

London to Scotland East Route Strategy

March 2017



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Route strategies

The division of routes for the programme of route strategies on the Strategic Road Network

- London to Scotland East
- London Orbital and M23 to Gatwick
- London to Scotland West
- London to Wales
- Felixstowe to Midlands
- Solent to Midlands
- M25 to Solent (A3 and M3)
- Kent Corridor to M25 (M2 and M20)
- South Coast Central
- Birmingham to Exeter
- South West Peninsula
- London to Leeds (East)
- East of England
- South Pennines
- North Pennines
- Midlands to Wales and Gloucestershire
- North and East Midlands
- South Midlands



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1. Introduction

The modernisation of England's motorways and major A roads, also known as the strategic road network (SRN), is making a vital contribution to economic wellbeing and growth. This Route Strategy – one of 18 such reports – provides a statement on the current performance of, and perceived pressures on, the London to Scotland East route to inform the planning of future investment.

The SRN supports national and local economic prosperity by:

- linking together major cities
- connecting with extensive local road networks
- providing links to major ports, airports, and rail terminals
- enabling good access to regions and cross-border routes between the nations of the United Kingdom

The establishment of Highways England through the Infrastructure Act 2015 has changed fundamentally the way we plan investment in the network. Funding is now determined every 5 years, in the [Road Investment Strategy \(RIS\)](#), which is set by Government. We are currently delivering on the commitments that were set out in the first RIS covering 2015 to 2020, which are already making a difference for road users across the network.

At the same time, we are working closely with the other 3 bodies with statutory responsibility for the RIS – Department for Transport, Office of Rail and Road and Transport Focus – on preparing for the next RIS (RIS2) for the period after 2020.





Purpose of Route Strategies

Route Strategies provide a high level view of the current performance of the SRN as well as issues perceived by our stakeholders that affect the network. They are one of the key components of research required for developing the RIS. This suite of Route Strategies builds upon the analysis underpinning the first set of Route Strategies undertaken between 2013 to 2015, which together provided the first comprehensive assessment of the entire network. This time the Route Strategies aim to:

- bring together information from key partners, motorists, local communities, construction partners, environmental groups and across the business
- achieve a better understanding of the condition and performance of our roads, and local and regional aspirations
- shape our investment priorities to improve the service for road users and support a growing economy
- help inform the next RIS¹

Strategic themes

The Government’s vision for transforming the SRN is described in the [Road Investment Strategy post 2020: Planning Ahead](#) document available on www.gov.uk. This vision builds on the 5 broad aims published in the [Road Investment Strategy for 2015-2020](#): economy; network capability; integration; safety; and the environment. It also builds on Highways England’s 5 strategic outcomes (see Figures 1.1 and 1.2). Using the evidence from this and the other 17 Route Strategies, we will develop proposals that can help bring the Government’s vision for roads to life.

RIS1 Strategic Vision as reiterated in “RIS Post 2020: Planning ahead”



Figure 1.1 - RIS1 strategic vision

Highways England Strategic Business Plan’s key outcomes

- Supporting economic growth** through a modernised and reliable network that reduces delays, creates jobs and helps business compete and opens up new areas for development
- More free-flowing network** where routine delays are more infrequent, and where journeys are safer and more reliable
- Safe and serviceable network** where no one should be harmed when travelling or working on the network
- Improved environment** where the impact of our activities is further reduced, ensuring a long-term and sustainable benefit to the environment
- More accessible and integrated network** that gives people the freedom to choose their mode of transport and enable safe movement across and alongside the network

Figure 1.2 - Highways England strategic outcomes

¹See Chapter 6 for more information on the next RIS



Stakeholder engagement

Building on the engagement we started in the first round of Route Strategies, we have continued to work closely with a wide range of stakeholders to enhance our understanding of the strategic road network, and identify where users and other stakeholders feel investment is needed.

We used a number of methods to collate information. For example, we launched an online tool for customers and stakeholders over the summer of 2016 to inform us of the issues and challenges on our roads that affected them. As well as information collated from a range of people within Highways England, more than 300 different stakeholder organisations provided important feedback on the network during the evidence collection period. There were also more than 370 individual members of the public who contributed information. In total, around 2,700 individual points were raised by external stakeholders.

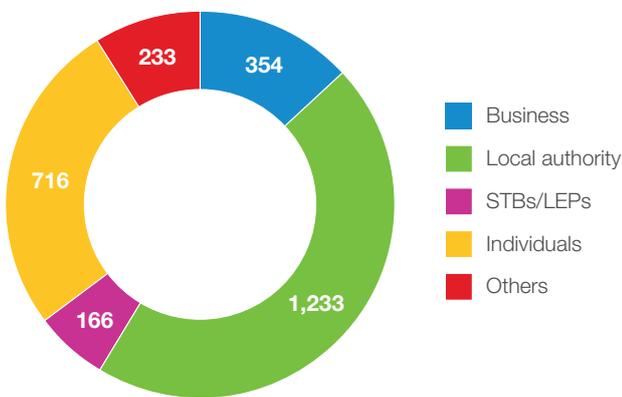


Figure 1.3 - External stakeholder responses

We are increasingly working with subnational transport bodies (STBs), including Midlands Connect, England’s Economic Heartland and Transport for the North, so we can ensure that their developing strategies and planning are integrated into our thinking (and vice versa).

Transport Focus

We commissioned Transport Focus, the road user watchdog, to undertake research on road user priorities. More than 4,400 interviews were undertaken with drivers across the SRN. Figure 1.4 below shows the breakdown by user type and purpose.

Completed interviews		
	3,487	79%
	322	7%
	407	9%
	206	5%
Commuting	501	11%
Business	1,367	31%
Leisure	2,457	56%

Figure 1.4 - Driver sample breakdown

250 fleet managers from a mix of industries, size and regions

The research found that the users of the London to Scotland East route rated the motorway and A road sections of the route quite differently, with only 54% of users rating their experience of the motorway sections as either extremely good or fairly good, but 76% of users giving the same rating to the A road sections. As Table 1.1 shows, 40% of users experienced problems using the route, with roadworks and then congestion cited as the two main causes.

The full report has been published on Transport Focus’s website www.transportfocus.org.uk/research-publications/publications/road-to-the-future.

We will continue to work closely with Transport Focus to understand customer priorities to ensure that the next RIS reflects their needs.

Experienced problems %	Route impacted	Largest problem	Second largest problem
61%	M25 to Solent		
58%	London Orbital and M23 to Gatwick		
50%	South Coast Central		
46%	Solent to Midlands		
44%	East of England		
43%	Birmingham to Exeter		
41%	South West Peninsula		
41%	North and East Midlands		
40%	London to Scotland East		
40%	South Pennines		
39%	Kent Corridor to M25		
37%	London to Scotland West		
32%	Midlands to Wales and Gloucestershire		 
30%	Felixstowe to Midlands		
30%	South Midlands		
28%	London to Leeds East		
27%	London to Wales		
17%	North Pennines		

 Congestion/traffic queuing
  Roadworks
  Delays caused by accidents/roads closed
  Roads busy/high volume of traffic

Table 1.1 - Transport Focus summary

2. The route

The London to Scotland East route provides a north–south strategic link between London and Scotland through the east of England, serving many key towns and conurbations along the route, including Milton Keynes, Northampton, Leicester, Nottingham, Derby, Sheffield, Leeds, Tees Valley and Tyne and Wear. The route is of major local, regional, national and international significance, forming part of the Trans-European Transport Network.

The route runs the length of the M1 from the M25 near London to Leeds, where it follows the A1 and A1(M) to the border with Scotland. It also includes:

- the A5 running in parallel to the M1 from junction 9 at Harpenden to where it joins the M1 at junction 18 near Rugby²
- the A168 and A19 from Dishforth to the north of Newcastle/Gateshead area, where there are the supplementary links A690, A194(M), A184 which serve the Tyne and Wear conurbation
- links within the Tees Valley area via the A66(M), A66, A174 and A1053

The route is made up of a mixture of road standards, ranging from 4-lane motorway on the M1 to all-purpose single carriageway sections on the A1 and A5. Smart motorways are well established on the route, including sections of hard shoulder running and all lane running. Ongoing investment will see the roll-out of further smart motorways schemes along the M1.

The route serves a number of key national and international gateways and freight terminals, including Luton Airport, Daventry Rail Freight Interchange, Magna Park, East Midlands Airport, Newcastle Airport, the Port of Tyne and Teesport. Further large freight developments are also planned in the corridor.



Figure 2.1 - Route overview map

²Once the new A5-M1 link is completed in spring 2017, the A5 to the south of the link through Dunstable to M1 junction 9 will be detrunked

The route caters for a high proportion of long-distance commercial journeys, due to its strategic nature and the number of distribution centres along its length. However in a number of areas, particularly around Milton Keynes, south of Leeds, in Tees Valley and around Newcastle and Gateshead, a significant proportion of the traffic is locally based, with drivers making short trips. The interaction between these long and short distance trips often results in congestion, particularly in peak hours. The busiest sections of the route are between London and Luton.

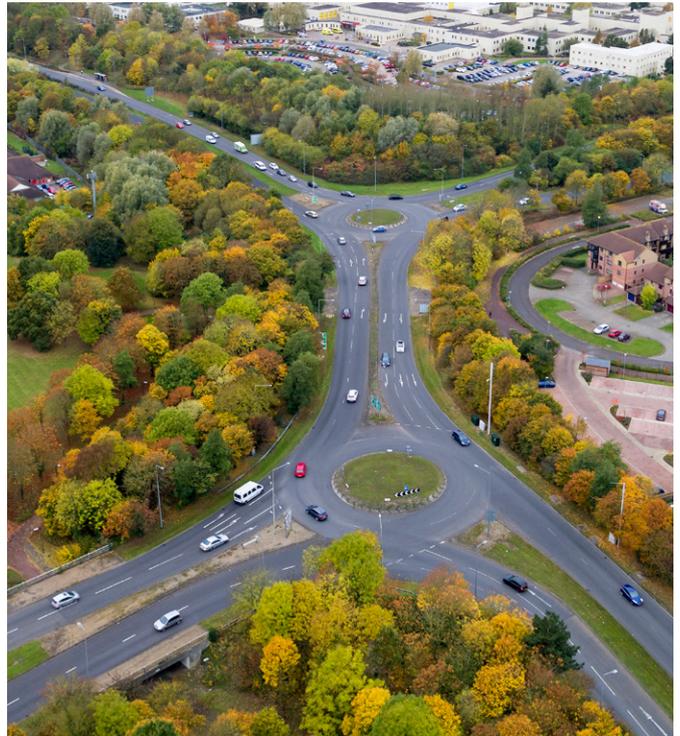
Additionally, and unusually for the SRN, the A5 through Dunstable and Towcester also functions as the town's high street, which means it is used by all types of vehicles and features signal-controlled junctions and pedestrian crossings.

The proportion of freight across the route is generally high owing to its strategic economic role. The M1, A1 and parts of the A19 are part of the Trans-European Transport Network which is considered vital for trans-European travel.

The route has a significant proportion of long-distance journeys, which are for commercial and leisure purposes. As a major north–south link, the route plays a very important role in supporting the retail, tourism and leisure industries. There are major shopping centres on the route at Leicester's Fosse Shopping Park, Meadowhall in Sheffield and Metrocentre Gateshead. It serves the Peak District, North Yorks Moors, Yorkshire Dales and Northumberland National Parks. The A1 and A19 cross the Hadrian's Wall alignment in the Newcastle area. In addition, the British Grand Prix at Silverstone, Northamptonshire, has a significant impact on the route in July.

There are 4 significant sections of the route maintained and operated on behalf of Highways England under the private finance initiative by design, build, finance and operate (DBFO) companies. These are the:

- M1 A1 Link Road (Lofthouse to Bramham)
- A1 Darrington to Dishforth
- A19 and A168 from Dishforth to the Tyne Tunnel, including the A174, A1053
- A66 from A19 to Teesside Park



The M1, A1 and parts of the A19 are part of the Trans-European Core Network which is considered vital for trans-European travel.



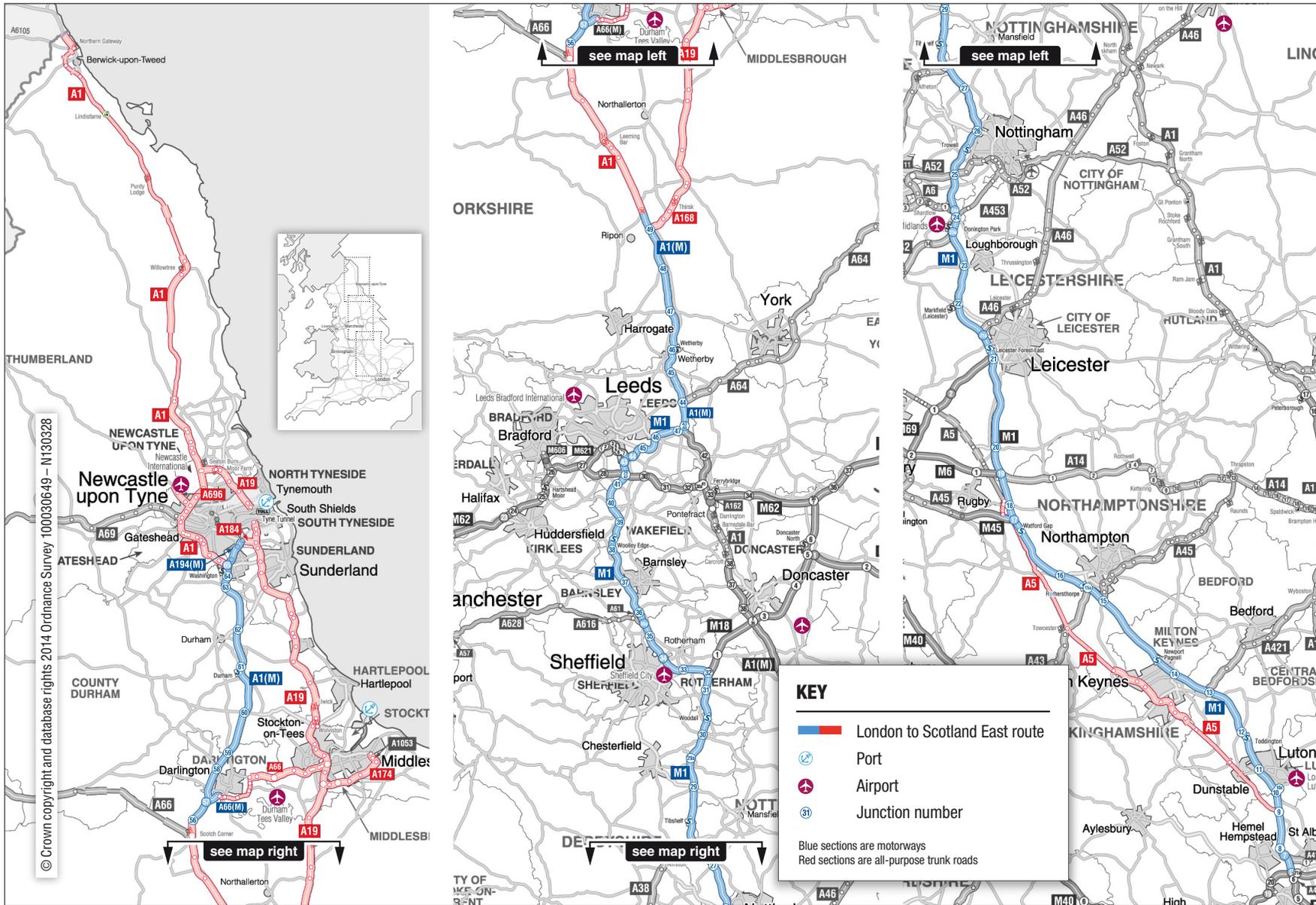


Figure 2.2 - Route Strategy overview map



3. Current constraints and challenges

This chapter outlines the emerging issues raised by stakeholders and is supplemented by Highways England information.

The following text and figures within this chapter provide a summary of the information collected and applied to our strategic themes.



A safe and serviceable network

There are concentrations of safety issues at various points along the route as shown in figures 3.1 to 3.4. The combination of congestion and the short distances between consecutive junctions contributes to many safety issues along sections of the route.

Several junctions on the M1 have high accident rates, including junctions 6a, 15a, 21 and 28. Queuing traffic may at times also pose a safety risk in terms of rear shunts or queuing on the main carriageway.

The section of A5 between Old Stratford to Towcester is single carriageway and also acts as a high street through the centre of Towcester. This poses a safety risk as heavy traffic volumes share road space with pedestrians, cyclists and parked cars.

Parts of the route are single carriageway, which tends to restrict capacity and can lead to drivers taking risks when overtaking, particularly when travelling behind slow-moving traffic. There are single carriageway sections on the A1 between Morpeth and Berwick, parts of the A66 in Tees Valley, and the majority of the A5.

On the A1/A1(M) between Hook Moor and Scotch Corner there is a lack of convenient HGV parking, leading to unsuitable parking on local roads.



More free-flowing network

Congestion is an issue at a number of locations throughout the route, particularly where there is a mixture of long- and short-distance traffic near urban areas. For instance, the London commuter belt generates congestion on the M1 in Hertfordshire, the Leeds conurbation creates congestion on the M1, the Tyne and Wear conurbation on the A1 and A19 and the Tees Valley conurbation on the A66 and A19.

In order to resolve congestion on the mainline, smart motorway coverage is either already in operation or planned to be introduced along sections of the M1. In the north, smart motorway coverage is less comprehensive. While this technology has served to relieve mainline congestion, issues with queuing remain at a number of junctions along the route.

The second section of the major projects upgrade of the A1(M) route to motorway standard between Leeming and Barton will be completed in 2017. This is the second section of a scheme to provide continuous motorway-standard carriageway between the north and south of the country.

In Tyne and Wear, A1 mainline widening schemes have partly been completed with more sections committed.

There are a number of junctions along the route where traffic exceeds the capacity designed at the time of construction because of unexpected traffic growth.

These junctions are primarily near large urban centres such as the M1 junctions between London and Milton Keynes, junctions near Nottingham, Sheffield and Leeds.

Congestion problems also arise where the SRN meets local roads, for instance, in the Sheffield area, particularly around Meadowhall and in Tees Valley, where incidents on the local or strategic road networks can lead to rapid-flow breakdown and area-wide congestion.



Supporting economic growth

The route is a critical strategic link between the South East, East Midlands, Yorkshire and North East. It is vital to the pan-regional economy as well as providing access to many major urban areas. As a key spine through the country, the route plays a major role in supporting the national economy and will remain a key driver in supporting future economic growth.

The targets for economic growth being promoted by the Northern Powerhouse, the Midlands Engine for Growth and England's Economic Heartland will increase the case for improved and more reliable connectivity between the economic hubs and their surrounding regions.

Congestion at a number of points on the network is considered to restrict economic growth. A lack of capacity on the A19, A174 and A66 corridor near Middlesbrough is considered to be restricting local housing growth, as is the A19 to the north of Newcastle.

Although the exact alignment of HS2 high-speed rail has not yet been determined, the route will provide a north-south link between London and Leeds that traverses the same regions as this route. It may run parallel to the SRN between Birmingham and Leeds at some locations and there is also potential for stations to be located close to junctions. Highways England will monitor closely the potential impacts of the HS2 plans as they move closer to implementation.

The strategic economic growth plan (*The Road to Growth*) has identified a number of economic opportunity areas – potential business hotspots – near the route, which we look at in the next chapter. These are likely to generate additional development traffic at a number of locations, some of which are already congested.



An improved environment

There are a number of environmental challenges at different locations across the length of the route.

Air quality is a significant issue, for the majority of the M1 between Sheffield and Leeds near Blaby and Lutterworth and on the A5 in Towcester.

A significant proportion of the route between Sheffield and Leeds is a designated Noise Important Area because of heavy traffic flows on the M1 and densely populated surrounding areas. The A19 near Peterlee and west of Sunderland are also noise sensitive areas, as are multiple sections of the A1 bypass to the west of Gateshead and Newcastle.

Flooding is a notable issue on various points of the route including on the M1 south of junction 38 in Yorkshire. Other environmental issues raised by stakeholders across this route include water quality and habitat protection.



A more accessible and integrated network

The evidence base highlighted a number of locations where there was a lack of technology which meant that drivers were unable to make informed route choices.

A lack of an east-west strategic link to the south of the M62 results in inappropriate HGV routing between M1 junction 39 and M62 junction 25.

Poor cycle accessibility and difficulties for pedestrians contribute to severance issues either side of the A1 over the single carriageway sections north of Morpeth.

London to Scotland East - Route Strategy: Map 1 of 6

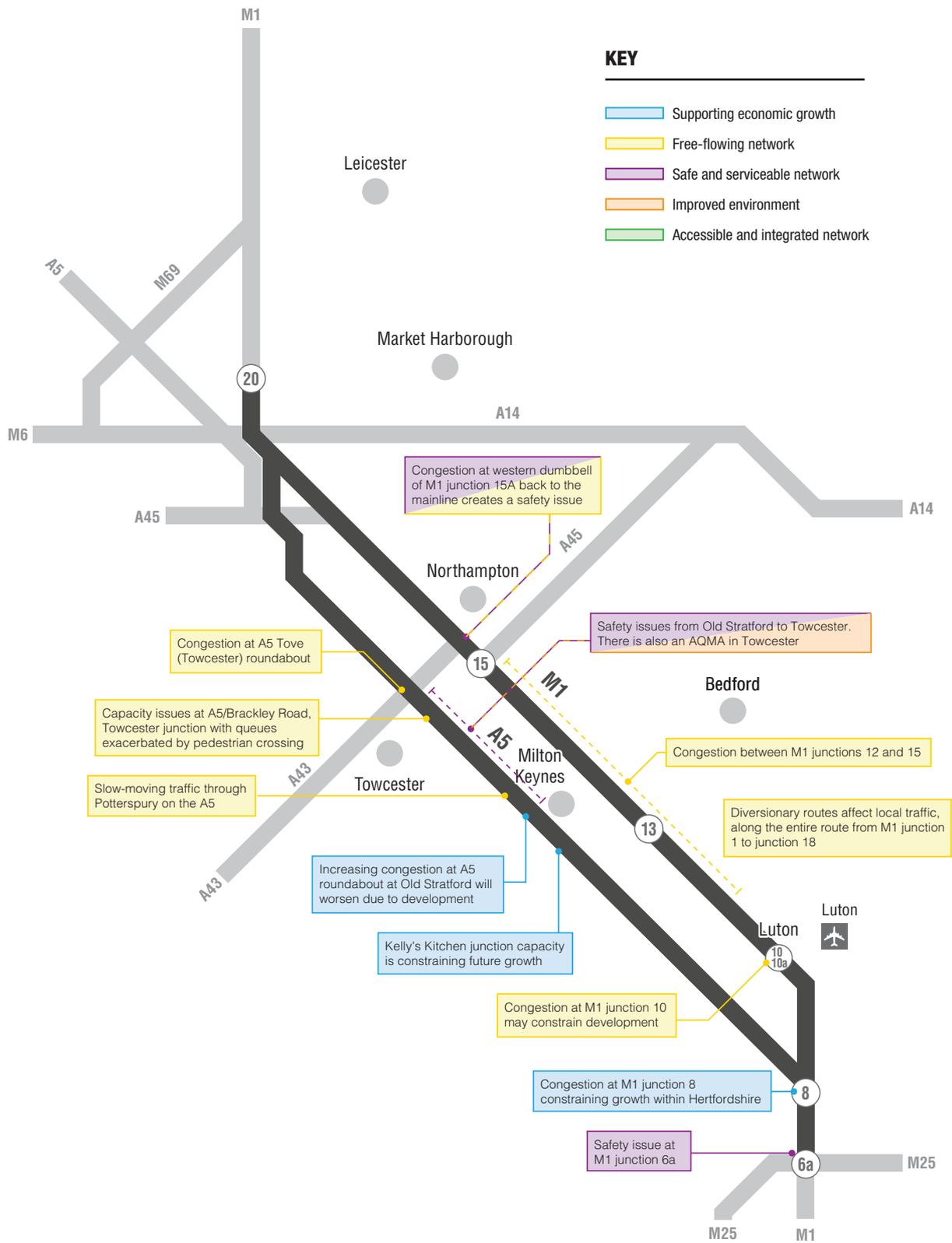


Figure 3.1 - Key challenges for the route

London to Scotland East - Route Strategy: Map 2 of 6

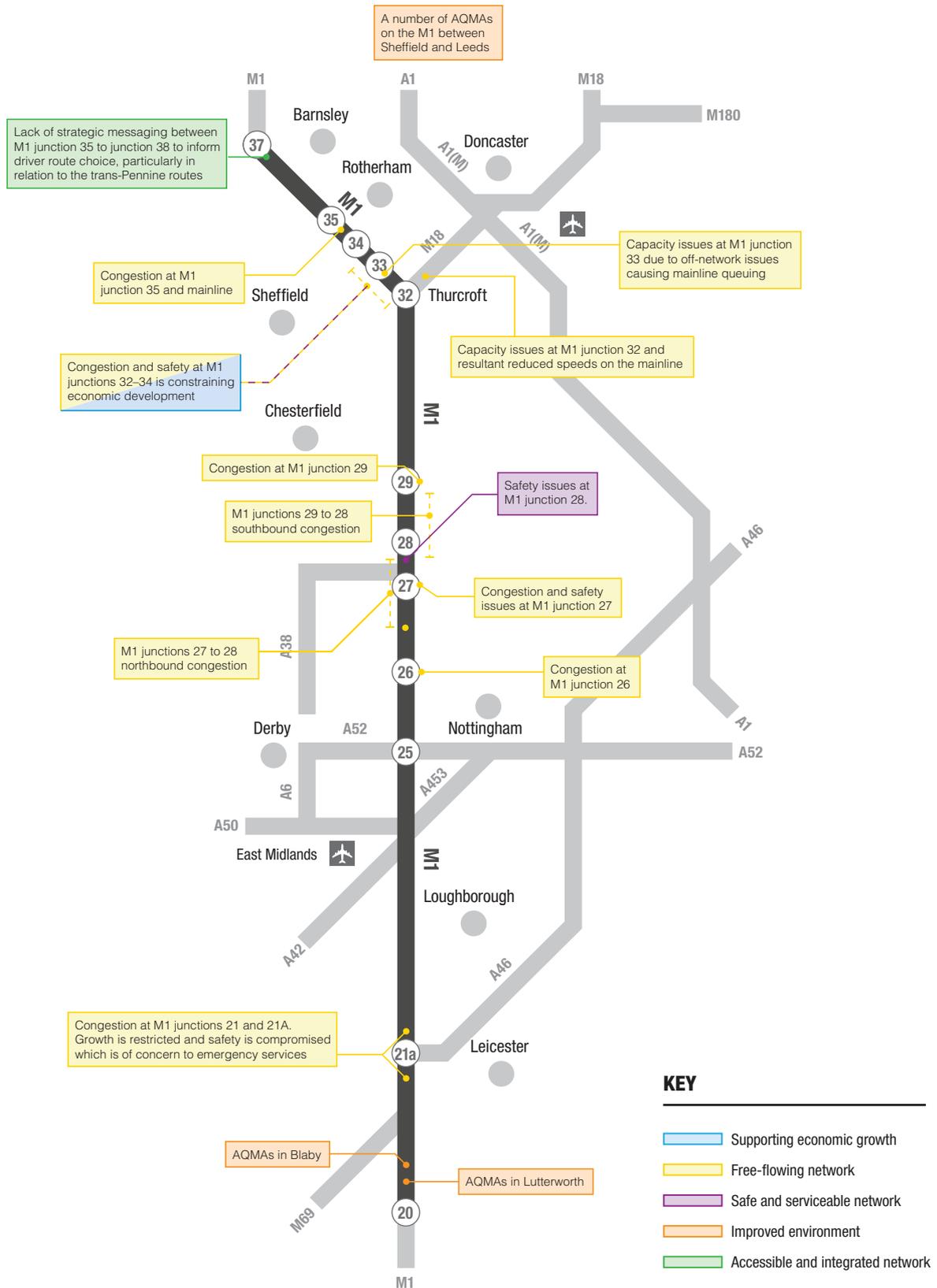


Figure 3.2 - Key challenges for the route

London to Scotland East - Route Strategy: Map 3 of 6

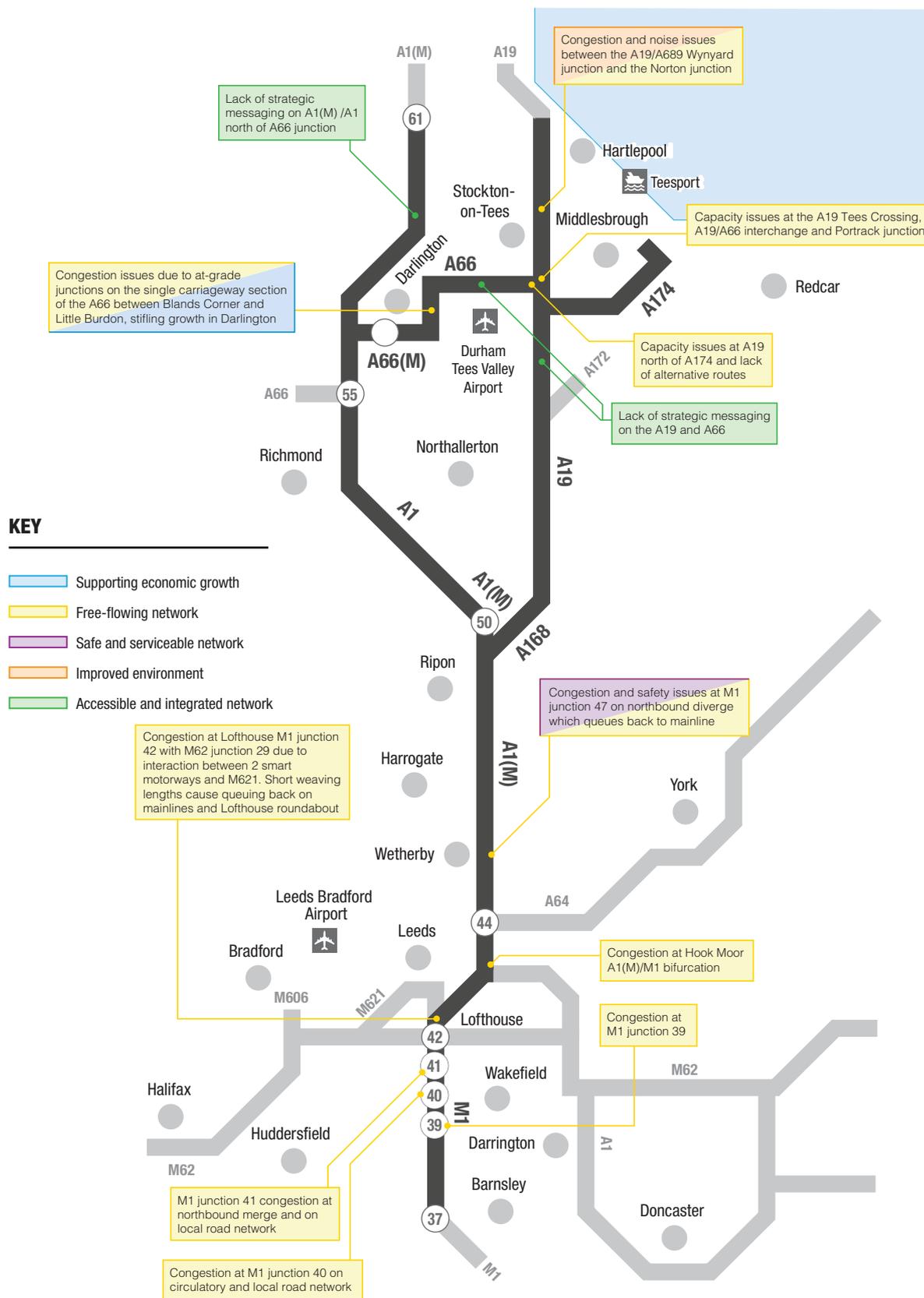


Figure 3.3a - Key challenges for the route

London to Scotland East - Route Strategy: Map 4 of 6

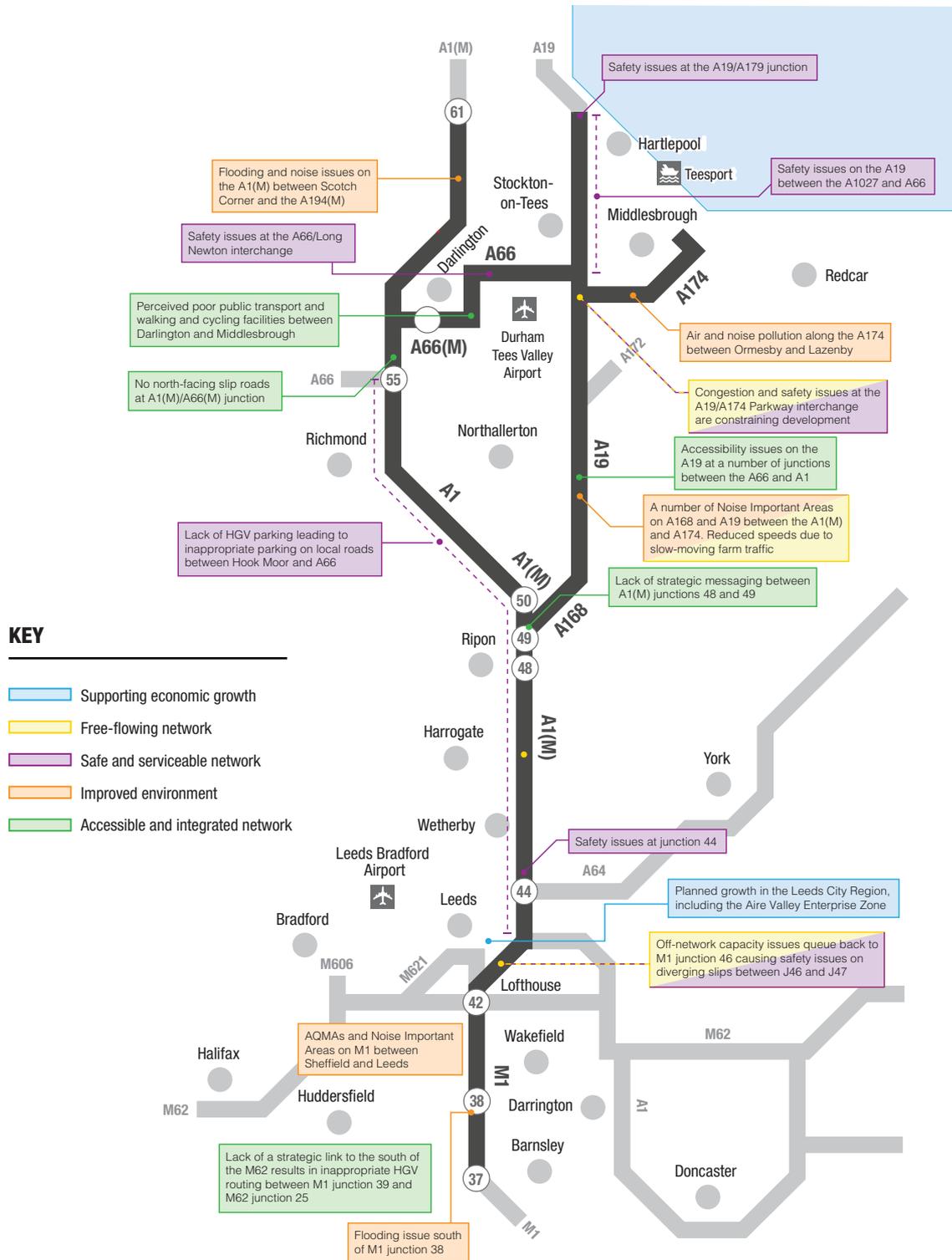


Figure 3.3b - Key challenges for the route

London to Scotland East - Route Strategy: Map 5 of 6

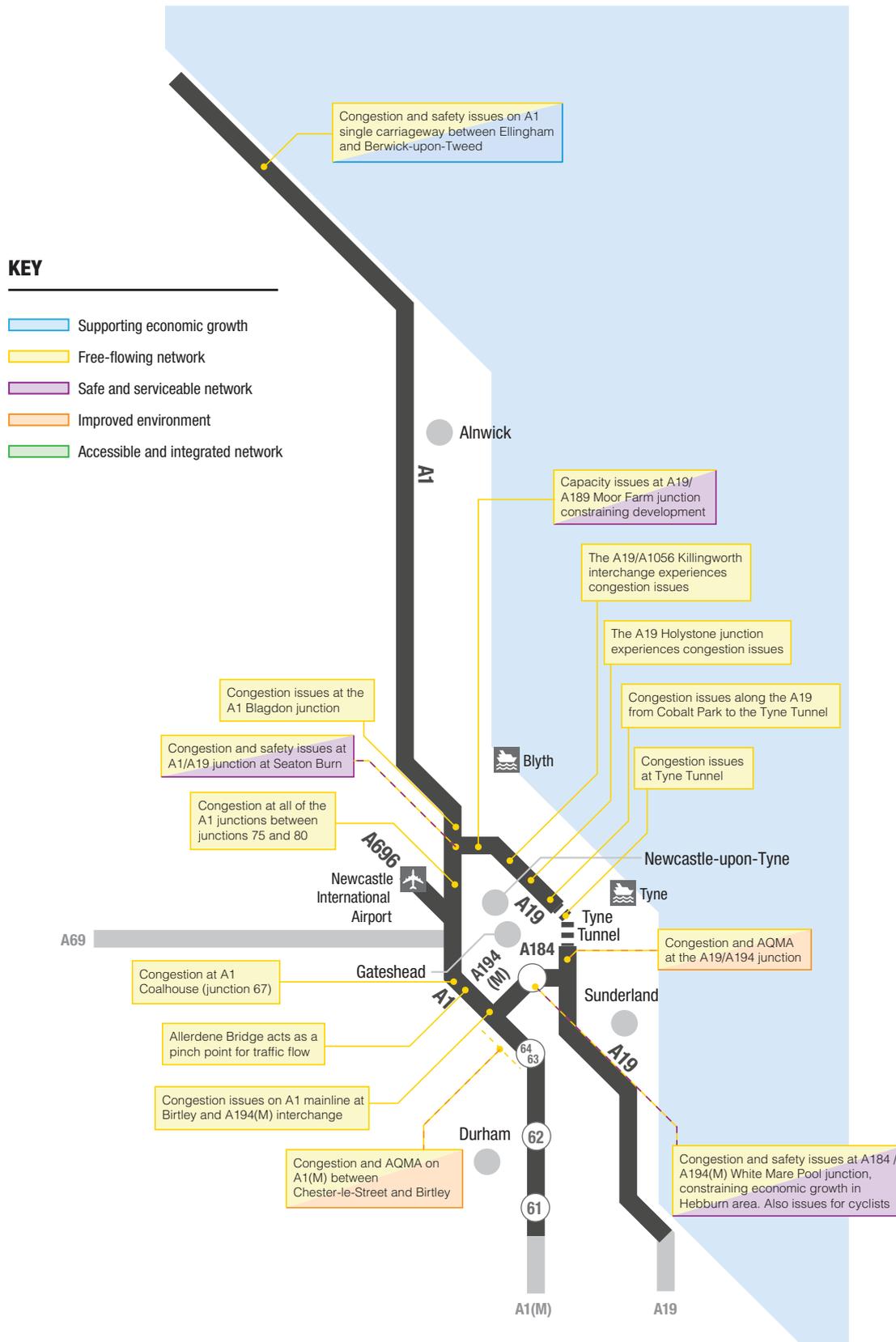


Figure 3.4a - Key challenges for the route

Diversiory Routes

An essential facet of a resilient road network is the ability to effectively divert traffic away from closed carriageways in the event of an unplanned incident. The map indicates the diversionary routes that currently exist on this route and that have been agreed with the local road network operator. However, it should be noted that the provision of these routes is dependent upon the nature of the incident and the suitability and availability of the surrounding network. In some instances, the diversion route may not be suitable for HGV traffic or might not be available due to events on the local road network. A review is currently underway to improve the quality and coverage of these routes, and to improve the traffic management procedures that are relied upon to implement these routes in the event of a carriageway closure.



Figure 3.5 - London to Scotland East diversionary routes

Maintaining the strategic road network

We carry out routine maintenance and renewal of roads, structures and technology to keep the network safe, serviceable and reliable. We also ensure that our contractors deliver a high level of service on the SRN to support operational performance and the long-term integrity of the asset.

The heavy year-round use of all our routes means that they require regular maintenance and inspections for repairs to keep them fully operational, in order to support economic growth. Our maintenance regime focuses on 4 key aspects of the routes: road surfaces, bridges and structures, drainage and earthworks. The summary condition of each on this route is set out below:

Road surface

The surface condition across the route is considered to be sound or having some deterioration with less than 0.5% having severe deterioration that would require focused investigation.

Bridges and structures

The structures across the route are mostly in very good or good condition. According to an analysis of current data, fewer than 2% of our structures are in poor or very poor condition.

Drainage

Drainage assets are represented by both linear assets (for example pipes, channels, ditches, drains) and non-linear assets (for example gullies, chambers). Across the route, drainage assets are considered to be in good condition for linear assets and fair condition for non-linear assets. Of those assets inspected, just under 70% of linear assets have no defects, while just under 60% of the non-linear assets have only superficial defects.

Earthworks

The geotechnical earthworks across the route are considered to be in fair condition with the total length of earthworks that require further investigation amounting to less than 4%.

New assets have an operational 'life', during which, under normal conditions and maintenance, the risk of failure is expected to be low. Beyond this period, the risk of asset failure is expected to increase, although for many types of asset the risk of failure remains low and we do not routinely replace assets solely because they are older than their expected operational life. We use a combination of more regular maintenance and inspection, along with a risk-based approach to ensure that assets remain safe while achieving value for money from our maintenance and renewal activities.



Future developments

We have taken steps to transform our approach to maintenance by establishing an asset management programme that develops and implements the Asset Management Framework for Highways England.

The framework aligns strategic objectives with regional asset management plans and lifecycle asset management plans. It also includes the analysis required to plan the investment and expenditure on the strategic road network during the next road period, developing the business case options for capital renewals. It will provide a clear articulation of the total value that will be delivered by investment in RIS2, including the costs and benefits of delivering the capital renewals programme.

Operations

We are establishing a nationally consistent approach to the management of our operational capability through our Operational Excellence change programme. This will deepen our understanding of how our interventions impact on the performance of the network and on the journeys of our customers. We are using the latest analytical software to process traffic data and gain insight into:

- how our operational services can improve safety and provide security to road users
- how the attendance of a traffic officer has an impact on incident durations
- how information provided by Highways England can benefit road users who plan their journeys beforehand and then while on their journeys

By better understanding our current operational performance, we can create a baseline from which we can identify opportunities for improvement.

4. Current investment plans and growth potential

Investment in the strategic road network can make areas more attractive for inward investment, unlock new sites for employment and housing and facilitate regeneration.

From servicing the UK's logistics needs, linking our manufacturing heartlands and connecting to our international gateways, supporting services-driven activity in high-growth towns and cities, to meeting the needs of our visitor economy, the SRN is critically important to servicing the UK economy.

Economic context

Highways England has been working with a wide range of stakeholders to develop a strategic economic growth plan, which we are calling *The Road to Growth*. This plan explores the economic role of the strategic road network, and aims to explain how we will further increase our contribution to the UK economy. As part of the evidence base for *The Road to Growth*, over 400 economic hotspots – or economic opportunity areas (EOAs) – around the SRN have been identified in consultation with Local Enterprise Partnerships (LEPs). The figures in this chapter highlight the EOAs which most closely align and are supported by the route.

To inform the development of *The Road to Growth* and assess the relationship between the SRN and economic growth, a suite of evidence reports were completed. These reports were published alongside The Road to Growth discussion paper and were subject to public consultation from November 2016 to January 2017. Alongside the engagement we have undertaken with all LEPs across England, the following evidence reports have ensured we have a more comprehensive economic evidence base and a better understanding of future challenges and opportunities:

- economic growth and the SRN – an evidence review of the relationship between transport investment and economic growth

- commercial development – an assessment of the relationship between the main property sectors and the SRN
- international gateways – a review of principal international gateways (ports and airports) and their contribution to the economy
- socio-economic analysis and future forecasts – mapping of socio-economic data (population, deprivation and employment) and sectoral forecasts up to 2030. This included identification of the likely growth forecasts for all sectors with a particular focus on those sectors heavily dependent on the SRN

The Road to Growth sets out our evidence findings to date and the steps we will take to enhance our enabling role in supporting economic growth.

Innovation

In April 2016, we published our Innovation, Technology and Research Strategy which set out how Highways England will use pioneering behaviours to help support our strategic objectives and create value for customers and stakeholders.

The £150 million Innovation Designated Fund was established to support innovative capital projects and to support developing the use of emerging technologies, new materials and ways of working.

Investment plans

The following figures show the location of Highways England major improvement projects which have previously been announced to help tackle some of the issues on the network. The Highways England website and delivery plan updates should be consulted for the latest information.

The figures also show strategic studies which have been progressed during RIS1, innovation projects and economic opportunity areas.

London to Scotland East - Route Strategy: Map 1 of 4

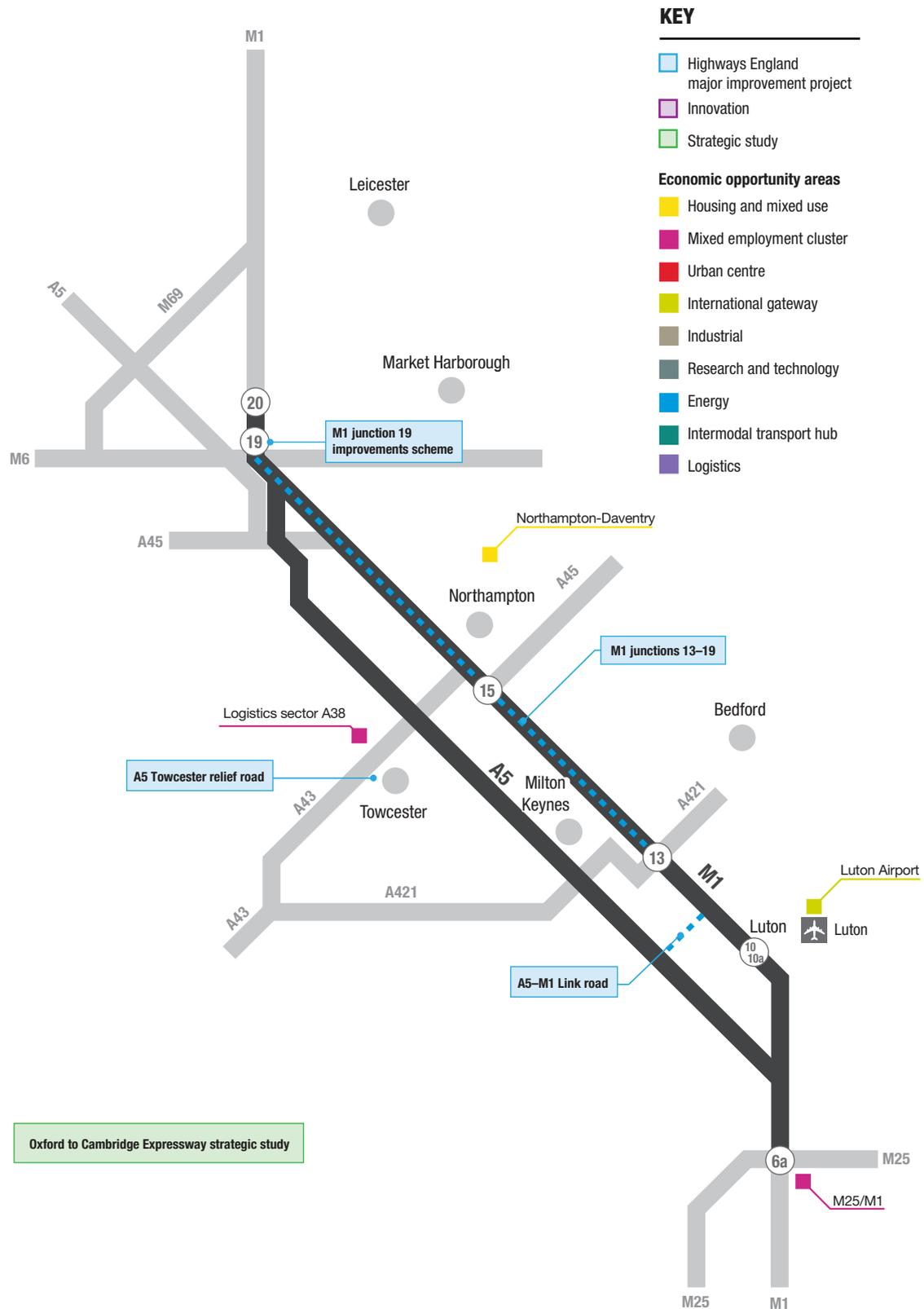


Figure 4.1 - Investment plans and economic opportunity areas

London to Scotland East - Route Strategy: Map 2 of 4

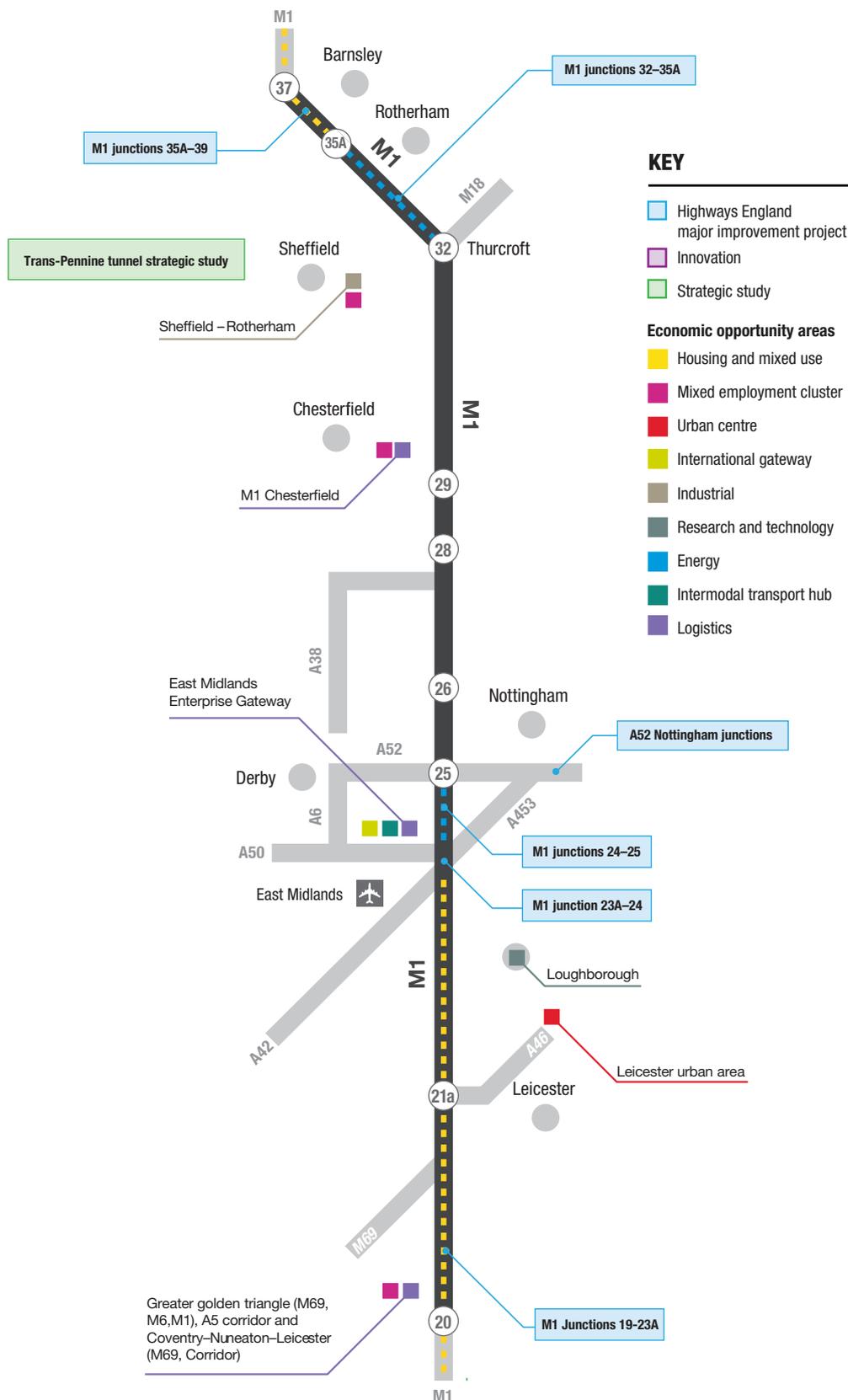


Figure 4.2 - Investment plans and economic opportunity areas

London to Leeds East - Route Strategy: Map 3 of 4

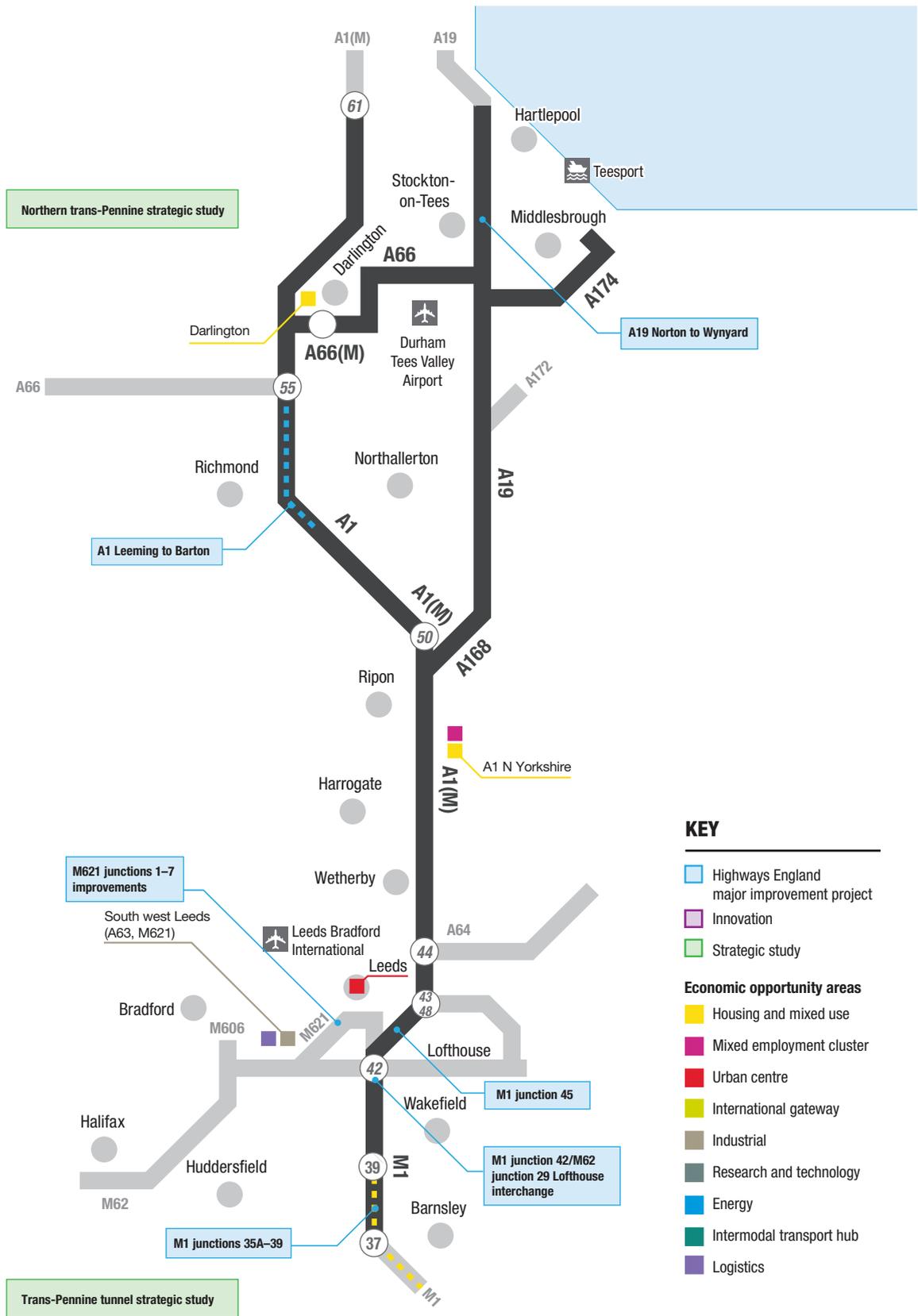


Figure 4.3 - Investment plans and economic opportunity areas

London to Scotland East - Route Strategy: Map 4 of 4

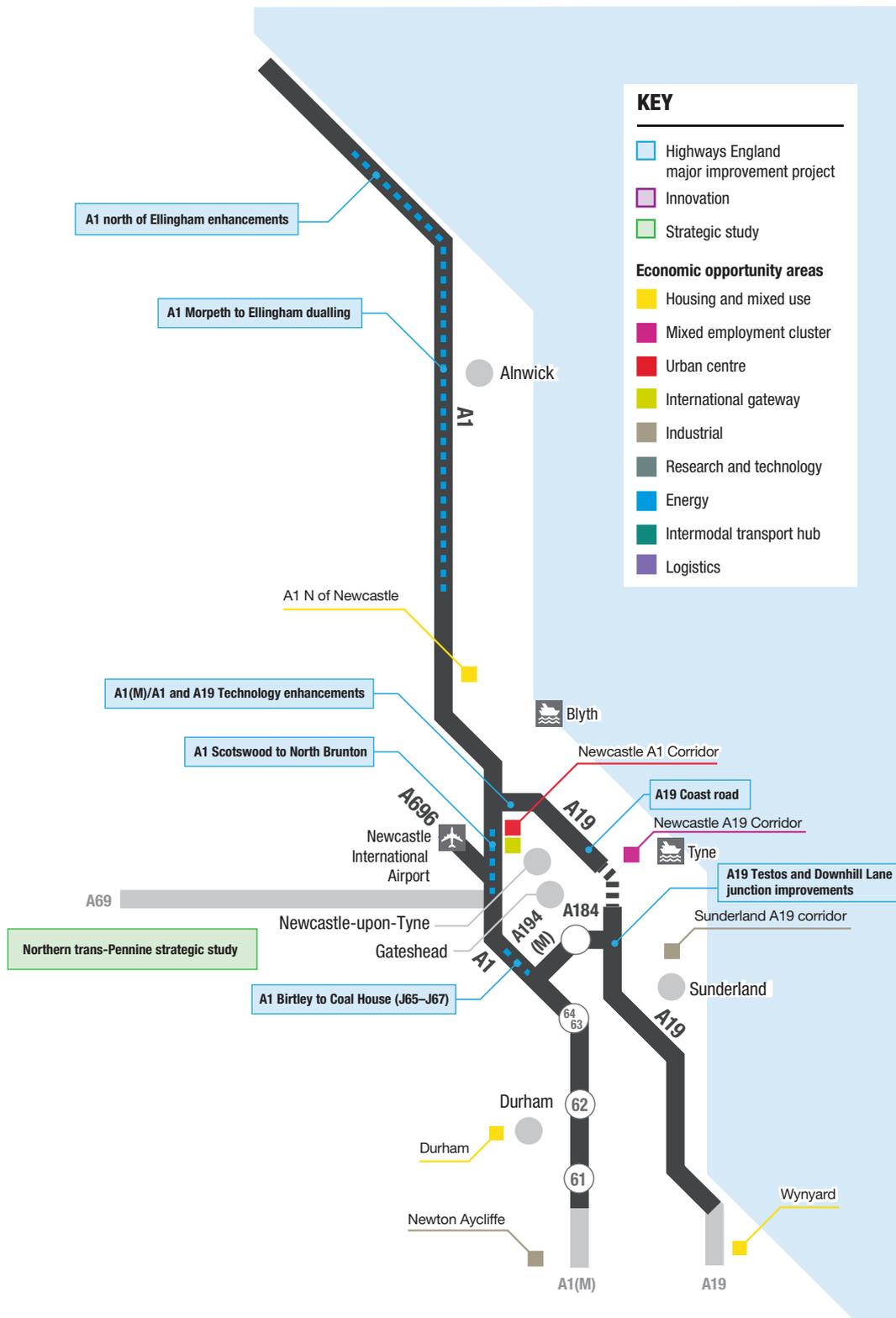


Figure 4.4 - Investment plans and economic opportunity areas



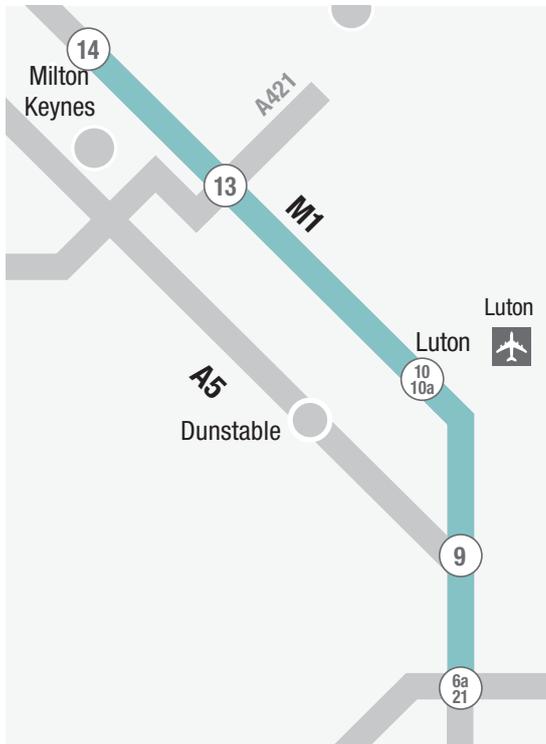
5. Future challenges and opportunities

Route Strategies have identified study areas on the strategic road network which require further investigation of the issues raised by stakeholders and identified through Highways England intelligence. These study areas will now be assessed further as part of our development for RIS2.



Figure 5.1 - Map of all study areas

M1 junctions 1 to 14



- Congestion at M1 junction 8 is currently constraining growth within Hertfordshire.
- Local traffic is affected by diversionary routes along the entire route from M1 junction 1 to junction 14.
- Congestion at M1 junction 10 may constrain development.
- There are safety issues at M1 junction 6a.
- There is congestion between M1 Junctions 12 and 15.
- Queues from congestion at the western dumbbell of M1 J15A block back to the mainline, leading to safety concerns.
- The route has a poor safety performance in general.

A5 – M1 to A361



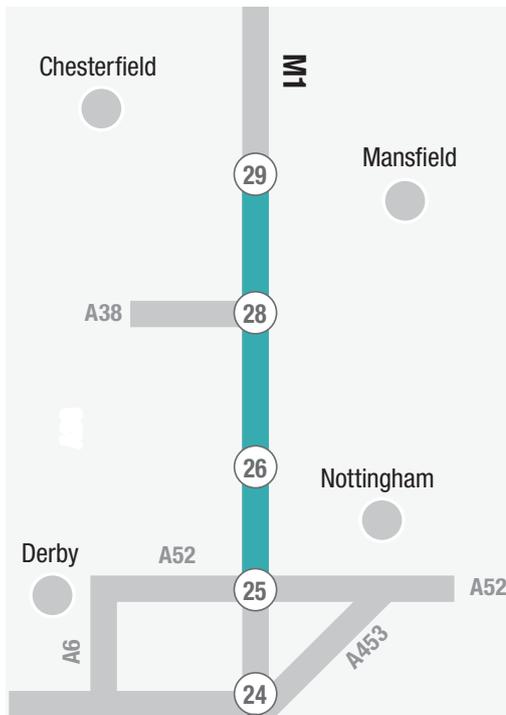
- The high street function in Towcester poses a number of free-flow and safety issues. The route also lies within an AQMA.
- The A5 route from Old Stratford to Towcester is single carriageway, which affects safety.
- There is congestion at A5/Brackley Road and A5 Tove (Towcester) roundabout.
- Congestion at the A5 roundabout at Old Stratford will continue to increase with growth throughout Milton Keynes.
- There is slow-moving traffic through Potterspury on the A5.
- Junction capacity at Kelly's Kitchen is constraining future growth.

M1 junctions 20 to 21A



- This study area is one of the worst on the network for journey delays.
- Businesses suffer costs due to congestion on the M1 between junctions 21 and 21A where growth is being restricted.
- There are air quality issues on this section, at Blaby and Lutterworth.
- Congestion at M1 junction 21 and on the mainline creates safety problems.

M1 junctions 25 to 29



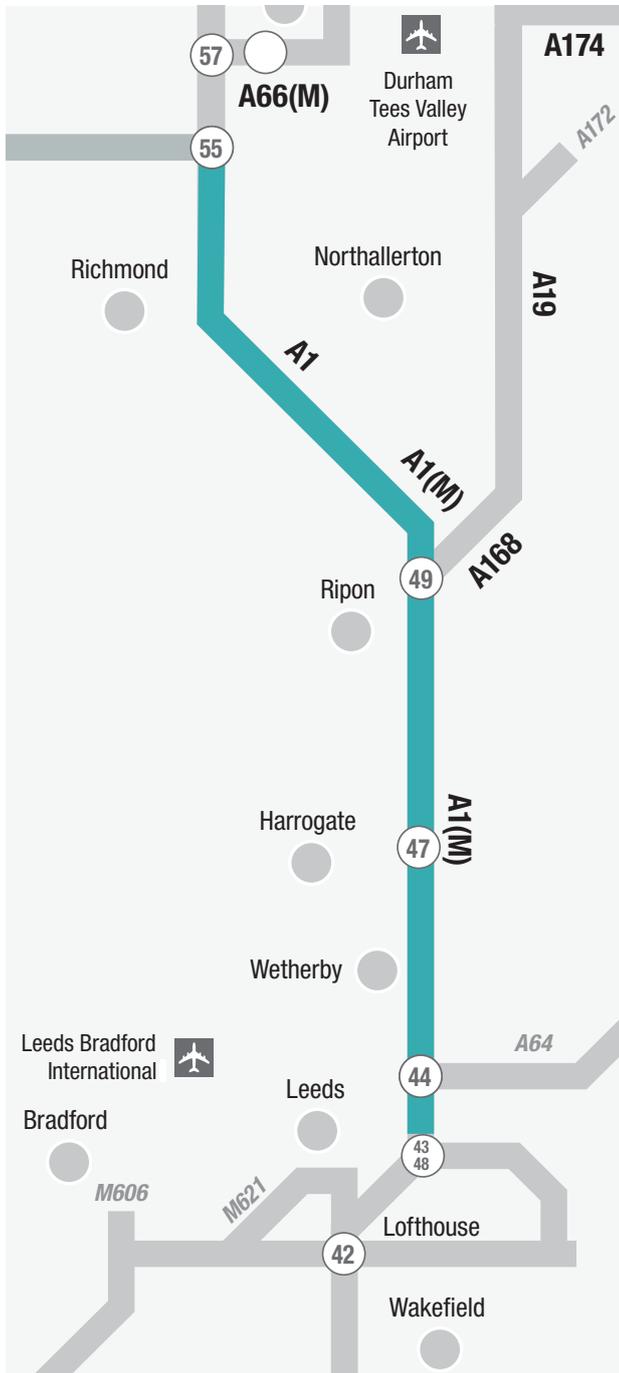
- M1 junction 29 suffers from congestion.
- There is congestion on M1 junction 29 to 28 southbound near Mansfield.
- There is congestion on M1 junction 27 to 28 northbound near Mansfield.
- There are safety issues at M1 junction 28 which also suffers from congestion.
- There is congestion at M1 junction 26 at Nottingham.
- M1 junction 27 experiences congestion and safety issues. The nearby A608/A611 junction also suffers congestion which can block back to the M1.

M1 (A1 to M1 junction 32)



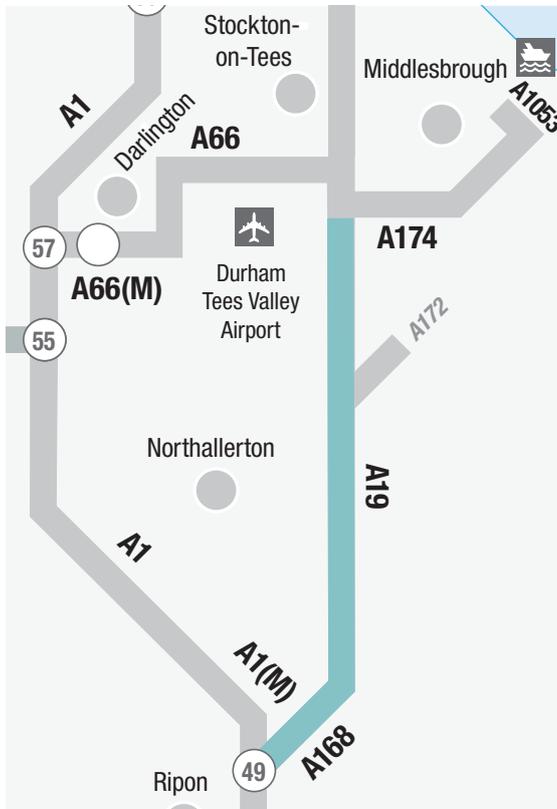
- There are capacity issues at M1 junctions 32 and 33 which affect traffic speeds on the mainline.
- At M1 junctions 34 and 35 there are congestion issues which cause mainline queuing, and constrain development.
- There is a lack of strategic messaging between M1 junction 35 to junction 38 to inform driver route choice, particularly in relation to the trans-Pennine routes.
- Lack of a strategic link to the south of the M62 results in inappropriate HGV routing on local roads between M1 J39 and M62 J25.
- There is congestion at junctions 39, 40 and 41, and on the local road networks, which is forecast to worsen as a result of planned growth in Wakefield and Kirklees.
- At Lofthouse M1 junction 42 with M62 junction 29 interaction between congestion on 2 motorways leads to short weaving lengths that cause queues back on the mainlines at the interchange and on Lofthouse roundabout.
- Planned growth in East Leeds will have an impact on M1 junctions 45, 46 and 47, which already have congestion and safety issues from capacity and interaction with the local road network.
- Air quality and noise are significant issues on the M1 between Sheffield and Leeds, and there is flooding south of M1 junction 38.
- There is congestion at Hook Moor A1(M)/M1 bifurcation.

A1(M) (A66 (Scotch Corner) to M1 (Hook Moor))



- The southern section of this study area is one of the worst on the network for journey delays.
- There are safety issues at junction 44 for the A64.
- At M1 junction 47 and surrounding links, there is congestion resulting in safety issues.
- Between junctions 48 at Boroughbridge and 49 at Dishforth, where the A168/A19 route diverges, there is limited driver information to guide route choice for northbound long-distance traffic.
- On the A1/A1(M) between Hook Moor and Scotch Corner there is a lack of convenient HGV parking, leading to inappropriate parking on local roads.

A19/A168 (A174 (Thornaby) to A1(M) (Dishforth))



- There are safety issues at central reserve gaps, including junctions and private accesses.
- There are a number of Noise Important Areas.
- Slow moving farm traffic affects journey time reliability issues.

A19 (A690 (Sunderland) to A66 (Middlesbrough))



- There is a lack of technology on the A19 to actively manage incidents.
- Capacity constraints at the A19 Tees Crossing cause delays and safety issues, and it is difficult to manage incidents. The Local Authorities are developing a business case for capacity improvements, in consultation with Highways England.
- The A19 Portrack interchange has capacity and weaving issues.
- There are safety issues at the A19/A179 junction.
- There are safety issues at central reserve gaps, including junctions and private accesses.
- There are Noise Important Areas on the A19 to the south west of Sunderland and to the west of Peterlee.

A66, A19 and A174: A1(M) to A1053



- There are only south-facing slip roads at A1(M) junction with A66(M), limiting potential turning movements for traffic going north.
- There are congestion, journey quality and safety issues at the A19/A174 Parkway interchange, and north of the junction on the A19, which are constraining development plans.
- The at-grade junctions on the single carriageway section of the A66 between Blands Corner and Little Burdon have capacity and congestion issues which are stifling growth in Darlington.
- There is poor connectivity for pedestrians, cyclists and public transport networks along the whole of the A66/A19/A174 corridor between Darlington and Middlesbrough.
- The local authorities are developing a business case for improvements to Tees Valley east-west connections in consultation with Highways England.
- There is a lack of technology on the A66 to actively manage incidents. There are safety issues at the A66/Long Newton junction.
- There are air and noise pollution issues along the A174 between Ormesby and Lazenby.

A1(M) (A194(M) (Birtley) to A66 (Scotch Corner))



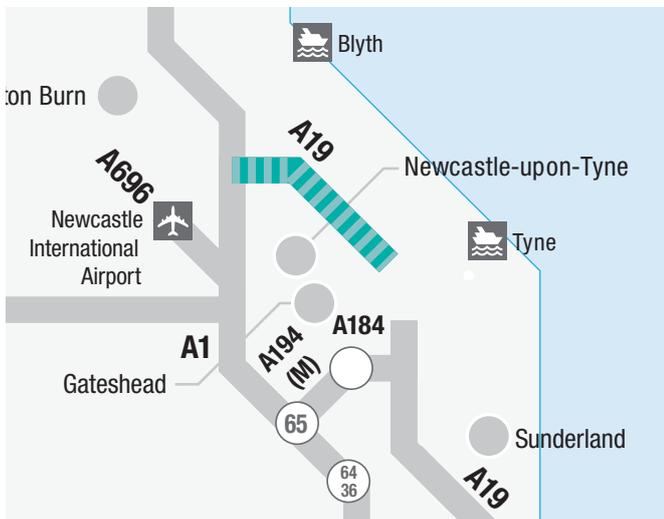
- There are safety and congestion issues at Scotch Corner.
- There is a safety issue at the A1(M) junction 62 for Durham.
- There are congestion issues on the A1(M) between Chester-le-Street and Birtley.
- There are Noise Important Areas near A1(M) junction 62 and between junctions 63 and 65.
- The A1(M) is partly within an AQMA between Birtley and Chester-le-Street.
- There are no slip roads facilitating access to the A1(M) northbound from the A66(M) and to the A66(M) eastbound (to Tees Valley) if travelling from the north on the A1(M).
- There are accessibility issues for cyclists A1(M) junction 56 to junction 65, including severance issues at junction 62 at Durham.

A194(M)/A184 (A1 to A19)



- There are safety and congestion issues at the A184/A194(M) White Mare Pool junction which are preventing economic growth.
- Provision for cyclists is also poor at the junction.
- There are safety issues at the A194(M)/A195 Follingsby junction.
- There is poor cycle provision at the A194(M) Havannah, A194(M) Follingsby and A184 West Pastures junctions.

A19 (A1 to A690)



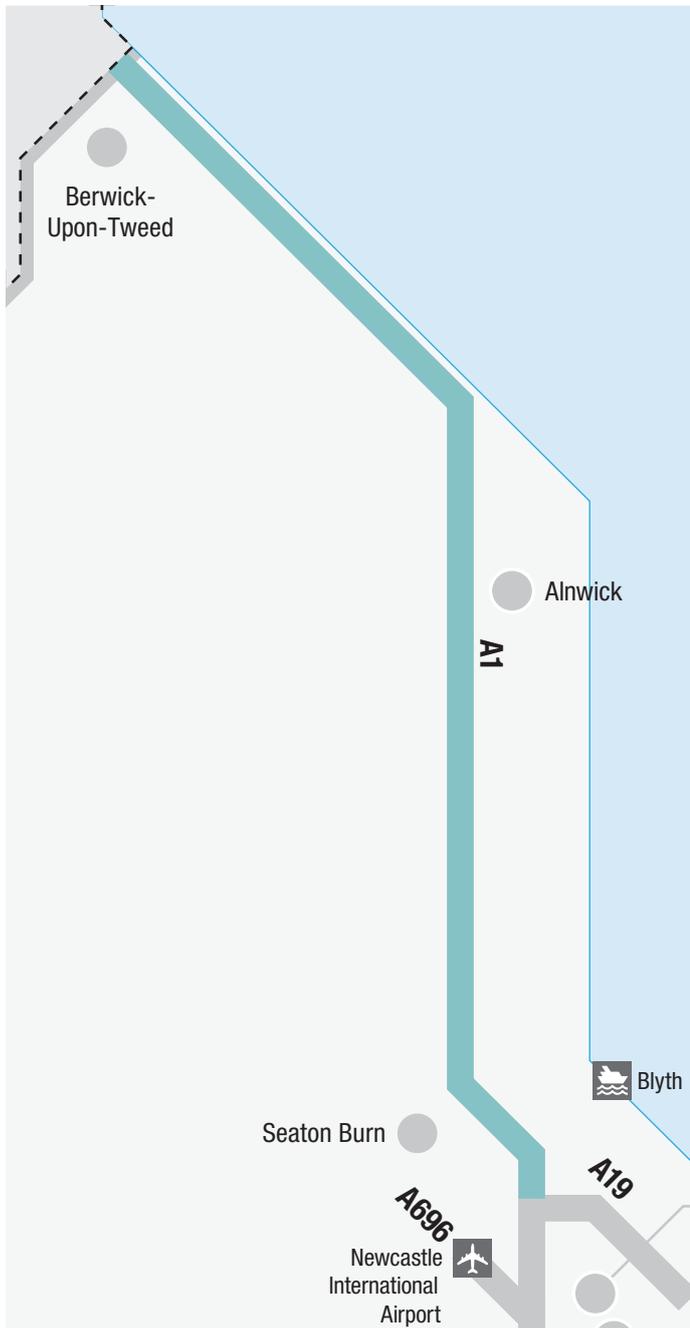
- There are congestion issues at the A19/A194 junction, which is also part of an AQMA, along the A19 from Cobalt Park to the Tyne Tunnel and at the A19/A180 Moor Farm junction, which are constraining development.
- There are safety issues on the A19 between the A1 at Seaton Burn and the A690, particularly at the grade-separated junctions along the corridor.
- There are congestion and safety issues at the A19/A184 Testos junction, the A19 Holystone junction and the A19/A1056 Killingworth junction.
- There are accessibility issues on the A19 at a number of junctions between the A66 and A1.

A1 J65 to J80



- Heavy use by local short-distance traffic is caused by the lack of local road alternatives.
- There are link and junction safety issues between the A1 Birtley interchange (junction 65) to Seaton Burn (junction 80).
- The A1 between the A194(M) and the A19 Seaton Burn is subject to flooding, particularly around junction 65 at Birtley and between the A69 and A696. There are a number of Noise Important Areas in the corridor.
- There is poor cycle provision at all A1 junctions between junction 65 Birtley and junction 80 Seaton Burn.
- There is congestion at A1 Coalhouse interchange (J67).
- There is poor cycle provision on the A696 at multiple junctions between the Newcastle Airport and the A1.
- There is congestion at all of the A1 junctions between junction 75 and junction 80.

A1 Berwick-upon-Tweed to Seaton Burn



- There are congestion, safety and accessibility issues at A1/A19 junction at Seaton Burn, and congestion issues at the A1 Blagdon junction.
- There is poor provision of cycle and pedestrian facilities on the A1 north of Seaton Burn.
- There are safety issues at a number of locations on the A1 north of Seaton Burn including A1/A197/Clifton Lane and multiple junctions between Felton and Alnwick.
- There are also congestion and connectivity issues at the A1/A197 Clifton junction, which does not cater for all directional traffic movements.
- The A1 at Mousen is single carriageway with poor longitudinal and vertical alignment, resulting in reduced driving comfort, poor visibility and increased accident risk.
- Issues on the A1 single carriageway between Ellingham and Berwick upon Tweed include traffic-flow disruption, delays and safety issues.
- Flooding is a problem on the A1 west of Cramlington, south of Alnwick and between A1/B653 junction and Berwick-upon-Tweed.

6. Next steps

Our findings from this and other Route Strategies, as well as other research, will inform our first Strategic Road Network Initial Report which is to be published later this year. This will form the basis of a public consultation, which in turn will feed into decision-making on the next Road Investment Strategy (RIS2).

We are looking ahead to the next RIS and how we can support the Secretary of State in ensuring that value for money investments are made in the road network. The process for developing RIS2 is set out in our licence, and is in 3 phases: research, decision and mobilisation.

We are currently in the first phase – **research phase** – where we are gathering wide-ranging evidence on the state of the network and how we can ensure that improvements have maximum impact. The series of Route Strategies, of which this is one, is an important part of this phase alongside the outcomes of strategic studies which looked at particularly complicated problems on parts of the network and how to tackle them. Another key source of evidence is the Strategic Economic Growth Plan (*The Road to Growth*), which examines where and how the SRN can help support economic growth. This will emphasise that sectors dependent on the road network employ 7.4 million people, that we are already doing a great deal to support growth and that we want to do even more.

Now that this series of Route Strategies is published, we will continue our engagement with stakeholders, including other transport providers and authorities, on how best to address problems and maximise opportunities. For example, in working towards seamless end-to-end journeys for our customers, we will be focussing on how the strategic road network links with local roads and other modes of transport.

Findings from the research phase will feed into Highways England's Strategic Road Network Initial Report, expected to be published later this year, which will outline Highways England's ambitions for the network across 2020–2025 and beyond. The Initial Report will be the subject of public consultation.

In the **decision phase**, the consultation feedback will assist the Department for Transport in developing RIS2. In turn we will develop a Strategic Business Plan (SBP) setting out how we will deliver RIS2 as a business. Both the RIS and SBP will be reviewed by the regulator of roads, the Office of Rail and Road, to ensure that we have made the most efficient decisions. The final documents are to be published in 2019.



Figure 6.1 - RIS2 high-level process

In the final **mobilisation phase**, we will set out a Delivery Plan with a detailed programme of investment to be carried out in 2020 to 2025 on the basis of the commitments in RIS2.

Continued investment in modernisation, maintenance and operation will further improve the road network on top of the measures and schemes currently being undertaken, and will allow us to further support users of the strategic road network and the UK's economy. The rigorous process of developing RIS2 should ensure that the best use is made of taxpayers' money and that investments have the maximum impact.

The views and perspectives of different stakeholders, including motorists, are important to us. Stakeholders may also wish to contact one of the partner organisations. For example, stakeholders can keep up to date with Transport Focus' work, by signing up to their monthly electronic newsletter *Road User Voice*. Alternatively, stakeholders may prefer to make their views known through one of the many organisations involved in RIS2. They include the AA, RAC, RAC Foundation, Road Haulage Association, Freight Transport Association, Campaign for Better Transport, Confederation of British Industry and many others.

We will provide information about the process and emerging findings at events for representative organisations in spring 2017. At the same time, we are developing the dialogue with emerging STBs, local government, LEPs, business groups and environmental organisations. We want to align our analysis, and eventually our decision-making, with that of other organisations, so that we can maximise the benefit of investment, for example focusing on improving the interconnectivity between different modes and between the strategic and local road networks. This should lead to a richer discussion during public consultation on the Strategic Road Network Initial Report.





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