

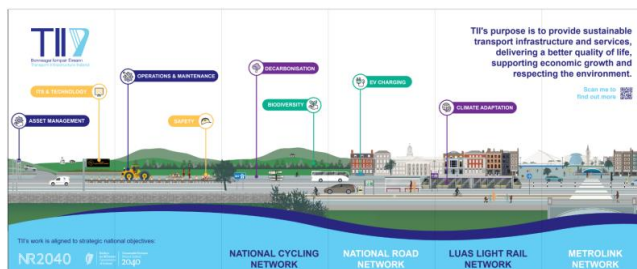
# TRA 2024

# TII Overview

April 2024



# TII Overview



- TII's purpose is to provide **sustainable transport infrastructure and services**, delivering a **better quality of life**, supporting **economic growth** and **respecting the environment**.
- TII's function is to provide an integrated approach to the future development and operation of the **national roads network** and **light rail infrastructure** throughout Ireland.
- The Strategy of National Roads 2040 (NR2040) will allow TII to **enable Project Ireland 2040**, responding to evolving national policy and aligning to the Department of Transport's National Investment Framework for Transport in Ireland (NIFTI).
- TII was formed following the merger of the **National Roads Authority (NRA)** and the **Railway Procurement Agency (RPA)**
  - NRA established in 1993, under the Roads Act 1993
  - RPA established 2001, under the Transport (Railway Infrastructure) Act 2001
  - TII established 2015, under the Roads Act 2015
- Staff of **300** technical and professional experts to deliver Ireland's National Development Plan.
- TII's work aligns to our five values



- TII's current remit is across:
  - Roads
  - Greenways & Active Travel
  - Public Transport
- In 2022, TII was assigned new responsibilities for the ZEV (Zero Emissions Vehicles Ireland) office, currently led by DoT.
- In 2023, TII was assigned new responsibility for EV Charging and Refuelling Infrastructure under the Road Traffic and Roads (Amendment) Act 2023

# TII's Themes at TRA 2024



## Asset Management

Asset Management activities at TII covers a multitude of light rail and road assets. TII's Statement of Strategy establishes a commitment to protecting the significant investment that has been made in our national transport system. In line with that commitment, TII established the Asset Management Policy that states, *“Assets will be managed in a sustainable manner through the development, implementation, and maintenance of an asset management approach that is risk-based and data-driven, enabling us to make informed decisions throughout the life of our assets.”* For more information please see: [TII Asset Management Policy](#) [TII Asset Management Strategy](#) [TII Asset Management Framework](#)

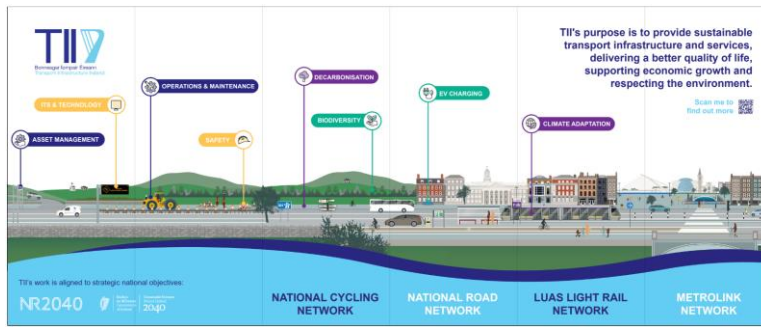
## Biodiversity

As a state agency provider of transport infrastructure, TII recognises the potential for operations to impact biodiversity and therefore play an active role in ensuring compliance with national and international biodiversity related legislation through the development of standards and guidance documents. TII emphasise the value of a proactive approach, with clear objectives, that harnesses national and international policy and emerging approaches to addressing biodiversity loss. As a result, TII have developed a biodiversity plan which outlining key objectives and pathways to achieving these. For more information please see: [TII Biodiversity Plan](#)

## Climate Adaptation

TII's assets and activities are vulnerable to extreme weather events, therefore TII adopts a proactive approach to managing the impacts of climate change, to prevent the worst of these impacts and avoid relying on costly reactive measures. TII's Climate Adaptation Strategy sets out the approach and next steps required over the coming years to continue adapting to the impacts of climate change. For more information please see: [Climate Adaptation Strategy](#),

# TII's Themes



## Decarbonisation

TII plans to reduce GHG emissions and actions to contribute to the delivery of climate targets. TII's Climate Action Roadmap 2022 (Roadmap) sets out TII's plans to reduce emissions and meet decarbonisation and energy efficiency targets as directed by Government.

For more information please see: [Sustainability Brief](#), [TII Climate Action Roadmap](#)

## EV Charging

TII is tasked with providing a safe and efficient network of recharging infrastructure and refuelling infrastructure across the National Road Network. In collaboration with Department of Transport and Zero Emission Vehicles Ireland (ZEVl), TII is leading this effort via the ZEVl EV Charging Infrastructure LDV En-Route Grant Scheme which aims to accelerate the development of Electric Vehicle (EV) charging infrastructure across Ireland's road network.

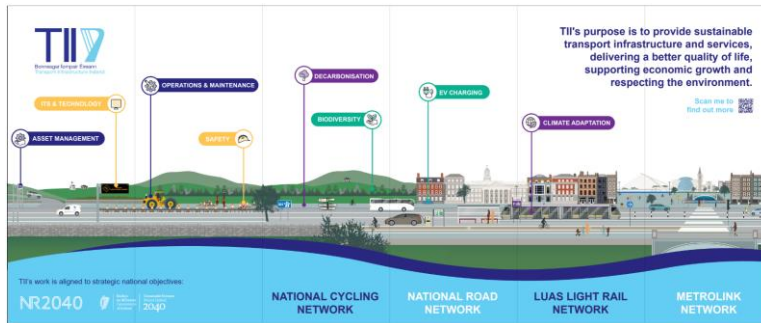
For more information please see: [ZEVl EV Charging Infrastructure LDV En-Route Grant Scheme - \(tii.ie\)](#)

## ITS & Technology

Intelligent Transport Systems (ITS) deliver real-time information about conditions that may impact traffic flows, from road works and accidents to adverse weather conditions, creating more seamless journeys in a safer network. Intelligent transport systems, defined as 'the integration of information and communication technologies with transport infrastructure, vehicles and users' enables TII to manage its network more efficiently, in greater safety & more sustainably, essential to achieving the objectives of the Roads Act Section 17.... 'to secure the provision of a safe & efficient network of national roads'. Transport Infrastructure Ireland (TII) is piloting Cooperative Intelligent Transport Systems (C-ITS) services.

For more information please see: [Cooperative ITS \(C-ITS\) Pilot - \(tii.ie\)](#)

# TII's Themes



## Operations & Maintenance

TII operates, maintains and improves the national primary and secondary road network in Ireland. This encompasses the provision of travel information, traffic data and emergency services as well as management and control of the network and its traffic.

For more information please see: [Operations & Maintenance](#)

## Research, Standards & Innovation

The TII Research Strategy serves as a guiding document for conducting research. It outlines the framework and approach, encompassing mission, goals, and objectives. By defining this strategy, TII aims to enhance its understanding of transportation infrastructure challenges and contribute to the field's advancement. TII engages in collecting and evaluating research needs and ideas, prioritizing research topics, managing research projects effectively and fostering collaboration with stakeholder and research providers. TII will shortly launch the TII Innovation Strategy. Innovation is one of the core values of TII's Statement of Strategy 2021-2025 - TII seeks to create value relevant to its purpose through the application of new and better solutions. TII's Innovation.

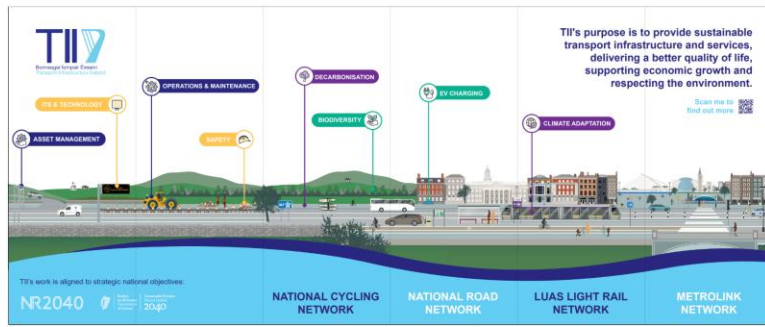
For more information please see: [TII Research Strategy](#) , [TII Innovation](#)

## Transport Planning

The Strategic and Transport Planning Department within TII shapes the future of transportation in the country. It conducts strategic studies, develops policies, and provides inputs for business cases related to roads and light rail projects. Additionally, it manages transportation modelling tools and collaborates with stakeholders to ensure efficient planning and decision-making.

For more information please see: [Strategic Planning Unit - \(tii.ie\)](#)

# TII's Themes



## Safety

TII is committed to safety across all operations - road, rail and construction. TII Road Safety has an extensive road safety agenda aimed at reducing the number of collisions occurring on the network of national roads, as set out in the Government's roads safety strategy. TII Luas safety continually monitors the safety performance of the Luas operation and carries out analysis of the incidents and accidents to identify trends and emerging issues as well as safety campaigns in collaboration with Transdev. TII Construction Safety carries out safety audits to monitor and check the performance of the contractors working on TII projects.

For more information please see: [Safety](#); [Health and Safety Advice Manual](#)

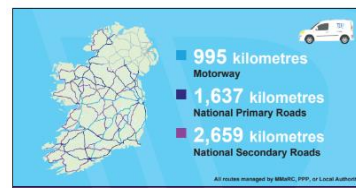
## Tolling

Toll roads in Ireland are generally located on major interurban corridors and impose a toll (levy or charge) on each vehicle using them. TII is responsible for overseeing the procurement and implementation of new tolling arrangements, and for monitoring and managing existing tolling arrangements on the national road network.

For more information please see: [Tolling Information](#), [eFlow](#)



# TII Networks: Roads



- TII operates, maintains and improves the **National Road Network (NRN)** which consists of **National Primary roads** and **National Secondary roads**. This includes **Motorways, Dual Carriageways, and Single-Lane Roads**, playing a central role in sustainably transporting people and goods across Ireland.
- TII **works with Local Authorities** in the management and maintenance of National Roads and Secondary Roads and Dual Carriageways
- Across **5,314km** of national roads, TII manages:
  - 1,200km of high-quality motorway and dual carriage way
  - 3 tunnels
  - 3,400 structures
  - 130,000 road signs
  - There are 11 tolled sections of the National Road Network, TII operate the M50 and Dublin Tunnel
  - Operation of 9 service areas (under PPP agreements)
- Some of our key national primary roads in Ireland are part of the **Trans-European Transport Network (TEN-T)**.
- In total, approximately **57 million passages** were recorded on the M50 toll road which is an increase of 5% from the previous year (2022: 54 million).
- In total, approximately **9.1 million passages** were recorded using Dublin tunnel in 2023.
- TII's **tolling operations** collect significant user charges every year from a broad customer base of **over two million domestic and foreign motorists** using the M50 and Dublin Tunnel toll roads.
- **TII's responsibilities include:**
  - Management of the M50 eFlow toll operation and Dublin Tunnel toll collections
  - Management of compliance levels on the M50 eFlow toll
  - Managing the national interoperability arrangements
  - Strategic planning relating to the evolution of the tolling sector in Ireland in line with Governmental and EU policies on user charging and infrastructure funding. This includes planning for the hand back of PPP toll roads to TII between 2030 and 2040



# TII Networks: LUAS, Cycling & Greenways



## Luas

- TII is responsible for the **development of the Luas infrastructure and its rolling stock**, managing the operations and maintenance contract for the **National Transport Authority (NTA)**.
- 20 years this year: Opening in 2004, the Luas system comprises two lines, the **Red Line (32 stops)** and the **Green Line (35 stops)** covering a total distance of 43 kilometres.
- Luas is Dublin's **Light Rail Transit system**, also known as the tram network.
- The Luas network has a fleet of **73 trams** and **seven dedicated Park & Ride Sites** operated by TII.
- In 2023, there were **48.2 million passenger journeys** registered on the Luas network



## National Cycling Network & Greenways

- TII is leading the development of an ambitious new **National Cycle Network** for Ireland. The proposed National Cycling Network will span **3,500km**, linking over 200 cities, towns, and villages across Ireland
- Since 2021 TII has had the responsibility for the management and delivery of the national **Greenway programme**.
- On behalf of the Department of Transport, TII is investing **€60m a year in greenways** until 2030.
- TII is supporting local authorities to deliver more than **200km of greenways** as part of the National Cycle Network and a further **100km of recreational greenways**. TII funded **70+ Greenway Projects in 2023**.
- As of March 2023:
  - 26 at planning and design stage
  - 7 greenways progressing to construction
  - 11 greenways at construction
  - 32 active travel projects at various stages



## What is Metrolink

- A proposed high-capacity, automated, metro railway in the Greater Dublin Area
- It will consist of 16 stations across 18.8km, mainly underground.
- Alignment will link Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services to create a fully integrated public transport network
- Will carry up to 53 million passengers annually, cutting journey times from Swords to the city centre to 25 minutes
- Metrolink is a key project in the National Development Plan 2021-2030.

## Why does Ireland need Metrolink?

- **Congestion:** In 2021, Dublin ranked as the 35th most congested city in the world. A Dublin commuter will spend an average of 213 hours a year stuck in traffic. Congestion and lost time will cost the Irish economy over €2 billion/year by 2033
- **Population Growth:** The congestion problem is forecast to worsen as Ireland's population continues to grow ( 5.1 million in 2021, having grown by 8% since 2016). The GDA transport network cannot accommodate these levels of growth and needs significant investment in new infrastructure projects such as Metrolink.
- **Inefficiencies:** People leave earlier/later in the mornings to avoid the peak hour rush making the transport system look like it is more efficient than it is and hides other costs.
- **Economic benefits:** 8,000 direct construction jobs per year 2,750 indirect support jobs per year during construction, 300 permanent staff during operation

## Next Steps

- In July 2022, Metrolink was approved by Government of the Preliminary Business Case. This allowed the Metrolink team to lodge a Railway Order / Planning Application for the scheme.
- Ongoing consultations and planning are currently taking place by the project team. The forecast of costs can only be established when the final arrangements for the project are sufficiently clear.

## More information

Can be found at: <https://www.metrolink.ie/en/>

# Sustainability

The Sustainability Implementation Plan is the foundation for embedding sustainability across TII.

TII has established a Sustainability Portfolio Management Office within TII to provide support and oversight on the delivery of all sustainability actions.

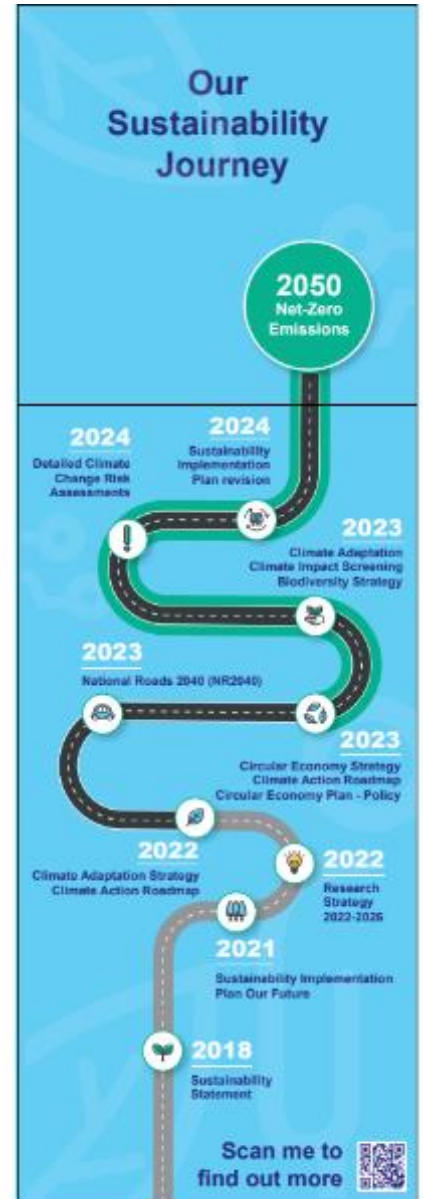
The Sustainability Implementation Plan (SIP) (updated 2024) includes sustainability outcomes which are aligned with commitments by the Government. Metrics have been developed to measure progress.

Progress since 2021 includes, but is not limited to, the development of the Climate Action Roadmap, an update of TII's Climate Adaptation Strategy, Climate Guidance for National Roads Light Rail, and Rural Cycleways (offline and greenways); the Carbon Assessment Tool for Road and Light Rail Projects; the National Road Emissions Model, Air Quality guidance and assessment standard; and supporting ZEV (Zero Emissions Vehicles Ireland) with planning and delivery of EVCI (electric vehicle charging infrastructure) along the National Road Network (NRN).

## Publications

Publications can be found on TII's Sustainability webpage: <https://www.tii.ie/sustainability/>

Information about TII's Climate Adaptation work can be found on [TII's Adapting to a changing climate webpage](#)



# TRA Web Page

## **All Aboard: TII's Accessibility Podcast: All Aboard**

<https://www.tii.ie/sustainability/all-aboard/>

## **Asset Management**

[TII Asset Management Policy](#)

[TII Asset Management Strategy](#)

[TII Asset Management Framework](#)

## **Biodiversity**

[TII Biodiversity Plan](#)

## **Climate Adaptation**

[Climate Adaptation Strategy](#)

[www.tii.ie/Sustainability](http://www.tii.ie/Sustainability)

## **Decarbonisation**

[TII Climate Action Roadmap](#)

[www.tii.ie/Sustainability](http://www.tii.ie/Sustainability)

## **EFlow & Tolling**

[Tolling Information/eflow - \(tii.ie\)](#)

[eFlow - \(tii.ie\)](#)

## **Environment**

<https://www.tii.ie/technical-services/environment/strategy/>

## **EV Charging**

[ZEV1 EV Charging Infrastructure LDV En-Route Grant Scheme - \(tii.ie\)](#)

## **ITS & Technology**

[Cooperative ITS \(C-ITS\) Pilot - \(tii.ie\)](#)

## **Luas**

<https://www.tii.ie/public-transport/luas/>

## **Metrolink**

[www.metrolink.ie](http://www.metrolink.ie)

## **Operations & Maintenance**

[Operations & Maintenance - \(tii.ie\)](#)

## **Research & Standards**

[TII-Research-Strategy-June-2022-Ver-0.0-Published.pdf](#)

## **Safety**

[Safety - \(tii.ie\);](#)

## **Transport Planning**

<https://www.tii.ie/technical-services/strategic-planning/>

# Appendix 1 – TII Adaptation

## Summary

- TII is taking a proactive approach to prepare for the impacts of climate change and increasingly extreme weather events, by improving its understanding of climate risks, to inform the approach to climate adaptation action across its activities.
- TII's Climate Adaptation Strategy was published in December 2022. It sets out TII's six-stage, five-year approach to climate adaptation.
- Climate impact screening assessments have been delivered for each of TII's six main asset groups (national roads, light rail, cycleways and greenways, land, buildings, and people), and were published in December 2023.
- A methodology has been developed to complete detailed Climate Change Risk Assessments. Detailed climate risk assessments have commenced for light rail and national roads.
- A methodology is being developed to understand the financial impact of climate change and proposed adaptation measures.
- TII has been working with Climate Ireland to support their development of climate resilience indicators to measure and quantify TII's progress on climate adaptation.

## Context

- In 2022, TII published its updated Climate Adaptation Strategy, a revision to its 2017 Strategy for adapting to climate change on Ireland's light rail and national road network – responding to Ireland's Climate Action Plan 2021. The Strategy has enabled TII to continue its climate risk and adaptation journey and embed climate adaptation principles across its activities and decision-making.
- TII's Climate Adaptation Strategy includes a six-stage approach to climate adaptation over a five-year cycle (see Figure 1). Representatives from TII directorates, as well as Met Éireann and Climate Ireland were engaged with during the Strategy's development

# A1 – TII Adaptation Cont.

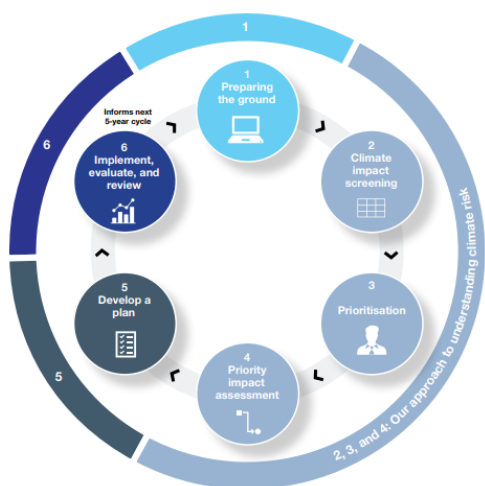


Figure 1 TII's climate adaptation approach, adapted from the Sectoral Planning Guidelines for Climate Change Adaptation.

## Progress to Date

TII has currently completed Stages 1 – 3 of its climate adaptation approach. The publication of the strategy marked the completion of Stage 1. Following this, a climate impact screening assessment tool was developed which was informed by TII's Climate Standard for National Roads. Climate impact screening assessments were undertaken for each of TII's six main asset groups (national roads, light rail, cycleways and greenways, land, buildings, and people). A bespoke, more detailed approach was adopted for the 'People' asset group, reflecting the unique nature of the group. These assessments summarise the relative magnitude of climate impacts to the assets from a suite of climate hazards (e.g. extreme heat, fluvial flooding, pluvial flooding, extreme wind, wildfire). They resulted in identifying the priority asset and climate hazard pairs that require further, more detailed investigation. This assessment and prioritisation process marked the completion of Stages 2 and 3 of the climate adaptation approach.

A methodology for delivering the detailed Climate Change Risk Assessments (CCRAs) has been developed to provide a clear route to delivering Stage 4 of the six-stage approach. The methodology enables TII to take a spatial approach to understanding the climate risks facing hazards, using geospatial asset and climate projection data to understand how assets are exposed to climate hazards, as well as asset specialist knowledge.

The overall steps involved in the CCRA for each asset categories includes establishing the scope and boundaries of the assessment; identifying climate change risks; data gathering for priority hazards; assessing climate change risks; and reporting the findings. Development of the CCRA's will include significant stakeholder engagement. The detailed CCRAs will help TII to inform the development of Climate Adaptation Implementation Plans (Stage 5). The initial focus of the CCRA's will be on light rail (expected completion November 2024), followed then by road (expected completion March 2025).

Additionally, a methodology is being developed to understand the financial impact of climate change and proposed adaptation measures. The next steps for the development of costings includes an initial benchmarking exercise, and consultations with other roads authorities to further inform the development of the methodology.

TII has been working with Climate Ireland to support their development of a case study on climate indicators. Climatological, impact, implementation and outcome indicators have been developed for national roads and light rail. The methodology for indicator selection will be detailed and a set of lessons learned to inform the wider transport sector.

## Benefits

The Climate Impact Screening assessments have provided a holistic high-level understanding of the assets and climate hazards, and a list of priority asset-hazard pairings.

The CCRAs will allow TII to gain real insights into where and what are its key climate risks, and the scale of these risks. They will inform the development of climate adaptation plans.

The climate resilience indicators which Climate Ireland and TII are developing, are part of a case study that will inform the rest of the transport sector, to help the Department of Transport take a consistent and robust approach to managing climate risk.