



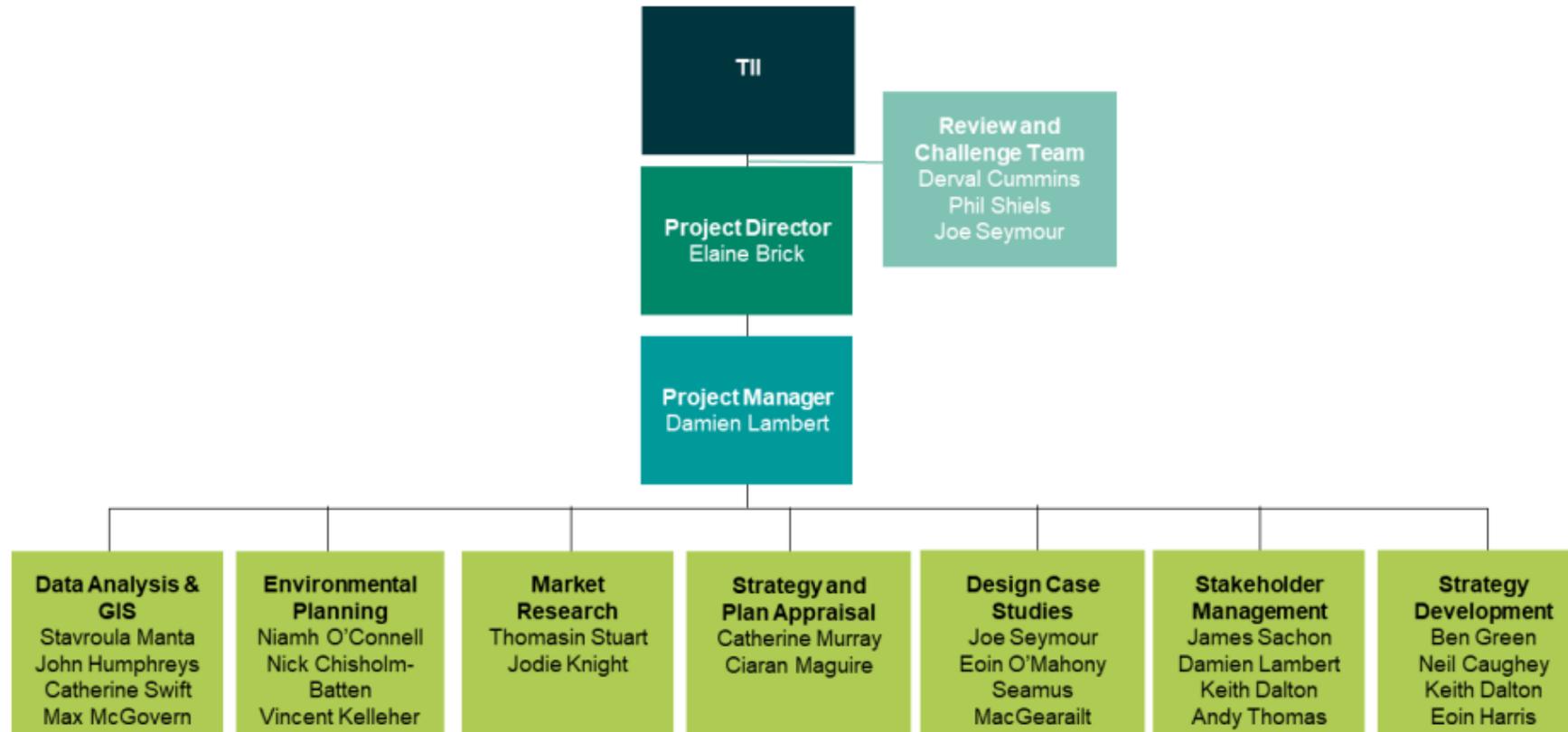
National Cycle Network (NCN)

Lunchtime Bitesize

Félim Kelly



Initial Team – Delivered as Part of TII TP&E Framework



Eimear Fitzpatrick – Stakeholder Engagement Consultant

Félim Kelly – Future Mobility Consultant

What is the National Cycle Network?



The NCN will:

Prioritise inter-urban connectivity between areas of 5,000+ population, as well as strategic destinations

Optimise the potential for daily activities via active travel

Aim to maximise the number of users and encourage modal shift

Prioritise both road safety and the safety and security of users

Integrate with existing and proposed cycle infrastructure

Agenda



1. Overview
2. Governance and Engagement
3. Approach
4. Network Development
5. Proposed NCN
6. Delivery
7. Conclusion

Overview

The NCN is mandated in the NDP 2021-2030, with TII the sponsoring agency and Dept. of Transport the approving authority



“The development of a new National Cycling Network Strategy...will map existing cycling infrastructure in both urban and rural areas, including Greenways, and will serve to inform future planning and project delivery decisions in relation to walking and cycling infrastructure for the remainder of the decade.” p.61

“Transport Infrastructure Ireland will work with key stakeholders, including the NTA, to develop a National Cycling Network Strategy which will both map existing cycling infrastructure and identify gaps where future investment could be focused in order to establish a comprehensive and connected cycling network around Ireland. Given its national focus, this Strategy will encompass both urban and rural areas, and will be a valuable resource in relation to active travel connectivity around Ireland.” p.84

What is the National Cycle Network?



Vision

“Develop a safe, connected, and inviting cycle network between urban areas and key destinations to achieve accessible, sustainable, and high-quality routes that will help to reduce the carbon impact of transport and promote a healthy and inclusive society.”

NCN Objectives (1 of 2)



National policies	Policy goal	NCN plan objective
Combat climate change & improve air quality (NPF, CAP, NIFTI, & RSES)	Reduce emissions from transportation by supporting a modal shift from private vehicles to cycling and walking.	<ol style="list-style-type: none"> 1. Increase the number of cycle trips by improving the provision of safe and attractive cycling infrastructure. 2. Enhance local environments and biodiversity where possible (e.g., pollinator plans, green corridors).
Healthy living (NPF & SRTS)	Encourage active travel for daily activities and recreation.	<ol style="list-style-type: none"> 1. Connect to strategic destinations outside of urban areas as appropriate (including centres of education, centres of employment, and leisure destinations). 2. Support the development of cycling and walking culture in Ireland.
Regional accessibility and economic development (NPF & RSES)	Support connectivity and economic growth of regional areas.	<ol style="list-style-type: none"> 1. Connect identified urban areas of 5,000+ population and those urban areas listed in the NTA's urban cycle network strategy. 2. Connect to strategic destinations outside of urban areas as appropriate (including transport hubs and tourist destinations), as appropriate. 3. Integrate with existing and proposed cycling infrastructure (including greenways, safe routes to schools, the EuroVelo network, Interreg projects), as appropriate. 4. Integrate with existing and proposed cycling infrastructure in Northern Ireland, as appropriate.

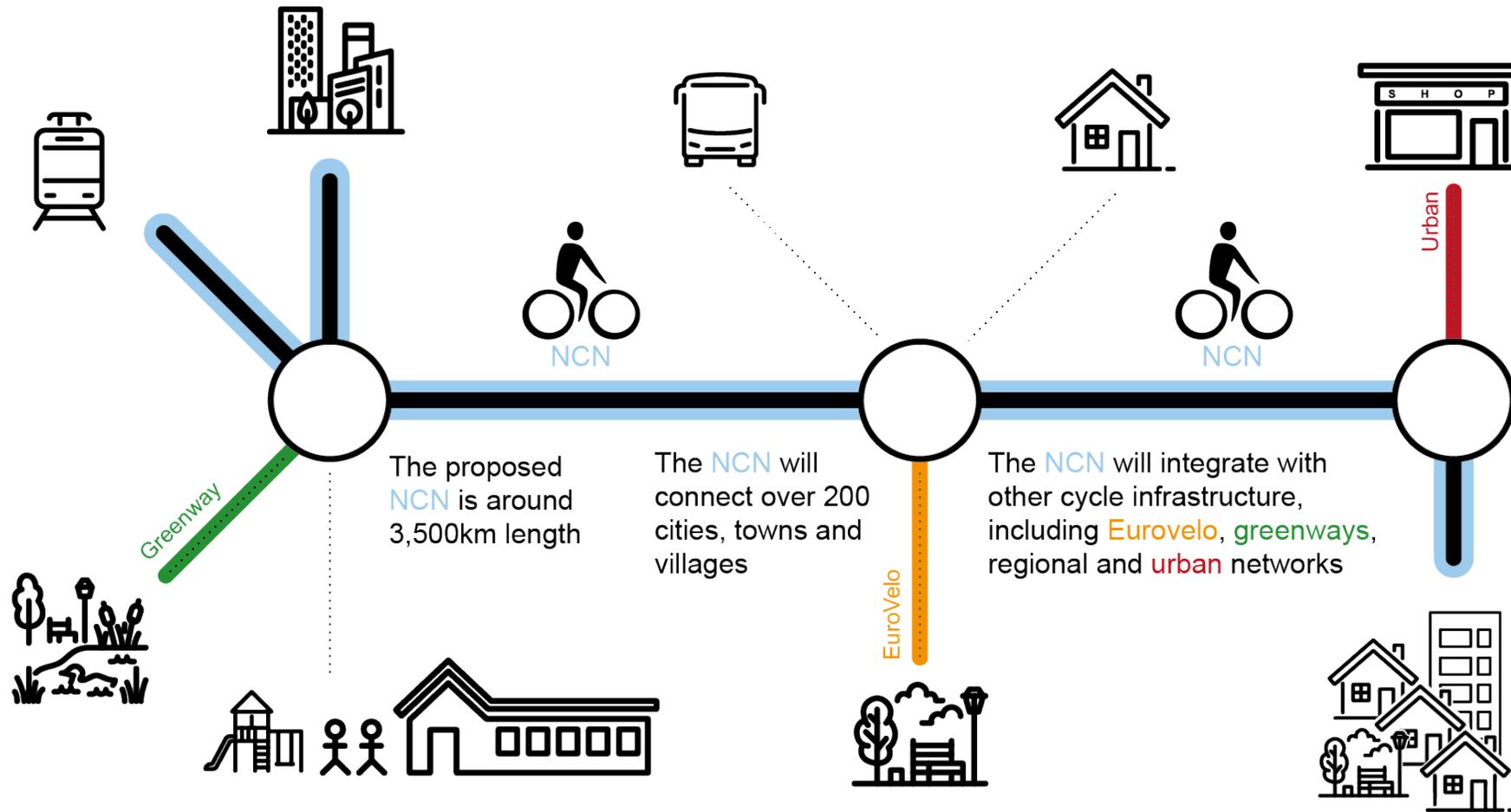
NCN Objectives (2 of 2)



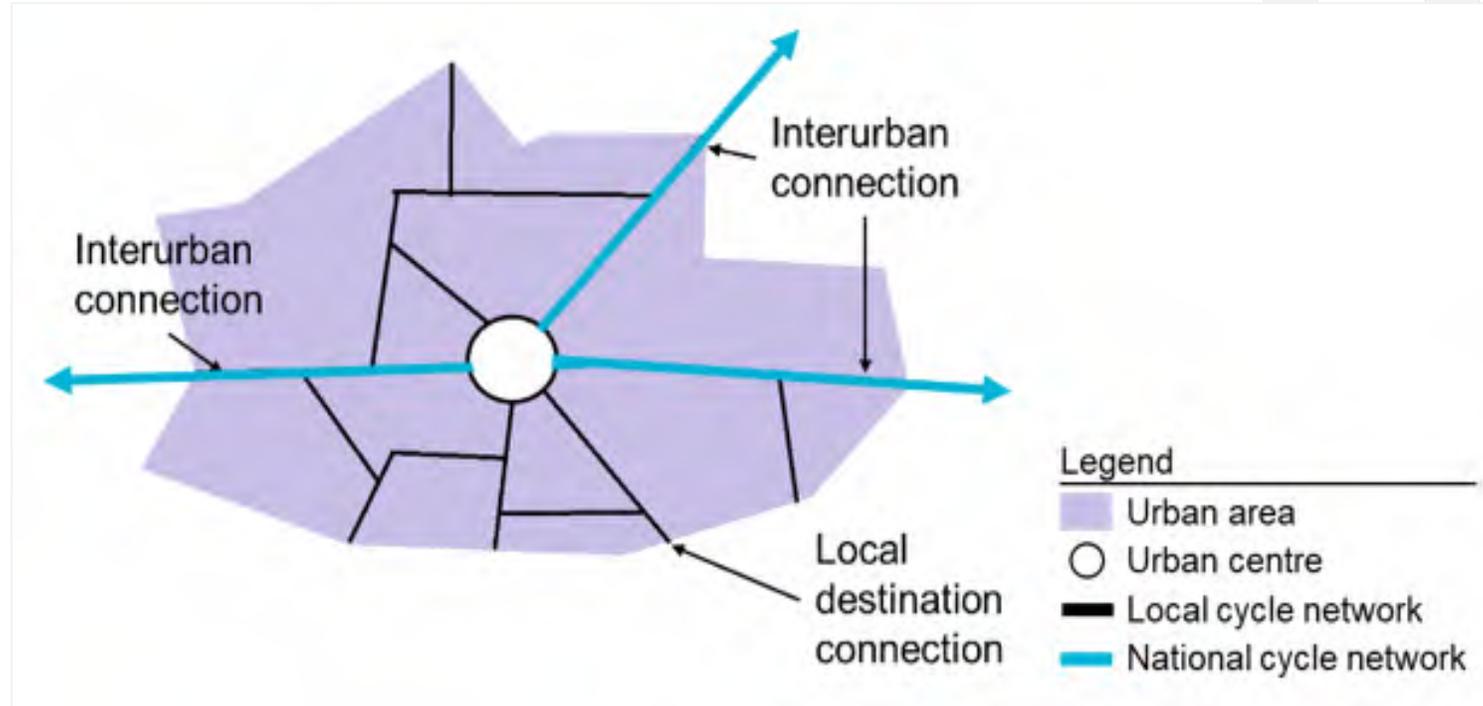
National policies	Policy goal	NCN plan objective
Safety & accessibility (RSS & NPF & SRTS).	Propose safe and accessible infrastructure that encourages modal shift and limits interactions with other vehicles.	<ol style="list-style-type: none">1. Encourage use of off-road infrastructure, where appropriate.2. Where efficient and effective, encourage routes that use 'quiet', low traffic volume roads.3. Promote the design of cycling infrastructure that is fully accessible to all users, regardless of age or ability.4. Promote the design of cycling infrastructure that meets safety requirements.5. Promote the design of cycling infrastructure that provides a safe and secure environment for all users.
Prudent use of public funds (PSC).	Ensure appropriate balance between value for money and quality of outcome.	<ol style="list-style-type: none">1. Propose corridors to maximise the number of users.2. Incorporate existing greenways, disused railways, canals, bypassed national roads, regional and local roads, long distance trails, as appropriate.3. Maximise the use of publicly owned land, where possible.4. Provide a framework to support the targeted investment in associated active travel projects.5. Take lessons from best practice internationally in development of national cycle networks, particularly the UK and EU high-cycling countries.6. Future-proof cycle route capacity, taking account of population growth and additional demand from modal shift.

What is the National Cycle Network?

The NCN will act as the core network connecting towns, cities and destinations across Ireland



What is the National Cycle Network?



Governance and Engagement

Governance Approach



Project Board



An Roinn Iompair
Department of Transport



WESTMEATH COUNTY COUNCIL
Comhairle Chontae na hIarmhí

Advisory Group



An Roinn Iompair
Department of Transport



Technical Group



Project Management Team

AECOM



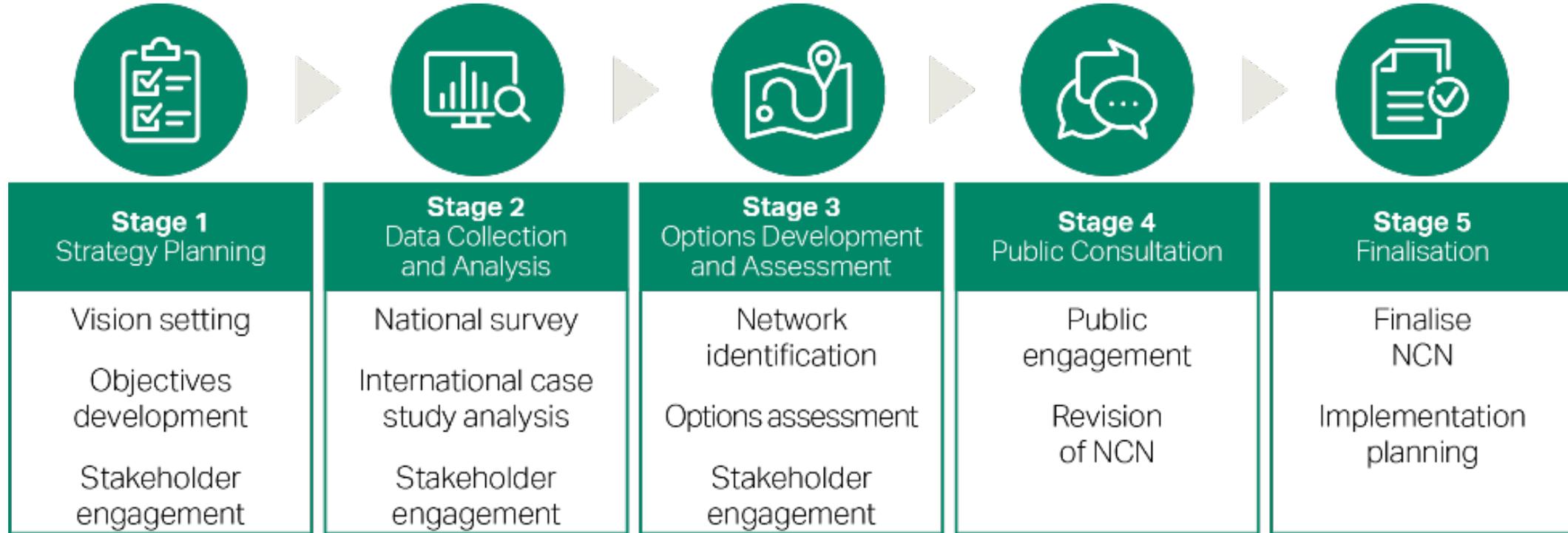
Engagement with Key Stakeholders





Approach

Approach to Development of the NCN Plan



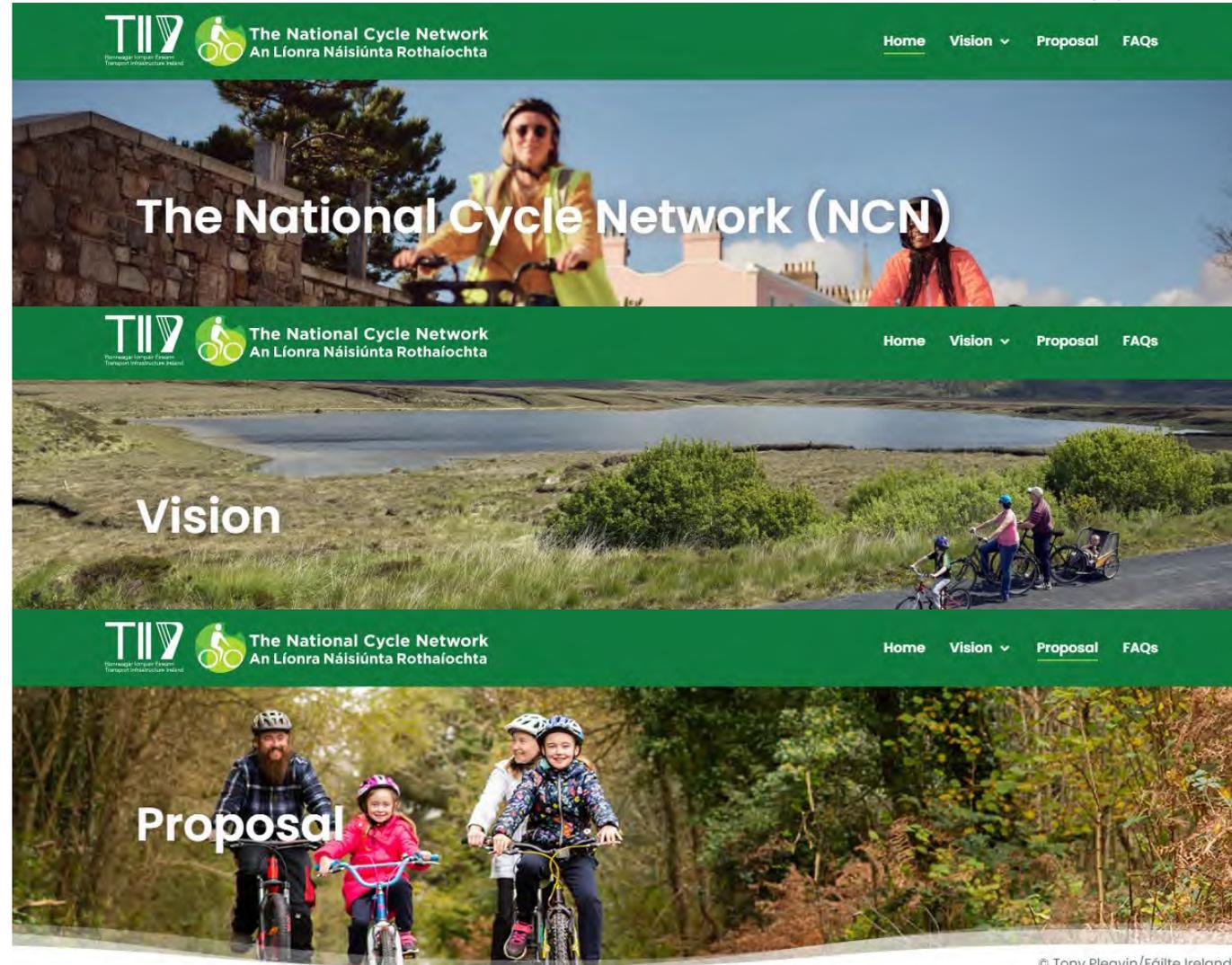
Project execution plan



Project Stage	Key Tasks
Stage 1 – Strategy planning	<ul style="list-style-type: none">• Stakeholder management plan• NCN objectives• Strategic Environmental Assessment (SEA) screening• Network assessment framework
Stage 2 – Data collection and analysis	<ul style="list-style-type: none">• Interactive NCN map of existing and planned cycle infrastructure• 2010 Scoping Study and policy review• International case studies• Identification of key destinations and attractions• Market research and analysis
Stage 3 – Options development and appraisal	<ul style="list-style-type: none">• Development of NCN corridors• Design case studies• Implementation criteria• Monitoring framework• Full SEA
Stage 4 – Public consultation	<ul style="list-style-type: none">• Public consultation• Stakeholder workshops• Summary of feedback
Stage 5 – Finalisation	<ul style="list-style-type: none">• Final NCN Plan report

Public Consultation

- Consultation period May – June 2022
- Over 1,400 online submissions received
- Key issues identified:
 - Safety
 - Segregation
 - Incorporating and upgrading existing infrastructure
 - Leisure and recreational function
 - Access and integration



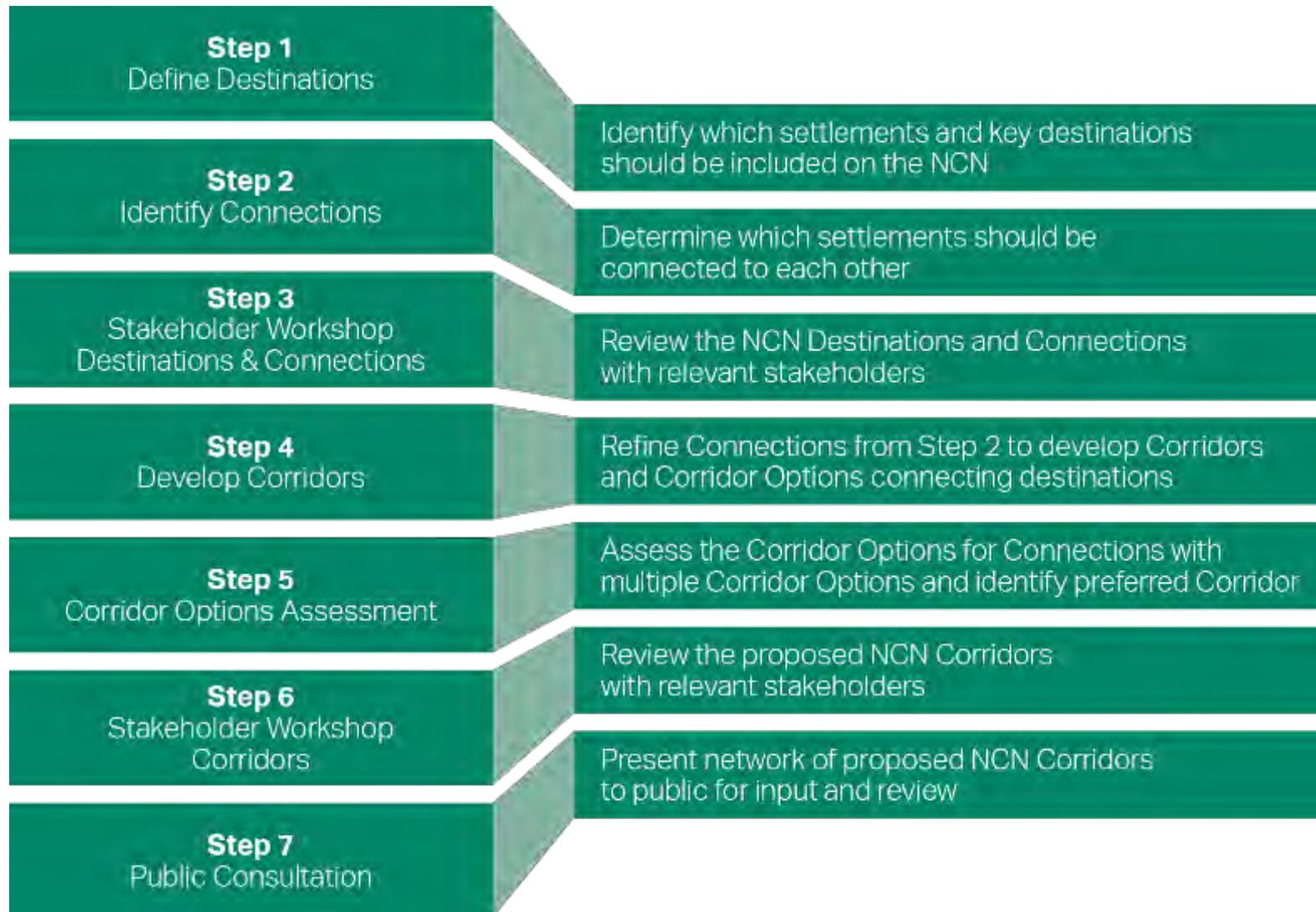
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Proposal



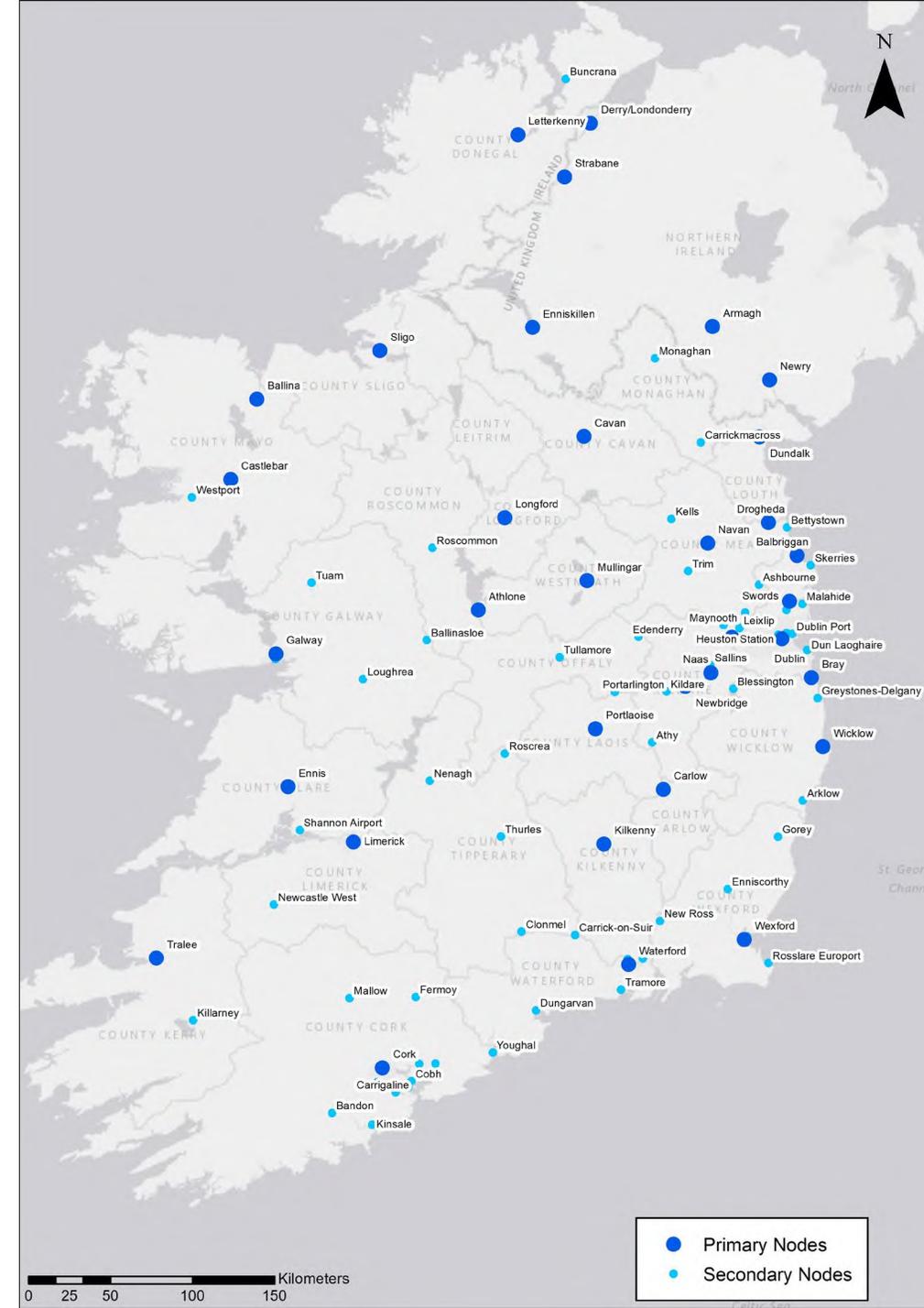
Network Development

Approach to Network Development



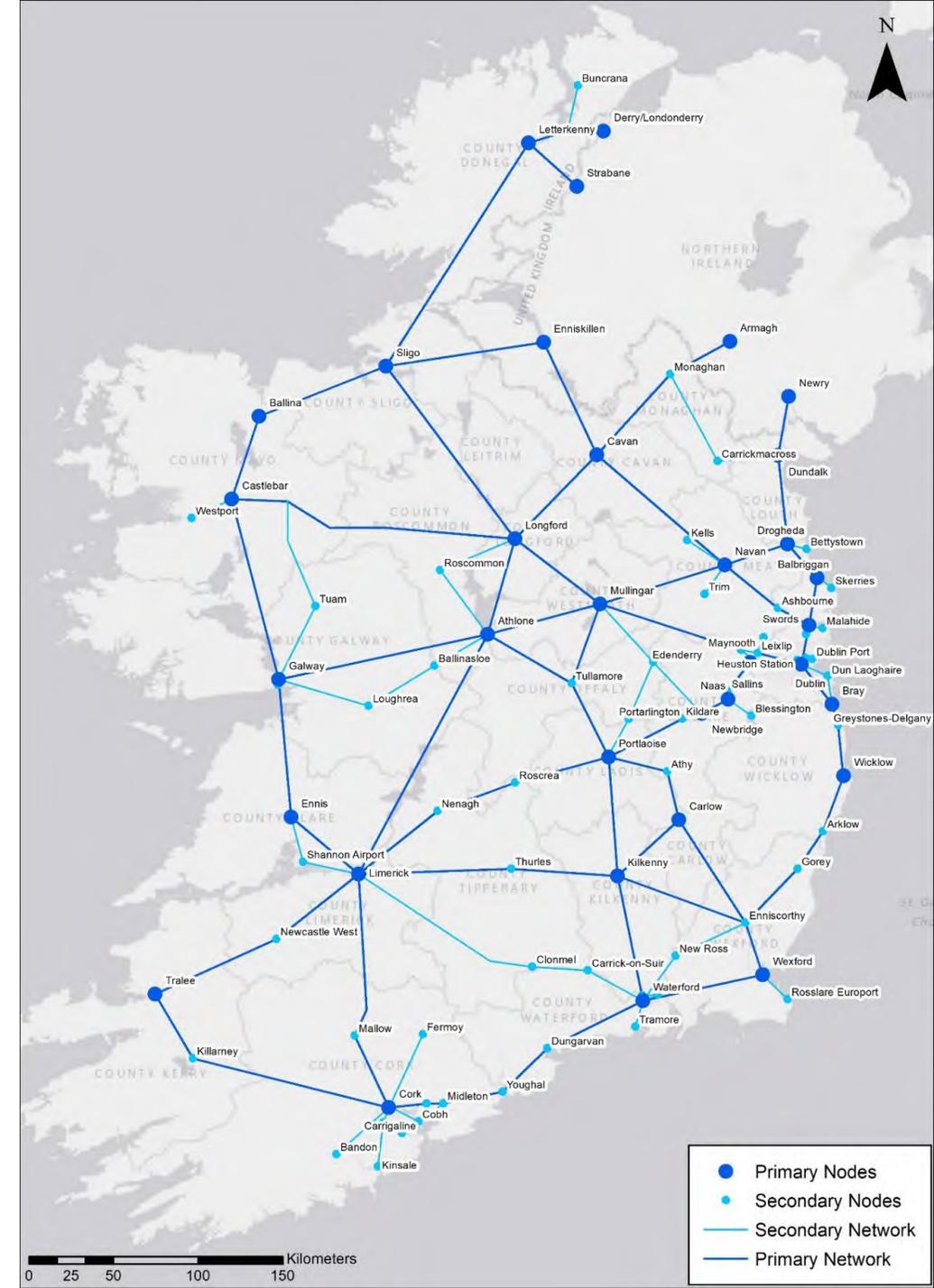
Step 1 – Define Nodes: Determine which settlements and key destinations should be included on the NCN

- **Primary:** Cities and large towns of >20k population, also includes some towns of >10k population to ensure geographic coverage.
- **Secondary:** Medium sized towns of >10k, also includes some towns of >5k population to ensure geographic coverage. Strategic destinations (i.e., rail transport hubs, ferry/ cruise ship ports)
- **Tertiary:** Additional destinations (not shown on map) located between primary and/ or secondary nodes which will be included on the NCN where possible (e.g., transport hubs, centres of education, centres of employment, leisure destinations, and tourist destinations).



Step 2 – Identify Connections

- Connections between nodes were established and links connecting the Primary and Secondary Nodes were developed. These connected primary nodes to adjacent primary and secondary nodes, as well as secondary nodes to adjacent primary nodes (either directly or via another secondary node).



Step 3 – Stakeholder Workshop: Destinations & Links



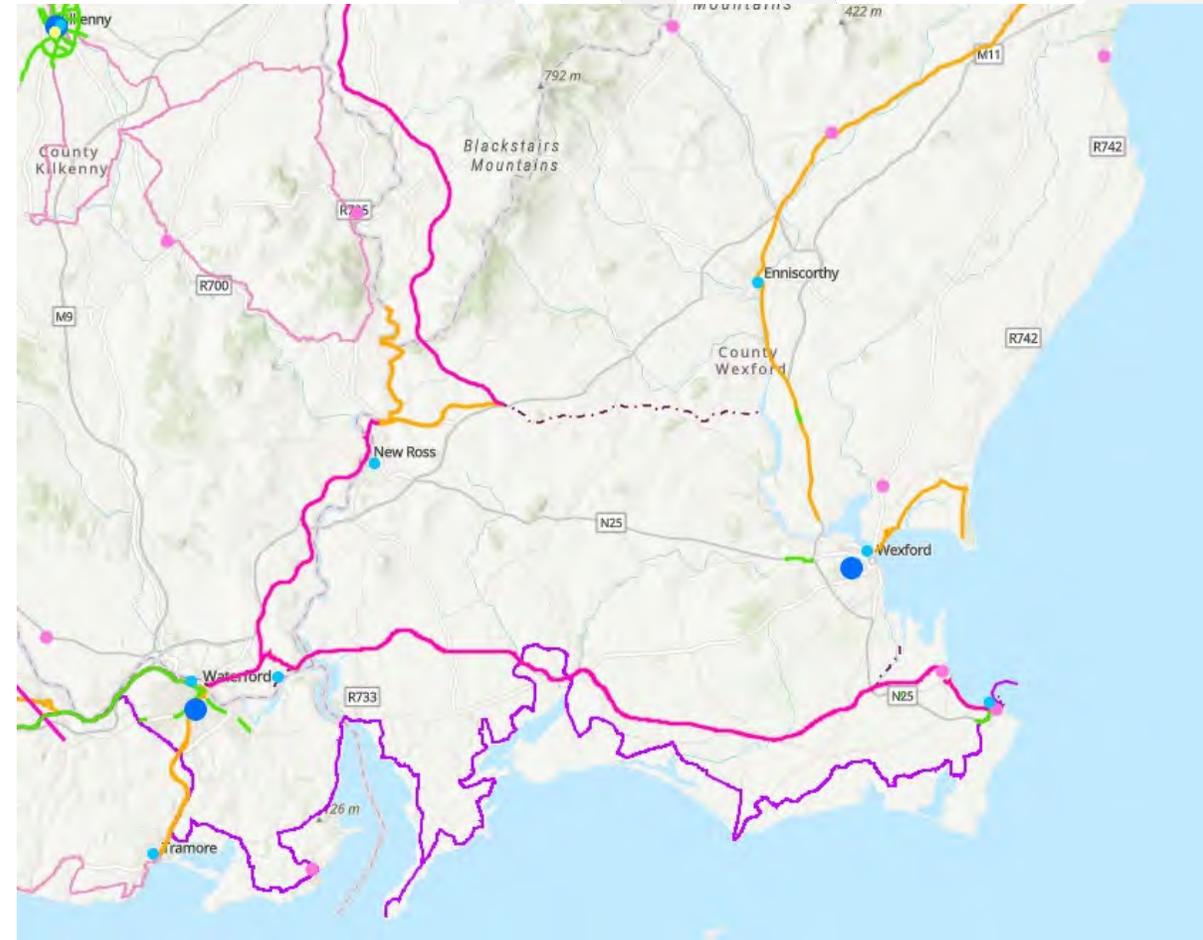
- Stakeholder workshops shaped the National Cycle Network (NCN) by identifying key nodes and connections.
- Originally proposing a 10,000 population threshold for settlements, it was revised to include over 5,000 people after unanimous agreement among stakeholders.
- Essential transportation hubs and various destinations were classified as primary and secondary nodes, ensuring a well-connected and dense national network.

Step 4 – Develop Corridors: This step combines and utilises many of the inputs previously developed

Identification of corridor options factors in multiple data sets

- Corridors will connect:
 - Primary nodes (●) and Secondary nodes (◐)
- Corridors will aim to incorporate:
 - Tertiary nodes, i.e. smaller settlements (◐), centres of education, centres of employment, leisure destinations, and tourist destinations
 - Existing cycle networks/ infrastructure (—, —, —)
 - Planned cycle networks/ infrastructure (—, —)
 - Other existing or natural resources, e.g. disused railways (—)
- Corridors will aim to utilise and/ or compliment existing and planned cycle infrastructure whenever possible

Interactive NCN map as starting point





Step 5 – Corridor Options Assessment: This is based on agreed criteria aligned to project objectives and various data sets available

NCN Plan Objectives	NCN Assessment Criteria
<ul style="list-style-type: none"> • Increase the number of cycle trips by improving the provision of safe and attractive cycling infrastructure. • Connect to strategic destinations outside of urban areas as appropriate (including centres of education, centres of employment, and leisure destinations). 	<ul style="list-style-type: none"> Demand for Commuting Trips School Trips Leisure Trips
<ul style="list-style-type: none"> • Promote the design of cycling infrastructure that meets safety requirements. • Promote the design of cycling infrastructure that provides a safe and secure environment for all users. 	<ul style="list-style-type: none"> Potential Safety Impacts
<ul style="list-style-type: none"> • Integrate with existing and proposed cycling infrastructure (including greenways, safe routes to schools, the EuroVelo network, Interreg projects), as appropriate • Incorporate existing greenways, disused railways, canals, bypassed national roads, regional and local roads, long distance trails, as appropriate. • Propose corridors to maximise the number of users. • Future-proof cycle route capacity, taking account of population growth and additional demand from modal shift. • Connect to strategic destinations outside of urban areas as appropriate (including centres of education, centres of employment, and leisure destinations). 	<ul style="list-style-type: none"> Integration with Existing Cycle Infrastructure Integration with Planned Cycle Infrastructure Integration with Existing Infrastructure Integration with Future Growth Integration with Smaller Settlements Integration with Tourist Attractions
<ul style="list-style-type: none"> • Support the development of cycling and walking culture in Ireland. • Enhance local environments and biodiversity where possible (e.g., pollinator plans, green corridors). 	<ul style="list-style-type: none"> Impact on sensitive areas
<ul style="list-style-type: none"> • Connect to strategic destinations outside of urban areas (including transport hubs and tourist destinations), as appropriate. 	<ul style="list-style-type: none"> Key Trip Destinations Social Inclusion Interchange Between Transport Modes



Step 6 – Stakeholder Workshop

- Included Department of Transport, NTA, CCMA, Fáilte Ireland, Sport Ireland, Cycling Ireland, Cyclist.ie.
- Discussions focused on corridor development process and network review.
- Addressed west coast coverage concern by aligning proposed NCN corridors with existing and planned cycle infrastructure like EuroVelo routes and greenways.
- Result: ensured the network met project objectives and formed a strong core network.

Step 7 – Public Consultation



Some of the main points raised by submissions received during the public consultation in relation to the proposed network included:

- Expanding the network to include additional greenways and rural settlements.
- Incorporating (and upgrading) existing (and proposed) cycle infrastructure where possible.
- Integrating with local cycle networks and connect town centres.



Proposed National Cycle Network

Outcome



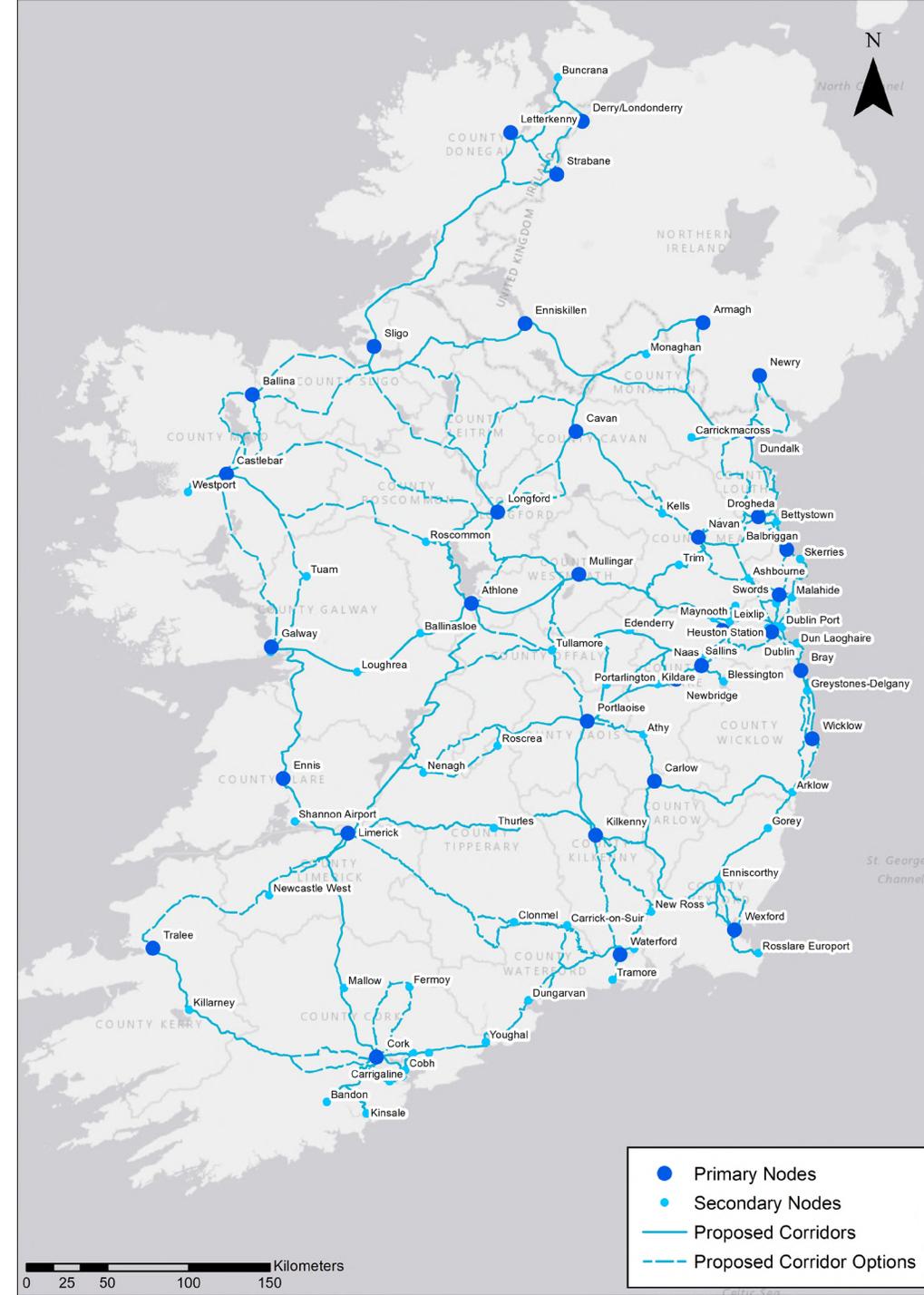
The NCN will be a strategic network acting as the core spine for other networks and routes to integrate with (e.g., urban cycle networks, county cycle networks, Eurovelo routes, greenways)

The NCN will be an inter-urban network connecting all Primary and Secondary nodes

The NCN will be utilised by commuters, recreational and leisure cyclists, tourists and other cyclists with the primary use varying depending on time, day and location

Proposed NCN Nodes & Corridors

- All settlements of 5,000+ population are included on network
- All identified Secondary Nodes are included on the on network
- Dashed lines represent Corridor Options under assessment
- Corridors will be ~4km wide and will not include design information
- Key statistics of proposed network will be developed, for example:
 - Total length of NCN
 - Number of settlements connected
 - Total population connected
 - Percentage of total population with defined radius of NCN

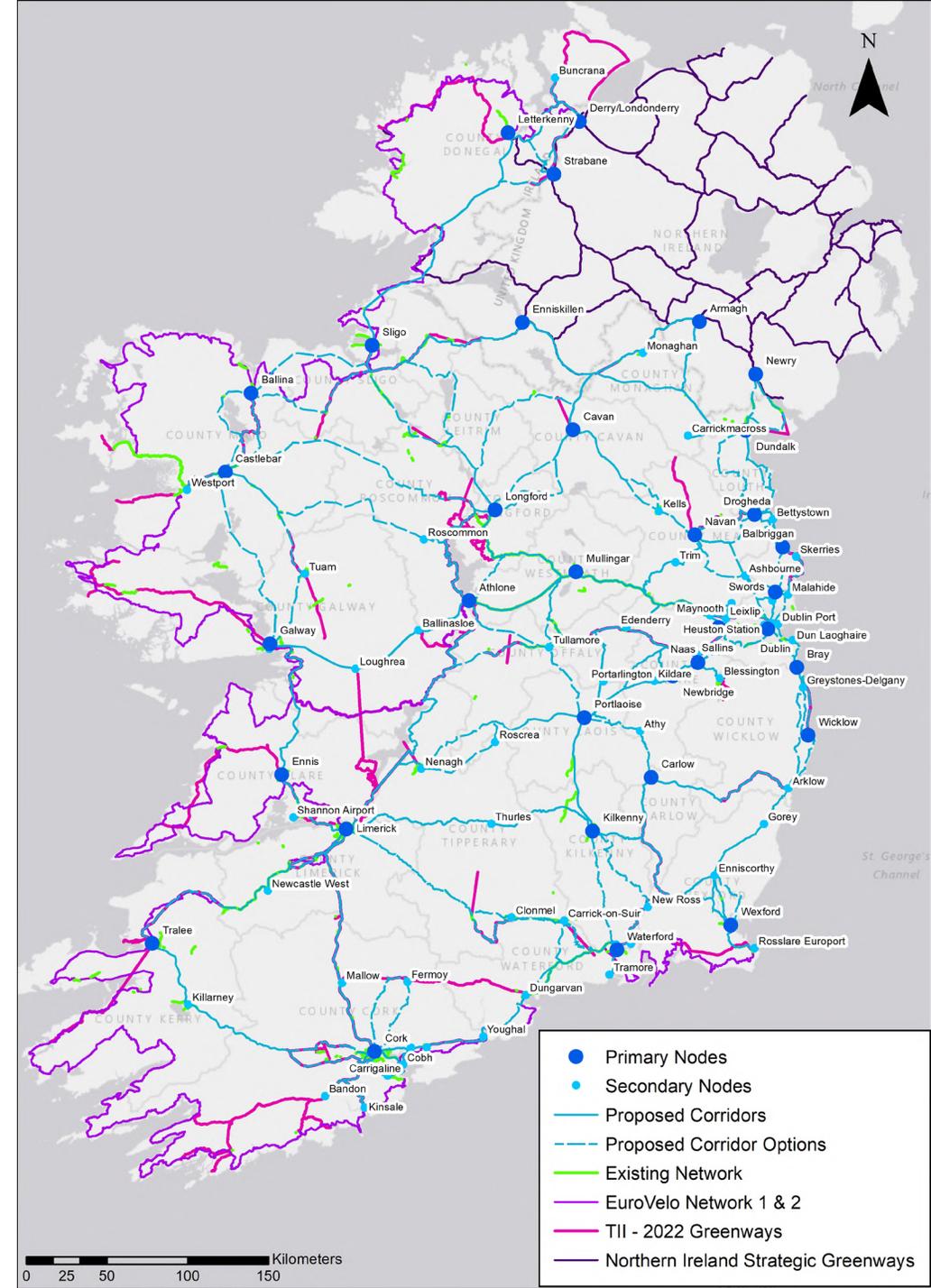


The NCN will integrate with other existing and planned cycle infrastructure

- Eurovelo and greenway projects provide cycle infrastructure in more remote areas (i.e., west coast), as well as tourist destinations (e.g., south west and north west)

Legend

- NCN Corridors
- Eurovelo routes
- Existing cycle infrastructure
- Planned cycle infrastructure (2022 TII)
- Northern Ireland strategic greenways



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Legend

- NCN Corridors
- Eurovelo routes
- Existing cycle infrastructure
- Planned cycle infrastructure (2022 TII)
- Northern Ireland strategic greenways



National Cycle Network

- Total length of NCN is approximately 3,500km
- Corridors are 4km wide and do not include design information
- NCN links with existing and planned networks such as CycleConnects, EuroVelo 1 and the NI Greenway Network



Proposed NCN

- Total length of NCN is approximately 3,500km
- Corridors are 4km wide and do not include design information
- Links with existing networks, e.g., EuroVelo 1 and NI Greenway Network
- Makes use of existing and proposed greenways where appropriate



Benefits of the National Cycle Network



Carbon
Reduction



Urban and Rural
Economy



Safety



Sustainable
Connectivity



Guide
Investment



Public Health



Delivery of the National Cycle Network

Delivery of the National Cycle Network



Planned and delivered as a single programme to ensure a coherent and integrated approach

A consistent standard of infrastructure across all projects

Adhere to the NCN Plan objectives

Branding and marketing

A coherent network, with regional balance

Ongoing monitoring and evaluation



Design Principles

The preferred infrastructure types for the NCN are all segregated, allowing cyclists to travel in their own space, away from road vehicles.

By providing safe, segregated cycle infrastructure the NCN will increase general cycling confidence leading to an increase in both the number of active cyclists, and overall cycle trips.





The NCN will be delivered under rolling, five-year implementation plans

A range of factors will be considered when prioritising corridors for inclusion in these plans, including:

- **Quick wins** – Corridors already in planning/ construction stage
- **Gap filling** – Missing sections of corridors with significant existing infrastructure
- **Demand** – High usage corridors based on proximity to or connection of Primary nodes
- **Deliverability** – Low level engineering and/ or planning complexities (e.g., minimal upgrades to existing infrastructure)
- **National coverage** – Ensure projects initiated across the country, not just in high population areas

An initial assessment will identify corridors to be delivered in each implementation phase. The implementation plan will be verified through consultation with local authorities to ensure deliverability of the various routes within the timeframes outlined incorporate resource availability.

- The first implementation plan will run from 2023-2025
- Subsequent implementation plans will run every five years commencing 2026-2030

The NCN will define minimum design criteria for cycle infrastructure to ensure a high-quality and safe network across the country



Infrastructure type	Description		
Cycle Trail	A cycle trail is a facility which is distinct from the road corridor and comprised of elements such as canal tow paths, disused railways and other such paths.		
Off-Road Cycle Way (TII)	An off-road cycleway is physically separated from the road carriageway by a verge or some other form of physical segregation; however it remains within the road corridor.		
On-Road Cycle Way (TII)	An on-road cycleway is located within the contiguous road surface and is separated from motorised traffic by a segregation strip at least 0.5m wide and delineated by road markings.		
Standard Cycle Track (NTA) *	Cycle Tracks are physically segregated from motorised traffic (e.g., by a kerb with a level change, by a grass verge or by bollards).	Sub-type	Description
		At Grade	Physical segregation between cyclist and motorised vehicles through bollards.
		Raised	Physical segregation by full kerb height between cyclist and motorised vehicles.
		Behind verge	Grass or paved verge separating cycle track from carriageway.
		Two-way	Physical separation from carriageway by dividing verge. Physical separation from footpath by verge or height difference.
“Quiet” road **	On carriageway shared use of road, including the use of hard shoulders. Road would meet criteria in relation to volume of vehicle traffic, speed of vehicle traffic, priority given to pedestrians/ cyclists. Criteria may differ in urban and rural settings.		

* The NTA is currently updating the Cycle Design Manual which specifies link types and their design requirements. The appropriate link types listed above will be updated based on any modifications made to the forthcoming Cycle Design Manual.

** The definition and requirements of a “Quiet” road are currently under review and discussion. The inclusion of this link type in the NCN will depend on the outcome of this review.

Conclusion

Overview



	Phase 1 (2023-2025)	Phase 2 (2026-2030)	Phase 3 (2031-2040)	Total
Approximate kilometres delivered	250km-300km	530km-610km	2,720km - 2,590km	3,500km



An Roinn Iompair
Department of Transport

National Cycle Network Plan

Report 2023



National Cycle Network Plan



Foreword

The Government is committed to ensuring Ireland plays its part in global climate action efforts. To this end, the Climate Action Plan 2023 (CAP23) sets out a roadmap for taking decisive action to halve Ireland's emissions by 2030 and reach net zero no later than 2050.

Achieving these ambitions will require a coordinated effort across Ireland and every economic sector will have to play its part. Transport, as the largest source of energy-related CO₂ emissions in Ireland, is the focus of significant decarbonisation efforts. This is recognised in the National Development Plan, which dedicates €1bn towards decarbonisation of transport in the period up to 2030. This is complemented by a new hierarchical approach to transport provision, which prioritises active travel and public transport investment. The commitment to spend €360m a year on walking and cycling and the 2:1 ratio of public transport investment to road infrastructure investment are fundamental in achieving this change.



In support of this, we published the National Sustainable Mobility Policy in 2022 setting out a strategic framework for active travel and public transport to deliver at least 500,000 additional daily active travel and public transport journeys by 2030.

Active modes are the most sustainable modes of transport and enabling people to walk or cycle for their daily journeys is a key element in meeting our decarbonisation targets. For this to happen, we need to provide them with a safe and reliable alternative to using the private car.

That is why, in 2021, I requested Transport Infrastructure Ireland (TII) to develop a plan for a new National Cycle Network (NCN). TII's remit was to develop a plan for an inter-urban cycle network (incorporating the regional and national greenways network, as appropriate), with a view to enabling greater levels of cycling and walking amongst leisure users, tourists, and commuters.

The National Cycle Network outlined in this plan represents a step-change in active travel infrastructure in Ireland. The NCN Plan sets out a phased programme that will see the delivery of approximately 3,500km of cycle facilities by 2040.

Together with the National Transport Authority's CycleConnects programme, the NCN will provide a comprehensive network of high-quality cycle infrastructure to promote safety, comfort, and increased participation in cycling. It will make a significant contribution to Ireland's commitments to sustainability and decarbonisation and will generate benefits for cyclists and communities across Ireland.

The Government is deeply committed to its efforts to decarbonise transport. I firmly believe that through our collective efforts, we can deliver on our climate objectives and that the NCN represents a significant step in that direction.

Eamon Ryan TD,
Minister for Transport



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