

**Our 2050 Vision**

**Enroute's vision for an  
integrated national  
transport network  
in Great Britain**

**Version 1**  
December 2023



# Foreword from Senior Leadership

“ I am pleased to be, alongside David, presenting our refreshed 2050 Vision, building on our work as Sustainable Transport Midlands on ourVision. Considering recent announcements and events in the transport sector, we saw it as essential to reconsider what we'd like decision-makers to take forward within our industry.

We encourage you to take a read of our proposals and please do get in touch if you have any questions about what we're proposing.



**Harry Burr**  
Joint Chief Executive

Our 2050 Vision establishes the principles to which Enroute will work. It sets out the sustainable transport network we envisage for the (not so distant) future, which will require a mix of 'hard' and 'soft' interventions to bring about, from fairer and more secure funding streams to new active travel and high-speed rail infrastructure. What we sketch out is not a final state for Great Britain's transport network, but the beginnings of a network that will enable and encourage the modal shift we need to sustainable transport in a warming climate.

“



**David Frankal**  
Joint Chief Executive





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# Our take on devolution & funding

## Our proposals

We propose that new transport powers are devolved to local areas. These powers would be governed through new Transport Authorities (TAs) operating in every area of England, Wales and Scotland with a specific catchment area.

Transport Authorities would be responsible for operation of public transport and investment into public transport and active travel, with the road network otherwise remaining the responsibility of Local Authorities or National Highways.

These Transport Authorities would absorb many existing transport responsibilities from the Local Transport Authority as well as Whitehall, including:

- The ability to run bus and tram services through franchising schemes
- The ability to have a say on new Passenger Service Contracts
- The ability to control bus and tram fares in their local area.
- The ability to set specific transport-related environmental targets
- The ability to set the Local Transport Plan and sub-plans for specific areas
- The ability to lead on transport improvement projects, from conception to completion
- In urban areas, the ability to rollout specific capped zone-based ticketing, similar to Oyster

Transport Authorities would function as non-political statutory bodies run and advised by industry experts, implementing evidence-based policies, operating at arms-length from, but ultimately accountable to, Local or Combined Authorities.





## Funding of Transport Authorities

We propose that funding for Transport Authorities, both in operational and capital expenditure, should be legally ringfenced and protected to prevent short-term budget cutting or diversion to unsustainable transport investments, such as road expansion.

We propose the following (non-exhaustive) funding mechanisms for Transport Authorities:

- Statutory minimum level of funding from Local or Combined Authorities, broadly based on current transport expenditure.
- Statutory minimum level of funding from Central or Devolved Governments.
  - The distribution of this funding should be a measured operation carried out by civil servants, not politicians.
  - Funding should be allocated based on population, the size of the existing network and historic levels of (under-) investment. This should not mean an automatic priority of urban over rural areas.
- A French-style 'Versement Transport' (source: [La Fabrique de la Cité](#)) tax that can be levied on local businesses with at least 11 employees, with the minimum rate dependent on the region's population, brought in incrementally. Funds raised from this tax would be strictly ringfenced to sustainable transport investment. This tax would be levied at the discretion of Local or Combined Authorities.
- The scrapping of all existing 'competition' or 'bid' style funds for capital expenditure from Central Government, with this money spent on strategic national infrastructure or otherwise shared out fairly (see above) to Transport Authorities, so that decisions on which projects to fund are taken on a local level.



France has

**29**

**tram networks, with more being built.**





# Improving & expanding rail infrastructure

## Railway electrification

Electrification of the railways is vital to decarbonise our transport network, and deliver a better, comfortable and more reliable service for passengers. Enroute supports the ambitions of Network Rail's Transport Decarbonisation Network Strategy ([source](#)).

We believe that all diesel-powered trains (including bi-modes) should be withdrawn or converted by 2050, with overhead electric power being the default on all long-distance and suburban routes (with battery-powered trains for lesser-used rural routes). We support third-rail 'infill' electrification on routes such as the Uckfield Line and East Coastway Line.



only

**38%**

of the rail network is electrified, including London and the South East ([source](#)).

## Expanding capacity

We believe urban and suburban routes in England, Wales and Scotland should be capable of providing a turn-up-and-go service every 15 minutes by 2050.

This will require new dedicated infrastructure for long-distance trains (see 'Our Vision for High-Speed Rail'), as well as significant capacity increases at major stations, such as Manchester Piccadilly and Leeds. There is no 'one-size-fits-all' approach for increasing capacity in/through major cities; each city has its own requirements based on the layout of the city and where it sits in the wider network.



## Reconnecting towns and cities with frequent trains

By 2050, every town and city in England, Wales and Scotland with a population over 8,000 should have a railway station with the following service pattern at a minimum:

- For settlements of over 8,000, a minimum of 1tph towards a major settlement with other connecting services.
- For settlements of over 25,000, a minimum of 2tph towards a major settlement with other connecting services.
- For settlements of over 50,000, a minimum of 4tph towards a major settlement with other connecting services,.



**We define a major settlement with other connecting services as a town or city with...**

**a population of over 150,000, with direct rail links to London, Birmingham and Manchester.**

## Taktfahrplan

We propose the adoption of Swiss-style 'Taktfahrplan' principles in future network and timetable design, especially:

- Regular clockface timetables (so regularity of service every 15, 30 or 60 minutes)
- Consistency throughout the day and week
- Easy and efficient connections, with information provided onboard
- High performance, ensuring reliability and dependability

## Rail Freight

- Expanding and electrifying rail freight is a key part of the transport decarbonisation agenda. We believe this can be achieved through a combination of projects with co-benefits for passenger rail, such as electrification and grade separation, and electrification to ports and intermodal terminals.
- We support the concept of 'infill electrification' proposed by the CILT ([source](#)), which proposes 800 miles of additional electrification across the UK which will ensure 95% of rail freight services electrified are powered by electricity rather than diesel.
- We support the continued development of electric (EMU) parcel trains by Orion High Speed Logistics, Varamis Rail, and the Rail Delivery Group.





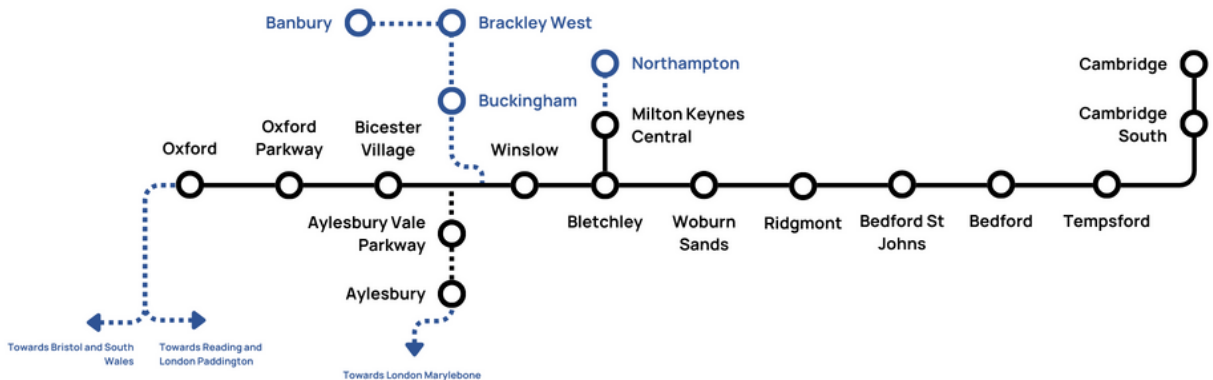
# Our approach to new rail projects

## Take it further: East West Rail

We believe that East West Rail is vital to the South Midlands and the knowledge and connectivity of the entire nation. East West Rail is a model for the level of ambition with which we should approach new rail schemes, selecting alignments based on the purpose of the line, and making use of a combination of new and reinstated alignments and existing lightly-used lines, where fit-for-purpose.

East West Rail should be electrified from the outset between Oxford and Cambridge, as should every new railway. Failing to do so is a missed opportunity for decarbonisation, particularly for freight, and will likely result in further disruption if a decision is later taken to electrify after services have started. We also consider the branch to Aylesbury vital for regional growth.

We call for consideration of extending passenger services along the existing network, to destinations such as Reading, Northampton and London Marylebone. We would also support studies into new services towards Bristol and South Wales (splitting off at after Oxford at Didcot Parkway), and a brand-new route between Verney Junction and Banbury, via Buckingham and Brackley.



## Get it started: the Leamside Line

We support calls to reopen the Leamside Line in the North East of England, providing a secondary route for passengers and freight between Darlington and Newcastle, serving Washington (one of England’s largest urban areas with no rail connectivity). This could form part of a longer second route from York to Newcastle (see below).

We support ambitions to utilise part of the Leamside Line for an extension of the Tyne & Wear Metro, but this must be allow provision for long-distance traffic on the line.



# Our vision for a High-Speed Britain

## Why High Speed Rail?

We believe a dedicated high-speed network will be the backbone of our public transport system. This will enable much more than reduced journey times between major cities; it will enable increased capacity and ease of travel, increased reliability and resilience, and will encourage significant modal shift away from domestic aviation, particularly between London and the Scottish Central Belt. As importantly, building new high-speed infrastructure for long-distance services will free up capacity on our existing network, enabling a step-change in frequency, capacity, efficiency and reliability for local, regional and commuter services, as well as freight on major arteries such as the West Coast Mainline.

HS2 should have been the beginning of a wider network connecting Great Britain. The cancellations of the planned legs to Leeds (November 2021) and Manchester (October 2023) are regrettable, and we would like to see those plans reinstated as soon as possible. However, for this vision, these recent events have given us the opportunity to think more broadly about the wider network we envisage, and how these plans could potentially be adapted to lay the groundwork for this.

Although building high-speed rail has a significant capital cost (especially when compared to other interventions we advocate for, such as Active Travel Corridors), its economic, social and environmental benefits mean that, in the long-term, it is money well spent. We reject the notion of “either-or”: A well-functioning transport network fit for the future must cater to the full spectrum of travel needs. We also emphasise the localised benefits of high-speed rail, both in terms of the benefits for the existing rail network (as above) and regeneration opportunities around stations.

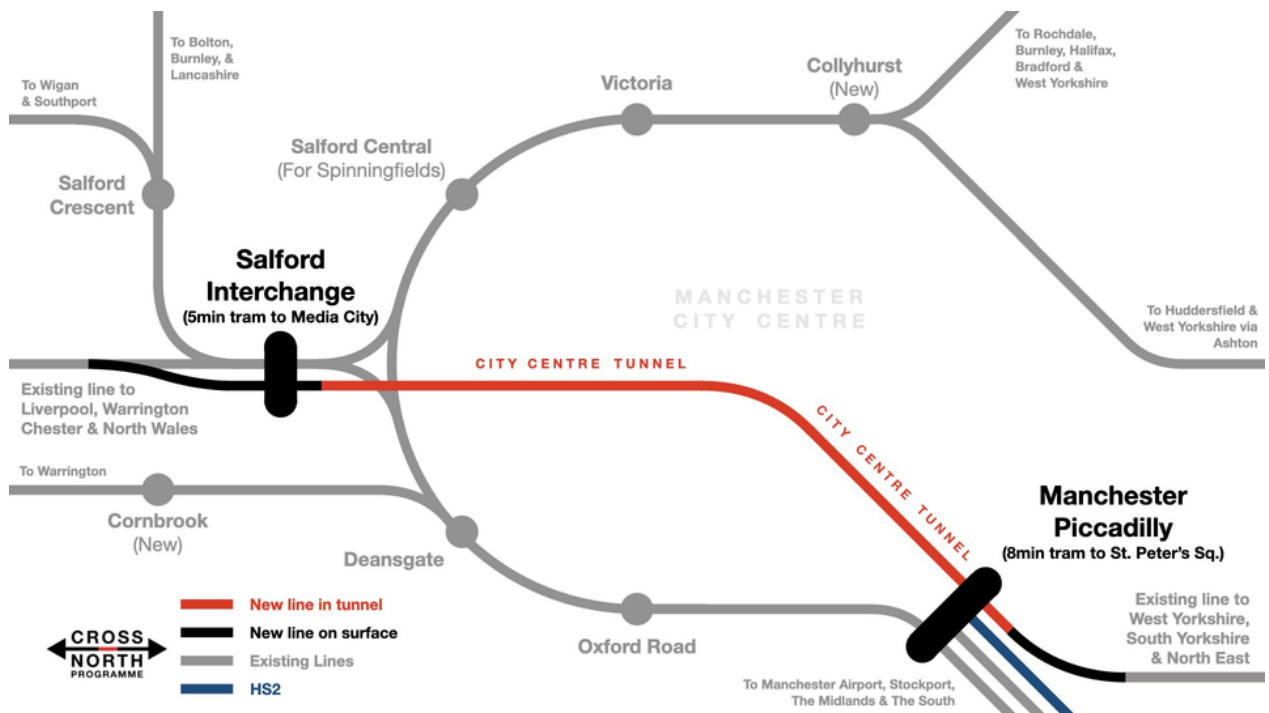
There are varying definitions for 'high-speed rail'. For the purpose of this vision, we are not specifying particular linespeeds, as they may differ between lines (HS2 is planned at 225mph, whilst Northern Powerhouse Rail (NPR) would likely be delivered at 125mph, for example). We are focusing on the overall shape of the network, rather than the technical specifications of individual lines.

## Completing a core strategic network

We believe the completion of a core strategic network must be made a priority for completion by 2050. This includes extending dedicated high-speed infrastructure from Birmingham to Manchester and Liverpool, and from Birmingham, through the East Midlands, to Leeds and York. It also includes Northern Powerhouse Rail, which, when completed, should be fully new-build infrastructure from Liverpool, through Manchester, to Leeds and York, with further upgrades east and north to Hull and Newcastle.

Plans for London Euston must revert to the original proposal of 11 platforms (which could be delivered in phases), in order to ensure the capacity needed for the core network and for future expansion.

We endorse the CrossNorth Programme (CNP) proposal (put forward by North on Track), for Northern Powerhouse Rail to run through central Manchester through a purpose-built east-west tunnel, separate from (previously planned) HS2 infrastructure. This would include underground stations at Manchester Piccadilly and Salford Interchange, enabling better connections to suburbs and nearby towns, reducing pressure on the Castlefield Corridor and enabling more efficient metro-style services on the existing network around Manchester. This new tunnel could be delivered ahead of new infrastructure west to Liverpool and east to Leeds, delivering significant capacity and reliability benefits sooner, whilst tying into a wider new network in the future.



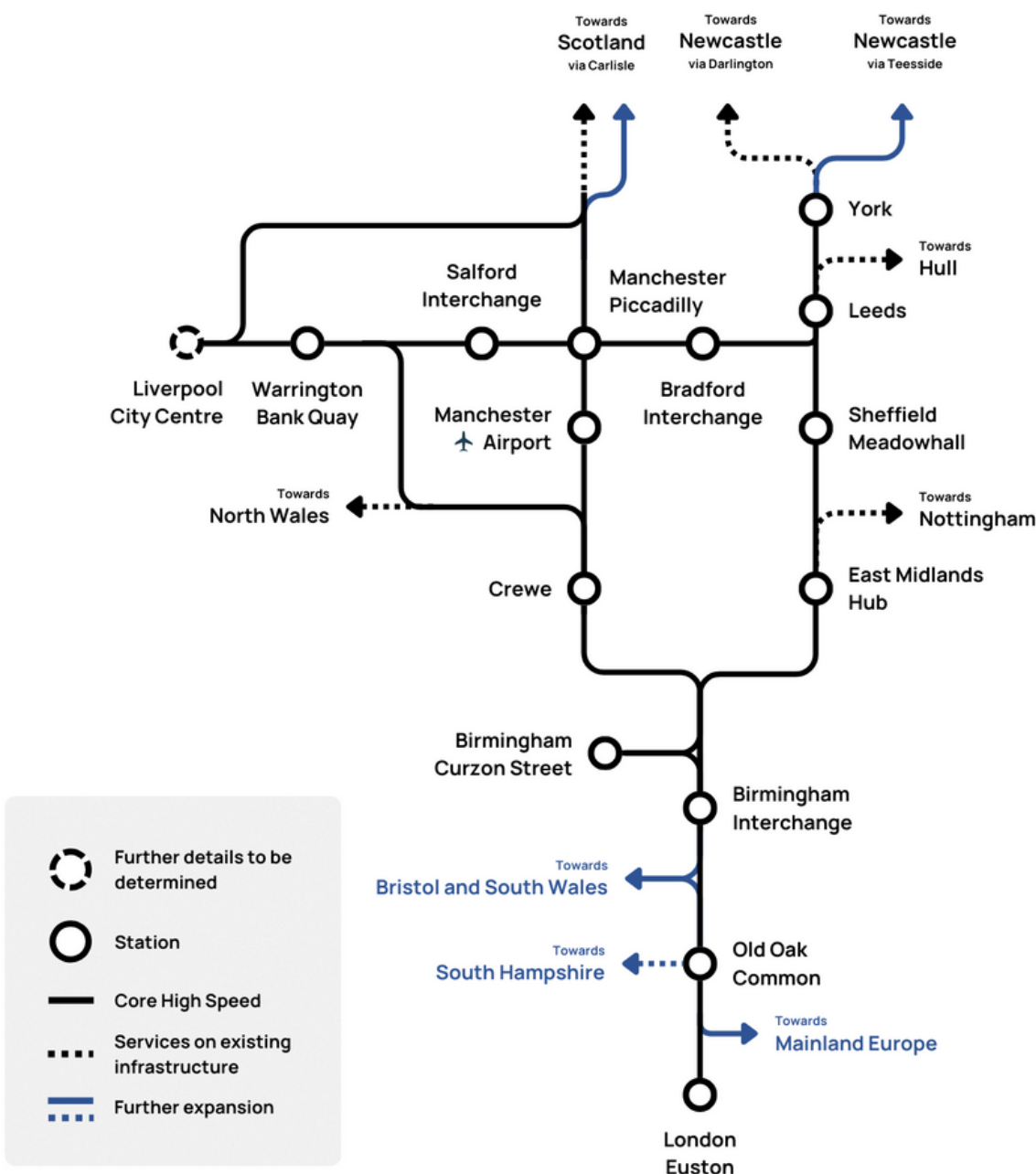
Northern Powerhouse Rail should be built with segregated, underground stations at Bradford and Leeds, freeing up space in Leeds station and ensuring maximum reliability.



We believe plans for terminus stations for HS2 in Manchester and Leeds should be revisited, with further studies into the possibility of extending dedicated high-speed infrastructure directly from Manchester further northwest, and from Leeds further northeast. This could involve an underground high-speed station at Manchester Piccadilly (separate to the east-west CrossNorth station), for services running between London and the Scottish Central Belt.

The high-speed line from Birmingham to Leeds should run via East Midlands Hub (Toton) and Sheffield Meadowhall, and should also offer high-speed services from Birmingham to Nottingham and Hull.

Direct high-speed services should also be provided from London to North Wales (via the high-speed line to Crewe), improving connectivity between England, Wales and Ireland.



## Further Expansion

We believe Great Britain needs a long-term vision for further expansion of high-speed rail, potentially beyond 2050, and that the groundwork for this future vision should be built into the design of our core network (as detailed above).

We believe dedicated high-speed infrastructure should extend north from Crewe/Manchester to Glasgow and Edinburgh (potentially via an underground station at Manchester Piccadilly, as detailed above). We believe a second route is needed between York and Newcastle via Teesside, which may be delivered via a mix of high-speed, upgraded or reinstated infrastructure (potentially including part of the Leamside Line).

We call for work to explore the viability of new high-speed rail from Birmingham to Bristol and Cardiff, potentially connecting to the HS2 line at a delta junction south of Birmingham Interchange, enabling fast direct services from Manchester and Leeds to Bristol and Cardiff.

Work should be undertaken to explore the viability of direct connections from Old Oak Common to the South Hampshire Conurbation (including Southampton and Bournemouth), allowing passengers travelling from the North and Midlands to make use of high-speed trains without having to change across Central London.

Linking the core network to HS1 could enable direct services from mainland Europe to cities including Birmingham, Manchester, Leeds and Glasgow. Further work is need to identify the right infrastructural solution and border security regime to enable this.





# Enabling universal access to the rail network

## Our core proposals

- Every rail service in England, Wales and Scotland should support level boarding by 2050, and as a result reduce dwell times at all stations and increase the number of people that can use public transport.
- Level boarding should be provided by bringing station platforms with over 10,000 passengers per year (pre-COVID) in England, Wales and Scotland to the government standard for height, which currently stands at 915mm, with a 730mm offset (source: [RSSB](#)).
- Along with this, all new rolling stock in England, Wales and Scotland should be low-floor, to match new platform heights.
- Every railway station with usage over 10,000 per year should be step-free from street to train, for example, via a lift or ramp, by 2050.

## Case Study: Class 777s

See below – the new Class 777s, dubbed some of the most accessible trains in the country, with level boarding at every station and generous space for wheelchairs.







# Rethinking control of bus services

## Introducing the Buses Commissioner for Great Britain

We propose a new Central Government quango, operating underneath the Department for Transport, known as The Buses Commissioner for Great Britain.

The agency would be responsible for:

- Working with Transport Authorities to deliver the appropriate funding to run bus services or franchise out to run bus services.
- Supporting the appointment or removal of bus operators in Transport Authorities where bus services are not running effectively.

The Buses Commissioner for Great Britain will also be responsible for ensuring neighbouring bus companies and Transport Authorities work together to integrate services, and potentially run services partially into their neighbouring areas.

The Commissioner will be controlled by civil servants with experience in bus operations – not politicians who will be naturally biased to their party and the area in which they represent.

### Control of services in urban areas

In urban areas, all bus services should be operated under a franchise agreement with an existing bus company, in an agreement with the Transport Authority.

Alternatively, the Transport Authority can run bus services themselves with extra funding from the Department for Transport and The Buses Commissioner for Great Britain. For example, Nottingham City Transport, funded and owned by Nottingham City Council.

### Control of services in rural areas

Bus franchising in rural areas may not be so attractive for bus companies to bid for. That's why Transport Authorities may run bus services themselves. Some TAs in rural areas may serve large areas with varying urban/rural splits. That's why TAs can choose to allocate specific areas within their operations to be controlled by a franchise.



# Putting bus services back on the map

## Minimum bus frequency levels

By 2050, buses should operate at the following frequencies:

- For areas with a population of over 500, a minimum of 0.25bph should operate to a nearby urban settlement.
- For areas with a population of over 1,000, a minimum of 0.5bph should operate to a nearby urban settlement.
- For areas with a population of over 2,000, a minimum of 1bph should operate to a nearby urban settlement.
- For areas with a population of over 4,000, a minimum of 2bph should operate to a nearby urban settlement.

In urban areas, bus frequencies should generally be higher. This will be controlled by Transport Authorities and the newly formed Buses Commissioner for Great Britain.

We define a 'nearby urban settlement' as a town or city with a population over 25,000 and with a railway station.

Bus stops in urban areas and main stops in rural areas should have modern passenger information systems installed, including audio and visual, which will show next bus departures, rerouting of specific services, and potential delays.

## Serving smaller settlements

For areas with populations under 500, under our plans, they will not necessarily be served by a scheduled bus service.

We support research into new innovative transport solutions to serve these smaller settlements. This could include emerging technologies like Demand-Responsive Transport.



## Electrifying the bus network

By 2050, all rural buses operating in England, Wales and Scotland should be electric, or a diesel/electric hybrid. By 2050, all urban buses operating in England, Wales and Scotland should be electric.

Cities should consider overhead trolleybus infrastructure on the densest, most frequent corridors. These are a proven technology routinely used in other countries. These networks could use battery buses which charge themselves from wired sections before continuing on branches using battery power.

More research is needed into the safety and efficiency of hydrogen buses before they are considered for wider rollout. We believe a combination of trolley and battery buses is likely to be the best solution for decarbonisation.

## Integrating buses into the wider network

One role of the Buses Commissioner will be ensuring buses are timetabled to enable seamless connections. We propose the following principles to ensure buses are integrated with each other, and with rail, metro and tram systems:

- Easy physical interchanges (with minimal walking time, step-free access and good signposting)
- Integrating timetabling with rail
- Holding bus connections for late-running trains or other buses where feasible, and informing passengers when connections will be held







# Building tram and metro networks

## Expansion of existing systems

Within England, Wales and Scotland, tram and metro systems operate in London (Croydon), Birmingham, Manchester, Sheffield, Nottingham, Newcastle-upon-Tyne, Blackpool, Glasgow and Edinburgh.

However, many of these systems, most notably Glasgow, have small networks which result in a lesser effect of modal shift from motor vehicles.

Enroute plans to use the following benchmarks to identify where tram and metro systems need expansion. In cities with populations over 200,000:

- 85% of the population must be within 400m of a bus stop with regular service (3bph minimum)
- 75% of the population must be within 600m of a regularly served mass transit network stop (for example, a tram stop, national rail station, or underground metro stop)

## Introduction of brand-new systems

We believe that all cities with a population over 200,000 should have their own tram or metro/underground service. The size and style of the system should depend on the geography and economy of the local area and may extend outwards to serve other smaller/larger towns and cities.

We would support proposals in England, Wales and Scotland for new tram or metro/underground systems in the following areas:

- Brighton & Hove, Bristol, Cardiff, Derby, Glasgow, Hull, Leicester, Luton, Medway (Kent), Milton Keynes, Newport, Northampton, Plymouth, Reading, Southampton & Portsmouth, Stoke-on-Trent, and West Yorkshire.

## Mode innovation

Enroute generally supports the innovation of transport modes. These new forms of transport, while interesting and worth investigating/funding, may not always turn out to be successful (widely known as 'Gadgetbahns'). We do not support the development of 'Gadgetbahns' based on unfeasible technologies, where proven technological solutions are available.

Enroute supports further investment in the development schemes for rural and urban Very Light Rail as well as tram-trains.

## Learning from the success of Crossrail

Crossrail and Thameslink in London have been extremely successful in attracting passengers out of their cars and onto new fancy trains. We would like to duplicate this success across England, Wales and Scotland, which is why we propose a new Central Government commission known as the Crossrail Britain Commission.

The commission would identify where new Crossrail-style schemes would be most beneficial for providing new cross-city connectivity and capacity, in cities such as Birmingham, Bristol or Leeds, and additional networks in London. Such assessments would take into account the capacity of existing infrastructure, other possible improvements and value-for money.

We believe such schemes would benefit from strong and consistent branding to build the image of a coherent network; for example, the incorporation of Thameslink into the TfL/Crossrail brand family.

We also support the delivery of Crossrail 2 in London, as proposed.





# Introducing Active Travel Corridors (ATCs)

## Introducing Active Travel Corridors

Active Travel Corridors, or ATCs, should be introduced in areas of dense population, high crime, high poverty, high car usage, and proportionately low bike usage.

ATCs should be funded in part by Transport Authorities, Local Authorities, local businesses and Central Government (the latter dependant on the scale of the scheme). ATCs will include both a cycleway and pedestrian walkway, with the ability to include a tram/busway or running track/route.

These new ATCs will rejuvenate and energise areas (literally), and support development and growth, as well as encourage people to switch from cars to walking and cycling. Existing bus and cycle lanes, as well as roads, can also be converted into Active Travel Corridors.

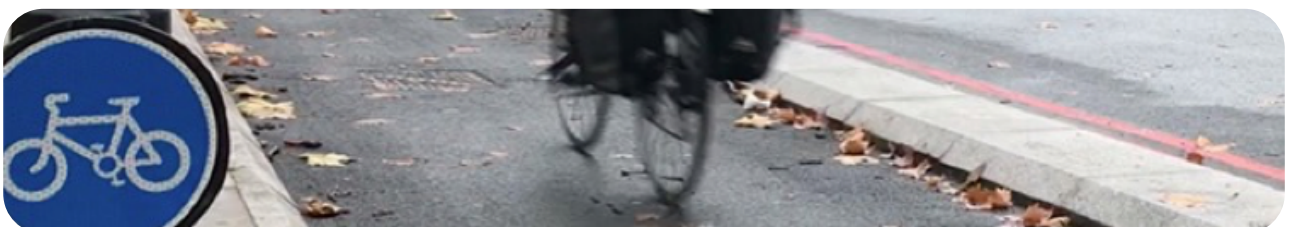
## What about cycle hire and e-scooters?

Cycle and e-scooter hire schemes should continue to roll-out in urban areas. The minimum age limit for these schemes (which is currently 18) should be reviewed – keeping in mind that limited youth ridership could be the reasoning for low patronage in some areas. Enroute proposes that:

- Age limits for cycle hire schemes is decreased to 14 with an accompanying adult, and 16 without.
- Age limits for e-scooters is decreased to 16.

E-scooter services should be introduced in more urban areas, in partnership with Transport Authorities.

Private e-scooters should be legalised on public rights of way (PRoW), allowing people to commute to work or go shopping without requiring a car or bike. This policy is subject to relevant legislative framework, which ensures safe ridership and responsible usage.





# Driving Sustainability, Empowering Communities

<https://enroutecic.com>

