

TII responses to further information requested
by the Public Accounts Committee
at Meeting held 3 February 2022

TII 2020 Financial Statements
Including: Public Private Partnerships
Ref: S0755 PAC33

Introduction

This document is prepared In response to requests for information from the meeting of the Public Accounts Committee held 3 February 2022.

Question	
Q1	For each of the 15 public-private partnership (PPP) schemes entered into by TII, the cost to the State of the scheme, and the comparative cost if the State were to have sole responsibility for the scheme (pgs. 6-7).
	A Briefing Note is attached.
Q2	The forecasted cost, beyond 2030, for the completion of projects in the National Development Plan that will still be in progress after that point (pgs. 11-12).

The National Roads Major projects listed in the National Development Plan 2021 to 2030 are set out in the table below. The table includes the anticipated construction time periods based on the levels of funding currently confirmed for New Roads following the publication of NDP 2021-2030.

These construction periods are subject to Decision Gate approvals as required under the public spending code, planning approval, and public procurement. The delivery of the New Roads projects is heavily influenced by the funding profiles of €1.1 billion 2021 to 2025 and €4 billion 2026 to 2030. It is also assumed that the next NDP review scheduled for 2025 and intended to cover the period 2026-2035 will maintain the indicated funding in the period 2026 to 2030 and provide funding to continue progression of projects underway post-2030.

Given the timeframe for delivery, the design and appraisal process necessary to determine the scope of the projects, potential changes in environmental law, changes in European and National law, policy changes as well as inflation, it is not possible to provide meaningful cost estimates for projects that will be constructed post-2030. TII has provided the cost ranges for these projects as submitted for the NDP review including where construction extends beyond 2030.

NDP National Roads Major Project	Cost Range from NDP review submission from TII (€million)	Earliest construction start subject to Public Spending Code (PSC) Decision Gate approvals, planning approval, public procurement and funding	Earliest construction completion subject to PSC gate approvals, planning approval, public procurement and funding
N2 Ardee from South of Castleblaney	250-1000	2026	2031
N2 Clontibret to Border with Northern Ireland	250-1000	2030	2033
N2 Slane Bypass	50-100	2025	2028
N2 Rath Roundabout to Kilmoon	50-100	2028	2030
N3 Virginia Bypass	100-250	2030	2032/2033
N3 Clonee to M50	50-100	2026	2029
N4 Collooney to Castlebaldwin	Scheme Complete		
M4 Leixlip to Maynooth	100-250	2026	Phased post-2030
N4 Mullingar to Longford – Priority Safety Project	250-1000	2030	2034
N4 Carrick on Shannon to Dromod	100-250	2031	2034
N5 Westport to Turlough	Under Construction		
N5 Ballaghaderreen to Scramoge	Under Construction		

NDP National Roads Major Project		Cost Range from NDP review submission from TII (€million)	Earliest construction start subject to Public Spending Code (PSC) Decision Gate approvals, planning approval, public procurement and funding	Earliest construction completion subject to PSC gate approvals, planning approval, public procurement and funding
N6 Galway City Ring Road		250-1000	2026	2030
M8/N40 Dunkettle		Under Construction		
N11 Oilgate to Rosslare Harbour Europort		250-1000	2028	2031
N11 Jn 4 to Jn 14		100-250	2026	Phased post-2030
Donegal TEN-T Network – N13, N14 & N56		250-1000	2026	Phased post-2030
N17 Collooney Knock		250-1000	2028	Phased post-2030
N20 Cork to Limerick		1000-3000	2028	2032
N21 Newcastle West Relief Road		100-250	2032	2034
N21 Abbeyfeale Relief Road		50-100	2032	2034
N21/N69 Limerick to Adare/Foynes		250-1000	2024/2025	2027/2028
N22 Ballyvourney to Macroom		Under Construction		
N22 Farranfore to Killarney		250-1000	2030	2032/2033
N24 Cahir to Limerick Junction		250-1000	2029	2033
N24 Waterford to Cahir		250-1000	2031	2035
N25 Carrigtwohill to Midleton		100-250	2030	2032
N25 Waterford to Glenmore		100-250	2031	2033/2034
M50 -Dublin Port Access Road		Project delivery to be determined		
N52 Ardee Bypass		20-50	2023	2025
N52 Tullamore to Kilbeggan		50-100	2031/2032	2034/2035
N56 Mountcharles to Inver		Scheme Complete		
N56 Dungloe to the Glenties		Under Construction		
N59 Clifden to Maam Cross		100-250	2030	Phased post-2030
N72/N73 Mallow Relief Road		20-50	2026	2028
Q3	The percentage of journeys made on the N25 to Rosslare Europort, and the percentage of journeys made to Rosslare Europort via the N11 (pgs. 14-15).			
	Using information from TII's National Traffic counters and recent survey work, the analysis shows that the source of Port traffic to Rosslare Europort is split equally between the N25 and N11.			
Q4	A note outlining the reasons why funding for projects on the N24 and N25 national roads was not allocated for 2022 (pg. 16).			
	A Briefing Note is attached.			
Q5	The total expenditure, to date, on the Metro North project (pg. 19).			
	<p>"Expenditure to date"</p> <p>The total amount spent on the original Metro North was €165.1m</p> <p>The total amount spent on MetroLink to Dec 2021 was €82.8m and therefore the total TII expenditure to date on Metro North and MetroLink is €247.9m</p>			

Q6	A detailed note on the project to extend the Metro along the Luas Green Line, including expenditure related to the project (pg. 27).												
	A Briefing Note is attached.												
Q7	Passenger numbers for the Luas in the years prior to the COVID-19 pandemic, and the most up-to-date passenger numbers for the Luas (pg. 27).												
	<p>The volume of passenger journeys / patronage levels for Luas for the last four years are set out in the table below. There were 1.73M passenger journeys reported during period 1 (i.e. first four weeks) of 2022. The current levels continue to be much lower than pre-COVID-19 pandemic levels which for example for period 1 for 2020 were 3.03M and for 2019 were 3.07M.</p> <table><tr><th colspan="4">Luas Patronage/Passenger Journeys</th></tr><tr><th>2018</th><th>2019</th><th>2020</th><th>2021</th></tr><tr><td>41.84m</td><td>48.35m</td><td>19.18m</td><td>19.48m</td></tr></table>	Luas Patronage/Passenger Journeys				2018	2019	2020	2021	41.84m	48.35m	19.18m	19.48m
Luas Patronage/Passenger Journeys													
2018	2019	2020	2021										
41.84m	48.35m	19.18m	19.48m										
Q8	The number of non-payments of tolls each year for the M50 over the last four years (pg. 28).												
	<p>TII aims to collect M50 (eFlow) toll revenue in a commercially efficient and fair manner and provides multiple payment channels to make the payment of the toll as convenient as possible for road users. Every tollable passage on the M50 is pursued for payment where possible, both for domestic and foreign registered vehicles. For those who do not pay tolls, the eFlow operator issues reminder notices advising users them of their outstanding balance and how to pay.</p> <p>The enforcement process works in tandem with eFlow’s Public Information activities which have been developed over time to encourage compliance by increasing awareness among road users (both domestic and foreign) of the M50 toll point location, obligations to pay the toll and payment methods available, as well as the consequences of not paying the toll.</p> <p>The tolls and default tolls / penalties are set out in the M50 Bye-Laws (made pursuant to the Roads Acts 1993 to 2015) which provide that any vehicle and road user shall, on passing through the toll location, be obliged to and shall pay the appropriate toll unless exempted from payment of the appropriate toll under the Bye-Laws.</p> <p>Tolls are written off after a two-year period or if they are deemed uncollectable and TII makes provisions in relation to this in Financial Statements published annually.</p> <p>The Financial Statements also record the actual ‘bad debt charge’ as shown in the table below for the years 2018, 2019, 2020 and 2021. Additionally, it is worth noting that default toll / penalty revenue generally compensates for the bad debts relating to unpaid toll revenues. For example, in 2020 TII collected default tolls / penalties of c.€6.7m in 2020 and c.€9m in 2019, with the decrease from 2019 to 2020 related to the pandemic and related restrictions.</p>												

	<table><tr><th>M50 Toll ('eFlow')</th><th>2018</th><th>2019</th><th>2020[#]</th><th>2021[*]</th></tr><tr><td>Toll Income</td><td>€154.6M</td><td>€161.0M</td><td>€124.0M</td><td>€139.0M</td></tr><tr><td>Bad Debt Charge</td><td>€3.8M</td><td>€3.9M</td><td>€3.4M</td><td>€4.5M</td></tr><tr><td>Estimated Compliance Level</td><td>97.5%</td><td>97.6%</td><td>97.3%</td><td>96.8%</td></tr></table> <p>*TII's Annual Report and Financial Statements for 2021 are not yet finalised nor have they been reviewed or approved by C&AG;</p> <p># As noted in TII's 2020 Annual Report and Financial Statements and shown above, the 'bad debt charge' in 2020 was €3.4m. This bad debt charge, which relates to tolls only, is the sum of bad debts written off and the movement in the bad debt provision. The bad debt charge in 2019 was €3.9m and the decrease in the 2020 charge was due to a reduction in traffic volumes in 2020 as a result of the COVID travel restrictions, rather than any improvement in overall compliance levels (which were at circa. 97% for 2020 and 2019).</p>	M50 Toll ('eFlow')	2018	2019	2020 [#]	2021 [*]	Toll Income	€154.6M	€161.0M	€124.0M	€139.0M	Bad Debt Charge	€3.8M	€3.9M	€3.4M	€4.5M	Estimated Compliance Level	97.5%	97.6%	97.3%	96.8%
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Q9	The unforeseen costs and losses of income borne by the private entity in the PPP schemes, broken down as far as possible (pg. 30).																				
	A Briefing Note on costs and losses is attached. Please note that in accordance with the instruction in the letter from the Committee of Public Accounts dated 18 February 2022, TII "objects to the publication of" the material provided in response to this Question 9, as this material is considered as commercially sensitive and confidential.																				
Q10	The total income derived from the PPP schemes by the relevant private entities (pg. 30).																				
	<p>The table below illustrates all toll income received on TII toll concession schemes from commencement of scheme operations to end December 2021.</p> <p>Toll Income on PPP Schemes (to Dec 2021)</p> <table><tr><th>Nominal €'m (ex VAT)</th><th>Toll Income</th></tr><tr><td>M1 Dundalk Western Bypass</td><td>€392.5m</td></tr><tr><td>M3 Clonee-Kells</td><td>€153.6m</td></tr><tr><td>M4/M6 Kilcock-Kinnegad</td><td>€368.5m</td></tr><tr><td>M6 Galway-Ballinasloe</td><td>€85.4m</td></tr><tr><td>M7/M8 Portlaoise-Cullahill</td><td>€173.1m</td></tr><tr><td>M8 Rathcormac-Fermoy</td><td>€167.8m</td></tr><tr><td>N18 Limerick Tunnel</td><td>€142.3m</td></tr><tr><td>N25 Waterford City Bypass</td><td>€66.3m</td></tr></table>	Nominal €'m (ex VAT)	Toll Income	M1 Dundalk Western Bypass	€392.5m	M3 Clonee-Kells	€153.6m	M4/M6 Kilcock-Kinnegad	€368.5m	M6 Galway-Ballinasloe	€85.4m	M7/M8 Portlaoise-Cullahill	€173.1m	M8 Rathcormac-Fermoy	€167.8m	N18 Limerick Tunnel	€142.3m	N25 Waterford City Bypass	€66.3m		
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Q11	A note detailing the amount paid to former TII CEO Michael Nolan upon his retirement in 2020 to include figures in respect of accrued holiday leave (pgs. 31-32).
	<p>In 2020, Michael Nolan was paid remuneration of €194,166 to 13.11.20. This was comprised of salary €164,861 and €29,305 in accrued holiday leave, representing 41 days accrued leave.</p> <p>His salary comprised 40 weeks at the annual rate of €186,477 and of 6 weeks at the annual rate €190,207 (following a 2% public sector pay increase).</p>
Q12	A detailed note outlining the cost of building an inner relief road in Mountmellick, and an update on the prospects of its construction (pg. 39).
	<p>Laois County Council submitted a draft strategic assessment report last year which includes an indicative cost estimate range of €25.9m to €38.1m (incl. VAT) for a 'Western Relief Road' of the town of Mountmellick. The cost estimate was based on several assumptions.</p> <ul style="list-style-type: none"> • Cross section = single carriageway, • Length of between 3.2km and 4.1km, • 1 No. River Bridge (River Owenass), • Assumes 5 No. at-grade junctions (2 No. Roundabouts & 3 No. Ghost Island junctions). <p>Based on recent tendered rates TII consider that cost estimate range is more likely to be €35 to €45m. It should also be noted that the 'Western Relief Road' only provides a bypass for the N80 National Road; this will not fully remove HGV traffic from Mountmellick as the R422 Regional Road (towards Emo) is the most direct route for traffic travelling towards Dublin wanting to enter the M7 motorway (via M7 Junction 15).</p> <p>Given the limited funding available to TII for New Roads projects between 2022 and 2025 inclusive it is unlikely that TII will be able to provide funding to progress this within this period.</p>
Q13	A note on the Portlaoise-Cullahill PPP scheme, providing the following information: <ul style="list-style-type: none"> • The total revenue to date from tolls on the road, • The amount paid by the State in respect of the scheme, • The total annual operational payment for the road, • Details of any extra payments or variations by the State in respect of the scheme, and • Any requirements in relation to the condition such PPP schemes must be in, when their responsibility is transferred to the State (pgs. 40-41).
	A Briefing Note is attached.
Q14	TII's submission to the National Transport Authority and the Department of Transport in respect of the 18 posts, with expertise related to metro systems, requested for the client organisation for the Metrolink project (pgs. 41-42).
	The submission is under active consideration by Department of Transport (DoT). DoT has advised TII that this request, relating to the resource submission, will be responded to by DoT.

Q15	A progress update on the N11-M11 upgrade being undertaken by TII, including information on the expected timeframe and cost of the upgrade (pgs. 42-43).
	<p>This project has recently concluded the Phase 2 Options Selection stage, and the Option Selection Report was published by Wicklow County Council in December 2021. The Preferred Option for this scheme consists of a series of enhancements and improvements to the existing road junctions together with the construction of new link roads between these junctions.</p> <p>It is not intended at this time to provide any additional mainline lanes on the carriageway, but to provide measures which will remove some of the local traffic from the mainline and better manage the traffic flows at the junctions.</p> <p>Due to the current funding constraints Transport Infrastructure Ireland was not able to provide an allocation for this scheme in 2022 and it is not possible to confirm when the Phase 3 Design stage will commence. While the project is at the early stages of design development, it is likely that the overall cost will be in the region of €200m to €250m.</p> <p>A separate project to provide bus priority measures between the Loughlinstown roundabout and Junction 9 at Glenview is advancing. This project is at the Phase 3 Design and Environmental Evaluation stage and a grant allocation of €1.2m has been provided for 2022. It is expected that a full Environmental Impact Assessment will be required for this scheme, and a programme is being developed to submit a planning application to An Bord Pleanála at the end of Q1 2023.</p>
Q16	A detailed note on Project BRUCE (Better Road User Charging Evaluation) (pg. 43).
	A Briefing Note on Project BRUCE is attached.
Q17	The last occasion on which the by-laws for toll schemes and rail systems were reviewed by the TII board (pg. 43).
	<p>The Light Rail Bye Laws were last updated in 2015 by S.I. 322/2015 Light Railway (Regulation of Travel and Use) Bye-Laws. There is no requirement for annual review. In relation to toll schemes, below is the date of the Bye-Laws for each Scheme. The Board reviews and approves applicable and default tolls, in line with the specific provisions of each bye-law, annually. This review is usually undertaken in December.</p> <ol style="list-style-type: none"> 1. Dublin Tunnel – Bye laws September 2006 – Maximum toll reviewed December 2021 2. Limerick South Ring Road Phase II – Bye Laws May 2010 – Maximum toll reviewed December 2021 3. M1 Motorway – Bye Laws May 2003 - Maximum toll reviewed December 2021 4. M3 Clonee to Kells – Bye Laws June 2010 - Maximum toll reviewed December 2021 5. M4 Kinnegad-Enfield-Kilcock - Bye-Laws November 2005 -Maximum toll reviewed December 2021 6. N6 Galway to Ballinasloe – Bye Laws December 2009 - Maximum toll reviewed December 2021 7. M7 Portlaoise to Castletown and M8 Portlaoise to Cullahill – Bye Laws April 2010 – Appropriate toll reviewed December 2021 8. M8 Rathcormac-Fermoy – Bye Laws July 2006 - Maximum toll reviewed December 2021 9. N25 Waterford Bypass – Bye Laws May 2009 - Maximum toll reviewed December 2021 10. M50 Barrier Free – Bye Laws July 2008 – Applicable and Default tolls reviewed December 2021

Q18	A note detailing TII's needs assessments on the condition of roads (pg. 44).
	A Briefing Note is attached.
Q19	<p>A note on the M7 Naas Bypass project outlining the following:</p> <ul style="list-style-type: none"> • The year in which the bypass first opened, and the cost of the project at that point, • The year in which the widening of the bypass was completed, and the cost of constructing the additional lane, and, • The comparative cost of constructing a three-lane bypass initially (pg. 45).
	<p>The N7 Naas Bypass was completed in 1983 by Kildare County Council. The project pre-dates the establishment of the National Roads Authority (now known as TII for operational purposes) by more than a decade and TII does not hold the records associated with its delivery. The widening of the bypass was completed in 2019 at a cost of €55.8 million.</p> <p>All roads are designed for a Design Life and to cater for the forecast traffic over the Design Life. Projects are progressed through the planning approval process on this basis. It would therefore have been challenging to bring a dual three-lane motorway through the planning process at the time, some forty years ago, because it might be argued at the time that providing more than dual two-lanes would have been unnecessary. Given that 36 years has elapsed between the construction of both projects, and original cost data for the Naas Bypass is not available, it is not feasible to provide reliable contemporaneous cost estimates for provision of the additional lanes at the same time as the original construction.</p> <p>It should be noted that provision was made in the original design of the Naas Bypass, both in the land acquired and in the wide median cross section, for a potential future upgrade to dual three lanes. This design provision was standard practice for motorways / dual carriageways being developed at the time and ensured that the scheme was future proofed. When the bypass was widened the only land required for the scheme was for drainage and services.</p>

Briefing Notes

Q1 Briefing Note

For each of the 15 public-private partnership (PPP) schemes entered into by TII, the cost to the State of the scheme, and the comparative cost if the State were to have sole responsibility for the scheme

Q1: For each of the 15 public-private partnership (PPP) schemes entered into by TII, the cost to the State of the scheme, and the comparative cost if the State were to have sole responsibility for the scheme (pgs. 6-7).

Cost to the State of Schemes

The costs to date to the State of each of the PPP schemes entered into by TII is set out in the Appendix to the Information Note submitted in advance of the meeting of the Public Accounts Committee on 3 February 2022 and is summarised in the table below. The table also sets out the forecast estimated costs to expiry of the schemes, assuming CPI of 2% per annum. Note some payments have been updated to include the period Sept to Dec 2021 (e.g. payments for contractual variations).

Costs to date and Projected Total TII Contract Costs on PPP Schemes (as at Dec 2021)

Nominal €'m (ex VAT)	TII Costs to date (Dec 2021)	Forecast TII Costs to Contract Expiry	Forecast Total TII Contract Costs
Toll Road Concession PPP Schemes			
M1 Dundalk Western Bypass	€4.5m	€2.2m	€6.7m
M3 Clonee-Kells	€533.1m	€161.9m	€695.0m
M4/M6 Kilcock-Kinnegad	€175.1m	€3.7m	€178.8m
M6 Galway-Ballinasloe	€349.9m	€20.5m	€370.4m
M7/M8 Portlaoise-Cullahill	€83.6m	€15.5m	€99.1m
M8 Rathcormac-Fermoy	€149.0m	€2.7m	€151.7m
N18 Limerick Tunnel	€298.0m	€142.7m	€440.6m
N25 Waterford City Bypass	€186.3m	€8.9m	€195.2m
Availability Payment PPP Schemes			
M50 Upgrade	€318.8m	€571.1m	€889.9m
N7/N11 Arklow-Rathnew	€109.0m	€320.2m	€429.1m
N17/N18 Gort to Tuam	€138.7m	€748.4m	€887.1m
M11 Gorey-Enniscorthy	€51.6m	€427.3m	€478.9m
N25 New Ross Bypass	€29.6m	€283.8m	€313.4m
Motorway Service Area PPP Schemes			
MSA Tranche 1	€47.1m	€0.0m	€47.1m
MSA Tranche 2	€0.0m	€0.0m	€0.0m

Comparative Cost if Exchequer funded

Once each of TII's PPP schemes passed the required economic viability tests, TII then considered the procurement options for the scheme, including the option of using PPP.

In line with PPP guidance, each PPP scheme required a value for money (VFM) assessment to be completed. This assessment consists of comparing the 'traditional' procurement option to the cost to the State of the PPP tender. A "Financial Comparator" (also referred to as a Public Sector Benchmark) is prepared which is an estimate of the cost of delivering the scheme in the 'traditional' way (i.e., where the State awards a contract for the design and build of the infrastructure and the State awards separate contracts for the ongoing operation and maintenance along with lifecycle renewal works on a scheme).

The VFM test is satisfied where the cost to the State of the PPP option as tendered is less than the estimated cost of traditional procurement as provided for in the Financial Comparator. Further detail on the Financial Comparator for 9 of TII's PPP schemes can be found in the post project reviews completed for these schemes ([Post Project Reviews - link](#)).

In respect of those schemes where Post Project Reviews have not yet been completed and published or where the Financial Comparator has not been included in the published review, the tables below provide summary detail on the results of VFM tests that were carried out.

N25 Waterford Bypass

€m in NPV terms	Financial Comparator	Preferred Tenderer
TOTAL	627	421

M17/M18 Gort to Tuam

€m in NPV terms	Financial Comparator	Preferred Tenderer
TOTAL	406.6	360.8

N7/N11 Arklow / Rathnew

€m in NPV terms	Financial Comparator	Preferred Tenderer
TOTAL	253.7	187.6

Motorway Service Area Tranche 2

€m in NPV terms	Financial Comparator	Preferred Tenderer
TOTAL	21.6	0

N25 New Ross Bypass

€m in NPV terms	Financial Comparator	Preferred Tenderer
TOTAL	225.8	171.8

M11 Gorey Enniscorthy

€m in NPV terms	Financial Comparator	Preferred Tenderer
TOTAL	359.7	253

Q4 Briefing Note

A note outlining the reasons why funding for projects on the N24 and N25 national roads was not allocated for 2022

Q4: A note outlining the reasons why funding for projects on the N24 and N25 national roads was not allocated for 2022 (pg. 16).

This note describes the factors affecting the funding situation in 2022 for the N24 Waterford to Cahir scheme, N25 Carrigtwohill to Midleton scheme, and the N25 Waterford to Glenmore scheme.

The NDP considers the 10-year period of the NDP in two periods of five years, namely, 2021-2025 and 2026-2030. As stated in the NDP, the final funding for 2026-2030 will be determined in a new NDP for the period 2026-2035, following a review of the NDP by Government in 2025. The Department of Transport (DoT) notified TII that approximately €5,100 million for New Roads is intended to be allocated by DoT to TII over the period 2021-2030 as follows:

- New Roads 2021-2025: approximately €1,100 million.
- New Roads 2026-2030: approximately €4,000 million.

There is a need to allocate available funding for New Roads in accordance with the NDP. The rate of progress on the delivery of New Roads Major Projects is dependent on the availability of funding resources on a multi-annual basis.

The constraints on the funding for 2021-2025 means several projects named in the NDP will be progressed during the period 2026-2030 or post-2030, in line with the projected increased funding expected to be available in the 2026-2030 period.

The 2022 Allocations seek to achieve the following key outcomes New Roads in accordance with NDP priorities:

- Major Projects in/near Construction: Allocate sufficient funding resource to Major Projects in construction or commencing construction to meet contractual payment obligations.
- N/M20 Cork to Limerick: Allocate sufficient funding to continue planning and design of the N/M20 Cork to Limerick project with a view to achieving approval of its business case and making the application for its planning consent and land acquisition orders in the period 2021-2025. Commencement of main works construction, subject to approvals, expected to commence in the 2026-2030 period of the NDP. Completion of project expected to be post-2030.
- Connectivity of Ports – Roads with Planning Consent: Allocate sufficient funding to acquire land and progress advance works contracts for the N28 Cork to Ringaskiddy (planning consent confirmed March 2021) and the N21/N69 Limerick to Adare/Foynes (planning consent expected in 2022). Commencement of main works construction of the N28 and N21/N69 projects, subject to approvals, expected to commence in the 2026-2030 period of the NDP.
- Connectivity of Ports – Roads in Planning: Allocate sufficient funding to continue planning and design of the N11/N25 Oilgate to Rosslare project with a view to achieving approval of its business case and making the application for its planning consent and land acquisition orders in the period 2021-2025. Commencement of main works construction, subject to approvals, expected to commence in the 2026-2030 period of the NDP.
- Bypasses in Planning: Allocate sufficient funding to acquire land and progress advance works contracts for the N6 Galway City Ring Road (planning consent is currently the subject of judicial review proceedings).

Commencement of main works construction for the N6 Galway City Ring Road will be subject to Government approval, and subject to resolution of the planning challenges.

- Allocate available funding, after meeting other priorities above, to continue planning and design of other Major Projects that provide town or village bypasses with a view to supporting Compact Growth and Town Centre First objectives, in alignment with the Minister's views that increasing focus should be on providing bypasses.
- Progression of individual projects into the planning consent process will be subject to approvals. A restricted number of projects are expected to commence main works construction, subject to approvals, in the 2026-2030 period of the NDP. Remaining projects are expected to continue progression through planning and/or commence main works construction, subject to approvals, post-2030.
- Other Major Projects in Planning: Allocate available funding, after meeting other priorities above, to other named Major Projects on the NDP list of national roads projects in planning (NDP, Chapter 7, page 64). Consider allocating any other additional funding made available to TII, after meeting other priorities above, to other Major Projects proposed by TII or Local Authorities on a case-by-case basis.

Having regard to the above factors it was not feasible for TII to provide for allocations in 2022 to the N24 Waterford to Cahir scheme, the N25 Carraigtwohill to Midleton scheme, and the N25 Waterford to Glenmore scheme. It is intended that these schemes will be progressed in the 2021-2030 term of the NDP.

Q6 Briefing Note

A detailed note on the project to extend the Metro along the Luas Green Line, including expenditure related to the project

Q6 A detailed note on the project to extend the Metro along the Luas Green Line, including expenditure related to the project (pg. 27).

MetroLink and Green Line Upgrades

The MetroLink proposals published in 2018 envisaged a metro service operating from Swords through the city centre to Sandyford. In those proposals, the existing Luas Green Line between Sandyford and Charlemont would have been upgraded to metro standard and the metro service would have replaced the existing Luas tram service along this section.

Extending the Metro along the Luas Green Line would have included work to extend the platforms to 60 metres, raising the platform heights, installation of safety gates at platforms and modifying access routes to each platform, including footbridges and additional lifts (as the tracks cannot be crossed at-grade in a metro).

The need to upgrade the Green Line arises from the expected passenger growth at key locations along this corridor – in particular, Cherrywood, Sandyford and Dundrum - and the planned extension of the line further southwards to Bray. Taking account of those developments, the number of people seeking to travel on the Green Line in future years will exceed the carrying capacity of the Luas system, requiring its upgrade to a metro service. The need to upgrade the Green Line to metro standard will not arise for some time - in the region of twenty years.

From the Non-Statutory Public Consultation in 2018, it emerged that many people were concerned about the need to close the Green Line for a prolonged period to allow its conversion to a metro system.

In March 2019, TII and NTA published a revised proposal based on an alternative approach that allows the new section of metro line to be built now and the Green Line conversion or any extension of MetroLink from the terminus at Charlemont to occur at an appropriate point in the future. Accordingly, the MetroLink scheme comprises the development of a metro from Swords to Charlemont.

During the period between the completion of the metro from Swords to Charlemont and the delivery of further extensions at a point in the future, there will be a need to increase the carrying capacity of the Luas Green Line. This will be dealt with as a separate project and will deliver capacity enhancements on an incremental basis over this period.

This approach is in line with the draft Transport Strategy for the Greater Dublin Area 2022-2042 published by NTA [Draft Transport Strategy for the Greater Dublin Area 2022-2042 - National Transport](#)

When MetroLink is completed, Green Line passengers will be able to connect with MetroLink at Charlemont, St Stephens Green and O'Connell Street for a fast service to Dublin Airport and Swords.

Costs associated with Developing the Concept Design and the Appraisal for the Green Line Upgrade to Metro

TII engaged a joint venture between Jacobs Engineering and Idom as Engineering Designer for MetroLink. The costs of this commission that are associated with the development of the proposal for the upgrade of the Green Line to Metro standard was approximately €400,000 (VAT excluded).

Q9 Briefing Note

The unforeseen costs and losses of income borne by the private entity in the PPP schemes, broken down as far as possible

Q9: The unforeseen costs and losses of income borne by the private entity in the PPP schemes, broken down as far as possible (pg. 30).

Please note that in accordance with the instruction in the letter from the Committee of Public Accounts dated 18 February 2022, TII “objects to the publication of” the material provided in response to this Question 9, as this material is considered as commercially sensitive and confidential.

[Redacted content]

Q13 Briefing Note

A note on the Portlaoise-Cullahill PPP scheme, providing the following information:

- **The total revenue to date from tolls on the road,**
- **The amount paid by the State in respect of the scheme,**
- **The total annual operational payment for the road,**
- **Details of any extra payments or variations by the State in respect of the scheme, and**
- **Any requirements in relation to the condition such PPP schemes must be in, when their responsibility is transferred to the State .**

Question 13 TII Payments and Toll Revenues on M7/M8 Portlaoise-Cullahill PPP Scheme (to Dec 2021)

M7/M8 Portlaoise-Cullahill																	
Nominal €'m (ex VAT)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TOTAL
TII Payments																	
Construction Payments	15.00	10.84	17.80														43.64
Operation Payments						4.50	6.63	5.67	4.81	3.72	3.40	1.97	0.77	0.72	1.23	1.33	34.75
Variation Payments				1.81	0.83	1.79		0.35		0.18			0.09	0.02	0.11		5.18
TII Payments to PPP Co	15.00	10.84	17.80	1.81	0.83	6.29	6.63	6.02	4.81	3.90	3.40	1.97	0.86	0.74	1.34	1.33	83.57
PPP Co Toll Revenue	0.00	0.00	0.00	0.00	6.70	12.71	12.66	13.54	14.26	15.56	16.53	17.29	17.43	17.87	13.11	15.42	173.07

In addition to funding ongoing lifecycle and renewal works during the term of the contract, on expiry of the each of the PPP contracts, the PPP Co is required to transfer the Project Road back to the Authority (Handback), in a safe and serviceable condition with a significant residual life available, thus protecting TII from having to invest in the road asset in the early years after contract expiry.

At the time of Handback, the minimum residual life of various elements of the road asset has been defined in the contract, for example a residual life of 10 years is required for road elements such as pavement, boundary fence and environmental barriers, a residual life of 15 years is required for drainage, and a residual life of 20 years is required for buildings. The contract allows for a series of inspections of the road assets which will be carried out within the last 5 years of the contract period to ensure that the residual life requirements as defined in the contract will be achieved.

The tables below provide typical residual life values that are required for structural and non-structural elements of a Project Road on Handback under the terms of PPP contracts.

Table 1: Residual Life of Structural Elements

Structural Element	Residual Life (years)
Reinforced Concrete	30
Prestressed Concrete	30
Structural Steelwork	30
Weathering Steel	30
Corrugated steel buried Structures	30
Corrosion protection for structural steelwork	5
Deck waterproofing	5
Deck Joints:	
(a) Asphaltic plug	5
(b) Elastomeric	5
(c) Elastomeric (in metal runners)	5
Vehicle/pedestrian parapets	15
Pedestrian parapets	15
Bearings:	
(a) Elastomeric	15
(b) Mechanical/Roller	15
(c) PTFE coating	8
Sign/Signal Gantries	15
Reinforced Earth/Anchored Earth Structures	30
Gabions	15
Crib walls	30
Soil nails	30
Ground Anchors	30
Catenary lighting systems	8

Structural Element	Residual Life (years)
High mast lighting	8
CCTV poles	8
Traffic signal poles	8

Table 2: Residual Life of Other Elements

Element	Residual Life (years)
Buildings	20
Toll Booth	20
Canopy	10
Toll Collection System	5
Earthwork Slopes	15
Footways and Cycle Tracks	5
Covers, Gratings, Frames and Boxes	15
Kerbs, Edgings and Pre-formed Channels	15
Piped Drainage Systems	15
Gullies, Catchpits and Interceptors	15
Filter Drains	5
Fin Drains	10
Headwalls, Aprons and Sluices	30
Tidal Flaps, Penstocks and Valves	10
Housings, Cabinets, Mountings and Posts for Communications Equipment	5
Boundary Fences	10
Walls	10
Environmental Barriers	10
Pedestrian Guard Rails	10
Safety Fences	5
Safety Barriers	12
Road Markings	5
Traffic Signs	5

Element	Residual Life (years)
Traffic Signals Housings, Mountings and Posts	8
Lighting Columns	8
Corrosion protection for non-structural steelwork including lighting columns	5
Availability Monitoring Equipment	5

Q16 Briefing Note

A detailed note on Project BRUCE (Better Road User Charging Evaluation).

Better Road User Charging Evaluation:
Public Accounts Committee Briefing Note February 2022

Project BRUCE



1. What is BRUCE?

BRUCE is a strategic decision-making process to assess future road user charging options as part of the operation and maintenance of the National Road Network (NRN) in Ireland.

Transport Infrastructure Ireland in partnership with Local Authorities operates and maintains the National Road Network on behalf of the government. As part of this, TII entered into several public private partnership (PPP) contracts over the last two decades to deliver segments of the national road network (NRN) in accordance with the objectives of various National Development Plans. These PPP contracts comprised both toll concession contracts and availability-based contracts.

The expiry of the first group of PPP contracts commences from 2033 and those assets will be progressively handed back to TII which will then be responsible for the management of the operation and maintenance of the assets, including the associated revenues and costs.

Guidance and evidence from other jurisdictions emphasise the importance of early planning for the expiry and hand-back of assets managed under PPP contracts to implement future target operating models in order to mitigate against service disruptions, manage costs and allow sufficient time for any disputes to be addressed.

“The expiry of the first group of PPP contracts commences from 2033 and those assets will be progressively handed back to TII ”

TII has chosen to commence investigations with sufficient time to consider various operations and maintenance scenarios and to develop options around tolling and the next generation of road user charging. The rationale for the PPP tolling arrangements was based primarily on contributing to the funding of the construction and operations of the roads, while the rationale for current and future road user charging schemes are supportive of broader sustainable transport and mobility outcomes and related government policies around climate action, connectivity and growth, as well as equity and inclusion.

Project BRUCE is increasingly being recognised as not only an approach to ensure financial sustainability, but also one that can support these wider policy aims - it is included as an action in the 2021 Climate Action Plan, Ireland's roadmap to becoming a **carbon neutral** economy and resilient society by 2050.

BRUCE will deliver the evidence base, information and decision-making tools required to make informed decisions in the public interest, in line with the Public Spending Code.

2. Why is TII doing BRUCE now?

As the PPP contracts expire and the assets are handed back, there is a unique opportunity for TII to look at how to evolve the network to best serve the national interest. TII wants to understand how the NRN can make tangible contributions to the delivery of key public policy agendas including: **decarbonisation of transport, encouraging mode shift to more sustainable modes, encouraging equitable access to opportunities and digitalisation** – through the future operating model. We also want to understand what the **revenue potential** of the network is in relation to the costs base for maintaining and operating the network and how that contributes to doing more with what is there now rather than building more road infrastructure which is a central principle of Government's NIFTI policy (National Investment Framework for Transport in Ireland).

Any changes will involve significant effort to implement technically, and will require extensive stakeholder engagement to build understanding and support to gain appropriate permissions and approvals. Starting now gives Ireland the opportunity to prepare for this change.

Safeguarding the value of the network requires a clear and informed strategy to reduce uncertainty

The National Road Network is critical infrastructure that connects Ireland and attracts millions of users annually, including a million toll account holders. The priced parts of the network are an important mechanism for demand management that should be retained or strengthened. The (financial) book value of the National Road Network assets is estimated at around €32bn. The service the network of infrastructure assets provides has high economic, social and political value beyond its book value – without the NRN regional cities and towns, communities and businesses would become **less viable**. **The network needs innovative maintenance and operational management to continue to deliver the service and public benefit expected from such a significant portfolio of national infrastructure assets.**

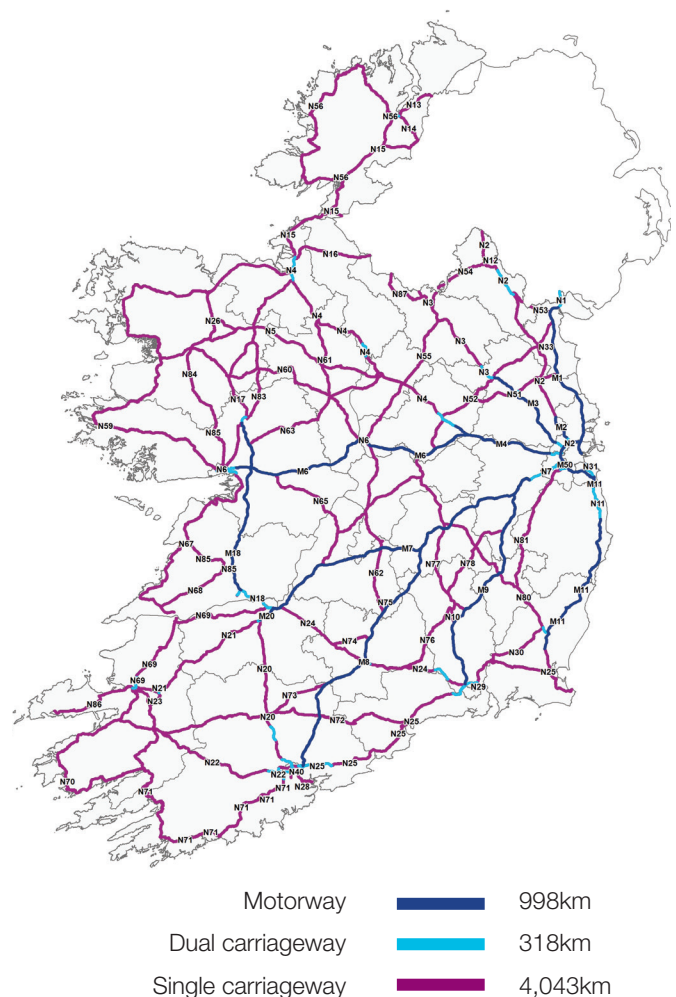


The contextual questions TII needs to consider are if, without the introduction of next generation road user charging on the use of the National Network, can Ireland:

- protect and grow its economy without significant recurrent public investment in its road network, the asset base worth more than €32 billion?
- provide fair access across the nation to jobs and education for people; to markets for business; to the goods needed to thrive on a daily basis?
- invest as required to support evolving technology to drive down the carbon emissions of the national transport fleet as it moves across the country creating that access?
- invest in delivering attractive transport choices that can reduce car dependence which improves both personal well-being, but also enables the economy to grow without being choked with congestion?
- encourage mode shift and change behaviours of road users to avoid having to invest in new infrastructure and instead optimise the current network?

At around the same time of the PPP expiry, fuel excise will rapidly decline, eventually removing an estimated revenue of €1.5 billion per annum, as electric vehicle ownership rises in line with climate policy.

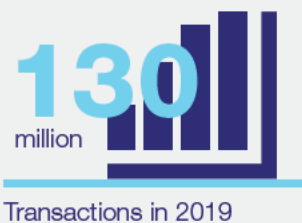
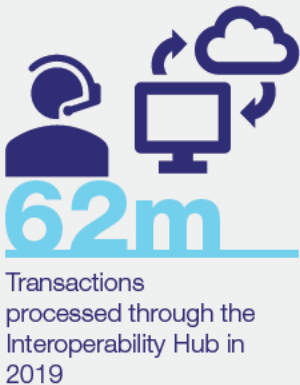
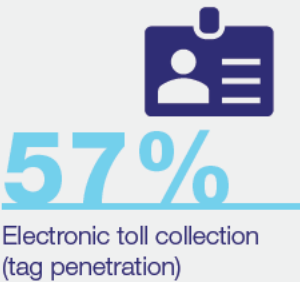
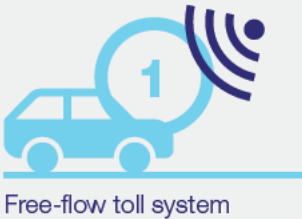
BRUCE aims to tackle these challenges and determine to what level of funding support, and the possible source(s), is required to maintain the full level of service while meeting the broader policy ambitions of Government. As the PPPs expire the opportunity arises with an integrated national network managed by Government for the people of Ireland to consider what part of the required funding support could be raised equitably through existing or enhanced road user charging.



Tolling in Ireland (2019)

Toll Locations

- Barriered toll systems
- Free-flow toll system



3. How is TII approaching BRUCE?



TII is taking a comprehensive and collaborative approach to rationale and objective setting to make sure the problem is clearly defined and objectives are communicated early across government. To avoid bias, TII is progressing through the Public Spending Code that rigorously tests the assumptions and validity of proposed government spending. BRUCE is at the earliest stage of the Public Spending Code process with a Draft Strategic Assessment Report, SAR prepared and issued to Department of Transport in 2021.

Since finishing the draft SAR, TII has focused on building the evidence needed to understand the problem and defining the analysis methods needed to produce credible solutions. TII is currently preparing a Preliminary Business case including an Options report, in line with the Public Spending Code.

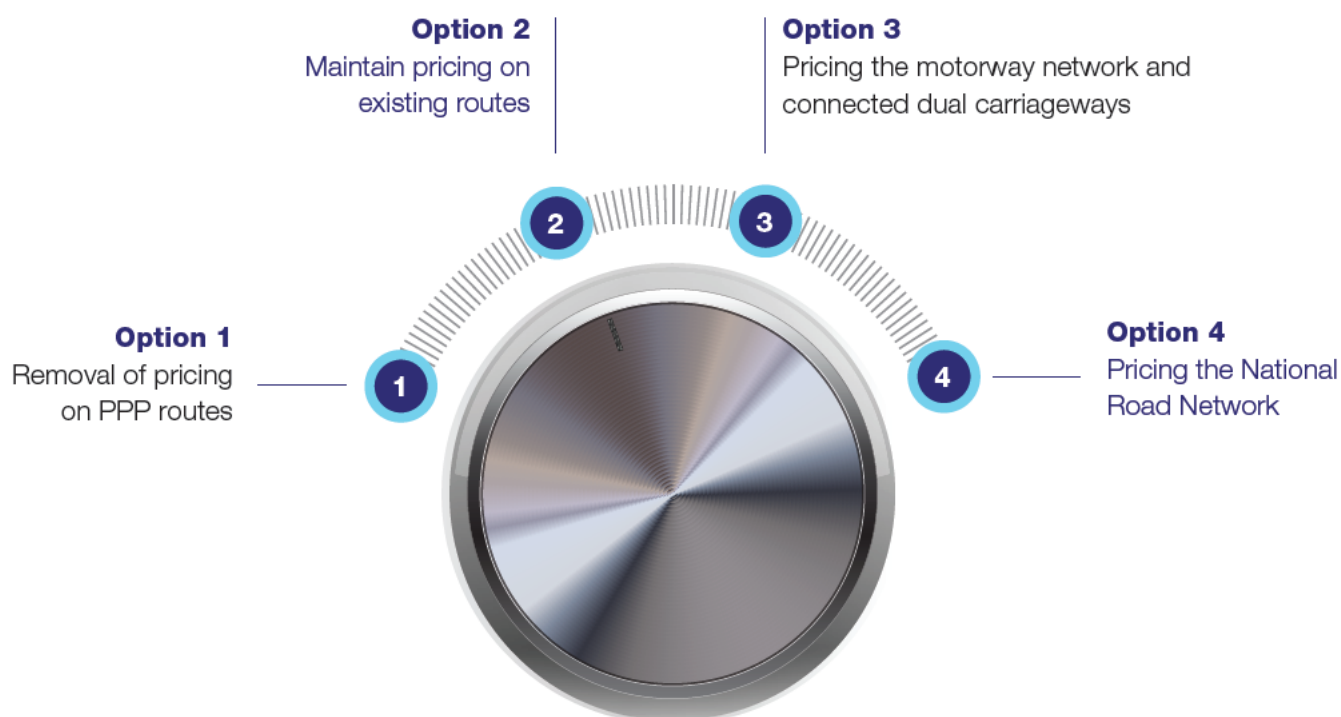
Over the medium to long term TII aims to provide a robust evidence base, analysis and decision-making tools that allow for a collaborative national conversation across government and with experts from all relevant industries, professional services, academia and the community to select the best path forward for Ireland.

While TII must focus on the most pressing issue – the expiry of the PPPs – it also must ensure that the options being considered take into account broader context and national interest. Therefore the analysis will include developing options which: meet the broader policies of government in the public interest; are technically, legally, economically and financially feasible; do not shift problems but resolve or manage them; contribute realistically to carbon reduction targets; remain valid as broader government policy is implemented; are supported by other branches and agencies of government which will necessarily provide support; and ensure improved equity in line with policy.

Using the Public Spending Code guidelines as intended, TII is using a series of analytical tools including multi-criteria analysis, cost-benefit analysis and advanced transport and behavioural modelling techniques to explore and measure the direct and indirect impacts of varying approaches for the future of road user charging. In due course, the analysis undertaken by BRUCE will provide decision makers with the ability to explore and understand the implications of a multitude of different options. TII will also, as a result, have stronger tools and evidence sets to support future option assessments and a richer understanding of how the network is used by individuals and businesses. The analysis will also inform a wider consultation with stakeholders, which could be planned carefully with relevant departments and agencies.

The BRUCE project is focused on a holistic assessment of the options for road user charging including both the appropriate approach to pricing as well as the most effective and efficient form of delivery and operation. The options considered across the NRN will range from limited to no road user charging through to more expansive and sophisticated approaches to road user charging that could include varying or applying charges to only certain types of vehicles or at certain times of the day. The assessment of these options will be guided by the overall objectives of the BRUCE programme which are informed by broader government policy.

We are currently investigating 4 options



Next steps

TII will engage with its sponsor, the Department of Transport to ensure that the next stage in the Public Spending Code analysis is aligned with the emerging climate action, policy and transport plans for Ireland.

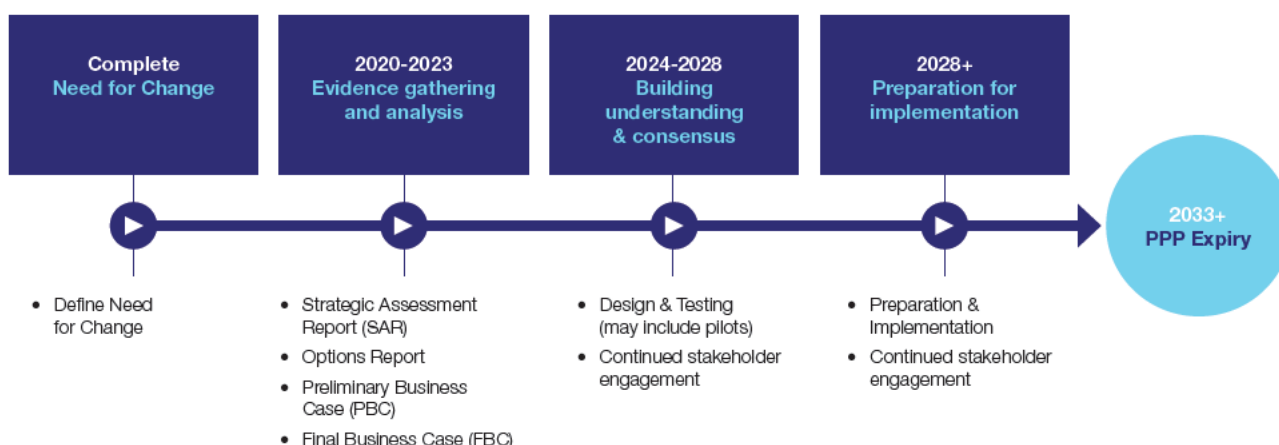
The Preliminary Business Case will more fully define and test the options, and variations of those options, following feedback from the SAR. TII will develop more evidence to increase confidence in the expected impacts of those options by undertaking both a Multi Criteria Analysis and Cost Benefit Assessment. This analysis will ensure schemes are rigorously assessed for their ability to meet the overarching objectives including ensuring fairness, genuine carbon reduction benefits, while still addressing the funding challenges facing the NRN.

To navigate the trade-off analysis and assess the relative importance of the objectives TII intends to enhance the analysis by collaborating with expert stakeholders, harnessing academic insight, conducting user research and testing options against international experience.

The Preliminary Business Case will then give Government the opportunity to decide whether to proceed with developing and piloting a test scheme to get real world understanding of user behaviour, systems efficacy, attractiveness and costs to ensure public engagement is grounded with understandable, measured and transparent experience.

BRUCE is fundamentally about defining changes and transitions and providing clear rationale and evidence to government decision makers to support the selection of a preferred operating model option. If the BRUCE project delivers against its aims and objectives, the network will:

- Support zero emissions vehicle operations along the entire network
- Adopt circular economy approaches to asset maintenance, operation and renewal
- Achieve a fairly balanced funding and pricing system between general taxpayers and users
- Maximise the density of movement on the network of both people and goods to minimise the need for expansion in capacity (future capital expenditure on roads)
- Keep Ireland connected and moving efficiently
- Support rural industry and regional economic competitiveness
- Successfully introduce technology that improves both the network user's experience, as well as the performance of the Network.





Q18 Briefing Note

A note detailing TII's needs assessments on the condition of roads

Question 18. A note detailing TII's needs assessments on the condition of roads (pg. 44)

TII investment in pavement protection and renewal is conducted on a “whole of network” prioritised basis.

The starting point for the prioritisation of pavement renewal works is the annual pavement survey that TII conducts across the entire 5,300km of the national road network each summer. The survey utilises an array of van mounted electronic and laser devices to measure various characteristics of the pavement, including longitudinal roughness, transverse rutting, skidding resistance, texture depth, surface cracking and ravelling.

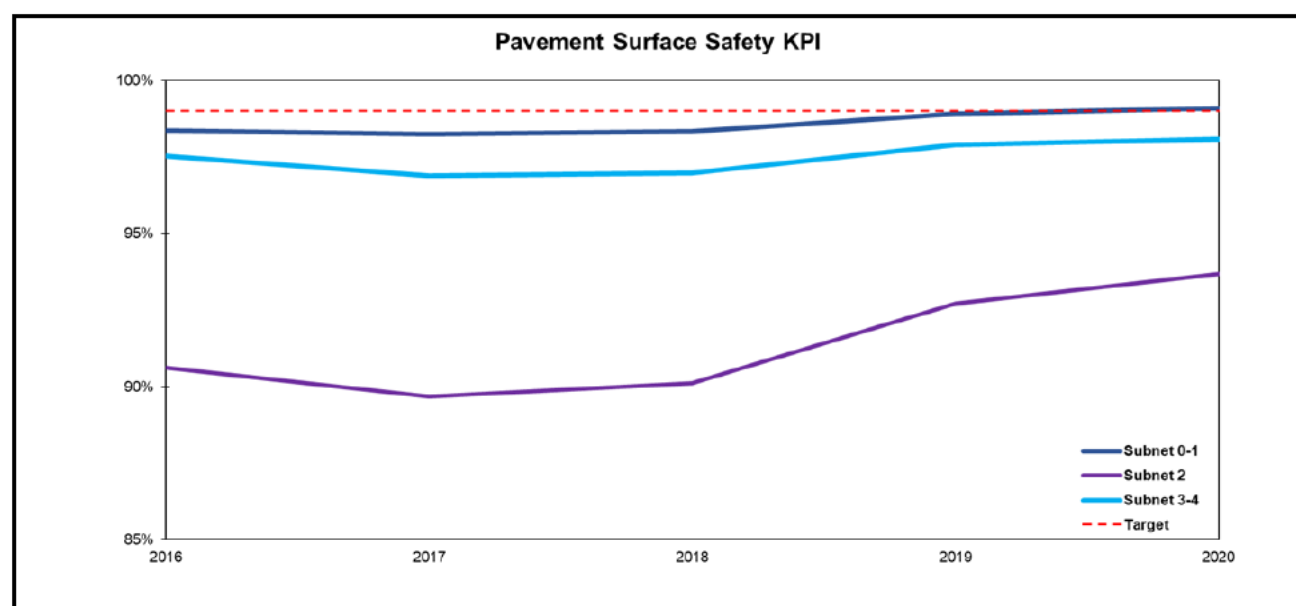
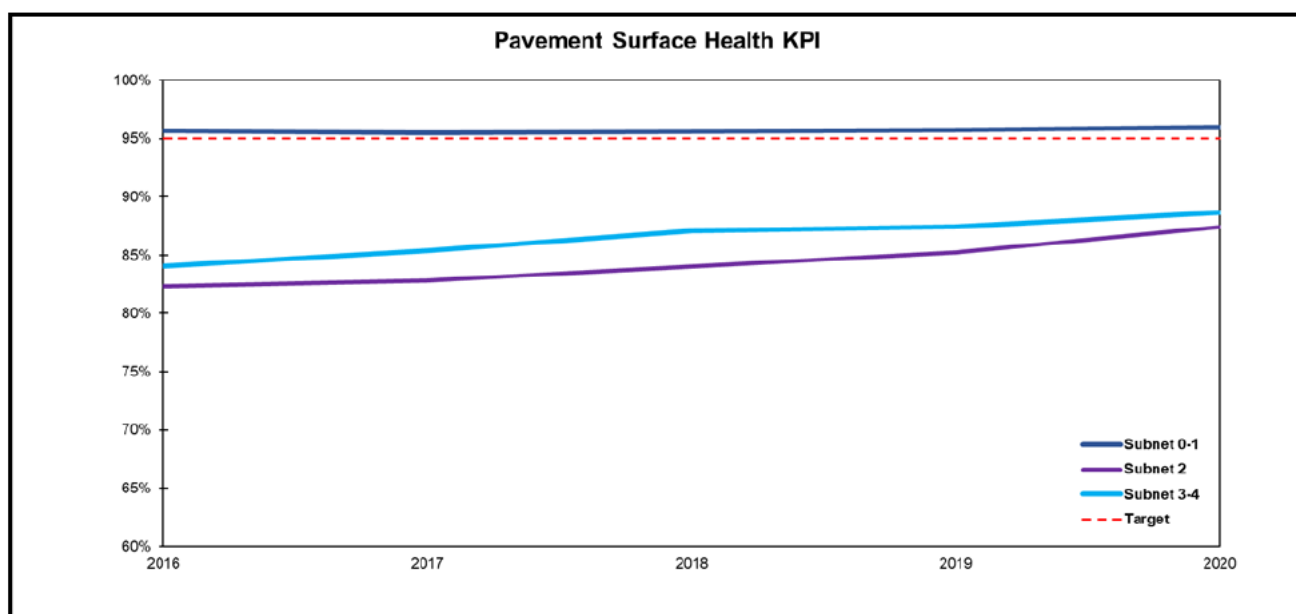
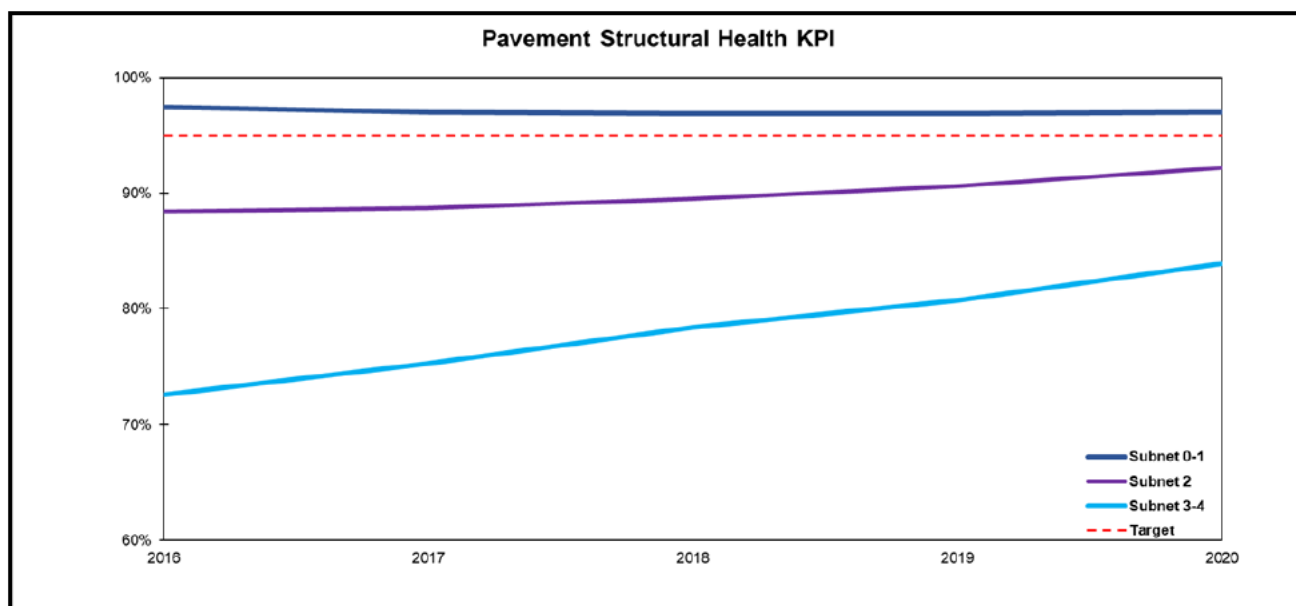


Vehicles with specialised equipment used to undertake the annual pavement survey.

The data collected is processed by TII's pavement management system (PMS) and used to analyse the overall condition of the network and report on key performance indicators (KPI) along with trends in the network's condition. In addition, the pavement management system provides an analysis of the data to identify the locations of greatest need for pavement renewal. This analysis is based on an assessment of the entire network. Investment in pavement renewals is prioritised on the basis of need, using objective, measured, performance criteria. Pavement allocations to each local authority are a result of this prioritisation process. Allocations to a County Council are not based on the length of network in that county.

The prioritisation of interventions on a whole of network basis delivers the best overall value for money and ensures that priority is given to those locations across the network where the intervention is most needed.

Extracts from TII's Pavement Key Performance Indicators Report 2021 shows that in overall terms, over the past number of years, pavement condition has been improving across the network, most particularly in what is termed Subnet 2 (urban sections) and Subnet 3-4 (predominantly national secondary routes). The graphs below show the percentages of the network assessed as having a fair or better pavement condition characterisation. This points to the appropriate level of investment in recent years and the effectiveness of TII's prioritisation process.



Sub-networks

The characteristics and performance of pavements on national roads differ across the network. Pavements on our motorways (sub-network 0) are designed and constructed to the highest engineering standards, as are pavements on our two lane improved network (sub-network 1).

In the case of our legacy national roads (i.e. those sections of the network that have not been realigned, although pavements have been strengthened and improved over the years, the pavements are not of as high a standard, and perform less well than pavements on new sections of the network. Such pavements generally occur on the national secondary network and on remaining legacy sections of the national primary network.

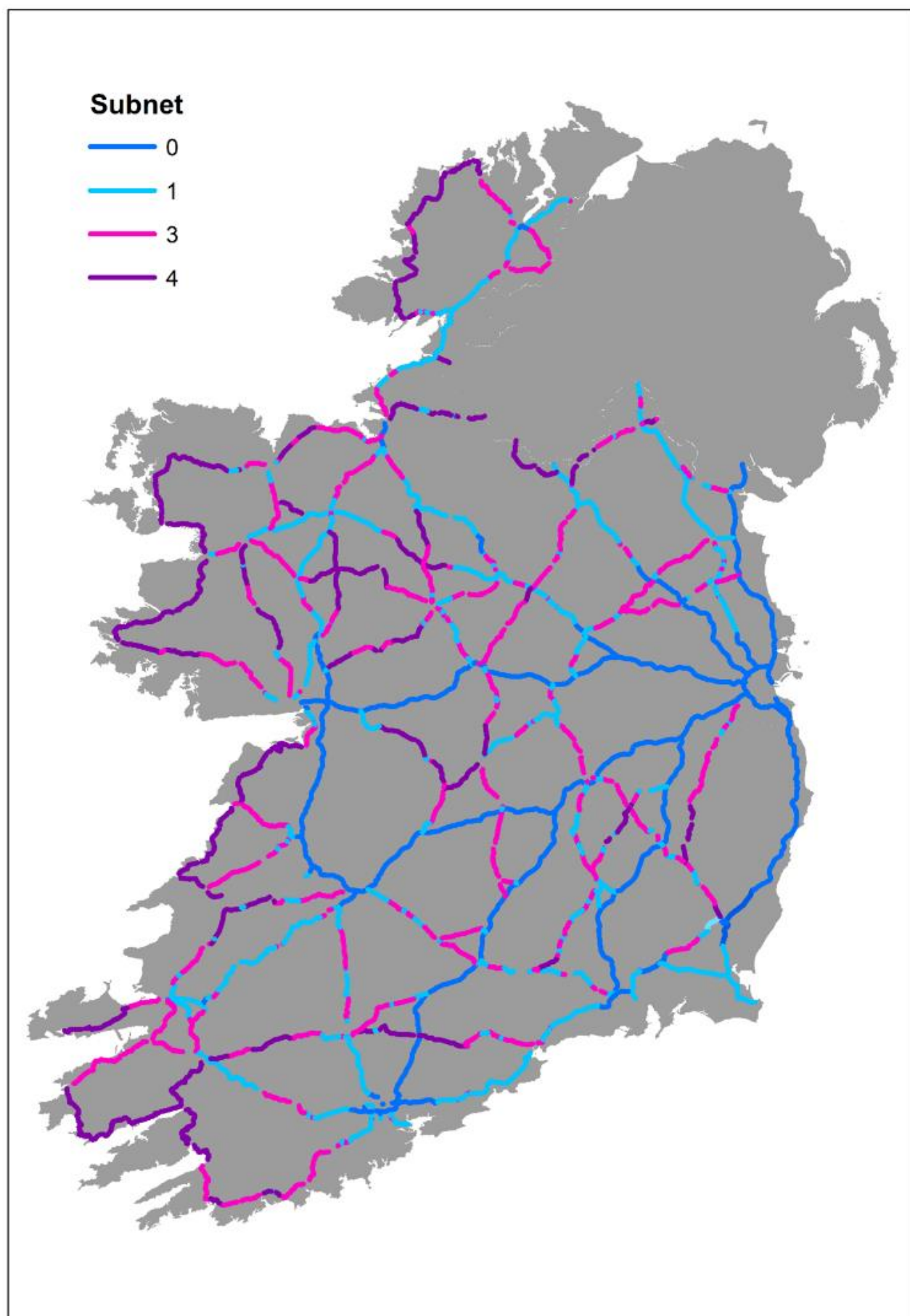
These national roads are categorised as sub-network 3 (higher traffic volume sections) and sub-network 4 (lower traffic volume sections). Urban pavements are given a separate categorisation (sub-network 2), because urban pavements are subject to much more disruption through excavation for services and other purposes and need to be managed on a different basis.

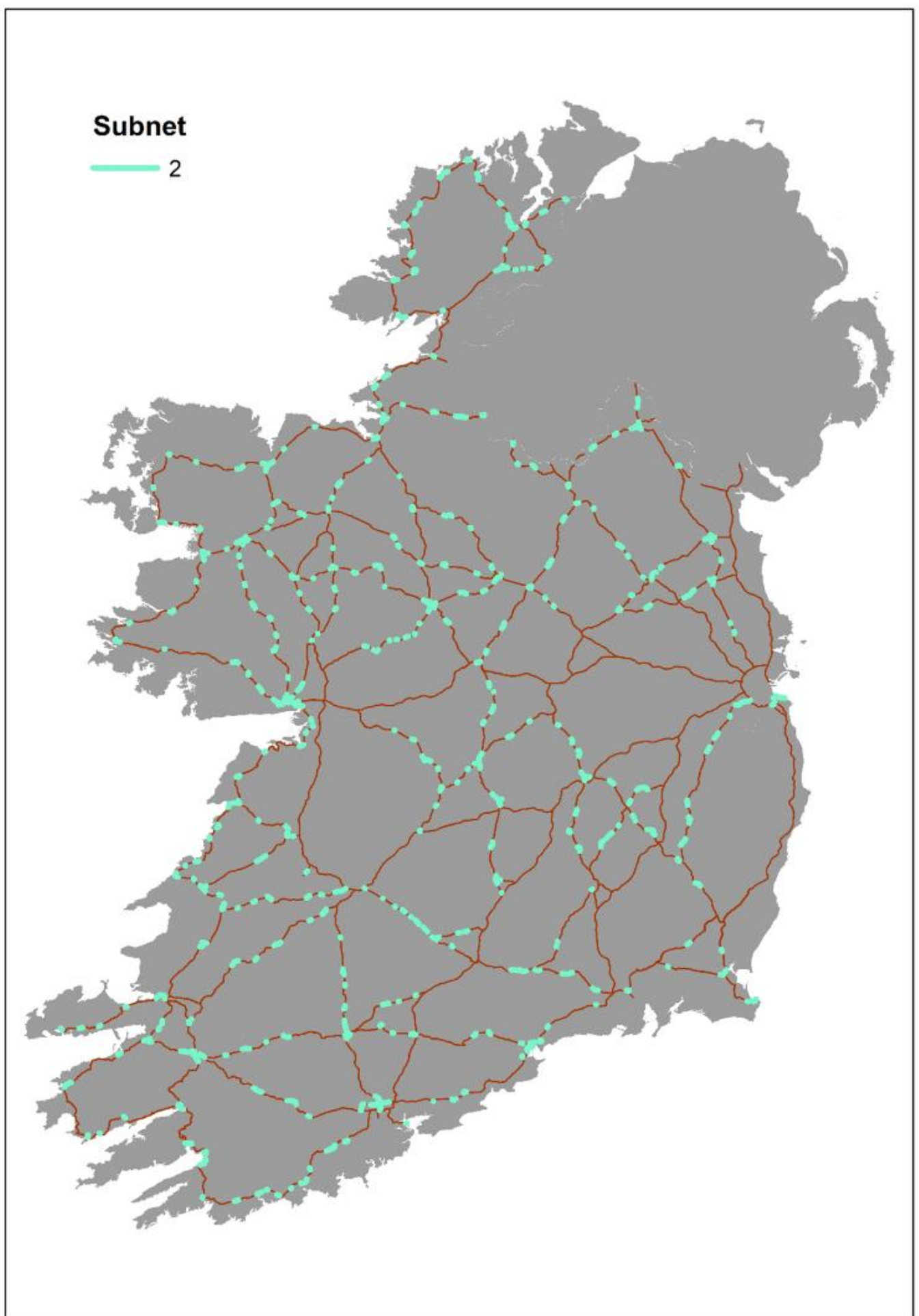
The use of sub-network categorisation allows TII to set different performance thresholds across the sub-networks ensuring that investment can be optimised to ensure the best overall outcome across the national road network.

Summary


Sub-network 0	Motorways and dual carriageways	Sub-network 3	Legacy national primary and higher volume national secondary roads
Sub-network 1	New/Re-aligned single carriageways		
Sub-network 2	Urban sections on national roads	Sub-network 4	Low volume national secondary roads

The National Road Subnet Categorisation maps are included on the following pages.







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