3. Need for the Project

3.1 Introduction

As set out in Chapter 1 of this updated EIAR, this chapter comprises an update to Chapter 3 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). Accordingly, this chapter forms part of the response to the request by ABP for further information in December 2023 where it requested GCC to *"Update the Environmental Impact Assessment Report".*

Accordingly, this chapter outlines the need for the Project which, as set out in Chapter 1 of this updated EIAR, refers to the combination of the proposed N6 GCRR and the proposed development at Galway Racecourse.

Chapter 2 of this updated EIAR outlines the policy support for the Project, whereby the National Planning Framework, National Development Plan, RSES for the Northern and Western Region, and City and County Development Plans set a vison for what Galway City will look like into the future. Galway is forecast to grow and become a city of scale and become a driver of economic growth in the region. Galway City is portrayed as a vibrant, young, thriving and economically robust city of the future which is attractive to local entrepreneurs and foreign direct investment alike. This is a realistic vision for Galway as it can build on its strong education and healthcare base, as well as having significant cultural and natural amenity facilities. To achieve this vision, Galway must be able to implement its sustainable, multi-modal, inclusive transport strategy as congestion is one of the main blockers for achieving the vision set out for Galway.

In the first instance, the need for the proposed N6 GCRR arises directly from the necessity to address the very serious transport issues currently arising in Galway City and its environs. The Galway Transport Strategy (GTS) sets out an overall transport strategy for Galway City and its environs to address these issues and the proposed N6 GCRR forms an essential part of this transport solution. In addition, and as explained in Chapter 1 of this updated EIAR, the decision of An Bord Pleanála on the Section 51 Application for the proposed N6 GCRR on 6 December 2021 (ref. no. ABP-302848-18), conditioned the omission of the permanent stables at Galway Racecourse. Arising from that decision and in order to ensure the functionality of Galway Racecourse during the construction and operation of the proposed N6 GCRR, the proposed development at Galway Racecourse (the construction of both temporary and permanent stables (and associated development)) is essential and this need stems from the provision of the proposed N6 GCRR.

The background to the development of the transport strategy is presented in Section 3.2. The overarching need for the Project is presented in Section 3.3. An understanding of the significant transport problems in Galway and its environs is outlined in Section 3.4. The role of the proposed N6 GCRR as part of the transport strategy in solving existing transport issues in Galway City and its environs is presented in Section 3.5, with the positive impacts of the implementation of the proposed N6 GCRR outlined in Section 3.6. The Project objectives and the function of the proposed N6 GCRR as part of the TEN-T network, its role in the context of Climate Action Plan 24 (CAP24) and the specific need for that piece of transport infrastructure in terms of economy, safety, physical activity, environmental, accessibility and social inclusion and integration is detailed in Section 3.7, with a summary of overall need for the proposed N6 GCRR and the benefits arising from its operation outlined in Section 3.8.

3.2 Previous studies

As outlined in the *Response to Queries raised in Module 2 of the N6 Galway City Ring Road in respect of Traffic and Climate* Oral Hearing in October 2020, the GTS, which is the overarching transport strategy for Galway City and its environs, is adopted in the Galway City and Galway County Development Plans and is currently being implemented.

The development of the transport solution which culminated in the publication of the GTS in 2016 is set out in Section 1.3.2 in Chapter 1 of this updated EIAR. The GTS sets out an overall transport strategy for Galway City and its environs for a twenty-year period with an overall vision "*to create a connected city region driven by smarter mobility*". Significantly, the GTS recognises the importance of the proposed N6 GCRR as part of an integrated transport solution to meet the existing and future needs of an expanding Galway City.

As it is now 2025, some of the specific measures in the GTS have been implemented, new policies have progressed in parallel with respect to climate action, new Census data is available, and an updated regional transport model is in use. Arising from these developments, it was possible to assess the current situation which showed, firstly, that the existing transport problem has worsened and, secondly, there remains a compelling need for the proposed N6 GCRR as part of the GTS to resolve the transport problems in Galway.

The implementation of the proposed N6 GCRR will alleviate congestion, thus enabling reallocation of road space on city streets and the consequent delivery of enhanced public transport options including, specifically, BusConnects in the short to medium term and the potential, in the future, for light rail linked to development growth on specific corridor(s). Furthermore, the updated assessments demonstrate that the proposed N6 GCRR as part of the GTS is consistent with the most recent Climate Action Plan 2024 (CAP24).

An Bord Pleanála's Inspectors in their report dated 22 June 2021, noted in their reasons and considerations for granting approval for the proposed N6 GCRR, stating that *"the scheme constituting a key transportation element for the Galway Transport Strategy"*. As demonstrated in this updated EIAR and, in particular, this chapter, that remains the case in 2025.

3.3 Overarching need for the Project

This section outlines the need for the two parts of the Project – firstly, the need for proposed N6 GCRR as part of the overall transport strategy and, secondly, the consequent necessity for the development of stables at Galway Racecourse.

3.3.1 Proposed N6 GCRR

As set out in their report, ABP's Inspectors agreed with the assessment undertaken and detailed in the 2018 EIAR, that Galway City and its environs have critical transport issues that require urgent resolution. In particular, the Inspector stated in categorical terms:

> *"I am of the view that it has been demonstrated that there is a clear and pressing need for the PRD as a result of the issues faced by Galway City which suffers from undue traffic congestion, delays and poor journey characteristics. Furthermore, the congestion and delay are forecast to continue and to worsen without any major intervention. It has also been clearly demonstrated that the proposed development would facilitate the freeing up of the city and village centres thereby enabling the other projects identified to succeed in the goals of modal change.*
>
> *I am satisfied that the need, justification and purpose of the road has been adequately demonstrated by the applicant. It is clear that it is not simply a bypass road as per the original 2006 GCOB. I also accept the applicant's contention that 20 years has passed since the original road was mooted and a lot has changed in terms of policy at national, regional and local levels which results in changes to the purpose of the road. It is considered, therefore, that the need and justification for the proposed development has been adequately established."*

The worsening congestion and delay which was forecast, as referenced by ABP's Inspector, has continued, as predicted, in the absence of the proposed N6 GCRR. The need for, and justification of, the proposed N6 GCRR is even more pronounced now than it was in 2018, and the proposed N6 GCRR is undoubtedly necessary for the strategic transport development of Galway City and its environs, including modal shift, active travel and significantly improved public transportation, all of which are enabled by the development of the proposed N6 GCRR.

In summary:

1. Galway City remains, and is increasingly, congested with traffic
2. Currently, regional traffic from Connemara connects with the National Road network route through Galway City, with potential alternative routes constrained by geography, Lough Corrib to the north and Galway Bay to the south
3. Galway is planned to double in size over the coming two decades as identified in the National Planning Framework with a corresponding increase in the number of person trips
4. Strategic planning objectives for Galway need to ensure that there is compact urban form to this development, reducing the overall demand for longer distance travel
5. Most of these additional trips, in addition to existing trips, within a more compact urban Galway need to be made by walking, cycling and use of public transport
6. To accommodate this, and to achieve an attractive, more liveable city environment, there is a need to both reduce and relocate significant through traffic volumes from Galway City and reallocate road and street space for sustainable travel modes and placemaking
7. The implementation of this strategy is progressing, in so far as is practical to realise without accommodating significant growth, including planning for implementing the recently approved Galway Cross City Link Project, a key enabler of the Galway BusConnects Programme which also removes significant traffic volumes from the 'core' city centre area, pushing traffic to more orbital routes to the periphery of the city centre
8. As Galway continues to grow, and transport demand increases, the proposed N6 Galway City Ring Road becomes a key enabler of this, and therefore a key component of the overall integrated transport plan for the Galway City Region, the GTS

Subsequent sections of this chapter expand on the detailed assessment underpinning the understanding of need for the proposed N6 GCRR, with reference to updated transport modelling and updated policies, together with the specific need for associated development at Galway Racecourse arising from delivering the proposed N6 GCRR.

3.3.2 Proposed Development at Galway Racecourse

As stated in Section 2.1 of Chapter 2 of this updated EIAR, in its decision on the application for approval made in respect of the proposed N6 GCRR on 6 December 2021 (ref. no. ABP-302848-18), ABP imposed a condition which required the omission of the permanent stables at Galway Racecourse. However, the construction of the proposed N6 GCRR removes the existing stables at Galway Racecourse. As permanent replacement stables are essential to ensure the continued operation and functionality of Galway Racecourse, the need for the proposed development at Galway Racecourse is triggered by the demolition of the existing stables during the construction of the proposed N6 GCRR.

The site identified for the permanent replacement stables is not immediately available as it will be used for the construction of the proposed N6 GCRR, in circumstances where the Galway Racecourse Tunnel will pass beneath a section of the site of the permanent replacement stables. Consequently, the permanent replacement stables cannot be constructed until after completion of construction and handover of the operational N6 GCRR. This factor has triggered the need to provide temporary stables prior to the demolition of the existing stables and prior to the commencement of construction of the proposed N6 GCRR. Therefore, the Galway Racecourse development has been split into phases which span either side of the proposed N6 GCRR, identified as Phase 2 in the sequence: see Chapter 5 of this updated EIAR. The need for the temporary stables in Phase 1 (described in Chapter 5 of this updated EIAR) is triggered in the proposed N6 GCRR is approved and is implemented.

Thus, the need for the permanent stables is to ensure the continued operation of Galway Racecourse post completion of the proposed N6 GCRR. As the temporary stables are needed to ensure the continued operation during the construction of the proposed N6 GCRR, they will be retained until post commissioning

and approval by the governing body for horse racing in Ireland, the Irish Horseracing Regulatory Board (IHRB), of the new permanent replacement stables in Phase 3 described in Chapter 5 of this updated EIAR.

Accordingly, the need for both the temporary and permanent stables is triggered by the proposed N6 GCRR which results in the demolition of the existing stables for the purposes of construction of Galway Racecourse Tunnel as part of the proposed N6 GCRR and, therefore, the acquisition of the lands on which the existing stables are located. Any planning permission granted for the temporary and permanent stables will only be implemented in the event that the proposed N6 GCRR project proceeds[1].

3.4 The Transportation Problem to be addressed

A review and assessment of the existing transportation system (transport infrastructure and services networks) which enables active travel journeys, public transport, and private vehicular trips was undertaken as part of this updated EIAR to identify any changes to the baseline considered at the time of preparing the 2018 EIAR. A new transport model was developed to inform the assessment of the existing issues and, thereafter, was implemented to assess the continued need for the proposed N6 GCRR to resolve the transportation problem, whilst taking cognisance of the latest policies in respect of climate. The GTS identified deficiencies in the transportation system, both in terms of infrastructure and service networks, at all levels which affects the optimal efficiency of active travel, public transport and private vehicular trips. The extent of these deficiencies and the effect of them is outlined in the subsequent paragraphs.

3.4.1 Baseline Issues

This section sets out the baseline issues which arise from this assessment for all modes of transport across the Galway transport system. Plate 3.1 shows the road infrastructure in Galway for ease of reference throughout this chapter.

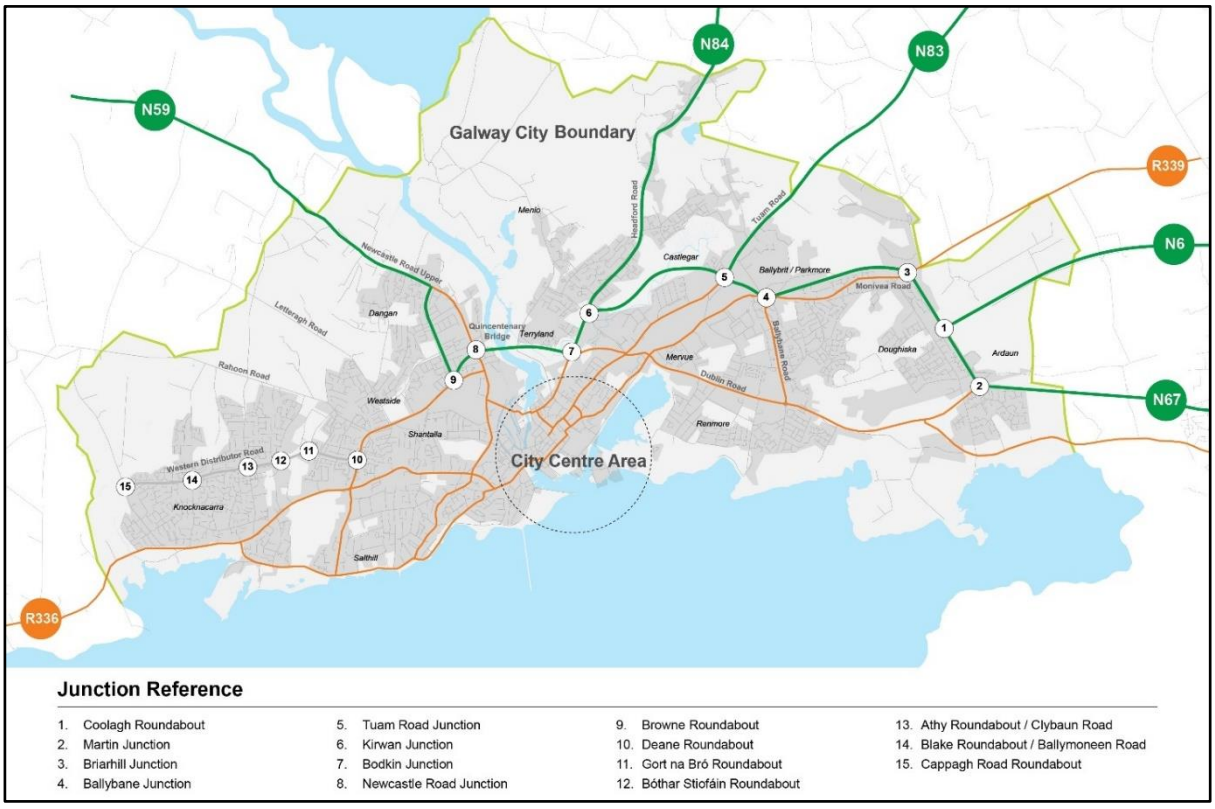

Plate 3.1 Existing Road Infrastructure in 2025

[1] Galway Race Committee Trust applied for planning permission for temporary and permanent stables and associated development. That application was granted permission by Galway City Council (Reference 24/60279).

The total breakdown of the existing transport network in Galway occurs on a frequent basis due to the lack of resilience in the network. Accordingly, gridlock on a city-wide scale is evident in the event of an unforeseen occurrence such as an accident, significant weather event, temporary traffic management associated with regular maintenance works on the existing road network, seasonal events and particular sporting match day events. Such gridlock causes significant delays and undoubted inconvenience to all road-users, has significant economic costs to both private businesses and the public exchequer, and has the potential to inhibit Galway functioning as a modern city and economic engine for the Western Region.

The transport issues which continue to impact upon Galway City and its environs today as a result of the inadequacy of the existing transport system are therefore wide ranging in their effects.

3.4.1.1 Active Travel – walking and cycling

There is limited available space on a significant proportion of the city's road and street network for fully segregated cycle infrastructure. This factor, coupled with traffic congestion, reduces opportunities for safe, attractive and comfortable cycling.

The significant volumes of traffic, including HGVs, in populated areas leads to lower air quality across the city. The HGV traffic makes routes unattractive for walking/cycling/active travel.

Galway is of scale appropriate for walking and cycling as all areas within the core city centre area, i.e. within the Galway City Centre Access Network as defined in the GTS as shown on Plate 3.4 below is less than 1.5km from Eyre Square. This represents less than a 15-minute journey on foot and less than 6 minutes on a bicycle.

Furthermore, the distances from the western suburb of Knocknacarra and from the eastern suburb of Doughiska to the city centre are less than 5km respectively, and both routes are relatively flat terrain. These are suitable routes for cycling, once congestion is removed and safe infrastructure is provided.

3.4.1.2 Public Transport

Prolonged journey times and delays continue to impact on the reliability and attractiveness of the current bus network. This factor, once again, is due to the presence of traffic congestion and, in part, to the limited available road space in the city centre, which inhibits the introduction of bus priority, thereby reducing the attractiveness of the city's public transport services to passengers and increases the costs of operating these services. Analysis of the problems on the city bus network is presented in Section 3.4.4.2.

Regional bus services accessing the city, and city bus services accessing the large employment centres in the northeast of the city, are affected by the congestion on the existing N6. Traffic arriving onto the existing N6 is currently controlled by the Urban Traffic Control (UTC) unit at Galway City Council. The signals on the existing N6 are effectively a "cordon" used to control access to the city centre. The traffic signals at Briarhill Junction are currently controlled and balanced between giving priority to the N6 traffic and giving priority to buses to cross through the junction, whilst also not apportioning too much time to this movement as would encourage "rat running" through Doughiska. However, any delay at Briarhill Junction causes queues or stacking of private cars to the east on to the M6 as far east as the Oranmore Junction in the morning peak hour, whilst also causing delays to the bus services accessing Doughiska and Parkmore.

Drone footage from the AM peak hour on 10 October 2018 was retaken at the same locations on 07 November 2024 at the N6 Coolagh Roundabout and Briarhill to Parkmore Junction. (see Plate 3.2 and Plate 3.3). As was the case in 2018, queues extend eastwards on the N6/M6 as far as the footage covers. Both the Express Bus Services and the City Bus services are impacted by this congestion – which represents the existing situation, which will only get worse without major intervention.

This situation is replicated at the Deane Roundabout at the junction of the Western Distributor Road on the western side of the city with delays for public transport trying to get to the commencement of the dedicated public transport corridor along Seamus Quirke Road.

Plate 3.2 M6/N6 approach to Coolagh Roundabout (Thurs Nov 07, 2024 @ 08.15)

Plate 3.3 Queues on all approaches to Briarhill Junction (Thurs Nov 07, 2024 @ 08.28)

The existing N6 from Coolagh Roundabout to the city centre and the west is a singular space or road network which is shared by all modes. Congestion on the network leads to delays to public transport as well as private cars, whilst also leading to increased fuel consumption resulting in increased vehicular emissions which impacts negatively on local communities and other road users (walkers and cyclists).

Moving south from the Coolagh Roundabout is the Martin Junction which was upgraded from a roundabout to a signalised junction in 2023 to give priority to public transport through this junction, provide for active

travel users, whilst also reducing the dominance of one flow at the peak hour. However, the congestion at Coolagh Roundabout impacts south to this junction also.

The delivery of the Galway BusConnects Cross City Link[2] project over the short to medium term will have a positive impact on bus journey times through the core city centre area and is seen as an important key initial project within the GTS. The impact of this project will see additional traffic shifted onto the 'City Centre Access Network' (see Plate 3.4, reproduced from Figure 4.2 of the Executive Summary of the GTS).

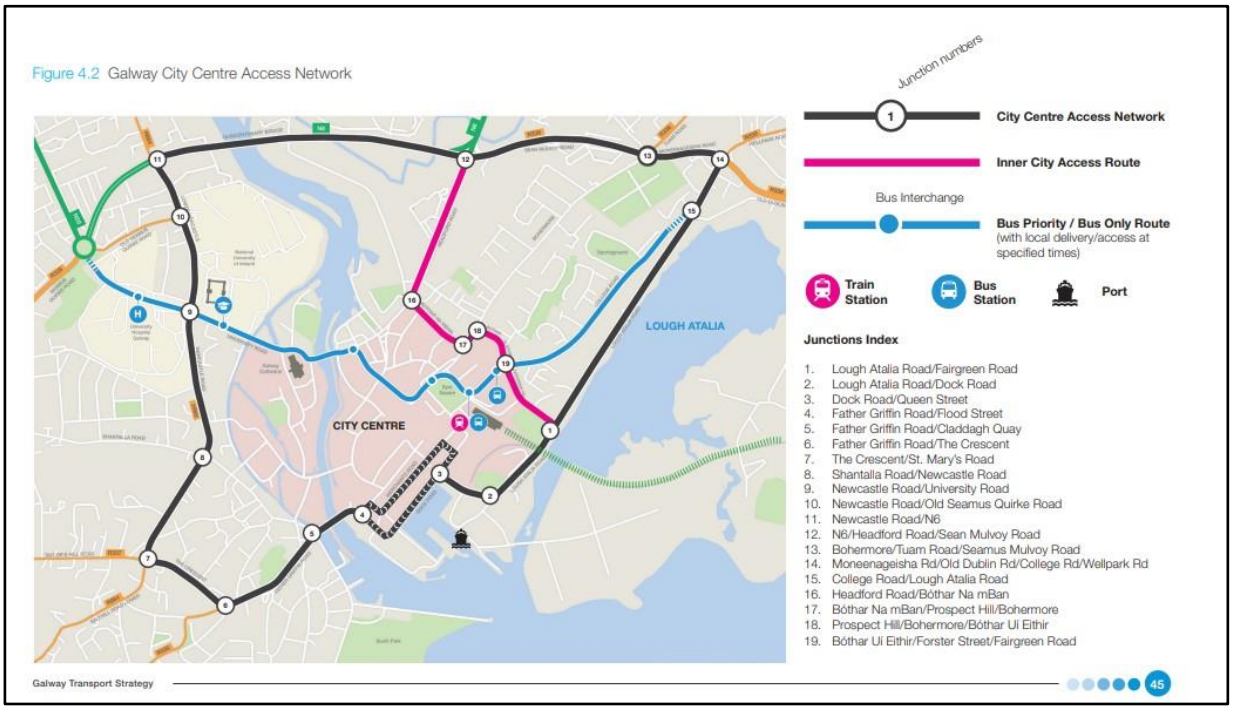

Plate 3.4 Extract of Figure 4.2 from GTS Executive Summary

The 'City Centre Access Network' includes sections of the existing N6, as illustrated in Plate 3.4. As Galway continues to develop, as planned, the 'City Centre Access Network' will become an increasing constraint within the transport system without further intervention, including further limiting the ability of the N6 to deliver its function as part of the strategic national road network. This is expanded upon in the subsequent section of this chapter.

3.4.1.3 Road network

The existing road network in 2025 is described in Chapter 6 of this updated EIAR, and consists of the existing N6, a National Primary route which connects the N6 on the east side of Galway at Coolagh to the N59 Moycullen Road and the R338 on the north-west side of Galway at Newcastle. The existing N6 passes though the environs of Galway City, namely Briarhill, Ballybrit, Ballybane and Terryland on the east side of River Corrib and Newcastle on the west of the river. The existing N6 terminates at the R338 at the at-grade roundabout junction, Browne Roundabout, with the N59. The R338 continues in a westerly direction to the Coast Road, the R336. Whilst the existing N6 bypasses Galway City Centre, a large portion of the traffic on the N6/R338 is not fully bypassing Galway City environs, rather it is using the existing N6 and the R338 to move in an east/west direction across the city.

Connectivity issues on the national and regional road network results in significant volumes of cross-county and strategic travel demand between east and west Galway being concentrated and funnelled through the city area in order to cross the River Corrib. This results in strategic traffic, which includes regional bus services, seeking to access the national road network being in conflict with local traffic within the city.

[2] Currently subject to Judicial Review Challenge

Daily traffic on the N6 increased by between 15% - 50% compared to the figures presented in the 2018 EIAR. Journey time unpredictability and delays associated with traffic congestion which affect public transport also affect the private car, commercial and HGV journeys. The journey time variability throughout the day varies from 5% - 40% in peak hours compared to remainder of the day. The duration of peak AM and PM period traffic delays has also increased, such that it is almost continuous throughout the day. Planned interventions within the core city centre area, as set out in Section 3.4.1.2 will add to existing pressure on the existing N6 and prevailing journey time unreliability.

The existing N6 is and remains the main artery connecting Galway with the region and the country with most of the arrivals to Galway arriving at the N6 Coolagh Roundabout. It was never envisaged that, in the long-term scenario, the motorway would terminate at a single at-grade junction as it would never be possible to fully disperse traffic and fully connect to all other routes at a singular location such as this.

If Galway is considered as a rectangular shaped linear city, then its road and street network could be described as having a central spine running east to west along the N6 Bóthar na dTreabh, across the River Corrib at Quincentenary Bridge, linking to the Seamus Quirke Road (R338) to link to the R337. Into this central spine feed several radial routes. There is also a second east-west link on the southern edge along the Old Dublin Road leading to Wolf Tone Bridge and then converging with the central spine at Kingston Road. Contained between these two principal east-west links on either side of the River Corrib is the city centre area. Refer to Plate 3.5 and Plate 3.6.

Plate 3.5 Existing Road Network of Galway City and its environs (2025)

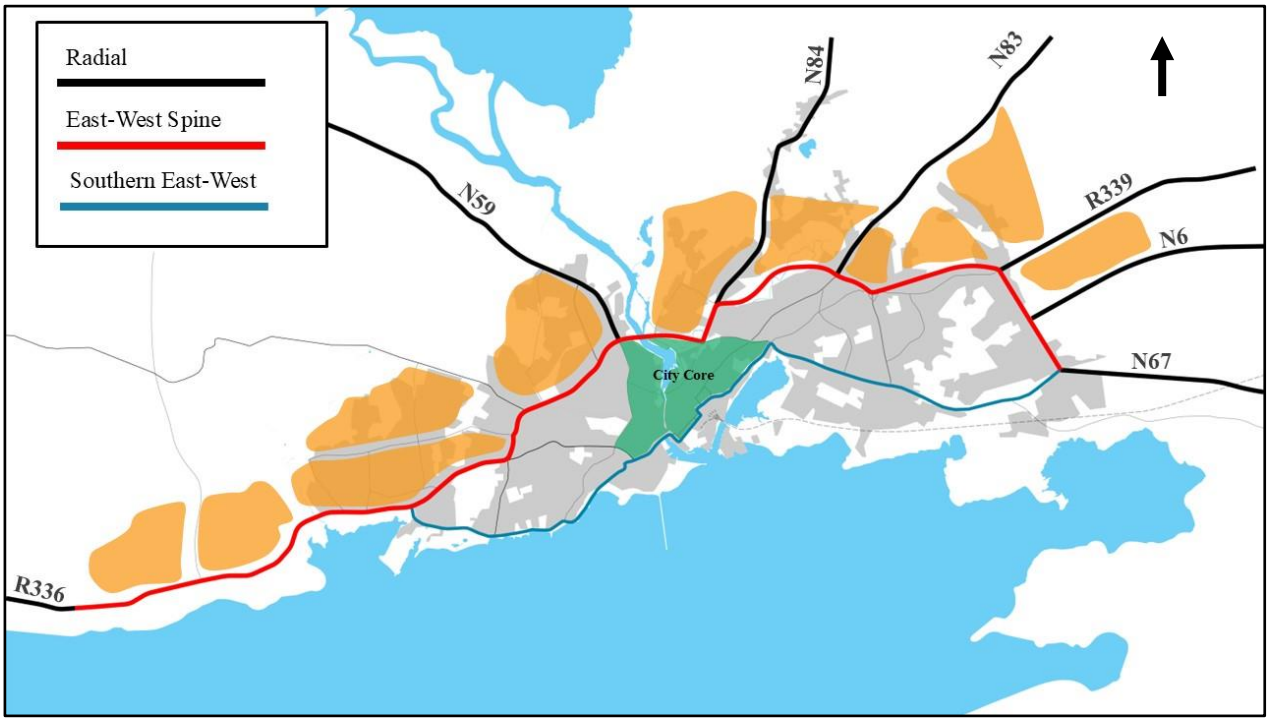

Plate 3.6 Existing Road Network and Population & Employment Centres (shown shaded) north of the existing N6 (2025)

It is apparent the road network is undeveloped along its northern half. This results in Galway lacking the connected road network which would facilitate strategic trips which cannot be accommodated by active travel or public transport, but which currently pass through the city centre. Traffic entering the city on the radial routes can only be dispersed across the city by using the same central spine.

There are also key north-south links missing from the network such as the link from the N59 Clifden Road to the Letteragh Road to the Rahoon Road, and the missing links between the two major employment centres on the east side of the city, Parkmore and Ballybrit, to the strategic road network. With these links absent, all modes of transport have to come into the city to access the spine road before then moving around the city or to bypass the city. Thus, the existing road network results in too many vehicular journeys entering the city centre area, which has the effect of crowding out the space for active modes and public transport.

3.4.2 Forecast Demand

Under the National Planning Framework (NPF), the population of Galway City is planned to increase by approximately 50% by 2040. Within the metropolitan area, the population is expected to grow to approximately 150,000 people by 2040 from the 2016 level of approximately 95,000 as shown in Plate 3.7.

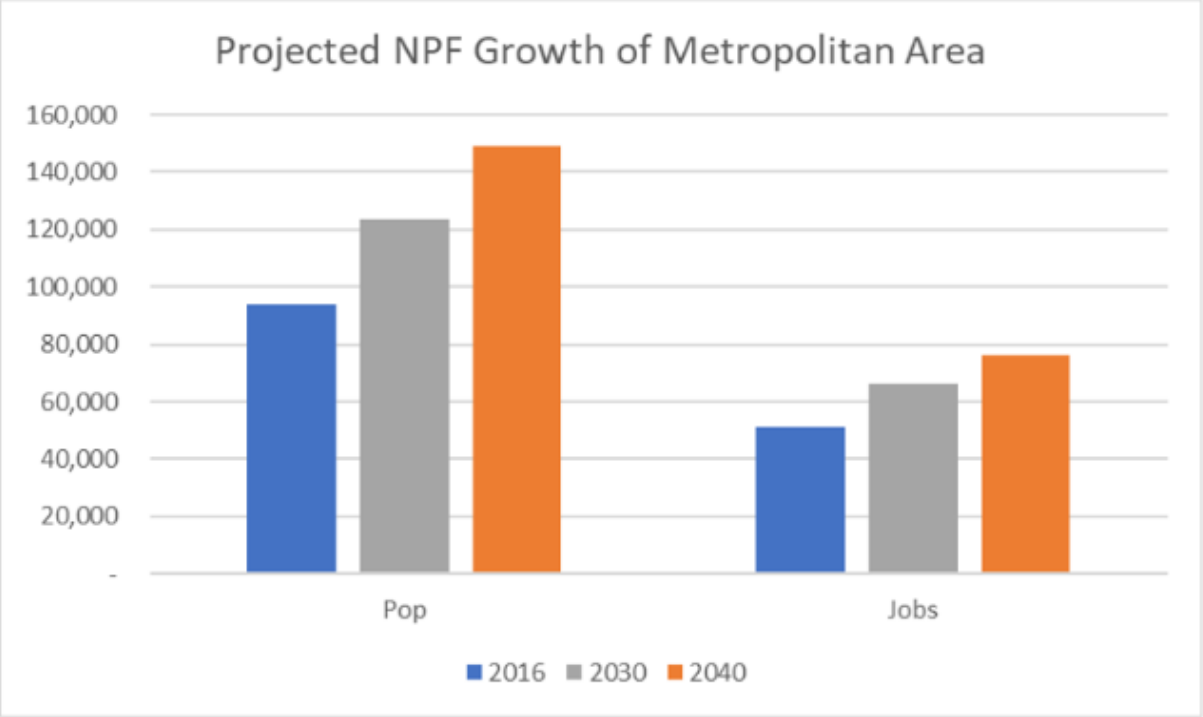

Plate 3.7 Projected NPF Growth of Metropolitan Area

The Western Regional Model was utilised to assess the impact of such population growth on travel demand in 2030 and 2018. These years were chosen as they are years in CAP24, against which emission reduction targets are measured. This planned increase in population and employment within the metropolitan area will increase the demand for travel across all modes (including freight), thereby exacerbating the transport capacity issues experienced currently and this factor has to be considered in the context of the transport problem facing Galway, and the implementation of measures set out in the Climate Action Plan.

It is noted that, by 2040, this population increases significantly again with associated increases in demand for travel across all modes, further exacerbating the existing transportation problems.

3.4.3 Impacts of Increased Travel Demand

It is clear that, without intervention, as set out in the GTS, the forecast demand for travel envisaged under the NPF growth scenarios will exacerbate the operational issues across the Galway transport system, including the national road network, with further delays and journey time reliability issues experienced across all modes. This impact is addressed in Chapter 6 of this updated EIAR.

The impacts of increased demand up to 2030 are illustrated in Plate 3.8 and Plate 3.9 in terms of queuing delays and journey times on the road network.

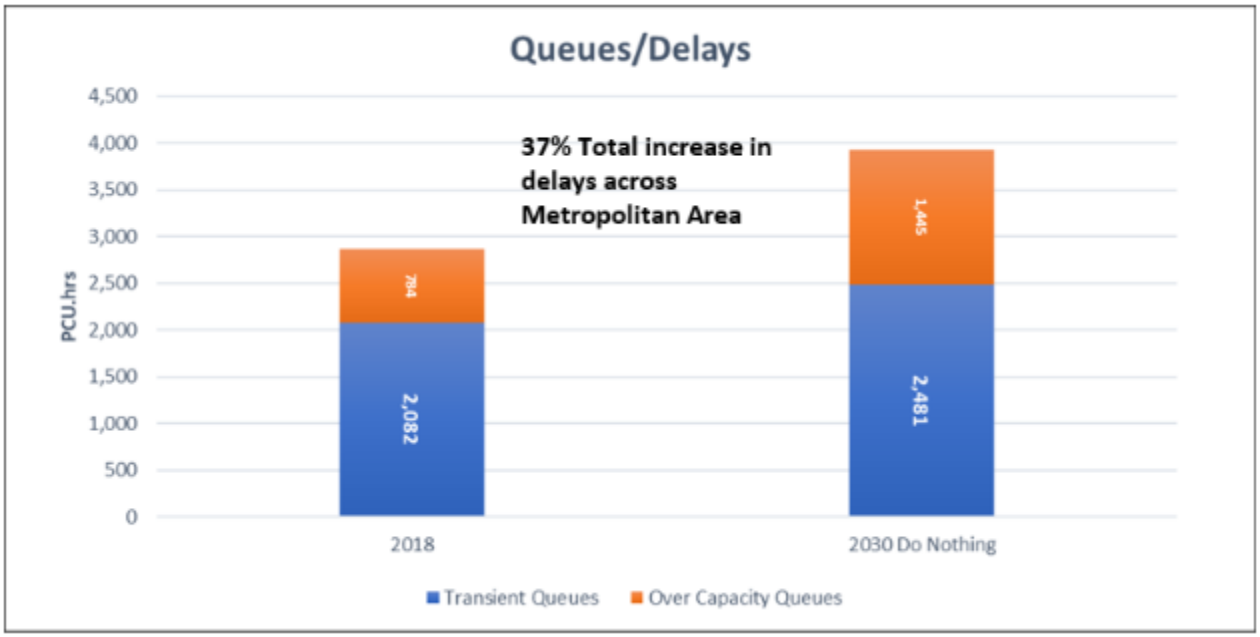

Plate 3.8 Delay Time 2018 versus 2030 Do-Nothing

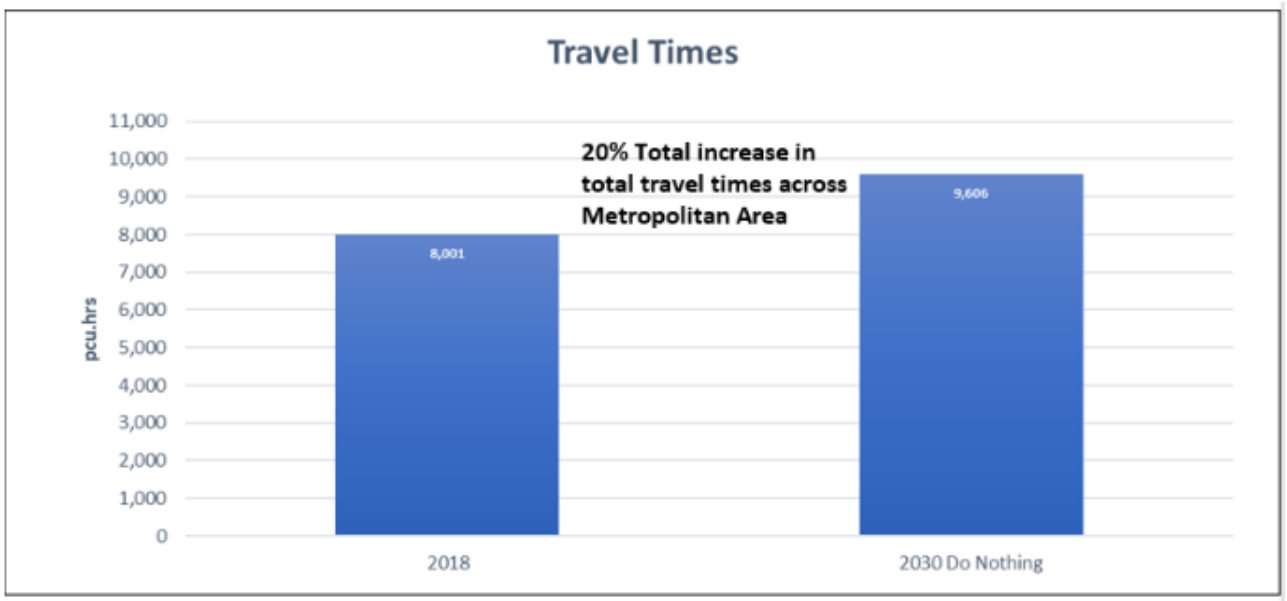

Plate 3.9 Travel Time 2018 versus 2030 Do-Nothing

It can be seen that queuing and journey times associated with the existing congestion across the wider city network due to the lack of adequate space for all modes will continue to increase in the period from 2018 to 2030 in the absence of any intervention measures that have been identified within the GTS as necessary to support the growth of the city in a sustainable manner, including the implementation of the proposed N6 GCRR.

According to results extracted from the traffic model, detailed in Chapter 6 of this updated EIAR, the average journey time for all car trips into the metropolitan area in 2023 in the morning peak hour is approx. 28 mins. This includes journeys which start inside or outside the metropolitan area but have a destination inside the metropolitan area. In 2046, which is the Design Year of the Project and is aligned to population targets from the National Planning Framework (50% increased population target for the city from 2016 levels), the equivalent average time increases to 44 mins (an approx. 58% increase on 2023 figure) in the Do-Minimum scenario which is assessed in Chapter 6 of this updated EIAR.

This Do-Minimum scenario includes the full implementation of the BusConnects programme for the city (increased services and associated infrastructure) but does not include the Project itself. In the Do-Something scenario, which adds the project onto the Do-Minimum scenario, the average journey time is 31 minutes (an approx. 10% increase on 2023 figure).

The existing network cannot be optimised further to cater for this level of growth, and the public transport and active travel facilities to enable delivery of this level of compact growth cannot be delivered without an intervention which creates space for alternative travel options (walking, cycling, bus and potential future light rail).

3.4.4 Analysis of Existing Transport Network

The key performance indicators used to assess the performance of the existing transport network include an analysis of the existing travel patterns, analysis of journey time and assessment of junction capacity as set out below.

3.4.4.1 Existing Travel Patterns

Initial feasibility studies to inform the 2018 EIAR identified the zones of employment, education, retail and residential within the City Region study area, as illustrated in Plate 3.10.

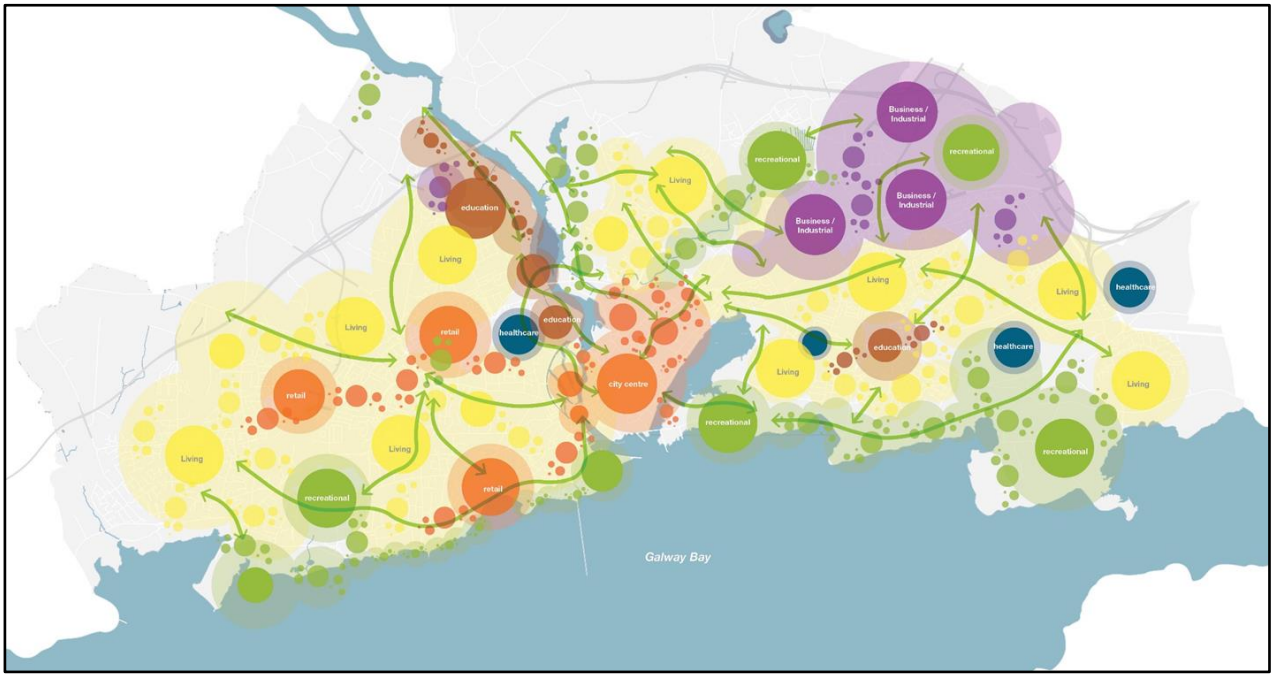

Plate 3.10 Traffic Generators and Attractors

These zones are clearly identifiable areas of trip generators and attractors. Since 2018, further development and densification has occurred within these zones. Plate 3.10 also illustrates the manner in which the residential areas in Galway are interwoven with the key trip attractors, with the resultant travel desire lines also displayed. The manner in which the River Corrib divides the city is clearly illustrated.

All the studies to inform the development of the GTS, supplemented by the 2018 EIAR for the proposed N6 GCRR, and the additional transport modelling in 2024 to inform this updated EIAR reinforces the impact that this development pattern, coupled with the physical constrains of Galway (e.g. the River Corrib) and resulting road and street network have on the existing transport system.

For this updated EIAR, the transport analysis was carried out using a detailed multi-modal transport model, i.e., the most recently available Western Regional Model (WRM), which forms parts of the National Transport Authority's (NTA) suite of Regional Models. As the assessment undertaken to inform the 2018 EIAR used a previous version of the WRM ,the latest release version has been utilised in the preparation of this updated EIAR in order to provide an updated and reliable picture of current travel patterns in and around

Galway City and the wider region, including data on all modes of travel, namely: (i) public transport; (ii) private vehicles; (iii) cycling; and (iv) pedestrians.

A project-specific road traffic model was also developed using surveys from November 2023, so as to be more reflective of traffic conditions post 2018. The 'Census 2022 Place of Work, School, College or Childcare - Census of Anonymised Records (POWSCCAR)' data and the latest National Planning Framework population forecasts were incorporated into this road traffic model to ensure that it is reflective of latest travel movements within the city.

Full validation of the new road model was completed to ensure a good match between the observed data and the modelled traffic characteristics, and to meet the robust Transport Infrastructure Ireland (TII) calibration and validation criteria (refer to Appendix A.6.1 Traffic Modelling Report of this updated EIAR).

An example of a comparison of traffic levels between 2023 and 2024 on the N6, between the N83 and N84, was also undertaken to validate the 2023 data used in the updated model development. This data was sourced from a TII traffic monitoring unit which is placed on the N6, which unit monitors traffic each day of the year and, therefore, gives an indication of traffic levels over time on the N6. Plate 3.11 illustrates the manner in which the traffic levels on the N6 show a very similar profile between the same week in November 2023, when the initial traffic surveys were undertaken, and the equivalent week in November 2024.

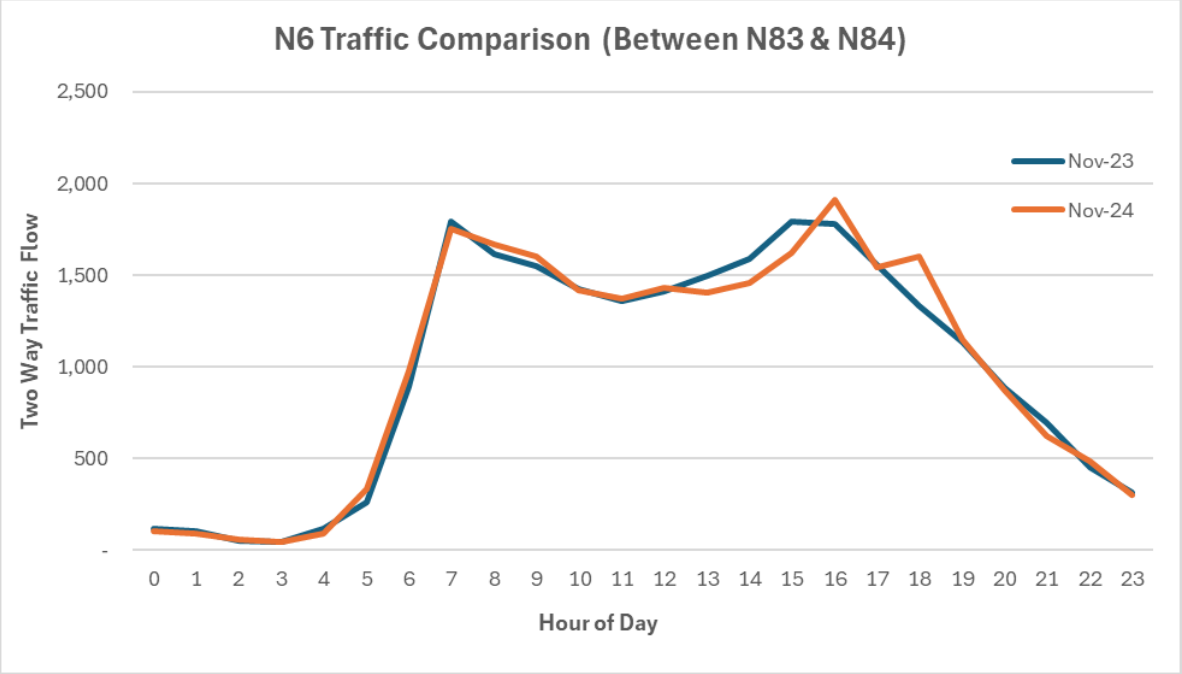

Plate 3.11 N6 Traffic Comparison

This validation exercise shows that, between:

- 7 - 8 a.m. 2023 levels are 2% higher than 2024 levels
- 8 - 9 a.m. 2023 levels are 3% lower than 2024 levels
- 4 - 5 p.m. 2023 levels are 7% lower than 2024 levels
- 5 - 6 p.m. 2023 levels are 1% higher than 2024 levels

Overall, the total traffic level travelling along the N6, is effectively the same, with only a 0.5% difference being observed across the peak morning and evening commuter periods. Accordingly, the data used in this assessment is considered to be robust and reflective of current prevailing traffic levels on the N6 corridor.

The full details of the updated transport modelling are provided in Chapter 6 of this updated EIAR and summarised in this chapter, for ease of reference. Plate 3.12 schematically illustrates the travel patterns for private car trips to, from or through Galway City in the 2023 Base Year morning peak hour (extracted from the traffic model, refer Chapter 6). Green arrows show movements that cross the River Corrib and black arrows show movements that do not cross the River Corrib.

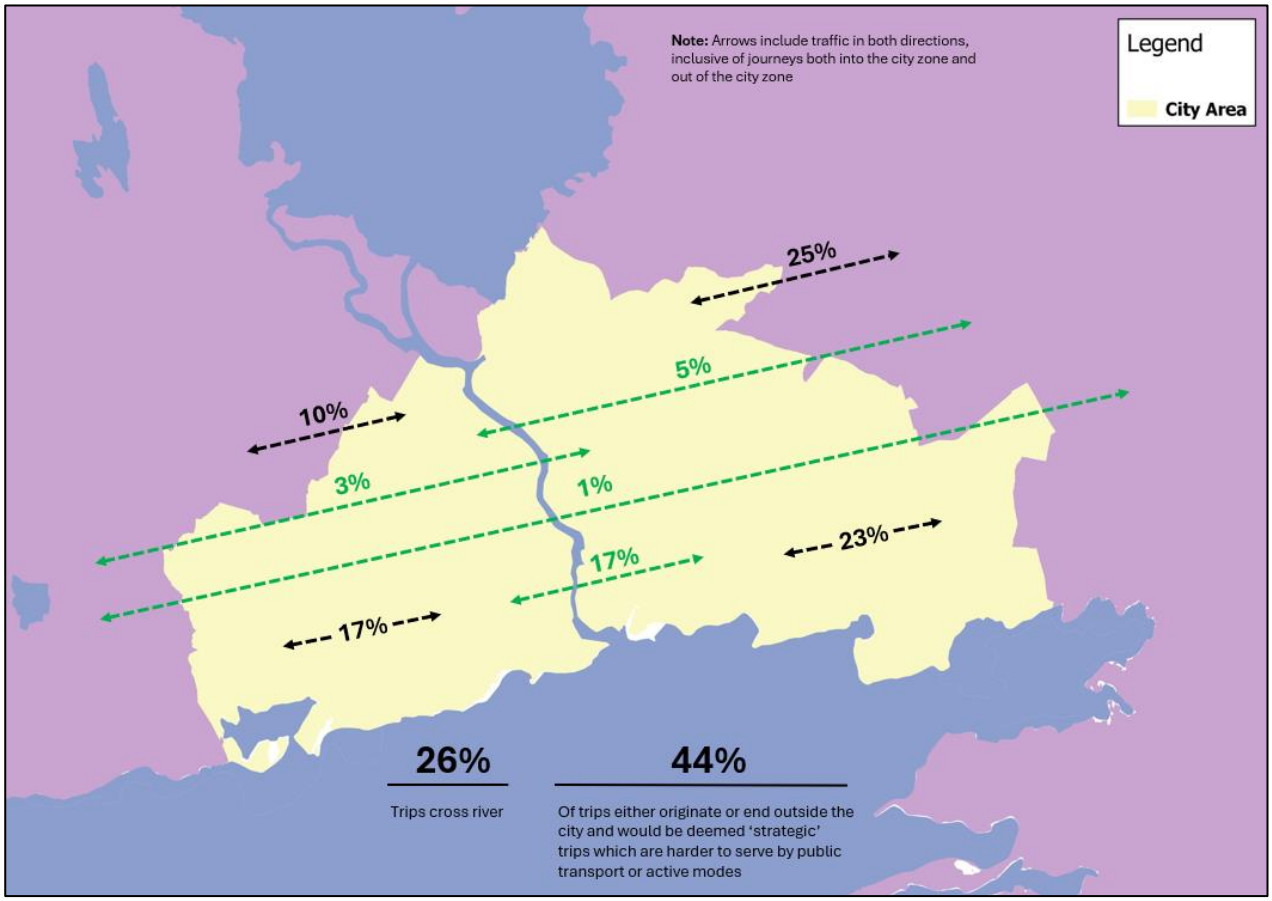

Plate 3.12 Travel Patterns 2023 Base Year Morning Peak Hour

As shown in Plate 3.12:

- 26% of all journeys into and out of the city zone and around Galway City (city zone) cross the River Corrib, of which 4% is bypass traffic (i.e. 1% of 26%).
- 43% of trips either originate outside of the city zone and end in the city zone or start in the city zone and end outside of the city zone. A further 1% pass route through the city zone without a purpose in the city. This 44% of traffic would be deemed strategic traffic which can be tougher to serve by public transport and active modes of transportation.
- 40% of all journeys originate and terminate within the city zone on the same side of the city as where they started i.e. do not cross the river, while
- Approximately 17% of all journeys are within the city zone and cross the river.

This analysis shows that any transport solution for Galway must be multi-modal, catering for the following various demands:

(i) the high proportion of short journeys within the city zone which must be primarily accomplished via public transport, cycling or walking (i.e. approximately 40% of journeys commencing in the city which remain on the same side of the city as they started, and are short trips, both in time and distance)

(ii) a further 17% of journeys are from one side of the city to the other, but are also short journeys, making them clear targets for a shift to public transport

(iii) Improved connectivity to the national road network for those on the western side of the River Corrib is only possible at present by using one of the existing city centre bridge crossings which are all over-capacity and this reinforces the need for another river crossing

3.4.4.2 Journey Time Reliability

Analysis of travel surveys, journey times and delays on the existing network in 2023 was carried out to establish a set of measurable key performance indicators (KPIs) to define the existing problems.

An analysis of observed journey times on three key routes around Galway and its environs – Routes 1, 2 and 3 as shown on Plate 3.13, was carried out to show the variance in journey times between the peak and off-peak periods in the Base Year of 2023. The difference between the peak and off-peak journey times is a measure of the level of congestion during the peak, with increasing congestion resulting in worsening journey time reliability.

Plate 3.13 Journey Time Reliability Routes Assessed in 2023 Base Year

Observed travel times in the 2023 Base Year on each of the routes in the inbound direction in the morning peak period versus the off-peak period, extracted from the transport model, are tabulated in Table 3.1.

Table 3.1 Journey Time Reliability

		2023 Journey Times (minutes)			
		Off-peak average hour	Morning peak hour	Difference	% Difference
Inbound	Route 1 IN	9-18	10-24	1-6	5-15%
	Route 2 IN	12-16	16-35	4-19	14-37%
	Route 3 IN	7-12	12-24	5-12	26-33%
	Route 4 IN	7-12	9-22	2-10	13-29%
	Route 5 IN	6-12	8-26	2-14	14-37%
	Route 6 IN	6-7	8-16	1-9	7-39%

This assessment of journey time shows that the travel times on these three key routes in the morning peak hour can be up to 40% slower than in the off-peak, which represents a worsening situation than that presented in the 2018 EIAR which showed increases on the following routes:

- Route 1 in the 2018 assessment covered the entire N6 and the R338 (to Salthill), a distance of 13km. The route shown in Plate 3.13 has been split and only covers the N6 between the M6 and the N84, a distance of approx. 8km. The journey time over the 13 km distance is 2018, was 28 minutes in the morning peak hour, or an average speed of approx. 28 km/hr. In 2023, the journey time over the 8 km section of the N6, was 24 minutes on the upper limit or an average speed of 20km/hr
- Route 2 showed a journey time of 25 minutes during the morning peak hour in the 2018 assessment, an average speed of 12km/hr. The upper limit shown in Table 3.1 is 35 minutes, an average speed of 8.5km/hr
- Route 3 showed a journey time of 19 minutes during the morning peak hour in the 2018 assessment, an average speed of 14km/hr. The upper limit shown in Table 3.1 is 24 minutes, an average speed of 12.5km/hr
- Routes 4, 5 and 6 are new routes added for this assessment

Journey time reliability is critical for efficient public transport as bus connections in the City Centre rely on 15/20/30-minute schedules. These schedules are not achievable due to congestion on all approaches to and within the city centre.

Connections for bus travellers are then missed with the result being that cross-city bus trips take over an hour. Again, the use of the existing network has been optimised and maximised, but the space is limited, and the network comprises an on-street network in a medieval city with no further optimisation possible. Transfer to public transport will only happen when the public transport is running optimally, which cannot occur in the existing transportation environment with space shared with private vehicles. Key public transport routes must, therefore, either have dedicated space or have traffic congestion removed from those key routes.

Similarly, active travel will only succeed if its delivery is safe, which requires a removal of the traffic conflict and provision of dedicated space. Therefore, a significant intervention is required in order to move traffic out of the city street network to significantly reduce journey time uncertainty associated with congestion and to dedicate more of the limited available space available for active travel and public transport. This objective will be partially achieved, in the core city centre area, through the implementation of the BusConnects Cross City Link project. However, that project will not, and is not designed to, achieve that objective on all the approach routes to the city centre.

An analysis using TomTom[3] data was carried out on the proposed public transport network serving the city & suburbs, developed by the NTA (the BusConnects Galway: Network Redesign (finalised in December 2023, as illustrated on Plate 3.14 for reference and on https://busconnects.ie/cities/galway/galway-bus-network-redesign/).

[3] Anonymised data captured from TomTom navigation devices in moving vehicles which can be used to interrogate real time data on travel patterns

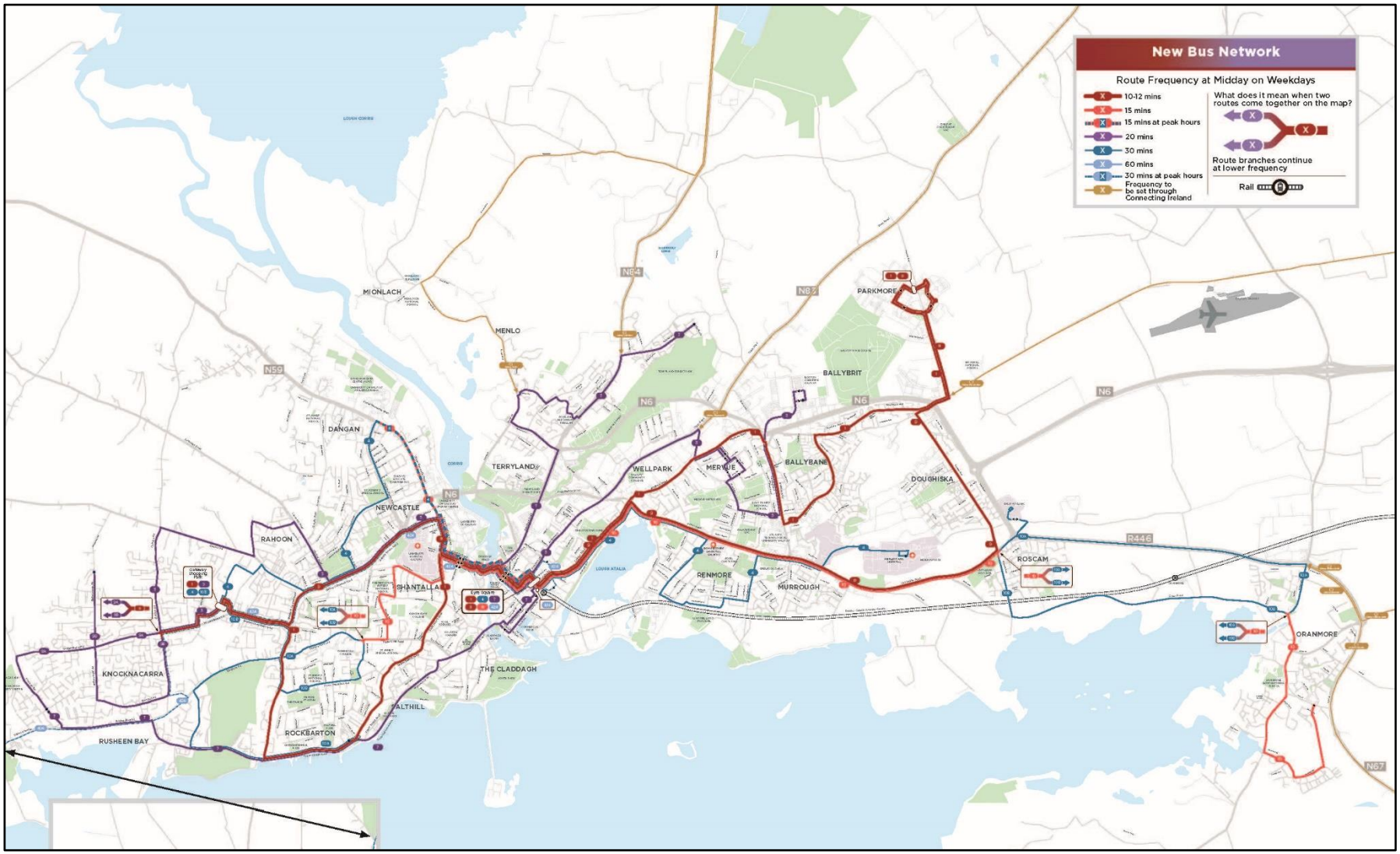

Plate 3.14 BusConnects Bus Network in Galway City

The TomTom data demonstrates that journey times increase along various routes compared to the Interpeak, i.e., indication of reliability of the new network in the peak periods (note: data shown is from November 2024). All routes form part of the proposed Bus Network for the city and Table 3.2 also shows the services which will be using each route, along with the proposed frequency of the service.

Table 3.2 2024 Bus Network Journey Time Reliability

Journey Time Comparison to Interpeak Period (2022)			
Route Description	**Services & (Frequency)**	**AM**	**PM**
Ballybane Road Northbound	#1 (15 min.) and #3 (20 min.)	18%	35%
Ballybane Road Southbound	#1 (15 min.) and #3 (20 min.)	34%	132%
Wellpark Road Outbound	#1 (15 min.)	-4%	54%
Wellpark Road Inbound	#1 (15 min.)	45%	98%
Doctor Mannix Road Outbound	#10B (30 min.)	9%	7%
Doctor Mannix Road Inbound	#10B (30 min.)	56%	13%
Connolly Avenue Northbound	#1 (20 min.)	53%	18%
Connolly Avenue Southbound	#1 (20 min.)	10%	22%
Thomas Hynes Road Northbound	#4 (30 min.)	5%	27%
Thomas Hynes Road Southbound	#4 (30 min.)	58%	5%
Upper Newcastle Road Southbound	#4 (30 min.)	30%	71%
Upper Newcastle Road Northbound	#4 (30 min.)	1%	19%
Lower Newcastle Road Southbound	#4 (30 min.), #9 (10min.) and #3 (20 min.)	-2%	124%
Lower Newcastle Road Northbound	#4 (30 min.), #9 (10min.) and #3 (20 min.)	-4%	104%
Taylors Hill Westbound	#10A (30 min.)	22%	75%
Taylors Hill Eastbound	#10A (30 min.)	62%	23%
Western Distributor Road Westbound	#9 (10min.) and #3 (20 min.)	17%	14%
Western Distributor Road Eastbound	#9 (10min.) and #3 (20 min.)	91%	6%
Salthill Road Lower Southbound	#1 (20 min.)	12%	8%
Salthill Road Lower Northbound	#1 (20 min.)	10%	21%

The data in Table 3.2 has been derived from journey time data (from November 2024) for routes where there is no current or planned bus lanes and thus buses need to travel alongside general traffic. This is the same problem again of a singular road space without any possibility of expanding these streets to allocate dedicated bus lanes. The data illustrates the substantial variability in bus journey times across the city in the morning and evening peak periods, when compared to the interpeak period. It can be seen that bus services experience significantly increased delay during the peak periods due to the widespread, network-wide traffic congestion, in turn leading to major increases in bus journey times, ultimately undermining the reliability for passenger travel by bus during these peak periods. As the predicted increases in queuing and general journey time increase, space needs to be reallocated to busses so that they can run optimally. As there is no possibility of adding width to these streets, and in the absence of an intervention to create this space, this will continue to increase further as the city continues to grow.

Journey time unreliability is a significant detractor to businesses seeking to locate in the area, to tourism due to difficulties of scheduling timetables and to existing industries attempting to transport goods out to national and international markets.

3.4.4.3 Junction Capacity

Congestion arises due to significant volumes of traffic using the road network and resulting capacity failures of the existing junctions. This congestion is stifling city living at present as well as inhibiting access from the wider region to employment and services in the city. The existing junctions have been optimised to perform the dual role of accommodating (i) traffic intending to circulate around the city and traffic on the radial routes trying to access the city, as well as (ii) active travel trips crossing through the junctions.

As traffic exceeds the capacity of key junctions, the existing congestion will continue to deteriorate further, with implementation of the bus priority envisaged at key junctions not being achievable as desired. In addition, the optimal shift to active modes will not occur as cyclists and pedestrians will not feel safe negotiating a heavily congested network with over-capacity/congested junctions where traffic straddles cycle lanes, blocks yellow boxes, and runs through red lights as frustration builds with the ever-increasing delay. Junctions are under pressure constantly, notwithstanding the fact that the time in the signal cycle is constantly optimised by means of Galway's Traffic Control Centre, but which does not favour the single pedestrian waiting for a safe crossing allocation.

In particular, the following junctions along the existing east-west spines are optimised to the maximum extent but are still congested, namely: Briarhill, Ballybane, Tuam Road, Kirwan Junction, Bodkin Junction leading to Quincentenary Bridge on the northern fringe of the city, in addition to the junctions from Martin Roundabout to Moneenageisha Junction to Wolf Tone Bridge on the southern edge of the city, see Plate 3.1. To the west of the Quincentenary, the key junctions to free capacity are Newcastle Road, Browne Roundabout, Deane Roundabout and Kingston Road Junction. All of these junctions are at-grade junctions and currently are over-capacity, which in turn leads to the congestion with associated impacts on the public transport and air pollution.

An assessment of the volume/capacity (V/C) ratio was undertaken at signalised junctions and roundabouts, plus other key junctions where main roads intersect, as shown on Plate 3.15, using data extracted from the 2023 AM Peak Base Year traffic model. Max turn V/Cs show the maximum volume to capacity ratio for the turns at each junction. This indicator is useful for highlighting the problem junctions, compared to the average V/C or average delay, which can be comminated by the high-volume low delay movements. The volume to capacity ratios is then related to level of delay and congestion at the junctions.

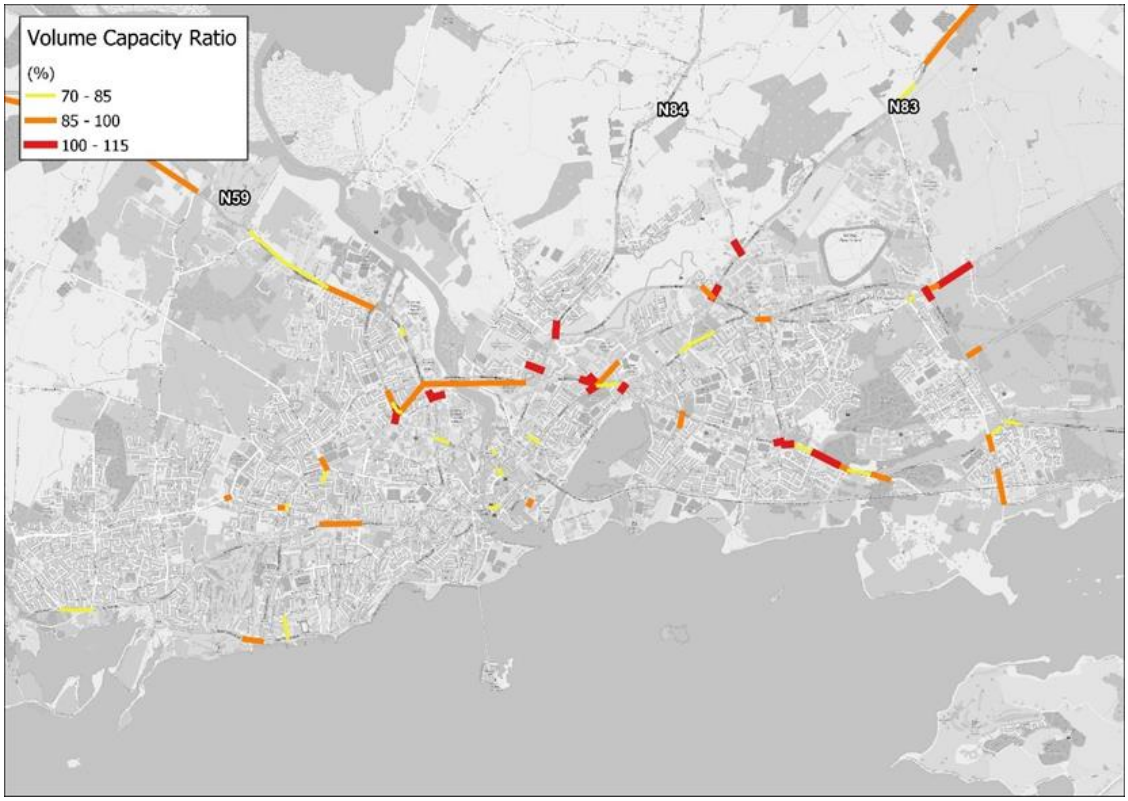

Plate 3.15 Volume/Capacity Ratios at Junctions (2023 AM Peak)

Plate 3.15 shows the number of junctions with a max turn V/C within standard ranges of 0.85-1.00, 1.00-1.15 and >1.15. Junctions with a V/C ratio greater than 1 have exceeded their capacity. Ideally, junctions should operate at a V/C ratio of < 0.85, which would allow 15% spare capacity in the junction to cope with an unexpected event or natural growth.

This analysis demonstrates that the existing network is restricted by junction capacity, even though these junctions have been optimised in recent times to maximise capacity and to cater for all modes as opposed to just vehicular traffic.

The junctions on the critical corridors accessing the city, namely the junctions of the N84, N83 and N59 Junctions with the existing N6, have all currently exceeded their capacity at peak hour as shown on Plate 3.15. These junctions are operating at greater than 100% of their capacity, which in turn leads to the significant delays at these locations on the network. As these junctions are the main arteries into the city, and the main junctions on the circumferential route around the city, this is a significant issue for the main gateways into the city.

These junctions must be retained to provide the connectivity but must have reduced traffic through the junctions to enable them to operate at capacity again and to enable provision of priority pedestrian and cyclist calls at the signals, which is simply not possible in the current situation. The city road network, therefore, needs significant intervention to relieve these junctions, so that they are not trying to cater for traffic wishing to circulate around the city, as well as traffic on the radial routes trying to access the city and active travel trips crossing through the junctions.

This analysis demonstrates that the network is finely balanced with minimal (if any) spare capacity to allow for any unforeseen event or natural growth. This is a significant factor, as gridlock on a city-wide scale is evident in the event of an unforeseen occurrence such as an accident, significant weather event, temporary traffic management associated with regular maintenance works on the existing road network, seasonal events and particular sporting match day events.

3.4.5 Long-term Impacts

The potential long-term impacts on the transportation, social and economic fabric of Galway will be significant unless the existing transportation issues are addressed.

A summary of the long-term transportation impacts in the absence of significant intervention would include:

- Impacts on the public transport network which results in prolonged journey times and delays on the bus network which detracts from increased patronage
- Reduces opportunities for safe and comfortable cycling, free of congestion and associated increased vehicular emissions
- Thousands of vehicles per day traveling unnecessarily through the city centre which brings with it associated and unmitigated impacts on businesses, public facilities, homes and non-motorised road users, noting that these trips are in the densest populated areas
- Unreliable transport links to access markets within the city, from Galway onwards and lack of accessibility to the Western Region as a whole

Macro-economic impacts which may arise would include the following:

- A decline in the quality of the urban environment could exacerbate the already existing trend to live outside the city limits and commute to Galway for work, increasing congestion and reducing the potential for any investment in public transport or alternative means of travel, to make an impact
- Continued suppressed travel movements either side of the River Corrib, resulting in isolation of areas of the city and county
- The creation of two separate city areas either side of River Corrib, with the city and county to the west declining

- A disincentive for Foreign Direct Investment (FDI) to invest in Galway City due to congestion costs in terms of both goods and labour
- Decline in the quality of the urban environment due to increased congestion and pollution may lead to reduced attractiveness of Galway City for labour force location
- The potential for further relocation of other activities away from the city core e.g. retail, business, employment, leisure, reducing the strength of Galway as a Gateway City
- A negative impact on the economic development of the wider western region as access is compromised (labour, goods, tourism)
- An overall decline in Galway City's ability to act as a Gateway on the western corridor, and to act as a regional counterbalance to the east

Social impacts resulting from the above would include:

- The creation of a challenging environment in accessibility terms for some sectors of society, particularly those most dependent on non-private car travel, as investment in public transport will be harder to justify over a more dispersed city fabric. Cycling and walking will continue to be less attractive due to safety concerns especially for school journeys
- A potential reduction in range of employment options available which could impact the profile of residents in the city and corresponding impacts on communities
- A reduction in quality-of-life indicators for the population who live, work and visit Galway

Given the potential long-term impacts above, there remains a pressing need to address the existing transportation issues facing the city and surrounding areas at present, and to underpin future growth by implementing the long-term strategy for transport as outlined in the GTS, which includes the delivery of the proposed N6 GCRR.

Indeed, in this respect, it is useful to recall the submission made by the Chamber of Commerce at the oral hearing convened in 2020. The results of a survey of their members showed that 80% of businesses surveyed considered that traffic congestion has a negative impact on business. They stated, *'that that the future development of the City requires additional road network capacity as well as significant improvement in sustainable transport infrastructure, and that the PRD is not just about the City Centre, but also the County and Region.'* (Refer to Inspectors Report Page 362).

3.5 Galway Transport Strategy

3.5.1 Overview

Whilst the GTS was published in 2016, in advance of the National Infrastructure for Transport in Ireland (NIFTI) of 2018, it was developed with due consideration given to the same principles as set out in NIFTI (See Plates 2.6 and 2.7 in Chapter 2 of this updated EIAR). Accordingly, the GTS prioritises walking and cycling and public transport over use of the private car and requires that the existing road infrastructure is optimised and improved prior to constructing any new infrastructure. The GTS sets out the strategic solution to the transportation problems experienced in Galway, including clearly recognising the need for the proposed N6 GCRR to ultimately deliver the level of change needed to allow the city to grow, whilst accommodating increasing travel demands in a more sustainable way.

The GTS identifies significant measures in the city centre thereby enabling reallocation of road space on city streets and the delivery of enhanced public transport options including, specifically, BusConnects in the short to medium term and the potential, in the future, for light rail linked to development growth on specific corridor(s).

There are currently four bridges crossing the River Corrib, which cumulatively carry approximately 80,000 vehicles per day, in addition to accommodating pedestrians, cyclists and bus services. Three of the four bridges are within the city centre, thus drawing traffic into the city for the sole purpose of crossing the river.

The Salmon Weir Pedestrian and Cycle Bridge was opened in May 2023, just south of the existing Salmon Weir Bridge and it removes conflicts between pedestrians, cyclists, and traffic, by offering a dedicated safe crossing point for pedestrians and cyclists alike. It has transformed the journey experience as the existing bridge is over 200 years old and had to cater for all modes in a very narrow space. The recently approved BusConnects Galway Cross City Link scheme, once implemented in full, will see the removal of significant volumes of traffic from the Salmon Weir Bridge, relocating some vehicular movements east-west onto the 'City Centre Access network; and the N6 Quincentenary Bridge and Wolfe Tone Bridge to the north and south, respectively.

The proposed N6 GCRR is a critical component of the GTS and is key to the realisation of the full benefits of an integrated transport solution. The proposed N6 GCRR will deliver the additional necessary crossing of the River Corrib and, as the city grows, will complement the BusConnects Cross City Link project which will turn the Salmon Weir bridge into a sustainable transport corridor during the hours of 7 a.m. to 7 p.m. This corridor will enable the prioritisation of other modes of transport within the city and suburban core area as set out in the GTS and thereby facilitate the increase in cross city buses set out in the BusConnects programme.

Furthermore, the proposed N6 GCRR will enable compact growth as envisaged by NPF which is necessary to meet our CAP24 targets, with public transport running optimally for a much larger population in a smaller compact area.

Over the past 15 years, the principles of modal hierarchy have also been employed to enable active travel and public transport on the existing N6 road corridor, which is the key east-west transport corridor on the northern side of the city. A segregated footpath and cycle track was added from the western end of the N6 at the Browne Roundabout to the N6/R865 intersection at Ballybane on both sides of the existing N6. Full pedestrian facilities have been provided at every junction along the N6 from the Browne Roundabout to the Briarhill Junction to enable pedestrians cross this busy road space safely. Bus priority has been provided at the Briarhill Junction where the bus crosses the N6.

Similarly, the N6 road curtilage has been retained, maintained and optimised in line with the intervention hierarchy to improve the capacity of this singular space, with the upgrade of the roundabouts to signalised junctions at the Martin Roundabout at the N67/R921 intersection, Lynch Roundabout at the N6/R339 intersection at Briarhill, Morris Roundabout at the N6/R865 intersection at Ballybane, Font Roundabout at the N6/N83 intersection, Kirwan Roundabout at the N6/N84 intersection and the Bodkin Roundabout at the N6/R338 intersection. The upgrade to the signals, together with the investment in the UTC centre enables a larger capacity to pass through the junction whilst also enabling safe passage for active travel users and priority for public transport. These interventions have extended the use of the existing N6. The GTS recognised that when all options are exhausted in terms of interventions on this singular road space, then a strategic intervention would be required to alleviate the situation.

A similar situation to that described along the N6 corridor extends onto the R338 west of the terminus of the N6 at the Browne Roundabout/N59 Junction. A segregated cycle path and footpath, pedestrian and cyclist facilities at all traffic signals, plus a 24-hour dedicated bus lane have been provided on both sides of the road on the R338 to the Deane Roundabout, ensuring the maximum utilisation of the road space. However, there is only one east-west link in this space with all modes in the same space competing for it. This is the primary public transport corridor to the west of the river and this route cuts through communities with a very high propensity for walking and cycling, yet it also is catering for significant traffic volumes.

From the Deane Roundabout to the Cappagh Road along the Western Distributor Road, an on-road cycle track plus a footpath is provided, but there are five roundabouts on this section. Un-signalised pedestrian crossings have been added to all these roundabouts since the 2020 oral hearing, plus a signalised pedestrian crossing has been added to Millers Lane junction with the Western Distributor Road to cater for the increased demand and desire lines. Galway City Council also has funding in place to convert the existing on-road cycle tracks to dedicated off-road tracks. This optimisation of the existing asset is useful, however, the fact remains that all HGV traffic accessing Galway Retail Park and significant traffic volumes occupy the same road corridor as the vulnerable road users. This factor is particularly relevant given the number of primary schools straddling this road and the number of children walking and cycling and interfacing with very high traffic volumes.

The GTS recognised that a strategic intervention in the form of an orbital route, being the N6GCRR, is required to remove significant volumes of traffic including HGVs from the Cappagh Road through to Deane Roundabout, thorough Westside on Seamus Quirke Road to Browne Roundabout, and onwards on the eastern side of the city to Briarhill and the Coolagh Roundabout.

3.5.2 Provision of strategic intervention in GTS

The GTS was developed on the premise of delivering an integrated network of 'links' (routes) and 'nodes' (stops and interchange locations) along which people can travel seamlessly, changing corridors and modes as necessary to make their journey in a sustainable manner. This remains the fundamental objective and underlying principle as the individual elements within the GTS have been implemented and are delivered into the future. The GTS expressly provides for routing of strategic traffic, which currently passes through the centre (to reach edge-of-centre locations), to more sustainable modes in the first instance and to suitable orbital routes around the core city centre area for essential vehicular trips. Such re-routing of strategic traffic facilitates prioritisation of active modes (walking and cycling) and public transport in the city centre and across the city centre, which is essential to achieve modal shift in favour of more sustainable transport. The GTS in this regard is robust and aligns fully with CAP24 and the CAP24 objective to reduce carbon emissions, notwithstanding the fact that the GTS was developed in advance of CAP24.

It should also be noted that the transport modelling informing the GTS identified that the strategic intervention required must serve a dual role of facilitating the strategic traffic (i.e. the 43% of trips originating outside of the city zone and end in the city zone or starting in the city zone and ending outside of the city zone) as well as being able to take traffic from the city centre and relieve the congestion there. These objectives are interlinked and both are needed to fully align with CAP24. Therefore, the provision of a high-quality public transport system is required, which needs to operate optimally, so that the city centre zone can cater for the demand therein. Likewise, the orbital route is required to cater for the strategic traffic and rerouting traffic from the city centre and, in doing so, fully support the optimal attainment of public transport proposals within the GTS.

Accordingly, it is not a case that provision of one objective negates the need for the other, as each objective serves different types of trips as part of the city's cohesive transport system. Equally, whether the public transport system is delivered in the form of bus in the short-term and light rail in the long-term does not negate the need for the strategic intervention of the orbital route in order to facilitate the optimal delivery of the chosen public transport solutions.

In October 2024, the National Transport Authority (NTA) published a Galway Light Rail Transit Feasibility Study Report,[4] which considered the potential feasibility in the future of introducing a Light Rail line to the city of Galway along one corridor linked to development growth. Such a potential light rail option was referenced in the GTS.

For the sake of completeness, this Light Rail option has been examined as an alternative to the proposed orbital route in Chapter 4 of this updated EIAR. However, in reality, the future development of any Light Rail line will be facilitated by the removal of strategic traffic from the city centre as a result of the development of the proposed N6 GCRR. In that context, any future potential Light Rail would serve more local trips, people who live and work within in the city, while the proposed N6 GCRR will be used mostly by traffic with a destination outside of the city and intends to access the strategic/national road network. Accordingly, whilst the implementation of the proposed N6 GCRR will facilitate, to a certain extent, the delivery of any future Light Rail line, the two strategic transportation options address different demand. The conclusion is that, even in the context of the development of a Light Rail line, there is still a strong demand for the orbital route with an AADT of approx. 40,000 vehicles using the new River Corrib crossing that cannot be catered for by potential future light rail. The analysis demonstrates that any potential future light rail and the proposed N6 GCRR, when delivered in tandem with the climate action plan demand management measures, serve complimentary functions, to a considerable extent.

[4] https://www.nationaltransport.ie/wp-content/uploads/2024/10/GMATS-LRT-Feasibility-Study-report-v0.4_Final.pdf

As noted above, the GTS recognised the need for an additional resilient/reliable orbital route so as to facilitate the re-allocation of existing road space for use by pedestrians, buses and cyclists. In particular, it identified the need for an additional crossing of the River Corrib to effectively implement the orbital route for journeys which could not be completed by non-car modes.

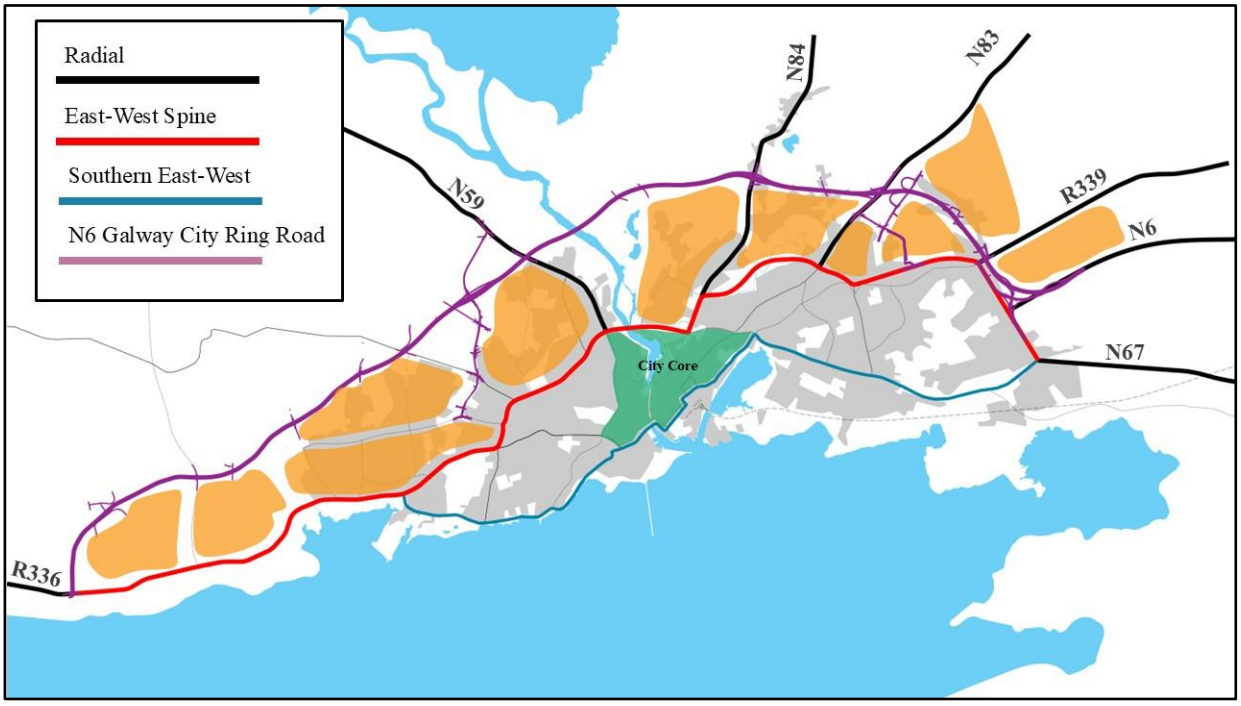

Plate 3.16 Overlay of proposed N6 GCRR and Population Centres to the north of Existing N6

The proposed N6 GCRR provides this required outer edge route, which will develop the road network of the northern half of the city, thereby facilitating more direct journeys, divert through traffic away from the central spine and facilitate the reallocation of road space in the city centre to active modes and public transport, see Plate 3.16. As recognised in the Inspectors' report of 22 June 2021, it recognised *"the missing link or undeveloped northern half of the network", and the consequence that "all traffic has to come into the city to access the spine road before it then moves around the city or bypasses the city".* The proposed N6 GCRR will provide the strategic solution to this transportation problem.

In addition, the proposed N6 GCRR will replace the function of the existing (and substandard) N6/R338 road network. By serving strategic traffic currently crossing the city via the existing N6, as well as the strategic traffic that is currently attempting to "rat-run" through the city using the existing city street network (as a result of congestion levels on the national road network), the proposed N6 GCRR will free up significant road space in the city centre which can then be used by other modes of transport. Indeed, the displacement of this strategic traffic from the city centre will facilitate the optimal operation and performance of a much larger number of cross city bus services planned as part of the NTA's BusConnects Programme for the city (50% increase in services).

Indeed, as stated above, the updated traffic modelling and assessment demonstrates that the transport issues remain the same today, and that the delivery of the proposed N6 GCRR as an integral part of the GTS is still required to address those transport problems.

3.5.3 Progress on Implementing GTS

Galway City Council is advancing bus network improvements to achieve the objectives of service plans developed by the National Transport Authority. Indeed, the delivery of the GTS is already underway with a focus on providing walking, cycling and public transport measures to meet the current needs of the city and to ensure alignment with CAP24.

Galway City Council has set out the current programme of works and services in its Annual Service Delivery Plan, prepared in accordance with Section 134A of the Local Government Act 2001, as amended. The

following is an update on the implementation of key projects under the GTS in Galway City Councils' 2024 Annual Service Delivery Plan:

- Galway Cross-City Link: Planning application currently subject to Judicial Review after receiving approval with conditions from ABP on 27 September 2024
- Salmon Weir Cycling and Pedestrian Bridge: Construction complete and this bridge has become a significant landmark in the city centre
- Development of infrastructure priority proposals for the bus network outside of the Cross-City Link zone: Ongoing
- Transport access improvements to Ardaun South: Complete
- Implementation of the Galway Cycling Strategy including greenways, primary, secondary and feeder routes: Construction Start 2021 and on-going
- BusConnects Galway - Dublin Road, On-going at pre-planning
- Implementation of the GTS remodelled bus service pattern (Bus Connects) in Galway City: Ongoing
- Access improvements to public transport such as improvements to bus stops/shelters: Commenced 2020 with provision of 19 new bus shelters. Programme is on-going
- Sustainable parking management and rollout of complementary initiatives such as bike share and public car share: Ongoing
- Pedestrian access improvements such as walking paths to public transport: Ongoing
- Maintenance, expansion and integration of the Urban Traffic Management Centre (UTMC): Ongoing
- Policy development and forward planning of modal shift options for major developments: Ongoing
- Park & ride site identification: Ongoing

Many of the same objectives and policies in the GTS are also imbedded in the recently-adopted Galway City Development Plan 2023–2029, including a number of measures aimed at shifting the focus of travel within the city centre to walking, cycling and public transport and linking land use planning and transport planning. These measures include:

- Concentrating future development in brownfield sites in the city centre
- Controlling the availability and cost of parking in the city centre
- Development of mobility management plans for major employment centres
- Reduced parking standards for new developments that are located close to public transport corridors
- Restricting traffic from certain streets
- Removing a large proportion of on-street parking in the city centre to provide more priority for pedestrians, cyclists and public transport

The measures outlined above are targeted at reducing the demand for travel in the first instance and are also being delivered by Galway City Council. For example, the Cross-City Link will restrict general traffic from entering the city centre. Traffic restriction will apply on Salmon Weir Bridge, and along St. Vincent's Avenue, Eglinton Street, Eyre Square and Forster Street and non-essential traffic will be re-routed away from the route to provide priority for public transport, walking and cycling.

The Cross-City Link will enable sustainable development in the city centre on brown field sites. New compact developments in brown field sites at planning or construction include Bonham Quay, Ceannt Station, Crown Square; others at an advanced design stage include Sandy Road and the Docks area.

Galway City Council has applied reduced parking standards in such new city centre brown field sites. For example, in Bonham Quay, a limited provision of car-parking within the development site will result in a high dependency among employees on travel by sustainable modes of transport, such as bus and rail, walking and cycling.

3.6 Positive impacts of the N6 GCRR on the transport system

As demonstrated above and further detailed in Chapter 6 of this updated EIAR, the existing road network is at capacity and insufficient to cater for the current travel demand for all modes (i.e. active travel, public transport and vehicular traffic) using it in Galway City, its environs and the Western Region. Accordingly, there is no doubt that the existing road network is wholly incapable of catering for the increased travel demand which is projected to occur by 2040 (as set out above in Section 3.4.2). The same KPIs which were used to explain the problem were analysed with the proposed N6 GCRR to demonstrate that the proposed N6 GCRR is needed as a strategic solution to that transportation problem.

Table 3.3 shows AADT reductions along routes in the city which will host BusConnects services, and which do not have existing or planned bus priority infrastructure. This data is based on the updated traffic modelling for the core EIAR scenario with the proposed N6 GCRR in place (undertaken for the purposes of the updated Chapter 6 of this updated EIAR). In the absence of the proposed N6 GCRR, these services, which are shown on Plate 3.14, would have to travel alongside general traffic and, as a result, would experience the same delay as general traffic as there is no space on these streets to provide dedicated bus infrastructure. However, by implementing the proposed N6 GCRR as part of a full suite of measures set out in the GTS, these routes would benefit significantly from quicker and more reliable journey times for bus users across both sides of the city.

Table 3.3 Design Year AADT Reductions along BusConnects Routes without existing or planned bus priority infrastructure with the proposed N6 GCRR in place (repeat of Table 6.18 from Chapter 6 of this updated EIAR for core EIA scenario)

AADT Locations	Road	Bus Connects Routes & Midday Frequencies	AADT Reduction
13	Kingston Road	10A (30 min)	45%
15	Barna Road	424 (60 min)	53%
28	Tuam Road (Mervue)	3 (20 min)	26%
8	N6 Terryland	7 (20 min)	15%
21	Upper Newcastle Road	4 (15 min at peak hours)	26%
29	Wolfe Tone Bridge	7 (20 min)	27%
14	R336 Upper Salthill Road	7 (20 min) & 10A (30 min)	14%
65	Seapoint Promenade	7 (20 min)	29%
72	Taylor's Hill Road (Taylor's Hill Primary School)	10 (15 min)	36%
64	Upper Salthill Road (Salthill Promenade)	1 (10 – 12 min), 7 (20 min) & 10A (30 min)	20%
60	Monivea Road (Crown Square development)	1 (10 – 12 min)	16%
58	Coast Road (Oranmore Train Station)	10B (30 min)	10%
75	Newcastle Road (Scoil Chroi Iosa)	1 (10 – 12 min)	18%
70	Shangort Road (McGrath's Field Park)	9B (20 min)	29%

AADT Locations	Road	Bus Connects Routes & Midday Frequencies	AADT Reduction
71	Ballymoneen Road	9B (20 min)	36%

Thus, the introduction of the proposed N6 GCRR is seen to improve the transport network-wide resilience due to the additional outer orbital traffic capacity provided, with transport modelling (reflective of 2023 traffic counts) showing that the existing N6 spine is conveying more traffic today than it did in the assessment to inform the 2018 application, as set out in Table 3.4. The orbital route adds a key new east-west spine to the road network and important north-south links to provide the interconnection to the new spine, and thereby providing the much-needed relief to these city routes which accommodate all other modes also.

Table 3.4 Traffic Volumes Comparison

Location	2013 AADT Estimates	2023 AADT Estimates	% Diff
N6 between Coolagh Roundabout and Monivea Road	21,400	32,786	+ 53%
N6 at Galway Racecourse (between Briarhill and Ballybrit Business Park R865 junctions)	19,900	31,812	+ 60%
N6 between Tuam Road and Kirwan Junction	22,400	27,994	+ 25%
N6 River Corrib Crossing at Quincentenary Bridge	34,600	40,015	+ 16%

Modelled traffic flows for 2043, the Project Design year, with and without the proposed N6 GCRR are presented in Table 3.5.

Table 3.5 2046 projects reductions in AADT with the proposed N6 GCRR and BusConnects in place

Location	2046 Do-Minimum	2046 Do-Something	% Difference
N6 between Coolagh Roundabout and Monivea Road	51,991	30,207	- 42%
N6 at Galway Racecourse (between Briarhill and Ballybrit Business Park R865 junctions)	51,724	41,461	- 20%
N6 between Tuam Road and Kirwan Junction	36,522	26,467	- 27%
N6 River Corrib Crossing at Quincentenary Bridge	65,637	43,967	- 33%
River Corrib Crossing at Salmon Weir Bridge	381	368	-3%

Accordingly, delivery of the proposed N6 GCRR as part of the GTS – which is incorporated in the current Galway City and County Development Plans – and which includes interventions to re-allocate the freed road space in the city centre to public transport, thus aligning with the objectives of CAP24, will result in an even greater significant shift to public transport and sustainable transport modes. In this regard, reference is made to transport modelling of CAP24 scenario in Section 6.7 of this updated EIAR. The proposed N6 GCRR also significantly improves the effectiveness and functionality of the 'City Centre Access Network' for which the urban section of the existing N6 is a key component.

3.6.1 Improved Journey Time Reliability

The proposed N6 GCRR seeks to address the issue of journey time reliability through relief of traffic congestion by removal of traffic from the existing network both through modal shift, provision of additional road space and separation of differing journey types.

The traffic modelling of the proposed N6 GCRR, which is discussed in Chapter 6 of this updated EIAR, demonstrates the manner in which the positive impact of the proposed N6 GCRR can be seen in journey time reliability on the routes identified in Plate 3.17.

Plate 3.17 Journey Time Routes

Full details of the 2031 Opening Year and 2046 Design Year AM and PM peak journey time results are presented in Chapter 6 of this updated IEAR. The results demonstrate that the impact of the proposed N6 GCRR is hugely beneficial for reducing journey times in Galway City in all time periods in both assessment years, with some improvements greater than 50%. A sample of such improvements is presented in Table 3.6.

Table 3.6 Journey Time Reliability: 2046 AM Peak Journey Time Results

Description	Do-Minimum (minutes)	Do-Something (minutes)	Difference (minutes)	% Difference
Route 1 Inbound	27	18	-9	-34%
Route 2 Inbound	30	24	-5	-18%
Route 3 Inbound	17	7	-9	-54%
Route 4a Inbound	37	17	-20	-55%
Route 4b Inbound	26	15	-10	-41%
Route 5 Inbound	58	50	-8	-14%
Route 6 Inbound	41	30	-11	-27%
Route 7 Inbound	14	16	3	19%
Route 8 Inbound	22	18	-3	-15%
Route 9 Inbound	10	10	-1	-9%
Route 10 Inbound	13	15	3	21%
Route 11 Inbound	23	20	-2	-11%

The achievement of journey time reliability reaffirms the basis of the need for the proposed N6 GCRR to deliver on journey time reliability, which is fundamental to delivery of an efficient public transport system which people will actually use, and in turn to delivery of the CAP24 goals of compact growth with a 50% population increase whilst reducing travel by private car.

The proposed N6 GCRR also provides connectivity to the national road network via junctions to maximise the transfer of cross-city movements to the new road infrastructure, thus releasing and freeing the existing city centre zone from congestion caused by traffic trying to access a city centre bridge to cross the River Corrib. The resulting reduction in congestion will lead to lower collision rates and improve conditions for vulnerable road users. Chapter 16 of this updated EIAR demonstrates that the significant reductions in AADT due to the proposed N6 GCRR would lead to improved air quality across the city due to the diversion of traffic including HGVs. Furthermore the reduction in HGV traffic makes routes more attractive for walking/cycling/active travel, all of which aligns with CAP 24 which specially references the benefit of active travel '*embracing active travel (walking and cycling) can have improved physical and mental health benefits which, considered in economic terms, are even greater than the positive environmental impact, while the shift to renewable fuel sources improves air quality.'*

Table 3.7 identifies roads where there are significant AADT reductions. Importantly, the implementation of the Project will result in a 33% reduction in traffic on the Quincentenary Bridge, freeing up capacity within the city centre to support priority for sustainable travel measures and lead to better air quality, which is a significant positive impact. Refer to Section 6.8 in Chapter 6 of this updated EIAR for further detail on forecast AADTs on other links in the transport model, and to Plate 6.18 to identify the link numbers referenced in Table 3.7.

Table 3.7 Locations of reduced AADT flows

Link Number	Link Location	2031	2046
		DS - DM	DS - DM
4	N6 South of Briarhill	41%	42%
5	N6 Near Ballybrit Business Park	24%	20%
6	N6 between N17 and R865	29%	26%
7	N6 Between N84 and N17	29%	27%
8	N6 East of Quincentenary Bridge	20%	15%
9	N6 - On Quincentenary Bridge	32%	33%
10	R338 at Westside Playing fields	31%	30%
11	Western Distributor Road between Clybaun Road and R338	43%	43%
13	R337 Kingston Road. Kingston	42%	45%
15	R336. Barna Road. Barna Woods	54%	53%
16	R336. Barna Road. Barna. Creagan bus stop	51%	51%
28	R338. Dublin Road. Between Renmore Road and Michael Collins Road	15%	17%
29	R336. Tuam Road. Mervue Business Park	25%	26%
30	Wolfe Tone Bridge	26%	27%
44	Letteragh Road North of GCRR Link Road	93%	82%
94	N6 North of Briarhill	31%	30%
95	R339 East of Briarhill	27%	25%
98	Ballybrit Crescent North of R339	38%	36%
99	Ballybrit Crescent North of Briarhill Business Park	40%	37%

Link Number	Link Location	2031	2046
		DS - DM	DS - DM
119	Western Distributor Road - East of Gort Na Bro	30%	36%

3.6.2 Improved Junction Capacity Assessment

The proposed N6 GCRR will contribute substantially to the resolution the constant problem of junctions without spare capacity on the existing N6 route and existing network, which frequently results in gridlock, in the context of also planning for significant population growth within the city. These factors link to the congestion relief, analysed in Section 3.2.1.3 above, all of which substantiates the need for the proposed N6 GCRR.

Chapter 6 presents the results of the junction capacity assessment which demonstrates that, with the introduction of the proposed N6 GCRR, there is a large decrease in the number of links in the network which have a ratio of flow to capacity (RFC) of over 90%. In the 2031 Opening Year, there will be a decrease of approx. 25% across both peak hours in the number of number of links in the network which have an RFC over 90%. For the key junctions, there is a predicted equivalent decrease of approx. 30% in both peak hours.

In the 2046 Design Year, which includes the NPF forecasts up to 2040, a decrease of approx. 20% is predicted across both peak hours in the number of number of links in the network which have an RFC over 90%. For the key junctions, there will be an equivalent decrease of between 15% - 20% across both peak hours.

3.6.3 Reduced Delay

Chapter 6 of this updated EIAR also presents the assessment of delay on the network in the 2031 Opening Year and 2046 Design Year and demonstrates that, with the proposed N6 GCRR in place, the network delay reduces considerably relative to the Do-Minimum and provides a higher average speed in all time periods in both the Opening and Design Year. The resultant reduction in delay (between 30% - 45% reduction in peak hours), removes several bottlenecks which are present in the Do-Minimum scenarios, and which would prevent traffic from finishing journeys within the hours which were modelled. This factor results in approximately 15% less time spent driving, as illustrated by the reduction in total travel time saved by the implementation of the proposed N6 GCRR. These results indicate economic benefits for Galway City from people spending less time in traffic and having a better quality of life.

3.7 N6 GCRR 2025 Objectives alignment with TEN-T & TAF

3.7.1 Project Objectives

The overall ambition of the Project, i.e., the proposed N6 GCRR and the Galway Racecourse development, is to achieve specific objectives under a number of multi-criteria categories specifically in relation to supporting the economic performance of Galway and integrating the principles of proper planning and sustainable development.

These multi criteria were outlined by the Department of Transport in *Guidelines on a Common Appraisal Framework for Transport Projects and Programme March 2016 (CAF)* and informed the development of the objectives as presented in the 2018 EIAR. The CAF (2016) document provided guidance on the appraisal of transport investments that was consistent with the Public Spending Code (PSC).

The CAF (2016) has since been replaced, in July 2024, by the *Transport Appraisal Framework (TAF)*, which again provides *"appraisal and implementation guidance that aims to promote investment in the transport system which meets the needs of society, fulfils strategic policy objectives, and delivers value for money"*.

The original CAF sub-criteria below remain relevant to the TAF sub-criteria, albeit that they are described slightly differently, and "Climate Change" is addressed specifically as an individual criterion as opposed to sitting within "Environment". Whilst it is not mandatory under TAF requirements to align the objectives with the appraisal criteria, the objectives below align with the most recent and current TAF and are retained with minor additions.

By identifying the objectives under these headings, it is the intention to provide a project which is attractive to all, delivers the key enabling road component of the overall transport solution for Galway and its environs, as identified in the GTS, provides benefit to the local and the larger regional population of Galway and the western region and is cognisant of the sensitive environment into which it is interwoven. The multi criteria which stem from CAP and were utilised to evaluate the Project are as follows:

- Economy (which covers Transport User Benefits and Other Economic Impacts in TAF)
- Safety (which is retained in TAF)
- Environment including Climate Change as per CAF, whereas Climate Change is a separate TAF criterion
- Physical Activity (not a separate criterion in TAF but is covered in all other criteria)
- Accessibility & Social Inclusion (which is split into two criteria in TAF namely Accessibility Impacts and Social Impacts)
- Integration (which covers Land Use Impacts in TAF)

Each of these objectives are linked to the European, national, regional and local polices set out in Chapter 2, Planning and Policy Context. As there have been new policies introduced since the 2018 EIAR, the objectives were re-examined to reflect the updated and new policies. Every endeavour has been made to ensure these objectives were optimally attained, insofar as is practicable, in the development of the proposed N6 GCRR. The specific objectives adopted for the Project under each of the evaluation criteria for this updated EIAR are detailed below.

The ***'Economic'*** objectives of the proposed N6 GCRR are to:

- Ensure benefits derive from the transport infrastructure provided for all modes of transport
- Improve linkages between the west and east sides of the city and county for all modes of transport
- Reduce journey times
- Encourage local, regional, national and international development
- Increase journey time certainty
- Support the economic performance of the Gateway of Galway as the only large employer in the region
- Improve connectivity to the Gateway of Galway
- Deliver a cost-effective project

The ***'Safety'*** Objectives of the proposed N6 GCRR are to:

- Support the provision of safer urban roads and streets across Galway City, particularly for active travel and vulnerable road users
- Segregate strategic traffic connecting to and from the National and Regional Road Network from local traffic
- Reduce road traffic collisions across the City Region's Road network

The ***'Environmental'*** Objectives of the proposed N6 GCRR are to:

- Support the delivery of an integrated sustainable transport solution for Galway aligned with the most recent Climate Action Plan (CAP24)
- Improve air quality aligned with Climate Action Plan
- Minimise impacts on designated Natura 2000 sites
- Avoid impacts to National Monuments

- Minimise impacts to the architectural, cultural or linguistic heritage of the area
- Take due cognisance of the importance of the existing landscape
- Seek to preserve existing well-established communities
- Reduce noise and air impacts on sensitive receptors

The ***'Physical Activity'*** Objectives of the proposed N6 GCRR are to:

- Improve opportunities for walking in the core city centre area, creating more walkable environments through the removal of significant traffic volumes
- Facilitate the continued reallocation of road space for the provision of additional cycling facilities on less congested urban streets
- Improve accessibility to Galway City for all persons of all ages, abilities and income level

The ***'Accessibility and Social Inclusion'*** Objectives of the proposed N6 GCRR are to:

- Implement sustainable transport policies for shorter commutes
- Support the improvement of the public transport hub linking Galway to other Gateways
- Improve accessibility to Galway City
- Improve interconnection between the Galway City and environs road network and the national motorway network
- Improve accessibility of the Galway urban area to its main markets
- Improve accessibility of the Gaeltacht areas to the remainder of the county and country
- Reduce disadvantage of the Gaeltacht areas
- Facilitate continued improvements to the urban environment of Galway City centre
- Support the current development strategy and settlement strategy

The ***'Integration'*** Objectives of the proposed N6 GCRR are to:

- Improve the TEN-T network to ensure connectivity of the west of Ireland to the single European market
- Support Galway's realise it's potential as Ireland's fourth largest city and an important residential, educational, employment and service centre for a wide regional hinterland, contributing to the national urban hierarchy in line with NPF
- Support the development of critical mass of regional population centres with compact growth in line with NPF and CAP24
- Support integration of Galway City and its environs (including western parts of Galway County) into the national economic development agenda
- Support balanced social and economic development at a national level
- Support balanced social and economic development at a city-region level
- Understanding of the development, land-use and transportation pressures in the Galway urban area and their impact on the delivery of a successful city region at Galway
- Support the recognition of the role Galway City plays as a gateway to the west and Connemara, and the consequent socio-economic benefits of enhanced connectivity of Galway City to national markets, enhanced tourism accessibility, and the national transport system

3.7.2 Compliance with the objectives of the TEN-T Comprehensive Road Network

As set out in Chapter 2 of this updated EIAR, the proposed N6 GCRR forms part of the TEN-T comprehensive road network and as such has a strategic function, with significant policy support at EU level. As also noted in Chapter 2, Brexit saw a realignment of the TEN-T Network, with Ireland joining the Atlantic Corridor as well as already being part of the North Sea -Rhine Mediterranean Corridor, which has created additional connections between Irish ports and ports in France, Belgium and the Netherlands, with the Atlantic Corridor also extending to Spain and Portugal. A review of the updated TEN-T regulations of July 2024 was undertaken and it has been confirmed that the design of the proposed N6 GCRR as presented in this updated EIAR is compliant with the current TEN-T regulations.

Compliance with the objectives of TEN-T is analysed under various headings which are fundamental to understanding the purpose and objectives of TEN-T and to understanding why the proposed N6 GCRR is of strategic importance in achieving the TEN-T objectives. The proposed N6 GCRR serves a dual purpose as it addresses the transport problem in Galway City by achieving two key objectives in developing the city's transport system which will enable sustainable and consolidated development:

- N6 GCRR will add trip capacity to the existing transport network, providing an additional crossing of the River Corrib, thereby reducing trips through the city centre and within and on the City Centre Access network as identified by the GTS. As there will be significantly fewer trips in the city, there is less congestion which in turn makes public transport and active travel modes more attractive
- the new links incorporated as part of the proposed N6 GCRR provide for the strategic need of the national road network and connectivity of Galway City and the Western Region to the national road and TEN-T network. Arriving and departing trips to the city can enter and leave the city on routes which do not require them to enter the city centre unless that is their destination

3.7.2.1 TEN-T Classification

- The EU's TEN-T Transport Policy[5] aims to create connectivity between regions, remove bottlenecks that hamper the smooth functioning of the EU's internal market and to promote a sustainable, multi-modal network for passengers. The proposed N6 GCRR enables such connectivity between the regions without the bottlenecks on the TEN-T network. It also promotes the multi-modal network by enabling reallocation of the existing road space to active travel and public transport
- The proposed N6 GCRR is being developed to be part of Ireland's comprehensive network in accordance with the EU TEN-T Transport Policy
- The proposed N6 GCRR has been developed as a high-quality road as part of the TEN-T comprehensive network to deliver the objectives of TEN-T both on strategic EU and national levels, as well as on a regional level to the Western Region. The proposed N6 GCRR is intended to support the economic and social development of the Western Region, by ensuring the connectivity and accessibility of this region to the single European market

3.7.2.2 Connectivity, Accessibility and Social Inclusion

- One of the principal aims of TEN-T is to improve cohesion throughout the EU by ensuring the connectivity and accessibility of all regions, including the EU's outermost and remote regions. The proposed N6 GCRR will improve linkages between the west and east sides of the country, as well as improving the connections between the Western Region and the wider internal market within the EU.
- The proposed N6 GCRR will improve the accessibility of Galway City to its main markets, by facilitating the crossing of the River Corrib without the need to go through the city centre. The proposed N6 GCRR will protect the interconnection of Galway City and its environs road system to the national motorway network. The Project will increase the connectivity of key strategic services within Galway, such as UoG and Galway University Hospitals, to the national motorway network. Such enhanced accessibility and connectivity aligns with the principles of compact growth, densification of population in

[5] http://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/map/maps.html

the urban areas and servicing this larger population in one central location all of which are part of CAP24.

- The proposed N6 GCRR will also improve the accessibility of Gaeltacht areas to the remainder of the county and country, thereby reducing the economic and social disadvantages of the Gaeltacht areas, as it will provide the capacity required for national and international traffic serving the Western Region whilst also connecting the county to the national network.

- Access to this strategic route is limited to the junctions provided along the route, which will protect the asset in the future and the proposed N6 GCRR has been designed to ensure that it is not misused as a 'hop on hop off' network for local traffic. Junctions have been restricted to the western tie-in with the R336 Coast Road, Bearna Moycullen Road, Cappagh Road, Ballymoneen Road and the national roads, N59, N84, N83 and the existing N6. This level of provision is deemed necessary to serve the strategic travel demand, as the traffic accessing Galway City is of a strategic nature, whilst also providing connections for users from the Western Region to the national road network. This aligns with future proofing the strategic route and builds resilience to the impacts of climate change.

3.7.2.3 Removing Infrastructural Bottlenecks

- TEN-T aims to increase efficiency throughout the transport network by removing bottlenecks and congestion. Currently, Galway City experiences transport problems across the city, particularly during peak hours, which is impacting on the economic capability of the city. The road and street network of Galway City is ill-suited to the high traffic flows currently prevalent and contributing to increased congestion and delay, affecting quality of life and impacting on the functionality of the city.

- The effects of this congestion and bottlenecks extend to the wider county and region, due to the large number of people commuting daily for work or education to the city from the surrounding towns, villages and rural areas. The congestion and infrastructural bottlenecks impact the connectivity of the Western Region to the rest of the country and the internal markets of the EU.

3.7.2.4 Sustainable Transport Choices for Passengers

- TEN-T aims to promote sustainable travel by enabling a multi-modal transport network for Galway which meets the mobility and transport needs of its users. The proposed N6 GCRR will reduce congestion and car dependency by attracting traffic from the city centre zone, which will facilitate a reallocation of road space, thereby improving capacity and reliability of public transport and facilitating greater opportunities for cycling and walking within the city centre core area.

- By providing opportunities for a multi-modal transport system, the proposed N6 GCRR promotes the reduction of greenhouse gas emissions as it will facilitate the advancement of a low-carbon and more energy efficient transport system, whilst also providing accessibility and connections to the city. These factors will also reduce the level of air pollution within the city centre. The GTS aims to relieve traffic congestion in the urban centre of Galway which in turn will facilitate a modal shift to public transport, cycling and walking, all of which promotes the reduction of greenhouse gas emissions as it facilitates the advancement of a low-carbon and more energy efficient transport system.

Therefore, the proposed N6 GCRR serves a dual purpose as it addresses the acute transport problem in Galway City and its environs by achieving two key objectives in developing the city's transport system which will enable sustainable and consolidated development:

(i) N6 GCRR will adds trip capacity to the existing transport network, providing an additional crossing of the River Corrib, thereby reducing trips through the city centre and, in particular, within and on the City Centre Access network as identified by the GTS. As set out above, as there will significantly fewer trips in the city, there will be significantly less congestion, which in turn makes public transport and active travel modes more attractive.

(ii) the new links incorporated as part of the proposed N6 GCRR will provide for the strategic need of the national road network and connectivity of Galway City and the Western Region to the national road and TEN-T network. Arriving and departing trips to the city can enter and leave the city on routes which do not require them to enter the city centre unless that is their destination.

By displacing strategic traffic currently crossing the city via the existing N6, as well as the strategic traffic currently attempting to "rat-run" through the city using the existing city street network, the proposed N6 GCRR will free up road space in the city centre that will be used by other modes of transport. It is critical to understand the strategic function of the proposed N6 GCRR and that it is classified as part of the TEN-T comprehensive road network as discussed above.

3.7.3 Alignment with CAF and TAF

An appraisal of these objectives against the need for the proposed N6 GCRR and the manner in which these objectives are attained was undertaken and presented in the 2018 EIAR. The appraisal presented in the 2018 EIAR was based on CAF rather than TAF, because CAF was the framework that applied at that time. However, for this updated EIAR, TAF was reviewed to understand any differences or new requirements that may apply. In fact, everything that needed to be considered under TAF was covered in the analysis carried out under CAF at the time and, therefore, little additional work or analysis is required. The importance of providing a sustainable development was also considered in the 2018 EIAR and is considered in this updated EIAR, thus addressing specific criterion of Climate Change in TAF. TAF focuses on the need to align with NIFTI, which has already been used as the basis for interventions as set out earlier in this chapter. The appraisal of the proposed N6 GCRR under the CAF criteria is presented in subsequent sections.

3.7.3.1 Safety

The existing traffic volumes and HGVs on the existing road network results in traffic congestion on a consistent basis. As outlined in Chapter 6 of this updated EIAR, the proposed N6 GCRR provides connectivity to the national roads via junctions to maximise the transfer of cross-city movements to the new road infrastructure, thus releasing and freeing the existing city centre zone from congestion caused by traffic trying to access one of the city centre bridges to cross the River Corrib. The reduction in congestion realised post completion of the proposed N6 GCRR will lead to lower collision rates and improve conditions for vulnerable road users across the local, regional and national road network.

Providing improved road infrastructure generates significant safety benefits to the network at two levels. Firstly, via the transfer of high volumes of traffic to the safer roads and secondly via a reduction in distances travelled on less safe existing roads. Modern technology and information systems which form part of new road infrastructure also gives greater security to road users. Opportunities for further safety benefits present through the provision for vulnerable road users through reallocation of road space on the existing network. Safety and security on our road network is of national interest and a key part of government policy over the past decades. It is linked to meeting the targets of CAP24 as safe facilities in compact urban centres free of heavy traffic volumes are essential to achieve the modal shift required to active travel.

3.7.3.2 Physical Activity

The 2016 CAF update included 'Physical Activity' as a new criterion for appraisal of transport projects. Whilst TAF does not specifically call out Physical Activity as a separate unique criterion, it is embedded into the all the other TAF criteria. The existing N6/R336 is a deterrent to physical activity due to lack of attractive provision for vulnerable road users, i.e., cycling and walking adjacent to heavily congested commuting routes and requirement to negotiated complex multi-phase traffic signals at crossings. The proposed N6 GCRR will create opportunities for an improved environment for walking in the core city centre area and to reallocate road space for the provision of additional cycling facilities as it is part of an overall strategy whereby road space is reallocated to cyclists and pedestrians once traffic is removed from the city centre to the proposed ring road.

3.7.3.3 Environment

The routing of thousands of vehicles per day through the city centre brings with it associated and unmitigated impacts on non-motorised road users, homes, businesses and public facilities. These impacts include noise and air pollution. The stop/start nature of urban driving and platooning of vehicles behind slow moving vehicles adds to the levels of pollution experienced by locals and visitors. The proposed N6 GCRR provides an additional crossing of the River Corrib, thus facilitating the reduction of congestion on city centre roads and allows the reallocation of road space in the city network to non-motorised modes of transport, thereby reducing the level of pollution within the city centre. Since 2018, the critical importance of vehicular emissions, including carbon emissions, has resulted in more sophisticated tools being available for the

assessment of transport emissions, and these have been used to predict the likely GHG emissions (CO_2eq) as outlined in Chapter 17 of this updated EIAR. This gives a robust assessment taking cognisance of all new policies in relation to climate since the 2018 EIAR.

Additional impacts on the receiving environment at present include severance effects of traffic congestion in urban areas and traffic speeds in rural areas as local roads are used to avoid the congested national road network. This severance will be reduced by the transfer of traffic to the proposed N6 GCRR.

As outlined in Chapter 2 of this updated EIAR, CAP24 supports policies to transform how society travels, and it identifies specific measures and actions to support the Avoid-Shift-Improve model. This approach involves avoiding or reducing the need to travel through densification and compact growth and shifting to sustainable modes of travel including active modes and public transport where travel is still necessary. The third element of the model is to improve the energy efficiency of vehicles by accelerating the electrification of road transport using electric and low-emission vehicles and the increasing biofuel blend rates for use in vehicular combustion engines. The transport strategy for Galway aligns with this model in CAP24 and the proposed N6 GCRR, as a critical component of the strategy, is key to the realisation of the full benefits of an integrated transport solution. Delivery of the full complement of measures contained within the GTS align with the aim of the most recently approved CAP24 of achieving a low-carbon, climate-resilient, and environmentally sustainable economy by 2050.

There is a national need to lower Ireland's level of greenhouse gas emissions and the Government has made a commitment to reduce Ireland's carbon footprint. An assessment of consistency with CAP24 is provided in Chapter 6 of this updated EIAR.

The proposed N6 GCRR will facilitate the advancement of a low-carbon and more energy-efficient transport system, as explained in Chapter 17 of this updated EIAR, as well as developing more efficient urban and intermodal transport solutions by removing traffic from the city centre and freeing up space for cycling and walking facilities as well as improved bus transport. The implementation of the Project will also bring an additional positive impact on air quality, in circumstances where traffic is diverted away from the receptors along the existing road network within the city centre because of the Project. Since 2018, more sophisticated tool is also available for computation of air quality, and this is assessed in Chapter 16 of this updated EIAR.

From an environmental perspective, European Union and national legislation requires that the environmental impacts associated with major roads projects are identified and measures taken to avoid, minimise or mitigate these impacts. The proposed N6 GCRR will be constructed to the increasingly high standard of environmental mitigation practice. This is set out in subsequent chapters of this updated EIAR, providing an in-depth analysis of potential environmental impacts and details of how these will be avoided, minimised and mitigated.

The need for the proposed N6 GCRR from an environmental sustainability perspective is to deliver an integrated, sustainable transport solution that aligns transport investment with settlement patterns, travel movements and supports a sustainable use of land, all of which aligned with CAF and still align with TAF. The proposed N6 GCRR as part of the GTS, satisfies this need as it offers opportunities that will reduce congestion and car dependency as Galway grows into the future, thereby facilitating a reallocation of road space to improve capacity and reliability of public transport and to facilitate cycling and walking within the city centre core area, all of which promotes the reduction of greenhouse gas emissions, whilst also providing accessibility and connections to the city.

The proposed N6 GCRR will also have certain localised negative impacts on the receiving environment including, unfortunately, a relatively large number of property demolitions that are unavoidable. From the outset of the design of the proposed N6 GCRR every effort was made to avoid property demolitions where possible. However, there will be residual property impacts, including some profound negative impacts, including those arising from the acquisition and demolition of 69 no. non-agricultural properties (refer to Chapter 5, Description of the Project and Chapter 15, Material Assets Non-Agriculture for further details). Whilst this is a significant number of property impacts, the overall context of the impacts is assessed against the potential benefits that can be accrued from the proposed N6 GCRR. The proposed N6 GCRR provides very significant and much-needed benefits to the TEN-T transport network, the Western Region and County Galway as well as the built-up environment of Galway City and environs.

3.7.3.4 Accessibility and Social Inclusion

As a Gateway to Connemara and the Western Region, connectivity and accessibility to and through Galway City is essential in aiding the region to revitalise and develop into the future. Accessibility and connectivity for areas within the county is of significant public interest and a key driver for the proposed N6 GCRR.

Providing well-developed transport links via roads, rail and air to the Western Region, enables enterprises and the local economy of the west to grow and develop as a viable alternative to the east coast corridor which is of significant public interest at a national level. The N6 is designated as part of the TEN-T network for this specific reason and a critical link to the Western Region.

Moreover, the provision of reliable transport infrastructure facilitates improved access to employment, education, vital services such as hospitals and amenities for all users. Reallocation of existing road space within the urban network will facilitate better provision of public transport which improves accessibility to all of the above services, in particular for lower income groups, vulnerable road users and the elderly. Greater accessibility to public transport, in turn, generates a healthier environment within the urban network where the population density is higher.

More sustainable and reliable transport infrastructure, and services links, to and from the Gaeltacht areas of the Western Region, enables Irish language speakers to remain in their native areas out of choice, and develop the Gaeltacht economy in a way that is both language and culture-friendly, assisting in halting the recent decline in population. Arresting Irish-language speakers population decline is of public interest as it is of national interest to preserve our heritage including our native language, as well as in accordance with local planning policy.

In tackling the city's congestion issues, the proposed N6 GCRR will assist in delivering provide a better quality of life for the city's inhabitants and provide a much safer environment in which to live. By reducing the number of cars on the roads within the city centre, improving streetscapes, workers and school children are facilitated to commute using multi modal transport means, including travelling on foot, by bicycle and on the public transport system. As a result, more sustainable travel is supported and encouraged. The delivery of sustainable transport is of overriding public interest at a local level but, more importantly, for the entire Western Region as Galway is at the core of the region and needs to be able to function efficiently to serve the region.

A detailed analysis of the impact of the proposed N6 GCRR on society is presented in Chapter 19 of this updated EIAR.

The need for the proposed N6 GCRR from an Accessibility and Social Inclusion perspective is driven by a need to provide connectivity to the national roads via junctions to maximise the transfer of cross-city movements to the new road infrastructure. Such displacement of cross-city traffic to the N6GCRR will release the existing city centre zone from congestion caused by traffic trying to access a city centre bridge to cross the River Corrib, which allows reallocation of existing road space within the urban network, all of which will facilitates better provision of public transport with improved accessibility to all other transport modes for many more sectors of society.

3.7.3.5 Integration

Chapter 2 of this updated EIAR sets out how the proposed N6 GCRR is integrated into European Union, national, regional and local plans and policies.

It is EU policy to take account of all aspects of sustainability (such as emissions, noise, land occupancy and biodiversity) and to base any action on a long-term vision for the sustainable mobility of people and goods i.e. sustainability of the entire transport system (ref EU Sustainable Development Strategy (EU SDS, 2001), reviewed 2009). The proposed N6 GCRR facilitates the effective implementation of the GTS and the development of a sustainable transport solution for Galway City and its environs. The proposed N6 GCRR also forms part of the TEN-T comprehensive road network in Ireland and is of strategic importance as it has a key role in delivering congestion relief and strengthening economic cohesion, as set out in Section 2.2.2 and Section 3.7.3 of this updated EIAR.

At national level, the proposed N6 GCRR is identified in the National Planning Framework as a key future growth enabler for Galway as it serves to relieve urban congestion and provide connectivity to Galway so that Galway can contribute to the overall national development. The *National Sustainable Mobility Policy*

2022 and *National Sustainability Mobility Policy Action Plan (2022 – 2025)* are national policies which better support climate action and sustainable mobility and adopt a more people-centric approach in all aspects of Active Travel and Public Transport Policy, refer to Section 2.3.9 of this updated EIAR. The proposed N6 GCRR is identified as a project at a national level which is necessary to support economic recovery and sustainable growth because of its ability to improve mobility of people and goods into and out of Galway and is vital to the economic recovery of the Western Region as a whole, which again is outlined in Chapter 2 of this updated EIAR. The proposed N6 GCRR is also needed to deliver on national policy in respect of modal shift as it fits within an overall transport strategy which encourages a modal shift to a form of public transport that is associated with less emissions per capita than private car use, thus releasing and freeing the existing city centre zone for the reallocation to walking and cycling facilities and public transport, refer to Section 2.3.5 of this updated EIAR.

These national policies are translated into regional and local policies as set out in the various development plans and local area plans, refer to Section 2.4 and Section 2.5 of this updated EIAR. The Galway Transport Strategy, which is the overall strategy to 2036, requires delivery of an orbital route in order to deliver on all components proposed in the strategy and therefore, underpins the need for the proposed N6 GCRR.

3.7.3.6 Economy

Developments in national policy since 2018 means that, more than ever, each region of the country has a crucial role to play in returning Ireland's economy to enterprise driven growth. The delivery of dynamic, competitive regions that provide quality and sustainable employment opportunities will involve not only the enterprise development agencies, but also a wide range of stakeholders including local authorities, higher education institutes and the business community at local, regional and national levels.

The proposed N6 GCRR will provide an economic benefit to Galway City and its environs. Whilst there are employment benefits during the construction phase of the Project for contractors and suppliers, the true economic benefit will be realised once the proposed N6 GCRR is optional. Accessibility to businesses and community facilities in Galway City and its environs and the Business Parks in Parkmore and Ballybrit will be better facilitated by the proposed N6 GCRR and the resulting reduction in congestion, both directly and through the improvements to public transport services which the proposed N6 GCRR will enable. It will also bring with it benefits to business and public facilities in Galway City centre by reducing noise and air pollution. This all translates into economic prosperity for the Western Region, with Galway City as a thriving city at the core, which in turn will play a part in reviving the Irish economy.

The proposed N6 GCRR will provide a high-quality roadway asset designed in accordance with current TII Design Standards and Guidance.

An efficient integrated transport infrastructure is necessary to reduce levels of congestion and allow economic growth. The proposed N6 GCRR facilitates this improvement by providing relief to the national, regional and local road network, whilst also improving accessibility of the public transport network and allowing advancement of sustainable transport planning at a local level.

3.8 Summary of Need for the N6 GCRR

The overriding need for the proposed N6 GCRR is underpinned by the fact that a modern economy requires world-class road transport infrastructure that is sustainable from an economic, social and environmental perspective. An efficient transport network which works for Galway City and environs will improve access to the Western Region, enhancing its attractiveness for inward investment and new employment opportunities and will contribute to enhanced competitiveness by reducing transport costs. Equally removing bottlenecks and congestion within Galway City will enhance the economic capability of the city, improve quality of life in the city and improve the functionality of the city. Therefore, the exiting N6, and proposed N6 GCRR in the future, is key to achieving these TEN-T objectives, and therefore is correctly designated as part of the TEN-T network.

The need to deliver the proposed N6 GCRR is supported in terms of policy from European Union to local level. The proposed N6 GCRR is compliant with current transport policy and planning policy as set out in the various policy documents adopted in recent years, including the most recent Climate Action Plan. Specific details for each of the policies and the manner in which the proposed N6 GCRR aligns with each are outlined in Chapter 2, Planning and Policy Context.

The specific project need is defined in terms of its potential to contribute to the resolution of existing transportation problems in Galway City and environs which include but are not limited to the following:

- Congestion throughout the city road network due to capacity failures at existing junctions with associated safety issues for vulnerable road users negotiating these same junctions
- Journey time unreliability and variability throughout the day including prolonged journey times for public transport due to limited road space to introduce bus priority measures which is a blocker to achieving our CAP targets
- Peak hour traffic delays for all modes of transport
- Strategic traffic is in conflict with local traffic
- Safety concerns for cycling and walking as a result of traffic congestion on the narrow medieval city streets, again a blocker to achieving our CAP targets
- Air pollution concerns as a result of traffic congestion
- Inadequate transport links to access markets within the city
- Accessibility issues for Galway City and the Western Region as a whole and connectivity issues on the National and Regional Road network
- Impact of traffic congestion on the city's reputation, particularly with regard to inward investment

As a Gateway to the Connemara and the Western Region, connectivity and accessibility to and through Galway City is essential in aiding the region to revitalise, improve and develop into the future. Providing well developed transport links via roads, rail and air to the Western Region enables enterprises and the local economy of the west, to grow and develop as a viable alternative to the east coast corridor which is of significant public interest at a national level.

More sustainable and reliable infrastructure links to and from the Gaeltacht areas of the Western Region enables Irish language speakers to choose to remain in their native areas and develop its economy in a way that is both language and culture friendly, halting the recent decline in population. It is of public interest at national level to preserve our heritage including our native language.

Galway City itself is a destination for strategic traffic to locations east and west of the River Corrib. The Project addresses the need to connect these strategic destinations.

In tackling the city's congestion issues, the Project will provide a better quality of life for the city's inhabitants and provide a much safer environment in which to live. By reducing the number of cars on the roads within the city centre and improving streetscapes, workers and students are facilitated to commute using multi modal transport means.

This includes travelling on foot, by bicycle and on the public transport system. As a result, more sustainable travel is supported and encouraged and smarter travel policies both at a national level and local level are achieved. This is of overriding public interest at a local level in Galway itself, but more importantly for the entire Western Region as Galway is at the core of the region and needs to be able to function efficiently to serve the region.

The Project will contribute significantly to the removal of traffic congestion from within Galway City and its environs by transferring existing and future traffic from the existing road network to the new road infrastructure. Relief of congestion in the city is essential to facilitate the improvement of the existing public transport network through measures such as the reallocation of road space, provision of a cross-city high frequency bus network, park and ride facilities, and or complementary traffic measures such as bus priority at junctions. Therefore, journey times will reduce, and journey time certainty will increase for both public transport and private vehicle users. The reduction in traffic congestion will also help to realise other proposed actions in the Galway Transport Strategy because the existing road space can also be reallocated for cyclists and pedestrians. This will result in reducing the number of short commuter journeys by car by facilitating journeys by bicycle which are faster, cheaper, and more sustainable and generate health benefits.

Achieving the targets as set out in Smarter Travel policies will deliver a more attractive, vibrant and economic Galway City with associated health and environmental benefits, all of which are necessary for sustainable travel into the future. The Project aligns with these policies and this project is necessary to firstly resolve the congestion issues which are currently restricting maximum implementation of the Smarter Travel policies by supporting sustainable transport policies for shorter commutes.

The need for an integrated transport solution which will relieve the congestion which is restricting Galway currently guided the development of the Galway Transport Strategy, of which the proposed N6 GCRR is a key element, as this congestion is experienced by all travellers using various transport modes.

Therefore, in summary, the functionality of the proposed N6 GCRR is twofold: the Project provides for the strategic need of the TEN-T comprehensive road network and connectivity of Galway City and the West Region to the national road network, as well as providing a solution to relieve the city centre roads of unnecessary strategic traffic and providing the necessary road space for other modes of transport, namely walking, cycling and public transport. These two functions are complementary and the need for the proposed N6 GCRR is supported by the policies below:

- Policies at European Union level, as expressed in the EU Sustainable Development Strategy, at national level in the Climate Action and Low Carbon Development Act 2015 and subsequent policies at regional and local levels, have identified the need for a sustainable transport solution to the type of traffic issues currently experienced in Galway City and its environs which can be alleviated through the delivery of the Galway Transport Strategy of which the N6 Galway City Ring Road is a key element. It is also consistent with Smarter Travel, A Sustainable Transport Future, 2009 and Irelands National Cycle Policy Framework, 2009 to 2020.
- Policies at European Union level, as expressed in the TEN-T Regulations, supplemented by policies at national, regional and local levels, have identified an objective for a high-quality road to connect Galway to the core Trans-European road network.
- Connectivity and accessibility to markets, employment and tourism offerings in Galway City and its environs, underpins the economic development of the Western Region as a whole, with Galway City as the hub.
- The Project is consistent with the recommendations, priorities and objectives as set out in the DTTaS 2015 investment framework and the Capital Plan, as it seeks to deliver the N6 Galway City Ring Road, address urban congestion in Galway City, and enhance national development through improved connectivity to Galway.
- The Project is a component of an overall transport strategy, the GTS, driven by a need to relieve traffic congestion in the urban centre of Galway which in turn facilitates a modal shift to public transport, cycling and walking.
- Galway City and County Development Plans have incorporated the provisions of the GTS within the transportation sections of these development plans with all other sections of the plans also built around the GTS.

The N6 GCRR represents the optimal solution to the transport issues described above for the following reasons:

- It will provide a **strategic route,** forming part of the TEN-T comprehensive network, across the River Corrib without the need to go through the city.
- This strategic route will be of a **high standard** cross-section and will provide the **capacity required for the strategic traffic** serving the city and connecting the county to the national network.
- Improves **connectivity to the Western Region** i.e. the county areas and hinterland beyond the city zone and provides the necessary connectivity to all the national roads and the Western Region and for those living within Galway and the rest of the country.
- Moreover, access to this strategic route is limited to the junctions which will **protect the road asset in the future** and means that its **capacity is secure**.

- This route is of European importance given that the **TEN-T comprehensive network designation** extends west of the city to the terminus of N6 GCRR and will provide a link to the Western Region of the standard of a comprehensive route in accordance with TEN-T.
- Provides for **strategic traffic accessing Galway City** and connectivity with zones of traffic generators and attractors.
- This route provides connections to **essential city links** to better distribute traffic.
- It meets the functionality of the **road component of the overall intermodal transport solution** and enables the reallocation of existing road space within the city to public transport and smart mobility measures and is part of a sustainable holistic transport solution. Thus, facilitating a **more efficient public transport system** and the provision of a **multi-modal choice of travel**.
- **Improves safety** levels for all public road users.
- By **tackling the city's congestion issues**, it will provide a **better quality of life** for the city's inhabitants and provide a much **safer environment** in which to live.
- By **reducing the number of cars** on the roads and streets within the city centre and improving streetscapes, residents, commuters, visitors to Galway and students are facilitated to commute using **multi-modal transport means**. This includes travelling on foot, by bicycle and on the public transport system.
- It provides connectivity to the national roads via junctions to maximise the transfer of cross-city movements to the new road infrastructure, thus **releasing and freeing the existing city centre zone from congestion** caused by traffic trying to access a city centre bridge to cross the River Corrib.
- It attracts traffic from the city centre zone thus facilitating reallocation of road space to public transport leading to **improved journey time reliability for public transport**.
- It **caters for the strong travel demand** between zones on either side of the city, both directly and through enabling significant improvements to walking, cycling and public transport services.
- It provides additional river crossing with **connectivity back to the city** either side of the bridge crossing.
- It facilitates **improved city centre environment** for all due to reduced congestion, thus **encouraging walking and cycling** as safe transport modes.