

METROLINK

Integrated Transport. Integrated Life.



MetroLink Annual Progress Report – Committee of Public Accounts September 2023



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1 Introduction

In July 2023, the Committee of Public Accounts published its report titled ‘*Examination of the 2019 and 2020 Appropriation Accounts for Vote 31 – Transport, the 2020 Financial Statements for the National Transport Authority, and the 2020 Financial Statements for Transport Infrastructure Ireland*’ which included the recommendation of the Committee that:

‘The Department provides it with a report on the MetroLink project by September 2023, and on an annual basis thereafter for the duration of the project, to include:

- 1. An up-to-date detailed breakdown of the total expenditure on MetroLink*
- 2. The most up-to-date estimated cost of the project*
- 3. Any milestones that have been achieved, missed, or amended within that timeframe.’*

This report addresses the recommendations made by the Committee of Public Accounts as part of their evaluation of exchequer spending on public transport infrastructure projects.

2 MetroLink Total Expenditure

Overall Expenditure on the MetroLink Programme for the period January 2016 to June 2023 inclusive, totals €116.9 million including VAT. The summary of costs by category are provided in table 1.

Table 1 – Overall Expenditure

Expenditure Category	Amount
Emerging Preferred Route	€ 0.2 M
Preferred Route Design, Public Consultations, Preliminary Design, Railway Order Documentation and Statutory Approval Process	€ 54.2 M
Advanced, Enabling Works and Site Investigations	€ 21.4 M
Programme Management	€ 23.2 M
Value Added Tax	€17.9 M
Overall Expenditure	€ 116.9 M

The full breakdown is provided in Appendix 1.



3 Preliminary Cost Forecast

The forecast cost range of the project is set out in the Preliminary Business Case, which was approved in July 2022, and extends from €7.16 billion to €12.25 billion (excluding VAT) as summarised in table 5. This range reflects the uncertainties that exist in forecasting the outturn costs of mega projects that span over many years.

Following the finalisation of the Preliminary Design which formed the basis of the Railway Order submission in September 2022, the MetroLink delivery costs are being reviewed in preparation for a Decision Gate 2 submission and are expected to increase in order to take account of the significant inflationary pressures experienced particularly in construction and the economy generally since 2021, that are still currently impacting market conditions including supply chain constraints and the significant increase in energy prices since the outbreak of the war in Ukraine.

The cost estimate range provides forecasts of the likely outturn costs at different probability levels – P80 representing an 80% probability that the outturn cost will be less than or equal to this figure; P50 representing a 50% probability that the outturn cost will be less than or equal to this figure; and P30 representing a 30% probability that the outturn cost will be less than or equal to this figure. This provides a more informed understanding of the likely cost implications of a project and reflects the challenging uncertainties associated with forecasting future costs over a considerable timeframe.

3.1 Base Cost Forecast

The base cost forecast for MetroLink which includes the Direct Works (Construction) Costs, Land & Property Costs and Authority Costs as per the approved Preliminary Business Case is summarised in table 2:

Table 2 – Base Cost Forecast (excluding VAT)

	(Q4 2021)
Direct Works (Construction) Costs	€ 4.59 billion
Land & Property Costs	€ 0.44 billion
Authority Costs	€ 0.78 billion
Base Cost Forecast	€ 5.80 billion

3.2 Risk Allowance

The risk allowances for MetroLink are provided in table 3:

Table 3 – Risk Allowance Range (excluding VAT)

	(Q4 2021)
P30 Risk Allowance	€ 0.41 billion
P50 Risk Allowance	€ 1.74 billion
P80 Risk Allowance	€ 3.03 billion



3.3 Inflation

The range of inflation allowances are summarised in table 4:

Table 4 – Inflation Ranges (excluding VAT)*

	P30	P50	P80
Low Inflation	€ 0.96 billion	€ 1.11 billion	€ 1.42 billion
Medium Inflation	€ 1.48 billion	€ 1.96 billion	€ 2.37 billion
High Inflation	€ 2.07 billion	€ 2.43 billion	€ 3.42 billion

*For purposes of developing the costs for the project including inflation, an opening year of 2034 has been used as per the approved PBC timeline

3.4 Delivery Cost Summary

The MetroLink delivery cost summary is summarised in table 5:

Table 5 – Delivery Cost Summary (excluding VAT)

		Without inflation (Q4 2021)	With inflation
Management Stretch Target	P30 Low	€ 6.20 billion	€ 7.16 billion
Management Base Target (Central Cost Forecast)	P50 Medium	€ 7.54 billion	€ 9.50 billion
Prudent Client Appraisal Value	P80 High	€ 8.83 billion	€ 12.25 billion



4 Programme Timeframes

Further to the Updated Timeframes that were included in the Approved Preliminary Business Case, the Key milestones that have been achieved, missed, or amended within that timeframe are listed in table 6.

Table 6 – Key Business Case Milestones

Milestone	Approved PBC Anticipated Timeline	Revised Anticipated Timeline	Status
Approval in Principle: Decision Gate 1	July 2022	July 2022 (A)	Achieved
Submit Railway Order Application	Sept' 2022	Sept' 2022 (A)	Achieved
Detailed Project Brief and Procurement Strategy Submission	Q2 2023	Q4 2023	Amended
Pre-Tender Approval: Decision Gate 2	Q2 2023	Q1 2024	Amended
Tenders issued	2024 / 2025	2024/2025	
Railway Order Granted	Q1 2024	Q4 2024	Amended

(A) Actual

The key milestones to progress MetroLink in line with the programme outlined in the PBC are granting of a Railway Order and procurement of contractors. These milestones could be impacted by any judicial reviews, lack of suitable contractors tendering for the contract packages, procurement challenges and the availability of resources and funding. In line with the recommendation, NTA / TII will provide annual updates on the achievement, or otherwise, of the key milestones within that timeframe.

A status update in relation to some of the milestones is provided below:

- Railway Order Granted:** This activity is in the control of An Bord Pleanála (ABP). In July 2023 ABP informed TII that an oral hearing would be held. The date for the oral hearing has not been confirmed by ABP. TII have assumed that the oral hearing will be held in Q1 2024, with a decision to grant a Railway Order being issued by ABP in Q3 2024 and an Enforceable Railway Order being in place in Q4 2024 subject to the expiration of the judicial review period.
- Tenders Issued:** Tenders will be issued subject to an Enforceable Railway Order being in place in Q4 2024. The Client Partner Contract was signed in July 2023. TII, with the support of the Client Partner will produce the tender documentation and the procurement of all works contracts.

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Public Accounts Committee – NTA Modelling Request

NTA Transport Modelling Department



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1. Introduction

1.1 Background

In July 2023, the Committee of Public Accounts published its report titled *“Examination of the 2019 and 2020 Appropriation Accounts for Vote 31 – Transport, the 2020 Financial Statements for the National Transport Authority, and the 2020 Financial Statements for Transport Infrastructure Ireland”*.

That report provided a number of recommendations one of which is Recommendation 6 which states:

“The National Transport Authority provide it with modelling by October 2023 on the projected impact of the Metrolink, DART+ and BusConnects projects, when completed, on the number of passenger journeys and modal shift in the Greater Dublin Area, and other cities nationwide”.

1.2 Proposed Approach

An extensive amount of transport modelling has already been undertaken in relation to metropolitan areas of Dublin, Cork, Galway, Limerick and Waterford as part of the development of transport strategies for those regions. Those transport strategies incorporated the projects referenced in the recommendation, in addition to other infrastructure and services. In addition, comprehensive transport modelling has also been undertaken for the MetroLink, DART+ and BusConnects programmes.

It is considered that the most informative way to provide the information sought is to provide the forecast overall strategy outcomes in the case of each city region, supplemented in the case of Dublin with specific output from the three listed mega-projects. In respect of the other cities, the design of the BusConnects services and infrastructure is at an earlier stage of development and the same level of transport modelling as in the case of Dublin is not yet feasible.

1.3 Report Structure

The remainder of this report is structured as follows:

- Chapter 2: Greater Dublin Area Transport Strategy and Dublin Projects
- Chapter 3: Limerick Transport Strategy
- Chapter 4: Waterford Transport Strategy
- Chapter 5: Cork Transport Strategy
- Chapter 6: Galway Transport Strategy
- Chapter 7: Summary

2. Greater Dublin Area (GDA) Transport Strategy

2.1 Overview

The Transport Strategy for the Greater Dublin Area 2022-2042 was approved by the Minister for Transport in January of this year. It sets out the framework for transport development across the region over the next two decades.

Its development took account of the spatial planning policies and objectives set out in the Regional Spatial and Economic Strategy (RSES) as adopted by the Eastern and Midland Regional Assembly and finalised in January 2020. This Transport Strategy is also consistent with national policies on sustainability as set out in climate action and low carbon legislation, and in climate action plans.

The overall aim of the Strategy is:

“To provide a sustainable, accessible and effective transport system for the Greater Dublin Area (GDA) which meets the region’s climate change requirements, serves the needs of urban and rural communities, and supports the regional economy.”

Figure 1: GDA Transport Strategy Study Area



2.2 Modelled Transport Scenarios

The NTA's East Regional Model (ERM) provides a comprehensive representation of travel patterns across the Greater Dublin Area and was, therefore, chosen as the most suitable tool for the testing and appraisal of the GDA Strategy.

The Strategy development work included identification and evaluation of various scenarios and proposals. Following consideration of the various alternatives, plus feedback from public consultation, the final strategy includes rail, bus and cycling enhancements, as well as traffic management and demand management measures. The key proposals in the adopted strategy include:

- **Active Modes (walking & cycling):** Significantly enhanced pedestrian and cycle network throughout the region, including traffic free streets, more pedestrianisation and a comprehensive cycle network in accordance with the updated Greater Dublin Area Cycle Network. The strategy also sets out a suite of complementary measures to improve journey quality of those travelling on foot or by bicycle.
- **BusConnects:** The GDA Strategy proposes a comprehensive network of high frequency bus services providing radial services between corridors either side of the city core (Core Bus Corridors - CBCs) and orbital services across the network. A significant improvement in the frequency and capacity of bus services on these radial routes and next generation ticketing is also proposed.
- **Combined Rail Network:** To support sustainable growth along an enhanced railway corridor, the GDA strategy proposes an extension of the DART services to Drogheda, Maynooth and Celbridge as part of the **DART+ Programme** plus further extension to Kilcock, Sallins and Wicklow. The DART+ programme will also include additional fleet, aligned with higher passenger demand, and a higher frequency of service on all lines. The existing rail network (commuter rail) in the GDA will be extended by the provision of a new rail line from the M3 Parkway terminus station (just west of Dunboyne) to Navan town, serving Dunshaughlin and Kilmessan along its route.
- **Light Rail:** The GDA Strategy proposes the delivery of 30km of new Luas lines including services to Lucan, Bray, Poolbeg and Finglas, as well as an underground metro system in the Swords-Dublin Airport-City Centre corridor (**MetroLink**).
- **Road Network:** Among the Road Scheme proposals included in the GDA strategy are: the upgrade of the N2 corridor to address safety issues, the provision of bus priority on the N/M11 corridor and the delivery of the N3-N4 link. The Strategy also aims to protect the strategic function of motorways and national roads, and promotes the reallocation of roadspace to sustainable modes.
- **Traffic / Demand Management Measures:** The GDA Strategy encourages the following measures in relation to traffic management: implementation of speed limits of 30km/h in all residential areas and in urban centres, variable speed limits to be considered as well as car free zones in urban areas. In relation to car parking, the GDA Strategy provides parking standards as maxima rather than the traditional minima to reduce car demand; restrictive parking standards to be applied both at residential (origins) and non-residential commercial developments (destinations). The Strategy also supports the implementation of increased parking charges both at retail centres and on-street parking and workplaces as well as the development of a policy of workplace parking reduction.

Table 1 provides a description of the two model scenarios which will be compared in the remaining sections of this Chapter.

Table 1: GDA Modelled Scenario Description

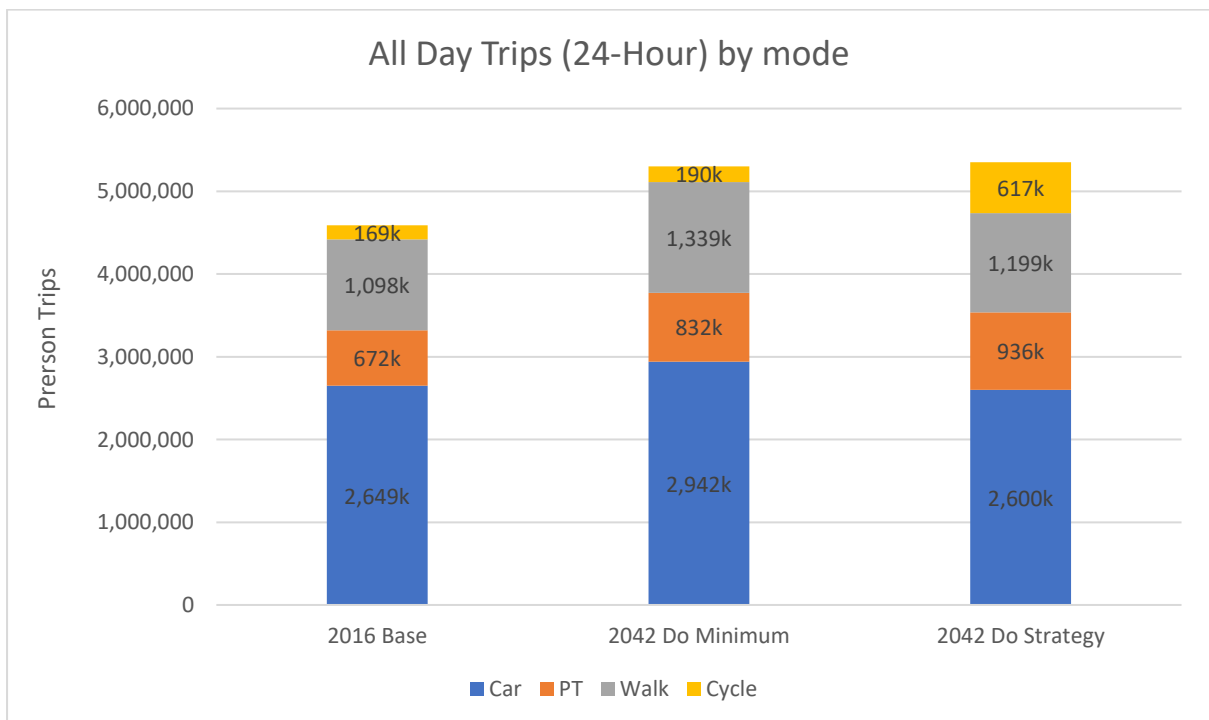
Scenario	Description
2042 Do Minimum	The Do Minimum network includes forecast transport demand (for the design year of 2042) and additional transport schemes (public transport, cycling and road) that are already built, under construction or are committed in terms of planning approval and allocation of funds. This scenario is set as the baseline against which all the public transport proposals are compared.
2042 Do Strategy	The Do Strategy network represents the future year with all proposed GDA Strategy schemes included. The schemes are coded on top of the Do Minimum 2042 scenario to facilitate the assessment of the strategy.

2.3 Modelled Travel Demand and Mode Share

2.3.1 Travel Demand

The graph below (Figure 2) presents the Greater Dublin Area (GDA) 24Hr Demand Distribution by mode for the Base Year (2016) and the forecast (2042) Do Minimum and Do Strategy scenarios. The analysis suggests an increase in overall trips within the GDA from approximately 4.6million in the base year 2016 to 5.3million trips (person trips) in 2042, representing a 17% increase in demand.

Figure 2: GDA 24Hr Demand Distribution



2.3.2 Mode Share Impacts

Table 2 provides a summary of the forecast mode share for trips within the GDA in 2042:

Table 2: GDA 24Hr Mode Shares

24-Hour Mode Shares				
Scenario	Car	PT	Walk	Cycle
2016 Base year	57.7%	14.6%	23.9%	3.7%
2042 Do Minimum	55.5%	15.7%	25.2%	3.6%
2042 Do Strategy	48.6%	17.5%	22.4%	11.5%

The Transport Strategy, which have MetroLink, DART+ and BusConnects as the foundational elements, is forecast to lead to a significant reduction in car mode share for the Greater Dublin Area from 57.7% in 2016 to 48.6% in 2042 for all trip purposes throughout the day. The Cycling mode share for all trips over the 24-hour period is forecast to increase from 3.7% in 2016 to 11.5% in 2042. The numbers using public transport in the GDA over a 24-hour period increase by 39%, leading to a mode share increase from 14.6% to 17.5%.

3. Limerick Transport Strategy

3.1 Project Overview

The NTA, in collaboration with Limerick City and County Council and Clare County Council, have developed a Transport Strategy for the Limerick and Shannon Metropolitan Area (LSMA) covering the period to 2040. The strategy aligns with the over-arching vision and objectives of the National Planning Framework (NPF) and Regional Spatial and Economic Strategy (RSES) and provides a framework for the planning and delivery of transport infrastructure and services in the LSMA over the next two decades. It also provides a planning policy for which other agencies can align their future policies and infrastructure investment.

Figure 3: LSMATS Study Area



3.2 Modelled Transport Scenarios

The NTA's Mid-West Regional Model (MWRM) provides a comprehensive representation of travel patterns across the Limerick and Shannon Metropolitan Area and has been used to inform the development and appraisal of the Strategy.

Various scenarios were tested as part of the strategy preparation process for the Limerick and Shannon Metropolitan Area (LSMA). The final adopted option (Do Strategy Scenario) includes rail and cycling enhancements, as well as demand management measures. This option was considered the preferred scenario as it promotes strong use of Public Transport and active modes with most trips across the day taken by sustainable modes. The key proposals in the adopted strategy include:

- **Active Modes (walking & cycling):** Significantly enhanced pedestrian and cycle network throughout the strategy area, including a comprehensive strategic cycle network and a suite of complementary measures to improve journey quality of those travelling on foot or by bicycle.
- **BusConnects:** LSMATS proposes to develop and deliver the BusConnects Limerick Programme. BusConnects Limerick will consist of a comprehensive network of high frequency bus services providing radial services between corridors across the city, greater levels of bus priority as well as significant improvement in the frequency of bus services on these radial routes is also proposed.
- **Rail:** LSMATS outlines several measures aimed at facilitating the improvement in InterCity and commuter services and journey times between Dublin, Limerick Junction, Waterford, and Cork in accordance with the All-Island Strategic Rail Review. This includes measures such as providing Dual Track between Limerick Colbert and Limerick Junction, new stations at Moyross and Ballysimon, and improved frequency of services to in the Study Area.
- **Land Use Regeneration and Schools:** LSMATS acknowledges the need for future development to occur in line with NPF principals with future development focused on areas with the built-up areas of cities, towns and villages and recognising the importance of integrating land-use and transport.
- **Urban Design and Place making:** A number of place making proposals are contained within LSMATS aimed at promoting higher levels of permeability and legibility for all users, in particular more sustainable forms of transport. These measures include, low emission zones, traffic restrictions and reduced speed limits.
- **Road Network and Demand Management:** Among other proposals, LSMATS proposes to retain and protect the strategic function of the national road network, complete the appraisal process and deliver the N/M20 scheme in addition to constructing the N69/M21 Foynes to Limerick Road. Some of the Demand Management proposals in LSMATS include rationalising parking provision, introducing low traffic/ zero traffic zones and exploring the introduction of a parking levy for workplaces.

Table 3 below provides a description of the two model scenarios which will be compared in the remaining sections of this Chapter.

Table 3: LSMATS Modelled Scenario Description

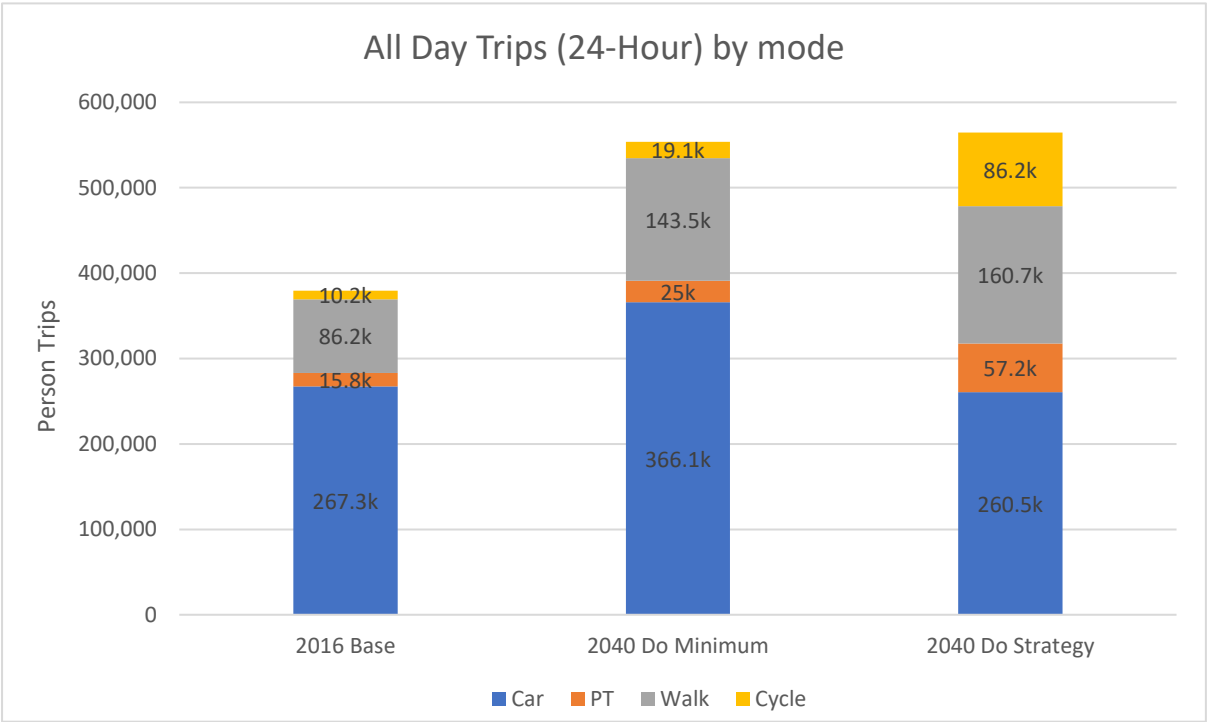
Scenario	Description
2040 Do Minimum	Scenario with existing transport network plus any committed schemes (with planning permission and funding secured) for the Study Area.
2040 Do Strategy	Scenario Builds on the Do-Minimum Measures and includes all the proposals from the Transport Strategy.

3.3 Modelled Travel Demand and Mode Share

3.3.1 Travel Demand

The graph below (Figure 4) shows the Limerick Shannon Metropolitan Area (LSMA) 24-Hour Demand Distribution by mode for the Base Year (2016) and the 2040 forecast Do Minimum and Do Strategy scenarios. The analysis shows a forecast increase in overall trips within the LSMA from approximately 380k trips in the base year 2016 to 558k trips in 2040, representing a 47% increase in demand. Additionally, the daily demand for sustainable travel almost triples, from 112k in the Base 2016 to 304k in 2040 following the introduction of the strategy.

Figure 4: LSMA 24Hr Travel Demand



3.3.2 Mode Share Impacts

The LSMATS is forecast to lead to a significant reduction in car mode share for the study area, reducing from 70% in 2016 to 46% in 2040 with the LSMATS in place (24-hour mode shares):

Table 4: LSMA 24Hr Mode Shares

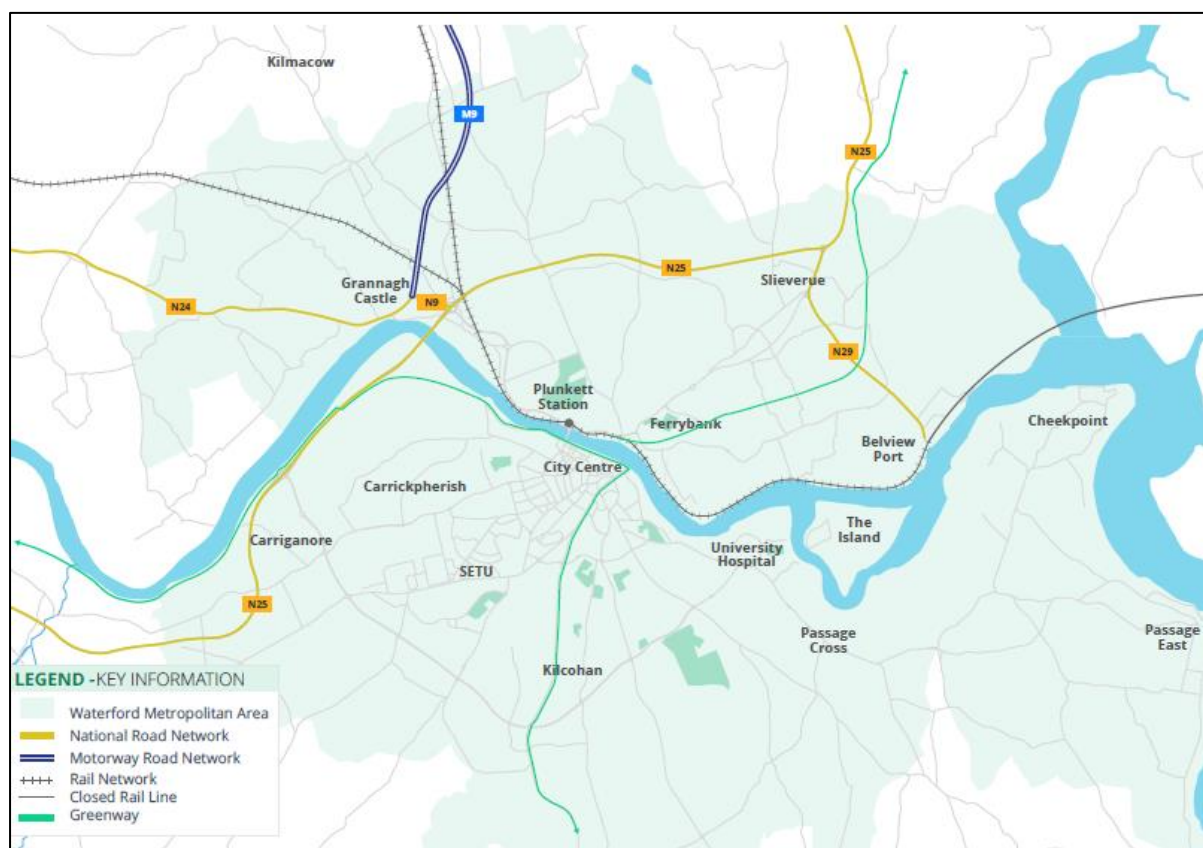
Scenario	24-Hour Mode Shares			
	Car	PT	Walk	Cycle
2016 Base	70.4%	4.2%	22.7%	2.7%
2040 Do Minimum	66.1%	4.5%	25.9%	3.4%
2040 Do Strategy	46.1%	10.1%	28.5%	15.3%

4 Waterford Transport Strategy

4.1 Project Overview

The NTA, in collaboration with Waterford City and County Council, Kilkenny County Council, the Southern Regional Assembly and Transport Infrastructure Ireland (TII) have developed a Transport Strategy for the Waterford Metropolitan Area (WMATS henceforth) covering the period up to 2040. The strategy provides a framework for the planning and delivery of transport infrastructure and services in the Waterford Metropolitan Area (WMA) over the next two decades. It also provides planning policy with which other agencies can align their future policies and infrastructure investments.

Figure 5: WMATS Study Area



4.2 Modelled Transport Scenarios

Throughout the WMATS development, modelling analysis was undertaken using the NTA's Regional Modelling System (RMS) and the South-East Regional Model (SERM) at various stages to assess options and determine the optimal transport strategy measures to support the development of the Waterford Metropolitan Area.

Various scenarios were tested as part of the strategy. The final adopted option (Do Strategy Scenario) includes rail and cycling enhancements, as well as demand management measures. This option was considered the preferred scenario as it promotes strong use of Public Transport and active modes. The key proposals from the strategy include:

- **Active Modes (walking & cycling):** Significantly enhanced pedestrian and cycle network throughout the study area, including upgrades to pedestrian and cycle infrastructure, delivery of

a safe comprehensive cycle network, as well as measures to improve journey quality of those travelling on foot or by bicycle.

- **BusConnects:** WMATS proposes to develop and deliver the BusConnects Waterford Programme. This will consist of a comprehensive network of enhanced bus services across the city region, greater levels of bus priority as well as significant improvement in the frequency of bus services on key radial routes is also proposed.
- **Rail:** WMATS proposed to relocate Plunkett Station to the North Quays and to support the recommendations from the All Ireland Rail Review.
- **Urban Design and Place making:** A number of place making proposals are contained within WMATS aimed at promoting higher levels of permeability and legibility for all users, in particular more sustainable forms of transport. These measures include reallocation of parking spaces on the South Quays to facilitate public realm upgrades.
- **Road Network and Demand Management:** Among other proposals, WMATS proposes to develop a City Centre Traffic Management Strategy and progress the delivery of a downstream river crossing in the later period of the strategy. Some of the Demand Management proposals in WMATS include reducing the availability of Free Workplace Parking and removal of heavily discounted daily parking rates.

The table below (Table 5) provides a description of the two model scenarios which will be compared in the remaining sections of this Chapter.

Table 5: WATS Modelled Scenario Description

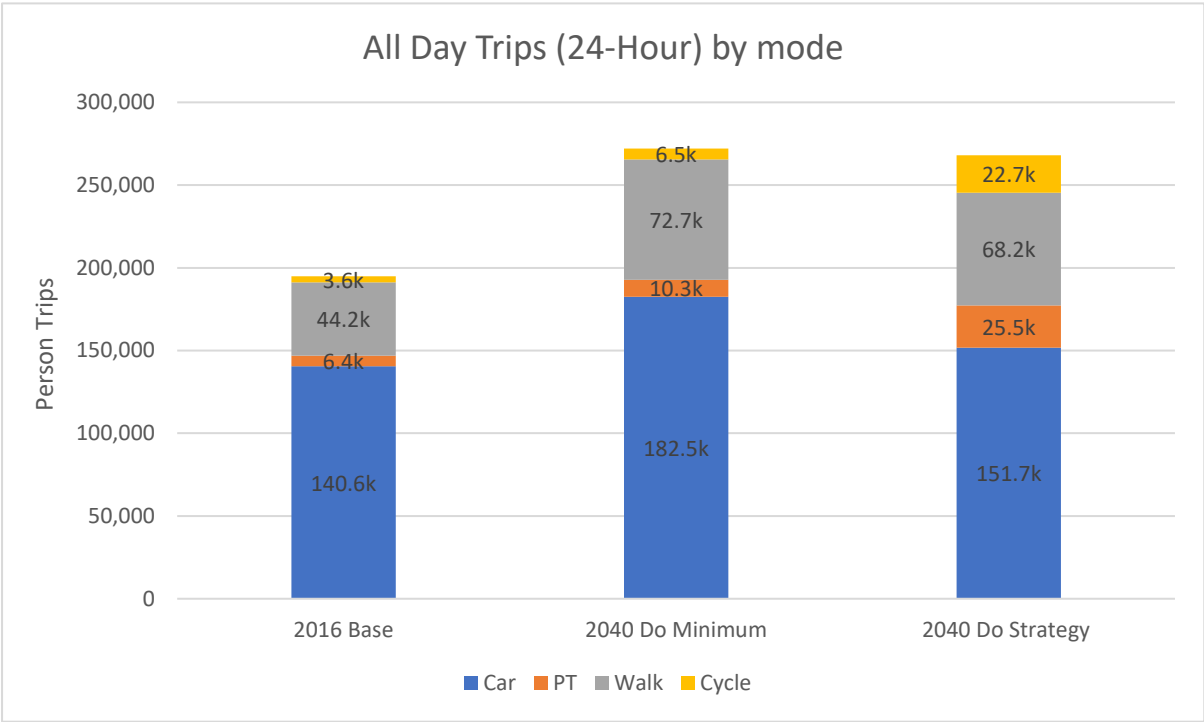
Scenario	Description
2040 Do Minimum	Scenario with existing transport network plus any committed schemes (with planning permission and funding secured) for the Study Area.
2040 Do Strategy	Scenario Builds on the Do-Minimum Measures and includes all of the proposals from the Transport Strategy.

4.3 Modelled Travel Demand and Mode Share

4.3.1 Travel Demand

Figure 6 shows the Waterford Metropolitan Area (WMA) 24-hour Demand Distribution by mode for the Base Year (2016) and the 2040 forecast Do Minimum and Do Strategy scenarios. This analysis shows an increase in overall trips, within the WMA, from approximately 195k trips in the base year to 270k trips in 2040, representing a 40% increase in demand.

Figure 6: WMA 24Hr Demand Distribution



4.3.2 Mode Share Impacts

The following table (Table 6) provides an analysis of mode shares for trips within the Waterford Metropolitan Area in 2040. In the Do Strategy scenario, the overall 24-hour public transport and cycling mode shares increase by 5.7%, and 6.1% respectively when compared against the Do Minimum.

This combined shift to sustainable modes results in a 11% drop in metropolitan area car mode share over 24-hours when compared against the Do Minimum scenario, and a 16% drop against the Base (2016).

Table 6: WMA 24Hr Mode Shares

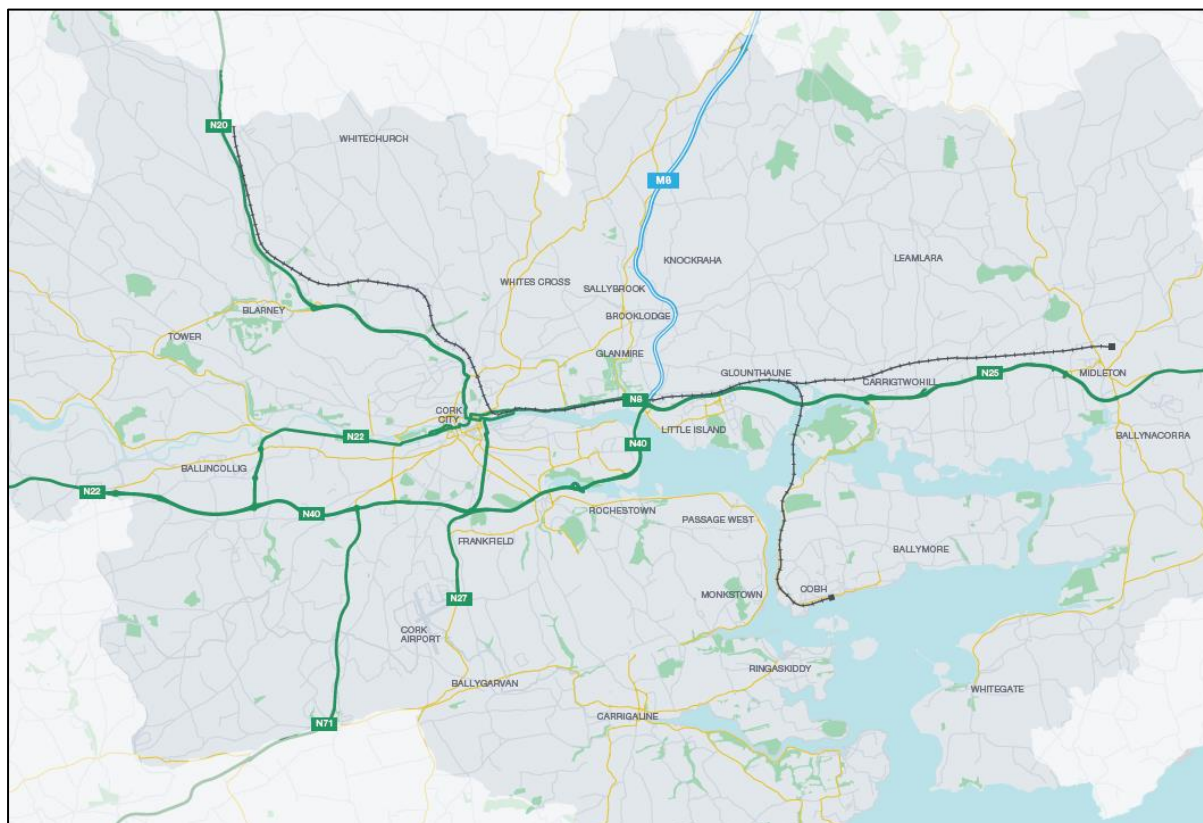
Scenario	24-Hour Mode Shares			
	Car	PT	Walk	Cycle
2016 Base	72.2%	3.3%	22.7%	1.9%
2040 Do Minimum	67.1%	3.8%	26.7%	2.4%
2040 Do Strategy	56.6%	9.5%	25.4%	8.5%

5. Cork Transport Strategy

5.1 Project Overview

The NTA in collaboration with Cork County and City Councils, have developed a Transport Strategy for the Cork Metropolitan Area (CMA) covering the period up to 2040. The strategy provides a framework for the planning and delivery of transport infrastructure and services in the CMA over the next two decades. It also provides a planning policy for which other agencies can align their future policies and infrastructure investment.

Figure 7: CMATS Study Area



5.2 Modelled Transport Scenarios

The South-West Regional Model (SWRM) provides a comprehensive representation of travel patterns across the Cork Metropolitan Area and is suitable tool for the testing and appraisal of the Strategy.

Various scenarios have been tested as part of the development of the strategy. The final adopted option (Do Strategy Scenario) includes rail, bus and cycling enhancements, as well as demand management measures. This option was considered the preferred scenario as it promotes strong use of Public Transport and active modes. The key proposals from the strategy include:

- **Active Modes (walking & cycling):** Significantly enhanced pedestrian and cycle network throughout the study area, including a comprehensive cycle network and a suite of complementary measures to improve journey quality of those travelling on foot or by bicycle.
- **BusConnects:** CMATS proposes a comprehensive network of high frequency bus services providing radial services between corridors either side of the city core and orbital services across

the network. A significant improvement in the frequency of bus services on key radial routes is also proposed.

- **Suburban Rail:** To support sustainable growth along an enhanced railway corridor, CMATS proposed new railway stations along the Midleton/Cobh-Cork and Mallow/Cork lines and the improvement of certain services' frequency.
- **Light Rail:** CMATS proposes a strategic east-west public transport corridor from Mahon to Ballincollig via the City Centre.
- **Road Network:** Among the road scheme proposals included in CMATS are the provision of northern and southern distributor roads, provision of the Cork Northern Ring Road, completion of the Cork City Movement Strategy and completion of the N28 and Dunkettle Upgrades.

The following table provides a description of the two model scenarios which will be compared in the remaining sections of this Chapter.

Table 7: CMATS Modelled Scenario Description

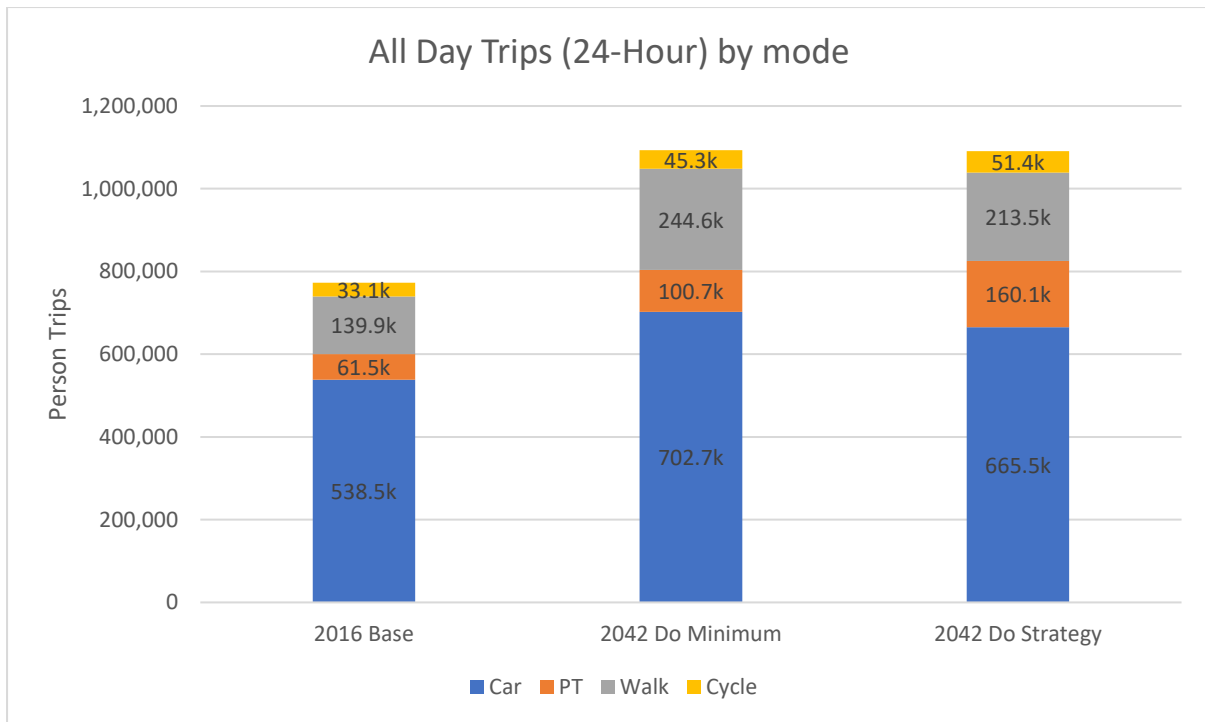
Scenario	Description
2040 Do Minimum	The Do Minimum network includes forecast transport demand (for the design year of 2040) and additional transport schemes (public transport, cycling and road) that are already built, under construction or are committed in terms of planning approval and allocation of funds. This scenario is set as the baseline against which all the public transport proposals are compared.
2040 Do Strategy	The Do Strategy network represents the future year with all CMATS transport schemes included. The schemes are coded on top of the Do Minimum 2040 scenario to facilitate the assessment of the strategy.

5.3 Modelled Mode Share and Travel Demand

5.3.1 Travel Demand

Figure 8 presents the Cork Metropolitan Area (CMA) 24Hr Demand Distribution by mode for the Base Year (2011) and the forecast (2040) Do Minimum and Do Strategy scenarios. The analysis suggests an increase in overall trips within the CMA from approximately 830k in the base year 2011 to 1.2million trips in 2040, representing a 45% increase in demand.

Figure 8: CMA 24Hr Demand Distribution



5.3.2 Mode Share Impacts

The table below (Table 8) provides an analysis of the forecast mode share for trips within the CMA in 2040:

Table 8: CMA 24Hr Mode Shares

24-Hour Mode Shares				
Scenario	Car	PT	Walk	Cycle
2011 Base year	69.7%	8.0%	18.1%	4.3%
2040 Do Minimum	64.3%	9.3%	22.3%	4.0%
2040 Do Strategy	61.4%	14.6%	19.6%	4.5%

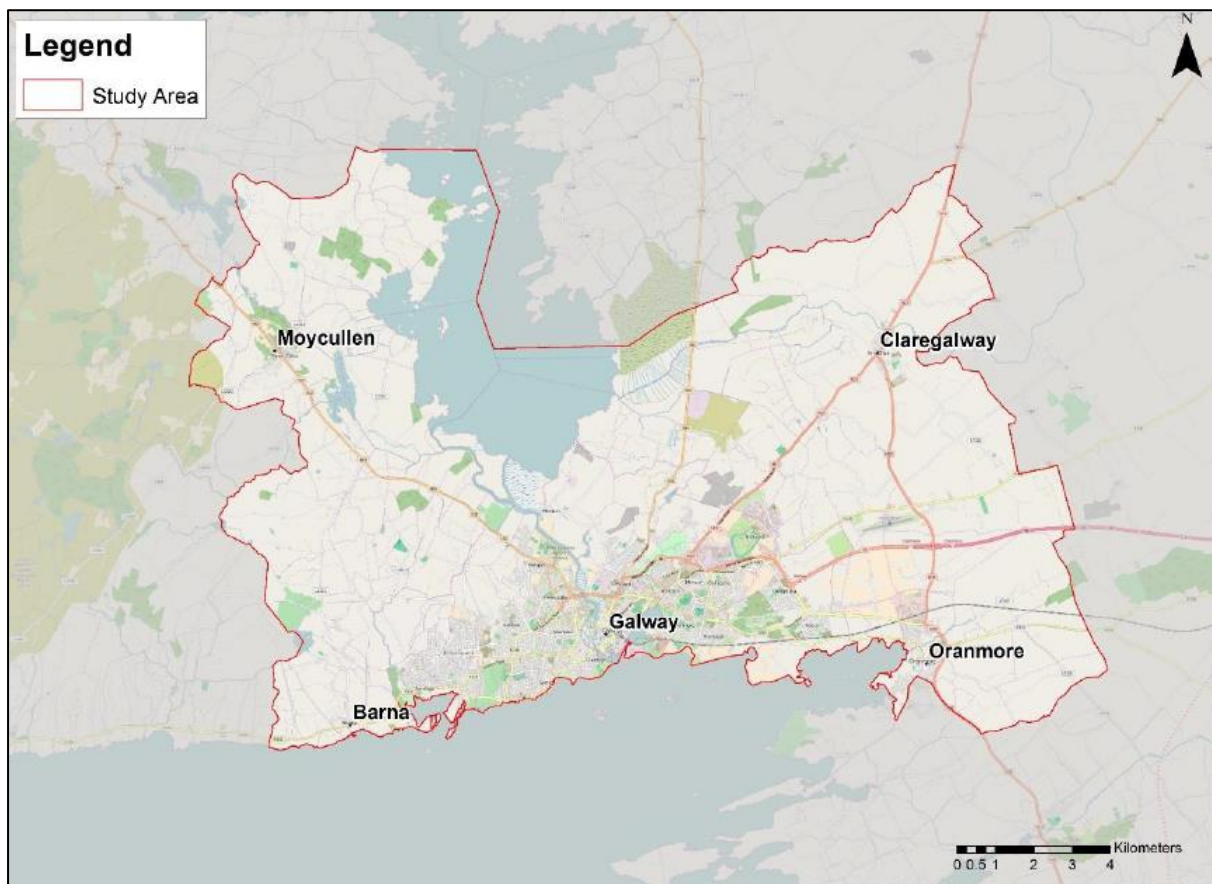
The results of the assessment show a substantial increase in sustainable mode share in the Do Strategy scenario compared to the Do Minimum; 24-hour PT mode share increases from 9.3% to 14.6%, with corresponding reductions in Car mode share reducing from 64.3% to 61.4%.

6. Galway Transport Strategy

6.1 Project Overview

The Galway Transport Strategy (GTS) sets down a framework for how Galway City's transport network can be redefined to address the current transport issues and well as cater for the future development of the city. The primary focus of the GTS is to examine how existing infrastructure can be best utilised and to ensure the most efficient and sustainable use of the limited available road space. The GTS also provides Galway an opportunity to grow both physically and economically, whilst creating the opportunity for improvements to the urban environment.

Figure 9: GTS Study Area



6.2 Modelled Transport Scenarios

The GTS has been developed using information from the NTA's West Regional Model (WRM); the WRM covers the five counties of Connacht and Donegal County with a focus on Galway City and provides a comprehensive representation of travel patterns across the Study Area and therefore is the appropriate tool for the testing and appraisal of the Strategy.

Various scenarios were developed and evaluated as part of the strategy. The final adopted option (Do Strategy Scenario) includes an upgraded and integrated public transport network, city centre prioritisation for public transport, as well as improvements for walking and cycling infrastructure priority. The key proposals from the strategy include:

- **Active Modes (walking & cycling):** Significantly enhanced pedestrian and cycle network throughout Galway, including a new pedestrian and cycle crossing of the River Corrib, a city centre

public realm improvement plan and complimentary measures to improve journey quality for pedestrians and cyclists.

- **Bus:** The GTS proposes a comprehensive redesign of the local Bus network to be supported by an East-West running Public Transport Only Corridor through the city centre.
- **Suburban Rail:** GTS proposes increased frequency of Rail Services to the city and upgrade of Ceannt Station to support interchange between regional and local public transport.
- **Road Network:** Among the road scheme proposals included in the GTS is the orbital bypass of Galway from the N6 to the R336 Bearna Road linking the N6, N17, N84 and N59 national roads (N6 Galway City Ring Road).

6.3 Modelled Outputs

The Galway Transport Strategy was originally prepared in 2016 and the same level of modelling analysis available for the cities outlined above is not available in the case of the existing Galway Transport Strategy. In addition, the style of reporting of strategy outcomes differed in the case of the Galway Transport Strategy.

An updated Galway Transport Strategy is currently under preparation by the NTA and will be the subject of a public consultation process early in 2024. When completed next year, it will replace the current strategy.

The modelling report accompanying the 2016 Galway Transport Strategy reports the following outcomes and benefits arising from the implementation of the strategy:

- 9.9% increase in the sustainable mode share;
- 50% reduction in the total number of road links over capacity;
- 18.3% reduction in City Centre traffic volumes;
- A significant reduction of 77.5% in the overcapacity queued hours;
- A reduction of 10% in total travel time across all modes;
- Significant increase in the provision of cycling infrastructure with a 569% increase in cycle routes of LOS B or higher;
- A total of 1700m of public realm improvements;
- Reduction in travel costs for both Road and Public Transport of 10.6% and 22.9% respectively; and
- A relative increase of 6.2% in the combined walking and cycling mode share.

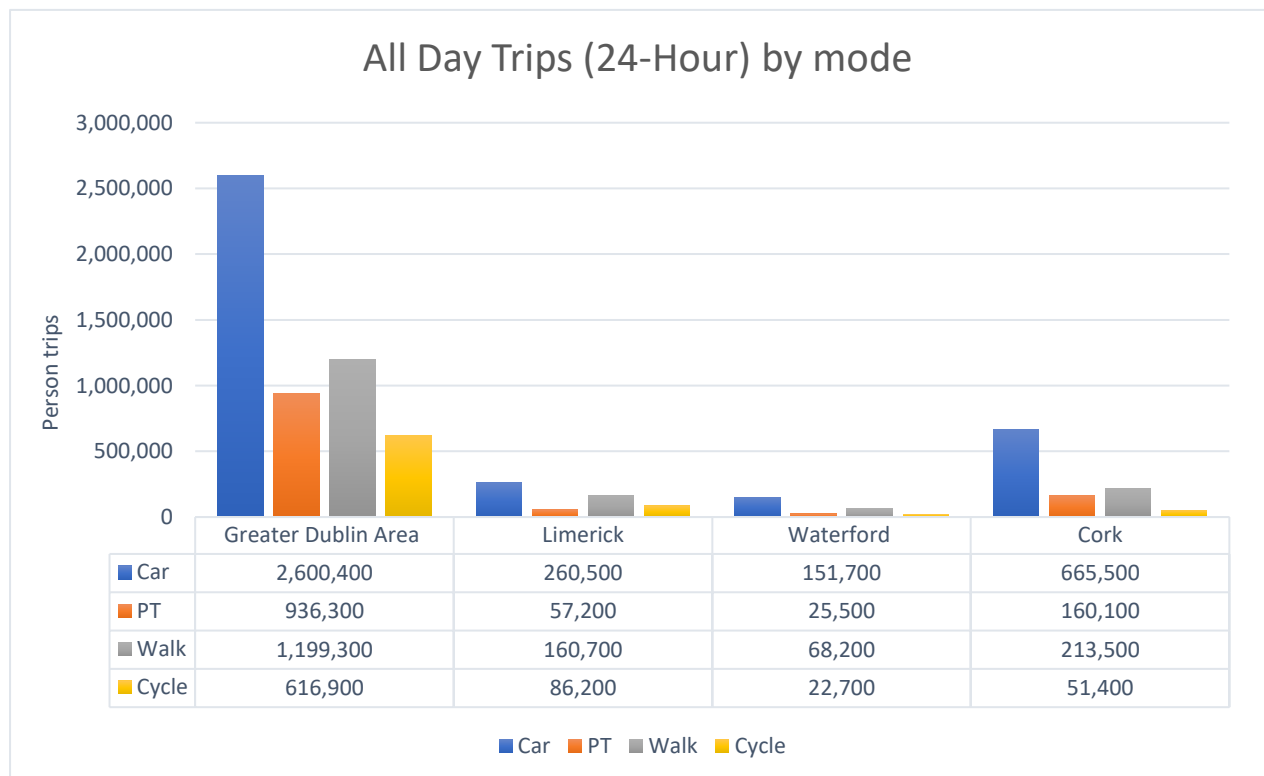
A draft updated transport strategy for Galway City will be available early next year and will be the subject of a public consultation process.

7. Summary

This report provides a summary of the Transport Strategies developed by the NTA for the Greater Dublin Area, Limerick, Waterford, Cork, and Galway, focusing on mode share and patronage forecasts. All strategies have been developed in accordance with national policies on sustainability as set out in climate action and low carbon legislation, and in climate action plans. Their goal is to promote strong use of Public Transport and active modes.

The forecast travel demand by mode (Car, PT, Walk, Cycle) for the relevant forecast years of each strategy is presented in the following graph.

Figure 10: Forecast Travel Demand by Transport Strategy



The following table summarises the forecast mode shares for trips by region in the relevant forecast years, for each Transport Strategy.

Table 9: Forecast Mode Shares by Transport Strategy

24-Hour Mode Shares			
Transport Strategy	Car	PT	Active Modes
Greater Dublin Area (GDA)	48.6%	17.5%	33.9%
Limerick (LSMA)	46.1%	10.1%	43.8%
Waterford (WMA)	56.6%	9.5%	33.9%
Cork (CMA)	61.4%	14.6%	24.1%
Galway (GTS)	59.6%	9.7%	30.7%

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Dún Scéine, Lána Fhearchair
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Committee of Public Accounts Recommendations to the National Transport Authority

National Transport Authority Response - September 2023

Introduction

The purpose of this paper is to provide a response and update to the recommendations from the Committee of Public Accounts July 2023 Report titled *“Examination of the 2019 and 2020 Appropriation Accounts for Vote 31 – Transport, the 2020 Financial Statements for the National Transport Authority, and the 2020 Financial Statements for Transport Infrastructure Ireland”*. The recommendations applicable to the NTA are set out below, together with the NTA response to the specific item.

Recommendation 1:

The Committee recommends that the Department provides it with a report on the Metrolink project by September 2023, and on an annual basis thereafter for the duration of the project, to include:

- **an up-to-date detailed breakdown of the total expenditure on Metrolink,**
- **the most up-to-date estimated cost of the project, and**
- **any milestones that have been achieved, missed, or amended within that timeframe.**

Response

Please see attached report titled *“MetroLink Annual Progress Report”* detailing MetroLink total expenditure to date, preliminary cost forecast and programme timeframes.

Recommendation 2:

The Committee recommends that the National Transport Authority reports to it by September 2023 on the lessons learned from the significant levels of ineffective expenditure on the Metro North, Metro West and DART Interconnector projects, and provides details of what the NTA is doing to prevent ineffective expenditure on the Metrolink project, and other planned public transport infrastructure projects.

Response

Background and Context

Metro North, Metro West and DART Underground are all projects that were largely developed in the period 2005 to 2010. Under Transport 21, the capital plan published by the Government in 2005 to guide transport investment, €34 billion was planned for transport investment over a ten-year period up to 2015. As well as including for the delivery of the inter-urban motorway programme, the plan envisaged the delivery of Metro North, the DART Underground project and Metro West as major public transport initiatives.

Given the developed stage of planning for the motorway network, the main investment focus of the first five years of the Transport 21 plan was the roads network, and specifically the development of

the planned motorways. It was intended that the investment emphasis would then shift to give priority focus to the public transport projects during the second five-year period of the Transport 21 plan, being the period 2011-2015.

While the roads programme was the beneficiary of the intended levels of investment up to 2010, enabling the completion of the five major inter-urban motorway routes plus a number of other major road schemes, the position on public transport was dramatically different. The global economic downturn in 2008, coupled with an unprecedented banking crisis, led to Ireland seeking, in 2010, financial assistance and support from the International Monetary Fund, the European Union and the European Central Bank to address its economic problems.

One consequence of this economic crash was that the State's prior capital investment plans, including Transport 21, could no longer be delivered – they were simply unaffordable under the new circumstances. Given that the structure of the Transport 21 plan comprised of an initial focus on roads up to 2010 to be followed by an investment transition to public transport thereafter, the public transport investment programme became disproportionately affected due to Ireland's changed financial circumstances in 2010. Instead of planned annual investment in public transport of between €1 billion and €2 billion, the investment available in 2011 and for subsequent years was only a small fraction of that.

These circumstances led the Government in 2011 to recognise and confirm that the previously planned Metro North project could not proceed, even though it had received planning consent. Similarly, a decision was taken that the Metro West project should not proceed in the planning process, as there was no prospect of funding being available to advance its delivery in the near future. Equally, it was also the case that funding was not available to progress the DART Underground tunnel in the timeframe and manner that had been intended. In respect of the DART Underground tunnel, it was also identified that the wider DART Expansion programme would also need to be developed in tandem with the tunnel, adding to the overall costs needed to deliver the intended outcomes.

Overall, it was macro-economic events, in particular the effects of Ireland's economic collapse, that radically curtailed the investment funding available in Ireland for a number of years from 2010 onwards, and led to the non-progression on Metro North, Metro West and the DART Underground projects on the previously intended basis. Notwithstanding that these were unprecedented events of a unique nature, there are still lessons that can be learned from these experiences.

Lessons Learned

1. A key component to ensuring effective transport investment is the provision of a long-term regional transport plan providing a comprehensive framework to guide the delivery of transport infrastructure and services across that region. This approach allows infrastructure projects to be planned on an integrated and coordinated basis, safeguarding against the risks of ineffective expenditure. This arrangement is now embedded in the Dublin region through the NTA's Transport Strategy for the Greater Dublin Area 2022-2042, which was approved by the Minister for Transport earlier this year, building on the first such statutory plan which was adopted in 2016. In addition, similar transport strategies have also been developed on a non-statutory basis in the other metropolitan city regions.
2. Governance arrangements are at the heart of infrastructure delivery. Robust governance arrangements are in place on all of the major public transport projects to ensure effective delivery of the particular schemes. This is coupled with a clear focus on the assurance

responsibilities of the Approving Authority, which in the case of most public transport projects is the NTA.

3. It is important that there is recognition at the planning submission stage of a project that the consequence of a confirmed Compulsory Purchase Order (CPO) approval is understood – within a period of time funding needs to be in place to allow the CPO to be activated. An approved CPO for a project has a limited period (generally 18 months) during which the formal notices triggering the compulsory acquisition order powers can be activated. Without a commitment to proceed with land/property acquisition, the CPO powers will lapse, requiring a subsequent re-application for approval.

Recommendation 3:

The Committee recommends that the National Transport Authority:

- **publishes a review on its website of the BusConnects programme on a twice-annual basis, including a survey of service user satisfaction with routes delivered by the programme, and**
- **provides detailed metrics for success when it makes announcements that it has successfully rolled out a new corridor or spine in relation to BusConnects.**

Response

It can take up to 12 months after launch of services for passenger numbers to grow to close to their out-turn levels. Additionally, punctuality and reliability can be variable in the early months due to journey time uncertainty prior to service launch. The content and focus of each issue of the rolling review will reflect this, and the NTA will focus each review on services launched 6 months or more prior to the review date.

The NTA currently undertakes public transport user customer satisfaction surveys on an annual basis, and will augment future surveys to include a larger sample of customers on bus services in areas where services have changed in the previous 6 to 24 months. Satisfaction of customers using these services will be compared to network-wide customer satisfaction in Dublin, to determine if recent network changes have resulted in greater or lesser degrees of satisfaction compared to the general levels on the bus network in Dublin.

The metrics that are under consideration for use in the reports to measure the success of the network redesign as it is implemented are:

- Annualised cost changes;
- Annualised passenger number changes;
- Punctuality by route;
- Reliability by route; and
- Customer satisfaction (annually only).

In all cases, relevant comparisons would be made, for example the position relative to overall changes on the bus network in Dublin.

It is also intended to include a summary of how the bus network redesign is meeting the strategic objectives of modernising the bus system to support Dublin's growth and pattern of development,

including: enhancing opportunities for orbital travel; making it easier to make journeys outside the traditional “peak” hours; serving new developments and complementing wider changes in the city centre and other key centres across the city.

Recommendation 4:

The Committee recommends that both the National Transport Authority and Transport Infrastructure Ireland provide a note in their respective financial statements to include details of any instances where the reported cost for a major capital project has varied by more than €5 million compared with the previous year, and the rationale for same.

Response

It is understood that “reported cost” means the expected final outturn cost for a project, and not the cost incurred during the financial year on the particular project.

As project lifecycles start from initial concepts and rudimentary estimates, it is proposed that this recommendation is implemented by reporting changes from the project estimate at Decision Gate 3 of the Public Spending Code. Decision Gate 3 represents the Final Business Case for a project, and is the point at which a final decision is taken to proceed or not proceed with the construction of a project.

As recommended, it is proposed that this reporting requirement is put in place for major projects, which is understood to mean projects requiring Government decision under the Public Spending Code. This will include all project costing €200 million and above.

Recommendation 5:

The Committee recommends that the National Transport Authority includes statistics in its annual report, starting from 2023, regarding:

- **The modes of transport used**
 - I. **in the Greater Dublin Area, and the cities of Cork, Galway, Limerick, and Waterford, and**
 - II. **nationally, broken down by local authority,**
- **how peak travel compares to off-peak travel.**

Response

The National Transport Authority is now undertaking a National Household Travel Survey on an annual basis, with the 2022 survey report published in August of this year. A copy of that survey is available at the following link: [Survey Report 2022](#). This survey will be repeated and published annually and will provide the metrics referenced in the recommendation.

Given that these survey reports will be individually published, it may be that only certain statistics are included in the organisation’s formal annual report, together with identification where the further information is available.

Recommendation 6:

The Committee recommends that the National Transport Authority provide it with modelling by October 2023 on the projected impact of the MetroLink, DART+ and BusConnects projects, when completed, on the number of passenger journeys and modal shift in the Greater Dublin Area, and other cities nationwide.

Response

A report providing the requested transport modelling information is attached.

Appendix A “MetroLink Annual Progress Report”

When PDF's TII MetroLink report to be attached



Mr. Ken Spratt
Secretary General
Department of Transport
44 Kildare Street
Dublin 2

By email to: Secretary General's Office (Transport) SecretaryGeneral@transport.gov.ie

Dáta | Date
28 September 2023

Ár dTag | Our Ref.

Bhur dTag | Your Ref.

Dear Secretary General

As you will be aware the Oireachtas Committee of Public Accounts published their report in July 2023 on the Examination of the 2019 and 2020 Appropriation Accounts for Vote 31 – Transport, the 2020 Financial Statements for the National Transport Authority, and the 2020 Financial Statements for Transport Infrastructure Ireland.

This report outlined several key issues arising from the Committee's engagements with the Department of Transport, the National Transport Authority, and Transport Infrastructure Ireland and made a number of recommendations to be considered and responded to by September.

This letter and the attached appendices provide TII's response in relation to the recommendations made by the Committee covering five specific areas as outlined in the table in Appendix 1 to this letter.

We would request therefore that TII's responses are provided to the Committee with the Department's own response. [Note that some of the recommendations request a response from the Department, rather than TII, in which case the material provided by TII can be viewed as supplementary to assist with the Department's own response.]

I trust this is clear however if the Department requires any further assistance on this matter, please do not hesitate to contact us.

Your sincerely,

Peter Walsh
Chief Executive

Attachments: Appendices 1,2 & 3

Próiseálann BIÉ sonraí pearsanta a sholáthraítear dó i gcomhréir lena Fhógra ar Chosaint Sonraí atá ar fáil ag www.tii.ie.
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Appendix 1

Ref.	PAC Recommendation	Information
1.	<p>The Committee recommends that the Department provides it with a report on the Metrolink project by September 2023, and on an annual basis thereafter for the duration of the project, to include:</p> <ul style="list-style-type: none"> •an up-to-date detailed breakdown of the total expenditure on Metrolink, •the most up-to-date estimated cost of the project, and •any milestones that have been achieved, missed, or amended within that timeframe. 	A report on the Metrolink project to be provided by the NTA.
4.	<p>The Committee recommends that both the National Transport Authority and Transport Infrastructure Ireland provide a note in their respective financial statements to include details of any instances where the reported cost for a major capital project has varied by more than €5 million compared with the previous year, and the rationale for same.</p>	TII response set out in Appendix 2 of this letter.
7.	<p>The Committee recommends that the Department ensures that, for any future public-private partnership schemes it enters into:</p> <ul style="list-style-type: none"> • there should be more transparency on the risk profile for both the State and the private entity, • review clauses that can only be triggered by the private entity are avoided, and • toll operators should not be allowed to retain excess tolls collected in cases of overpayment, and that this revenue should instead be invested in the community and/or roads maintenance. 	TII response set out in Appendix 3 of this letter.
8.	<p>The Committee recommends that Transport Infrastructure Ireland reports to the Committee by September 2023 on any instances where refinancing mechanisms were triggered by the private entity in PPP schemes undertaken by TII, and at what cost, if any, to the State.</p>	TII response set out in Appendix 3 set out of this letter.
9.	<p>The Committee recommends that Transport Infrastructure Ireland carries out an exercise on the removal of physical toll barriers nationwide, to investigate any benefits regarding the reduction of carbon emissions and mitigation against EU fines for CO2 emissions, versus the cost of implementing such systems nationwide. The Committee recommends that TII reports to it on this matter by September 2023.</p>	TII response set out in Appendix 3 of this letter.

Appendix 2

Proposed TII responses to Recommendation 4 in PAC Report dated July 2023 following Examination of the 2019 and 2020 Appropriation Accounts for Vote 31 – Transport, the 2020 Financial Statements for the National Transport Authority, and the 2020 Financial Statements for Transport Infrastructure Ireland (“PAC Report”)

Purpose

The purpose of this Note is to provide information to Department of Transport to assist in responding to the recommendations set out in the PAC Report.

Recommendation 4

4. The Committee recommends that both the National Transport Authority and Transport Infrastructure Ireland provide a note in their respective financial statements to include details of any instances where the reported cost for a major capital project has varied by more than €5 million compared with the previous year, and the rationale for same.

Response

TII will implement this finding in its 2023 Annual Report and Financial Statements in accordance with the following understanding:

It is understood that “reported cost” means the expected final outturn cost for a project, and not the cost incurred during the financial year on the particular project.

As project lifecycles start from initial concepts and rudimentary estimates, it is proposed that this recommendation is implemented by reporting changes from the project estimate at Decision Gate 3 of the Public Spending Code. Decision Gate 3 represents the Final Business Case for a project and is the point at which a final decision is taken to proceed or not proceed with the construction of a project.

As recommended, it is proposed that this reporting requirement is put in place for major projects, which is understood to mean projects requiring Government decision under the Public Spending Code. This will include all projects costing €200 million and above.

Appendix 3

PAC Recommendation 7

7. The Committee recommends that the Department ensures that, for any future public-private partnership schemes it enters into:

- *there should be more transparency on the risk profile for both the State and the private entity,*
- *review clauses that can only be triggered by the private entity are avoided, and*
- *toll operators should not be allowed to retain excess tolls collected in cases of overpayment, and that this revenue should instead be invested in the community and/or roads maintenance.*

Response

TII acknowledges the recommendations made in the PAC report in relation to future public private partnership (PPP) schemes which the Department of Transport and / or TII enters into in line with government policy and accepts the validity of the three individual points made. With that in mind, TII has taken this opportunity to highlight and clarify certain factors relating to these points which TII believe should be taken into consideration for any future PPP schemes which it might enter.

• **transparency on the risk profile**

In relation to the first point on transparency relating to risk profiles for PPP schemes, it is important to note that all current PPP contracts were competitively and transparently tendered in accordance with public procurement regulations with the objective of awarding the contract to the PPP company offering the most economically advantageous tender for the state. TII recommends that the primary consideration in the procurement and delivery of future PPP projects in terms of achieving the required outcomes (e.g. availability of high-quality transport assets and services for the State) at the best value possible from the market continues to be the primary consideration for public agencies procuring future PPP schemes.

This is because these current arrangements explicitly factor in the risk profile for the individual schemes and explicitly allocate it within the contract for the construction and operation of the asset (and services) at the point where the public agency awards the contract to the private sector company (i.e. PPP company) on behalf of the State. For instance, all of TII's existing PPP contracts allocate risk so as to ensure that they are managed in accordance with the risk profile agreed during the competitive procurement process and ultimately borne by the party in the best position to manage them.

In terms of understanding risk and being transparent in relation to the risk profiles relating to any future scheme, TII is of the view that this is best achieved by continuing to subject all PPP schemes to rigorous analysis as required by the Public Spending Code and separate PPP Guidelines for the use of PPP's¹. It is TII's view that these assessments should continue to be undertaken for any future transport PPP schemes with the assistance of the National Development Finance Agency ("NDFA") and should continue to include the specific value for money (VfM) assessments² as these tests specifically consider and assess the risk profile from the State's perspective. In particular these tests assist the public agencies procuring infrastructure and services by way of a PPP arrangement in developing a more balanced understanding of the potential costs of seeking to transfer a risk (or not) or to share it (e.g. costs of energy or demand risk) for the term of the contract.

By way of clarification, in addition to assessing the overall VfM of the project (i.e. does the project as a whole offer good value for money) the current processes also test the VfM of the PPP contract; do the aspects of the project that are being procured by PPP represent good value for money, compared with the cost of traditional

¹ Guidelines for the use of Public Private Partnerships (PPP). DPER December 2019

² Guidelines for the Provision of Infrastructure and Capital Investments through Public Private Partnerships: Procedures for the Assessment, Approval, Audit and Procurement of Projects, July 2006.

procurement. Specifically, the testing applies four formal tests carried out at various stages during the procurement process and prior to contract award as outlined below:

- (i) the first VfM test, at the PPP Procurement Assessment stage, is carried out to determine whether, and in what form, a PPP arrangement has the potential to offer the best value for money solution for the procurement of the scheme in question;
- (ii) the second VfM test occurs at completion of the Public Sector Benchmark³ (PSB) to determine whether the conclusion reached in the PPP Procurement Assessment is still valid;
- (iii) the third VfM test at Tender Evaluation stage compares the highest-ranking bid against the PSB in order to assess whether the bid from the PPP company still offers value for money for the state; and
- (iv) the fourth VfM test at Financial Close is the final test carried out to assess the impact of any changes in price (including changes in interest rates and/or discount rates) when compared against the PSB.

More generally in relation to the concept of transparency, TII believes in the merit of providing briefings and information to stakeholders on the current portfolio of PPP schemes and for this reason provided a detailed briefing document on PPPs in advance of the PAC meeting in February 2022. This document included information on how certain risks were allocated between public and private parties in contracts.

TII is satisfied to update this information in advance of future PAC hearings to keep members of the public and their representatives apprised of performance of the PPP contracts and to ensure there is clarity on what infrastructure was delivered by the PPP company and how the individual PPP schemes are structured financially, including the financial contribution from both public and private entities. Please see updated Briefing Note included in the Appendix 3A to this document outlining the performance of the PPP schemes to which TII is party.

TII has also taken the steps to publish the Post Project Reviews which again provide transparency not just on the risk profile but on the overall performance of the PPP scheme in terms of what was expected at the time the scheme was procured and whether the expected benefits have materialized for the State and the users of the infrastructure and services. To date TII has published Post Project Reviews on 10 of the PPP contracts to which it is party (available at tii.ie/tii-library/post_project_reviews/Public-Private-Partnership-Post-Project-Reviews.pdf), and is in the process of preparing reviews on the remaining projects.

- ***review clauses***

On the second point, TII notes that the implications of seeking to avoid refinancing clauses that can be triggered by the private entity would need to be carefully assessed in conjunction with the Department of Public Expenditure, NDP Delivery and Reform as well as NDFA. On the other hand, the implications of seeking to tender PPP contracts with refinancing clauses which could be triggered by the public authority would equally need to be carefully assessed given the possible consequences that any such clauses have for bringing the debt associated with the project on to the public balance sheet.

Recent guidance issued by EUROSTAT⁴ confirms that the right for the public entity to require the private partner to proceed with a refinancing could lead to the debt associated with the project to be treated as on the Government's balance sheet. This could impact public finances and reduce one of the potential benefits of PPP contracts, namely having the debt associated with the project held 'off balance sheet'.

More generally, TII would recommend that if Government is potentially interested in public agencies being more involved in instigating the refinancing of PPP contracts that such concepts should, in conjunction with NDFA, be thoroughly tested with the funding market well in advance of tendering any particular PPP schemes through a transparent market engagement process.

³ The PSB is as a comprehensive estimate of the cost (including risk valuations) of procuring those elements of the project that the private sector is to be invited to tender for in the PPP contract. It is based on the whole life cost to the public agency of procuring (those elements of) the project using traditional procurement and include risks.

⁴ A Guide to the Statistical Treatment of PPPs. EUROSTAT September 2016.

- *excess coinage / change from toll payments*

On the third recommendation, TII accepts the point in relation to “excess tolls” and notes that it is considered highly unlikely that any future road PPP contracts will take the form of toll concession contracts. This is due to the lack of appetite by infrastructure investors and banks for acceptance of traffic demand risk given the poor performance of some toll road concessions nationally and internationally over the past decade or so which resulted in significant losses for private investors and funders.

In relation to cash payments, TII notes that the proportion of toll road users paying by electronic tag or bank card has greatly increased in recent years and now represents circa 77% of all payments made and that where cash is being used, change is always available at toll plazas. In addition, the PPP company under the toll concession contracts assumes the risk of non-payment by toll road users, and the cost of this risk in 2022 (€237K) exceeded the amount of excess tolls retained (€165K) on the eight toll concession contracts.

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PAC Recommendation 8

8. The Committee recommends that Transport Infrastructure Ireland reports to the Committee by September 2023 on any instances where refinancing mechanisms were triggered by the private entity in PPP schemes undertaken by TII, and at what cost, if any, to the State.

Response

TII can confirm there have been two instances where refinancing mechanisms have been triggered in PPP Availability contracts to which it is a party, and in each case, there was a financial gain to the State. One toll concession scheme (N25 Waterford Bypass) also underwent a restructuring of its debt in 2021 and this resulted in a reduction of the contingent liability of the State.

The two instances where a Refinancing Gain took place were on (i) M17 / M18 Gort to Tuam scheme in May 2016 and (ii) N7 / N11 Arklow Rathnew scheme in January 2019.

- i. In the case of M17 / M18 Gort to Tuam, TII's share of the Refinancing Gain (as defined in the PPP contract) was €10,267,581. TII elected to realise this gain through a reduction in monthly Availability Payments to be paid to the PPP company over the life of the contract, rather than a one off upfront payment at the time. This led to an annual reduction of over €900,000 in the Base Price Annual Availability Payments in the PPP Contract that TII is required to pay until contract expiry in 2042.
- ii. In the case of N7 / N11 Arklow Rathnew, TII's share of the Refinancing Gain was €8,265,844. Again TII elected to realise the benefit of this gain over the remaining life of the contract by reducing the amount of the monthly Availability Payments. This led to an annual reduction of over €700,000 in the Base Price Annual Availability Payments in the PPP Contract until contract expiry in 2040.

In addition, a debt restructuring took place in the N25 Waterford Bypass scheme that was finalized in October 2021. This restructuring was subject to a Scheme of Arrangement that was sanctioned by the High Court in July 2021. Although not technically defined as a refinancing under the PPP contract, it did involve the conversion of bank debt into equity in the PPP company as well as a significant reduction or effective 'writing off' of debt borrowed by the PPP company from lenders. Ultimately, the project was placed on a sounder financial footing and the contingent exposure of the State was reduced as a result of the transaction.

In each of the above instances, TII benefitted from specialist financial advice from National Development Finance Agency in engaging with PPP Co and received reimbursement from the relevant PPP company for legal fees incurred.

.....

PAC Recommendation 9

9. The Committee recommends that Transport Infrastructure Ireland carries out an exercise on the removal of physical toll barriers nationwide, to investigate any benefits regarding the reduction of carbon emissions and mitigation against EU fines for CO₂ emissions, versus the cost of implementing such systems nationwide. The Committee recommends that TII reports to it on this matter by September 2023.

Response

In 2019 TII and the DoT commissioned Arup Engineers to engage with stakeholders across government, the haulage industry, academia and wider freight industry representatives and undertake a Road Freight Decarbonisation Study. This work, which was largely completed during 2020, examined a host of potential opportunities to reduce carbon emissions from the road freight industry, through a blend of desktop research, workshops and stakeholder interviews.

The engagement identified a long list which was then narrowed down to a short-list of interventions presented across a broad spectrum of potential actions that address infrastructure, policy, logistics and alternative fuels. Of particular relevance to this PAC recommendation the report included “infrastructure interventions that decrease emissions and congestion” with a focus on charging and refuelling infrastructure for alternatively fuelled vehicles and migrating to free-flow tolling where it could have a positive benefit on emissions. The report also noted that progressing with any of the items on the short list would require detailed business cases and funding.



Following the publication of this Road Freight Decarbonisation Study, TII requested Arup Engineers to undertake a review of the potential benefits from migrating a conventional toll plazas (i.e with toll booths and barriers) to a free-flow plaza. This review concluded there were relatively little emissions savings generated from removing toll booths and barriers and migrating to free-flow tolling and it was hard to justify such an intervention given the level of investment required.

After the PAC report was issued TII again requested Arup Engineers to reconsider this question and review and refresh their original assessment from 2021. This review also concluded that due to the increased speed of traffic and efficiency created by free-flow and the current fleet emissions profile there were relatively little emissions savings from removing toll booths and migrating to free-flow.

The methodology for reviewing this question included:

- Estimation of carbon emissions under current operating conditions;
- Estimation of carbon emissions under free-flow operating conditions; and
- Scaling the calculation results to understand potential change in emissions across the plazas and the national road network.
- Estimations of other air pollutants were also included in the analysis but given the question to be addressed were not the primary focus area.
- Note the COPERT Street Level software tool was used to estimate the emissions. COPERT Street Level has in-built emission factors for each of the European member states including Ireland as well as vehicle fleet compositions for all members states.
- The physical layouts of three actual toll plazas (Portlaoise, Drogheda, Enfield) were used to best represent the various toll plaza layouts on the national road network and the calculations were assessed over lengths

of 800 metres and 900 metres of motorway and plaza.

- These assessments based on the sample of three toll plazas were then applied and scaled up to account for the other relevant toll plazas on the national road network to estimate an overall potential impact.
- The potential annual savings relative to the Average Annual Daily Traffic (AADT) was also calculated, and from this an annual expectation of potential savings across the wider network. For context, this calculation was represented alongside the overall tailpipe emissions estimations for road transport on the national road network.

The most recent review found that the potential carbon emissions savings due to the conversion of traditional toll plazas across the national road networks to full free-flow plazas is approximately 3% over the length of the affected sections of road at the conventional toll plazas (with barriers) maintaining existing speed limits.

When this is compared to total potential carbon reductions across the entire national road network, it results in a reduction of approximately 0.004%. Therefore, while local carbon emission reductions at toll plazas might be worth considering, particular in the context of other benefits which could be achieved by migrating to free-flow tolling, on their own they would contribute very little across the overall network. As a result, such investments are difficult to justify given the capital costs of migrating a to full free-flow operation are estimated to be in the region of €3m-€5m for a regular mainline toll plaza on the motorway network.

That said, toll concessionaires in some jurisdictions are interested in and are migrating from conventional tolling plazas to free-flow tolling plazas for operational and financial reasons. Concessionaires who have multiple conventional plazas along a single corridor (which is not the case in Ireland) can benefit from the economies of scale by replacing multiple conventional plazas with a new barrier-free operational model. For this to work effectively toll concessionaires require high levels of tag penetration levels and an effective and efficient enforcement regime to minimize levels of toll evasion.

Other toll operators are migrating to 'hybrid' tolling systems which are not full 'free-flow' systems but which improve traffic flow at the plaza and minimize queuing by upgrading the toll plaza layout and equipment. As the PAC will be aware from TII's appearances, TII has designed and is procuring a new tolling system for the Dublin Tunnel. This new system will replace the existing system and tolling barriers which are reaching their end of life. The new system will include advance gantries in both directions at the toll plaza which will allow for more rapid processing and throughput of traffic through the plaza, including heavy goods vehicle traffic. The upgrade scheme is due for completion in 2024.

APPENDIX 3A

PPP Schemes Briefing Note

M1 Dundalk Western Bypass PPP Scheme

- **30-year PPP Toll Road Concession**
- The M1 Dundalk Western Bypass PPP contract was awarded to Celtic Roads Group (Dundalk) Ltd. consortium in February 2004. The contract is for a 30-year term. The scheme involved the construction of an 11km stretch of road forming part of the N1/M1 national primary route in the vicinity of the town of Dundalk, Co. Louth, together with approximately 8km of associated side roads and tie-ins. The construction works were completed in 2005. The PPP Contract also includes the operation and maintenance of existing motorway with an approximate length of 42km, i.e., the Dunleer Bypass and the Dunleer/Dundalk Motorway as well as the operation and maintenance of the tolling facilities between junction 7 and 10 on the M1 (Gormanston to Monasterboice) scheme.

Financial Close: 2004

Road opened: 2005

Contract expiry: 2034

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	-	-	-	-	-	-
Operational Payments	-	-	-	-	-	-
Variation Payments	€4.8m	€0.2m	€0.3m	€0.2m	€2.2m	€7.0m
Total	€4.8m	€0.2m	€0.3m	€0.2m	€2.2m	€7.0m

- **TII Construction contributions** – The construction cost of the project was €113m (ex. VAT). TII made no contributions to the construction costs.
- **TII Operational Payments (VAT not applicable)** – There are no Operational Payments specified in the PPP contract.
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €4.8m. The projected VPs in 2023 are €0.2m. The total future VPs from 1 Jan 2023 to contract expiry are projected to be €2.2m (for committed variations).

- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 3.4% in 2018 and 4.8% in 2019 (ADT₂₀₁₉ = 41,458). Traffic levels fell by 30.5% in 2020 and 20.3% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 0.8% lower than 2019 levels (ADT₂₀₂₂ = 41,114). PPP Co toll revenues were €30.6m pre-COVID (2019). PPP Co toll revenues increased by 5.7% to €32.3m in 2022.

- **Revenue Share Payments to TII (ex. VAT):** TII has received **€12.9m** in Revenue Share payments up to 31 Dec 2022. Revenue Share payments in 2022 were €2m compared to €0m in 2021. (There were no Revenue Share payments in 2021 because traffic levels didn't reach the revenue share threshold.) Future projections of revenue share will depend on traffic levels and inflation and could range between €40m and €57m. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-34).

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money.

- 2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2000*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 111.7 for August 2000 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2000}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2000} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2000} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2000}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.60	111.7	167.7	1.501	0.901	1.108	1.10
Car	1.15	111.7	167.7	1.501	1.727	2.124	2.10
Bus/Coach	2.05	111.7	167.7	1.501	3.078	3.786	3.80
LGV	2.05	111.7	167.7	1.501	3.078	3.786	3.80
2 & 3 Axle	2.90	111.7	167.7	1.501	4.354	5.355	5.40
4 Axle	3.70	111.7	167.7	1.501	5.555	6.833	6.80

M4/M6 Kilcock-Kinnegad PPP Scheme

- **30-year PPP Toll Road Concession**
- The M4/M6 Kilcock/Kinnegad PPP Contract was awarded to Eurolink Motorway Operation Ltd in March 2003. The contract is for a 30-year concession period. The scheme involved the construction of 39km of motorway, including 19 overbridges, 7 underbridges and 3 underpasses. The scheme, which is tolled between junctions 8 and 10, opened to traffic in December 2005. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works of the motorway section for the contract period.

Financial Close: 2003

Road opened: 2005

Contract expiry: 2033

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€159.8m	-	-	-	-	€159.8m
Operational Payments	€8.4m	-	-	-	-	€8.4m
Variation Payments	€7.2m	€0.3m	€0.3m	€0.3m	€3.6m	€10.8m
Total	€175.4m	€0.3m	€0.3m	€0.3m	€3.6m	€179.0m

- **TII Construction contributions** – The construction cost of the project was €302m (ex. VAT). TII paid circa 53% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – OPs are indexed using CPI. The total OPs to 31 Dec 2022 were €8.4m. There are no further OPs on the project. **The total OPs to be made over the contract are €8.4m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €7.2m. The projected VPs in 2023 are €0.3m. The total future VPs from 1 Jan 2023 to contract expiry are projected to be €3.6m (for committed variations).

- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 4.2% in 2018 and 4.6% in 2019 (ADT₂₀₁₉ = 30,262). Traffic levels fell by 33.8% in 2020 and 20.6% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 1.4% lower than 2019 levels (ADT₂₀₂₂ = 29,843). PPP Co toll revenues were €30.2m pre-COVID (2019). PPP Co toll revenues increased by 5.3% to €31.8m in 2022.

- **Revenue Share Payments to TI (ex. VAT):** TII has received **€39.2m** in Revenue Share payments up to 31 Dec 2022. Revenue Share payments in 2022 were €7.1m compared to €4m in 2021. The lower Revenue Share payments in 2021 reflected the reduction in traffic due to COVID. Future projections of revenue share will depend on traffic levels and inflation and could range between €122m and €142m. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-33). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-33).

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money.

- **2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2000*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 111.7 for August 2000 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$\text{Maximum Toll}_{2023} = (\text{Base Toll}) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2000}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2000} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2000} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2000}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.90	111.7	167.7	1.501	1.351	1.662	1.70
Car	1.75	111.7	167.7	1.501	2.627	3.232	3.20
Bus/Coach	2.65	111.7	167.7	1.501	3.979	4.894	4.90
LGV	2.65	111.7	167.7	1.501	3.979	4.894	4.90
2 & 3 Axle	3.50	111.7	167.7	1.501	5.255	6.463	6.50
4 Axle	4.30	111.7	167.7	1.501	6.456	7.941	7.90

M8 Rathcormac-Fermoy PPP Scheme

- **30-year PPP Toll Road Concession**
- The M8 Rathcormac/Fermoy contract was awarded to the Direct Route (Fermoy) Ltd. consortium in June 2004. The PPP contract involved the design, construction, operation and maintenance of approximately 17.5 km of motorway. The scheme includes three grade separated interchanges at Rathcormac South, Corrin, and Moorepark and a 450m long viaduct spanning the Blackwater Valley. The scheme, which is tolled between junctions 14 and 17, opened to traffic in October 2006. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works of the motorway section for the contract period.

Financial Close: 2004

Road opened: 2006

Contract expiry: 2034

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€85.7m	-	-	-	-	€85.7m
Operational Payments	€62.9m	€2.1m	€1.4m	€0.9m	€1.3m	€64.2m
Variation Payments	€2.7m	-	€0.9m	-	-	€2.7m
Total	€151.3m	€2.1m	€2.3m	€0.9m	€1.3m	€152.6m

- **TII Construction contributions** – The construction cost of the project was €171m (ex. VAT). TII paid circa 50% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – OPs are indexed using CPI. The total OPs to 31 Dec 2022 were €62.9m. The OPs in 2023 will be €0.9m. The total future OPs from 1 Jan 2023 to contract expiry are projected to be €1.3m, assuming CPI of 2% p.a. **The total OPs to be made over the contract are projected to be €64.2m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were 2.7m. At this stage there is no future commitment to variations.

- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 2.4% in 2018 and 2.8% in 2019 (ADT₂₀₁₉ = 19,758). Traffic levels fell by 32.1% in 2020 and 21.5% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 4.2% lower than 2019 levels (ADT₂₀₂₂ = 18,929). PPP Co toll revenues were €14.2m pre-COVID (2019). PPP Co toll revenues increased by 4.5% to €14.9m in 2022.

- **Revenue Share Payments to TI (ex. VAT):** There have been no revenue share payments to 31 Dec 2022. Future projections of revenue share will depend on traffic levels and inflation and could range between €0m and €7m. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-34).

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money.

- 2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2000*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 111.7 for August 2000 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2000}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2000} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2000} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2000}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.60	111.7	167.7	1.501	0.901	1.108	1.10
Car	1.15	111.7	167.7	1.501	1.727	2.124	2.10
Bus/Coach	2.05	111.7	167.7	1.501	3.078	3.786	3.80
LGV	2.05	111.7	167.7	1.501	3.078	3.786	3.80
2 & 3 Axle	2.90	111.7	167.7	1.501	4.354	5.355	5.40
4 Axle	3.70	111.7	167.7	1.501	5.555	6.833	6.80

N6 Galway-Ballinasloe PPP Scheme

- **30-year PPP Toll Road Concession**
- The N6 Galway/Ballinasloe PPP contract was awarded to the N6 (Concessions) Limited consortium in April 2007. The scheme involved the construction of approximately 56km of new dual carriageway, a 7km link road to the Loughrea bypass, 32km of side roads and five grade-separated junctions. The scheme extends from Doughiska, east of Galway City to the existing N6 east of Ballinasloe in County Roscommon. The scheme, which is tolled between junctions 15 and 16, opened to traffic in December 2009. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works for the contract period.

Financial Close: 2007

Road opened: 2009

Contract expiry: 2037

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€177.3m	-	-	-	-	€177.3m
Operational Payments	€169.7m	€1.8m	€1.3m	€0.8m	€20.4m	€190.1m
Variation Payments	€5.7m	€0.1m	€1.5m	-	-	€5.7m
Total	€352.7m	€1.9m	€2.8m	€0.8m	€20.4m	€373.2m

- **TII Construction contributions** - The construction cost of the project (including claims) was circa €309m (ex. VAT). TII paid circa 57% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – OPs are indexed using CPI. The total OPs to 31 Dec 2022 were €169.7m. The OPs in 2023 will be €0.8m. The total future OPs from 1 Jan 2023 to contract expiry are projected to be €20.4m, assuming CPI of 2% p.a. **The total OPs to be made over the contract are projected to be €190.1m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €5.7m.
- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 13.8% in 2018 and 5.1% in 2019 (ADT₂₀₁₉ = 13,966). Traffic levels fell by 36% in 2020 and 23.5% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 5.9% lower than 2019 levels (ADT₂₀₂₂ = 13,137). PPP Co toll revenues were €9.6m pre-COVID (2019). PPP Co toll revenues increased by 1% to €9.7m in 2022.
- **Revenue Share Payments to TI (ex. VAT):** There have been no revenue share payments to 31 Dec 2022. Future projections of revenue share will depend on traffic levels and inflation and could range between €0m and €0.5m. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34); 0% p.a. (2035-37). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-37).
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.
- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money.

- 2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2004*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 129.2 for August 2004 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2004}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2004} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2004} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2004}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.694	129.2	167.7	1.298	0.901	1.108	1.10
Car	1.330	129.2	167.7	1.298	1.726	2.123	2.10
Bus/Coach	2.371	129.2	167.7	1.298	3.078	3.785	3.80
LGV	2.371	129.2	167.7	1.298	3.078	3.785	3.80
2 & 3 Axle	3.354	129.2	167.7	1.298	4.353	5.355	5.40
4 Axle	4.280	129.2	167.7	1.298	5.555	6.833	6.80

N25 Waterford City Bypass PPP Scheme

- **30-year PPP Toll Road Concession**
- The Celtic Roads Group (Waterford) Ltd. consortium was awarded the N25 Waterford City Bypass PPP contract in April 2006. The scheme comprised the construction of the N25 bypass extending from Kilmeaden in County Waterford to Slieverue in County Kilkenny. The route crosses the River Suir at Grannagh thus providing Waterford with a second major bridge over the Suir and allowing traffic on the N25 Cork to Rosslare route to bypass the city. The scheme comprised approximately 23km of dual carriageway, a bridge over the River Suir of approximately 475m in length and approximately 4km of single carriageway construction. The contract included an additional 11km of side roads and tie-ins and a 2km railway realignment. The scheme, which is tolled, opened to traffic in October 2009. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works for the contract period.

Financial Close: 2006

Road opened: 2009

Contract expiry: 2036

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€105.4m	-	-	-	-	€105.4m
Operational Payments	€81.3m	€4.0m	€2.8m	€1.8m	€5.9m	€87.2m
Variation Payments	€2.4m	€0.03m	€0.04m	€0.04m	€0.6m	€3.0m
Total	€189.1m	€4.0m	€2.8m	€1.9m	€6.5m	€195.6m

- **TII Construction contributions** – The construction cost of the project was €262m (ex. VAT). TII paid circa 40% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – OPs are indexed using CPI. The total OPs to 31 Dec 2022 were €81.3m. The OPs in 2023 will be €1.8m. The total future OPs from 1 Jan 2023 to contract expiry are projected to be €5.9m, assuming CPI of 2% p.a. **The total OPs to be made over the contract are projected to be €87.2m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €2.4m. The projected VPs in 2023 are €0.04m. The total future VPs from 1 Jan 2023 to contract expiry are projected to be €0.6m (for committed variations).

- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 5.2% in 2018 and 6.4% in 2019 (ADT₂₀₁₉ = 9,668). Traffic levels fell by 24.4% in 2020 and 10.3% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 11.3% higher than 2019 levels (ADT₂₀₂₂ = 10,765). PPP Co toll revenues were €7.3m pre-COVID (2019). PPP Co toll revenues increased by 17.5% to €8.6m in 2022.

- **Revenue Share Payments to TI (ex. VAT):** There have been no revenue share payments to 31 Dec 2022. It is not anticipated that TII will receive revenue share payments in future as traffic levels are not projected to exceed the minimum revenue share thresholds.

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2012 did not specifically deal with value for money but confirmed the need for the scheme and its key objectives, verifies that the specified objectives had been delivered, and confirmed that the project has been successfully completed.

- 2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2000*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 111.7 for August 2000 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2000}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2000} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2000} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2000}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.60	111.7	167.7	1.501	0.901	1.108	1.10
Car	1.15	111.7	167.7	1.501	1.727	2.124	2.10
Bus/Coach	2.05	111.7	167.7	1.501	3.078	3.786	3.80
LGV	2.05	111.7	167.7	1.501	3.078	3.786	3.80
2 & 3 Axle	2.90	111.7	167.7	1.501	4.354	5.355	5.40
4 Axle	3.70	111.7	167.7	1.501	5.555	6.833	6.80

N18 Limerick Tunnel PPP Scheme

- **35-year PPP Toll Road Concession**
- The DirectRoute (Limerick) Ltd consortium was awarded the Limerick Tunnel PPP contract in August 2006. The contract term is 35 years. The Limerick Tunnel PPP Scheme involved the construction of approximately 10km of new dual carriageway along with associated link roads and side roads. The tunnel crossing of the River Shannon involved an immersed tube tunnel, approximately 0.9km in length, linking the townland of Coonagh on the northern bank with the townland of Bunlicky on the southern bank of the Shannon. The scheme, which is tolled between junction 2 and 4, opened to traffic in July 2010. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works for the contract period.

Financial Close: 2006

Road opened: 2010

Contract expiry: 2041

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€181.1m	-	-	-	-	€181.1m
Operational Payments	€57.7m	€8.8m	€0.8m	€0.8m	€14.7m	€72.3m
Variation Payments	€0.04m	-	-	-	-	€0.04m
VOPs	€65.979m	€8.4m	€6.0m	€7.2m	€117.6m	€183.6m
Total	€304.8m	€17.2m	€6.8m	€8.0m	€132.3m	€437.1m

- **TII Construction contributions** – The construction cost of the project was €361m (ex. VAT). TII paid circa 50% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – The total OPs to 31 Dec 2022 were €57.7m. The OPs in 2023 will be €0.8m. The total future OPs from 1 Jan 2023 to contract expiry will be €14.7m. This is based on a fixed annual indexation of 2% per annum. **The total OPs to be made over the contract will be €72.3m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €0.04m. At this stage there is no future commitment to variations.
- **TII Variable Operating Payments (VOPs) (ex. VAT):** The total VOPs to 31 Dec 2022 were €66m (payable) and €63.3m (cashflow). VOPs in 2022 decreased by €2.4m (from €8.4m to €6m, payable). TII expects to continue to pay VOPs until 2036, the extent to which will depend on traffic levels and toll inflation. VOPs are projected to be c. €7.2m in 2023. VOP projections from 1 Jan 2023 to contract expiry could range between €91.7m and €117.6m. The higher projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34); 0% p.a. (2035-41). The lower projection assumes 2% inflation with traffic growth at 2% p.a. (2023-41). **The total VOPs to be made over the contract could range between €158m and €184m.**
- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 6.4% in 2018 and 5% in 2019 (ADT₂₀₁₉ = 25,070). Traffic levels fell by 32.9% in 2020 and 21.4% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 0.8% higher than 2019 levels (ADT₂₀₂₂ = 25,270). PPP Co toll revenues were €16.6m pre-COVID (2019). PPP Co toll revenues increased by 7.3% to €17.8m in 2022.
- **Revenue Share Payments to TI (ex. VAT):** There have been no revenue share payments to 31 Dec 2022. It is anticipated that revenue share payments will commence in 2033 and could range between €50m and €84m, (nominal), depending on traffic levels and inflation. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34); 0% p.a. (2035-41). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-41).
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2015 confirmed that the decision to procure the Scheme as a PPP represented value for money.

- **2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2003*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 125.9 for August 2003 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2003}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2003} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2003} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2003}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.676	125.9	167.7	1.332	0.900	1.108	1.10
Car	1.296	125.9	167.7	1.332	1.726	2.123	2.10
Bus/Coach	2.310	125.9	167.7	1.332	3.077	3.785	3.80
LGV	2.310	125.9	167.7	1.332	3.077	3.785	3.80
2 & 3 Axle	3.268	125.9	167.7	1.332	4.353	5.354	5.40
4 Axle	4.170	125.9	167.7	1.332	5.554	6.832	6.80

M3 Clonee-Kells PPP Scheme

- **45-year PPP Toll Road Concession**
- The M3 Clonee/Kells PPP contract was awarded to the Eurolink Motorway Operations Ltd consortium in March 2007. The scheme, which provides bypasses of Dunboyne, Dunshaughlin, Navan, Kells and Carnaross, involved the construction of a motorway of approximately 47km in length which is linked by ancillary roads within the pre-existing road network through grade-separated junctions at Pace, Dunshaughlin, Blundelstown, Kilcarn, Athboy Road and Kells. The full scheme also includes 10km of new N3 Dual Carriageway road from Kells to North of Carnaross and 4km of the Kells N52 Bypass. A further 4km of National Secondary Type 1 Dual Carriageway and a total of 40km of Regional and Local Roads were constructed. In addition, over 100 structures consisting of 62 bridges and various culverts and retaining walls were required. The scheme, which is tolled between junction 5 and 6 and also junctions 9 and 10, opened to traffic in June 2010. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works for the contract period.

Financial Close: 2007

Road opened: 2010

Contract expiry: 2052

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€246.1m	-	-	-	-	€246.1m
Operational Payments	€261.6m	€18.3m	€20.2m	€21.2m	€150.9m	€412.4m
Variation Payments	€28.0m	-	€0.1m	-	-	€28.0m
VOPs	€17.8m	€2.0m	-	-	-	€17.8m
Total	€553.4m	€20.3m	€20.2m	€21.2m	€150.9m	€704.2m

- **TII Construction contributions** – The construction cost of the project (including claims) was circa €522m (ex. VAT). TII paid circa 47% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – OPs are indexed using CPI. The total OPs to 31 Dec 2022 were €261.6m. The OPs in 2023 will be €21.2m. The total future OPs from 1 Jan 2023 to contract expiry are projected to be €150.9m, assuming CPI of 2% p.a. **The total OPs to be made over the contract are projected to be €412.4m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €28m. It is difficult to predict what variations if any may be required in the future. At this stage there is no future commitment to variations.
- **TII Variable Operating Payments (VOPs) (ex. VAT):** The total VOPs to 31 Dec 2022 were €17.8m (payable) and €17.8m (cashflow). VOPs in 2022 decreased by €2m (from €2m to €0m, payable). On the assumption that traffic levels going forward do not fall below 2022 levels, it is not expected that TII will pay further VOPs for the remainder of the contract. **The total VOPs to be made over the contract is expected to be €17.8m.**

- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at 6.1% in 2018 and 4.9% in 2019 (ADT₂₀₁₉ = 35,062). Traffic levels fell by 28.2% in 2020 and 18.5% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 1.3% lower than 2019 levels (ADT₂₀₂₂ = 34,600). PPP Co toll revenues were €17.3m pre-COVID (2019). PPP Co toll revenues increased by 6% to €18.4m in 2022.

- **Revenue Share Payments to TII (ex. VAT):** There have been no revenue share payments to 31 Dec 2022. It is anticipated that revenue share payments will commence in 2026 and could range between €379m and €572m (nominal), depending on traffic levels and inflation. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34); 0% p.a. (2035-52). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-52).

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money

- **2023 Tolls** – The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2000*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 111.7 for August 2000 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2000}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2000} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2000} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2000}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.450	111.7	167.7	1.501	0.676	0.831	0.80
Car	0.875	111.7	167.7	1.501	1.314	1.616	1.60
Bus/Coach	1.325	111.7	167.7	1.501	1.989	2.447	2.40
LGV	1.325	111.7	167.7	1.501	1.989	2.447	2.40
2 & 3 Axle	1.750	111.7	167.7	1.501	2.627	3.232	3.20
4 Axle	2.150	111.7	167.7	1.501	3.228	3.970	4.00

M7/M8 Portlaoise-Cullahill PPP Scheme

- **30-year PPP Toll Road Concession**
- The M7/M8 Portlaoise PPP contract was awarded to the Celtic Roads Group (Portlaoise) consortium. The contract was awarded in June 2007. The project, which provides bypasses of Abbeyleix, Durrow, Cullahill, Mountrath, Castletown and Borris-in-Ossory, involved the construction of a tolled motorway of approximately 41km total length. There are grade separated junctions at Portlaoise, Borris-in-Ossory and Rathdowney as well as a partial motorway to motorway interchange at Aghaboe. The scheme also included a new 3km regional link road from the motorway back to Borris-in-Ossory along with approximately 15km of side roads. The scheme, which is tolled between Junction 18 (Portlaoise West) and Junction 19 (the M7/M8 interchange junction), opened to traffic in May 2010. The PPP Co is responsible for the ongoing operation, maintenance and lifecycle works for the contract period.

Financial Close: 2007

Road opened: 2010

Contract expiry: 2037

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Construction Payments	€43.6m	-	-	-	-	€43.6m
Operational Payments	€36.1m	€1.3m	€1.4m	-	-	€36.1m
Variation Payments	€5.2m	-	-	-	-	€5.2m
Total	€84.9m	€1.3m	€1.4m	-	-	€84.9m

- **TII Construction contributions** – The construction cost of the project was €300m (ex. VAT). TII paid circa 15% of the construction costs.
- **TII Operational Payments (VAT not applicable)** – OPs are indexed using CPI. The total OPs to 31 Dec 2022 were €36.1m. There will be no further OPs on the project. **The total OPs to be made over the contract are €36.1m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €5.2m. At this stage there is no future commitment to variations.

- **Traffic Levels and Toll Revenues (ex. VAT):** Traffic levels grew at -0.4% in 2018 and 1.5% in 2019 (ADT₂₀₁₉ = 23,935). Traffic levels fell by 34.5% in 2020 and 20.6% in 2021 compared to pre-COVID levels. Traffic levels in 2022 were 2% lower than 2019 levels (ADT₂₀₂₂ = 23,449). PPP Co toll revenues were €17.9m pre-COVID (2019). PPP Co toll revenues increased by 6% to €18.9m in 2022.

- **Revenue Share Payments to TI (ex. VAT):** There have been no revenue share payments to 31 Dec 2022. Future projections of revenue share will depend on traffic levels and inflation and could range between €19m and €23m. The lower projection assumes 2% annual inflation with traffic growth: 1% p.a. (2023-31); 0.5% p.a. (2032-34); 0% p.a. (2035-37). The upper projection assumes 2% inflation with traffic growth at 2% p.a. (2023-37).

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money.

- 2023 Tolls** The 2023 Maximum Tolls were calculated in accordance with the Toll Bye-Laws following CSO's publication of the August 2022 Consumer Price Index (CPI). The 2023 Maximum Tolls were calculated by multiplying the Base Tolls per Class of Vehicle (*as defined in the Toll Bye-Laws*) by the CPI for August in the previous year, dividing by the Opening Index (*August 2004*), and then adding applicable VAT (@23%). The calculated amounts were then rounded to the nearest 10 cents for each Class of Vehicle. The CPI figures used in the calculation were published on CSO's website: 129.2 for August 2004 and 167.7 for August 2022. (*Base Reference Period for CPIs: Nov 1996 = 100*).

$$Maximum\ Toll_{2023} = (Base\ Toll) \times \left\{ \frac{CPI_{Aug\ 2022}}{CPI_{Aug\ 2004}} \right\} + VAT$$

Class of Vehicle	Base Tolls (1)	CPI _{Aug 2004} (2)	CPI _{Aug 2022} (3)	CPI _{Aug 2022} /CPI _{Aug 2004} (4) = (3)/(2)	Base Tolls * (CPI _{Aug 2022} /CPI _{Aug 2004}) (5) = (1) * (4)	Add 23% VAT (6) = (5) * 1.23	2023 Maximum Tolls (7) = (6) rounded to nearest 10 cents
Motorbike	0.694	129.2	167.7	1.298	0.901	1.108	1.10
Car	1.330	129.2	167.7	1.298	1.726	2.123	2.10
Bus/Coach	2.371	129.2	167.7	1.298	3.078	3.785	3.80
LGV	2.371	129.2	167.7	1.298	3.078	3.785	3.80
2 & 3 Axle	3.354	129.2	167.7	1.298	4.353	5.355	5.40
4 Axle	4.280	129.2	167.7	1.298	5.555	6.833	6.80

M50 Upgrade PPP Scheme

- **35-year PPP Toll Road Concession**
- The M50 Upgrade PPP contract was awarded in September 2007 with a contract term of 35 years to M50 Concession Limited. The M50 Upgrade PPP Contract construction comprised the widening of 24km of the M50 from south of the M1/M50 (Turnapin) interchange to the N3 interchange and from south of the Ballymount interchange to the Sandyford interchange, including the upgrade of junctions along these sections. The upgrade works were completed in 2010. The PPP Co's investment costs are recouped through availability payments paid by TII. In addition to the M50 Upgrade PPP contract, separate M50 Upgrade works were procured through two Design & Build contracts. These contracts provided for (i) the widening of approximately 8km of mainline carriageway between the N4 (Junction 7) and Ballymount (Junction 10) along with the upgrading of the N4, N7 and Ballymount interchanges, and (ii) the widening of 1.3km of motorway south of the N3 interchange. These upgrade works were completed in 2008. The PPP Co is responsible for ongoing operation, maintenance and lifecycle works of the mainline of the M50 motorway from the M1/M50 interchange to the Sandyford interchange for the contract period.

Financial Close: 2007

Road opened: 2010

Contract expiry: 2042

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Availability Payments	€287.0m	€22.6m	€23.1m	€25.0m	€576.5m	€863.5m
Variation Payments	€55.8m	€3.0m	€2.2m	-	-	€55.8m
Total	€342.9m	€25.6m	€25.4m	€25.0m	€576.5m	€919.4m

- **TII Availability Payments (ex. VAT)** – APs are indexed using CPI. The total APs to 31 Dec 2022 were €287m. The APs in 2023 are projected to be €25m. The total future APs from 1 Jan 2023 to contract expiry are projected to be €576.5m, assuming CPI of 2% p.a. **The total APs to be made over the contract are projected to be €863.5m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €55.8m. At this stage there is no future commitment to variations.
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.
- **Value for Money** – The Post Project Review for the Scheme completed in 2014 confirmed that the decision to procure the Scheme as a PPP represented value for money.

N7/N11 Arklow-Rathnew PPP Scheme

- **27.3-year PPP Toll Road Concession (25-year operations)**
- The N11 Arklow/Rathnew PPP contract was awarded to N11 Arklow Rathnew PPP Limited in April 2013. The N11 Arklow/Rathnew PPP contract includes the design, construction, operation, and maintenance of approximately 16.5km of dual carriageway on the Arklow to Rathnew section of the N11, the operation and maintenance of an additional 30km section of the existing M11/N11 route (Arklow-Gorey and Arklow Bypass), the design and construction of the N11 Gorey Service Area and the design, construction, operation, and maintenance of the N7 Newlands Cross Junction Upgrade. The Newlands Cross section was completed in November 2014 and the Arklow/Rathnew section opened to traffic in July 2015. The contract operational period is 25 years from scheme completion and the PPP Co will recoup its investment costs through availability payments paid by TII.

Financial Close: 2013**Road opened:** 2015**Contract expiry:** 2040

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Availability Payments	€120.4m	€16.0m	€16.3m	€16.7m	€309.4m	€429.8m
Variation Payments	€4.9m	€0.1m	€0.01m	€0.01m	€0.15m	€5.0m
Total	€125.3m	€16.1m	€16.3m	€16.7m	€309.5m	€434.8m

- **TII Availability Payments (ex. VAT)** – APs are indexed using CPI. The total APs to 31 Dec 2022 were €120.4m. The APs in 2023 are projected to be €16.7m. The total future APs from 1 Jan 2023 to contract expiry are projected to be €309.4m, assuming CPI of 2% p.a. **The total APs to be made over the contract are projected to be €429.8m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €4.9m. The projected VPs in 2023 are €0.01m. The total future VPs from 1 Jan 2023 to contract expiry are projected to be €0.15m (for committed variations).
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.
- **Value for Money** – The Post Project Review for the Scheme has not yet been completed.

N17/M18 Gort to Tuam PPP Scheme

- **28.6-year PPP Toll Road Concession (25-year operations)**
- The M17/M18 PPP Scheme was awarded to the DirectRoute (Tuam) Ltd. consortium in April 2014. The M17/M18 PPP Contract comprises the design, construction, operation, and maintenance of approximately 53km of motorway along with the design and construction of 4km of dual carriageway. The scheme provides bypasses for the towns of Clarinbridge, Claregalway and Tuam. The contract operational period is 25 years from scheme completion and the PPP Co will recoup its investment costs through availability payments paid by TII. The scheme opened to traffic in September 2017.

Financial Close: 2014**Road opened:** 2017**Contract expiry:** 2042

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Availability Payments	€168.3m	€33.0m	€33.5m	€34.4m	€731.5m	€899.8m
Variation Payments	€4.0m	€0.4m	€0.1m	-	-	€4.0m
Total	€172.3m	€33.4m	€33.6m	€34.4m	€731.5m	€903.8m

- **TII Availability Payments (ex. VAT)** – APs are indexed using CPI. The total APs to 31 Dec 2022 were €168.3m. The APs in 2023 are projected to be €34.4m. The total future APs from 1 Jan 2023 to contract expiry are projected to be €731.5m, assuming CPI of 2% p.a. **The total APs to be made over the contract are projected to be €899.8m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €4m. At this stage there is no future commitment to variations.
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.
- **Value for Money** – The Post Project Review for the Scheme has not yet been completed.

M11 Gorey-Enniscorthy PPP Scheme

- **28.8-year PPP Toll Road Concession (25-year operations)**
- The M11 Gorey to Enniscorthy PPP contract was awarded to Gorey to Enniscorthy M11 PPP Limited in October 2015. The PPP contract includes the design, construction, operation, and maintenance of approximately 31.4km of dual carriageway (M11 and “N80 Link Road” routes) and the design, construction, and financing of 8.0km of single carriageway (N30 route). The contract operational period is 25 years from scheme completion and the PPP Co will recoup its investment costs through availability payments paid by TII. The M11 mainline section opened to traffic in July 2019 with N30 section opening in August 2019.

Financial Close: 2015

Road opened: 2019

Contract expiry: 2044

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Availability Payments	€62.0m	€18.3m	€18.2m	€18.5m	€413.6m	€475.6m
Variation Payments	€7.8m	€6.8m	€0.02m	€0.2m	€0.2m	€8.0m
Total	€69.8m	€25.1m	€18.2m	€18.7m	€413.8m	€483.7m

- **TII Availability Payments (ex. VAT)** – APs are indexed using CPI. The total APs to 31 Dec 2022 were €62m. The APs in 2023 are projected to be €18.5m. The total future APs from 1 Jan 2023 to contract expiry are projected to be €413.6m, assuming CPI of 2% p.a. **The total APs to be made over the contract are projected to be €475.6m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €7.8m. There are some close outs required to the construction phase in 2023 with a cost estimate of €0.2m.
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.
- **Value for Money** – The Post Project Review for the Scheme has not yet been completed.

N25 New Ross Bypass PPP Scheme

- **29-year PPP Toll Road Concession (25-year operations)**
- The contract for the N25 New Ross Bypass PPP Scheme was awarded to New Ross N25 Bypass Designated Activity Company in January 2016. The PPP contract includes the design, construction, operation and maintenance of sections of both the N25 and N30 routes. More particularly the scheme comprised works of approximately 13.6km of dual carriageway (N25 and N30 routes) and 1.2km of single carriageway (New Ross N30 route). The contract operational period is 25 years from scheme completion and the PPP Co will recoup its investment costs through availability payments paid by TII. The scheme opened to traffic in January 2020.

Financial Close: 2016

Road opened: 2020

Contract expiry: 2045

- **Historic and projected TII payments are summarised below with projected figures highlighted in red:**

TII Payments (payable basis ex. VAT)	Contract start - 31 Dec 2022	2021	2022	2023	1 Jan 2023- Contract Expiry	Total Contract
Availability Payments	€33.8m	€11.6m	€11.9m	€12.0m	€275.0m	€308.8m
Variation Payments	€7.7m	-	-	-	-	€7.7m
Total	€41.5m	€11.6m	€11.9m	€12.0m	€275.0m	€316.5m

- **TII Availability Payments (ex. VAT)** – APs are indexed using CPI. The total APs to 31 Dec 2022 were €33.8m. The APs in 2023 are projected to be €12m. The total future APs from 1 Jan 2023 to contract expiry are projected to be €275m, assuming CPI of 2% p.a. **The total APs to be made over the contract are projected to be €308.8m.**
- **TII Variation Payments (ex. VAT)** – The total VPs to 31 Dec 2022 were €7.7m. At this stage there is no future commitment to variations.
- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the road to the required handback standard.
- **Value for Money** – The Post Project Review for the Scheme has not yet been completed.

Motor Serviceway Area (MSA) Tranche 1 PPP Scheme

- **25-year PPP Concession**
- The contract provides for the design, construction, operation, maintenance and finance of three service area facilities constructed at M1 North (near Castlebellingham); M1 South (near Lusk); and on the M4 (near Enfield). In 2009, the NRA signed a Public Private Partnership (PPP) contract with the *Superstop* consortium to build the Tranche 1 MSAs, all three double-sided facilities.

Financial Close: 2009**Road opened:** 2010**Contract expiry:** 2034

- **TII Construction contributions** – The construction cost of the project was €63m (ex. VAT). TII paid circa 75% of the construction costs.
- TII is not required to make any payments during the operational stage of the project.

- **Revenue Share Payments to TII (ex. VAT):** TII has received **€12.7m** in revenue share payments to date (from operations commencement in 2010) and is expecting a further €0.7m payment in 2023 relating to FY2022 revenues. Future projections of revenue share will depend on the growth in sales at the motorway service areas (fuel, retail and restaurant) and could range between €40m and €49m. The lower projection assumes the minimum contractual payments and the upper projection assumes 2% growth in sales per annum.

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the motorway service area assets to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme confirmed that the decision to procure the Scheme as a PPP represented value for money.

Motor Serviceway Area (MSA) Tranche 2 PPP Scheme

- **25-year PPP Concession**
- The contract provides for the design, construction, operation, maintenance and finance of two service areas at M6 Athlone Service area, M9 Kilcullen Service Area as well as the fit out, operation, maintenance and finance of a third service area at M11 Gorey Service Area on the national road network.

Financial Close: 2018

Road opened: 2019

Contract expiry: 2043

- **TII Construction contributions** - – The construction cost of the project was circa €26m (ex. VAT). TII did not make any contributions to the construction costs.
- TII is not required to make any payments during the operational stage of the project.

- **Revenue Share Payments to TI (ex. VAT):** TII has received **€653k** in revenue share payments to date (from operations commencement in 2019) and is expecting a further €400k payment in 2023 relating to FY2022 revenues. Future projections of revenue share will depend on the growth in sales at the motorway service areas (fuel, retail and restaurant) and could range between €9m and €10m. The lower projection assumes 1% growth in sales per annum and the upper projection assumes 2% growth.

- **Handback** – at the end of the contract the PPP Co will have to carry out and fund the necessary renewal works to bring the motorway service area assets to the required handback standard.

- **Value for Money** – The Post Project Review for the Scheme has not yet been completed. In line with the guidance set out in the Public Spending Code, TII will commission a Post Project Review once sufficient time has elapsed for the benefits and outcomes of the scheme to materialise. The Public Spending Code indicates a period of 3-5 years following scheme commencement. However, a period of scheme operation post-COVID will be necessary in order to complete a meaningful review.

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