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Transport in Ireland: Connecting Sustainably

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Engineers Ireland leads the development of current and future engineers, and promotes excellence through accreditations, continuous professional development (CPD) opportunities, and a robust membership network.

Introduction

Ireland's transport sector contributes 21.4% of this country's greenhouse gas emissions.[1] At a time of significant man-made climate change, the case to ensure that transport radically re-orients to operate more sustainably has never been stronger. Indeed, the Irish state has made a commitment to achieve a 51% reduction in carbon emissions, from 2018 levels, by 2030, and a further commitment to reach net zero by 2050.[2] Such goals cannot be realised without significant reform of the transport sector.

Indeed, successive Climate Action Plans and the Sectoral Emissions Ceilings, agreed by the Government in 2022, set out a high level emissions target for the transport sector of a 50% reduction in emissions by 2030.

Unquestionably considerable strides have been made in our understanding of the impact of transport emissions on the environment, and engineering continues to ensure greater efficiencies are made in vehicles' use of energy. Despite these efficiencies, however, transport emissions are considerably greater today than they were three decades ago, largely due to large-scale increases in the use of road transport. In the period between 1990 and 2023, transport-related greenhouse gas emissions grew by 129.2%, from 5,143 kt CO2 eq to 11,791 kt CO2 eq.[3] It must be noted, however, that transport emissions today are 18% lower than at their highest point, in 2007.[4]

Road transport makes up the lion's share of carbon emissions in the transport sector and is the area in which behavioural changes by those travelling will make the greatest environmental impact. For instance, in 2023, road transport was responsible for approximately 95% of all Irish transport emissions at 11,187 kt CO2 eq, though, again, this figure is down from the 13,829 kt CO2 eq recorded in 2007.[5]

While the proportion of electric vehicles on the market continues to rise, the private car population in Ireland has risen to over 2.3 million according to figures compiled by the Central Statistics Office (CSO), underlining the structural challenges at the heart of transport policy reform in Ireland.[6] And while total distance travelled by private car in Ireland rose in 2023 to 35.1bn kilometres, a 0.5% increase on 2022, this is some way short of the 38.0bn kilometres recorded as travelled by private car in 2017.[7]

While falls in transport related emissions and lower private car use are welcome developments, it is evident that far more work will be needed in this area for Ireland to reach its climate targets. Recently, both the Irish Fiscal Advisory Council and the Climate Change Advisory Council have warned that the country is currently above the trajectory to reach the required target, a failure that could cost the exchequer billions of euros to correct by way of the purchase of carbon credits to offset excess emissions.[8]

This paper aims to provide some brief analysis of the range of efforts ongoing to make Ireland's inland transport network more sustainable and better equipped to support a high quality of life on this island and offers some recommendations for further consideration. As it is predominantly concerned with factors contributing to routine travel and transport in Ireland, air and sea travel are excluded from its scope, however, some comment is offered on connections to airports and ports.

In 2022 the Organisation for Economic Co-operation and Development published Redesigning Ireland's Transport for Net Zero, which offered a strong critique of Irish transport policy, stating that "[g]rowing car use in Ireland is largely determined by car-dependent transport and urban systems, organised around increased mobility and characterised by three unsustainable dynamics: induced car demand, urban sprawl, and the sustainable modes low-attractiveness trap" and that "[i]mplemented policies and those expected to bring the highest emission reduction shares according to Ireland's Climate Action Plan 2021 are unlikely to help the country transform its car-dependent system."[9]

The report later stated that "[t]he choice to drive a car or motorcycle is often perceived as an individual preference, exogenous to the system in which the choice is embedded."[10] For many of those living and working in Ireland, car use is undoubtedly perceived as a necessity, rather than a choice. As a relatively sparsely populated open economy, located at the periphery of Europe, and highly reliant on inward investment to support its economy, Ireland must attempt to reach its emissions targets while also developing the kind of transport infrastructure that will ensure this country is amongst the easiest and most competitive places in the world to invest and do business, all while ensuring accessible and affordable transport options for its citizens across rural and urban areas.

Bold choices in infrastructural investment in transport can help navigate this delicate path, but they must be urgently taken. There will, after all, never be a more affordable time to make this investment than today.

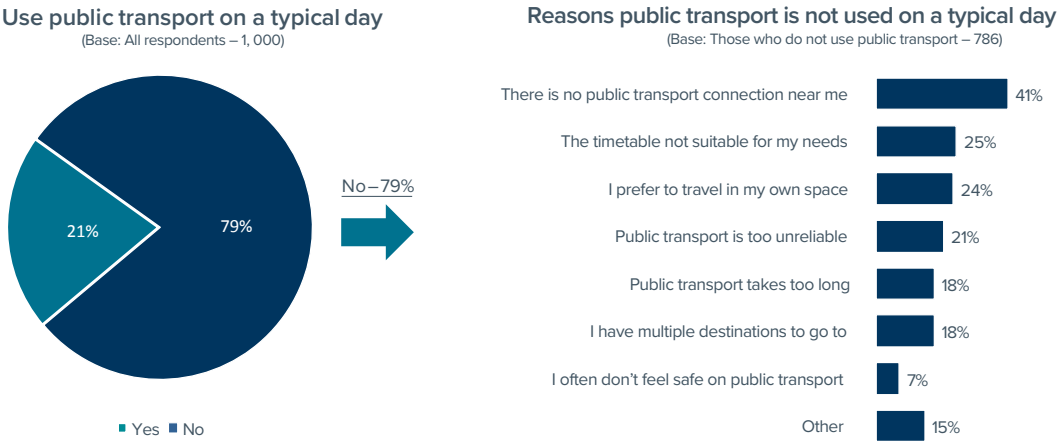
1 Environmental Protection Agency, *Greenhouse gas emissions (GHG): Transport*, May 2024, available at https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/
2 Section 6A, subsection 5, Climate Action and Low Carbon Development Acts 2015 to 2021.
3 Environmental Protection Agency, *Greenhouse gas emissions (GHG): Transport*, May 2024, available at: https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/transport/
4 Ibid.
5 Ibid.
6 Central Statistics Office, Transport Hub, THA18 - *Road Traffic Volumes of Private Cars*, available at: https://www.cso.ie/en/releasesandpublications/hubs/p-transo/transporthub/roadtrafficvolumes/
7 Ibid.
8 Irish Fiscal Advisory Council and Climate Change Advisory Council, *A colossal missed opportunity: Ireland's climate action and the potential costs of missing targets*, March 2025, p. 8, available at: https://www.fiscalcouncil.ie/wp-content/uploads/2025/03/Irelands-climate-action-and-the-potential-costs-of-missing-targets.pdf
9 OECD (2022), Redesigning Ireland's Transport for Net Zero: Towards Systems that Work for People and the Planet, OECD Publishing, Paris, p. 8.
10 Ibid, p. 18.

Transport User Behaviour and Attitudes Towards Transport Options

Research conducted for Engineers Ireland in 2024 by Amárach Research investigated the attitudes and behaviours of a representative sample of 1,000 Irish adults concerning various aspects of transport in Ireland.

83% of respondents said they completed a journey by walking at least once a week, while 82% did so using a car, 18% a bus, 8% a bicycle, and 6% a train, demonstrating relatively low frequent reliance on public transport.

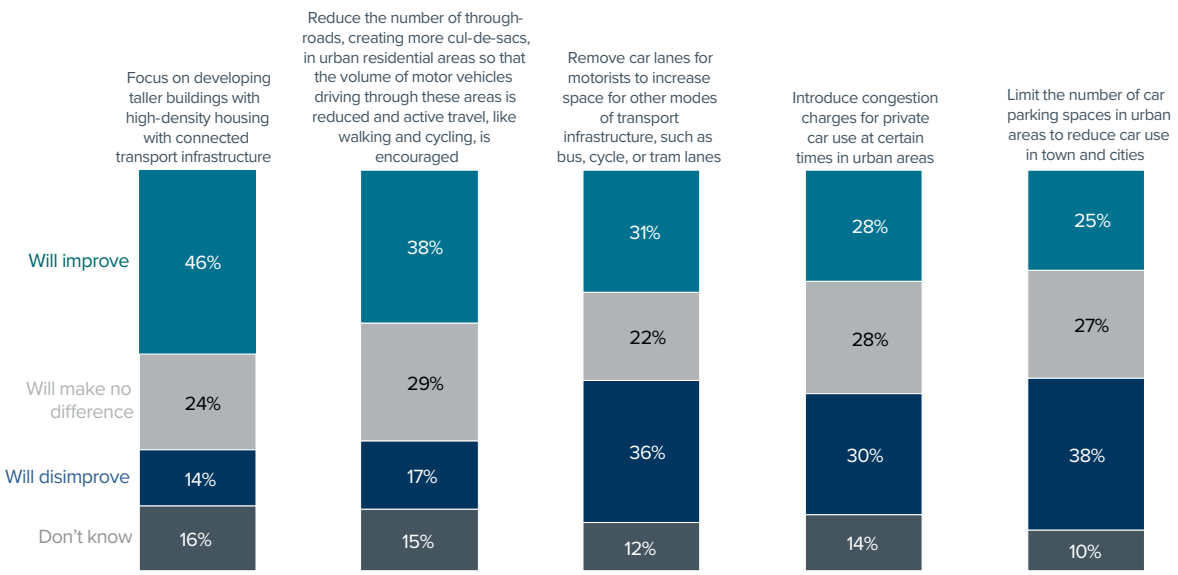
Figure 1 – Use of and Attitudes Towards Public Transport



Questions: Do you use public transport on a typical day?/ Why do you not use public transport on a typical day? Select all that apply.

In fact, 79% of respondents said that they do not use public transport on a typical day. The reasons offered for not doing so are varied, however the most popular reasons were that (i) there is no nearby public transport connection (41%), (ii) that the timetable is not suitable for their needs (25%), and that they prefer to travel in their own space (24%). Notably 7%, or around one-in-fourteen of those who do not use public transport on a typical day say that a perceived lack of personal safety on public transport is a factor in their decision.

Figure 2 – Perspectives on Measures to Improve Transport Sustainability



Question: To what extent do you feel the following measures would improve or disimprove the sustainability of transport infrastructure in Ireland?

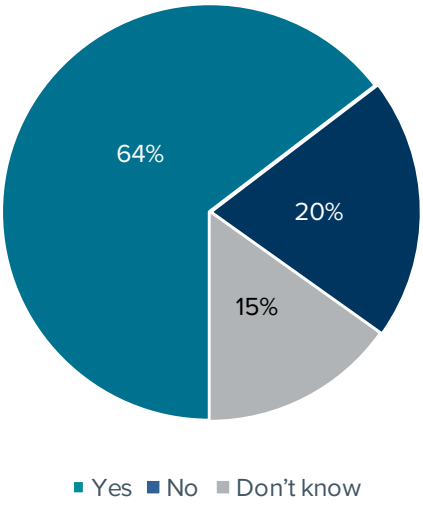
When asked about measures that may improve the sustainability of transport infrastructure in Ireland, respondents generally opposed those that would target motorists, with greater numbers suggesting that removing car lanes in favour of space for other modes of transport, the introduction of congestion charges, and a reduction in the number of urban car parking spaces would disimprove sustainability, rather than improve it. Most popular in terms of agreement on its improvement of sustainability was a focus on developing greater urban density (46%) and a reduction in the number of through roads in residential areas (38%). On the subject of greater urban density, a pronounced difference between male and female perspectives was evident, with 56% of men believing greater urban density would improve the sustainability of transport infrastructure, with just 38% of women answering this question in the affirmative.

Figure 3 – Perceptions of Cycling Safety in Ireland

Questions: What is your perception of safety for cycling in rural Ireland?/ What is your perception of safety for cycling in urban Ireland?

As is clear from Figure 3, there is very pronounced view that cycling is considered to be unsafe in Ireland. While safety is perceived as worse in rural areas, at least three quarters of respondents believed cycling to be somewhat or very unsafe, regardless of location. This response suggests an urgent need on the part of policy makers to comprehensively address these concerns through public safety campaigns and supportive cycling infrastructure, such as structurally separated cycle lanes.

Figure 4 – Support for Mandated Remote Working



Question: Should the Government mandate increased use of remote working, for those who can, to reduce transport emissions?

There was also significant support for Government intervention to mandate increased remote working, for those who can. While the Work Life Balance and Miscellaneous Provisions Act, 2023, provided a framework for workplace requests for remote working, and other forms of flexible working, it did not create any entitlement to remote working. Nearly two-thirds of Irish adults (64%), however, said that further Government action should be pursued to require greater remote working, in an effort to reduce emissions.

Research compiled by the National Transport Authority, in the form of the National Household Travel Survey examined the frequency of various modes of transport for individual trips, and has found that "cars are the dominant mode of transportation, accounting for 71% of trips. Walking is the second most popular mode, making up 18% of trips. Public transport usage is relatively low, with buses/coaches used for 4% of trips and train/DART/Luas for 1%. Cycling represents 2% of trips."[11] The Survey also found that "[t]he main reasons for travel are for work/business (20%) and social (20%), closely followed by education at 18%, and shopping at 16%".[12]

[11] National Transport Authority, *National Household Travel Survey 2023: Research Report*, August 2024, p.16
[12] Ibid.

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Figure 5 – Modes of Transport

	2012 (%)	2017 (%)	2022 (%)	2023 (%)
Car	70.1	70.9	68.7	70.9
Walk	20.0	18.0	19.3	17.7
Bus/Coach	4.2	5.3	4.2	3.9
Cycle	1.7	2.7	1.8	1.9
Train/DART/Luas	0.9	0.7	1.1	1.0
Truck/Van	2.4	1.4	3.7	3.2
Other	0.7 (includes vans)	1.0	1.3	1.4

Source: National Transport Authority, National Household Travel Survey 2023: Research Report, August 2024, p. 30.

Somewhat concerningly, despite considerable efforts to extend and promote both public transport and active travel in recent years, there seems to be little reduction in car use or increase in bus, bicycle, or train use. Walking, indeed, appears to have fallen back somewhat in the most recent Survey.

With its high degree of rurality, relatively low population density, and underdeveloped public transport infrastructure compared to many other west European countries, the retention of car use at very high levels is, perhaps, unsurprising.

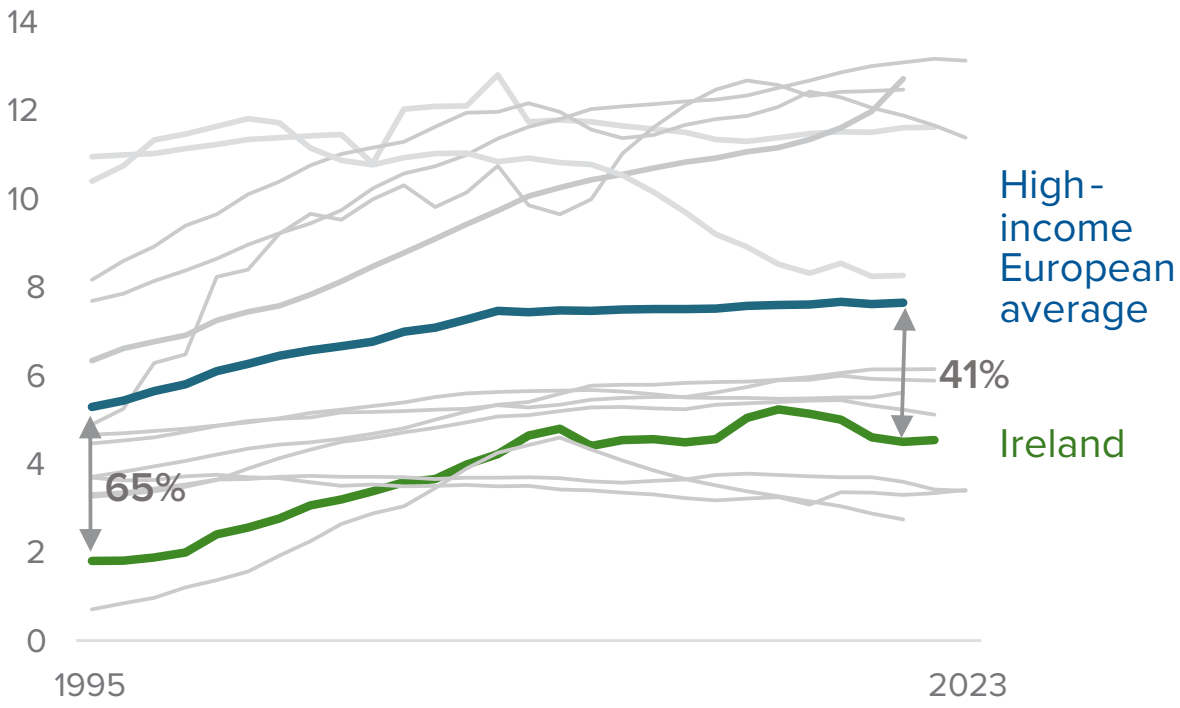
Choice of transport mode is highly dependent on convenience, cost, and speed, and unless public transport options can offer serious competition to private car use across all three of these determinative factors in Ireland, it is likely to continue to struggle to make significant inroads into private car use.

Infrastructure

Ireland's transport infrastructure lags behind our comparators. The International Institute for Management Development World Competitiveness Ranking 2025 places Ireland seventh in the world in terms of overall competitiveness, but 44th in basic infrastructure, with the management of water infrastructure, the density of road and rail networks, and energy infrastructure singled out as areas of particular concern.[13]

The Irish Fiscal Advisory Council has noted, as can be seen from Figure 6, "that the real net capital stock of transport per person in Ireland has grown but remains below other high-income European countries."[14] To address this shortfall it is recommended that investment "increase temporarily by more than 5% per year over the next 10 years", after which it could then return to normal levels, assuming value for money was achieved in that period.[15]

Figure 6 - Real Net Capital Stock of Transport per Person: Ireland vs. High-income European Average



Source: N. Conroy and K. Timoney, Ireland's Infrastructure Demands, Working Paper No. 23, Irish Fiscal Advisory Council, October 2024, p. 25.

Similarly, "[w]hile public investment in transport has been increasing significantly over the course of the current National Development Plan, transport specific deficits have been shown to be quite acute".[16] The Council adds that there "remains a critical need to enhance the delivery of our economic infrastructure to address growing deficits. Significant infrastructural demand arising from strong population growth, in combination with an insufficient supply response has resulted in growing deficits across housing, energy, water and transport."[17]

Project Ireland 2040 sets out a positive and ambitious vision for addressing many of these deficits, however, it is vital that these plans become a reality if Ireland's transport network is going to meet the demands placed on it by evolving international market pressures and demographic changes in the coming decades However, in developing new transport infrastructure, it is important to maintain the 2:1 ratio of funding in sustainable transport modes to further encourage modal shift away from cars and reduce dependency on fossil fuels in Ireland.

[13] International Institute for Management Development, *World Competitiveness Ranking 2025: Ireland*, available at https://www.imd.org/entity-profile/ireland-wcr/#_factor_Infrastructure
[14] N. Conroy and K. Timoney, *Ireland's Infrastructure Demands*, Working Paper No. 23, Irish Fiscal Advisory Council, October 2024, p. 25.
[15] Ibid.
[16] National Competitiveness and Productivity Council, *Ireland's Competitiveness Challenge 2025*, July 2025, p. 61.
[17] Ibid, p. 8.

Roads

The National Roads Network spans almost 5,300km of roads.[18] This breaks down to 995km of motorways, 1,639km of other National Primary roads, and 2,659km of National Secondary Roads.[19] Beyond this, there are almost 94,000km of regional and local roads in Ireland, which accounts for 94% of the country's roads network, carrying around 55% of all road traffic.[20]

While the Organisation for Economic Co-operation and Development, and others, have understandably criticised Ireland's car-dependent transport model, it is nevertheless the case that Ireland's road infrastructure will require substantial additional investment to ensure the country's continuing international competitiveness, foster greater regional connectivity, and to facilitate stronger bus and cycle infrastructure.

Our Motorway Network

While Ireland possesses higher road density than the EU average, it lags significantly behind in motorway density, with only 14.49km of motorway per 1,000sqkm of land area. This places Ireland significantly below the EU average of 22.7km per 1,000sqkm of land area.[21]

Motorways and dual carriageways within the National Road Network are important mechanisms of ensuring quick and efficient access between regions, as well as maximising the potential of existing infrastructure. They are also statistically the safest form of road in Ireland, with Transport Infrastructure Ireland research indicating that motorways are five times safer than rural two-lane roads.[22]

One clear gap in Ireland's motorway network is the absence of a motorway link between Ireland's second and third most populous cities, Cork and Limerick. A motorway between the cities was first seriously contemplated as part of the Transport 21 proposals, launched by Government in 2005, however, the project is now contemplated within Project Ireland 2040. A public consultation was launched in November 2020, with a planning application due to be submitted to An Coimisiún Pleanála late next year. Barring delays, construction may be in a position to begin by 2028.

Similarly, no motorway links Cork and Waterford, which is currently served by the N25, a mostly single carriageway national road, with some sections of dual carriageway. At present, travel times between the cities is often in excess of two hours, on a route that is approximately 123km in length. The absence of a higher quality road linking Ireland's second and fifth largest urban centres, both of which host designated ports of national significance, may act as a barrier to enhanced regional commercial activity, while a motorway upgrade, at least in portions of this route, would enhance its safety. With the establishment of a more direct rail line between the two cities ruled out by the All-Island Strategic Rail Review, a renewed examination of improved road connectivity may be warranted.

Lastly, it must be noted that Ireland's north west is not served by Ireland's motorway network, with no connection to Dublin or the nearby regional city, Galway. However, with recommended extensions of the Western Rail Corridor within the All-Island Strategic Rail Review, it may be hoped that this, in conjunction with improvements to existing road infrastructure in the region, may improve connectivity.

Bus Corridors and Routes

As the most efficient and sustainable method of road passenger travel, bus infrastructure should be prioritised above other forms of passenger traffic. Happily, improved bus infrastructure and services have received considerable public policy attention in recent years through the Bus Connects and Connecting Ireland Rural Mobility Plans.

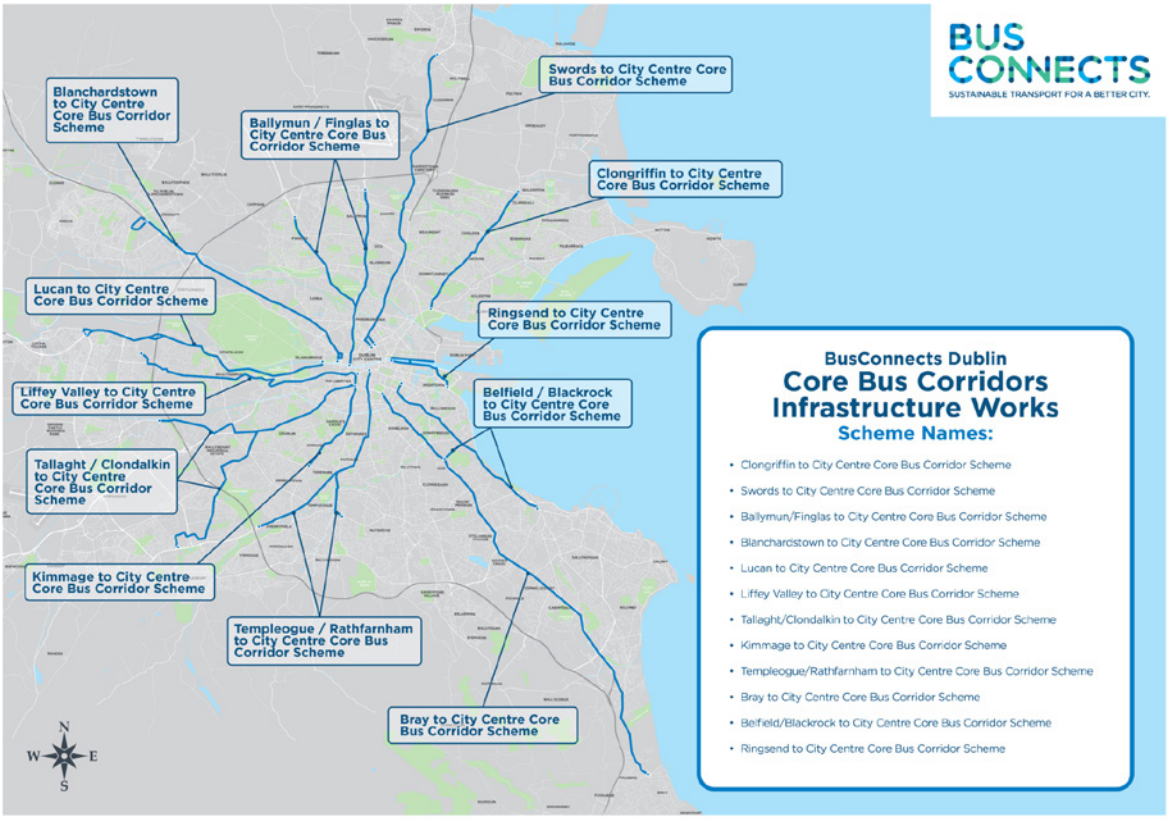
There are 12,500 active bus stopping locations in Ireland, but of these only around 2,400 a provided with bus shelters and 6,000 with bus stop poles. The National Transport Authority has set its objective that all bus stopping locations to be clearly identified by a bus stop flag, and that, over time, the default level of provision would include a bus shelter with an illuminated waiting area.[23]

In Dublin, Bus Connects includes the provision of approximately 230km of designated bus lanes and 200km of cycle tracks, designed to deliver a 35% increase in annual "in-service" kilometres in Dublin.[24] This includes 12 separate schemes across five local authority areas, with six out of the 11 phases of the redesigned network now implemented and all 12 bus corridor schemes have now been approved by An Coimisiún Pleanála,[25] with construction on the first of these corridors due to begin in the coming months.

Similar interventions are planned for Cork, Galway, Limerick, and Waterford, albeit these are at a less advanced stage. The Cork plan, which would include 75km of new bus lanes, will likely

18 Transport Infrastructure Ireland, Roads 2040: *Final Report*, April 2023, p. 2.
19 Ibid.
20 Department of Transport, *Regional and Local Roads*, 25 September 2019, available at: https://www.gov.ie/en/department-of-transport/publications/regional-and-local-roads/
21 European Commission, *Road, rail and navigable inland waterways networks by NUTS 2 region*, 2022 statistics, available at: https://ec.europa.eu/eurostat/databrowser/view/tran_r_net/default/table?lang=en&category=reg.reg_tran.reg_otran
22 R. Riegel, 'Seven in 10 fatal crashes occur on rural roads with speed limit of 80km as research indicates motorways are five times safer', *Irish Independent*, 1 July 2024, available at: https://www.independent.ie/irish-news/seven-in-10-fatal-crashes-occur-on-rural-roads-with-speed-limit-of-80km-as-research-indicates-motorways-are-five-times-safer/a890255857.html
23 National Transport Authority, Bus Stop Infrastructure in Ireland, available at: https://www.nationaltransport.ie/public-transport-services/bus-stops/
24 BusConnects, *Dublin Network Redesign*, available at: https://busconnects.ie/cities/dublin/new-dublin-area-bus-network/.
25 ational Transport Authority, *Bus Connects Dublin: Progress Report March 2025*, March 2025, p. 4.

Figure 7 – BusConnects Dublin Map



Source: BusConnects, Core Bus Corridor Schemes, available at: https://busconnects.ie/cities/dublin/core-bus-corridors/

see planning applications submitted later this year,[26] while an application for development consent for the BusConnects Galway – Dublin Road was submitted to An Coimisiún Pleanála in February.

Connecting rural Ireland to public transport, and bus routes, possesses a more significant challenge. 30% of the population lives outside of established towns and villages, in one-off houses or 'ribbon' development along main roads, while, in rural areas only 44% of people live within 15 minutes' walk of a bus stop.[27]

To address shortfalls in rural public transport connectivity, the Connecting Ireland Rural Mobility Plan was developed by the National Transport Authority and was designed for mobility in rural areas through the development of new and enhanced public transport services. Through its three phases rolled out thus far it has achieved impressive results, cumulatively delivering 350,000 additional weekly vehicle kilometres across 54 new and 94 enhanced bus routes, newly connecting 294 towns and villages to the public transport network.[28]

Connecting Ireland services saw a 38% rise in rural bus use from 2023 to 2024, and almost eight million journeys were recorded across all Connecting Ireland services last year, with 1.2 million of those journeys attributed specifically to the services introduced in Phase 3.[29]

An area, however, that would benefit from faster transition is the electrification of the bus fleet. The transition to a zero-emission urban bus fleet is currently programmed to take up until 2035, however it is unclear where sufficient charging infrastructure is in place to support a rapid transition. The Electric Vehicle Charging Infrastructure Strategy 2022-2025 notes that "[t]he charging needs of buses is likely to be met at bus stations and bus depots, with opportunity charging taking place on public infrastructure," but does not make specific provision for bus charging.[30] Accordingly, a strategy or public plan specific to the infrastructural requirements of an electric bus fleet may help to realise the goal of full electrification by 2035.

26 Roughan & O'Donovan, *BusConnects Cork*, available at: https://www.rod.ie/projects/busconnects-cork
27 National Transport Authority, *Connecting Ireland Rural Mobility Plan*, November 2021, p. 13.
28 National Transport Authority, *Connecting Ireland Phase 1: Implementation Review 2022*, p. 6; National Transport Authority, *Connecting Ireland Phase 2: Implementation Review 2023*, p. 5; and National Transport Authority, *Connecting Ireland Phase 3: Implementation Review 2024*, p. 2.
29 Transport For Ireland, Connecting Ireland services see 38% surge in rural bus use from 2023 to 2024, 4 July 2025, available at: https://www.transportforireland.ie/news/connecting-ireland-services-see-38-surge-in-rural-bus-use-from-2023-to-2024/
30 Department of Transport, *Electric Vehicle Charging Infrastructure Strategy 2022-2025*, 2023, p. 54.

Road Port Connectivity

Ireland's geographic status as an island on the western periphery of Europe, heavily reliant on roll-on, roll-off freight at its ports to support its economic life, means that efficient road connectivity to and from these ports is crucial economically.

As Transport Infrastructure Ireland notes in National Roads 2040: Final Strategy,

> *"Ireland's economy is heavily dependent on the efficient movement of goods, both domestically as well as into and out of the country, and is therefore dependent on efficient domestic and international transport networks. Freight dependent industries need high-quality transport connections to ensure certainty of arrival of incoming goods and outward shipping of products. Producers and retailers need efficient distribution systems for timely access to their markets and customers.*
> *"Currently, the vast majority of internal trade freight in Ireland is carried on the road network, in a variety of vehicles, from Heavy Goods Vehicles (HGVs) to smaller vans. TII estimates that in the region of 80-90 percent of all freight transport occurs on National Roads."*[31]

Ireland's National Ports Policy designates five ports as being of national significance: Dublin, Cork, and Shannon Foynes (Tier One), and Waterford and Rosslare (Tier Two). Currently, however, only Dublin Port connects directly to Ireland's motorway network, with other ports requiring better connectivity. There are, however, some plans to address these shortfalls.

In April this year the Minister for Transport, Darragh O'Brien, announced the M28 Cork to Ringaskiddy Road Project would progress to its construction phase, which would develop approximately 11km of motorway, from the Bloomfield Interchange to Barnahely, with an additional 1.5km of single carriageway protected road linking to the eastern side of Ringaskiddy. A decision was made by An Bord Pleanála in June 2018 to grant approval for the project, with the planning application having been lodged with An Bord Pleanála in May 2017. An Bord Pleanála's decision was subsequently subject to a number of unsuccessful legal challenges. Construction on the project began in May 2025, with completion expected by the summer of 2028.

Similarly, work is also being undertaken on the Limerick to Foynes Project, a 35km of stretch of road connecting the Port of Shannon Foynes to the motorway network. This comprises 15.6km of dual carriageway from Foynes to Rathkeale, 1.9km of single carriageway road from Ballyclogh towards Askeaton, and 17.5km of motorway from Rathkeale to Attyflin. An Bord Pleanála approved the Foynes to Limerick Road development in August 2022, with the application having first been made to An Bord Pleanála in December 2019. An Bord Pleanála's decision was then subject to an application for judicial review, which was withdrawn in mid-2023. The project was initiated following a decision in 2014 by Limerick City and County Council to engage consultants to undertake the planning, design, and environmental assessment of the proposed development. Construction on the project began in January 2025, with expected completion by the end of 2030.

The Oylegate to Rosslare Harbour Scheme in Co. Wexford also seeks to link Rosslare, more efficiently, to Ireland's national road network, through a 33km stretch of new motorway which would link Rosslare with Cork and Waterford via the N25, and Dublin via the M11. A public consultation on the project was commenced in July 2020, however, a planning application is not expected to be submitted to An Coimisiún Pleanála until late 2026, while an expected date of the commencement of construction may be in 2030.[32]

Planning Issues and Delay

All of the road projects mentioned within this section, while of critical economic and infrastructural importance, have been beset with numerous, significant delays. Like many other infrastructure of a similar nature, the design and planning process can extend more than a decade before construction begins.

In an effort to address some of these issues the Government has given commitments, in the Programme for Government, *inter alia*, to:

- provide multi-annual funding clarity for roads budgets so agencies can plan accordingly;
- increase funding for new roads as part of the NDP review and the maintenance of existing roads;
- increase funding for the protection and renewal of the road network to address maintenance backlogs; and
- establish distinct budgets for road maintenance and new road construction starting in 2025 to ensure sustained investment in the network.

Such measures, if implemented, can help to address some of the issues delaying these developments, however, other systemic issues, such as the length and unpredictability of timelines within the planning process must be addressed. There has also been a very considerable increase in the extent to which the decisions of An Bord Pleanála, now An Coimisiún Pleanála, have been the subject of judicial reviews in recent years, with numbers almost trebling, from 30 applications for judicial review in 2015 to 86 in 2023.[33]

While it is acknowledged that it will take some time to assess the impact of the Planning and Development Act, 2024, the third longest piece of legislation in the history of the State, on delays to development, it is evident that the status quo is resulting in unsustainable delays to major infrastructure projects.

31 Transport Infrastructure Ireland, *National Roads 2040: Final Strategy*, April 2023, p. 15.
32 S. Bourke, 'New Rosslare motorway remains ten years off despite increases in traffic', *Wexford People*, 16 January 2025, available at: https://www.independent.ie/regionals/wexford/wexford-district/new-rosslare-motorway-remains-ten-years-off-despite-increases-in-traffic/a681184604.html.
33 McCann FitzGerald, *Knowledge Network: What was all the fuss about?* Planning and Development Act 2024, 12 February 2025, available at: https://www.mccannfitzgerald.com/uploads/What_was_all_the_fuss_about_Planning_and_Development_Act_2024.pdf.

Active Travel

As is noted in the National Household Travel Survey, "one quarter of all trips taken are for journeys of between 1.00 and 2.99 kilometres", which are particularly well suited to active travel, while "almost seven in ten trips taken nationally are for a distance of less than 10 kilometres (69%)".[34] It is an objective of Ireland's Climate Action Plan to ensure that walking, cycling and public transport account for 50% of all daily trips by 2030.[35]

Walking

As has been noted above, walking is the second most popular way of travelling, making up 18% of all trips.[36] The National Household Travel survey has noted, however, that "[t]hose living in Dublin City and Suburbs (30%) and the Greater Dublin Area (26%) are the most likely to make a trip by walking, considerably ahead of their counterparts in Rural Areas of whom 7% walked".[37]

Most people in Ireland live within a 15-minute walk of important amenities, such as a shop (70%), pub or restaurant (65%), bus stop (65%), chemist or pharmacy (58%), public leisure space (57%). Additionally, around half of all respondents stated that they lived within 15-minutes' walk of a post office (50%), supermarket (49%), and doctor's surgery (47%).[38] It is probable, therefore, that scope exists to increase the proportion of journeys walked in Ireland. It should be noted, however, that, according to the International Transport Forum, Dublin ranks 108th out of 121 European cities in terms of the number of places of interest (e.g. schools, hospitals, shops and green spaces) accessible within 15 minutes' walk.[39]

The National Transport Authority's metropolitan walking and cycling indices provide insight into the kinds of interventions that may improve walking uptake in Ireland. The Dublin Metropolitan Area Index suggests that better footpath accessibility, like level surfaces, dropped kerbs at crossing points (79%), nicer places along streets to stop and rest, like more benches, trees and shelters (74%), wider footpaths (71%), more frequent road crossings, with reduced wait times (68%), fewer cars parked on the footpath (68%), less fear of crime or antisocial behaviour in their area (63%), would increase the likelihood of them walking more, with similar results returned in studies of those in Cork, Galway, Limerick, and Waterford.[40]

While distances from home to amenities are far likelier to be shorter in urban areas, and thus more suitable for walking, urban areas in Ireland also benefit from considerably more developed walking infrastructure than rural areas.

There is lack of comprehensive data on the availability and quality of footpaths and other walking infrastructure in rural villages, but a recent study by the Central Statistics Office found that "[m]ore than one in five rural dwellers (21%) said a lack of safe footpaths was a barrier [to spending time in nature], compared with 8% of those living in urban areas.[41] Additionally, a walkability audit of eight towns around Ireland in 2014 found that a majority of respondents felt that "the available footpaths were not in good repair (68%) and that they were not ramped or easy to negotiate (53%)." [42]

Efforts to develop greenways and walking trails, such as the Walks Scheme, and various National Waymarked Trails, are being made, however, these initiatives are largely aimed at improving the touristic appeal of rural areas and not to facilitate trips to amenities by those living in rural areas.

The development of a national strategy to install minimum standards of footpaths and walking infrastructure in rural villages and towns would improve safety and walkability of rural areas for those resident in the local communities.

34 National Transport Authority, *National Household Travel Survey 2023: Research Report,* August 2024, p. 23.
35 Department of An Taoiseach, *Government launches updated Climate Action Plan accelerating ambition in reaching climate goals*, 16 January 2023, available at: https://www.gov.ie/en/department-of-the-taoiseach/press-releases/government-launches-updated-climate-action-plan-accelerating-ambition-in-reaching-climate-goals/
36 Ibid, p. 36.
37 Ibid.
38 Ibid, p. 19.
39 International Transport Forum, *How accessible is your city?*, 2022, available at https://www.itf-oecd.org/urban-access-framework.
40 National Transport Authority, Dublin Metropolitan Area Walking and Cycling Index 2023, March 2024, p. 15.
41 Central Statistics Office, *Recreation in Nature - How We Spent Summer 2024*, available at: https://www.cso.ie/en/releasesandpublications/ep/p-rnhwss/recreationinnature-howwespentsummer2024/keyfindings/.
42 Age Friendly Ireland, *How Walkable Is Your Town?*, March 2015, p. 8.

Cycling

Bicycles are extremely efficient in their use of road space, as each lane of a typical road can accommodate 14,000 cycles per hour, compared to 2,000 cars per hour.[43] To achieve our sustainability goals, cycling will need to become a more significant part of the transport system.

The use of cycling for trips in Ireland has remained, however, stubbornly low in recent years, at around 2% according to the National Transport Authority's National Household Travel Survey, however in Dublin City and its suburbs, this figure rises to 5%.[44] Additionally, research carried out for Engineers Ireland by Amárach research shows that 64% of Irish adults say they never cycle, and while this research revealed that 74% of respondents felt cycling to be unsafe in urban areas, the Dublin Metropolitan Area Walking and Cycling Index 2023 showed that 57% of residents there think the level of safety for cycling in their local area is good.[45]

One of the most substantial programmes planned to boost cycling infrastructure, and thus its perceived accessibility and safety, is CycleConnects, which aims to improve sustainable travel by providing the potential for more trips on a safe, accessible, and convenient cycling network.

Draft proposals envisage an extensive cycling network across the 22 counties, complementing the cycling plans already developed for the Greater Dublin Area (Meath, Kildare, Wicklow, and Dublin).[46] Together, it is envisaged that these plans will create a comprehensive cycle network for Ireland. The CycleConnects project does not prescribe any cycle infrastructure for the routes presented but mainly serves to illustrate the potential cycle connections between, and within, all major towns and cities outside the Greater Dublin Area. The completion of this active travel network must be a priority, with development in line with the town plans outlined in CycleConnects. Many urban transport development plans however, like BusConnects, are incorporating cycling infrastructure, such as the planned 200km of cycle tracks set out in Dublin BusConnects plan.

Innovations such as the Cycle Design Manual, which guides the design of cycle infrastructure in Ireland and promotes the segregation of cyclists from motorists on roads, is likely to aid safety and thus increase cycling participation.

Rail

With the increasing popularity of car travel into the mid-20th century, many lines struggled for viability, and by the 1980s almost all branch lines and cross-country routes not serving Dublin directly had closed. Since then, however, rail use has stabilised and has begun to rebound substantially in Ireland, with a 37% growth in passengers across the whole island between 2011 and 2019, though the rail network has now contracted to 2,300km, less than half of its greatest extent.[47] This growth has continued in recent years, following the Covid-19 pandemic, with Iarnród Éireann reporting 50.7m passenger journeys in 2024, an increase of 11% compared to 2023, when 45.5m journeys were recorded.[48]

As rail is generally acknowledged to be the most sustainable and efficient mode of passenger transport, especially over longer distances, it receives outsized attention in this paper.[49] Only 1% of journeys in Ireland, however, are taken by train or tram, with only 21% of the population live within 15 minutes' walk of a train or Luas station, suggesting further scope for increases in passenger numbers.[50]

The case for encouraging greater rail use is particularly acute in the case of inland freight, only 1% of which is carried by rail in Ireland currently. Goods vehicles represent 25% of all vehicles on Irish roads and take up 33% of the available road space,[51] while greenhouse gas emissions from heavy and light goods vehicles account for 20% and 18% of total transport-related greenhouse gas emissions, respectively.[52]

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43 B. Ensink, *Future cities are cycling cities!*, European Cyclists' Federation, March 2009, p. 3.
44 National Transport Authority, *National Household Travel Survey 2023: Research Report*, August 2024, p. 36.
45 National Transport Authority, Dublin Metropolitan Area Walking and Cycling Index 2023, March 2024, p. 9.
46 National Transport Authority, *CycleConnects: Ireland's Cycle Network*, 2023, p. 5.
47 Department of Transport and Department for Infrastructure, *All-Island Strategic Rail Review: Final Report*, July 2024, p. 26.
48 National Transport Authority, *2024 Rail Census records 215,333 passenger journeys*, 30 April 2025, available at: https://www.nationaltransport.ie/publications/nta-national-rail-census-report-2024/.
49 European Environmental Agency, *Transport and Environment Report 2020*, 2021, p. 6.
50 National Transport Authority, *National Household Travel Survey 2023: Research Report*, 2024, pp. 19 - 21.
51 Transport Infrastructure Ireland, *National Roads 2040: Final Strategy*, April 2023, p. 19.
52 C. Rowland, P. Weldon, and N. Farid, *Research to assess specific measures for road freight emission abatement under the ASI framework*, Working Paper No. 30, June 2024, Climate Change Advisory Council, p. 7, available at: https://www.climatecouncil.ie/councilpublications/councilworkingpaperseries/Working%20Paper%20No%2030%20Research%20to%20assess%20specific%20measures%20for%20road%20freight%20emission%20abatement%20under%20the%20ASI%20framework.pdf

Photo: The Chetwynd Viaduct, completed in 1851, was designed by Engineer-in-Chief of the Cork & Bandon Railway Company, Charles Nixon. The 90ft tall structure, which connected Cork to Bandon, as part of the now disused West Cork Railway, remains standing over the N71. Photo credit: Hywel Williams.

All-Island Strategic Rail Review

In 2021, the then Minister of Transport for the Irish Government, Eamon Ryan, and the then Minister for Infrastructure for the Northern Ireland Executive, Nichola Mallon, launched an All-Island Strategic Rail Review, which set out to assess the current state of the island of Ireland's rail network and propose recommendations for its evolution.

Among the most significant challenges to rail use, and its development, in Ireland identified by the Review were:

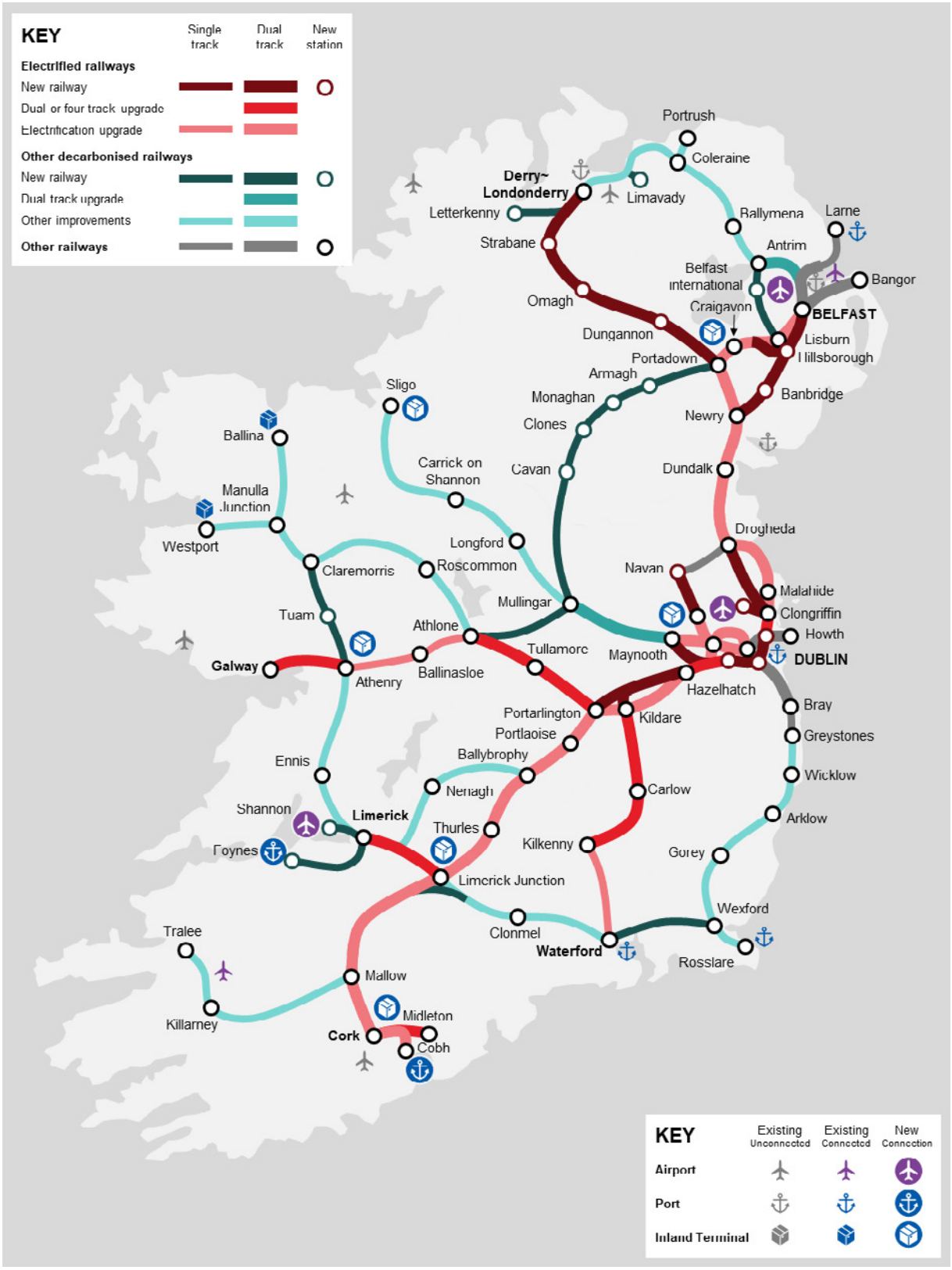
- significant gaps in the rail network's coverage;
- relatively low service frequencies and speeds compared to similar railways (such as those in Scotland and Denmark);
- the lowest level of electrified railway in the European Union;
- quality of service that does not consistently meet customer expectations;
- inconsistent and, in some places, poor station access;
- no connection for passenger rail services to any major Irish airport;
- inconsistent integration across cities (notably Dublin), modes, and jurisdictions;
- infrastructure that limits opportunities to deliver affordable, transformational improvements; and
- demographics on the island that are not particularly conducive to supporting high density, high frequency railway networks in many places.

To address many of these challenges, the Review made 32 recommendations. Some of the more significant of these recommendations are to:

- develop and implement an All-Island Rail Decarbonisation Strategy that includes an electrified intercity network;
- upgrade the core intercity railway network to top speeds of 200km/h;
- increase line speeds to at least 120km/h;
- reinstate the Western Rail Corridor railway between Claremorris and Athenry;
- reinstate the South Wexford Railway;
- develop short sections of new railways on congested corridors;
- connect Dublin, Belfast International, and Shannon Airport to the railway and improve existing rail-airport connections; and
- strengthen rail connectivity to the island's busiest ports.

Perhaps the most eye-catching of the Review's recommendations were those of new or newly electrified line proposals, as seen below.

Figure 8 – All-Island Strategic Rail Review – New and Upgraded Line Recommendations



Source: Department of Transport and Department of Infrastructure, All-Island Strategic Rail Review: Final Report, July 2024, p. 48.

South East

In the South East, the Review notes that rail connectivity "has declined in recent years with the closure of the South Wexford Railway in 2010. Furthermore, the line from Waterford to Limerick Junction has only two services per day per direction and has many speed restrictions, hampering connections to Limerick and Cork."[53] Currently, travel time between Cork and Waterford, by rail, is inconvenient and lengthy, with travel times ranging between three and six hours, given the circuitous nature of the existing line, the requirement for at least one change in train at Limerick Junction, and the infrequency of connecting services.

The Review proposes that these issues be addressed through upgrades of the existing lines between Cork and Limerick Junction, and Limerick Junction and Waterford, as well as the construction of a spur that would allow trains to travel directly from Cork to Waterford without the need for passengers to change trains, thus reducing journey times.

It is notable that, similar to the gap in Ireland's motorway network, there is no direct train line between Cork and Waterford. A construction of more direct route between Cork and Waterford was also considered by the report but was "found to be impractical due to the geography of this corridor", as well as concerns over the level of demand for the route.[54] A more direct Mallow to Waterford train line was closed in 1967, due to low passenger traffic.

It is suggested that the building of a similar spur for Cork to Limerick traffic, to avoid changes for passengers at Limerick Junction, would improve travel times and convenience, improving the route's attractiveness to passengers.

The reopening of the South Wexford Railway line is also proposed by the Review, which would improve the connectivity of Rosslare Port with Cork, Limerick, and Waterford.

North and Connection to Midlands

Major infrastructural investment is recommended by the Review in Northern Ireland, by restoring the rail line between Derry and Portadown, which was closed in 1965 and would link the large towns of Strabane, Omagh, and Dungannon to the network, improving connectivity between Derry and Belfast, Dublin, and the remainder of the island. Additionally, the creation of a direct line between Lisburn and Newry, connecting with Banbridge and Hillsborough, which was closed in 1956, is recommended.

Additionally, the Review recommends reinstating the railway between Lisburn and Antrim, which was closed to passenger services in 2003, with a new station at Belfast International Airport.

A new rail connection from Derry to Letterkenny, in Co. Donegal, is also recommended, which would restore rail services between the two locations for the first time since 1954.

These infrastructural additions, coupled with new rail lines connecting Portadown to Athlone, would render rail access from all areas in Ireland to the north of the island considerably better.

West

A further extension of the Western Rail Corridor, from Athenry to Claremorris, is also recommended by the Review, supporting freight and regional connectivity in the west of Ireland. The west, particularly the north west, may be considered as one of the most infrastructurally underdeveloped and under-connected areas in the country, a large factor in which is its more rural, more sparely distributed population.

A further rail link between Claremorris and Collooney, continuing on the rail corridor to provide a more direct rail link between Sligo and Galway, as well as other urban centres in the west and south west was also considered, but not recommended by the Review. The review noted that, "[m]odelling undertaken for interventions on this corridor showed there would be very low demand for passenger rail services on this route and that building a railway on this corridor would have a significant adverse impact on the environment."[55]

Nevertheless, the current regional gap in the rail network renders rail travel from Sligo, and its hinterland, to other major urban areas in the west, such as Galway, Castlebar, or Tuam, highly impractical and thus the potential future viability of this extension of the Western Rail Corridor should be monitored.

South West

Notable by their absence from the Review are proposals for further commuter rail links between Cork and larger surrounding commuter towns, like Bandon, Kinsale, and Youghal. In recent years there have been calls for a restoration of the West Cork Railway,[56] portions of the infrastructure of which, including the well-known Chetwynd Viaduct, remain in place, though disused since the line's closure in 1961.

The Review considered towns with populations with populations of less than 10,000 as unviable for rail connections, however, given that both Bandon and Youghal had populations above 8,000 at the time of the last Census, in 2022, a re-assessment of the benefit of these connections, in the near future, should be considered.

Priority Works

Focus must also be placed on projects required in the shorter term to tackle significant bottlenecks in the current network. These include Portarlington to Athlone, Limerick Junction to Limerick and, very significantly, Clongriffin to Dublin Connolly. These are examples of current choke points where lack of infrastructure is already impacting both on daily reliability and planned service expansion.

Accordingly, these must be tackled with urgency, since they impact all services on these routes, and their subsequent connections. If rail is to grow market share and achieve a public reputation for reliability and frequency, both being core strategic requirements for any public transport mode, these infrastructural constraints must be prioritised.

[53] Department of Transport and Department of Infrastructure, *All-Island Strategic Rail Review: Final Report*, July 2024, p. 48
[54] Ibid, p. 66.
[55] Ibid, p. 133.
[56] E. English, 'Restoration of West Cork railway would undo one of Ireland's 'biggest transport mistakes', *Irish Examiner*, 17 January 2022, available at: https://www.irishexaminer.com/news/arid-40787103.html.

Port, Airports, and Rail Freight

At present, only 1% of inland freight is carried by rail in Ireland, against a European average of 18%.[57] Given the very significant greenhouse gas emissions created by heavy goods vehicles, as well as the road scape occupied by them, rail in Ireland has the potential to deliver a major positive impact in transport-related emissions and road congestion relief. Around 112g of CO2 is generated per freight tonne per km transported by heavy goods vehicles, against 18g of CO2 per freight tonne per km transported by train.[58]

Iarnród Éireann's plans to reconnect the port of Shannon Foynes to the rail network, which was closed to freight traffic in 2001, which it states "will drive growth in bulk and intermodal traffic and support opportunities with mining and off shore power generation in the region".[59] Plans also exist to re-establish the rail connection to Marino Point in the Port of Cork, which will allow for the movement of bulk commodities by rail to and from the Port.[60]

The construction of this new infrastructure, at two of Ireland's busiest ports is essential to improving the likelihood of additional freight being moved on the rail network.

Additionally, the All-Island Strategic Rail Review recommends rail connections at Shannon and Belfast International Airports. No major airport in Ireland is connected to rail and Kerry and George Best airports, which do have rail connections, do not have access to rail within the terminal buildings. Proposals also exist to connect Dublin Airport to Dublin via a new MetroLink line, however, the Review also recommends building a rail spur from Clongriffin to Dublin Airport, which would complement the planned MetroLink project in Dublin and would enable intercity and other longer-distance services to directly access Ireland's busiest airport.[61]

The long-contemplated MetroLink project, which would link Dublin airport and north Dublin, as far as Swords, to the city centre, has been a part of public policy proposals since at least Transport 21 in 2005. The benefits of the plan have been well-articulated, with planners suggesting that the project could replace up to 360 million car trips by 2050.[62] In September 2022, Transport Infrastructure Ireland submitted a Railway Order application to An Bord Pleanála, with approval granted in late 2025. It is now believed that construction may not begin until 2028,[63] however, possible legal challenges to a potential approval of the application by An Coimisiún Pleanála renders any potential start date uncertain.

The Challenges of Developing Infrastructure in Ireland

Ireland's ability to deliver critical transport infrastructure is however often constrained by complex regulatory, planning processes, and judicial reviews more than engineering challenges. These processes can create significant delays and uncertainty for projects of all scales. The recent "Accelerating Infrastructure Report" identifies systemic challenges within Ireland's regulatory and planning framework that impede timely delivery of critical infrastructure.[64]

The current processes are highly fragmented, requiring multiple consents, licences and permits from numerous agencies, often with overlapping responsibilities and inconsistent timelines, many post-planning. This lack of coordination results in duplication of effort, as similar information is sought by different bodies, and there is frequently little prioritisation for projects of strategic importance. These delays apply not only to large-scale developments but also to upgrades of existing infrastructure, where identical consent requirements can extend timelines significantly. Furthermore, the potential for judicial review challenges introduces additional uncertainty, with some projects delayed by years. The recent judicial review of the grant of planning permissions for the long-awaited Metro North scheme illustrates the scale of risk and delay posed by these processes, even for projects that have been in the planning process for decades. The cumulative effect of these factors increases cost, risk, and delivery time for works that is essential for the public good, environmental protection, and economic competitiveness.

Engineers Ireland is encouraged by the Government's commitment to streamline these processes through the actions outlined in the Report. In particular, Engineers Ireland welcomes the proposal to increase exemption thresholds for critical infrastructure, a measure strongly advocated in Engineers Ireland's response to the Accelerating Infrastructure public consultation, amongst other measures.[65]

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57 Iarnród Éireann, *Rail Freight 2040 Strategy*, 2021, p. 8.
58 Ibid.
59 Ibid, p. 5.
60 Ibid.
61 Department of Transport and Department of Infrastructure, *All-Island Strategic Rail Review: Final Report*, July 2024, p. 24.
62 MetroLink, *Key Facts*, available at: https://www.metrolink.ie/en/about/key-facts/.
63 D. MacRedmond, 'Construction of MetroLink project may not begin until 2028, transport committee to hear', *TheJournal.ie*, 28 May 2025.
64 Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation, *Accelerating Infrastructure Report and Action Plan*, December 2025, available at https://assets.gov.ie/static/documents/a1ef9433/Accelerating_Infrastructure_Report.pdf.
65 Engineers Ireland, *Engineers Ireland's Submission to the Department of Public Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation on Accelerating Infrastructure*, July 2025, available at https://www.engineersireland.ie/LinkClick.aspx?fileticket=7rtoHJtqJkM%3d&portalid=0&resourceView=1

Conclusions and Recommendations

Ireland faces a critical juncture in its transport policy. With transport accounting for over 21% of national greenhouse gas emissions and road transport comprising 95% of that figure, urgent and transformative action is required to meet the country's climate action commitments. The following policy recommendations are designed to supplement Government's ongoing efforts to both improve the accessibility and connectivity of Ireland's transport network, while lowering greenhouse gas emissions and the negative impact of transport on the environment, delivering a sustainable, efficient, and inclusive transport system.

Investment

- Increase investment in transport by more than 5% per year over the next 10 years to bring transport net capital stock to the average level of a high-income European country.
- Maintain the 2:1 ratio of funding in sustainable transport modes to further encourage modal shift away from cars and reduce dependency on fossil fuels in Ireland.

Accelerate Bus Infrastructure and Electrification

- Expedite the BusConnects programme across all major cities, ensuring timely implementation of dedicated bus lanes and ancillary cycle tracks.
- Prioritise the electrification of the bus fleet by developing a targeted infrastructure strategy for depot and on-route charging.

Enhance Rural Connectivity

- Strengthen the Connecting Ireland Rural Mobility Plan by increasing route coverage and frequency, particularly for more isolated rural communities.
- Collect comprehensive data on the availability and quality of footpaths and other walking infrastructure in rural villages and consider the launch of a National Rural Footpath Programme t ensure safe, accessible walking routes in villages and towns.

Tackle Cycling Safety Issues

- Pursue a great focus on segregated cycle lanes in all urban transport projects and further measures that can improve cyclist safety.
- Help address safety concerns through public awareness campaigns and infrastructure upgrades.

Develop Regional Interconnectivity

- Implement the All-Island Strategic Rail Review's recommendations, including electrification of intercity routes, reinstatement of key lines (e.g., Western Rail Corridor), and improved airport and port connectivity.
- Prioritise infrastructure that will assist in increasing the transport of freight by rail, to reduce both emissions and congestion from heavy goods vehicles on our roads.
- Pursue the development of improved road connections between Ireland's regional urban centres, in particular, between cities like Cork, Limerick, and Waterford, to boost economic links and promote decentralisations.

Incentivise Working from Home

- Support reductions in commuting emissions by incentivising working from home, as well as the decentralisation of employment.

Implement and Monitor Planning Reform

- Ensure a timely commencement of all sections of the Planning and Development Act, 2024, and monitor the effect of its provisions on timelines in the planning process.
- Explore further legislative interventions to expedite planning decisions, including improved resources for An Coimisiún Pleanála and planning departments within local authorities.

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