands** discusses general agricultural lands (zoned ‘A’) and high amenity agricultural lands (zoned ‘G’). The latter areas are illustrated on Figures 12.3.01 and 12.3.02 and indicate that the proposed N6 GCRR crosses this high amenity designation on the east side of the River Corrib. Policy 5.10 aims to prevent development that would give rise to environmental pollution or injury to general amenities, and also restricts the location of structures (other than structures with essential links to the waterway and public utilities) within ten metres of the River Corrib, in ‘G’ zoned lands.

Section 5.10 of the plan sets out further specific objectives in relation to **Natural Heritage, Recreation and Amenity**, including:

- A medium/long term objective to explore the potential for developing lands adjacent to Menlo Castle incorporating Menlough Woods as a park
- A medium/long term objective to develop a walk along the eastern side of the River Corrib from the Dyke Road to the pier at Menlough

Section 9.9 of Galway City Development Plan addresses **Light Pollution** and Policy 9.7 seeks to ensure the design of external lighting minimises the incidence of light pollution, glare and spillage into the surrounding environment and has due regard to the visual and residential amenities of surrounding areas.

12.3.1.5 Ardaun Local Area Plan 2018-2024

The western section of the existing M6/N6 Galway to Dublin Motorway and the eastern end of the Project falls within the area covered by the Ardaun Local Area Plan (LAP). The LAP acknowledges that the ‘*N6 Galway City Ring Road route corridor reservation traverses the north-western section of the area*’ (refer to Section 4 Ardaun Local Area Plan, page 8) and does not include development proposals within the corridor of the proposed N6 GCRR. The LAP proposes major development in the area, including new residential and commercial developments on c.81 hectares of an overall LAP area of c.164 hectares. The LAP envisages significant changes to the landscape and visual setting of the area, which will be delivered on a phased basis over a long period of time, refer to Plate 12.3.

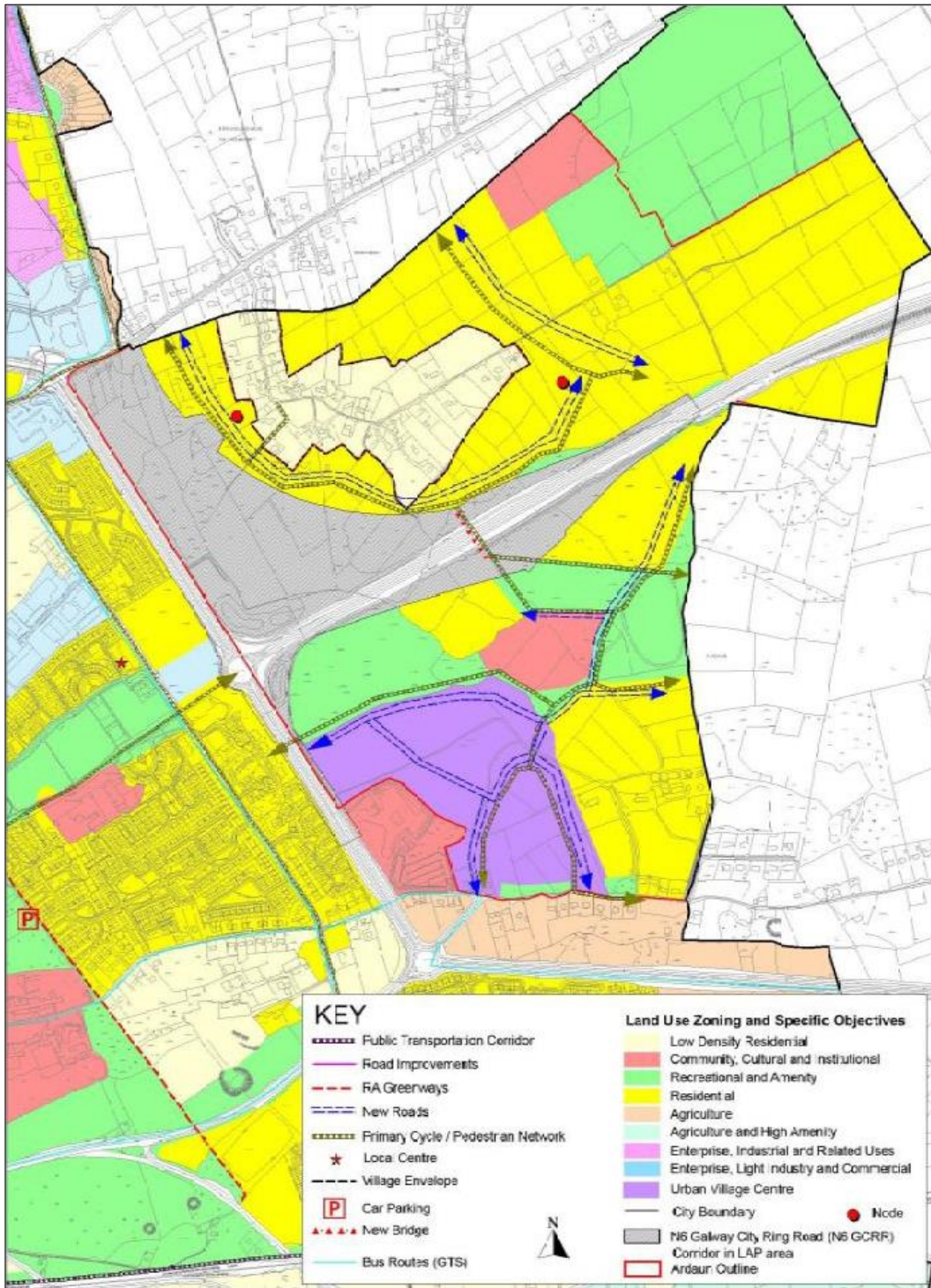


Plate 12.3 Ardaun LAP – Land Use Zoning (source: Figure 23 from Ardaun Local Area Plan 2018-2024)

12.3.1.6 Galway County Development Plan 2022-2028

The Galway Transport Strategy (GTS) and the proposed N6 GCRR are incorporated within the current Galway County Development Plan, which has been updated since the 2018 EIAR, and are discussed in detail in Sections 6.3.3 and 6.5 of the Plan respectively. Whilst the County Development Plan has been updated, some of the policies and objectives as set out in the 2018 EIAR are amended and reworded but essentially are similar in context to those of the previous Plan. All references to objectives and policies in the current Plan have been updated for this updated EIAR.

The GTS and the proposed N6 GCRR are supported by Policy Objectives for Galway County Transport & Planning Study and Galway Transportation Strategy GCTPS 1, GCPTS 2, GCTPS 7, GCTPS 8, GCTPS 9. The GTS and the proposed N6 GCRR are also relevant to Policy Objectives for Integrated Land Use and Transport Planning ILUTP 2 and ILUTP 3 and to Policy Objectives for Priority Roads Projects PRP 1. The GTS and the proposed N6 GCRR are also noted in Policy Objectives for National Roads NR1 and NR2.

Chapter 8 of Galway County Development Plan sets out policies and objectives in relation to **Tourism and Landscape**. The strategic aims of the Plan include, *inter alia*:

- To protect the landscape categories within the county and avoid negative impacts upon the natural environment

Section 8.13 of Galway County Development Plan sets out Policies and Objectives in relation to **Landscape Conservation and Management** and to the consideration of landscape character, and where appropriate, to the preservation and enhancement of character, views and prospects, amenities of places and features of natural beauty or interest.

Section 8.13.1 of Galway County Development Plan notes that County Galway has been subdivided into three landscape regions and the coast. These landscape regions have been further broken down into ten separate **Landscape Character Areas** (refer to Map 8.1 of the County Development Plan) each of which has been attributed landscape values and sensitivity ratings. The Landscape Character Assessment of the 2015-2021 Galway County Development Plan has been updated in the current County Development Plan 2022-2028 and this is discussed in detail in Section 12.3.1.3 of this chapter.

Section 8.13.3 of the Galway County Development Plan refers to **Protected Views and Scenic Routes** and to Objective PVSR 1 which seeks to preserve the protected views and scenic routes as detailed in Maps 8.3 and 8.4 of the Galway County Development Plan. Again the selection and numbering of protected views has been updated in the current Plan. The proposed N6 GCRR ties into the R336 west of Bearna and the R336 west of Galway City is highlighted as the ‘Galway Bay Scenic Route’. It is noted that this objective shall be balanced against the need to develop key infrastructure to meet the strategic aims of the Plan, and have regard to the zoning objectives of serviced development land within Galway Metropolitan Area.

Map 8.4 of the Galway County Development Plan indicates **Protected Views**. None of these pertain to the route of the proposed N6 GCRR. The nearest view (No. 30) is of the coast from Bearna, east of the proposed N6 GCRR (Refer to Figures 12.3.01 and 12.3.02).

Chapter 10 of Galway County Development Plan sets out a range of **Natural Heritage, Biodiversity and Green / Blue Infrastructure** Policies and Objectives, which seek to protect, conserve and enhance the natural heritage and biodiversity of designated and non-designated sites, ecological networks and linear features such as hedgerows, stone walls, water resources, geological and geomorphological systems, bats and bat habitats, eskers, the coastal zone, inland waterways, riparian zones and soil and groundwater; to promote green infrastructure; to implement national and county heritage plans and biodiversity plans; to support measures for prevention, recording and eradication of invasive species; to promote the use of native species; and to take account of Management Plans prepared for European sites by the National Parks and Wildlife Service (NPWS).

Objective TWHS 1 ‘**Trees, Woodlands, Natural Boundaries and Stone Walls**’ seeks to: protect and seek to retain important trees, tree clusters and tree boundaries, ancient woodland, natural boundaries including stone walls, existing hedgerows particularly species rich roadside and townland boundary hedgerows, where possible and replace with a boundary type similar to the existing boundary.

Chapter 12 **Architectural, Archaeological and Cultural Heritage** of Galway County Development Plan sets out Policy Objectives for Architectural Heritage (12.5.8), Archaeological Heritage (12.6.12), and Cultural Heritage (12.7.5), including:

- Objective AH 9 – ‘Local Landscape and Place Assessment’ supports proposals from local communities and residents’ groups in analysing the character of their place and promoting its regeneration for their own use and enjoyment and that of visitors to the area.
- Objective AH 10 – ‘Designed Landscapes’ addresses surviving designed landscapes and promotes the conservation of their essential character, both built and natural.

The Bearna LAP (2007-2017) previously addressed the development of Bearna and its surrounding area. The Metropolitan Area of Galway was established under the National Planning Framework in 2018 and this extends from Bearna in the west to include Galway City and suburbs and continuing eastwards to Baile Chláir and Oranmore. Section 2 of Volume 2 of the current County Development Plan 2022-2028 sets out the vision for the metropolitan settlement of Bearna and replaces the earlier LAP. The wider landscape surrounding the settlement of Bearna is not included in the metropolitan area of the settlement as set out in Section 2 of Volume 2 of the Development Plan. As such the wider surrounding landscape is considered under the general Development Plan provisions for the landscape of the county as a whole.

The objectives of the Gaeltacht Local Area Plan, 2008-2018 have been incorporated into Chapter 13 of the Galway County Development Plan 2022-2028.

12.3.1.7 Historic Gardens and Designed Landscapes

The National Inventory of Architectural Heritage (NIAH) records properties under Historic Gardens and Designed Landscapes.

The properties listed in Table 12.4 lie on or close to the Project and all listed remain as per the 2018 EIAR. However, the description of the properties in the NIAH have been updated since the 2018 EIAR and these changes are reflected in the following. Not all of these historic properties are directly impacted or even indirectly impacted, e.g. in terms of impact on their setting. Historic demesnes with houses that have potential for visual impact have been assessed, together with all other properties, within the visual impact schedule in Appendix A.12.1 and within Section 12.5.3.6 and Section 12.5.4.6 of this chapter. A more detailed consideration of all aspects of architectural and cultural heritage is provided under Chapter 13, Cultural Heritage.

Table 12.4 Historic Gardens and Designed Landscapes located along the Project

Figure Ref.	Name and location relative to Project:	NIAH Comments & Principal Retained Features
P008-043 (Figure 12.1.12)	Bushypark House demesne. Mainline of proposed N6 GCRR over 600m+ from house. Proposed N59 Link Road North ties into existing N59 Moycullen Road along southern demesne boundary.	NIAH Comments: Site footprint, principal building, kitchen/walled garden and defined boundary still present. Much of the structural footprint of the designed landscape is visible in aerial photography but features are in a degraded condition. The principal structure, 'Bushypark House', is still extant and is listed as a protected structure. Some residential development has taken place within the demesne lands.
N/A	Ashley Park demesne. 300m+ from Project.	NIAH Comments: Housing has been constructed on this site. Virtually no features of the designed landscape shown on the 1836 - 1846 OS map are visible in aerial photography.
P009-001 (Dangan House – 2nd Ed. Mapping) (Figure 12.1.07)	Dangan Cottage, Dangan House, Dangan Nunnery, Mary Ville demesnes. (Effectively forming one combined or conjoined landscape). Proposed N6 GCRR passes through northern portion of original conjoined demesne lands.	NIAH Comments: Virtually no recognisable features remain. Industrial and sporting facilities have been constructed on this site. No recognisable features remain. NIAH garden survey only includes an entry for Dangan House, which, like Nunnery, on the first edition map was located on the edge of the River Corrib. Neither property survives today or are indicated on second edition mapping. Dangan Cottage appears in the same place on both first and second edition mapping. However, the property is no longer present and a sports pitch has been constructed on the location. Mary Ville is not shown on first edition mapping, but does appear on second edition mapping, together with a new reference for Dangan House in a different location to that shown on the first edition mapping.

Figure Ref.	Name and location relative to Project:	NIAH Comments & Principal Retained Features
P009-003 (Figure 12.1.07)	Menlo Castle demesne. Proposed N6 GCRR passes through southeast portion of original demesne – c.150m from castle ruins.	Located alongside the River Corrib. Main features unrecognisable – peripheral features visible. Much of the parkland shown on the 1836 - 1846 OS map has been divided into smaller fields. The principal castle structure survives as a dramatic ruin on the edge of the river (P009-003). The principal structure and its entrance are both protected structures.
PG14-016 (site of) (Figure 12.1.14)	Ballybrit House demesne. 1km+ from Project. City East Business Park Junction works are within demesne.	NIAH Comments: Area under the existing N6 road. Today the demesne is completely covered by industrial and residential development and the site of the house lies beneath Bóthar na d'Treabh (N6).

12.3.1.8 Landscape and Visual Significance and Sensitivity

The main features of significance and sensitivity in the receiving landscape of the Project (in general west to east order) are as listed in the 2018 EIAR:

- The semi-natural landscape character of marginal grasslands, scrub plantings, small stream valleys and stone walls to the west and north of Bearna
- Environmental Management and Open Space Areas, protected views and prospects, and proposed greenways and linkages west and north of Bearna
- The open rising landscape, including open space lands, northwest of Galway City
- The River Corrib corridor and its wider landscape setting, which includes the prominent ruins of Menlo Castle, as well as a diverse mosaic of semi-natural and man-influenced landscapes, riparian plantings, grasslands, scrub and woodland. Protected views and prospects and lands on east bank designated as High Amenity Agriculture
- The recreation, sports and amenity lands of University of Galway Sports Campus and surrounding areas. Lands on west bank of River Corrib designated as Recreation, Open Space
- The limestone, grassland and scrub landscape with stone walls northeast of Galway City
- The wider drumlin and valley landscape setting with protected views and prospects around Ballindooly Lough
- The open recreational lands of Galway Racecourse and surrounding areas

The main features of visual significance and sensitivity in the receiving landscape (in a general west to east order) are as listed in the 2018 EIAR:

- The presence, prominence and visual amenity of residential property and development in general, especially at the:
- West and north of Bearna, at Forai Maola Road, at Troscagh Road and at Ann Gibbons and Bearna to N59 Moycullen Road
 - west/northwest of the city, at Aille Road, Cappagh Road, and Ballymoneen
 - northwest of the city, at Rahoon Road and Clybaun Road, Letteragh Road and at Chloch Scoilte
 - to either side of the N59 Moycullen Road north of the city, at Knocknafroska, Barnacranny, Upper Dangan and Aughnacurra and also at Ballagh and Bushypark
 - north/northeast of the city, at Bóthar Nua, Seanbóthar

- northeast of the city, at N84 Headford Road and at Hynes' Bóithrín, Spellman's Bóithrín and School Road and setting of Castlegar Village
- east of the city, at N83 Tuam Road, Racecourse Avenue, Ballybrit Crescent, and the village of Coolagh-Briarhill
- The location of protected views and prospects
- The visual amenity associated with UoG Sports Campus
- The visual amenity associated with the River Corrib corridor, including the setting of Menlo Castle
- The visual amenity associated with Galway Racecourse

12.4 Characteristics of the Project

A detailed description of the Project and construction activities are provided in Chapter 5, Project Description and Chapter 7, Construction Activities.

There are five phases in the Project as set out below. The inclusion of the temporary stables as relocated infield at Galway Racecourse and ancillary works in the assessment of the Project for this updated EIAR has resulted in the increased area of the Assessment Boundary in the vicinity of Galway Racecourse. The main characteristics of the Project of relevance to the landscape and visual assessment are outlined under construction and operation phases in Sections 12.4.2 and 12.4.3 respectively. Phase 2 comprises the most significant characteristic of the Project.

12.4.1.1 Phase 1

Phase 1 includes the construction of a temporary stableyard including horsebox parking, machinery shed, maintenance shed, ESB substation, two wells, new pre-parade ring and pavilion on Galway Racecourse lands (Approval for which was granted by Galway City Council in December 2024 Planning Ref. No.:24/60279).

12.4.1.2 Phase 2

Phase 2 comprises the construction and operation of the proposed N6 GCRR.

12.4.1.3 Phase 3

Phase 3 comprises the construction of the new permanent stableyard including horsebox parking post-handover of the proposed N6 GCRR (Approval for which was granted by Galway City Council in December 2024 Planning Ref. No.:24/60279).

12.4.1.4 Phase 4

Phase 4 comprises the demolition of the temporary stables constructed in Phase 1 (Approval for which was granted by Galway City Council in December Ref. No.:24/60279).

12.4.1.5 Phase 5

Phase 5 is the operational phase of the Project.

12.4.2 Construction Phase

The main characteristics of the construction stage of the Project that have potential for landscape and visual impact are as follows, noting that the modifications to the Project since the 2018 EIAR as set out in Chapter 5 of this updated EIAR including the removal of the UoG pitches (UoG has obtained planning permission for alternative pitches - ABP Ref. No.: 308412-20) and the temporary stables at an alternative infield location at the racecourse (Approval for which was granted by Galway City Council in December Planning Ref. No.:24/60279):

- Site mobilisation and establishment, tree and vegetation removal, fencing of lands, provision of site compounds
- Removal of properties, boundaries, amenities

- Normal landscape disturbance and activity, including removal of topsoil, general earthworks and operation of construction traffic
- Construction of significant earthworks, including cuttings and rock cuttings (< 3m deep) and embankments (< 3m high)
- Construction of the new road, link roads and associated local road re-alignments, including provision of noise barriers, lighting, gantries signage, etc.
- Construction of new structures, including under and overbridges, culverts, a c.650m long bridge crossing of the River Corrib and its valley, a c.310m length of viaduct, and 2 separate sections of tunnel – one of c.270m length at Lackagh Quarry, and a second of c.240m length at Galway Racecourse
- Demolition and modification of part of UoG Sports Pavilion
- Provision of temporary stables and permanent stables (Approval for which was granted by Galway City Council in December Planning Ref. No.:24/60279 to mitigate the impacts of the proposed N6 GCRR on the operation of the racecourse and to ensure that the racecourse can continue to operate both during and after the construction of the proposed N6 GCRR)
- Other related works, including diversion of existing services, provision of new services, provision of attenuation and wetland ponds, drainage facilities, new road boundaries and landscape works, etc.

12.4.3 Operational Phase

The main characteristics of the operation stage of the Project that have potential for landscape and visual impact are as presented in the 2018 EIAR:

- The presence and operation (traffic) of the road and its proximity to residential, amenity and other property
- The prominence of embankments and cuttings in the landscape
- The prominence of elevated structures such as bridges and the viaduct
- The presence of noise barriers, gantries signage, etc.
- The presence of additional roadside lighting
- The movement of traffic on the proposed N6 GCRR, including on bridges, embankments, tunnel portals etc.

12.5 Evaluation of Effects

12.5.1 Introduction

The Project crosses a diverse rural/sub-urban landscape to the west, north and east of typical city-edge development. Phase 2, the construction of the proposed N6 GCRR, comprises the most significant characteristic of the Project and results in the greatest potential for significant impacts.

Therefore, the impact assessment is conducted on the overall Project but splits it into the sections of the proposed N6 GCRR for ease of reference as per the layout of the 2018 EIAR.

The presence of residential properties is a common feature along most sections of the proposed N6 GCRR, particularly at the crossing of local roads west and northwest of Galway, at the crossing of the N59 Moycullen Road, at the N84 at Ballindooley, at Castlegar, and at Ballybrit, Dougishka and Coolagh-Briarhill.

Within this landscape, the construction associated with the proposed N6 GCRR will give rise to significant and profound negative impacts in terms of disturbance to the existing landscape and visual character of the area and to properties located close to the proposed N6 GCRR.

While landscape and visual impacts will tend to be most pronounced during the construction and early operation stages, the proposed N6 GCRR will, as with all road schemes, also have some degree of residual permanent effect on its landscape and visual environment.

12.5.2 Do-Nothing Effects

Landscapes and properties along the proposed N6 GCRR would not experience the negative landscape and visual impacts that are associated with the proposed N6 GCRR and their existing setting would experience little or no change in the short to medium-term other than from likely further residential and city-related development.

12.5.3 Potential Construction Effects

Details of the anticipated five-year construction period of the Project, with a three-year construction period anticipated for Phase 2, is set out in Chapter 7, Construction Activities.

Potentially impacted features and landscape and visual impacts of the Project are described on a section-by-section basis with reference to the chainage along the proposed N6 GCRR below. The description of landscape character and of protected views has changed in the current County Development Plan, and as such the relevant Landscape Planning and Landscape Character sub-sections in the following have also been updated in this updated EIAR. However, the overall impact assessments remain as presented in the 2018 EIAR.

An assessment of the overall construction stage visual impact is also discussed separately in the Section 12.5.3.6 of this chapter. Potentially impacted properties are indicated on Figures 12.1.01 to 12.1.15 and recorded in Appendix A.12.1.

12.5.3.1 Ch. 0+000 to Ch. 6+300

The following construction-related aspects give rise to potential for landscape and visual impacts within this section of the Project:

- **Properties:** Ten residential properties are to be acquired with consequent impact on existing community and landscape/visual setting (refer to Figures 12.1.01 to 12.1.05). These are mainly located at the crossing of local roads where ribbon-style residential development is a feature along such roads

Locally significant short-term negative impact

- **Vegetation:** Removal of vegetation is very limited and is primarily focused on areas of scrub vegetation, short sections of gappy hedgerows and occasional small trees – often around properties to be acquired (refer Figures 12.1.01 to 12.1.05)

No significant impact arises

- **Landscape Features:** There is substantial impact on, and removal of, stone field boundary walls. While often dilapidated and overgrown with scrub, these walls are a notable feature of this relatively open, rough-grained landscape

Locally significant short-term negative impact

- **Embankments:** Significant embankments (i.e. >3m high) are limited in extent and scale. While some short sections of lower embankments (i.e. < 3m high) are required to cross local low points, the main sections of embankment (total c.2.55km) with approximate maximum heights are:

- Ch. 0+550 to Ch. 1+150 (up to c.6m high)
- Ch. 1+200 to Ch. 1+600 including Troscaigh/Foraí Maola Overbridge Link (up to c.7m high)
- Ch. 1+900 to Ch. 2+250 (up to c.7m high)
- Ch. 2+800 to Ch. 3+050 (up to c.6m high)
- Ch. 3+900 to Ch. 4+000 (up to c.7m high)

- Ch. 4+100 to Ch. 4+350 (up to c.5m high)
- Ch. 4+750 to Ch. 5+000 (up to c.6m high)
- Ch. 5+950 to Ch. 6+300 (up to c.9m high)

Locally significant short-term negative impacts

- **Cuttings:** Significant cuttings (i.e. > 3m deep) are limited in extent and scale. While some short sections of shallow cut (i.e. < 3m deep) are required to cross local ridges/high points, the main sections of cut (total c.0.95km) with approximate maximum depth are:
 - Ch. 3+150 to Ch. 3+900 (up to c.5m cut – rock expected at lower depths)
 - Ch. 5+350 to Ch. 5+530 (up to c.9m cut – rock expected at lower depths)

Locally moderate short-term negative impacts

- **Visual Impacts:** Significant negative visual impacts arise for residential properties, especially in the crossing of local roads (at R336, Forái Maola, Troscaigh, Ann Gibbons, Aille, Cappagh, Ballymoneen, Ragoon and Letteragh) and at the proposed Troscaigh/Forái Maola Overbridge Link (Ch. 1+380). Refer to Section 12.5.3.6 and Figures 12.1.01 to 12.1.05.

Overall, there will be a significant short-term negative visual impact

- **Landscape Planning:**

Construction of part of the proposed N6 GCRR crosses Agricultural and Recreational and Amenity zoned lands (in Galway City Development Plan) at Cappagh/Ballynahown/Keeraun (c.Ch. 4+700 to Ch. 5+300), and residential zoned lands between Ch. 5+350 and Ch. 6+300 (Ragoon Road)

The proposed N6 GCRR crosses the greenway link objectives at Cappagh Road (Ch. 4+450), Boleybeg Bóithrín (Ch. 4+550) and at Keeraun Bóithrín (Ch. 5+950). Construction stage activities will result in temporary restrictions on the use of these local access roads/tracks

Large-scale construction of the proposed N6 GCRR will be visually distracting and incongruous in the foreground of long range views south towards the north Clare coast

Overall, there will be a significant short-term negative landscape planning impact

- **Landscape Character:** Notwithstanding the extent of existing residential development, the construction of the proposed N6 GCRR will give rise to substantial disruption of local landscape character – especially in the provision of the Troscaigh/Forái Maola Overbridge Link. The construction will have limited impact on the more locally sensitive Coastal Fringe – especially south of the R336 Coast Road

Overall, there will be a moderate to significant short-term negative impact on local landscape character

12.5.3.2 Ch. 6+300 to Ch. 8+000

The following construction-related aspects give rise to potential for landscape and visual impacts within this section of the Project:

- **Properties:** Three residential properties are to be acquired with consequent impact on the existing community and landscape/visual setting (refer to Figures 12.1.05 to 12.1.06 and Figures 12.1.12 to 12.1.13). These are located at Letteragh (1) and at the N59 Letteragh Junction (2)

Locally moderate short-term negative impact

- **Vegetation:** Removal of vegetation is limited and is primarily focused on areas of scrub vegetation, short sections of gappy hedgerows and occasional trees – generally around the proposed N59 Letteragh Junction (refer Figures 12.1.05 to 12.1.06 and Figures 12.1.12 to 12.1.13)

Locally slight short-term negative impact

- **Landscape Features:** There is considerable impact on, and removal of, stone field boundary walls. While often dilapidated and overgrown with scrub, these walls are a notable feature of this relatively open landscape

Locally moderate to significant short-term negative impact

- **Embankments:** Some significant embankments (i.e. > 3m high) arise. While some short sections of lower embankments (i.e. < 3m high) are also required to cross local low points, the main sections of embankment (total c.1.15km) with approximate maximum heights are:
 - Ch. 6+300 to Ch. 6+550 (up to c.12m high)
 - Ch. 6+800 to Ch. 6+950 (up to c.10m high)
 - Ch. 7+000 to Ch. 7+550 (various embankments associated with approach to and N59 Letteragh Junction – up to c.6m high)
 - Ch. 1+500 to Ch. 1+700 on N59 Link South (up to 7m high)

Locally moderate short-term negative impacts

- **Cuttings:** Some significant cuttings (i.e. > 3m deep) arise. While some other short sections of shallow cut (i.e. < 3m deep) are required to cross local ridges/high points, the main sections of cut (total c.0.85km) with approximate maximum depth are:
 - Ch. 7+550 to Ch. 8+000 (various cuttings associated with N59 Letteragh Junction – up to c.11m cut. Rock expected at lower depths)
 - Ch. 0+050 to Ch. 0+450 on N59 Link North (up to 8m cut)

Locally significant short-term negative impacts

- **Visual Impacts:** Significant negative visual impacts for residential properties, especially in the crossing of local roads at Letteragh and Rahoon and at the tie-in to the existing N59 Moycullen Road at Ballagh/Bushypark). Refer to Section 12.5.3.6 and Figures 12.1.05 to 12.1.06 and Figures 12.1.12 to 12.1.13

Overall there will be a significant short-term negative visual impact

- **Landscape Planning:** The majority of this section of the proposed N6 GCRR passes through agricultural zoned lands, with the N59 Link Road South passing through residential and enterprise zonings. A short section of the proposed N6 GCRR passes through High Amenity agricultural lands at the Rahoon Road (Ch. 6+300 to Ch. 6+450). Construction of the proposed N6 GCRR falls within the context of Linear View 10 of the River Corrib from the N59 Moycullen Road. However, no significant impact arises for View 10

Overall there will be a slight to moderate short-term negative landscape planning impact

- **Landscape Character:** Notwithstanding the rural/city edge nature of the landscape and the extent of residential development, the construction of the proposed N6 GCRR will give rise to substantial disruption of the open elevated local landscape character

Overall there will be a significant short-term negative impact on local landscape character

12.5.3.3 Ch. 8+000 to Ch. 11+800

The following construction-related aspects give rise to potential for landscape and visual impacts within this section of the Project:

- **Properties:** Thirteen residential properties are to be acquired with consequent significant impact on existing community and landscape/visual setting (refer to Figures 12.1.06 to 12.1.08). These properties are mainly located to either side of the N59 Moycullen road at Knockadoney/Bushypark (2), Ard na

Locha (3) and Aughnacurra (6) on the east bank of the River Corrib, and at Bóthar Nua (2) on the west bank. A temporary acquisition of the University of Galway Sports Pavilion is also proposed to allow for modification of the building to facilitate the proposed N6 GCRR.

Locally very significant / profound short-term negative impact at N59 Moycullen Road/Aughnacurra, and otherwise significant

- **Vegetation:** Substantial removal of vegetation within Aughnacurra residential estate and University of Galway Sports Campus on the west bank; and southwest of Menlo Castle; and in sections across limestone landscape of Menlough/Coolough on the east bank (refer Figures 12.1.06 to 12.1.08). Significant impact on woodland block south of Menlo Castle is particularly notable

Locally significant / very significant short-term negative impact

Landscape Features: There is substantial impact on and removal of stone field boundary walls at Chloch Scoilte, Knocknabrona and Knocknafroska all west of the N59 Moycullen Road. There is a lesser impact on stone walls through the limestone areas of Menlough/Coolough on the east side of the river

Significant disruption and intrusion onto the recreational, amenity and sport grounds of University of Galway Sports Campus; River Corrib watercourse and banks; distinctive setting of Menlo Castle; and the exposed limestone pavement areas in the east in Menlough/Coolough

Existing sports pitches impacted at University of Galway Sports Campus. However, it is also noted that UoG has obtained planning permission for alternative pitches (ABP Ref. No.: 308412-20)

Locally very significant / profound short-term negative impact

- **Embankments and Structures:** Some very significant embankments (i.e. > 3m high) and structures are required through this section. The main sections of embankment (total c.1.575km) and elevated structures (including 650m long bridge) with approximate maximum heights of embankment are:
 - Ch. 8+350 to Ch. 9+000 (up to c.8m high). Embankment includes bridge over existing N59 Moycullen Road and significant sections of high retaining walls through retained residential areas
 - Ch. 8+850 to Ch. 9+500 Major elevated bridge structure across River Corrib and immediate landscape setting
 - Ch. 9+500 to Ch. 10+100 Eastern tie-in to River Corrib Bridge (up to 18m high)
 - Ch. 10+105 to Ch. 10+425 Viaduct over limestone pavement
 - Ch. 10+425 to Ch. 10+550 (up to c.10m high)
 - Ch. 11+500 to Ch. 11+800 (up to 9m high – but located on excavated floor of Lackagh Quarry)

Locally profound short-term negative impact

- **Cuttings and Structures:** Cuttings are limited through this section, and lead mainly to the proposed tunnel into Lackagh Quarry

The main sections of cut (total c.0.4km) and other structures with approximate maximum depth of cuttings are:

- Ch. 10+950 to Ch. 11+150 (cutting leading to Lackagh Quarry – up to c.8m cut. Rock expected at lower depths) Ch. 11+150 to Ch. 11+350 Tunnel into Lackagh Quarry

Locally slight / moderate short-term negative impacts

- **Visual Impacts:** Profound negative visual impacts for residential properties, especially to either side of N59 Moycullen Road; through University of Galway Sports Campus; at crossing of River Corrib, including at Menlo Castle; as well as at Bóthar Nua and Seanbóthar on east bank of River Corrib. Construction of the bridge, associated embankments and viaduct will have a significant visual impact and give rise to city-wide attention and interest in the process. Refer to Section 12.5.3.6 and Figures 12.1.06 to 12.1.08.

Overall profound short-term negative visual impact

- **Landscape Planning:** On the west side of the River Corrib the proposed N6 GCRR passes through Low Density Residential lands at Dangan/Aughnacurra and Recreation and Amenity zoned lands at UoG Sports Campus. On the east side of the river the proposed N6 GCRR passes through Agriculture and High Amenity lands and Agriculture zoned lands, including Lackagh Quarry

The construction of the proposed N6 GCRR crosses recreation and amenity zoned lands on west bank of River Corrib; and High Amenity Agricultural lands on east bank

The proposed river crossing is within the context of potential greenway objectives along the west and east bank of the River Corrib. Construction of proposed bridge and associated earthworks will be visually prominent, distracting and incongruous in this area

Overall profound short-term negative landscape planning impact

- **Landscape Character:** Construction of the bridge and associated works especially on east bank will have a significant impact on the local landscape character of this broad river valley landscape, on its feature castle ruin and on the semi-natural setting of the east bank. The proposed viaduct rises on to the locally elevated east side of the river valley corridor and as such the construction of the structure will be visible from more elevated locations on the west bank of the river

Overall, very significant / profound negative impact on local landscape character

12.5.3.4 Ch. 11+800 to Ch. 14+200

The following construction-related aspects give rise to potential for landscape and visual impacts within this section of the Project:

- **Properties:** Twenty-five residential properties are to be acquired with consequent significant impact on existing community and landscape/visual setting (refer to Figures 12.1.08 to 12.1.10). These properties are mainly located along the N84 Headford Road at Ballindooley/Castlegar (14) Castlegar Village (8) and N83 Tuam Road (3)

Locally profound short-term negative impact at Castlegar and local significant impact at N84 Headford Road and elsewhere

- **Vegetation:** Limited removal of vegetation around residential areas at N84 Headford Road and Castlegar and along other limited sections (refer Figures 12.1.08 to 12.1.10)

Locally slight to moderate short-term negative impact

Landscape Features: There is moderate impact on and removal of stone field boundary walls through Castlegar.

Locally moderate short-term negative impact

- **Embankments and Structures:** Series of embankments. The main sections of significant embankment (i.e. > 3m high) and elevated structures with approximate maximum heights of embankment (c.1.0km overall) are:
 - Ch. 11+950 to Ch. 12+500 (up to c.14m high). Embankment includes bridge over existing N84 Headford Road
 - Ch. 13+650 to Ch. 14+150. Embankment (up to 12m high) includes bridge over existing N83 Tuam Road

Locally very significant short-term negative impact

- **Cuttings and Structures:** Various significant cuttings (i.e. > 3m deep) through this section – including deep cutting southwards out of Lackagh Quarry (Ch. 11+800 to Ch. 11+950)

The main sections of cut (total c.1.0km) with approximate maximum depth are:

- Ch. 11+800 to Ch. 11+950 (cutting out of Lackagh Quarry – up to c.18m cut. Rock expected through most of depth)
- Ch. 12+550 to Ch. 12+850 through ridge at Castlegar (up to 7m deep – rock at lower levels)
- Ch. 13+050 to Ch. 13+600 through ridge at Castlegar (up to 12m deep – rock at lower levels)

Locally very significant short-term negative impacts

- **Visual Impacts:** Very significant / profound negative visual impacts for residential properties, especially to east of crossing of N84 Headford Road and through Castlegar generally. Refer to Section 12.5.3.6 and Figures 12.1.08 to 12.1.10.

Overall profound short-term negative visual impact

- **Landscape Planning:** The proposed N6 GCRR passes through mainly Agricultural zoned lands, with areas of Residential zoning at the N84 Headford Road, and the N83 Tuam Road. The historic village settlement of Castlegar lies to the south of the proposed N6 GCRR

The landscape surrounding Ballindooley Lough immediately north of the proposed N6 GCRR is designated as High Amenity Agriculture

The construction of the proposed N6 GCRR falls within the context of protected views V6 and V19

Overall moderate - significant short-term negative landscape planning impact

- **Landscape Character:** Construction of proposed embankments, cuttings as well as a c.650m long bridge structure and a c.320m long viaduct structure will have a substantial impact on the rolling hill and valley nature of the local landscape character

Overall significant / very significant negative impact on local landscape character

12.5.3.5 Ch. 14+300 to Ch. 17+540

The following construction-related aspects give rise to potential for landscape and visual impacts within this section of the Project:

- **Properties:** Three residential properties are to be acquired with consequent minor impact on existing community and landscape/visual setting (refer to Figures 12.1.10, 12.1.11 and 12.1.14). These properties are located along Racecourse Avenue and the R339 Monivea Road

Locally slight short-term negative impact

- **Vegetation:** Limited removal of scrub vegetation west of Coolagh-Briarhill (refer Figures 12.4.10, 12.4.11 and 12.4.14)

Locally slight short-term negative impact

- **Landscape Features:** There is substantial impact on and removal of stone field boundary walls at Ballybrit and Coolagh-Briarhill. The proposed N6 GCRR crosses the line of an old mass path at Parkmore (Ch. 1+010 on Parkmore Link Road)

Locally moderate to significant short-term negative impact

- **Embankments and Structures:** Series of embankments. The main sections of embankment (c.1.0km overall) and elevated structures with approximate maximum heights of significant embankment (i.e. > 3.0m high) are:
 - Ch. 14+200 to Ch. 14+400 (up to c.6m high). Embankments up to 15m high associated with loop link roads
 - Ch. 15+550 to End. Series of embankments up to 12m high with bridges and sections of retaining wall leading to and comprising proposed Coolagh Junction

Locally significant short-term negative impact

- **Cuttings and Structures:** Various significant cuttings (i.e. >3.0m deep) through this section – including deep cutting into Lackagh Quarry (Ch. 11+800 to Ch. 11+950)
- The main sections of cut (total c.1.0km) with approximate maximum depth are:
 - Ch. 14+150 to Ch. 14+950 (up to c.10m deep). Cutting leading to Galway Racecourse Tunnel
 - Ch. 14+950 to Ch. 15+200 Cut and cover tunnel structure at Galway Racecourse
 - Ch. 15+200 to Ch. 15+400 (up to c.8m deep). Cutting leading from Galway Racecourse Tunnel

Locally significant short-term negative impacts

- **Visual Impacts:** Very significant / profound negative visual impacts for residential properties, at Racecourse Avenue/Ballybrit Crescent and significant at Coolagh-Briarhill. Slight to moderate negative visual impacts at Dougishka. Refer to Section 12.5.3.6 and Figures 12.1.10, 12.1.11 and 12.1.14

Proposed works at the Galway Racecourse in relation to the temporary and permanent stables (Phases 1, 3 & 4 of the Project) will give rise to localised, but not significant, visual impacts

Overall very significant short-term negative visual impact

- **Landscape Planning:** The proposed N6 GCRR passes through a mix of urban zonings including Residential, Enterprise, Industry, Commercial, and small areas of Recreation and Amenity (latter within the Ardaun LAP area). Galway Racecourse lands at Ballybrit are zoned for Recreation and Amenity land use

The historic village settlement of Coolagh-Briarhill lies to the immediate northeast of the proposed N6 GCRR. This village already overlooks existing smaller N6 junction

Overall significant short-term negative landscape planning impact

- **Landscape Character:** Construction of proposed embankments, cuttings and structures will have a substantial impact on the open recreational and amenity character of Galway Racecourse. Proposed works at the Galway Racecourse stables (Phases 1, 3, & 4 of the Project) will have a localised but not significant impact on landscape character of the area

Overall significant negative impact on local landscape character

12.5.3.6 Visual Impact

Visual impact tends to be most pronounced during the construction phase when the initial disturbance is both unfamiliar and substantial and may often be in close proximity to properties. At the same time, effective visual mitigation may also be limited and therefore, significant negative temporary and short-term visual impacts will arise.

Construction stage impacts will arise primarily from visual disturbance and visual intrusion resulting from the initial loss of vegetation and boundary screening, from earthworks, alteration of ground levels and from normal construction activity and traffic. Issues such as noise and construction activity and the location of construction compounds will also have the effect of drawing visual attention to the works, thereby increasing the perceived visual impact associated with visual disturbance.

The construction stage visual impact of the Project has been assessed and is set out in detail in the Visual Impact Schedule (VIS) Table in Appendix A.12.1. The findings are summarised in Table 12.5 below.

In overall terms, some 425 locations have been assessed along the Project, noting that this is an increase since the 2018 EIAR (i.e. 406 in 2018 EIAR) due to the increased area of the Assessment Boundary at Galway Racecourse. Of these 54 residential properties will be acquired (44 of which will be demolished), together with a temporary acquisition of the University of Galway Sports Pavilion, and the remaining 371 properties and landscape locations have been assessed for visual impact during construction. Refer to Chapter 15, Material Assets – Non Agriculture for further details on acquisitions.

During the construction stage, 37 of the 371 locations (c.10%) will have an imperceptible impact. A further 175 locations (c.47%) will have a not significant, slight or moderate short-term impact. One hundred and thirteen locations (c.30.5%) will have significant or very significant short-term visual impact. The remaining 46 locations (c.12.5%) will experience profound temporary or short-term negative visual impact associated with the construction stage of the Project.

Table 12.5 Visual Impacts Construction Stage

Impact	Construction Stage
Imperceptible	37
Not Significant / Slight	84
Moderate	91
Significant	86
Very Significant	27
Profound	46
Total	371

12.5.4 Potential Operational Impacts

Potentially impacted features and general landscape and visual impacts of the Project are described on a section by section basis with reference to the chainage along the proposed N6 GCRR below. As per the assessment of the Potential Construction Impacts above, the overall potential operational impact assessments remain as presented in the 2018 EIAR, whilst noting that this assessment for this updated EIAR reflects the updated current development plans.

An assessment of the overall operational stage visual impact is also discussed separately in the Section 12.5.4.6.

12.5.4.1 Ch. 0+000 to Ch. 6+300

- **Landscape Character:** In its operational phase the Project, with its various sections of embankment and related road infrastructure will contrast significantly with the open exposed nature of the existing landscape, the small-scale and narrow nature of existing roads and the extent of residential development located along such existing roads. The Project will tend to integrate over time within this generally small scale coarse landscape

Lighting at the proposed R336 Coast Road and lighting from traffic will also introduce a significant new element into the landscape corridor of the proposed N6 GCRR. The corridor of the existing R336 – especially along the northern side – is being increasingly developed resulting in an on-going change to its background rural character

The introduction of short sections of roadside lighting at the proposed Bearna East Roundabout and the proposed Cappagh Road Junction will also accentuate the degree of change in the background rural landscape. Roadside lighting at the proposed Ballymoneen Road Junction will tie-in to existing roadside lighting to the immediate south along the Ballymoneen Road

Local significant short-term and locally moderate medium-term negative impact

- **Visual Impacts:** Significant negative visual impacts will continue to arise for residential properties close to the proposed N6 GCRR, especially in the crossing of local roads (at R336, Forai Maola, Troscaigh, Ann Gibbons, Aille, Cappagh, Ballymoneen, Ragoon and Letteragh) and Troscaigh/Forai Maola Overbridge Link. Refer to Section 12.5.4.6 and Figures 12.1.01 to 12.1.05

Overall significant short-term and locally moderate medium-term negative impact

- **Landscape Planning:**

The proposed N6 GCRR will not have a significant impact on the proposed large areas of open spaces east of Aille Road (Ch. 3+850); and at Cappagh/Ballynahown/Keeraun (c.Ch. 4+700 to Ch. 5+300)

The proposed N6 GCRR will not have a significant impact on the Greenway Link objectives. The proposed N6 GCRR will allow for and facilitate crossing and tie-in to proposed Greenway Link objectives at Trusky Stream (Ch. 2+850); at Aille Road (Ch. 3+300) and at Cappagh Road (Ch. 4+450); Boleybeg Bóithrín (Ch. 4+550) and at Keeraun Bóithrín (Ch. 5+950)

While traffic on the proposed N6 GCRR will introduce a moving and distracting element within the foreground of views, it will not detract from the longer-range focus of the views – which is of the sea and the north Clare coast. In addition, the proposed N6 GCRR will open up significant new views of the coast and the sea – especially travelling from Na Forái Maola Thair, south to the R336

Moderate short-term and slight medium-term negative landscape planning impact

12.5.4.2 Ch. 6+300 to Ch. 8+000

- **Landscape Character:** In its operational phase the Project, with its various sections of embankments and cuttings (latter especially at Ballagh/Bushypark) and major junction at Letteragh will contrast significantly with the open exposed, sometimes remote and elevated nature of the existing landscape and the small-scale and narrow nature of existing roads. Residential development is prominent along local existing local roads and the area is increasingly under the influence of expanding city development. The proposed Project will tend to integrate over time within this increasingly urban influenced landscape

Roadside lighting at the proposed N59 Letteragh Junction and along the proposed N59 Link Road North together with lighting from traffic will also introduce a significant new element into the landscape corridor of the proposed N6 GCRR

Roadside lighting is already present on the N59 Moycullen Road at the location proposed N59 Bushypark Junction. Likewise roadside lighting is already present between Gateway Retail Park – Rahoon Road – Rosán Glas – Bun A Chnoic, which accounts for much of the corridor of the proposed N59 Link Road South

Significant short-term and moderate medium-term negative impact on local landscape character

- **Visual Impacts:** Significant negative visual impacts will continue to arise for residential properties, especially in the crossing of local roads at Letteragh and Rahoon and at tie-in to existing N59 Moycullen Road at Ballagh/Bushypark). Refer to Section 12.5.4.6 and Figures 12.1.05 to 12.1.06 and Figures 12.1.12 to 12.1.13

Overall significant short-term and moderate medium-term negative visual impact

- **Landscape Planning:** The proposed N6 GCRR falls within the context of Linear View 10 of the River Corrib from the N59 Moycullen Road. However, the proposed N6 GCRR will not detract from the focus of the protected views (River Corrib and Lough Corrib) from these locations

Slight short-term negative and no medium-term landscape planning impact

12.5.4.3 Ch. 8+000 to Ch. 11+800

- **Landscape Character:** The proposed N6 GCRR, including major new c.650m long bridge, high embankments and a c.320m long viaduct will introduce a dominant new feature into its landscape corridor. The new bridge will be prominent along the River Corrib and University of Galway Sports Campus and from Menlo Castle, while the embankments and viaduct on the east of the River Corrib cross a very remote and elevated semi-natural landscape. The bridge and viaduct, and particularly traffic on the structures, will also be visible where elevated vantage points on the west side of the river allow for viewing across the River Corrib valley

Given the existing environment, and the nature of this section of the proposed N6 GCRR, integration of the development will be slow and structures such as the bridge and viaduct will permanently influence landscape character

Other than at the portal entrance to Lackagh Tunnel and within Lackagh Quarry itself, is not proposed to provide roadside lighting along this section of the proposed N6 GCRR. Nevertheless, a level of lighting will be introduced from traffic movements particularly along elevated sections

Profound short-term and very significant medium negative impact on local landscape character

- **Visual Impacts:** Profound negative visual impacts will continue for residential properties, especially to either side of N59 Moycullen Road; through University of Galway Sports Campus; at crossing of River Corrib, including at Menlo Castle; as well as at Bóthar Nua and Seanbóthar on east bank of River Corrib. Many properties are retained close to the elevated proposed N6 GCRR both east and west of the N59 Moycullen Road (Ch. 8+300 to Ch. 8+700). This necessitates the use of retaining walls to minimise landtake and the presence of retaining structures will increase the visual impact of the development in these areas. Noise barriers are also provided along sections of the proposed N6 GCRR. Whilst they will screen traffic, where they are located on the top of an embankment they will also accentuate the overall visual impact. The proposed noise barriers on the River Corrib Bridge will be transparent. Refer to Section 12.5.4.6 and Figures 12.1.06 to 12.1.08.

Overall profound short-term negative visual impact and very significant medium-term impact

- **Landscape Planning:** The proposed N6 GCRR crosses recreation and amenity zoned lands on the west bank of River Corrib; the river itself with existing walks on the west bank and greenway objectives on either bank, and High Amenity Agricultural lands on the east bank. While this will change the character of the area the proposed N6 GCRR will not preclude on-going objectives for the landscape planning of the area

Significant short-term and moderate medium-term negative landscape planning impact

12.5.4.4 Ch. 11+800 to Ch. 14+200

- **Landscape Character:** The proposed N6 GCRR, which includes two major junctions (N84 Headford Road and N83 Tuam) and significant embankments and cuttings cuts across a rolling drumlin valley landscape and is within the wider setting for Ballindooley Lough. Traffic on elevated embankments will be particularly prominent from higher ground further east/northeast. Nevertheless, the landscape corridor of the proposed N6 GCRR is also being increasingly influenced by urban edge development – especially along the N84 Headford Road and N83 Tuam Road

This section includes for the introduction of significant extent of proposed roadside lighting across an area, which is currently outside the limit of roadside lighting in adjoining suburban areas. Notwithstanding proximity to the developed suburbs, roadside lighting, as well as lighting associated with traffic, will have the effect accentuating the presence of the proposed N6 GCRR and emphasising the degree of change in the background rural/suburban edge landscape

Significant short-term and moderate medium-term negative impact on local landscape character

- **Visual Impacts:** Very significant / profound negative visual impacts will continue for residential properties, especially to east of the crossing on Headford Road and through Castlegar generally. Refer to Section 12.5.4.6 and Figures 12.1.08 to 12.1.10

Profound short-term and very significant medium-term negative visual impact

- **Landscape Planning:** Impact will arise for the high amenity setting of Ballindooley Lough and from the historic village settlement of Castlegar

The proposed N6 GCRR will not have a significant impact on protected Views V6 and V19

Significant short-term and moderate medium-term negative landscape planning impact

12.5.4.5 Ch. 14+300 to Ch. 17+540

The following operation-related aspects give rise to potential for landscape and visual impacts within this section of the Project:

- **Landscape Character:** This section of the proposed N6 GCRR is set within an urban influenced landscape. Nevertheless, the significant road infrastructure will give rise to impacts on local character – especially through the open recreational and amenity character of Galway Racecourse and to a lesser degree at Douglishka and Coolagh-Briarhill – which are already impacted by the existing N6 and city development. Operation of the proposed new stables (i.e. Phase 5) at Galway Racecourse will not have a significant impact on landscape character of the area

While roadside lighting is proposed through this area, much of the area already lies within the suburban context of the outer city where roadside lighting is a feature of the background landscape

Significant short-term and slight medium-term negative impact on local landscape character

- **Visual Impacts:** Very significant negative visual impacts will continue for residential properties at Racecourse Avenue/Ballybrit Crescent and to a lesser degree at Coolagh-Briarhill. Refer to Section 12.5.4.6 and Figures 12.1.10 to 12.1.11 and 12.1.14

Operation of the proposed new stables (i.e. Phase 5) at Galway Racecourse will not give rise to significant visual impacts

Very significant short-term and moderate medium-term negative visual impact

- **Landscape Planning:** Proposed N6 GCRR passes through the edge of the recreation and amenity zoned landscape of Galway Racecourse and to the west and south of the historic village settlement of Coolagh-Briarhill already overlooks existing smaller N6 junction

Moderate short-term and slight medium-term negative landscape planning impact

12.5.4.6 Visual Impact

On completion of construction, aspects such as earthworks, construction activity and disturbance are removed as impacting features. Nevertheless, impacts will continue to arise from the presence of the Project which will remain prominent in the landscape until such stage as landscape proposals established and become effective. As such, operational-stage visual impacts will be most pronounced in the short-term after construction (i.e. pre-establishment stage), however, negative visual impact will also continue to arise for residential and other properties located close to or adjoining the boundary of the Project for some considerable period of time (i.e. post-establishment stage).

During the operation stage, visual impacts will continue to arise from the physical built presence of the Project, including its significant structures, elevated embankments, deep cuttings, traffic usage and additional illumination both fixed and from vehicles, especially where the proposed N6 GCRR is on embankment or at junctions and bridging locations. In open views, embankments have the potential for visual obstruction and significant visual intrusion. Deep cuttings can also result in significant change to the visual nature of landscape continuity.

Measures for the mitigation of potential noise impact will be required at a number of locations along the proposed N6 GCRR, especially where residential properties are in close proximity to the carriageway. Such noise impacts and mitigation measures are considered in detail in Chapter 18, Noise and Vibration. Mitigation measures will involve the provision of barriers or earth bunds or a combination of such features. While initially these features may increase the visual presence of the proposed N6 GCRR, they also provide for immediate visual screening of the proposed N6 GCRR and its associated traffic. In the majority of circumstances these features can also be appropriately incorporated into the proposed landscaping measures.

The proposed N6 GCRR also includes for realignments / tie-ins to existing national, regional and local roads, together with drainage works and accommodation measures, all of which have potential for localised visual impacts. Local road realignment is important as many residential properties tend to be located along such roads and local direct impacts can arise.

A full schedule and description of visual impacts on properties is set out in the Visual Impact Schedule (VIS) Tables in Appendix A.12.1 and on Figures 12.1.01 to 12.1.15. The findings are summarised in Table 12.6 below.

In the pre-establishment stage 72 of the 371 locations (c.19.5%) will have an imperceptible impact. A further 175 locations (c.47%) will have a slight or moderate short-term impact. Ninety-three locations (c.25%) will have significant or very significant short-term visual impact. The remaining 31 locations (c.8.5%) will experience profound short-term negative visual impact associated with the presence and early operation stage of the Project. Refer to Figures 12.1.01 to 12.1.15 for locations of properties.

As landscape measures establish and mature the level of visual impact will gradually recede so that in the post-establishment stage some 159 locations (c.42.5%) will have an imperceptible impact. A further 153 locations (c.41.5%) will have a slight or moderate medium-term impact. Thirty-six locations (c.9.5%) will have significant or very significant medium-term visual impact. The remaining 23 locations (c.6.5%) will continue to experience profound medium and longer-term negative visual impact associated with the Project. Refer to Figures 12.1.01 to 12.1.15 for locations of properties.

The properties with on-going significant and very significant visual impact are either located in more remote and rural areas and are in proximity to the Project, or are in suburban areas and are located directly adjacent to the Project.

Table 12.6 Summary of Visual Impacts

Impact	Construction Stage	Pre-establishment Stage	Post-establishment Stage
Imperceptible	37	72	159
Not Significant / Slight	84	88	76
Moderate	91	87	77
Significant	86	71	35
Very Significant	27	22	1
Profound	46	31	23
Total	371	371	371

12.5.4.7 Photomontages

Photomontages were prepared of the proposed River Corrib Bridge and for other areas along the Project.

The Photomontages of the proposed River Corrib Bridge and associated infrastructural works from the surrounding landscape are included in Appendix A.12.2. For some locations the views are summer-time, for others the views are winter-time and for some locations both summer and winter views are used. In any case, it is clear that the density of vegetation in the local landscape means that the potential for increased winter-time visibility is not so pronounced in this landscape setting.

For each view presented in the 2018 EIAR, the original baseline ‘As Existing’ view is provided, together with new baseline photographs taken for this updated EIAR. The updated baseline views are labelled “As Existing 2024”. Thereafter, a view is shown with the Project simply ‘overlaid’ on the ‘As Existing’ view. This assists the viewer in accurately locating the Project in the view before it is set into the image. The final version is an ‘As Proposed’ view and this shows which elements, if any, of the Project will be visible.

The ‘As Proposed’ version of views do not require updating as there is negligible or limited change in the baseline views, which when present mainly results in increased screening of the Project.

A feature of all of the more distant views is the extent to which the landscape visually absorbs the proposed N6 GCRR and the River Corrib Bridge. This characteristic ensures that the proposed N6 GCRR will not dominate views within its wider landscape setting. As such the proposed N6 GCRR and the River Corrib Bridge is either entirely screened or only partly glimpsed in views from Quincentenary Bridge (Photomontage View 1); from the Coolough-Menlough Road (Photomontage Views 2, 3 & 4); from Glenlo

Abbey (Photomontage View 8); from the N59 Moycullen Road in the vicinity of Bushypark House (Photomontage Views 9, 10, 11 & 12); and from more southern parts of the University of Galway Sports Campus (Photomontage View 15).

The bridge becomes an increasingly prominent feature in closer range views, especially from the river bank (Photomontage Views 6, 7, 16, 20, 21 & 22); from Menlo Castle (Photomontage Views 5, 6, 20 & 21); and from the grounds of University of Galway Sports Campus (Photomontage Views 14, 16, 17, 18, 19). That said the wooded nature of the background river edge landscape means that the structure appears out of a wooded backdrop to openly cross the wide river in a simple single span. The effect is to maintain open views along the river corridor and to/from Menlo Castle.

The greatest impact is from the existing sports grounds of University of Galway on the west bank of the river where users of the sports facilities and the river-side amenities gain direct access to the underside of this large structure.

Photomontages have also been prepared from a range of other areas along the route of the proposed N6 GCRR. These views, which are included in Appendix A.12.3, are presented in two formats: first showing landscape works immediately after planting and second: with established planting c.15 years after planting. The views help illustrate the nature of the physical and visual changes, as well as the associated effects likely to arise as a result of the Project.

12.5.5 Landscape and Visual Impact of related or associated developments

Other aspects of the construction and operation of the Project have potential for landscape and visual impacts. Construction-related aspects such as site compounds, construction traffic on the local roads, temporary road closures and diversions, works associated with the stables at Galway Racecourse, works associated with local road tie-ins, provision of footpaths and cycleways, stream diversions, culverts, drainage works, drainage ponds, service diversions, including diversion of overhead transmission lines will give rise to slight to moderate localised temporary impacts.

ESB's 110kV overhead transmission lines are to be locally modified and/or diverted at four locations namely Cappagh, Castlegar, Parkmore, and Coolagh, Briarhill, as indicated on Figures 15.1.1 to 15.1.15 (e.g. Ch. 13+525; Ch. 14+200 to Ch. 14+450 – Parkmore Link Road Junction; Ch. 16+20 to Ch. 17+100 – Coolagh Junction). These minor modifications / diversions will give rise to imperceptible to slight landscape or visual impacts.

Minor adjustments, including short re-alignments, undergrounding, provision of new poles and local raising of existing low voltage transmissions lines (10kV, 38kV) is also proposed at a number of locations as indicated on Figures 15.1.1 to 15.1.15 (e.g. Ch. 3+780; Ch. 3+875; Ch. 6+675; Ch. 8+250 to Ch. 8+500; Ch. 2+025 – N59 Link Road South & Parkmore Link Road). These will not give rise to adverse landscape or visual impacts. Refer to Chapter 15, Material Assets Non-Agriculture for further details.

As well as the mainline, the proposed N6 GCRR will involve the construction of roundabouts, at-grade junctions, grade-separated junctions, local roads, tunnel service buildings and a c.30m wide wildlife overbridge at Castlegar (Ch. 12+700).

East of the River Corrib roadside lighting is to be provided at the main junctions between the R336 Bearna West Roundabout and the N59 Letteragh Junction; along the full length of the N59 Link Road South, including around the Gateway Retail Park Junction; along the full length of the N59 Link Road North, including at the Bushypark Junction on the N59 Moycullen Road. Roadside lighting is already present along the part of the corridor of the N59 Link Road South between Gateway Retail Park – Ragoon Road – Rosán Glas and Bun A Chnoic. Roadside lighting is also already present along the N59 Moycullen Road at Bushypark.

West of the River Corrib roadside lighting is to be provided at the Lackagh Tunnel Portal; along the full length of the mainline of the proposed N6 GCRR from Lackagh Tunnel, via the N84 Headford Road Junction to the N83 Tuam Road; along the City North Business Park Link; the Parkmore Link Road; at the Galway Racecourse Tunnel Portals; and along the Briarhill Business Park Road, the Ballybrit Crescent Junction, the R339 Monivea Road, Lynch Junction, Briarhill Link, Coolagh Junction and section of R446 within the proposed N6 GCRR. Roadside lighting is already present along the N83 Tuam Road, within

Parkmore Business Park, along Ballybrit Crescent, along R339 Monivea Road, along Briarhill Business Park Road, and along Bóthar na dTreabh, at the Coolagh Roundabout, and for 300m east along the existing N6.

Where not already a feature of the landscape, the introduction of roadside lighting will emphasise the degree of change in the rural landscape brought about by the proposed N6 GCRR and associated traffic use. In many central and eastern areas the proposed N6 GCRR passes through a suburban or suburban edge landscape where roadside lighting is already a feature. The most significant area of additional roadside lighting runs from Lackagh Quarry east to the proposed N83 Tuam Road Junction.

Operational aspects such as gantries and other signs, lighting columns, noise barriers, safety barriers, boundary and other fencing are all features typical of road development. In general, such aspects will give rise to slight localised and short-term impacts, however, taller noise barriers (>2.5m) on elevated sections of embankment located to either side of the N59 Moycullen Road crossing will further accentuate already significant visual impact for residential properties in this area. Where present, noise barriers will also have a beneficial effect in reducing the visibility of traffic from nearby residential properties. Transparent noise barriers will be used on the proposed River Corrib Bridge. Tunnel service buildings are to be provided adjacent to the two tunnels at Lackagh Quarry (Ch. 11+300) and Galway Racecourse (Ch. 14+950). The former building is to be located within the excavated quarry floor and will have no landscape or visual impact. The latter building is to be provided close to the boundary with Racecourse Business Park, where it will not give rise to landscape or visual impact.

Likewise, the proposed re-organised stabling and parking at Galway Racecourse, which is subject to a separate planning application to Galway City Council, is in keeping with the surrounding context and will not give rise to adverse landscape or visual effects. Tunnel portals are associated with the two tunnels – however, these features are set into the landscape (as in Lackagh Quarry) or set low in the landscape (as at Galway Racecourse). The proposed wildlife overpass at Castlegar (Structure S12/02, Ch. 12+700) will provide a wide landscape/planted bridge for the connection of local habitats.

12.6 Mitigation Measures

12.6.1 Introduction

This section of the chapter has been updated to include additional mitigation measures presented at the oral hearing in 2020 and included in the schedule of commitments at that time.

Consideration was given to avoidance of significant landscape and visual impacts during the route corridor selection and during the design process for the proposed N6 GCRR. Nevertheless, all road construction projects give rise to some degree of unavoidable landscape and visual impacts.

Mitigation of landscape and visual impacts for the Project shall have regard to the approach as set out in the following NRA/TII guidance documents, which remain relevant to the assessment in this chapter of this updated EIAR:

- A Guide to Landscape Treatments for National Road Schemes in Ireland (2006)
- Guidelines on the Implementation of Landscape Treatments on National Road Schemes in Ireland (2012)
- Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, During and Post Construction of National Road Schemes (2006)
- Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (Revision 1, 2010)
- Design and Delivery of Soft Landscape Treatments in Urban Transport Environments (2024)

In the following sections detailed mitigation proposals are set out for both the Construction Stage and Operational Stage

Landscape mitigation proposals shall take account of the approaches and principles as set out in A Guide to Landscape Treatments for National Road Schemes in Ireland, in particular to Chapter 4: Components of the Roadside Landscape; Chapter 5: Soil Geographic Factors; and Chapter 6: Landscape Treatments. Unless

otherwise qualified in the following or in Chapter 8, Biodiversity (of this updated EIAR), seeding and planting proposals, including species and planting type and species shall be in accordance with Chapter 6 of the Landscape Guidelines, adapted as required for local environmental and landscape conditions.

The updated Natura Impact Statement (NIS) includes the following specific measure of relevance to the landscape treatment of the Project in the vicinity of Special Areas of Conservation (SAC):

“The seed/planting mix should not include either non-native invasive species at any location, nor within 250m of the SAC, negative indicator species for limestone pavement or calcareous grassland, including perennial rye grass, white clover, sycamore, beech and conifers. Within 100m of the SAC there will be control of other negative indicator species as listed by Wilson and Fernandez (2013), such as creeping thistle and ragwort, while the vegetation is establishing on the soft estate for two years post-seeding.”

12.6.2 Construction Phase

During the construction stage, the Construction Environmental Management Plan (CEMP) in Appendix A.7.5 will be finalised and adopted by the Contractor. Adherence to the CEMP will be a contract requirement and this will ensure good working practices are followed so as to minimise and manage any significant, negative environmental impacts arising from construction. As well as other items, the CEMP includes the mitigation set out within this chapter and incorporates these measures as part of their implementation.

Mitigation will ensure that the works will have continuous monitoring under the CEMP so as to ensure adequate protection of areas outside of the construction works.

Specific measures shall ensure that:

- Site machinery shall operate within the footprint of the proposed N6 GCRR construction area
- Storage areas shall be located so as to avoid impacting further on existing residential and other property, woodlands, trees, hedgerows, drainage patterns, etc.
- Solid site hoarding of minimum 2.0m in height shall be provided alongside construction works adjoining residential property or recreational amenities
- Solid hoarding or similar, of minimum 2.0m in height shall be provided along any side of a proposed construction compounds, where they are located within 100m of residential properties
- Construction compounds shall be fully-decommissioned and reinstated to their pre-construction condition at the end of the construction contract
- Side slopes and other landscape areas along the proposed N6 GCRR shall be prepared for soiling, and either seeded and / or planted at the earliest possible opportunity. As such, some scope may exist for undertaking significant areas of seeding and planting prior to the end of the construction works. However, due to construction programming and seasonal restrictions, it is also likely that significant planting works will not be undertaken until the end of the major construction phase in Phase 2 of the Project

12.6.3 Operational Phase

Measures proposed to mitigate the landscape and visual impacts of the operation stage of the Project are considered under Project-wide Measures and Specific Measures. Project-wide measures are described in the following section and in Table 12.7, while specific measures are set out in detail in Table 12.8. The measures are also identified on Figures 12.1.01 to 12.1.15.

12.6.3.1 Project-wide Landscape Measures

Project-wide measures will be applied over the entire Project, depending on the nature of the particular section. Where feasible such measures shall include for the re-connection of existing field boundaries and hedgerows along the Project. Where appropriate trees species as noted in Mitigation Table 12.7 and Table 12.8, shall be randomly spaced in a visually naturalistic manner within such hedgerows.

This approach will be locally modified to incorporate other landscape treatments, which may negate the requirement for the hedgerow, *e.g.* blocks of native woodland planting (see Landscape Guidelines, Section 6.2: Tree and Shrub Treatments) or semi-natural meadows (see Landscape Guidelines, Section 6.1: Grassland Treatments) where it is considered appropriate to have open sections along the proposed carriageway. Open sections shall allow for views to the wider landscape where they do not impinge on requirements for screening for residential properties or other amenities.

Proposals will ensure that planting is distributed along the proposed N6 GCRR and the associated local road realignments and will vary from locally appropriate hedgerow reinstatement, with tree-planting, where appropriate; to wider plantings of landscape and screen planting; to the establishment of larger areas of scrub / shrub planting and new woodland for integration of the development within the wider landscape. The approach will provide a density and diversity of plantings and improve the biodiversity structure of the new landscape (see Landscape Guidelines, Section 6.2: Tree and Shrub Treatments).

Treatments will take into consideration the assessment and recommendations of Chapter 8, Biodiversity and will ensure that, species which are locally indigenous and native are utilised in the proposed plantings. However, detailed proposals in terms of their nature and approach will consider the locally impacted environment and in terms of species may include non-invasive, non-native plants, *e.g.* within residential areas where existing garden plantings are disturbed.

Where areas are in cut or fill, a grass or meadow sward will be established over the slope except in areas of cutting through stable rock (see Landscape Guidelines, Section 4.2: Cuttings and Embankments). It is not proposed to plant either cut or fill slopes in their entirety, but to encourage a more naturalistic and locally sympathetic grouping of plantings within a semi-natural grass sward. Slopes may also be seeded to wildflower grassland and hydro-seeding may be utilised for seeding of steep slopes. It is expected that significant extent of rock cutting will arise on the proposed N6 GCRR. Stable rock slopes will be retained as an exposed face for natural colonisation and as a local landscape features.

Along the length of the Project, landscape areas within junctions and small areas of severed fields, plots or other property acquired for the construction of the Project will be varyingly treated including being planted in a semi-natural copse like scrub plantings and native woodland species (see Landscape Guidelines, Section 4.6: Additional Plots and Other Areas). Such planted blocks dispersed along the proposed N6 GCRR will assist in the improvement of the longer-term visual character of the proposed N6 GCRR and local surrounds. Particular attention shall be given to an appropriate extent and scale of planting in and surrounding junctions (see Landscape Guidelines, Section 4.3: Junctions, Interchanges and Roundabouts) and embankments (see Landscape Guidelines, Section 4.2.2: Embankments).

Certain areas along the length of the proposed N6 GCRR have been set aside for drainage requirements/pollution control/attenuation. Where proposed these will be securely fenced and planted with locally appropriate hedgerows, shrubs and/or screen planting located along the fenceline for the proposed N6 GCRR to minimise any visual impact from off road areas. However, it is noted that these features also offer the potential to provide for improved landscape diversity and habitat.

Proposed planting will generally be established using bare-root transplants, whips and feathered plants which adapt readily to disturbed ground conditions.

A proportion, totalling not less than 5% of 'Half-standard' (6-8cm girth & 200cm-250cm tall) and a further 5% 'Standard' (8-10cm girth & 250cm-300cm tall) trees shall be used to supplement these plantings, especially in the vicinity of residential areas. All planting mixes will take cognisance of, and include native and local species as identified in the Chapter 8, Biodiversity. These requirements have been adapted and further detailed as appropriate to particular areas as set out in Table 12.8.

Where used, tree species will be selected from a list of primarily native, naturalised and indigenous species, which will include alder, common ash (*subject to planting restrictions at time of works*), common birches, common oaks, mountain ash, Scots pine and willow species. Planting sizes will be from 75cm to 400cm in height and tree species will be planted at average 2.0m centres within the wider planting mix.

Shrub planting species utilised will be selected from a list of primarily native and indigenous species, which will include, blackthorn, elder, hawthorn, hazel, holly, guelder rose, spindle, willows and other plants found

naturalised in the affected localities. Planting sizes will vary from 30 to 75cm in height and shrub species will be planted at between 1.0 and 1.5m centres depending of landscape type, see Table 12.8.

Hedge planting will be primarily of blackthorn and hawthorn interspersed with other species such as elder, hazel, holly and those found locally. Hawthorn within hedgerows shall be planted at between 75 to 90cm in height and at 500mm centres in each of 2 double staggered rows or wider plantings where a more dense effect is required. The hedgerow will be interspersed with standard-sized randomly spaced tree species such as alder, common ash and oaks, as appropriate to particular locality.

Areas to be seeded to meadow will be thinly topsoiled (5cm layer) and seeded with a locally appropriate seed mix. Mainline and side road verges will be cultivated, topsoiled minimum 200mm deep and stone buried to remove stones down to 25mm diameter prior to seeding to a low-maintenance grass seed mix.

Where lighting is proposed, the lighting design shall meet the requirements of BS EN 13201-2:2003 and BS5489-1: 2003, Code of Practice for Design of Road Lighting. Lighting of Roads and Public Amenity Areas and shall comply with the requirements of the DMRB TD 34-91. The detailed lighting design shall be completed in a manner, which will minimise glare and will ensure that light-spill effect is minimised.

In specific locations barriers and / or earth bunds may be provided to reduce the impact of noise. Such barriers will also have the effect of providing immediate visual screening of traffic from properties. Such features shall, wherever possible, be integrated within the proposed landscaping measures. Chapter 18, Noise and Vibration outlines the assessment of noise impact and the requirements for such mitigation.

Table 12.7 Project-wide Landscape and Visual Mitigation Elements and Treatments

Reference	Description of Measures
Cut slopes on mainline, link roads and local roads	<p>Cut slopes shall be finished to even gradients, topsoiled unless otherwise stated in this table or elsewhere in this updated EIAR. Slopes shall be free of rubble and stones over 50mm diameter. All such rubble/stone shall be removed or buried. Unless otherwise stated slopes shall be seeded to a low maintenance non-agricultural grassland or to a diverse grass / wildflower sward, as appropriate. Steep slopes may be hydro-seeded.</p> <p>Where exposed, stable rock cuttings / slopes will be retained as a landscape feature along the proposed road corridor.</p>
Embankments on mainline, link roads, and local roads	<p>Embankments shall be finished to even gradients, topsoiled unless otherwise stated in this table or elsewhere in this updated EIAR. Slopes shall be free of rubble and stones over 50mm diameter. All such rubble/stone shall be removed or buried. Unless otherwise stated slopes shall be seeded to a low maintenance non-agricultural grassland or to a diverse grass / wildflower sward, as appropriate. Steep slopes may be hydro-seeded.</p>
Verges & Roundabouts on mainline, link roads, and local roads	<p>Verges will be provided along both sides of the mainline of the proposed N6 GCRR. Verges will also be provided around junctions and along local road re-alignments and tie-ins. Verges and roundabouts shall be finished to even or gently flowing gradients, with minimum 200mm topsoil. Areas shall be stone buried or raked will be free of rubble and stones over 25mm diameter. Verges and roundabouts will be seeded to low-maintenance seed mix.</p>
Ponds, swales, 'V-drains' etc.	<p>All slopes shall be evenly graded and free of rubble and stones over 50mm diameter. Slopes shall be seeded to low maintenance non-agricultural grassland or to a grass/wildflower sward, allowing for natural development over time. Steep slopes on pond edges and 'V-drains' may be hydro-seeded.</p> <p>Areas around ponds shall be a diverse landscape of low maintenance grassland/species-rich grass wildflower sward and plantings of scrub planting and/or low-canopy woodland and shrub planting. Hedgerows of blackthorn and hawthorn, hazel and holly, without tree species, shall be established along non-roadside boundaries.</p> <p>Non-palisade type fencing (e.g. paladin or timber and anti-climb netwire fencing) shall be used to secure pond areas.</p> <p>The overall objective of the landscape treatment around pond features is to provide a sustainable, low maintenance and ecologically diverse landscape of grassland and mixed planting with new hedgerows along secured boundaries. The ponds have the potential to add to local landscape, visual and ecological diversity.</p>
Noise barriers / bunds	<p>Where possible hedgerow scrub and shrub planting and/or low-canopy woodland of native species shall be established as either a narrow planting of 3.0m minimum width or double-staggered hedgerow along the full off-road face of barriers.</p>

Reference	Description of Measures
	<p>Low-canopy and/or shrub planting of native species shall be established on the off road face of bunds. The planting shall include ash*, birch, blackthorn, elder, hawthorn, hazel, holly, rowan and/or willow species as appropriate. Plants shall be 90 to 120cm in height at planting.</p> <p>* Note: Due to the risk of Ash Dieback (<i>Chalara fraxinea</i>) and until further notice, ash (<i>Fraxinus</i> species) is no longer approved by the TII for planting schemes. This does not impact on the use of Mountain ash – also known as rowan (<i>Sorbus aucuparia</i>).</p> <p>Transparent noise barriers will be used on the River Corrib Bridge</p>
Plants and planting areas	<p>All tree species over 150cm in height together with all Pine shall be appropriately staked and tied. All failed, dead or defective plants shall be replaced before the end of each and every year of defect aftercare.</p> <p>Full planting area will be free of stones over 50mm in diameter.</p>
Grass areas	<p>Grass areas shall provide full sward cover within 12 months of seeding. Any failed, bare or defective areas shall be re-seeded between March – May and/or August – September in each and every year of defect aftercare.</p>
Unauthorised access, parking and / or encampment	<p>Landscape proposals shall avoid creating areas considered as being suitable for unauthorised parking and shall use landscape proposals to deter and prevent such use.</p>
Remnant areas	<p>Any post-construction remnant lands shall be treated to a diverse range of grassland and/or planting proposals to include a minimum 30% planting, amended as locally appropriate. The remaining area shall be treated as locally appropriate low maintenance grass/species-rich sward.</p>
Stone Walls	<p>Where stone walls are removed and not replaced as part of the Project, the stone will be retained and made available for re-use by the adjacent property owners for the construction of a new stone wall their side of the Project boundary if they wish.</p> <p>The removal of sections of old stone walls is a significant impact along sections of the proposed N6 GCRR. Many of these are low, dilapidated and interwoven with vegetation. As such, it would not be possible to replace walls of the same character and such features would not provide for an adequate boundary to the proposed N6 GCRR.</p> <p>Provision of new a stone boundary along the mainline would create its own visual issues, due to what would be a homogenous and incongruous landscape feature in contrast with the existing dry stone walls in the area.</p> <p>Therefore, the provision of timber post-and-rail fences and substantial landscaping planting – with selective replacement of stone or render boundary walls to affected houses is considered preferable. Refer to relevant section in Table 12.8 below also.</p>
Road Lighting	<p>As detailed at Section 5.4.1.2.4 of Chapter 5 of this updated EIAR, proposed road lighting has been designed to limit light trespass and measures include:</p> <ul style="list-style-type: none"> • The use of modern LED fittings with well-defined, controlled light beam distribution • The use of horizontal, lighting cut-off fittings, which prevents light emission to the sky and minimises light direction off the proposed N6 GCRR.
Construction Compounds	<p>At the end of construction the construction compounds will be decommissioned, cleared and the lands reinstated or landscaped.</p>

12.6.3.2 Specific Landscape Measures

Specific mitigation measures are set out on Figures 12.1.01 to 12.1.15 and in Table 12.8. The measures include construction-related aspects such as avoidance/minimising impact on property boundaries and landscape features as well as provision of solid screen hoarding during the construction phase for those properties particularly impacted by the works.

All of the following specific mitigation measures will be taken account of in the detailed design and implementation of landscape measures:

- Location of cut-off drains at the top of cuttings and at the bottom of embankments
- The location and requirements for maintenance access along the mainline of the proposed N6 GCRR

- Locations where rock is encountered in cuttings. Such rock faces may be retained as geological features of the corridor of the proposed N6 GCRR
- The location and integration of noise barriers within the landscape design
- Clearance zones (TD19 - Safety Barrier Standards)
- Sight-lines, including at junctions and to carriageway signage, etc.

A series of significant retaining walls, and a bridge over the N59 Moycullen Road, are proposed in the Dangan area between Ch. 8+300 and Ch. 8+670. This is both an existing residential area and a gateway into the city. Where feasible reinforced earth retaining wall approaches will be incorporated so as to allow for a green landscape finish to all or part of the retaining structures. A limestone finish will be used where structural walls are required and for the abutments of the proposed bridge over the N59 Moycullen Road. The stone will consist of natural limestone, matching the character of the local stone, with a strong horizontal axis of between 5 to 1 and 7 to 1 (i.e. horizontal to vertical dimension).

Landscape Measures also take account of the specific protection and mitigation measures detailed in Chapter 8, Biodiversity. In particular, the measures include:

- Retained habitats, trees and hedgerows on landtake boundaries, *etc.* will be fenced-off and protected during construction works
- Specific measures are proposed at a number of locations for mitigation of potential impact on Bat species. This includes:
 - the provision of artificial bat roosts – with specific planting to encourage use
 - the provision of a planted wildlife overbridge (Ch. 12+700) with tie-in planting to local hedgerows and proposed planting on the boundary of the proposed N6 GCRR, which will maximise potential benefit and use
 - dense planting, with trees for improvement of connectivity along the boundary of the proposed N6 GCRR:
 - west of the crossing of the L1323 Letteragh (Ch. 7+200 – Ch. 7+280)
 - along embankments to either side of the proposed bridge over the River Corrib
 - between the crossing of the N84 Headford Road at Ballindooley and School Road at Castlegar
 - hedgerow planting for improvement of connectivity of habitats to the east of Menlo Castle
 - hedgerow and copse planting for enhancement of foraging habitat to the north of Menlo Castle
- In order to deter Barn Owls from foraging close to the proposed N6 GCRR, embankments and cuttings, other than rock cuttings or cut slopes left to naturally regenerate, will be densely planted with low growing scrub (e.g. blackthorn, hawthorn) from Ch. 8+550 to Ch. 17+500
- In order to deter Barn Owls from over flying the proposed N6 GCRR, planting of closely-spaced trees (approx. 2m centres) greater than 4m in height will be established along the top of the embankments between Ch. 9+600 and Ch. 10+100
- All mitigation planting will take place at the earliest opportunity feasible during the construction stage so as to maximise establishment prior to road opening

Table 12.8 Specific Landscape and Visual Mitigation Elements and Treatments

Reference	Location	Description of Measures
6.0m wide Screen Planting	Planting at 1.0m centres for visual screening shall be of a minimum of 6m in width. The planting shall extend for a minimum of 100m to either side of any adjoining residential property or amenity. (refer to Figures 12.1.01 to 12.1.15)	<p>Planting will include a dense planting at 1m centres of alder, birch, blackthorn, elder, geulder rose, holly, hawthorn, hazel, rowan, and willow species. Shrubs shall be planted at between 60 to 90cm in height.</p> <p>Scots pine of minimum 60cm in height at planting shall comprise 20% of the overall plant numbers and holly at a minimum of 45cm in height shall comprise a further 15%.</p> <p>Tree species, planted equally at half-standard (6-8cm girth) and standard size (8-10cm girth), shall comprise minimum 10% of the mix.</p>
3.0m wide Screen Planting	Where space is limited planting at 1.0m centres for visual screening shall be of a minimum of 3m in width. The planting shall extend for a minimum of 100m to either side of any adjoining residential property or amenity. (refer to Figures 12.1.01 to 12.1.15)	<p>Planting will include a dense planting at 1m centres of alder, birch, blackthorn, elder, geulder rose, holly, hawthorn, hazel, rowan, and willow species. Shrubs shall be planted at between 60 to 90cm in height.</p> <p>Scots pine of minimum 60cm in height at planting shall comprise 20% of the overall plant numbers and holly at a minimum of 45cm in height shall comprise a further 15%.</p> <p>Tree species, planted equally at half-standard (6-8cm girth) and standard size (8-10cm girth), shall comprise minimum 20% of the mix.</p>
3.0m wide Screen Planting	West from Ch. 1+760 back to Ch. 1+580 (refer to Figures 12.1.01 to 12.1.15)	It is proposed to extend the proposed 3m wide mixed screen planting belt along the property side of the proposed N6 GCRR.
Stone Wall Boundaries	Stone walls as indicated on Figures 12.1.01 to 12.1.15)	<p>Stone walls of various type and age are a notable feature around residential and other properties along the Project.</p> <p>Therefore, where indicated, stone walls will be replaced along impacted sections of property and road boundaries on local roads. The stone from the disturbed sections of existing walls will be retained and re-used (generally granite to west; limestone to east) where possible to reinstate these new boundaries. The boundary walls may be backed by hedgerows of locally appropriate species, i.e. blackthorn, hawthorn and holly to west and hazel, hawthorn and holly to east.</p> <p>Elsewhere, where stone walls are removed the stone will be retained and made available for re-use by the adjacent property owners for the construction of a new stone wall on their side of the fenceline for the proposed N6 GCRR if they wish.</p> <p>Refer to relevant section in Table 12.7 above also.</p>
Boundary Hedgerow	Typical double staggered hedgerow with tree planting, where locally appropriate	<p>West: Primarily blackthorn (30%), hawthorn (40%) and holly (10%) hedgerow in the west interspersed with other species (20%) such as elder, willow, and those found locally.</p> <p>East: Primarily hazel (30%), hawthorn (40%) and holly (10%) hedgerow in the east interspersed with other species (20%) such as blackthorn elder, willow, and those found locally.</p> <p>Hawthorn plants shall be of c.90cm in height and planted at 50cm centres in each of two double staggered rows, 25cm apart. Other plants of c.50cm in height shall be interspersed.</p> <p>The hedgerow may be interspersed with ‘half-standard-sized’ (6-8cm girth) alder, birch and / or oak trees planted</p>

Reference	Location	Description of Measures
		at random spacings but averaging a min. of 1 tree per 25 linear metre. Limited tree species, such as birch and mountain ash may also be included as ‘whips’ at 150cm in height.
Retaining Walls and structure over the N59 Moycullen Road	Use of reinforced earth retaining systems and limestone finishes for structural elements. Retaining Wall Structures R08/01; R08/02; R08/07 & R08/04; and Bridge Structure S08/02. (Ch. 8+300 to Ch. 8+670 of the proposed N6 GCRR).	Where feasible reinforced earth retaining wall approaches will be incorporated so as allow for a green landscape finish to all or part of the retaining structures. Planting of trees shall also be provided along the base of the structure. These shall include smaller growing species such as alder, birch and rowan planted as Selected Standards (i.e. 14cm girth or greater). A limestone finish will be used for the external finish of the abutments for the proposed bridge over the N59 Moycullen Road and where structural walls are required. The stone will consist of natural limestone, matching the character of local stone, with a strong horizontal axis of between 5 to 1 and 7 to 1 (i.e. horizontal to vertical dimension).
Bat habitat enhancement	New 2m wide tree and shrub hedgerow, with occasional planted copses located north and east of Menlo Castle.	New hedgerow of native species will be established with plants at 0.5m staggered centres in each of 5 rows located 0.5m apart to sub-divide existing open fields. Standard-sized trees species (min 8-10cm girth, 2.4m high) will be planted at 15m staggered centres in each of the 3 central rows. Diverse range of shrub species will be planted between trees in the central rows and throughout the outer 2 rows. Circa 15m diameter woodland copses will be established within open fields using similar approach, densities and species. Planting will be protected by stock-proof fence, c.1.25m high located at 1.0m offset to either side of the outer row of the new hedgerow. Tree species to include alder, birch, oak, rowan, planted as standards (as above) and whips (1.25m high). Shrubs to comprise mainly blackthorn, hawthorn and hazel (combined 60%), with elder, holly, spindle, willow etc. Hawthorn plants shall be of between c.90cm in height and all other shrubs shall be c.60cm in height.
Wildlife Overpass	Ballindooley/Castlegar Structure S12/02 (Ch. 12+700 of the proposed N6 GCRR)	Wildlife overpass (c.30m wide) will be landscaped to provide for connective habitat across proposed N6 GCRR. Planting to consist of a central narrow grass path bounded on either side by tree-lined hedgerows of native species. Soil depths to vary from minimum c.45cm depth at edges to c.1.5m depth along centre-line of both hedgerows. Planted element of both hedgerow lines will be c.2m wide with standard-sized trees (min 8-10cm girth, 2.4m high) planted at 3m staggered centres in each of 2 rows in each hedgerow. Diverse range of shrub species will be planted between trees and along the line of each hedgerow. Planting to tie-in to proposed planting leading east and west on upper slopes of cuttings on both sides of the proposed N6 GCRR. This will form a continuous hedgerow/planted network. Tree species to include alder, birch, oak, rowan, planted as standards (as above) and whips (1.25m high). Shrubs to comprise mainly blackthorn, hawthorn and hazel (combined 60%), with elder, holly, spindle, willow etc.

Reference	Location	Description of Measures
		Hawthorn plants shall be of between c.90cm in height and all other shrubs shall be c.60cm in height.
Barn Owl Tree Planting	Typical double staggered treeline with dense underplanting, between Ch. 9+600 and Ch. 10+100 of the proposed N6 GCRR.	<p>Deterrent tree planting to comprise alder, birch and/or rowan planted at 4m in height (min 12-14cm girth) and at 2.0m centres in each of 2 rows 1.5m apart.</p> <p>Dense low scrub planting to comprise blackthorn (50%), hawthorn (20%), hazel (10%) and holly (10%) interspersed with other species (10%) such as elder, willow, and those found locally.</p> <p>Hawthorn plants shall be of c.90cm in height and planted at 50cm centres. Blackthorn and other plants shall be of c.50cm in height and planted at 50cm centres in staggered rows, 50cm apart.</p>
Barn Owl Scrub Planting	Dense low scrub planting on all embankments and cut slopes (other than rock cuttings or cut slopes left to naturally regenerate) from Ch. 8+550 to Ch. 17+540 of the proposed N6 GCRR.	<p>Dense low scrub planting to comprise blackthorn (50%), hawthorn (20%) hazel (10%) and holly (10%) interspersed with other species (10%) such as elder, willow, and those found locally.</p> <p>Hawthorn plants shall be of c.90cm in height and planted at 50cm centres. Blackthorn and other plants shall be of c.50cm in height and planted at 50cm centres in staggered rows, 50cm apart.</p>
Compensatory Habitat Areas (CHA)	Along Project Refer to 'CHA' locations on Figures 12.1.01 to 12.1.15)	Areas identified for compensatory habitat for mitigation of potential ecological impacts. Refer to Chapter 8, Biodiversity for further detail.
Aughnacurra Estate	Ch. 8+530 to 8+680 of the proposed N6 GCRR Aughnacurra Estate (Refer to location on Figure 12.1.06)	A commitment was given at the oral hearing in 2020 and included in the Schedule of Commitments that a grass verge with birch tree planting will be established to either side of the new entrance avenue into Aughnacurra Estate to match the character of the existing entrance.
Properties 539 & 540 Aughnacurra Estate	Ch. 8+670 to 8+800 of the proposed N6 GCRR Aughnacurra Estate (Refer to Property No.'s. P008-066 & P008-067 on Figure 12.1.06)	A commitment was given at the oral hearing in 2020 and included in the Schedule of Commitments that with the exception of where the existing wall is retained, a new stone wall will be constructed to the front of Properties 539 and 540 (west of proposed N6 GCRR) along the side of the existing / realigned avenue within Aughnacurra Estate to match the character of existing stone walls within the estate.
Properties 539 & 540 Aughnacurra Estate	Ch. 8+670 to 8+800 of the proposed N6 GCRR Aughnacurra Estate (Refer to Property No.'s. P008-066 & P008-067 on Figure 12.1.06)	<p>A commitment was given at the oral hearing in 2020 and included in the Schedule of Commitments that ground levels within the residual lands at Properties 539 and 540 shall be raised back towards the proposed N6 GCRR and planted with 1000 no. trees of between 1.0 and 2.0m in height in accordance with the details set out on Figure 12.4.01</p> <p>The soil grading and planting shall not interfere with the proposed Bat Roost Structure in Property 540.</p>
Plot 195	Ch. 2+850 of the proposed N6 GCRR Bearnna to Moycullen Road L1321 (Refer to Property No. P002-013A on Figure 12.1.01)	A commitment was given at the oral hearing in 2020 and included in the Schedule of Commitments to consult with the landowner of Plot 195 in relation to the planting proposals to be established along their property boundary.
Plot 229	Ch. 5+800 of the proposed N6 GCRR	A commitment was given at the oral hearing in 2020 and included in the Schedule of Commitments that in

Reference	Location	Description of Measures
	(Refer to location on Figures 12.1.04 & 12.1.05)	accordance with measures provided for under Section 12.6.3.1 Project-wide Landscape Measures and associated Table 12.7 above, any post-construction remnant areas within acquired portions of Plot 229 will be planted to locally appropriate native woodland species.

* **Note:** Due to the risk of Ash Dieback (*Chalara fraxinea*) and until further notice, ash (*Fraxinus* species) is no longer approved by the TII for planting schemes. This does not impact on the use of Mountain ash – also known as rowan (*Sorbus aucuparia*).

In summary, as stated during the Oral Hearing in 2020 the total planting in this updated EIAR is:

- **Boundary hedgerow planting** will result in the planting of over 68km of new hedgerow with c.275,000 hedgerow trees and shrubs, which includes over 2,700 half-standard sized trees
- **Screen planting** will result in the planting of over 300,000 sqm of screen planting with c.300,000 trees and shrubs, which includes c.40,000 standard / half-standard-sized trees
- **In overall** terms, landscape proposals as detailed in this chapter of this updated EIAR will result in the establishment of over 500,000sqm. i.e. 50 hectares, of new planting using approximately one million trees and shrubs

12.7 Residual Impacts

12.7.1 Introduction

Residual Impacts are outlined separately in the following sections under Construction Phase and Operational Phase.

12.7.2 Construction Phase

In landscape and visual terms, proposed mitigation measures will have limited effect during the construction stage, and relate more to the orderly development, protection of landscape on and external to the landtake and to minimisation of visual disruption and impact, where possible. For this reason, it is considered that the potential negative landscape and visual impacts as outlined in Section 12.5.3 of this updated chapter will continue to arise, even with mitigation, during the temporary and short-term construction phase of the Project.

12.7.3 Operational Phase

During the initial operation stage landscape and visual impacts will continue to arise from the physical presence and operation of the Project. The proposed N6 GCRR will be a significant and prominent new element in the landscape – at least until such stage as landscape mitigation proposals establish and become increasingly effective. As such, initial operational-stage landscape and visual impacts will continue to be pronounced and negative in the short-term (i.e. pre-establishment stage). With the development of mitigation planting, the significance and severity of landscape and visual impacts will gradually abate over time.

Negative visual impact will also continue to arise for residential and other properties located close to or adjoining the boundary of the Project for some time (*i.e.* post-establishment stage).

Therefore, significant or notable residual landscape impacts will continue to arise:

- Along the edge of Sruthán Na Libeirtí, Bearna
- On the open elevated landscapes of Ballagh, Ragoon, Letteragh, Barnacranny and Dangan Upper
- On the recreation sports and amenity landscape of University of Galway Sports Campus
- On the lowland landscape valley of the River Corrib, and the setting of Menlo Castle
- On the limestone landscape of Menlough and Coolough
- On the rolling landscape through Castlegar, south of Ballindoooley Lough

Locations of these significant landscape impacts are provided on Figures 12.1.01 to 12.1.15.

Significant or notable residual visual impacts will continue to arise for properties:

- At the crossing of local roads north and northeast of Bearna (Foraí Maola Road, Troscaigh Road, Ann Gibbons Road, Aille Road)
- At the crossing of local roads northwest of Galway (Cappagh Road, Ballymoneen Road, Ragoon Road and Letteragh Road)
- To either side of the crossing of the N59 Moycullen Road north of Galway (The Heath, Barnacranny, Ard na Locha, Aughnacurra and at Bushypark/Ballagh)
- On the recreation sports and amenity landscape of University of Galway Sports Campus
- On the lowland landscape valley of the River Corrib, and setting of Menlo Castle
- At the crossing of Bóthar Nua and Seanbóthar north / northeast of Galway City
- At the crossing of the N84 Headford Road, at Castlegar, (including crossing of School Road) and at the N83 Tuam Road, northeast of Galway
- At Ballybrit/Parkmore, at Racecourse Avenue, Ballybrit Crescent, Monivea Road and Coolagh-Briarhill east of Galway

Details of the visual impacts are provided in Table 12.6 above, in Appendix A.12.1 and are indicated on Figures 12.1.01 to 12.1.15.

12.8 Cumulative Impacts

This section of the chapter presents the assessment carried out to examine whether the Project along with any other projects or plans could cumulatively result in a likely significant landscape and/or visual effects.

It is assessed that construction and operation of the Project on its own gives rise to significant, very significant and profound landscape and visual impacts at specific locations. These impacts are generally focused within the immediate corridor of the proposed N6 GCRR on the urban/rural edge of the city. To the west and north of the city much of the lands along the corridor are identified for agricultural and/or amenity uses.

The identification of potential projects for the assessment of cumulative impacts has considered statutory city and county development plans and associated planning registers, local area plans, Galway Transport Strategy etc., with projects identified according to the methodology laid out in Chapter 21 of this updated EIAR. Thereafter, planned and committed projects have been scoped for assessment in this chapter based on relative proximity and potential visual connection between developments.

The identification of projects for the long list considered the following sources:

- An Bord Pleanála (ABP) website (<http://www.pleanala.ie/index.htm>) – for details of Strategic Infrastructure Developments (SIDs), Strategic Housing Developments (SHDs) and permissions made on appeal
- Local authorities (Galway City Council and Galway County Council) for up-to-date planning applications and local development plan designations

The types of projects considered:

- Local Planning Applications – those projects for which planning permission is applied for through the local planning authorities themselves and were identified from local authority planning application lists
- Strategic Housing Developments (SHDs) – housing developments of a certain type and scale (e.g., 100 or more houses or student accommodation units) where applications were lodged directly with An Bord Pleanála

- Large Scale Residential Developments (LRDs) – housing developments of a certain type and scale (e.g., 100 or more houses or student accommodation units comprising 200 bed spaces or more) for which planning permission is applied for through the local planning authorities
- Strategic Infrastructure Development (SIDs) - major infrastructure developments by local authorities and others for which applications are lodged directly with An Bord Pleanála

A five-year timeframe was deemed the most appropriate period for planning searches, as permissions granted more than five years ago would generally be constructed, partially constructed, or are under construction when the planning registers were viewed.

An initial sift was carried out to exclude applications that were not considered relevant in the ‘long list’. This included applications that are either not currently active (i.e. retention, invalid, withdrawn, refused-and not appealed, refused on appeal), or applications of a minor scale. The planning application lists were searched to identify and exclude these minor applications from the long list on the basis that given their minor nature these were not likely to have a cumulative effect noticeable over the effects of the Project in isolation. Examples of planning applications which were excluded from the preliminary long list were applications to construct or demolish conservatories, house extensions, loft conversions, change of uses for single or small numbers of buildings, construction of outbuildings, modifications to driveways and retention applications.

The developments identified in this refined list were then assessed to consider the potential for cumulative landscape and visual impacts that could arise with planned/permitted projects located within the visual context of the Project. The majority of planned/permitted developments relate to small scale developments, including one-off residential, or those within existing residential estates, business parks/industrial estates – all on appropriately zoned lands. No potential for significant cumulative landscape or visual impacts arise with the Project as a result of these smaller-scale developments.

In terms of consideration of relevant projects context, further education-related and sports and amenity developments are likely within the grounds of University of Galway Sports Campus on the west bank of the river. In December 2021 University of Galway received permission for development of 1 no. 3G pitch and 1 no. grassed GAA/soccer pitch plus all ancillary infrastructure, ball stop fencing, floodlighting, drainage, an enhanced biodiversity area and all associated site development works (ABP Ref. No.: 308412-20). The proposed pitch development is to be located south of existing soccer pitches and to the immediate north of the proposed N6 GCRR.

The layout of the pitch development has been designed to take account of the proposed N6 GCRR. The proposed pitch development also includes for provision of a biodiversity enhancement area to the north (riverside) of the existing pitches.

The proposed pitch development is within the existing University of Galway Sporting Campus, located on existing pitches on land zoned for recreation and amenity use, and the development does not give rise to further cumulative landscape and visual impacts. While floodlighting is also provided, this is not out of place in the context of the surrounding sport campus.

Permission for St. Joseph’s Patrician Secondary School was granted by An Bord Pleanála in December 2024 for a site on the Dangan Road immediately east of Aughnacurra and east of the proposed N6 GCRR. The proposed school development adjoins the lands for the proposed N6 GCRR and construction of the proposed N6 GCRR has potential for significant visual impacts on the school. The two developments also have potential for moderate construction and operational phase cumulative visual impacts for residential properties at Dangan Heights and Circular Road immediately west of the N59 Dangan Road.

There are some areas of residential zoning at Trusky East, Ballymoneen, Rahoon, Letteragh, Ballindoooley and Castlegar and on-going residential and associated open space development is a noticeable feature along sections of the Project. Clusters of residential development are also on-going in the townlands of Ballynahown East/Ballyburke/Ballymoneen Road, Mincloon/Rahoon Road, Letteragh, and at Barnacranny/Upper Dangan. The principal developments, (as detailed in Table 12.9)) are located on zoned lands on the existing developed edge of the City or of Bearna and these will not give rise to significant landscape and visual impacts or cumulative impacts.

An area of enterprise, industrial and related zoning is indicated to the north and east of Galway Racecourse, but much of these lands are already developed within Parkmore Business Park.

The eastern end of the Project falls within the area covered by the Arduan Local Area Plan (LAP). The LAP proposes major development in the area, including new residential and commercial developments on c.81 hectares of an overall LAP area of c.164 hectares on the east side of the city. The existing M6/N6 corridor runs through the centre of the LAP area and the proposed N6 GCRR ties-in to the existing road infrastructure within the LAP area. While the LAP envisages significant changes to the landscape and visual setting of the area, it is likely that the measures proposed will be delivered on a phased basis over a long period of time. Nevertheless, depending on timing of delivery, scope exists for some limited or not significant cumulative landscape and visual impacts to arise.

The Galway Transport Strategy (GTS) also envisages further transport-related developments, including public transport and cycleway and greenway measures. However, these measures are unlikely to further adversely impact the landscape or visual setting along the Project.

The Galway Harbour Port Extension project is at planning stage. However, if permitted, it is not expected that any significant cumulative landscape or visual effects will arise because of the separation distance between the Project and the port location.

Permission for development to erect a 24m high telecommunications lattice structure including a headframe together with antennas, dishes and associated telecommunications equipment all enclosed by security fencing at Cappagh Road, Bearna (Galway City Council Ref. No.: 24/60137) Is on appeal with An Bord Pleanála (ABP ref.: 321367-24). The site is in an area with strong local screening located off Boleybeg Bóithrín north of the proposed N6 GCRR at approximate Ch. 4+650. If permitted, it is not expected that any further significant cumulative landscape or visual effects will arise given the context of the location adjacent to the proposed N6 GCRR, which will have significant effects on the landscape and visual character in the area.

Other projects, such as the N59 Maam Cross to Oughterard Road Project (consented and pre-construction), are considered too distant from the Project to give rise to cumulative landscape and/or visual effects.

Notable projects that have been considered within this assessment include those in Table 12.9.

Table 12.9 Notable Projects included in the Cumulative Impact Assessment

Planning Application Ref.	Planning Authority	Development Type	Address	Likely Significant Cumulative Impacts
304762	An Bord Pleanála	Residential (238 no. units and associated development)	Ballyburke, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
23/129 318465	Galway City Council An Bord Pleanála	Residential (148 no. units and associated development)	Rahoon, Letteragh, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
2460270	Galway City Council	Residential (156 no. units and associated development)	Ballymoneen Road (L5024), Keeraun and Ballynahown East, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
2460394	Galway City Council	(53 no. units and associated development)	Letteragh Road (L1000), Letteragh, Galway	Not significant arising from this development.

Planning Application Ref.	Planning Authority	Development Type	Address	Likely Significant Cumulative Impacts
				There are significant impacts already identified for the Project on its own.
2460056	Galway City Council	(20 no. units and associated development)	Letteragh Road, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
19/372 308412	Galway City Council An Bord Pleanála	Sports (Pitches and associated development)	National University of Ireland, Galway, Sports Grounds, Dangan, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
24/60279	Galway City Council	Sports (Construction and demolition of temporary stables and construction of permanent stables and associated development)	Galway Racecourse Ballybrit, Galway	Not Significant arising from this development: (Included in assessment at Sections 12.4 & 12.5 of this chapter) There are significant impacts already identified for the Project on its own.
24/60137 321367	Galway City Council An Bord Pleanála	Infrastructure (24m high tele-communications structure and associated development)	Cappagh Road, Barna, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
22/271 315478	Galway City Council An Bord Pleanála	Residential (Change to previously permitted (Ref. No.: 20/249) two-storey dwelling and associated development)	Lakeview Hill, Barnacranny, Bushypark, Galway	Not significant arising from this development. There are significant impacts already identified for the Project on its own.
23/141 320047	Galway City Council An Bord Pleanála	Educational (Construction of a school and associated development)	Immediately East of Aughnacurra, Dangan Lower, Galway	Moderate arising from this development. There are significant impacts already identified for the Project on its own.

In summary it is considered that there is limited potential for any significant cumulative impacts with other planned or potential developments and that these will not further increase the adverse or negative impacts associated with the Project.

12.9 Summary

The Project passes through a rural/city edge landscape to the west, north and east of Galway City. Residential development is a prominent feature, especially along local roads from Bearna through to Letteragh; in suburban developments at Barnacranny and Dangan on north of the city; along the N84 Headford Road at Ballindooley and around the village settlement of Castlegar to the east/northeast of the city.

Some areas along the Project are of very high landscape and visual quality and sensitivity - especially centred on the River Corrib and its broad lowland valley, with the riverside ruin of Menlo Castle and the high quality amenity and sports grounds of University of Galway. The remote and semi-natural limestone and scrub covered landscapes of Menlough and Coolough are also of significant landscape quality and sensitivity, while Ballindooley Lough and Galway Racecourse are also of notable landscape quality.

Due to the nature of the baseline landscape, the construction and initial operational stage of the Project will give rise to a range of significant, very significant and profound landscape and visual impacts, at least until such stage as the extensive landscape mitigation proposals establish and become effective. With the development of mitigation planting, the significance and severity of landscape and visual impacts will gradually abate.

Even with the development of mitigation planting, negative visual impact will continue to arise for residential and other properties located close to or adjoining the boundary of the Project and where the proposed N6 GCRR including the major River Corrib Bridge, crosses sensitive landscape areas.

Therefore, the Project will continue to have longer-term visual impacts for properties located immediately along the proposed N6 GCRR where it is on high embankments and requires retaining walls. This is of particular note through Barnacranny/Dangan/Aughnacurra and at Ballinfoyle and Castlegar as well as at dispersed locations along the proposed N6 GCRR.

The proposed bridge and associated embankments and viaduct on the east bank of the river will have a permanent and significant impact on the semi-natural landscape valley and setting of the River Corrib as well as on the recreational and sports amenity of the northern end of University of Galway Sports Campus. However, it is noted that UoG has obtained planning permission for alternative pitches (ABP Ref. No.: 308412-20).

12.10 References

Environmental Protection Agency. (2022) *Guidelines on the information to be contained in Environmental Impact Assessment Reports*.

Fáilte Ireland. (2009) *Determination of Waters of National Tourism Significance and Associated Water Quality Status*.

F.H.A. Aalen et. al. (Eds.). (1997) *Atlas of the Irish Rural Landscape*.

Galway City Council. (2023) *Galway City Development Plan 2023-2029*.

Galway City Council & Galway County Council. (2016) *Galway Transport Strategy*.

Galway County Council. (2022) *Galway County Development Plan 2022-2028*.

Galway County Council. (2022) *Landscape Character Assessment* (Appendix 4 of Galway County Development Plan 2022-2028).

Galway City Council. (2018) *Ardaun Local Area Plan 2018–2024*

Galway County Council. (2006) *N6 Galway City Outer Bypass EIS*.

Landscape Institute and Institute for Environmental Management & Assessment. (2013) *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition*.

National Roads Authority (NRA). (2006a) *A Guide to Landscape Treatments for National Road Schemes in Ireland*.

National Roads Authority (NRA). (2006b) *Guidelines for Protection and Preservation of Trees, Hedgerows and Scrub Prior to, during and Post Construction of National Road Schemes*.

National Roads Authority (NRA). (2008) *Environmental Impact Assessment of National Road Schemes - A Practical Guide*.

National Roads Authority (NRA). (2010) *Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads* (Revision 1).

National Roads Authority (NRA). (2012) *Guidelines on the Implementation of Landscape Treatments on National Road Schemes in Ireland*.

Transport Infrastructure Ireland (TII) (2024) *Design and Delivery of Soft Landscape Treatments in Urban Transport Environments* (GE-ENV-03002).

Transport Infrastructure Ireland (TII) (2020a) *Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Specified Infrastructure Projects - Overarching Technical Document* (PE-ENV-01101).

Transport Infrastructure Ireland (TII) (2020b) *Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Proposed National Roads – Standard* (PE-ENV-01102). TII, 2020.

Transport Infrastructure Ireland (TII). (2016-2017) *Project Appraisal Guidelines (Revision 1)*.

Electronic Sources

www.osi.ie – Ordnance Survey Ireland

www.buildingsofireland.ie – National Inventory of Architectural Heritage (NIAH) Historic Gardens and Designed Landscapes

www.googleearth.com – Aerial photographic datasets

www.bingmaps.com – Aerial photographic datasets

www.galwaycity.ie – Galway City Council

www.galway.ie – Galway County Council

www.tiipublications.ie – TII (NRA) Publications