

# **North Tyneside Network Management Plan**



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# North Tyneside Network Management Plan

## Introduction

The [North Tyneside Transport Strategy](#) sets out how we will improve safety, health and well-being outcomes and environmental sustainability; support economic growth; improve connectivity; enable smart choices for all; and manage demand.

A key aim for both our Transport Strategy and the North Tyneside Local Plan is to develop a road network that meets the current and future needs of those travelling to, from, and through the Borough. Through offering improved connectivity, reliability and demand management across all modes of transport, North Tyneside aims to operate and develop a network that can “manage the peaks” and deliver a consistent and reliable experience to all road users.

The Network Management Plan sets out how we intend to “manage the peaks” in highway operations through a combination of; investing in further network improvements at strategic locations, managing demand through supporting improved journey decision making, delivering behavioural change initiatives, and using technology to efficiently and equitably manage network demands.

The challenge of the Network Management Plan is to balance competing road user demands whilst also improving air quality and reducing carbon emissions. The next 10 years are likely to see significant changes in vehicle operations, both in terms of fuel types and connected technology and future road users making different choices about how they want to travel.

## Strategic Approach

North Tyneside has a clear commitment to listen to what our residents and businesses tell us they want. Transport features highly in terms of residents’ priorities, particularly in relation to managing transport demand and the condition of our roads and pavements. Public transport is one of the top ten issues that local residents believe is key to making the place a great place to live work and visit. Network Management in the borough is part of a broader strategic context, which is made up of:

- i. Our North Tyneside Plan 2018 to 2020;
- ii. the Local Plan 2017 - 2032;
- iii. the North Tyneside Transport Strategy;
- iv. the North Tyneside Highway Asset Management Plan (HAMP); and
- v. the North Tyneside Travel Safety Strategy.

In May 2017 North Tyneside adopted its first Transport Strategy which sets out clear overarching principles to be applied to support the management of the Transport Network in the borough.

The Network Management supports each of the five key principles identified in the Transport Strategy but specifically focuses upon:-

iii. **Improve connectivity;** We will seek to

- a. link people to workplaces and destinations in the region and the rest of the North of England
- b. ensure our transport links remain competitive at national level, with the rest of Europe and internationally
- c. improve interchange between forms of transport

iv. **Enable smart choices for all;** We will seek to

- a. enable and encourage informed choice and the wider use of active and sustainable ways to travel
- b. support the use of smart technology, e.g. to simplify public transport ticketing
- c. improve information about travel routes including real time information on journey times, delays etc

v. **Manage transport demand;** We will seek to

- a. encourage and address increased demand to cycle and walk by improving the street network and putting cycling and walking first
- b. improve bus priority and work with partners to support an integrated public transport network, including Metro and local rail, and increase public transport capacity to meet peak-time travel demand
- c. ensure the overall highway network is well maintained
- d. enable parking at the right time, right place and right price
- e. manage future demand through integration between transport and land use planning strategies

The Network Management Plan sits within the Transport Strategy and supports the delivery of several key priorities under the three themes of Our People, Our Places, and Our Economy identified in Our North Tyneside Plan, these are;

Our People will:

- Be healthy and well – with the information, skills and opportunities to maintain and improve their health, well-being and independence, especially if they are carers.

Our Places will:

- Offer a good choice of quality housing appropriate to need, including affordable homes that will be available to buy or rent.
- Provide a clean, green, healthy, attractive, safe and sustainable environment.

- This will involve creating a cycle friendly borough, investing in energy efficiency schemes and by encouraging more recycling.
- Have an effective transport and physical infrastructure - including our roads, pavements, street lighting, drainage and public transport.
- Continue to be regenerated in Wallsend and Whitley Bay, through effective public, private and community partnerships, while ambitious plans will be developed for North Shields, Forest Hall and Killingworth.

Our Economy will:

- Continue to support investment in our business parks, units and Town Centres.

The Network Management Plan has been developed in accordance with these principles and is supported by the plans detailed above.

## **Background**

The Transport Strategy identifies that we need to improve connectivity, manage transport demand, and enable smart choices for all. These are important objectives that when delivered will ensure we continue to support housing growth, economic prosperity, and improve the environment and health for residents of the Borough.

The previous Network Management Plan identified 20 locations on the Highway Network where congestion and road safety matters were considered severe and required an improvement scheme. Over the last 6 years North Tyneside has delivered, supported and secured investment to address the majority of these locations. The most significant improvement scheme is the A19 Silverlink Interchange scheme which will substantially improve the operation of both the Strategic Road Network (SRN) and Local Highway Networks.

North Tyneside has continued to review and expand upon the list of locations where current or projected congestion is likely to require investment in the Highway Network. The list has been assessed against a number of criteria including, level of congestion, traffic volume, public transport impacts, pedestrian/cyclist severance issues, and road safety record. The North Tyneside Travel Safety Strategy, approved by Cabinet in March 2018, reviews road safety across the whole highway network annually and identifies locations with an unacceptable road safety record (cluster sites) to be considered for remedial measures.

## **Network Management**

To effectively manage all aspects of the local highway network North Tyneside applies supporting local and regional policies and sub-policies. Many of these policies and guidance have been prepared to advise and direct organisations, operators, and road users on how to behave when interacting with the highway network to minimise disruption and impacts to other road users.

## **Roads**

The management of highway operations encompasses the rules and regulations applicable to road users, maintenance of the network (including traffic signals equipment), managing access to statutory undertakers (Streetworks), and monitoring systems such as UTMC (Urban Traffic Management Control).

North Tyneside has prepared a number of policies and guidance documents that set out how and why certain infrastructure on the highway is provided. This includes items such as Speed Management (contained within the [North Tyneside Travel Safety Strategy](#)) which clarifies how we set and monitor speed limits in the Borough. The Network Management Plan will be supported by a Signage Design Guide that sets out acceptable sign specification standards, guidance on what types of signs are appropriate and where and how we review signage conditions and accuracy.

The [North Tyneside Parking Strategy](#) sets out how we manage parking provision across the local highway network. Effectively managing parking provision and demand on the highway network is an important aspect operating a safe and efficient network that serves the needs of all road users.

North Tyneside is carrying out a review of areas where pavement or verge parking is prevalent to understand if there is an opportunity to better manage these issues. Parking provision applicable to new developments is more generous than what is available in more historic locations in the Borough. Therefore if there are areas where a shortage in provision is leading to footpath obstructions or damage to verge areas, alternative provisions should be explored. The outcome of this study will be reported as part of our annual Transport Strategy Information Report to Cabinet.

North Tyneside has set out its approach to Highway Maintenance, including monitoring highway conditions, gully cleansing, and Asset Management in the [HAMP \(Highway Asset Management Plan\)](#). The Regional Signals Group is responsible for maintaining, installing and operating all traffic signal equipment in the Borough. Signal timings are implemented in agreement with North Tyneside council and most major junctions are monitored remotely by the regional Urban Traffic Management and Control (UTMC) team. The operational efficiency of signalised junctions is currently reviewed periodically but this will become more frequent as remote monitoring technology is rolled out in 2018 and 2019. North Tyneside is looking to develop an automated reviewing process that allows for traffic signal operations to become more accurately optimised and responsive to daily traffic patterns.

The regional UTMC control room is an invaluable tool that supports the efficient management of the regions road network. As traffic levels continue to increase the effective management and balancing of competing demands is becoming ever more important to provide consistent and reliable journey experiences for all road users. North Tyneside is investing significantly in dynamic new monitoring equipment and network controls that will allow us to operate the network as efficiently as possible. This includes additional Variable Message Signs (VMS) installed at strategic locations around the network to inform road users of incidents upstream, advocate alternate routes, and feedback current journey times along key routes.

North Tyneside is the only Authority in the North East to have so far adopted a [Streetworks permitting system](#) to manage road work activities on the highway network. The system requires utility companies and developer sub-contractors to formally engage with the Authority to seek permission to excavate an area on the local road network. The system encourages utility companies to coordinate works on the highway and penalises them should they overrun. This permitting system has allowed North Tyneside to restrict non-emergency road works on routes already subject to highway works or experiencing increased traffic volumes as a consequence of diverting traffic. The next stage of the Streetworks permitting system being considered is around “lane rentals” where the cost of a permit is linked to how

busy a road is and thus the number of road users impacted. Lane rental systems have been shown to expedite road works along high traffic routes which further reduces the negative impacts upon journey time reliability and reduces unnecessary delays.

### Footpaths and Cycleways

North Tyneside has adopted a [Cycling Design Guide](#) which sets out a minimum standard of provision appropriate for all types of roads and streets in the Borough. Our [Cycling Strategy](#) sets out our approach to encouraging more cycling trips through improving infrastructure provision, expanding and developing a Strategic Cycle Network (see the [Cycling Strategy](#)) and increased cycle training.

In line with Government guidance, a Local Cycling and Walking Infrastructure Plan (LCWIP) is in preparation, which projects where the greatest opportunities for increased walking and cycling trips are, and where we should focus our investment. This work has helped complement and endorse the routes identified on our Strategic Cycle Network “Tube Map”.

North Tyneside will be preparing supporting guidance for managing “Objects on the Highway” which will complement the Streetworks permitting system through requiring any obstruction on the Highway to require prior consent to be given by the Authority. This guidance will prove useful in managing areas where there is limited public space and footpath users are forced to navigate obstacles such as signage and outdoor seating.

### Public Transport

A revised regional [Bus Strategy](#) is being prepared which identifies opportunities to improve and enhance current facilities and service levels to stimulate greater patronage and reduce the pressure on the highway network. North Tyneside is reviewing provision in each of its Town Centre locations to establish accessibility levels, sources of delay, operational barriers, and opportunities for improved servicing arrangements that can support regeneration, economic growth and local plan developments.

North Tyneside officers engage with Nexus and bus operators through regular Network Management meetings to discuss opportunities for improvements to services and identify future markets that will need to be well served. Strategic sites identified in our Local Plan will be required to offer attractive levels of public transport provision to support their sustainable credentials and North Tyneside are pushing operators to support delivering on this challenge without detrimentally impacting existing provision.

## Road Safety

North Tyneside's [Travel Safety Strategy](#) sets out our approach to managing road safety on the network. Ensuring the road network operates safely is a key principle in effective network management as this impacts behaviour of road users and can remove barriers to sustainable travel. North Tyneside has a good road safety record with a reducing number of cluster sites and strong collision reduction figures at major highway junctions following remedial works being carried out. This performance is reported as part of our annual Transport Strategy Information Report to Cabinet.

## Taxis and Private Hire Vehicles (PHVs)

As part of the revised Network Management Plan the [Taxi Rank Register](#) that has previously accompanied the North Tyneside Hackney Carriage and Private Hire Licensing Policy will now form a supporting document to the Network Management Plan. Ensuring appropriate levels of provision and locations of ranks/bays across the Borough is vital to supporting this public service. North Tyneside will therefore continue to periodically review this provision in partnership with the North Tyneside Hackney Carriage.

## Air Quality

The operation of the Highway Network has a direct impact upon local Air Quality and Carbon emissions. It is therefore important that the Network Management Plan considers and responds to the implications for the environment. An Air Quality Strategy is being prepared for North Tyneside, which will set out the Authority's approach to addressing the challenge of improving local Air Quality. This includes further detailed monitoring of areas with poor Air Quality, increasing awareness and advocating behavioural change to help support sustainable travel choices over car based travel.

## **Revised Approach**

Following a successful period of local and national investment into the highway network it is important that we continue with our improvements to manage demand and allow the efficient operation of the network at all times. Our approach in securing Major Scheme funding has been based on demonstrating a robust evidence base of current network conditions and forecasting where economic growth and future housing development is likely to strain network operations.

The strategic highway improvement schemes that have been delivered over the past 5 years form part of a wider strategic plan to manage travel behaviour along key corridors through the Borough. This corridor based approach provides the opportunity to address congestion hotspots and manage demand along a corridor rather than just relocating the issues downstream. **Appendix A** shows the major

highway schemes programmed for delivery and those already delivered across the Borough.

To support this revised approach we will be investing in data collection technology and monitoring systems that will provide the robust evidence base from which investment priorities can be decided. North Tyneside has already been successful in securing funding for additional data collection technology such as Automatic Number Plate Recognition (ANPR) cameras which will be spread around the local highway network to record journey times and highlight the routes vehicles use when travelling through North Tyneside. This data, when complemented with traffic volume data (collected by the Tyne & Wear Traffic and Accident Data Unit, TADU) and journey purpose information, can provide detailed insights into driver behaviour and support decisions as to when and where to invest in the network.

National and regional funding opportunities are putting greater impetus on smarter management of the highway network as opposed to expanding it. It is therefore timely that North Tyneside's 5 year network investment programme is drawing to an end. This programme has focused on delivering schemes that enable jobs growth at key employment sites in the Borough and delivering improvements in road safety and operational capacity where practicable. There are now limited opportunities for substantial network improvement schemes to address congestion or road safety as reflected in the reducing number of collision cluster sites being identified in the Travel Safety Strategy. Housing growth is driving where capacity improvements will become necessary and we will continue to pursue funding opportunities from central government as well as requiring developers to mitigate this forecast network pressure.

As air quality impacts borne from vehicle trips are now in exceedance of national standards in some areas there is a need to address congestion more intelligently through improved demand management with more focus on providing alternatives to car based trips. In North Tyneside there are excellent opportunities to travel without reliance on a car. The Borough is well served by Public Transport through metro, bus, and taxi and distances between residential areas and places of employment are within reasonable cycling distance.

Through a corridor based approach we will deliver a comprehensive network of links between key origins and destinations for all modes of transport. This approach supports greater levels of investment, delivers wider local benefits, and increases the opportunity for securing developer contributions through the planning system. This helps reduce the burden on Council funding to wholly deliver major highway improvements and allows more schemes to come forward.

We will develop schemes that support the following key principles:-

- Supports the management of congestion and improves **journey time reliability** for all road users

- Improves Network Management using intelligent **technology** such as bus priority, dynamic signal control, improved network recovery/resilience, intelligent monitoring and data sharing
- Delivers **demand management** initiatives that educate and advocate more informed decisions and support modal shift to alternative uncongested mode choices
- Increases highway **capacity** to remove severe delays that are barriers to economic growth and Local Plan development.

The Network Management Plan aims to manage peak period operations through implementing new technologies, managing demand, and investment in network capacity improvements where appropriate. The Plan focuses on a corridor based approach with 11 key routes identified that cater for the majority of journeys undertaken across the Borough. These corridors are broken down into commuting corridors that support the local economy and provide access to/from the Borough, and local distributor routes which link to the many residential areas across the Borough. These corridors are listed in the table below and highlighted in the Highway Corridor Plan in **Appendix B**:-

<b>Strategic Commuter Routes</b>	<b>Local Distributor Routes</b>
• A19 (SRN)	• A186
• A1058	• A188
• A189	• A192
• A1056	• A187
• A191	• B1505
• A193	

SRN – The road forms part of the Strategic Road Network managed by Highways England, rather than the local road network managed by North Tyneside Council.

Each corridor will be assessed against the following criteria to allow investments to be prioritised:-

- Operational capacity / grade of provision / public transport service level
- level of demand (current and forecast)
- economic growth/local plan sites supported (jobs & houses)
- user behaviour (short/long trips, commuting/leisure/education)

We will develop a service standard that each corridor should operate at based on measurable attributes such as journey time reliability, level of delay, duration and scale of congestion relative to off-peak average journey times, public transport service level, cycling provision and number of cyclists, etc.

### **Monitoring and Reporting**

The key challenges in monitoring network performance are that there are many ways in which this can be done some of which are data intensive and can be costly. This

data and analysis is vital to gain a better understanding of network behaviour and make more informed decisions about where and how to improve network operation.

The table below details what data we propose to collect and how it will be analysed to inform performance levels:-

<b>Data Type</b>	<b>Collection Method</b>	<b>Analysis</b>
Traffic volumes and speeds	TADU traffic counters	Monitor current levels of demand and measure growth against forecasts
Journey times / delay	ANPR cameras at key locations	Monitor changes in travel times at peak periods to inform signal timings and provide accurate information to share with road users to make better decisions
Public Transport journey time reliability and service levels	Bus GPS data and ANPR	Identify sources and scale of delay to bus services and measure average journey times
Cyclist numbers	Camera counter surveys	Monitor cycling usage and growth and measure change following investment in improved infrastructure provision

The Highway Network operates within its design capacity for approximately 97% of the year with congestion and delays only manifesting at peak times during school term time. National trends in car ownership and commuting behaviour project a reducing pressure from commuters upon peak hour network operation.

North Tyneside will continue to monitor local trends and review research literature to understand how travel behaviour is changing and ensure that our road network is capable of supporting future demands.

The performance of each corridor will be reported as part of our annual Transport Strategy Information Report to Cabinet.

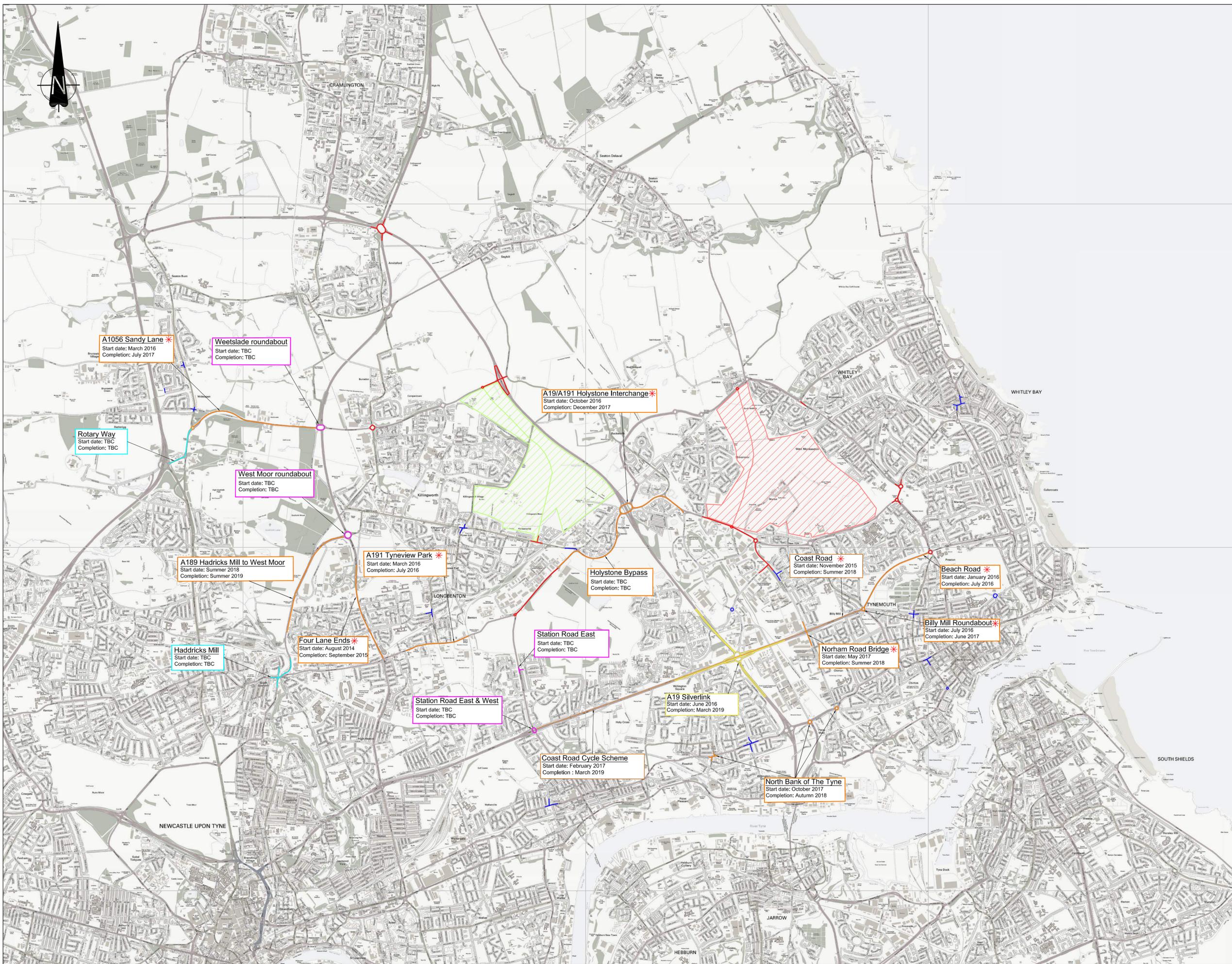
### **Indicators of Success**

Each of the 11 corridors identified will have service levels and performance monitored annually and changes in service levels analysed. We aim to provide network users with a consistent experience to support travel decisions and minimise delays where possible.

As developments identified in our Local Plan come forward we aim to manage the impact upon each of the corridors to ensure average peak hour journey times are not significantly impacted.

The Authority will know if it has been successful in managing the Highway if it can demonstrate that:-

- i. Peak hour road works are reduced along each corridor
- ii. Peak hour journey times remain consistent along each corridor
- iii. Bus service provision and patronage levels along each corridor increases
- iv. Corridor provision for all road users progresses towards borough wide standard



- Key:
- Current / Delivered Scheme
  - Consented Scheme
  - Future Major Scheme
  - Future Minor Scheme
  - Highways England Scheme
  - Newcastle City Council Scheme
  - Local Plan - Murton Gap
  - Local Plan - Killingworth Moor
  - Completed schemes

Rev	By	Chkd.	Date	Description

Drawing Status: PRELIMINARY  APPROVAL

INFORMATION  TENDER  CONSTRUCTION



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Job:

Title:  
 North Tyneside  
 Major Highway Schemes Plan

Drawn: JLCT Date: Sept 2018

Checked: NB Date: Sept 2018

Approved: NB Date: Sept 2018

Drawing No. MAJOR Revision J

Job Log:

Drawing Scale: 1:25,000 @ A1

