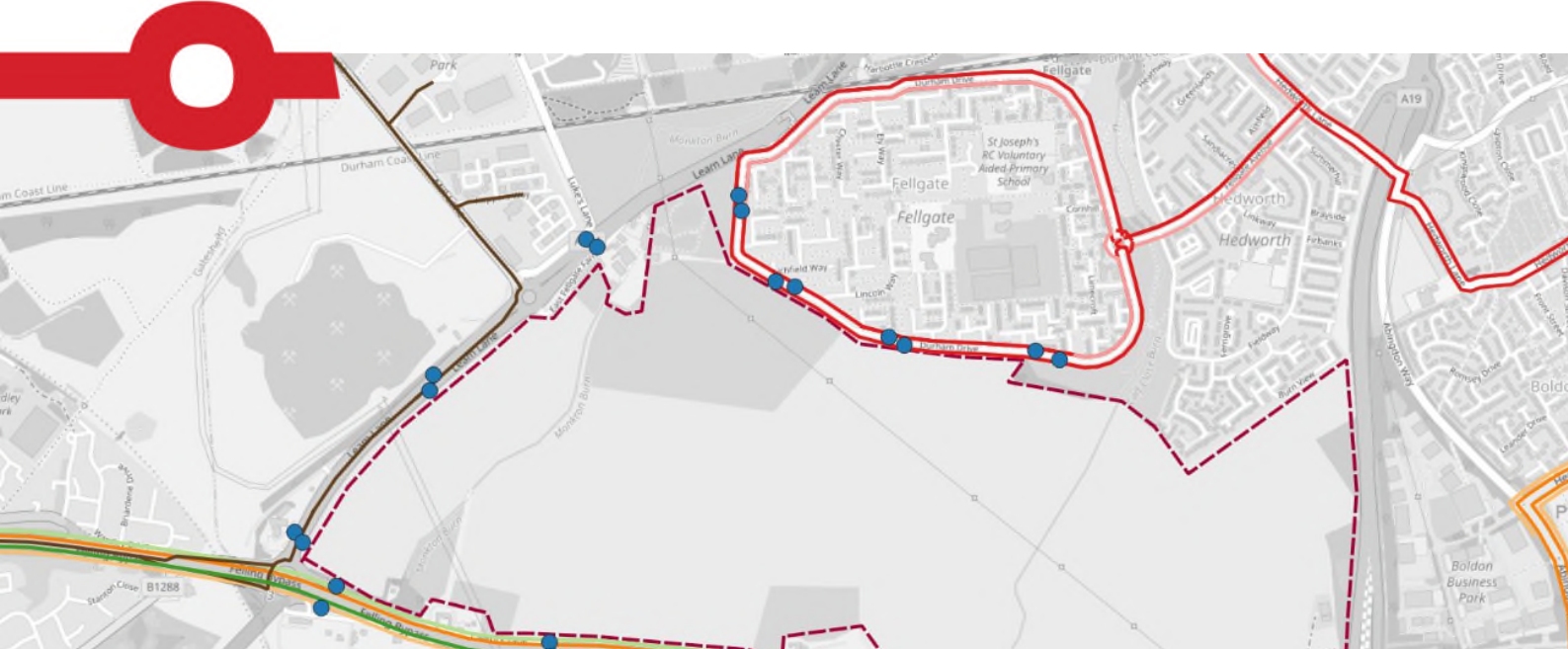


# SUSTAINABLE ACCESSIBILITY REVIEW



South Tyneside Council



# SOUTH TYNESIDE GREENBELT RELEASE

## SUSTAINABLE ACCESSIBILITY REVIEW

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# 1. INTRODUCTION

## Background and Site Location

- 1.1.1 The purpose of this report is to provide a review of the current accessibility of an area of land located south of the existing residential area of Fellgate, west of the A19, north of the A184 and east of the A194. It is approximately 192 hectares in size and currently designated as greenbelt land but has previously been considered for development.
- 1.1.2 It is understood that consideration is being given to developing in the region of 2,000 - 3000 dwellings and accompanying amenities in the area. South Tyneside Council is seeking to understand the potential impact of development on the local and strategic highway network at this location. An understanding of the potential for reducing impacts by facilitating and encouraging sustainable travel choices to and from the site, thereby reducing the number of single occupancy vehicle trips in the peak periods is also sought.
- 1.1.3 This is a review, feasibility and information gathering exercise that lies out with the formal planning application process for which Transport Assessments and Travel Plans would be prepared and submitted. This study will also give consideration to how the parcel of land could be accessed. The outputs of this study may well inform said documents for planning in the future.
- 1.1.4 This study will run in parallel with a study being commissioned by Highways England. The Highways England commissioned study will consider infrastructure improvements that may be required to facilitate the development aspirations with particular consideration around the A194(M)/A184 White Mare Pool junction and the A19/A194 Lindisfarne junction. It will require input from this study with regard to site access options, trip generation and the distribution of trips.
- 1.1.5 It is understood that both of these studies will precede a future tranche of work assessing schemes using established and updated modelling within the Tyne and Wear AIMSUN model, which will assess the efficacy of the draft road improvements with a view to understanding feasibility, the facilitation of future development, and the benefits of each relative to cost.

## Site Location

- 1.1.6 The land considered in this note is situated to the north of the A184 Newcastle Road, between the junction of the A184 with the A194 Leam Lane (known as White Mare Pool Roundabout) in the south-western corner and the junction of the A184 and the A19, (known as Testos Roundabout) in the south-eastern corner. It is approximately 6.5 km west of South Shields, 7km east of Gateshead and 8km from Newcastle upon Tyne.



Figure 1. Site Location



## Format of the Report

1.1.7 Following this introductory section, this note is set out as follows:

- **Section 2** provides a brief overview of national, regional and local policy with specific regard to sustainable transport solutions (including Local Plan and Local Transport Plans);
- **Section 3** considers the impact on traffic flows across the UK throughout 2020 and 2021 and how flows have changed due to the COVID-19 pandemic around the White Mare Pool Interchange which could come under pressure from the land allocation as well as the wider South Tyneside allocations;
- **Section 4** provides a review of the current and potential accessibility of the proposed site allocation including TRACC accessibility mapping for each sustainable travel mode;
  - An overview of potential sustainable travel and transport initiatives that could be implemented to improve accessibility is presented. This includes the consideration of new Metro stations, improved bus routes adjacent to and through the development, and wider improvements to the pedestrian and cycle network;
  - In addition, it is discussed how the beneficial aspects of working from home more and 'travelling less way of life', can be retained (or 'locked-in') as restrictions are eased;
- **Section 5** considers how the development could be accessed via vehicular traffic;
- **Section 6** considers the potential scale of development that could be brought forward within the land considered. A likely trip generation is then calculated for low/medium/high accessibility development scenarios (using TRICS). The likely trip distribution on the local and strategic highway network using the accessibility scenarios is presented.
- Finally, **Section 7** provides a summary of the report with some recommendations for next steps and further work.

## 2. POLICY REVIEW

- 2.1.1 The following section provides a brief overview of national, regional and local policy with specific regard to sustainable transport solutions. Development of the land allocation would need to be undertaken within the context of these documents.

### National Policy

#### 2.1.2 The Transport White Paper (2011)

- 2.1.3 The Government's vision for a sustainable local transport system is set out in the January 2011 Transport White Paper: "Creating Growth, Cutting Carbon – Making Sustainable Local Transport Happen."

- 2.1.4 The White Paper acknowledges that transport provision is essential for economic growth if the Government is to improve the economic deficit which it is currently facing. The Paper also recognises however, that the current levels of carbon emissions from transport cannot be sustained if the nation is to meet its national commitments on climate change as well as creating a safer and cleaner environment in which to live. The Government highlights sustainable transport solutions as a means by which the economy can grow which will also see a positive impact on the local environment.

- 2.1.5 Whilst the Paper outlines the funding options which will be available for sustainable transport schemes, it also recognises that investment alone will not be enough and that help needs to be given to people to ensure that the transport choices they make are good for society. The Paper recognises that it is at the local level where most can be done to encourage sustainable transport modes and implement sustainable transport schemes. Solutions should be developed for the places they serve, tailored for the specific needs and behaviour patterns of individual communities.

- 2.1.6 Within the Paper, sustainable transport considers more than just public transport, walking and cycling schemes and acknowledges that it is not feasible for some trips to be undertaken by these modes. There is therefore a realisation that the car will continue to be an important mode of transport and a focus should be given to making car travel greener through electric and other low emission vehicles.

#### 2.1.7 National Planning Policy Framework

- 2.1.8 The Government's National Planning Policy Framework (NPPF) replaced the majority of previous Planning Policy Statements (PPS) and Planning Policy Guidance Notes (PPG) documents on 27 March 2012. It has subsequently been reviewed and updated in July 2018 and again in February 2019.

- 2.1.9 It sets out the Government's expectations and requirements from the planning system. It provides guidance for local councils to use when defining their own personal local and neighbourhood plans. This approach allows the planning system to be customised to reflect the needs and priorities of individual communities.

- 2.1.10 The NPPF defines the delivery of sustainable development through three roles:

- an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;



- a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and
  - an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.
- 2.1.11 It notes that to achieve sustainable development, these roles should be sought jointly and simultaneously through the planning system.
- 2.1.12 At the heart of the NPPF is a presumption in favour of sustainable development (paragraph 10).
- 2.1.13 Paragraph 108 states “In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:
- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
  - safe and suitable access to the site can be achieved for all users; and
  - any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree”.
- 2.1.14 Paragraph 109 states “development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe”.
- 2.1.15 Paragraph 110 states “Within this context, applications for development should:
- give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
  - address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
  - create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
  - allow for the efficient delivery of goods, and access by service and emergency vehicles; and
  - be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations”.
- 2.1.16 Paragraph 111 states that, “All developments that will generate significant amounts of movement should be supported by a Travel Plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed”.



## 2.1.17 National Planning Practice Guidance

2.1.18 The Government's National Planning Practice Guidance (NPPG) was launched on 6th March 2014 by the Department for Communities and Local Government (DCLG) as a web-based resource.

2.1.19 Within the NPPG, the 'Travel Plans, Transport Assessments and Statements in Decision-Taking' guidance provides advice on when transport assessments and transport statements are required, what they are and what they should contain.

2.1.20 Paragraph 6 sets out the importance of the Travel Plans (TPs), Transport Assessments (TAs) and Transport Statements (TSs) saying that they can positively contribute to:

- "Encouraging sustainable travel;
- lessening traffic generation and its detrimental impacts;
- reducing carbon emissions and climate impacts;
- creating accessible, connected, inclusive communities;
- improving health outcomes and quality of life;
- improving road safety; and
- reducing the needs for new development to increase existing road capacity or provide new roads."

2.1.21 The NPPG recommends that the following key principles should be taken into account whilst preparing TA, TP or TS reports, which should be:

- "proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;
- established at the earliest practicable possible stages of development proposal;
- tailored to local circumstances (other locally determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);
- brought forward through collaborative ongoing working between the Local Planning Authority/ Transport Authority, Transport Operators, Rail Network Operators, Highways Agency where there must be implications for the strategic road network and other relevant bodies. Engaging communities and local business in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities)."

2.1.22 In determining whether a TA or TS will be needed for a proposed development, the NPPG states on Paragraph 13 that "Local planning authorities should take into account the following considerations:

- the Transport Assessment and Statement policies (if any) of the Local Plan;
- the scale of the proposed development and its potential for additional trip generation;
- existing intensity of transport use and availability of public transport;
- proximity to nearby environmental designations or sensitive areas;
- impact on other priorities/strategies (such as promoting walking and cycling);
- cumulative impacts of multiple developments within an area; and
- whether there are particular types of impacts around which to focus on the Transport Assessment or Statement (e.g. assessing traffic generated at peak times)."

### 2.1.23 Decarbonising Transport: Setting the Challenge (DfT, March 2020)

- 2.1.24 The UK is aiming for net zero greenhouse gas (GHG) emissions by 2050. Because of success in the energy and waste sectors, transport became the largest contributor to UK domestic GHG emissions in 2016 and still is now. Transport contributed 28% of the UK's domestic emissions in 2018, they were 4% higher in 2018 than in 2013 and were only 3% lower than in 1990.
- 2.1.25 Within transport, road transport is the largest emitter of GHG. Cars contributed 55% of domestic transport emissions in 2018. The improvements in efficiency of new passenger cars has been largely offset by their increased use and the tendency for people to purchase larger vehicles.
- 2.1.26 In 2018, 94% of car journeys were under 25 miles, with 58% under five miles.  
[Decarbonising Transport: Setting the Challenge](#)
- 2.1.27 A Time of Unprecedented Change in the Transport System: The Future of Mobility (Government Office for Science, January 2019)
- 2.1.28 Since 1996, traffic has increased in England by 38% on motorways, by 15% on A-roads and 12% on minor roads (Department for Transport, 2018, TRA0103<sup>1</sup>), whilst there has been a general decrease in both trips and mileage (per person) for personal transport in rural, semi-urban and urban areas. The DfT predicts, under a range of scenarios, that motorway traffic will rise further by 22-47% from 2015 to 2040 (Department for Transport, 2018I).
- 2.1.29 Over three-quarters (77%) of all households today have access to a car or van, and the proportion of households having access to two or more cars was 35% in 2017 (Department for Transport, 2018, NTS0205). Despite growth in car ownership, car travel per person in England fell between 2002 and 2017 (Department for Transport, 2018, NTS0303), the time spent in cars decreased by 8%, and the number of trips and the distance travelled per person both decreased by 12% (Department for Transport, 2018, NTS0303). However, the total mileage travelled in private cars has increased overall, due to population growth.
- 2.1.30 The average number of people travelling in each car in England is 1.55 people (Department for Transport, 2018, NTS0905). The average UK car is also parked for 96% of time on average (Bates and Leibling, 2012).
- 2.1.31 Since the mid-1990s, the number of trips for most purposes has either fallen or remained constant. The average number of trips per person is falling across all age groups (Department for Transport, 2017, NTS0403), with an average decrease of 13% between 1995 and 2017. In the same period, total distance travelled per person has also fallen (Department for Transport, 2017, NTS0305). Shopping is the reason for the largest number of trips in England, followed by commuting (Department for Transport, 2017, NTS0403).

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<sup>1</sup> All references are taken from the original document



Figure 2. Average number of trips per person by trip purpose, in England, 1995/1997-2017

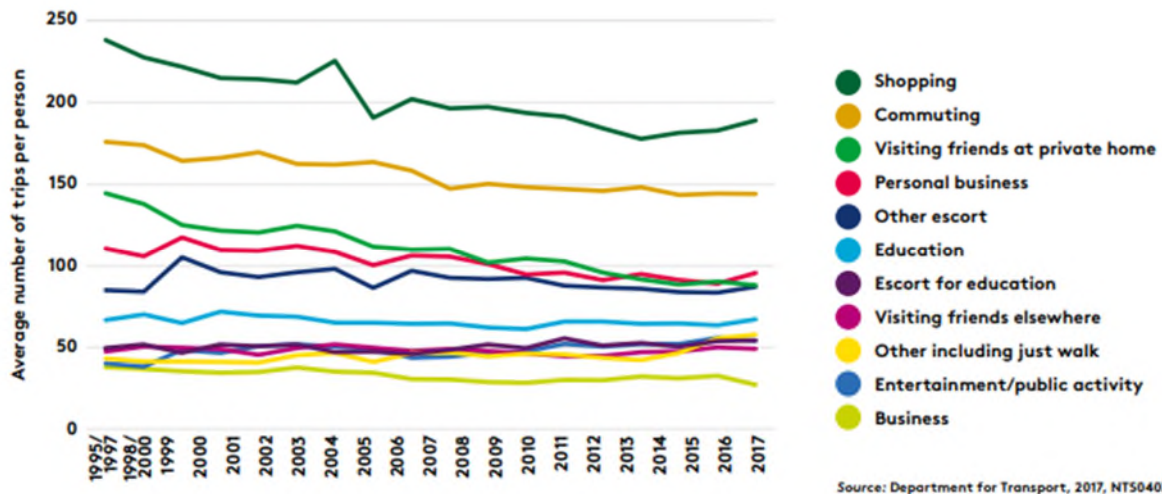
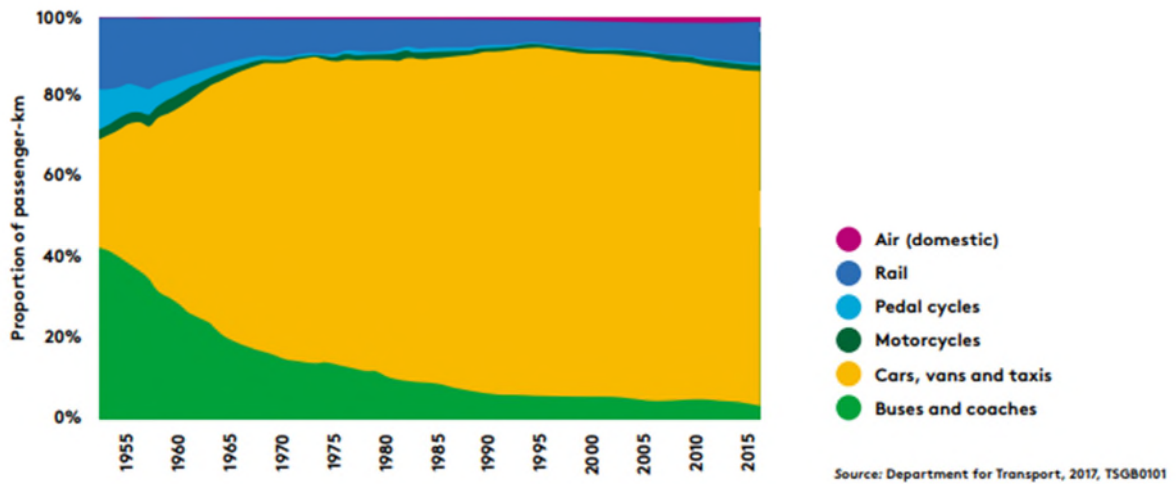


Figure 3. Proportion of passenger-km travelled by transport mode, Great Britain, 1952-2016



2.1.32 The report provides a thought-provoking section (*section 4.3*) that draws on research about how travel behaviour can be changed. It is advocated that “*People make mobility decisions as part of a total hierarchy of wider lifestyle choices*” (Salomon and Ben-Akiva, 1983; Chatterjee and Scheiner, 2015). It refers to well cited ‘windows of opportunity’ that tie into periods of significant personal or life stage changes or due to an external change in transport provision. It outlines the many and complex factors that influence travel behaviour choices, but also suggests that government can intervene through land use and transport policies.

2.1.33 Once shaped by external factors, most personal travel behaviour is then habitual and fits into a wider set of lifestyle decisions, with different time frames and windows of opportunity.

[A Time of Unprecedented Change in the Transport System: The Future of Mobility](#)

### 2.1.34 Future of Mobility: Urban Strategy – Moving Britain Ahead (DfT, March 2019)

2.1.35 This government strategy advocates how the UK should take advantage of a current window to be at the forefront of technological advances in Future Mobility, what steps need to be taken and the risks of not managing these advances properly. This Urban Strategy is the start of the UK’s Future of Mobility programme and sets out the principles which will guide the approach to emerging mobility technologies and services. It includes numerous case studies of where innovative measures have been implemented and trials conducted from demand

responsive shared transport to products that transform a regular bicycle into an electrically assisted bicycle.

[Future of Mobility: Urban Strategy – Moving Britain Ahead](#)

### 2.1.36 TRICS Guidance Note on the Practical implementation of the Decide & Provide approach (February 2021)

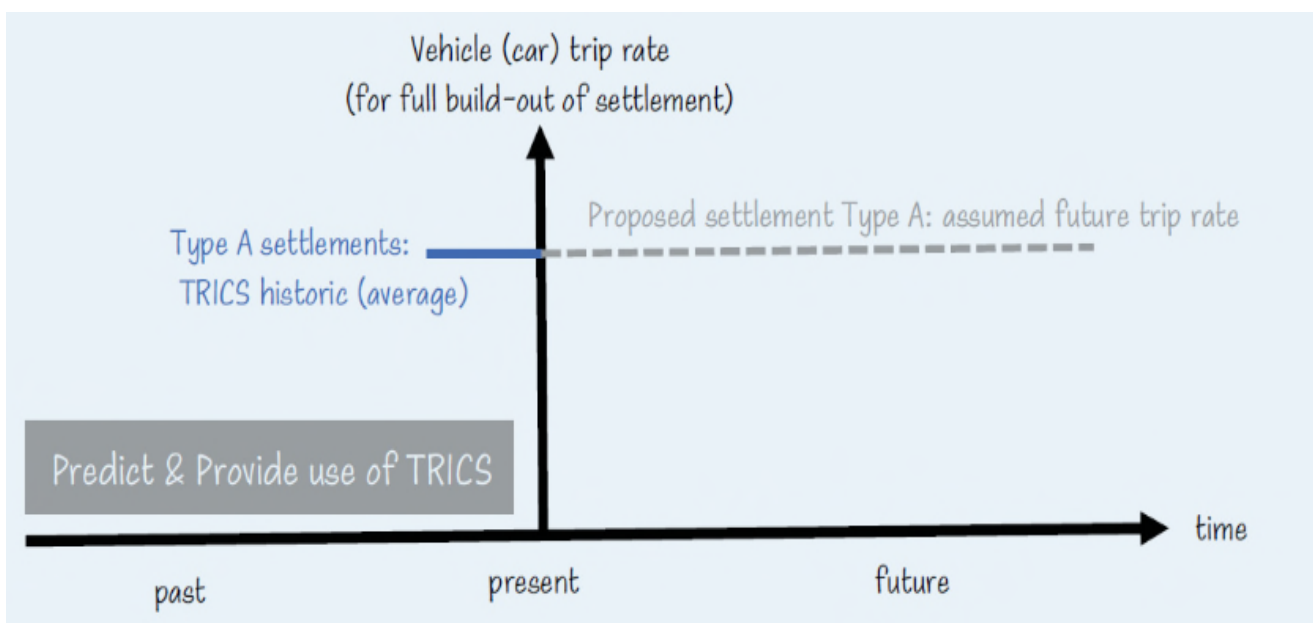
2.1.37 The Predict and Provide (P&P) paradigm, essentially uses past or historical traffic and socio-economic trends to determine the future need for infrastructure. It can be perceived as replicating and reinforcing the status quo. Traditional transport planning has, by default, used the P&P process using these past trends to forecast the transport needs of the future.

2.1.38 The risks associated with sticking with the P&P approach need to be recognised and acknowledged. If we continue to reproduce past transport solutions based on previous travel behaviours, it is inevitable that transport planning will continue to seek to provide infrastructure that meets previously predicted needs, rather than meeting, and indeed shaping, the transport needs of the future. It is important to recognise society's needs and changes in society, to avoid the over-provision of highway infrastructure and the perpetuation of car borne development. The possible consequences, unintended or otherwise, include:

- The potential over-provision of highway capacity which, in turn, can induce motorised traffic (exacerbating efforts to reduce direct CO2 emissions from the transport sector);
- The potential under-provision of walking and cycling infrastructure or public transport services; and
- The risk of planning and developing underutilised or stranded assets.

2.1.39 This approach is summarised in Figure 4.

Figure 4. The Predict and Provide Principal



2.1.40 Decide and Provide is a more recent approach and vision-led, rather than forecast-led and which aims to improve the resilience of planning decisions by taking account of deep

uncertainty about the future. At its heart is deciding on a preferred future and providing a development path best suited to achieving it.

2.1.41 It is an acknowledgement that we need to take decisions and make provisions that respond to the following key drivers including the following:

- The drive towards Net Zero climate change or greenhouse gas emissions.
- Strategies to decarbonise the transport sector, being progressed in the UK's Transport Decarbonisation Plan.
- In terms of health and wellbeing, respond to the UK's obesity crisis (also further compounded by Covid-19) and further promote active travel provision.

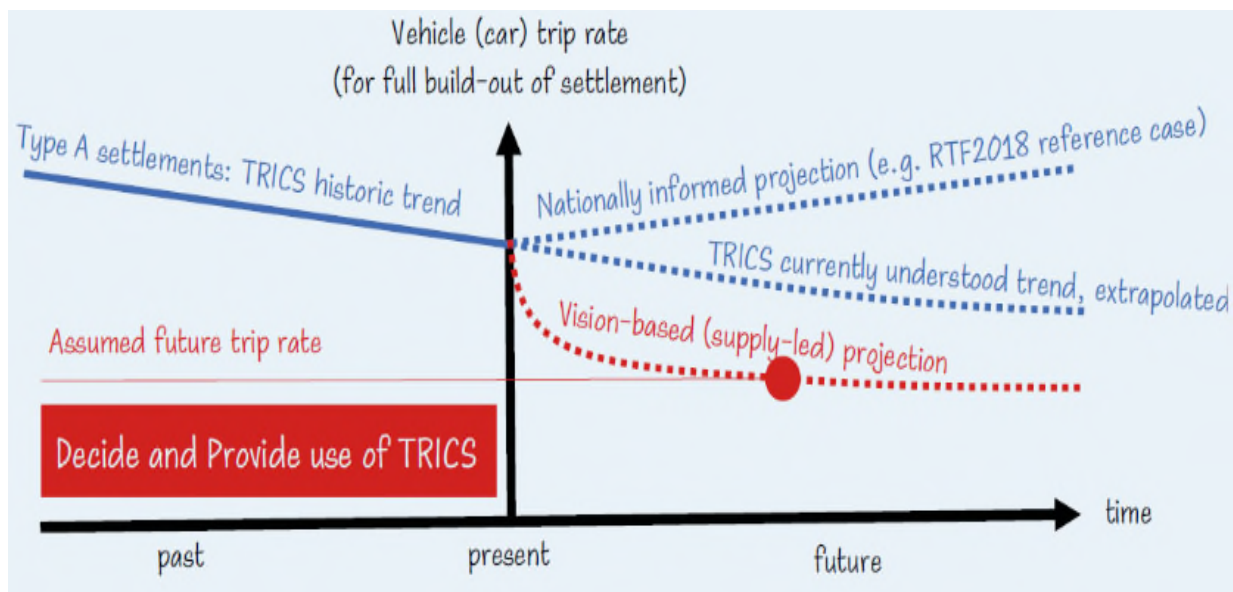
2.1.42 The Decide & Provide approach is still informed by TRICS survey data but instead of predicting one future trip rate, multiple plausible trajectories are considered and then a decision is made on a justifiable projection.

2.1.43 The starting point is to decide on a vision for the development. It is for the Local Authority or the applicant to put forward the vision for the development accompanied by an evidence-led approach.

2.1.44 The vision and its supporting strategy will influence assumptions for trip characteristics and mode splits and consequently, will inform the future assessment year

2.1.45 This approach is summarised in Figure 5.

Figure 5. The Decide and Provide Principal



2.1.46 The extent of scenario forecasting required is a product of a project's scale, sensitivity and complexity and this should be discussed as early as possible during the pre-application scoping process. It is recommended that early preapplication scoping discussions with the relevant local authority and Highways England are held to discuss and agree the need for, and extent of, scenario planning required.

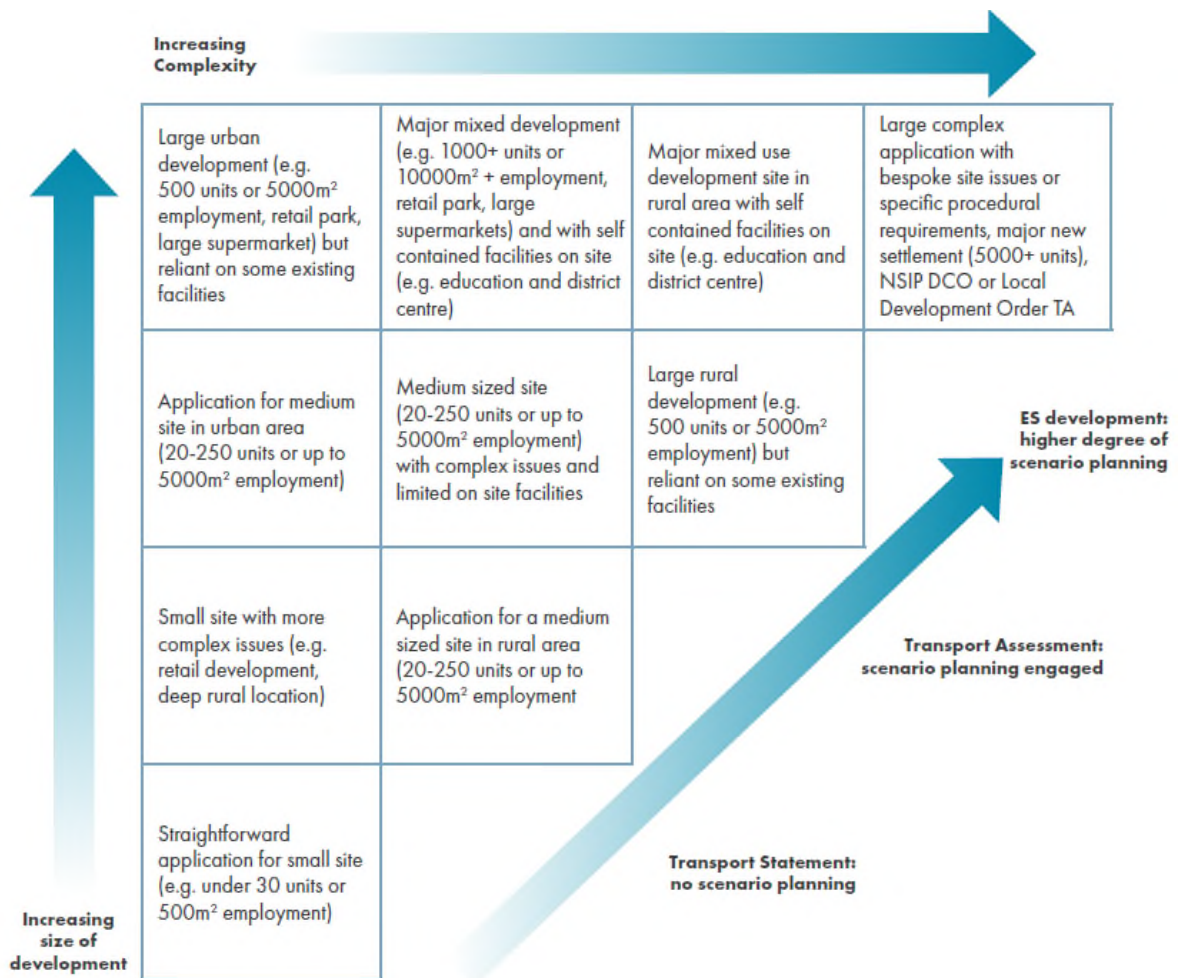
2.1.47 There are three main parameters to consider:



- Scale – The need for scenario planning will increase with the project size. All major planning applications relating to 500+ homes or 5,000m<sup>2</sup> employment/retail floorspace should be supported by scenario planning.
- Sensitivity – The need for scenario planning will also increase with increased project sensitivity, for example in less accessible rural areas or, conversely, highly congested, dense urban environments.
- Complexity – The need for scenario planning will also increase with project complexity.

2.1.48 The scalability matrix, shown in Figure 6, provides an alignment of the Decide & Provide approach to the established concepts of Transport Statements and Transport Assessments. As can be seen by increasing the scale, sensitivity and complexity of a development results in the requirement for increased sensitivity testing.

Figure 6. Scalability Matrix



2.1.49 The number of scenarios needed would be a matter of professional judgement, but the guidance considers that a minimum of three different and plausible scenarios may be considered. Additional scenarios can be produced that take account of the phasing and implementation of the proposed development / development.

2.1.50 A range of potential trip generation arising from plausible future scenarios could be represented as a trip rate fan or “fan of influence”, which illustrates the outcomes of these different scenarios. Plausible scenarios may be typically considered. For example:

- Scenario 1 – using current trip rates taken from TRICS.
  - Scenario 2 – using a historic trend of trip rates taken from TRICS.
  - Scenario 3 – using adjusted trip rates taken from TRICS which take account of increased internalisation, increased working from home and low/zero carbon initiatives.
- 2.1.51 Throughout the process, the trip rates used need to be clearly presented in a Transport Assessment. In particular, this relates to lower trip rates secured by the transport strategy interventions that achieve the vision for the proposed development.
- 2.1.52 These lower trip rates linked to the transport strategy interventions need to be supported by a Monitoring and Evaluation Plan.

## Regional Policy

### 2.1.53 North East Combined Authority Transport Manifesto (2016)

2.1.54 The NECA Transport Manifesto - "Our Journey" – feeds into the emerging Local Transport Plan for the North East Combined Authority and sets out how the Combined Authority intends to deliver on its ambition *“to provide affordable, attractive, reliable, safe, healthy transport choices for businesses, residents and visitors while enhancing the environment”*.

2.1.55 The vision in the North East is for transport to be:

- Accessible: it should run as near as possible to where people live and want to travel to, and where businesses are (or want to be) located. It should be usable by everyone.
- Affordable: as far as possible, transport should be provided at a reasonable cost relative to the journey being undertaken.
- Reliable: the transport network should be one that we can rely on to work, with buses and trains running on time and congestion at a minimum.
- Easy to use: it should be easy to plan safe journeys, find out the best way to travel, pay for tickets and get all the essential information for your journey.
- Safe: the transport network should be, and be seen to be, safe regarding both road safety and crime and fear of crime on public transport. Vulnerable users should be given greater protection than they currently are.
- Sustainable: the attractiveness of sustainable modes of transport should be improved. Transport should not have an adverse impact on the environment.
- Integrated: the transport network should be connected so that people can switch easily between modes, and timings and methods of payment complement each other.

2.1.56 The themes above are expanded into a set of guiding principles, which govern what the North East Combined Authority are trying to achieve:

- Good access to workplaces, services, shops and leisure.
- Well-maintained, climate-resilient and safe transport networks.
- Less road congestion.
- More sustainable travel.
- Growth in economic activity.
- Better air quality and lower carbon emissions.
- Healthy, active lifestyles.
- Efficient use of transport assets.
- Land use planning that favours sustainable travel.



- Equality of opportunity.
- Better cycling network.
- Better connectivity across the UK.
- Expand the public transport network

#### 2.1.57 **The Third Local Transport Plan for Tyne and Wear (LTP3) (2011 - 2021)**

2.1.58 The third Local Transport Plan (LTP3) for Tyne and Wear represents a ten-year strategy (2011-2021) setting out the transport objectives and policies of the region. It is proposed to replace LTP3 in 2021 with a new North East Transport Plan, which is summarised below.

2.1.59 The vision of LTP3 is that:

*“Tyne and Wear will have a fully integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life. Our strategic networks will support the efficient movement of people and goods within and beyond Tyne and Wear, and a comprehensive network of pedestrian, cycle and passenger transport links will ensure that everyone has access to employment, training, community services and facilities.”*

2.1.60 The five goals adopted to meet this vision are:

- To support the economic development, regeneration and competitiveness of the region;
- To reduce carbon emissions produced by local transport;
- To contribute to healthier and safer communities;
- To provide equality of opportunity and access to employment, training, facilities and services;
- To protect, preserve and enhance the natural and built environments.

2.1.61 In order to address economic development and regeneration, the Plan seeks to manage congestion on strategic routes, improve accessibility to key employment and regeneration sites, and improve integration between transport networks. These measures would include the use of UTMC and addressing bus service reliability.

2.1.62 In terms of addressing climate change, the Plan seeks to encourage walking and cycling trips and reallocate road space away from vehicular traffic.

2.1.63 In order to support safe and sustainable communities, the aim of the Plan is to improve accessibility for all, local air quality and noise, and encourage greater active travel, particularly in the design of the built environment and urban streetscapes.

#### 2.1.64 **North East Transport Plan 2021-2035**

2.1.65 The North East Transport Plan was approved by the North East Joint Transport Committee on 16 March 2021. It is the first to cover the seven local authority areas of the two north east combined authorities: The North East Combined Authority (Durham, Gateshead, South Tyneside and Sunderland), and The North of Tyne Combined Authority (Newcastle upon Tyne, North Tyneside and Northumberland). It sets out the region’s transport aspirations up to 2035.



Figure 7. Commuting Movements in the North East

## Travel to work – within, to and from our region

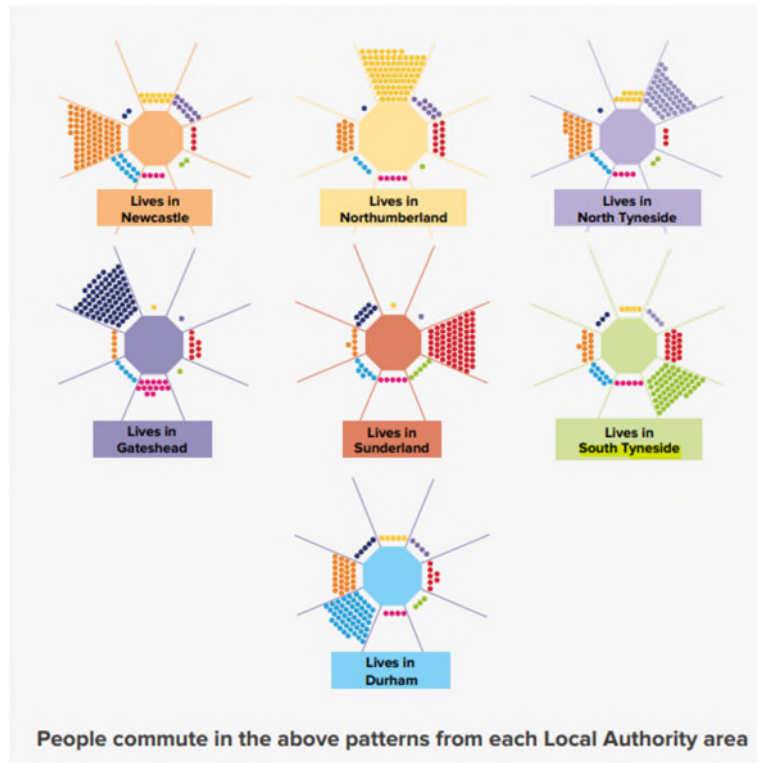
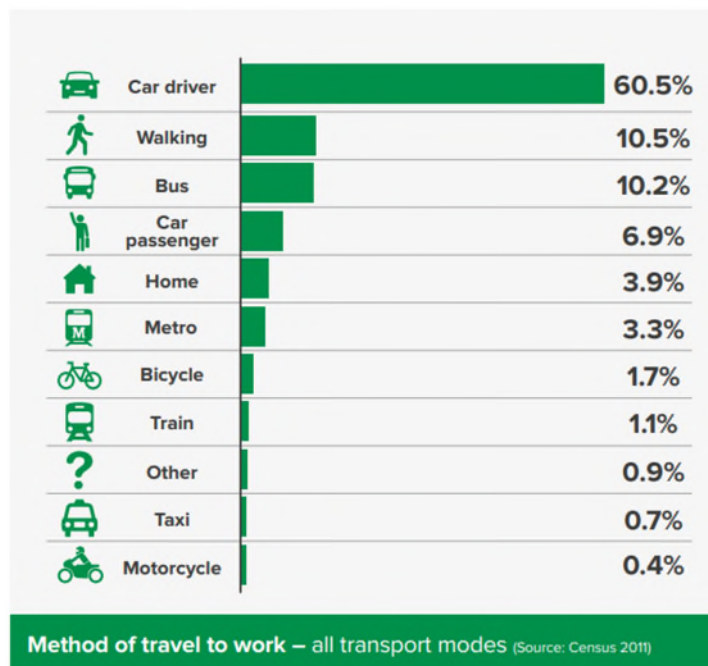


Figure 8. Commuting Modes in the North East

## Travel to work – what transport we use



(Source: North East Transport Plan 2021-2035)

2.1.66 In the North East, 56% of commuting trips are under 10km and 37% under 5km. It is estimated in the report that “27% of the region’s workforce were working from home in late 2020. Post Covid-19 rates of working from home will fall back but certainly not to where they were, and this is likely to be a long-term change.” (p25).

2.1.67 Encouraging KPIs include:

- Sustainable Journeys: Increase the proportion of journeys made by public transport, walking and cycling from a pre-Covid baseline of 33%;
- Accessibility: Increase the proportion of people living within 25 minutes of key employment and education sites (baseline of 45%); and
- Reduce Motor Vehicle Miles from a baseline of 5,077 in 2019.

### **2.1.68 The North East Strategic Economic Plan (North East Local Enterprise Partnership)**

2.1.69 The North East Strategic Economic Plan (SEP), published in 2014 and updated in 2019, is the North East’s plan for a more productive, inclusive and sustainable regional economy. The SEP is focussed on improving employment opportunities and the quality of jobs in the North East, which lags behind other regions of the UK.

2.1.70 Its ambition is to increase the number of jobs in the North East by 100,000 between 2014 and 2024, with 70% of these defined as managerial, professional and technical roles.

2.1.71 In terms of transport connectivity, the SEP has an ambition of improved, greener and more sustainable transport options, including public transport, cycling and walking. It also highlights the role of LTP3 in improving local journeys and the opportunity of TCF in enhancing sustainable transport infrastructure for the region.

### **2.1.72 Strategic Transport Plan (Transport for the North)**

2.1.73 The Strategic Transport Plan (STP) represents the vision of Transport for the North, a statutory sub-national body set-up to drive transport investment in the north of England.

2.1.74 The four objectives of the STP are:

- Transforming economic performance;
- Increasing efficiency, reliability, integration and resilience in the transport system;
- Improving inclusivity, health and access to opportunities for all;
- Promoting and enhancing the built, historic and natural environment.

2.1.75 Among the key areas of delivery highlighted by the STP is investment in local and sustainable transport and, in particular, “targeting short trips that could be undertaken by public transport, cycling or walking”. It is recognised that investment is required at a local level, as well as at a pan-Northern level, in order to deliver change for the ‘whole journey’. Investment in and delivery of the Transforming City Centre scheme is an example of local and sustainable transport investment that will protect the built environment, increase network efficiency, and improve inclusivity, health and access.

### **2.1.76 The Northern Powerhouse Strategy (HM Treasury)**

2.1.77 The Northern Powerhouse Strategy sets out how the national government will work with local stakeholders to address key barriers to productivity in the region. It states that the government will:





- invest in transport infrastructure to improve connections between and within the North's towns, cities and counties;
- work with local areas to raise education and skills levels across the North;
- ensure the North is an excellent place to start and grow a business;
- ensure the Northern Powerhouse is recognised worldwide as an excellent opportunity for trade and investment.

### **2.1.78 Nexus and NECA - Metro and Local Rail Strategy (2016)**

2.1.79 The expansion, improvement and integration of local rail and Metro services is fundamentally important to the economic growth plans of the North East and is reflected in the Transport Manifesto's ambitions for rail services. The North East Devolution Agreement commits to:

*"The Combined Authority producing a business case, for consideration by Government, for investment in the Metro network to 2030, including the upgrade of the Metro fleet, potential expansion, and future integration of the Metro with the rail network".*

2.1.80 The strategy outlines plans to enable Metro and local rail to further develop the economy of the NECA area by providing reliable, sustainable transport for people to use to get to work, education, healthcare and leisure facilities. By providing centre-to-centre links avoiding highway congestion, the network will help to redefine the mental map of the region and encourage wider journey to work patterns and travel horizons.

2.1.81 Investment in the Metro is essential and three key developments have been identified to allow it to prosper:

- A new fleet of trains;
- Essential infrastructure renewals to ensure that the network operates reliably and efficiently;
- Closer integration between Metro and regional rail to extend the scope and reach of the network.

2.1.82 A statement is strongly made about the need for land-use policy and the future development of the Metro and local rail network to be "mutually connected at all stages of development. The permanence and visibility of rail-based transport should be a powerful influence favouring the sustainable development of locations within easy walking distance of stations. Where major new development is proposed, wherever possible it should be located within reach of existing corridors; where this cannot be achieved then consideration needs to be given as to whether Metro or local rail is the best sustainable accessibility solution and, if so, how it can be accommodated and funded as part of the development process."

2.1.83 New routes to and from South Tyneside are also discussed including potential to use an existing single-track freight alignment for new Metro services between Tyne Dock and Brockley Whins to the east of the proposed land allocation. The line currently serves the Port of Tyne from Boldon East and West Junctions, east of Brockley Whins Metro.

### **2.1.84 North East Transforming Cities Fund Bid**

2.1.85 The aim of the Transforming Cities Fund (TCF) is to drive up 'productivity and spread prosperity through investment in public and sustainable transport in some of the largest English city regions. The Fund will be focused on intra-city connectivity, making it quicker and easier for people to get around – and access jobs in – some of England's biggest cities.'

2.1.86 In the March 2018 Call for Proposals, it is stated that TCF will seek to rectify the issue of city centre investment not benefiting outlying areas due to poor transport links. It is also noted



that there has been a decline in bus patronage in England, limiting access to opportunities to those without access to a car.

2.1.87 Another issue relates to productivity, which on a national level continues to lag behind other countries with significant differences between cities and poor performance compared to London. The Industrial Strategy seeks to address this, and public transport investment through TCF will contribute towards this.

2.1.88 Alongside the aim of improved public transport connectivity, TCF also seeks to tackle a number of other key policy priorities such as:

- Improving skills and apprenticeships uptake
- Unlocking and delivering housing
- Tackling poor local air quality and carbon emissions
- Improving access to employment

2.1.89 Encouraging an increase in journeys made by low carbon, sustainable modes is also a key objective of TCF.

### **2.1.90 Cycling and Walking Investment Strategy (Department for Transport)**

2.1.91 The Cycling and Walking Investment Strategy was published in 2017 and sets out an ambition to make cycling and walking the natural choices for shorter journeys, or as part of a longer journey. By 2040, the ambition is to deliver:

- Better safety – 'A safe and reliable way to travel for short journeys';
- Better mobility – 'More people cycling and walking - easy, normal and enjoyable';
- Better streets – 'Places that have cycling and walking at their heart'.

2.1.92 The objectives of the strategy are that by 2020 we will:

- increase cycling activity, where cycling activity is measured as the estimated total number of cycle stages made;
- increase walking activity, where walking activity is measured as the total number of walking stages per person;
- reduce the rate of cyclists killed or seriously injured on England's roads, measured as the number of fatalities and serious injuries per billion miles cycled;
- increase the percentage of children aged 5 to 10 that usually walk to school.

### **2.1.93 Bus Back Better – National Bus Strategy for England (Department for Transport)**

2.1.94 Bus Back Better: The National Bus Strategy was published by the Department for Transport on 15<sup>th</sup> March 2021. The strategy sets out a vision for bus services in England with cheaper and simpler fares, quicker and more reliable journeys and improvements to timetables all promised. £3bn has been allocated by Government to help drive these outcomes.

2.1.95 In practical terms, the Strategy provides a significant financial incentive to follow one or both courses of action made available to the bus industry by the 2017 Bus Services Act:

- An enhanced partnership – where local transport authorities and bus operators agree a detailed partnership plan (a Bus Service Improvement Plan) that is refined through consultation. A series of partnership schemes are built into the final agreed partnership plan.



- Bus franchising – where local transport authorities take greater control over bus services and fares, contracting with bus operators to deliver timetables to a good standard.

2.1.96 As part of the strategy, the Department for Transport also held a consultation on when to send the sale of new diesel buses to drive forward the decarbonisation of public transport, which closed in April 2021.

### **2.1.97 North East Region Strategic Outline Business Case – Transforming Cities Fund Tranche 2 (North East Combined Authority, North of Tyne Combined Authority)**

2.1.98 The Strategic Outline Business Case was prepared for the North East Joint Transport Committee to support its bid to the TCF. The North East TCF vision is:

*“More sustainable connectivity, and more mobility, making sustainable transport the natural choice for people moving around our city region, banishing congestion and its polluting effects, and improving air quality and public health.”*

2.1.99 The vision is aligned to the aims and objectives that is sought to be achieved by the TCF.

2.1.100 The preferred programme of schemes was set out in five thematic packages:

- Transforming bus corridors
- Transforming cycling and walking corridors
- Transforming city centre gateway
- Transforming park and ride
- Delivering Metro and local rail strategy

2.1.101 The key economic priorities under the TCF are to support economic growth by improving capacity for commuting trips, improving access to employment centre and delivering sustainable links to development sites as well as delivering wide social and economic benefit for the community through transport investment.

### **2.1.102 Active Travel Fund Tranche 1 and 2**

2.1.103 Recognising the importance of walking and cycling during the pandemic, the Government announced the Active Travel Fund in May 2020, which is being delivered in two tranches.

2.1.104 The objectives of the fund are to provide more space to pedestrians and cyclists, mainly through the reallocation of road space through a mixture of temporary and permanent schemes. The schemes installed enable social distancing to be maintained, make walking and cycling safer, more comfortable, and more viable methods of travel, as well as encouraging people to maintain these habits over the longer term. The North East JCT was awarded £2.2 million in Tranche 1 to deliver pop-up cycling and walking infrastructure.

2.1.105 In November 2020, the Secretary of State for Transport confirmed the region is to be awarded a further £9 million to deliver Active Travel Fund Tranche 2 measure. The schemes will build on the success of the Tranche 1 schemes and provide permanent reallocation of road space to pedestrians and cyclists, continuing to make it safer and easier for people to get around our region on foot or by bike. The programme is intended to be complete by Spring of 2022.

2.1.106 South Tyneside Council has been identified for circa £600,000 to deliver four active travel corridors.

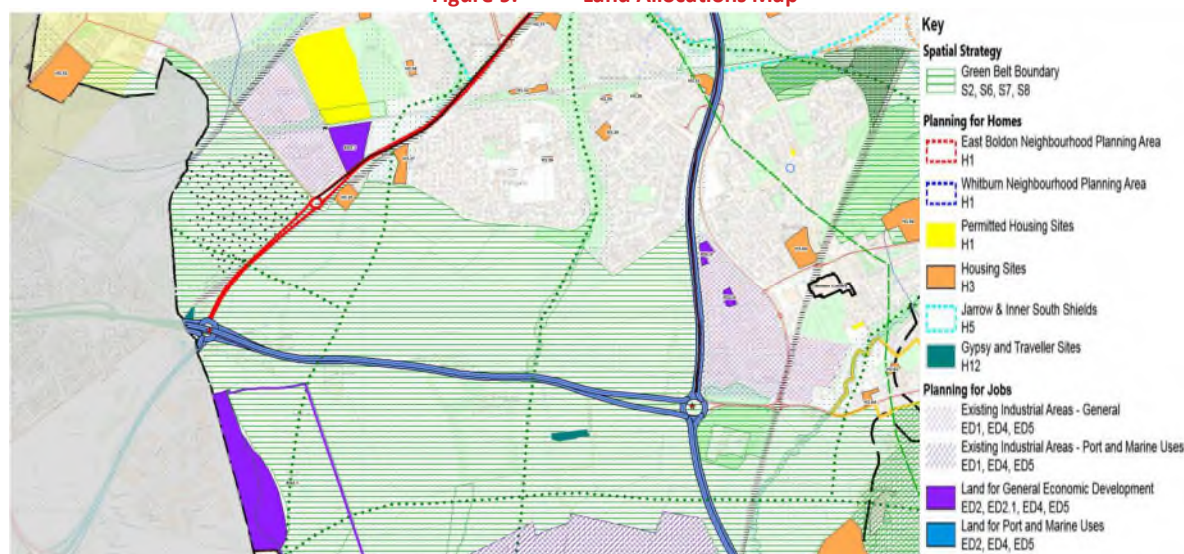


## Local Policy

### 2.1.107 South Tyneside Local Development Framework (LDF) - Core Strategy (2007) and the Emerging Local Plan (Pre-publication Draft, 2019)

2.1.108 The parcel of land considered in this note is designated as 'Green Belt Boundary' in the Pre-Publication Draft Local Plan, previously Greenbelt in the adopted development plan (Core Strategy 2007 and Site Allocations 2012). The Council is preparing a new Local Plan which will need to meet the Borough's development needs over the next 15 – 20 years. A consultation on the Local Plan took place between August and October 2019. As part of the new Local Plan, the Council accepts that it will be necessary to review historic Green Belt boundaries and meet its development needs in accordance with the NPPF.

Figure 9. Land Allocations Map



(Source: Emerging Local Plan (Pre-publication Draft, 2019))

### 2.1.109 Travel Plans Supplementary Planning Document (SPD7) (April 2010)

2.1.110 This SPD was adopted in 2010 and sets out the following guidelines:

- What a Travel Plan is;
- The background and wider policy context for travel planning;
- When a development is likely to require the submission of a Travel Plan;
- The essential requirements for the content of all Travel Plans;
- What type of Travel Plan is appropriate and the process to follow for each;
- How the Travel Plan should be monitored and reviewed; and
- Advice on how the Travel Plan should be secured and implemented.

2.1.111 In particular, an area-wide approach to Travel Planning is advocated, referred to as a 'cluster approach' and/or the preparation of Framework Travel Plans for larger mixed-use developments.

### 2.1.112 South Tyneside Local Cycling and Walking Investment Plan (LCWIP)

2.1.113 Public exhibitions were held between November 2019 and March 2020. An online, map-based consultation tool called Commonplace was used to collate comments and feedback during this period. Users were initially asked "How would you improve cycling and walking routes in South Tyneside?". A follow-up online consultation was used to ask "Where do we need more

space for cyclists and pedestrians?" during May 2020  
<https://stynesidewip.commonplace.is/about>.

2.1.114 Some of the comments made on the online consultation map near to the land allocation are outlined below. Links to a relatively new development nearby are heavily criticised. Lessons can be learned from what has or hasn't worked elsewhere.

- A194/B1036 roundabout: "There needs to be a pedestrian crossing point over the A194 at this point now The Maples is complete. There is no bus servicing The Maples, so residents must walk down to Fellgate and cross A194 at the Fellgate flyover to catch a bus, or risk their life crossing the dual carriageway."
- A194/Luke's Lane: "Path from the A194 just stops and you have to. Walk or cycle along the road to get to The Maples Estate, no. Street lighting makes this very dangerous"
- Fellgate Metro station: "Loads of cyclist use this path daily and people using the metro have fallen off their bike or tripped over the pavement as some of it is raised also when there is rain the route gets blocked by water in the middle and makes it absolutely impossible to walk or cycle down this path"
- A184: "Develop a cycle route alongside the A184 between Whitemare Pool and Testo's Rbt."
- "Upgrade the footway on north side of A184 and make it a safe cycling route to link up to the Gateshead network and the network through Boldon. This will become more important as the IAMP comes online."
- "Formal crossings are needed across the A184 and ideally Abingdon way. This is an important point at the southern end of the new Tyne tunnel route. the Roundabout and exits are very wide and traffic moves quickly when it's not busy."
- "The A184 is now the only route available for cycling between Sunderland and Newcastle, especially since the close of Follingsby lane and the development of IAMP. There are no cycle provisions. Consequently the main highway is the only place left to cycle in 70mph traffic. Worrying for cyclists and frustrating for motor vehicles."
- A194/A184 Whitemare Pool Roundabout: "Cyclists and pedestrians take a massive risk when crossing the northbound carriageway because there is no user-controlled crossing and vehicles come tearing round from under the bridge or down the 'on ramp' at very high speeds. It is especially dangerous between 1600 to 1900 hours when traffic volumes are very high with few breaks in the traffic. This crossing needs user-controlled lights to stop vehicles to allow a safe crossing. As this is the main cycle route from Sunderland and South Shields to Gateshead if STBC is serious about encouraging active travel then making this crossing safe is essential."
- "The crossing at Whitemare Pool is a death trap. There needs to be a crossing installed as per Testo's roundabout."
- A194: "The cycle path all the way along Leam lane to white mare pool is uneven, full of pot holes and the cycle path around the shell garage has raised curbs! The curbs need to be dropped to allow cyclists to traverse these roads safely. I would also suggest installing a give way to cars for the cycle path on the exit to the shell garage and paint lines for the cycle path across this section, giving cyclists priority over exiting vehicles."
- "Provide a traffic free route along the north side of the A194 between Whitemare Pool and Lindisfarne Rbt using Roman Road between York Ave, & A19. Provide this for commuting cyclists & leisure cycling."
- Hedworth Lane/Abingdon Lane: "Road users are by-passing the major roads to cut through the estate. Road users are running red lights. The only path alongside this flyover is very narrow, and pretty scary at times with a young child on foot. It's very

busy and noisy. Ideally the path would be widened, or, a pedestrian bridge further south, linking the Jarrow and Boldon estates would be safer for pedestrians and cycle users.”

- “Although the new cycling route to Tyne Tunnel is being built there are still issues with this junction. It needs a toucan across Abingdon way, and ideally a cycle/shared path around and along Cotswold lane. If you're heading north and crossing at the end of Hedworth lane, the path is barely wide enough for someone else to pass. A cyclepath along east side from Cotswold lane to an improved crossing across Abingdon way would be the ideal solution.”
- “Parking problems and too much traffic around Hedworth Lane Primary School”.
- “Hedworth lane could be closed to through traffic. Alternative routes are available which would barely inconvenience drivers. Due to the narrow bridge there is no pavement.”





## 3. COVID TRAFFIC FLOW ANALYSIS

### 3.1.1 Introduction

3.1.2 The COVID-19 pandemic has had a unique effect on traffic flows across the UK throughout 2020 and 2021; ranging from the first lockdown resulting in a significant reduction in traffic flows in March 2020, to anecdotal evidence that the traffic flows have normalised back to pre-pandemic levels or indeed higher due to the accessibility of public transport and public perception of safety when using it.

3.1.3 The following section aims to provide an evidence base of how flows have changed due to the COVID-19 pandemic around the White Mare Pool Interchange. Development of the land allocation would need to be undertaken within the context of this information.

### National impact

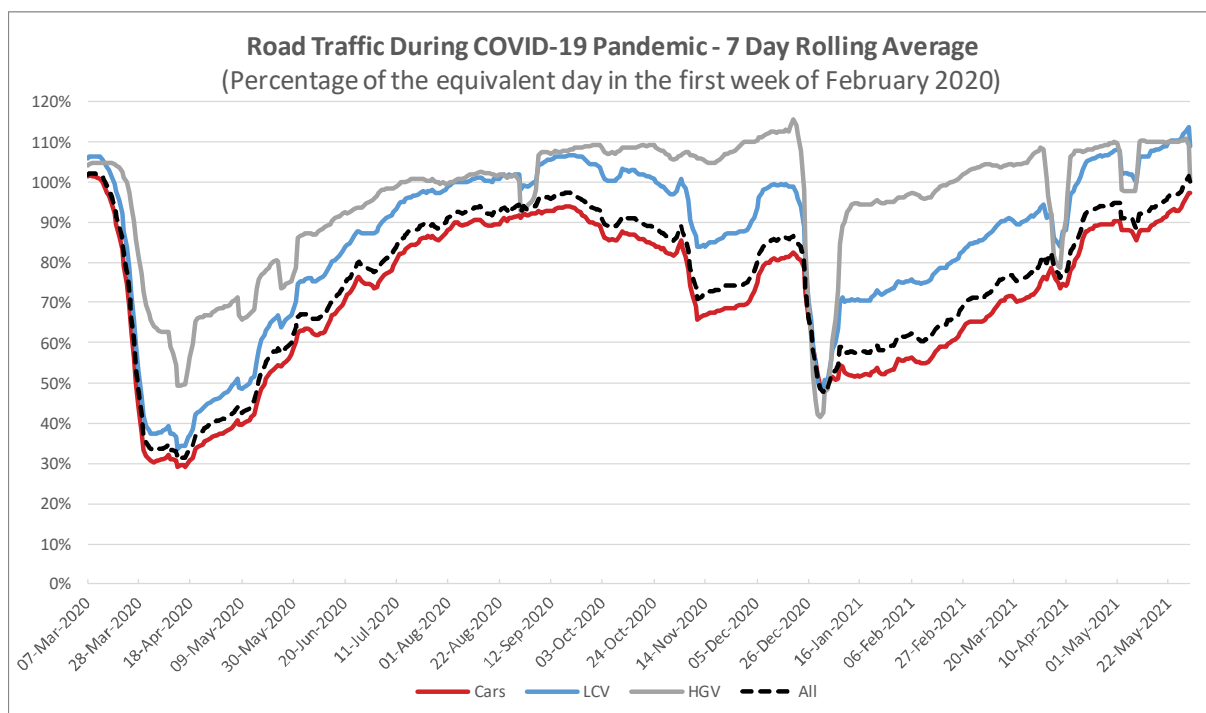
3.1.4 The use of the transport network has been under observation by the government during the COVID-19 pandemic.

3.1.5 The COVID-19 transport data methodology note states that, for road traffic data (encompassing cars and taxis, light commercial vehicles (LCVs) and heavy goods vehicles (HGVs)), the analysis is based on approximately 275 automatic traffic count sites across Great Britain, which are used for DfT's Quarterly Road Traffic National Statistics series to estimate traffic change. Hence the samples of automatic traffic counters are stratified by area, road classification, and road management and have been designed to be representative of national traffic.

3.1.6 The note also states that daily road traffic estimates are suitable as an indication of traffic change rather than actual traffic volumes. The data provided is indexed to the first week of February and the comparison is to the same day of the week, i.e., 100 would mean that traffic is the same as the equivalent day in the first week of February. Over the course of the year, normal traffic can vary by +/- 20%.

3.1.7 The graph below illustrates how traffic levels have changed nationally for cars and taxis, LCVs and HGVs compared with the first week in February 2020.





**Figure 10. Road traffic comparison during COVID-19 - 7 day rolling average, (DfT, 2020)**

- 3.1.8 Figure 10 shows the rolling 7-day average, to smooth out weekly fluctuations and anomalies (e.g. bank holidays).
- 3.1.9 Firstly, Figure 10 shows the trend that HGV vehicle flows on average drop less than LCVs and cars. At their lowest, flows were at approximately 50% of the baseline February 2020 flows. From July 2020, HGVs have mostly been at the same level as the baseline February 2020 flows, or higher. In the absence of previous year data, it is uncertain whether this flow has returned to what would be classed as ‘normal’. However, it is assumed to be in the normal range, as DfT stated that that traffic levels typically vary by  $\pm 20\%$  throughout the year. The 7-day averages in May 2021 show HGV flows to be at 110% of the February 2020 baseline level. The HGV flow shows no impact resulting from the second national lockdown (5th November-2nd December) but do show a sharp dip around Christmas – this could be due to the holiday period rather than Covid.
- 3.1.10 LCVs show a similar level of traffic reduction to cars in the early lockdown period. However, the flows rebound at a faster rate, as by mid-to-late July, they have returned to near the baseline level. LCV flows remained close to the baseline until the onset of the second national lockdown, which saw flows drop rapidly to approximately 85% before rebounding slightly. The 7-day average between 24th-30th November 2020 shows LCV flows to be at 88% of the February baseline level. LCVs also show a steep drop to around 50% around Christmas with a gradual recovery through the spring of 2021, reaching February 2020 levels in mid-April. There appears to be a continued increase through May 2021, with higher numbers of LCVs than in February 2020.
- 3.1.11 By comparison, car usage is much slower to rebound and remains consistently under the February baseline level. In 2020 between mid-August and mid-September, the rolling average remained constant at 90-95%. At the start of the second national lockdown (5<sup>th</sup> November), numbers dropped again to around 50% (compared to 30% in the first lockdown). There has been a consistent gradual increase from then until the latest available data at 2<sup>nd</sup> June 2021, when the 7-day rolling average has reached 97% of February 2020 levels.



- 3.1.12 These patterns provided by DfT provide a representation of overall traffic levels, measured over a 24-hour period across the country. Later sections of this note provide a representation focussed on the study area, and taking into account the changes in traffic flows through the day.

## **White Mare Pool Interchange**

### **3.1.13 Data source**

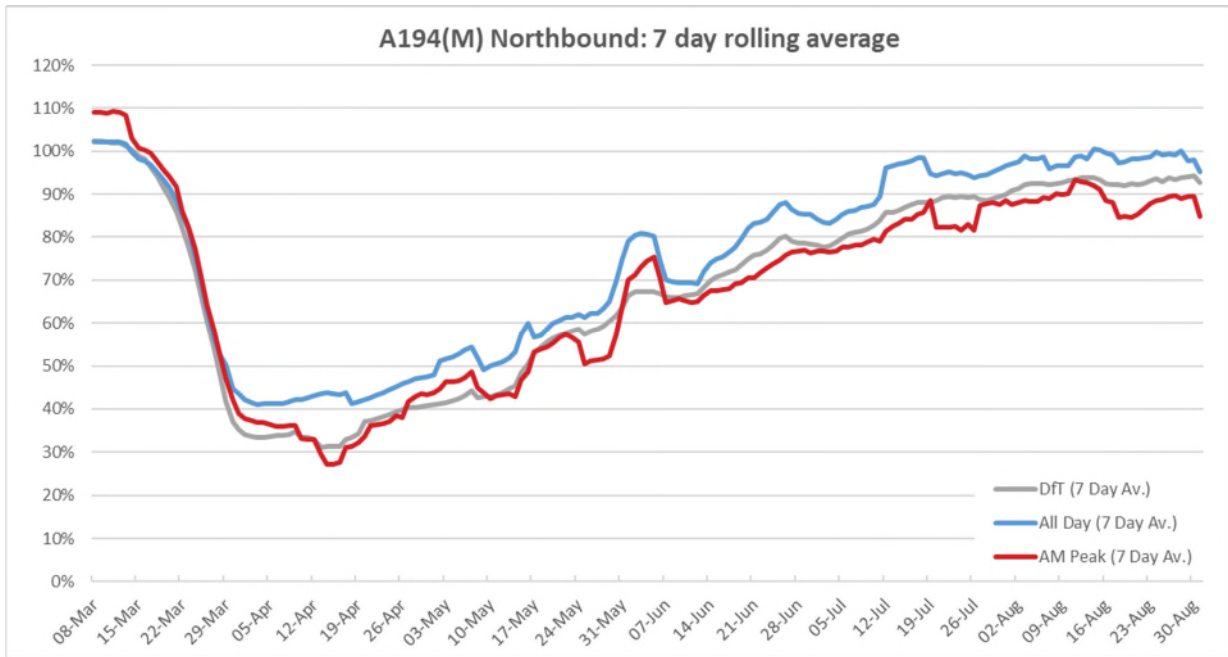
- 3.1.14 The traffic data used in this note was taken from Tyne & Wear's Traffic and Accident Data Unit [TADU] sites surrounding the White Mare Pool Interchange. At the two sites on the A184, only pre-Covid data was available. Analysis is provided here for the A194 northbound, north of the interchange, and the A194(M) northbound, south of the interchange.
- 3.1.15 Highways England's TRIS database was also checked, but none of the TRIS sites in the vicinity of White Mare Pool recorded data for the period under consideration.
- 3.1.16 The extracted data was used to investigate:
- How traffic flows on these links compare to the national trend presented in the previous section, to identify whether traffic flows on these pressurised sections of the network have followed the national trend.
  - How traffic flows across the day compare between a post full lockdown day in 2020 and an equivalent pre-Covid day in a previous year, to identify whether traffic has returned to pre-Covid levels in some periods and not others.

## **A194(M) northbound**

### **3.1.17 Comparison with the national trend**

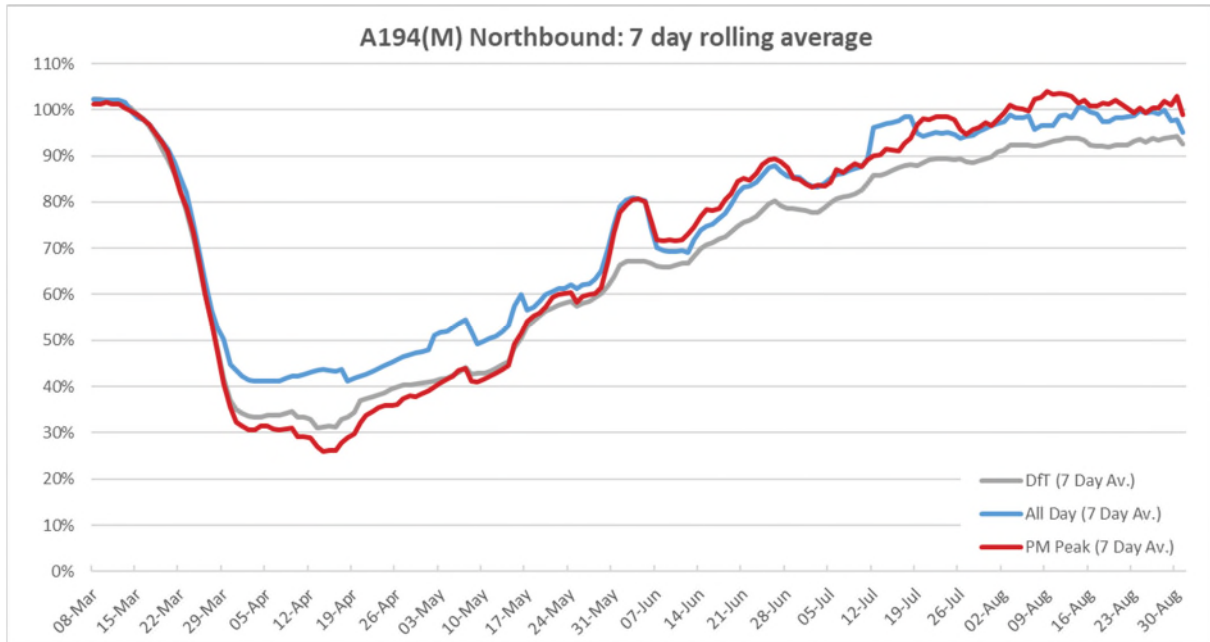
- 3.1.18 The first set of comparisons for the White Mare Pool Interchange uses TADU data from the A194(M) northbound, where data was available due to this location having data for 2019, and for 2020 up to the end of August. For consistency with the national DfT results, the comparison uses the first week of February.
- 3.1.19 Figure 11 shows that all-day traffic flows on the A194(M) northbound did not drop as severely during the first lockdown as the national average. The proportionate flow (% of February 2020 level) remained around 5-10% higher than the national average for as long as data was available (to August 2020). The AM peak flows dropped to around 40% of the pre-Covid level in the first lockdown, similar to the national 24-hour pattern. In July and August 2020, the morning peak traffic had recovered less than the all-day flows.
- 3.1.20 The sharp peak in the AM peak flows (red line) in early June 2020 was due to traffic management associated with the Testo's scheme. The A184 between White Mare Pool and Testo's was closed, leading to diversion impacts at the A194(M).





**Figure 11. AM peak traffic (all vehicles) on the A194(M) northbound**

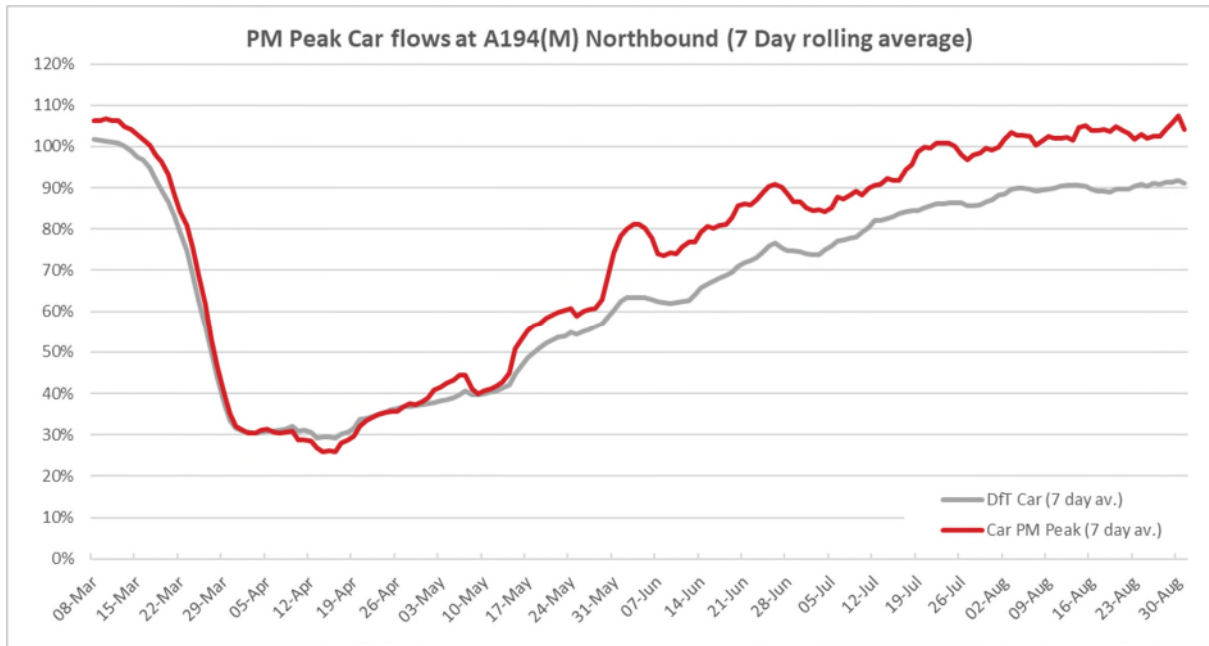
3.1.21 Figure 12 shows that the PM peak flows dropped by a similar proportion to the 24-hour national average at the start of lockdown, but from June 2020, the PM peak has recovered by around 5% more than the 24-hour flows at the same location and 10% more than the national 24-hour average. From May, the PM peak flows (as a proportion of pre-Covid flows) remain above both the DfT data and the all-day flows. Throughout August 2020, the PM peak flows remain consistently above the baseline period (first week in February).



**Figure 12. PM peak traffic (all vehicles) on the A194(M) northbound**

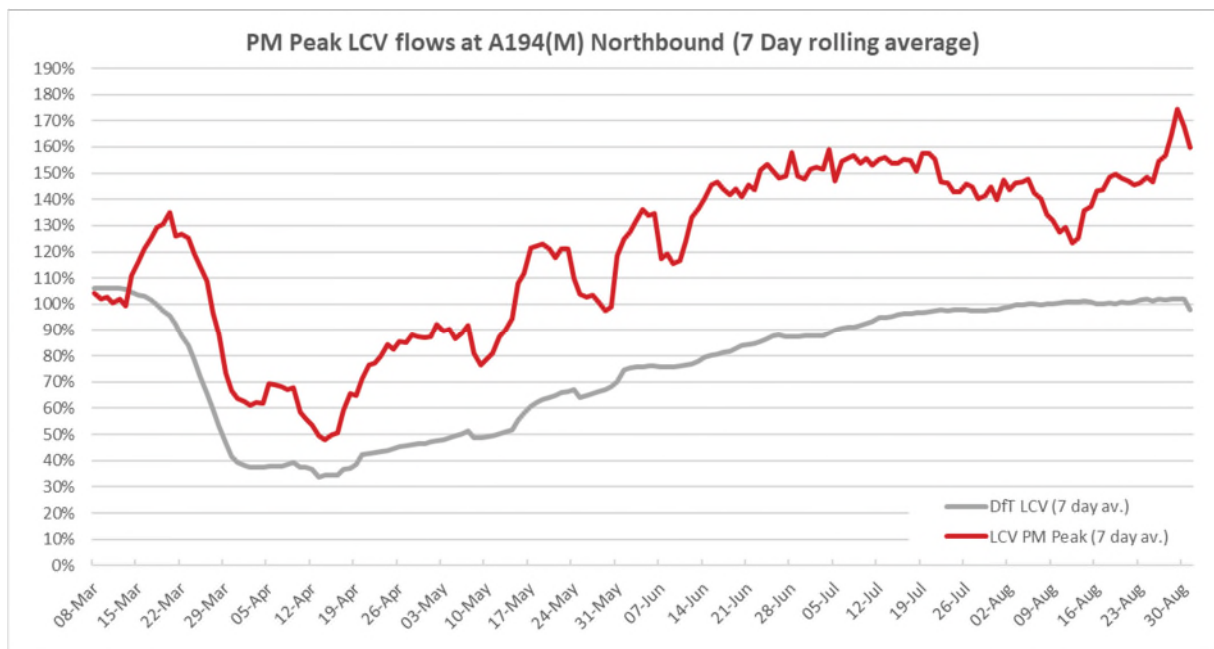
3.1.22 The figures below provide additional investigation by vehicle type (car and taxi, LCV and HGV) in the evening peak compared with the national data. The afternoon peak has been considered as this period has a faster recovery than the all day and DfT data.





**Figure 13. PM peak traffic (cars) on the A194(M) northbound**

3.1.23 Figure 13 shows that for cars, the drop in flow is similar to DfT data during the initial lockdown (March-May) but from May 2020, the rate on recovery is faster than the DfT average. By August 2020 the PM peak hour flow is slightly higher than the February 2020 baseline. This may be due to reduced upstream constraints or reduced peak spreading.



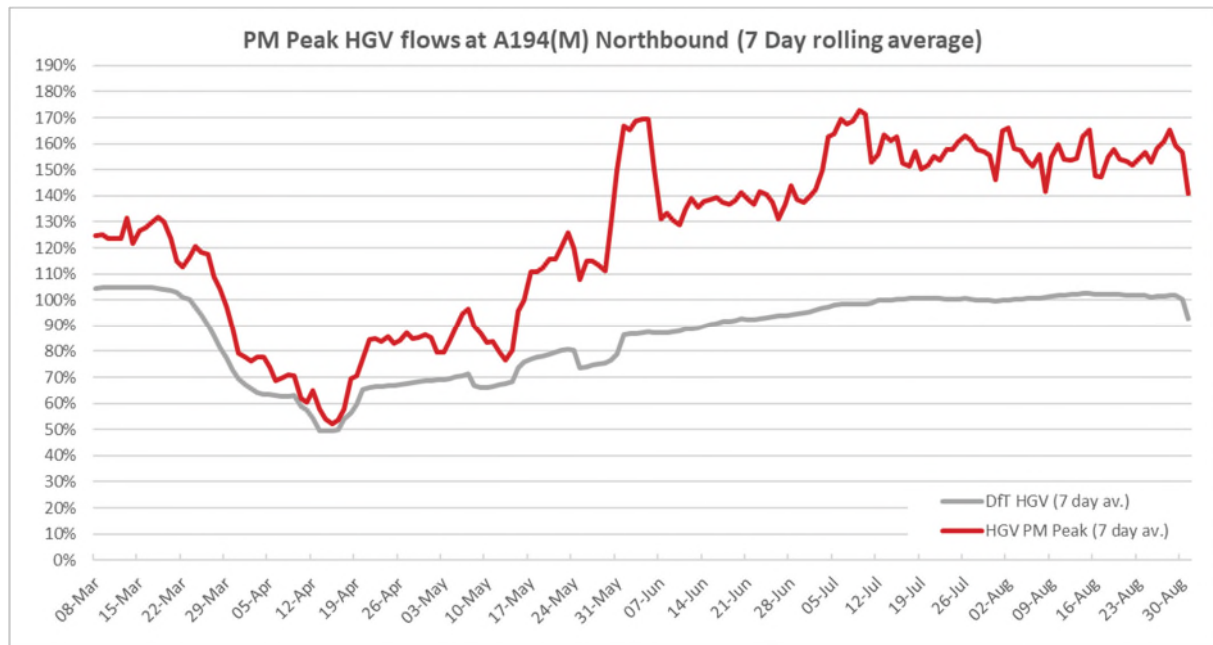
**Figure 14. PM peak traffic (vans) on the A194(M) northbound**

3.1.24 As shown in Figure 14, the LCVs show a different pattern than observed with cars. Nationally, LCV flows dropped by around 40% to April 2020 before gradually increasing to August 2020 when LCV traffic had fully recovered.

3.1.25 LCV flows at the A194(M) northbound did not drop in the early lockdown – in fact there was an increase in LCV flows for the first couple of months. There was a dip in April/May 2020, but since then, LCV flows at this location in the PM peak have grown above the baseline level, with around 50% more vans in the PM peak hour than the February 2020



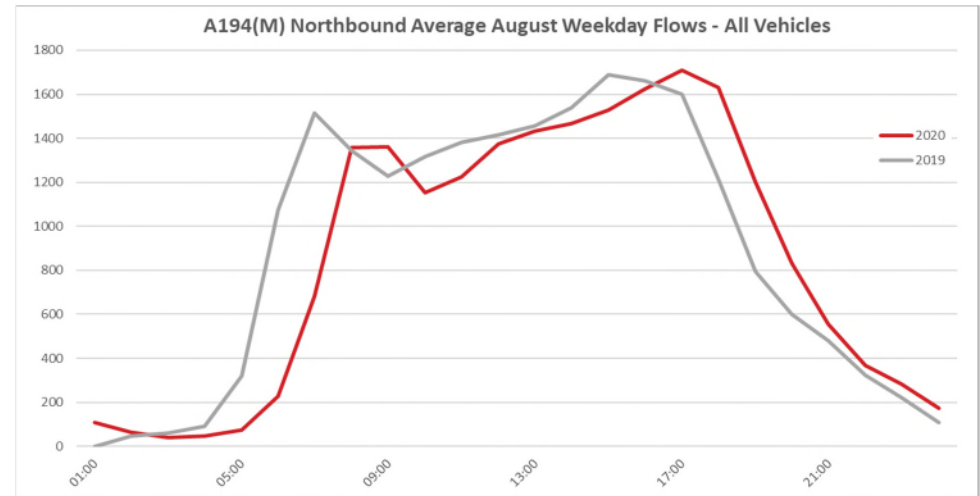
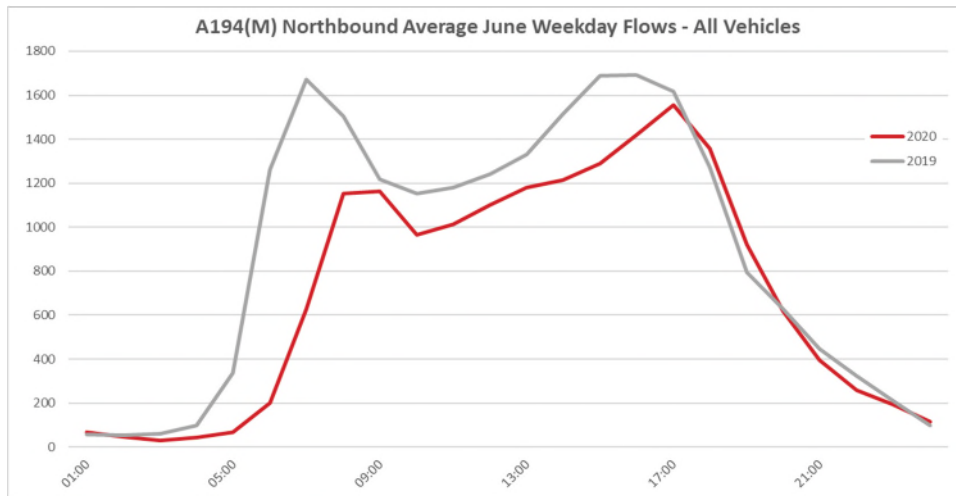
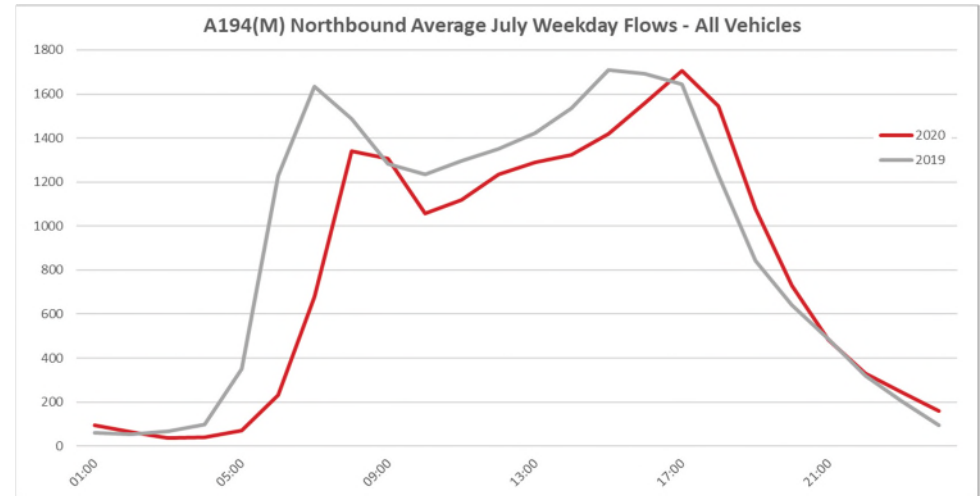
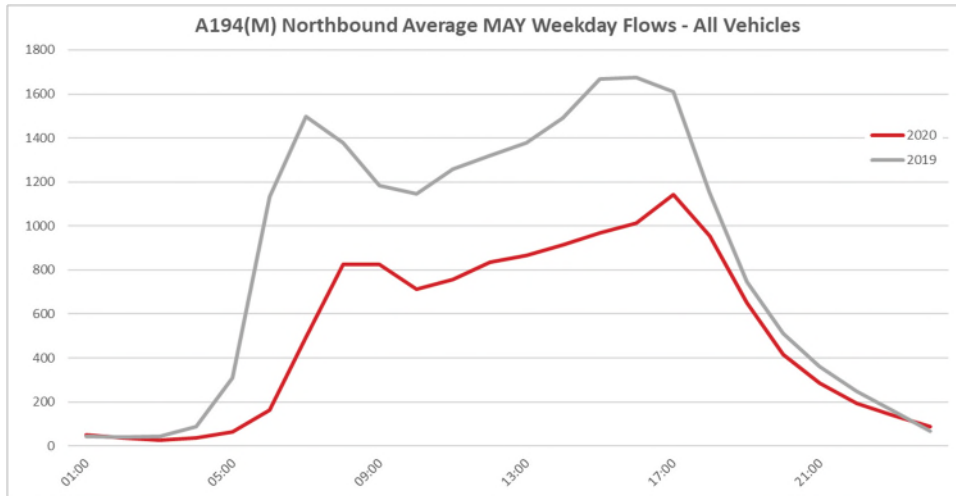
baseline. The absolute numbers of LCVs are small, with around 60 per hour in the PM peak baseline period of the first week of February 2020. While the proportional increase is large, it is an increase of approximately 30 vehicles per hour. This level of increase could be due to the increase in home shopping which took place during lockdown. Alternatively, it could be related to LCV drivers choosing to travel in the peak hour when previously they would have avoided peak periods due to congestion, or rerouting to avoid roadworks at Testo's.



**Figure 15. PM peak traffic (HGVs) on the A194(M) northbound**

- 3.1.26 As shown in Figure 15, the HGVs show a similar trend to LCVs. HGV flows remain consistently above the DfT average throughout the Covid restrictions. Compared to the local data, by May 2020, the number of HGVs was higher than the February 2020 baseline, levelling off at around 50% more than the baseline from July 2020.
- 3.1.27 As for LCVs, this increase could be due to additional movements, changes to the times of HGV trips or rerouting to avoid Testo's roadworks.
- 3.1.28 Some of the significant peaks (particularly early June 2020) are due to road closures associated with the Testo's works, leading to additional traffic on the A194(M).
- 3.1.29 Daily profile – comparison with 2019**
- 3.1.30 This section illustrates how 2020 weekday flows throughout the day compare to 2019 flows. Flows for an average weekday in the respective month were used in each year.
- 3.1.31 Figure 16 shows how total flows throughout the day in May, June, July and August compare between the two years. As Figure 16 shows, across all four months there is a consistent pattern of both peak flows being consistently lower in 2020 than in 2019. Interpeak flows remain largely consistent, with the exception of a slight time shift of the morning peak. Anecdotal evidence suggests that this is due to commuting times being lower due to reduced traffic levels meaning that leaving early to avoid the peak is not as attractive.





**Figure 16. Daily profiles pre-and post-Covid on A194(M) northbound**

3.1.32 Figures 17 to 19 below disaggregate the average daily flows in August by vehicle types. The car flows suggest that the volume of cars has almost recovered to 2019 levels with the exception of a time shift to later in the day. The average flows for both LCV and HGV are higher throughout August compared to the 2019 flows. This could be attributed to growth.

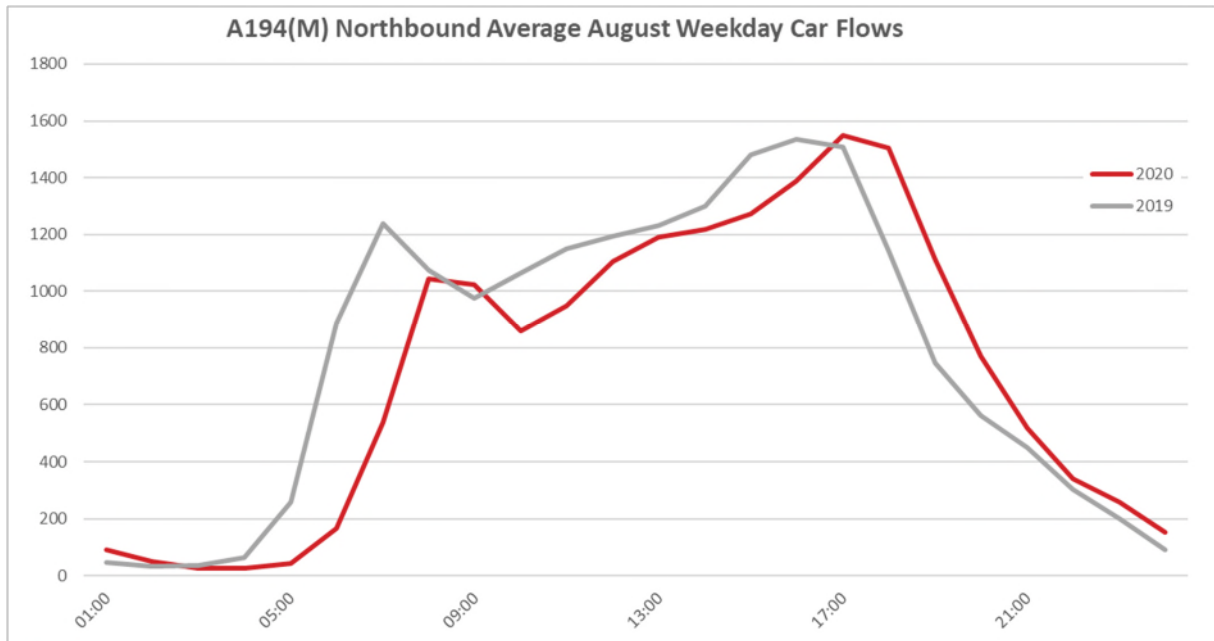


Figure 17. Traffic profile (cars) on the A194(M) northbound, August 2019 and August 2020

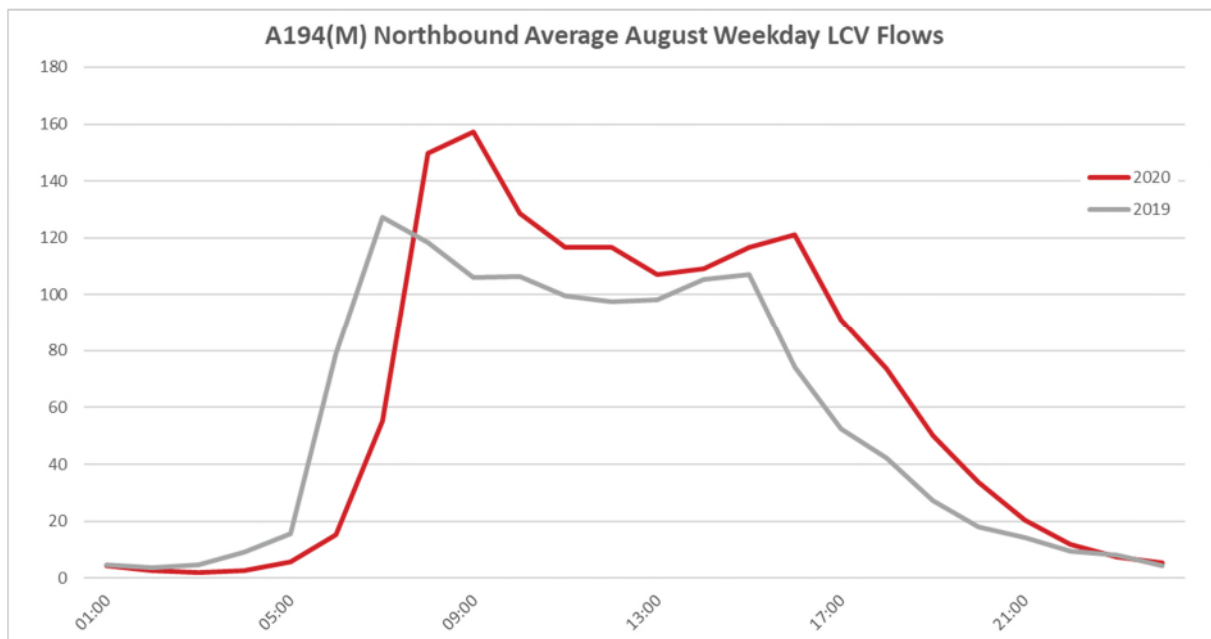


Figure 18. Traffic profile (vans) on the A194(M) northbound, August 2019 and August 2020





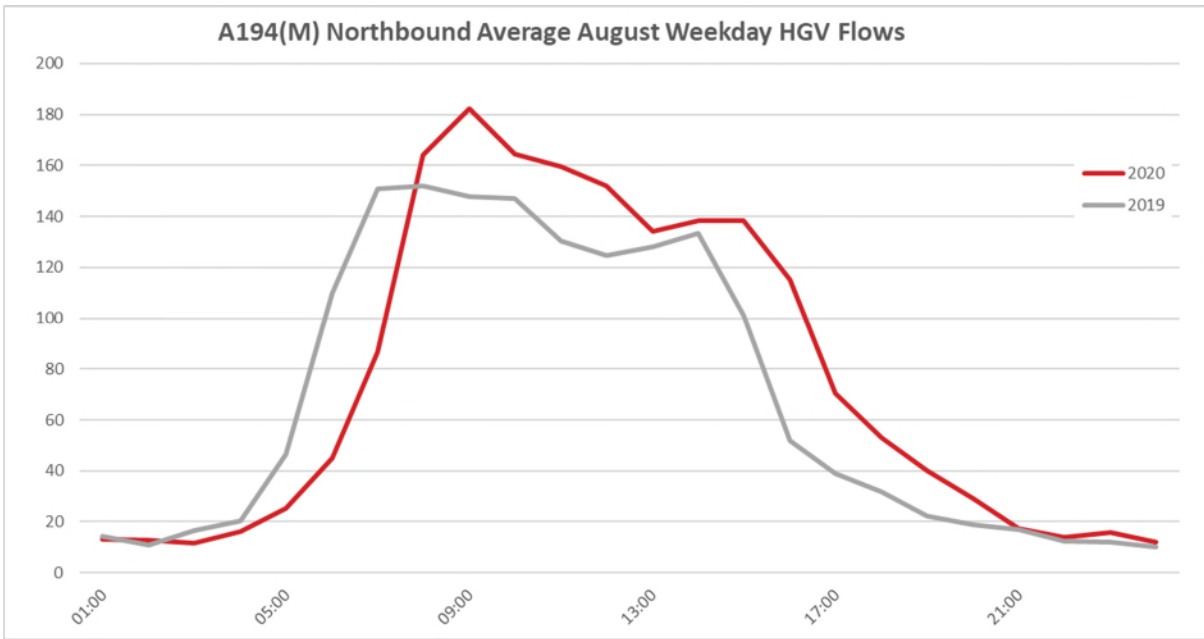


Figure 19. Traffic profile (HGVs) on the A194(M) northbound, August 2019 and August 2020

### A194(M) southbound

#### 3.1.33 Comparison with the national trend

3.1.34 This comparison uses data from the southbound section of the A194(M), south of White Mare Pool. The first week of February 2020 is used as a baseline. TADU data was extracted to the 31<sup>st</sup> of August 2020, which was the latest available data at this location.

3.1.35 Figure 20 shows for the southbound direction, the all-day flows generally experience a less severe drop than the DfT data, and a stronger recovery. The AM peak traffic shows a deeper drop early in lockdown and has not recovered compared with the all-day traffic.

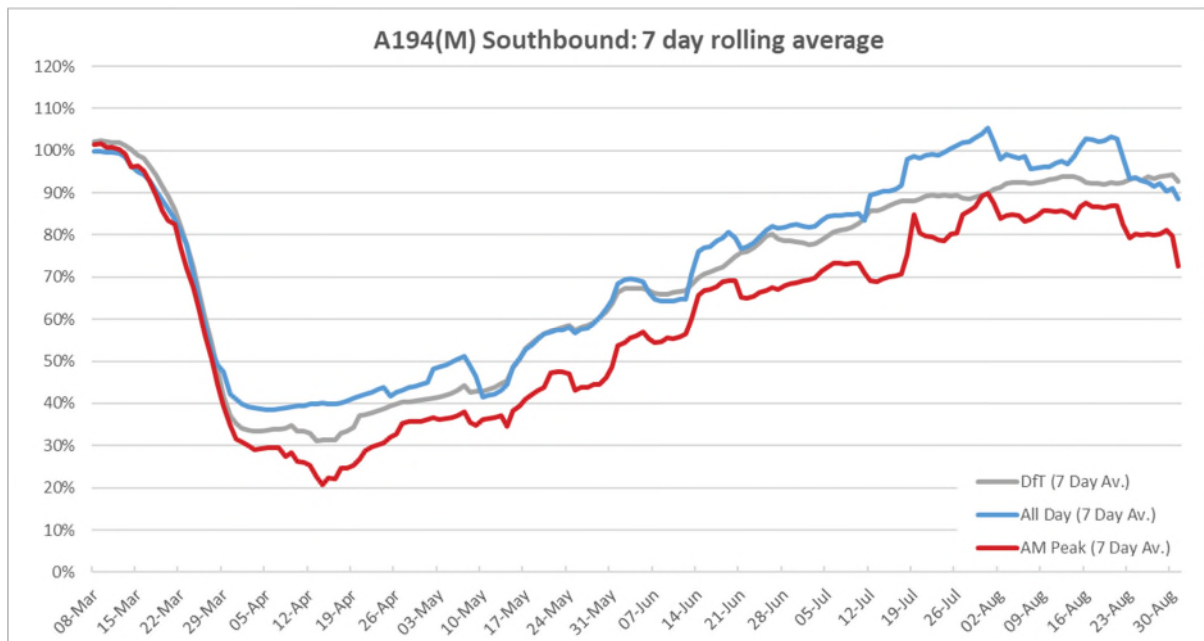


Figure 20. AM peak traffic (all vehicles) on the A194(M) southbound



3.1.36 Figure 21 shows for the southbound direction, the all-day flows generally show a less deep drop than the DfT data, and a stronger recovery. The PM peak flows dropped more severely during the initial lockdown period (April-August) and for most of 2020 experienced a weaker recovery.

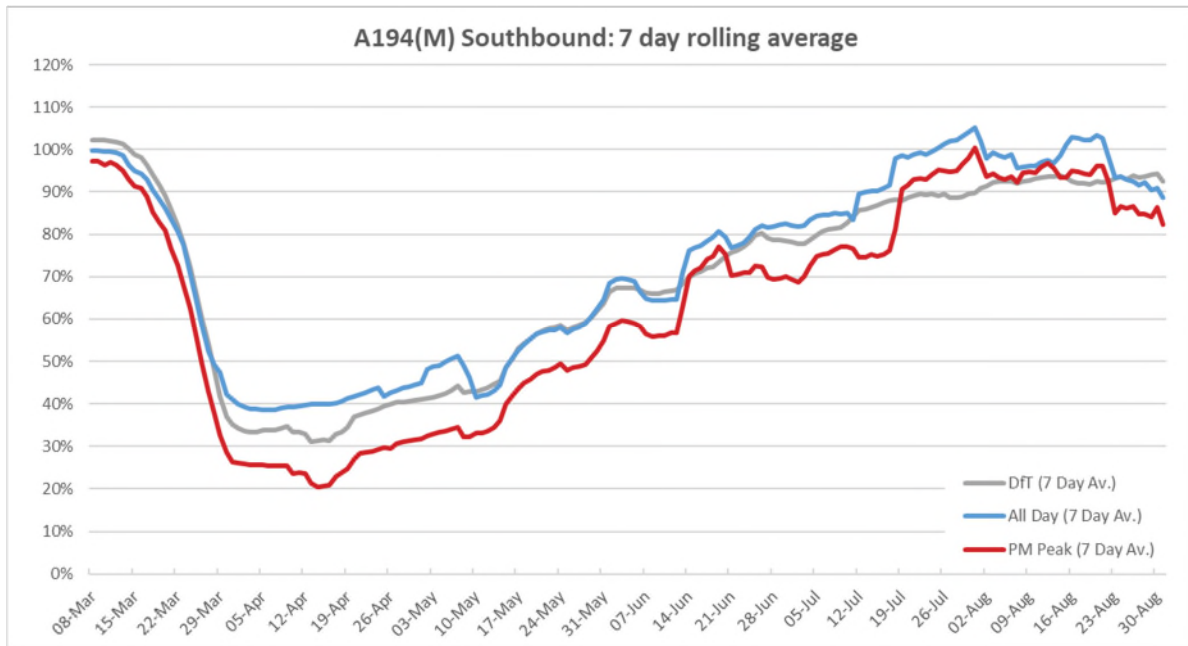


Figure 21. PM peak traffic (all vehicles) on the A194(M) southbound

3.1.37 The figures below provide additional investigation by vehicle type (car and taxi, LCV and HGV) in the southbound direction in the evening peak compared with the national data.

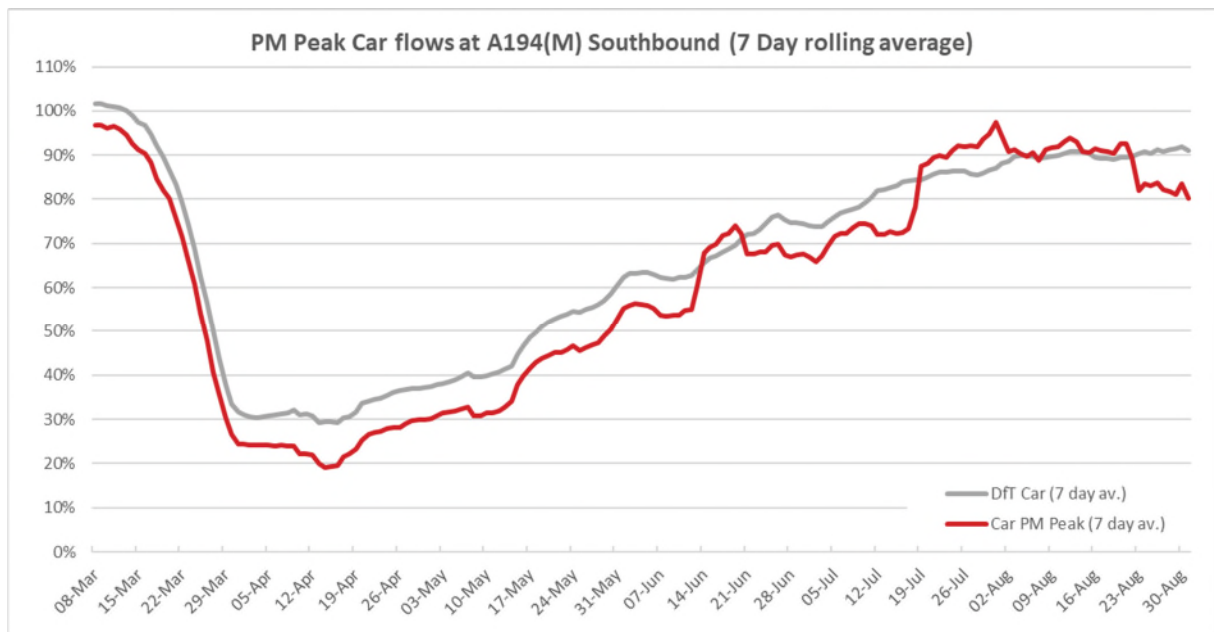
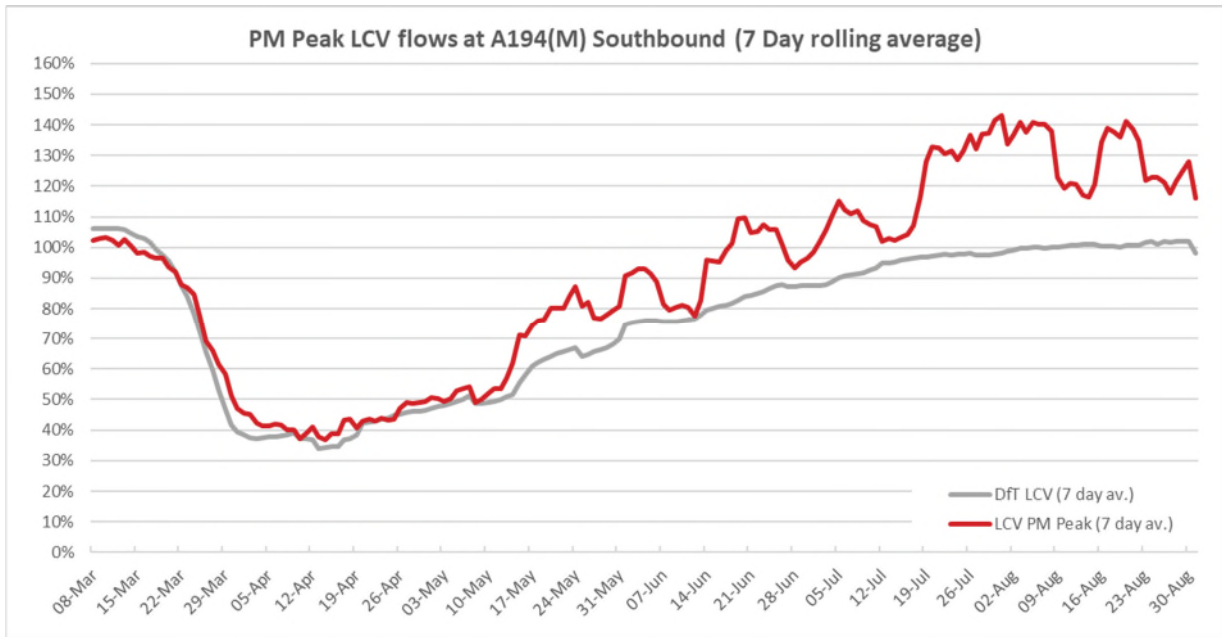


Figure 22. PM peak traffic (cars) on the A194(M) southbound

3.1.38 Figure 22 shows that for cars, the flows are initially lower than the DfT data from March to May, but from June, the rate of recovery roughly matches the DfT average.

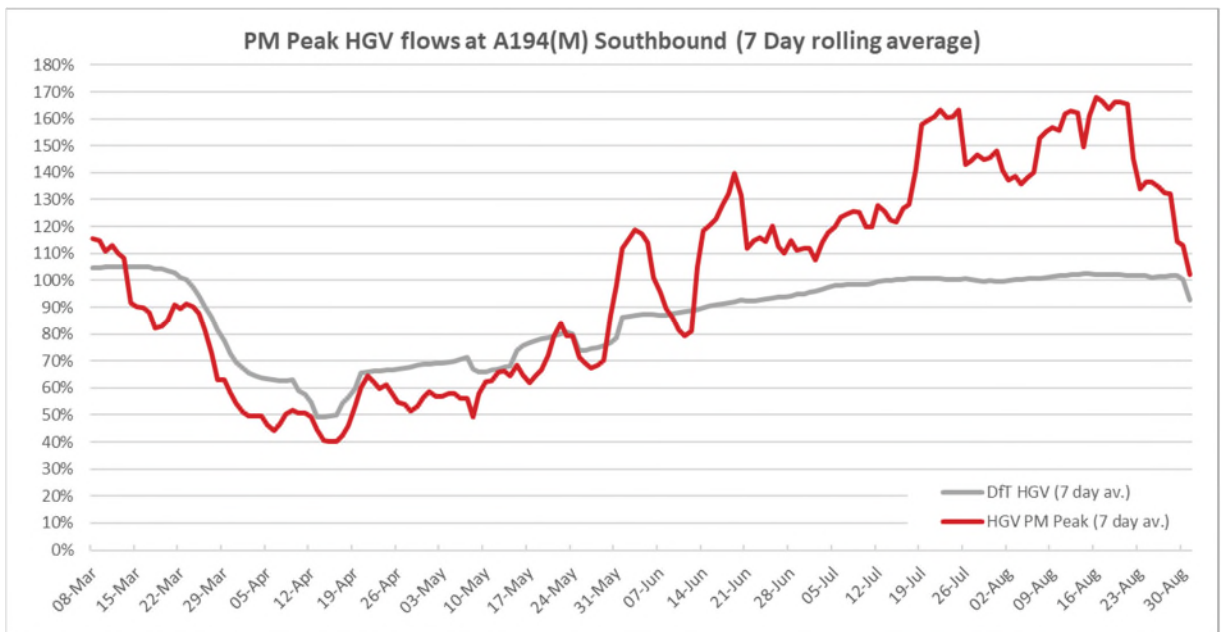






**Figure 23. PM peak traffic (vans) on the A194(M) southbound**

3.1.39 As shown in Figure 23, the LCVs show a different trend from cars. LCV flows remain consistently in line with the DfT average throughout the early part of the Covid restrictions, until May when they appear to rise faster than the DfT average and begin to level out slightly above pre-Covid levels from mid-July.



**Figure 24. PM peak traffic (HGVs) on the A194(M) southbound**

3.1.40 As shown in figure 24, the HGV flows follow a similar pattern to LCVs. The proportionate flow remains consistently below the DfT average through the early Covid restrictions, until June, when they recover to pre-Covid levels, higher than the DfT average.

3.1.41 While the 7-day average typically smooths out the trend, for the A194(M) southbound, the flows are visibly more variable. This could be due to lower vehicle volumes experienced during Covid, as well as occasional road closures associated with the Testo's works.



### 3.1.42 Comparison with 2019

- 3.1.43 This section illustrates how 2020 weekday flows throughout the day compare to 2019 flows. Flows for an average weekday in the respective month were used in each year.
- 3.1.44 Figure 25 shows how total flows throughout the day in May, June, July and August compare between the two years. The figure indicates that, across all four months, there is a consistent pattern of both peak flows being consistently lower in 2020 than in 2019. Interpeak flows remain largely consistent, with the exception of a slight time shift of the morning peak. Anecdotal evidence suggests that this is due to commuting journey times being lower due to reduced traffic levels, meaning that leaving early to avoid the peak is not as attractive.



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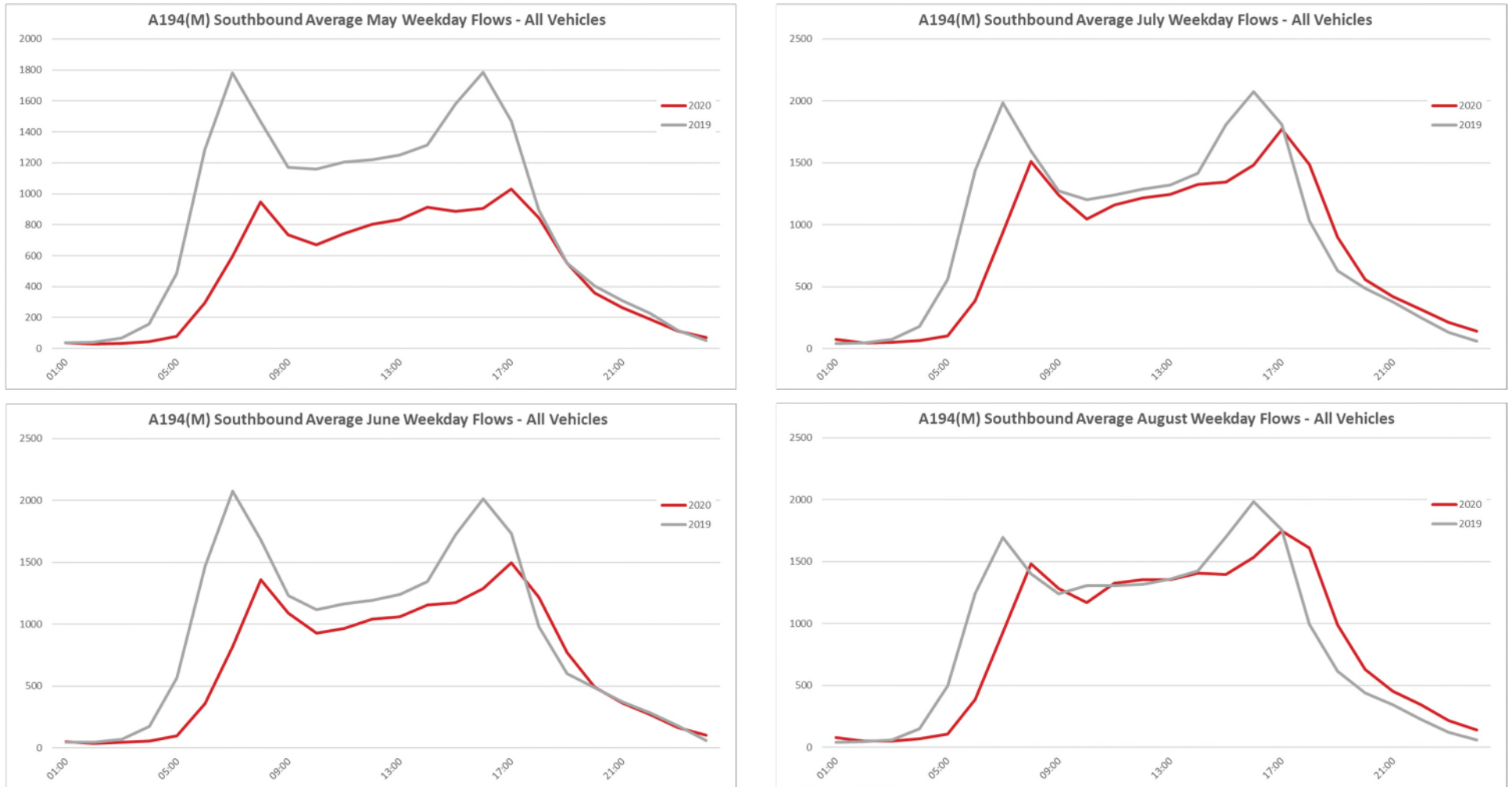


Figure 25. Daily profiles pre-and post-Covid on A194(M) southbound

3.1.45 Figures 26 to 28 below disaggregate the average daily flows in August by vehicle types. The car flows suggest that the volume of cars has almost recovered to 2019 levels with the exception of a time shift to later in the day and some peak time intensity. The average flows for LCV are in line with August compared to the 2019 flows. The average flows for HGV are higher in August compared to the 2019 flows. This could be attributed to local growth, as discussed above.

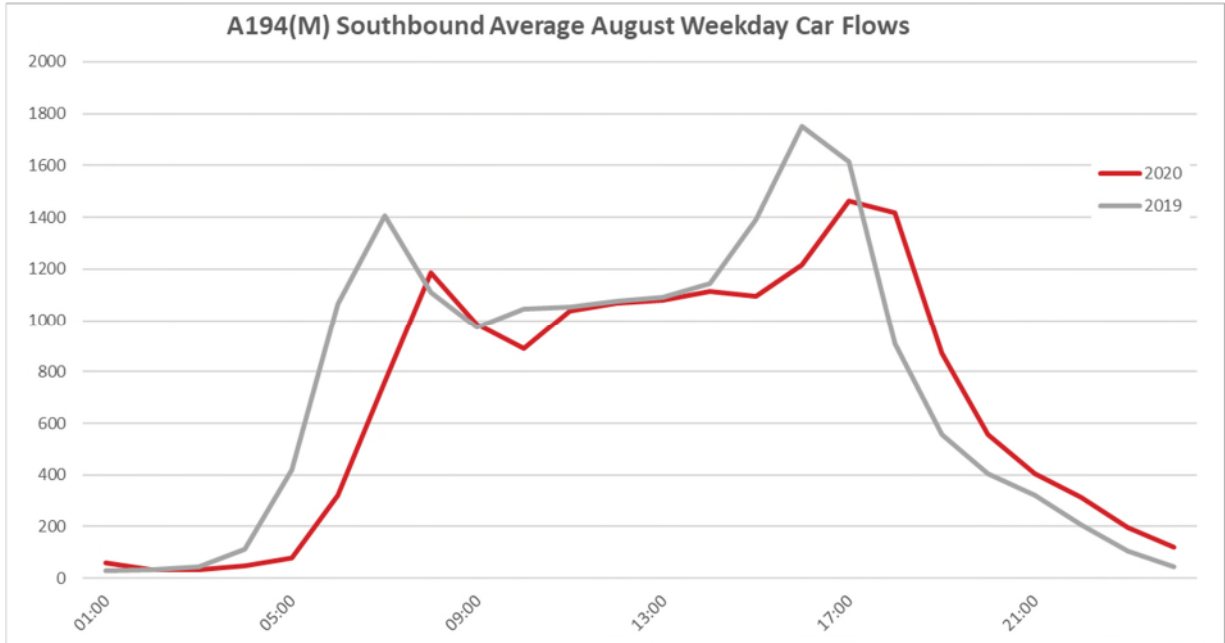


Figure 26. Traffic profile (cars) on the A194(M) northbound, August 2019 and August 2020

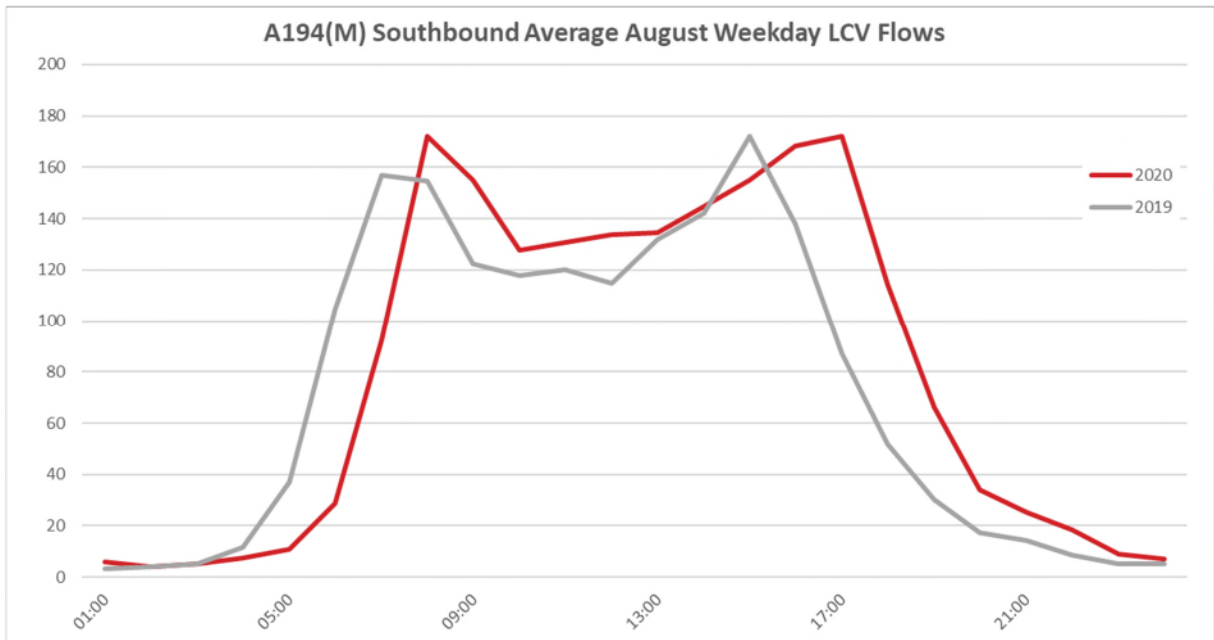


Figure 27. Traffic profile (vans) on the A194(M) northbound, August 2019 and August 2020



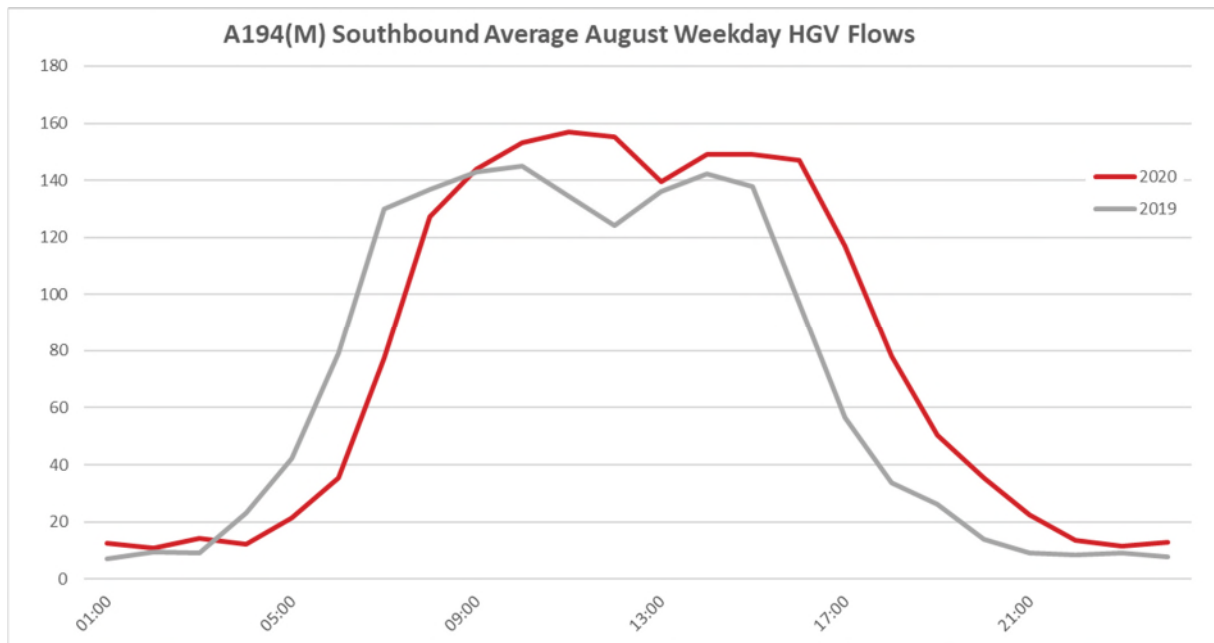
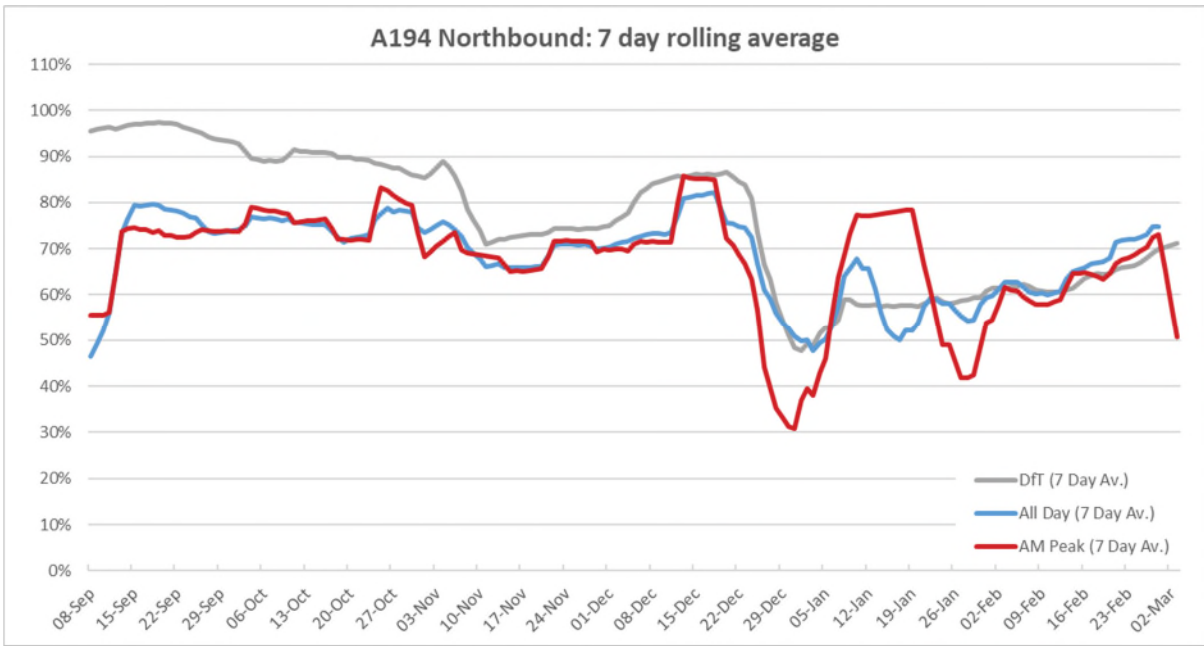


Figure 28. Traffic profile (HGVs) on the A194(M) northbound, August 2019 and August 2020

## A194 northbound

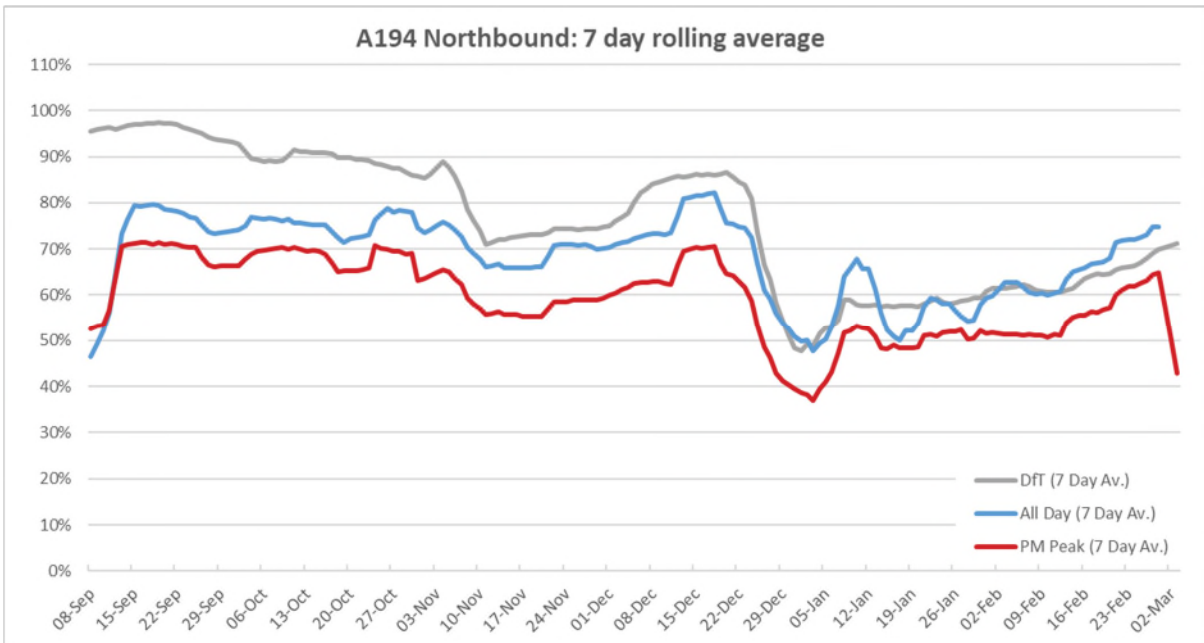
### 3.1.46 Comparison with the national trend

- 3.1.47 This comparison uses data from the northbound section of the A194, north of White Mare Pool. Due to this location lacking data from before September 2020, the post-Covid data is for September 2020 to February 2021. Pre-Covid data is from 2019, with the first week of February 2019 as the baseline (compared to the DfT calculations which used February 2020).
- 3.1.48 The data was not available broken down by vehicle class, therefore, comparisons are presented only for all vehicles.
- 3.1.49 As noted above, counts were not available for the same dates used for the A194(M) comparisons. These graphs start at September 2020 and the baseline is February 2019, which means the data does not start at 100%.
- 3.1.50 Figure 29 shows that for the northbound direction, the all-day flows and AM peak flows were further below the baseline than the DfT data over the initial autumn/winter period. In January, the proportionate traffic was briefly higher than the DfT trend, but from February into March, the proportion of baseline traffic is in line with the DfT trend.
- 3.1.51 The all day and AM peak flows follow broadly similar patterns.



**Figure 29. AM peak traffic (all vehicles) on the A194 northbound**

3.1.52 Figure 29 shows that A194 northbound traffic experienced a more severe drop in flows than the DfT average, and even more severe for the PM peak. This trend continued until Christmas 2020 when the all day data follows a similar trend to the DfT flows. The PM peak traffic remains at a lower proportion of the baseline than the DfT average.



**Figure 30. PM peak traffic (all vehicles) on the A194 northbound**

**3.1.53 Comparison with 2019**

3.1.54 This section illustrates how 2020/2021 weekday flows throughout the day compare to 2019 flows. Flows for an average weekday in the respective month were used in each year.

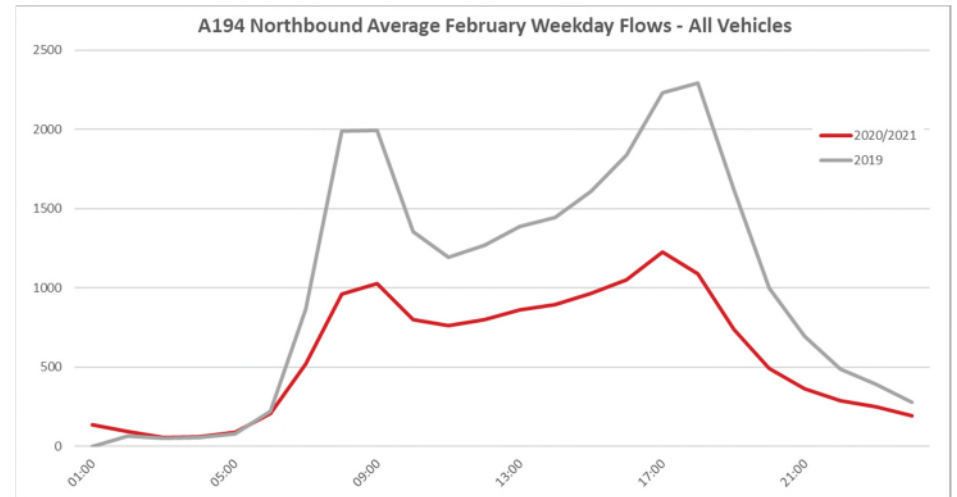
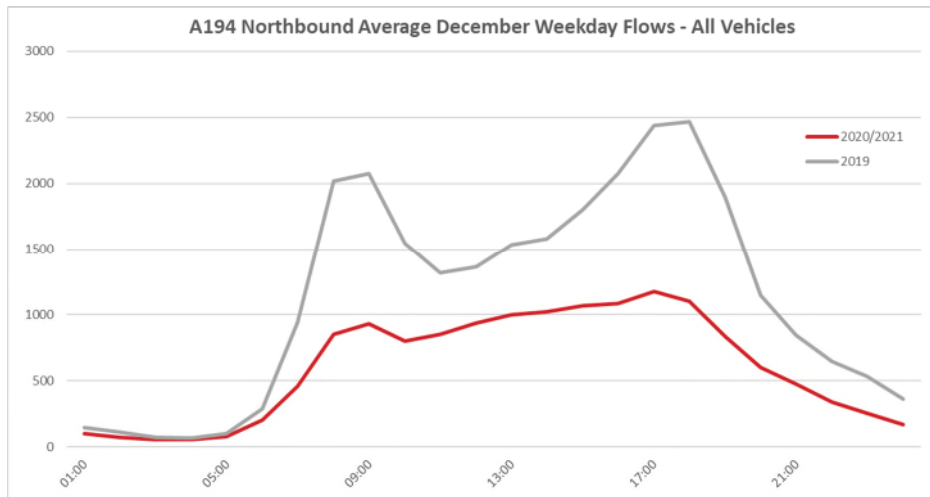
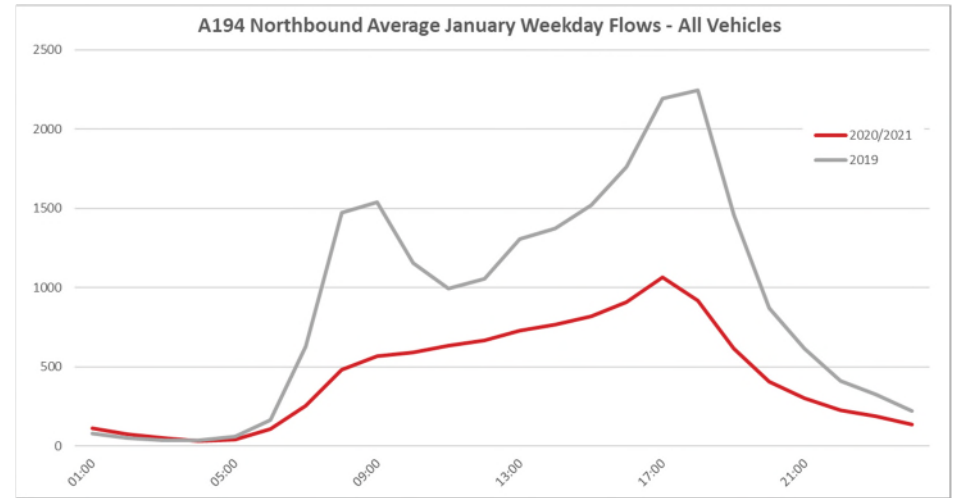
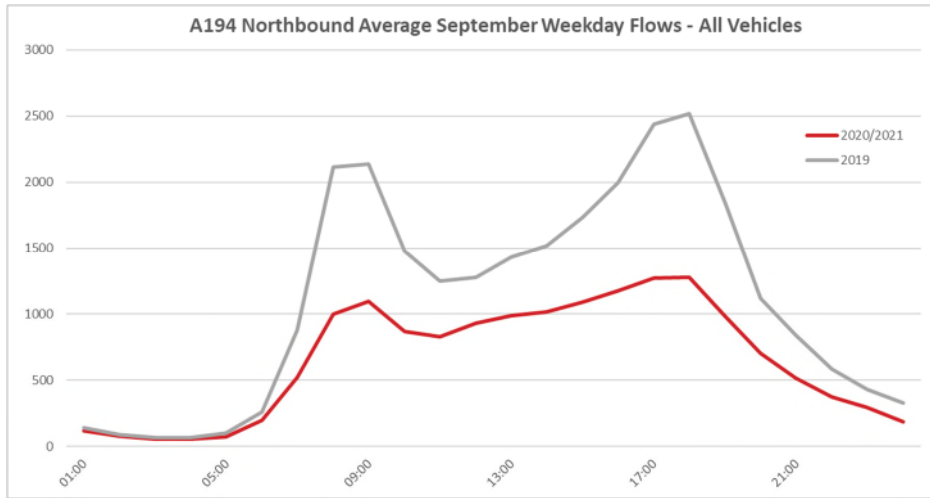
3.1.55 Figure 31 shows how total flows throughout the day in September, December, January and February compare between the two periods. As Figure 22 shows, across all four





months, flows are practically identical in the pattern of both peak flows being consistently lower in 2020/2021 than in 2019. Interpeak flows remain largely consistent at around 1/3 lower than pre-Covid, with the exception of a slight time shift of the AM and PM peak periods. Anecdotal evidence suggests that this is due to commuting times being lower due to reduced traffic levels meaning that leaving early to avoid the peak is not as attractive and leaving later/being caught in traffic has less of an impact on returning home times.





**Figure 31. Daily profiles pre-and post-Covid on A194 northbound**

## A194 southbound

### 3.1.56 Comparison with the national trend

3.1.57 The final comparison uses data from the southbound section of the A194, north of White Mare Pool interchange. As for the A194 northbound, data was not available for March to August 2020, as a consequence, count data for September 2020 to February 2021 is compared against a 2019 baseline. The baseline is taken from the first week of February 2019.

3.1.58 As for the A194 northbound, data was also not separated by vehicle class, resulting in a comparison of total flows only and not by vehicle class.

3.1.59 Figure 32 shows for the southbound direction, the all-day flows and AM peak flows experience a much more severe drop compared to baseline than the DfT data over the whole winter period, while still following the general trendline of the DfT average.

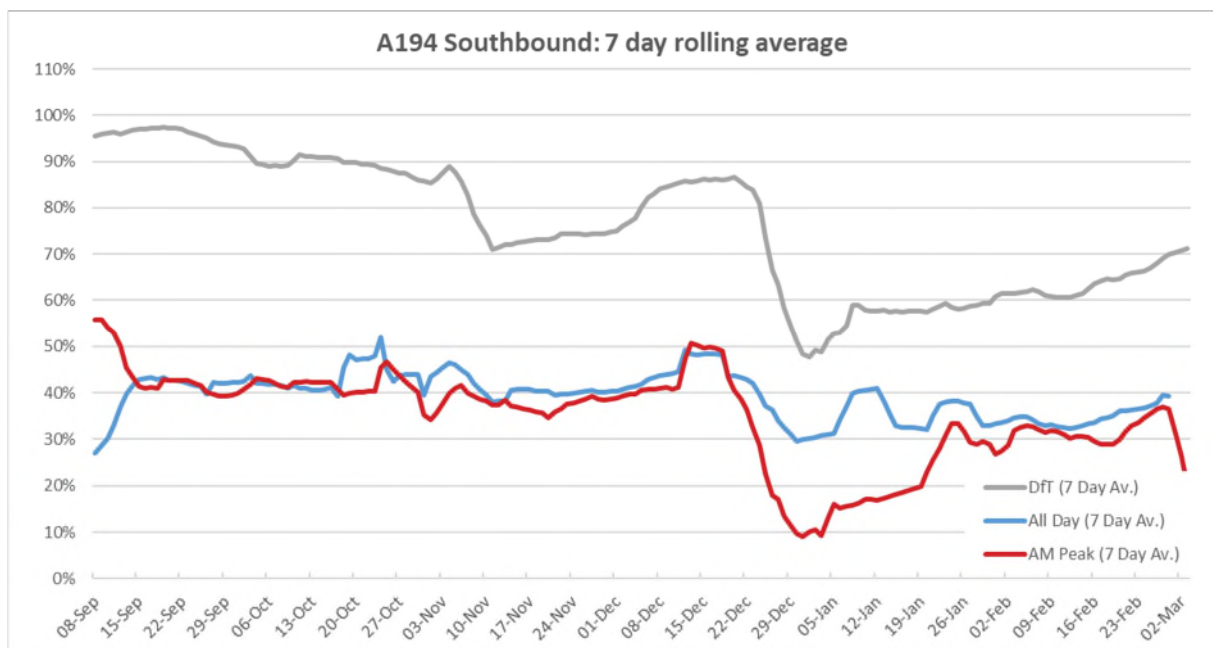
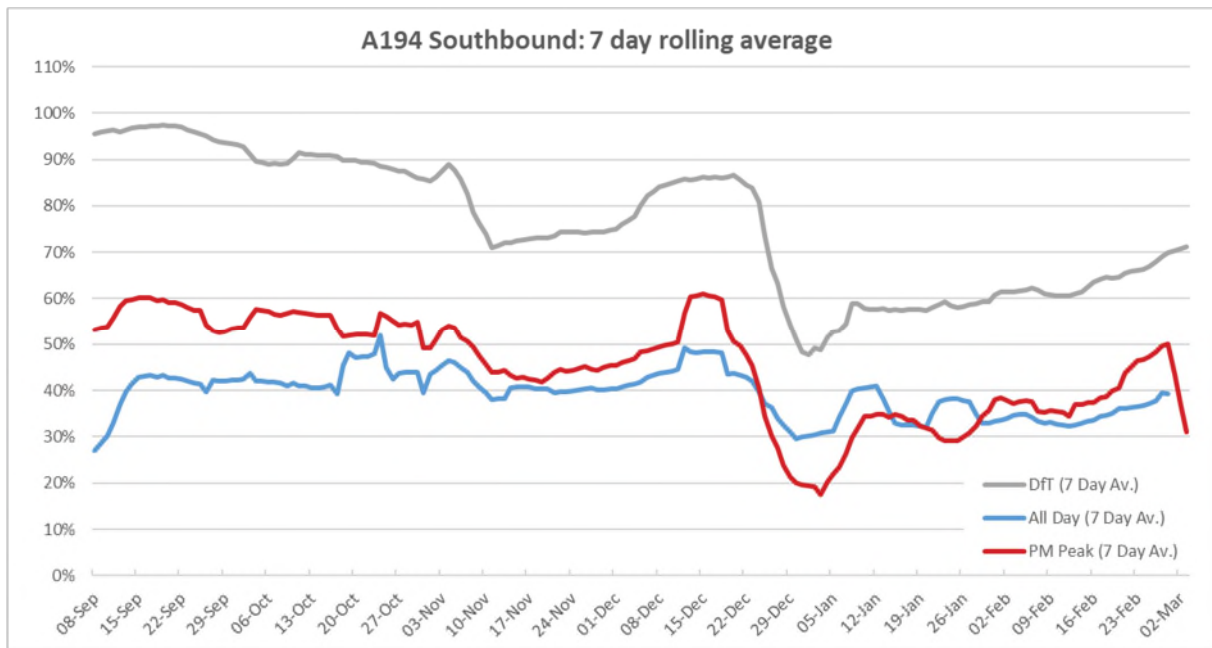


Figure 32. AM peak traffic (all vehicles) on the A194 southbound

3.1.60 Figure 33 indicates for the southbound direction, the PM peak experiences a similar pattern to the AM, with a more severe drop from baseline, but a similar pattern of changes through the period shown in the graph.





**Figure 33. PM peak traffic (all vehicles) on the A194 southbound**

**3.1.61 Comparison with 2019**

3.1.62 This section illustrates how 2020/2021 weekday flows throughout the day compare to 2019 flows. Flows for an average weekday in the respective month were used in each year.

3.1.63 Figure 34 shows how total flows throughout the day in September, December, January and February compare between the two periods. The figure indicates that flows follow a similar pattern to the northbound direction but with a larger disparity in total flows between the 2020/2021 data and the 2019 data.



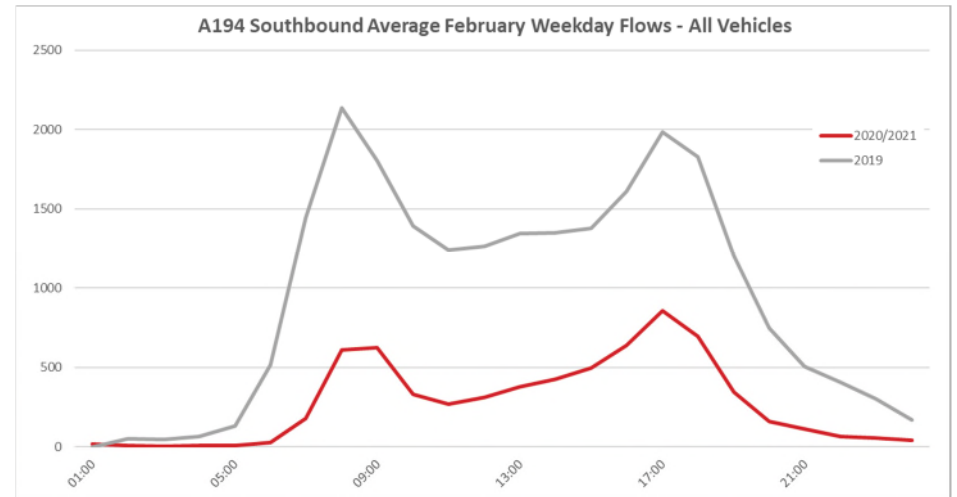
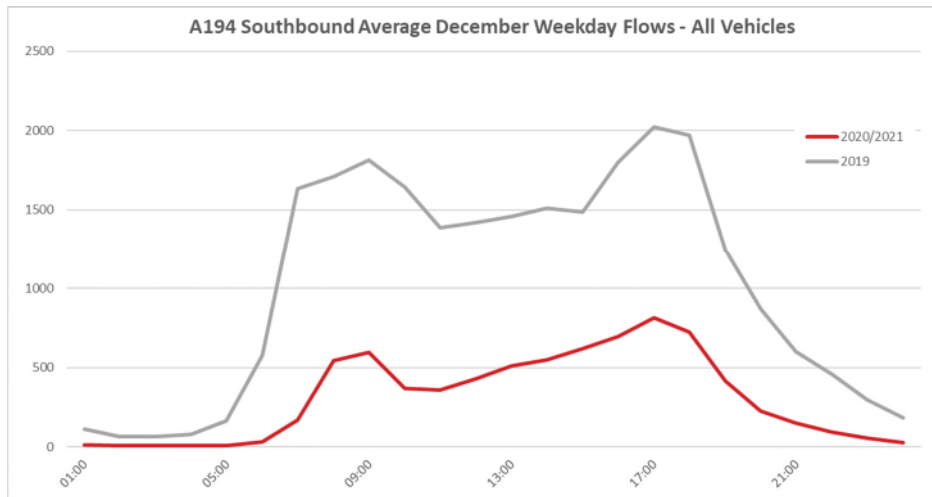
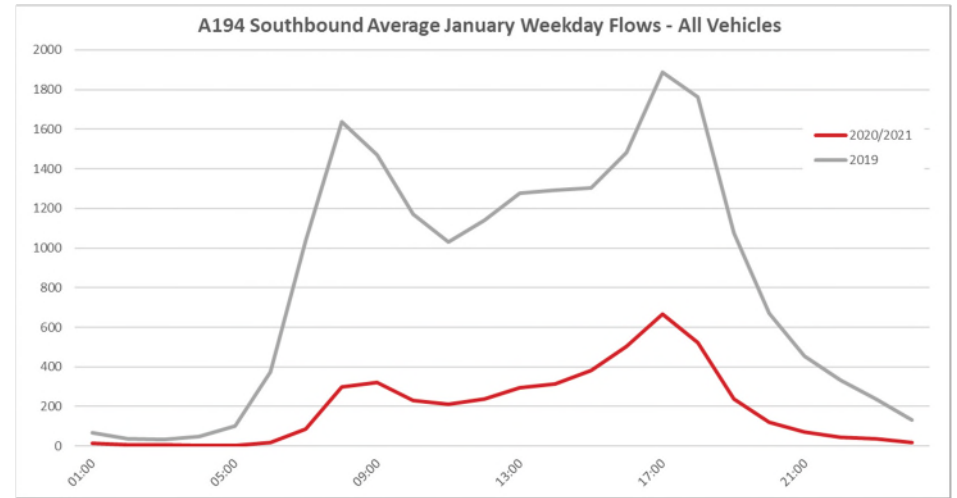
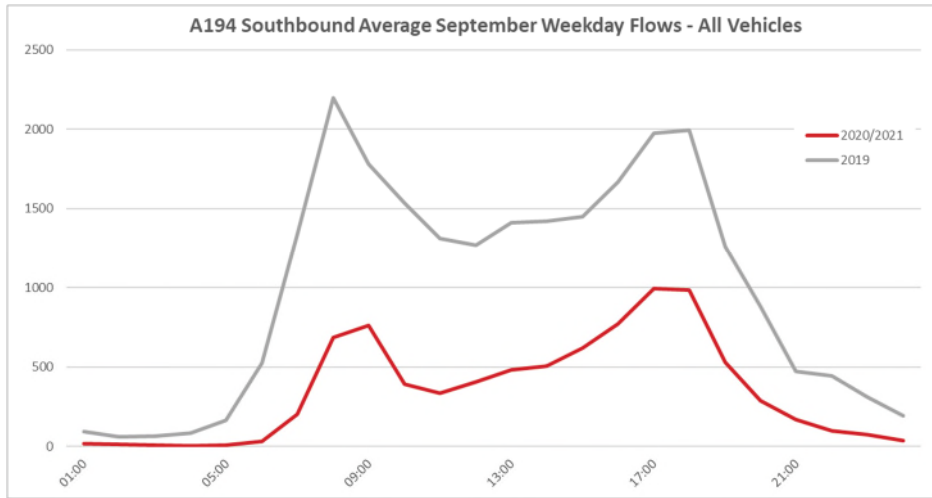


Figure 34. Daily profiles pre-and post-Covid on A194 southbound

## Traffic Flow Analysis Summary

### 3.1.64 DfT national trend

- 3.1.65 DfT publish traffic flows on a representative sample of roads across the UK, and how the flows have changed from a February 2020 baseline.
- 3.1.66 The DfT trend shows significant dips in all traffic at the national lockdowns, with gradual rises as restrictions were eased. HGV and van traffic show an increase over the February 2020 baseline by May 2021, with car and total traffic flows increasing from around 50-60% of baseline in January to around 95% of baseline by the end of May. This suggests that total traffic flows are almost back to pre-pandemic levels.
- 3.1.67 However, while the DfT data provides a clear overview of traffic trends for the full 24-hour daily flow UK-wide, local data sometimes shows different patterns. Flow data has been obtained for a pre-Covid baseline and available time periods during Covid restrictions, for the A194(M) south of White Mare Pool and the A194 north of the junction, in both directions. The data is compared against published DfT trends over the same periods. No data was available on the A184 after February 2020, as a consequence, the comparisons are limited to the A194 and A194(M).

### 3.1.68 White Mare Pool trend

- 3.1.69 On the A194(M) south of the junction, traffic data was available from February to August 2020. The traffic flows followed a similar trend to the DfT average – slightly higher northbound for the 24-hour flow and PM peak, but slightly lower in both directions for the AM peak. Vans and HGVs increased by around 50% compared to the pre-Covid baseline, likely to be related to the increase in home shopping.
- 3.1.70 On the A194 north of the junction, traffic data was available from September 2020 to March 2021. The traffic dropped more severely in both directions than the DfT average.
- 3.1.71 The daily profile was compared for pre-Covid and during restrictions (dependent on which data was available). Sample profiles are shown below, comparing August 2019 and 2020 for the A194(M) southbound, and February 2019 and 2021 for the A194 northbound.
- 3.1.72 South of White Mare Pool (by August 2020) flows were similar to pre-Covid levels, with the peaks moving later in the day (Figure 35). North of the junction, there has been a more significant drop, particularly in the peaks, and this was still apparent by February 2021 (Figure 36).



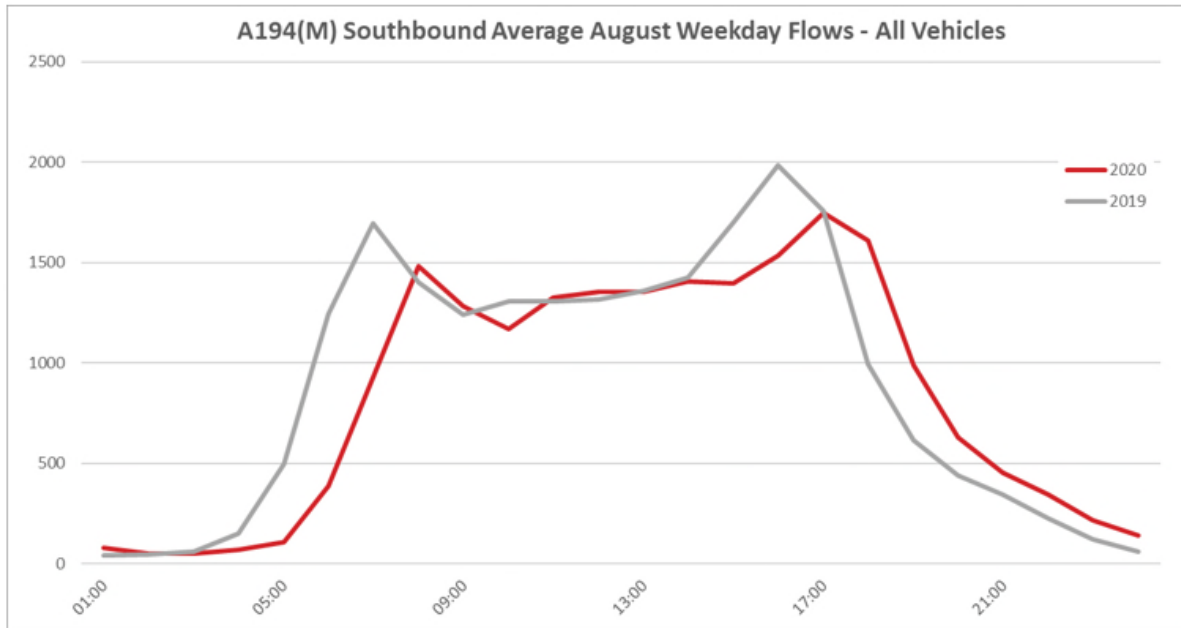


Figure 35. A194(M) and A194 profiles

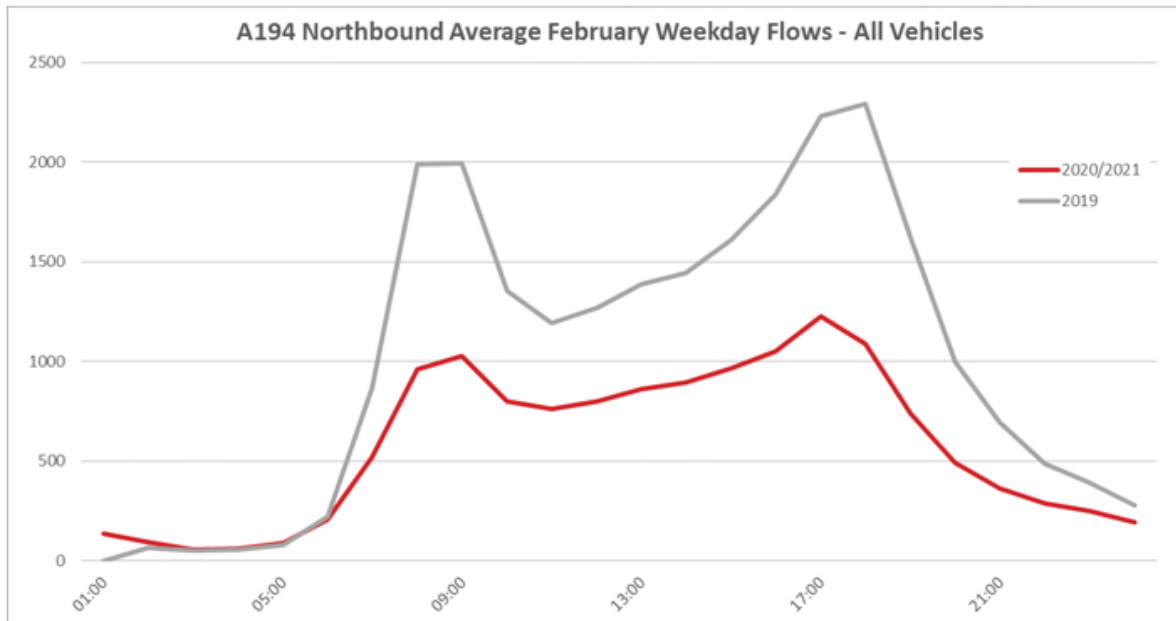


Figure 36. A194(M) and A194 profiles

## 4. CURRENT & FUTURE ACCESSIBILITY

### Introduction

- 4.1.1 This section provides an assessment of the current accessibility of the proposed allocation site by sustainable modes of travel, providing an understanding of how residents and visitors will be able to travel between the site and nearby local amenities with minimal use of a privately owned car. This will include an accessibility assessment using TRACC software of existing accessibility to the development.
- 4.1.2 Some potential sustainable transport improvements have then been identified and coded into TRACC. The outcome of this potential future level of accessibility will be presented.
- 4.1.3 In addition to sustainable transport options and schemes already or soon to be available, ‘emerging’ schemes and concepts that are in early development phases or currently unavailable have also been considered.
- 4.1.4 In addition, a review of research into achievable mode shift as a result of travel planning and sustainable transport proposals will be outlined.
- 4.1.5 **Accessibility** can be defined as “the extent to which individuals and households can access day to day services, such as employment, education, healthcare, food stores and town centres” (DfT, 2014).
- 4.1.6 Given the geographical extent and size of the allocation, sustainable transport links and provisions will be required as part of any development. The assessment in this section therefore focuses on accessibility from/to the perimeter of the land allocation.

### Walkability Audit

- 4.1.7 Guideline walking distances provided in the Chartered Institution of Highways and Transportation (CIHT) document ‘Guidelines for Providing for Journeys on Foot (2000)’, are shown in **Table 1**.

**Table 1. CIHT Guideline Acceptable Walking Distances.**

CRITERIA	TOWN CENTRE	COMMUTING	ELSEWHERE
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred Maximum	800m	2,000m	1,200m

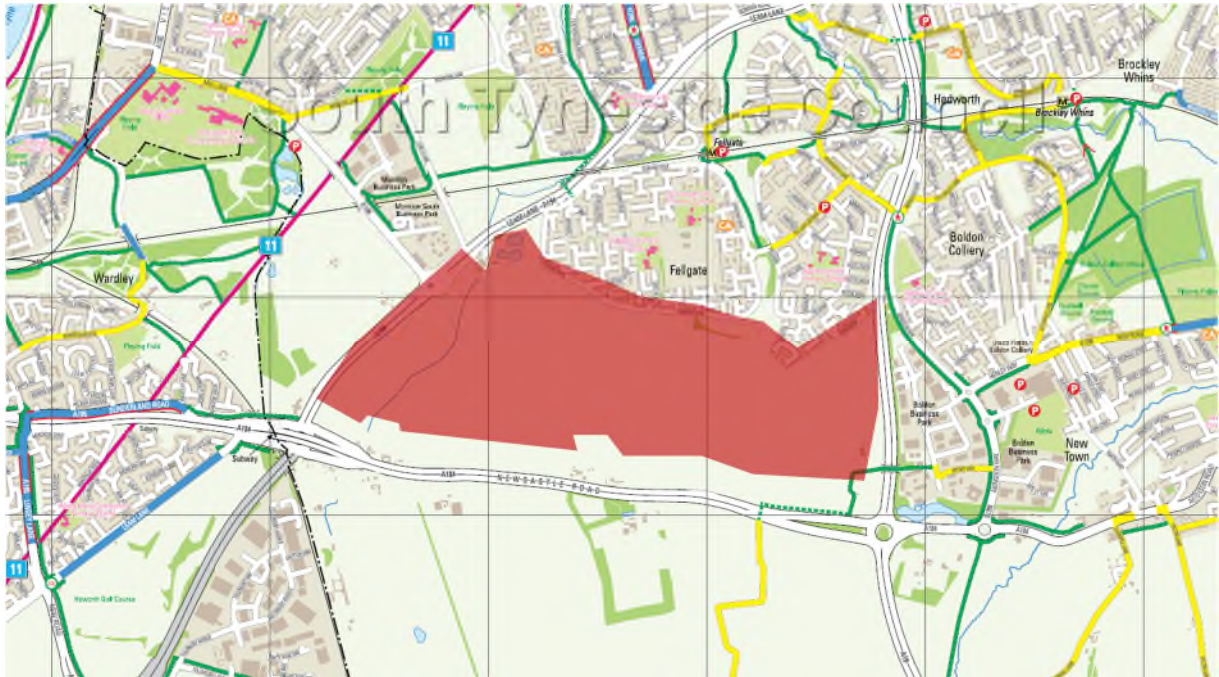
- 4.1.8 The CIHT guidelines suggest that for commuting purposes, up to 500m is a desirable walking distance, up to 1,000m is considered an acceptable walking distance and 2,000m is the preferred maximum walking distance. However, the distances commuters are prepared to walk have been shown to vary according to the local context and culture for walking.

- 4.1.9 Appropriate walking distances are dependent upon the location of the specific development; more remote locations will see people being prepared to walk further to their end destination. Similarly, appropriate walking distances are also dependent upon the standard of existing pedestrian infrastructure provision, with further walking distances achievable in locations with extensive and high-quality pedestrian footways, crossings and pedestrianised areas.
- 4.1.10 Given the site is currently greenfield, pedestrian connectivity is poor. To the west of the site there are currently no footways on the development side of the A194, although a footway does exist on the west side of the A194 carriageway. There are no formal pedestrian crossing facilities over the A194, although it is understood that a signalised crossing incorporated into the signals at the Mill Lane roundabout is due to be constructed towards the end of 2021. To the north of the development there are no footways on the development side of Durham Drive, although a footway does exist on the north side of Durham Drive.
- 4.1.11 A pedestrian footway exists to the south of the development adjacent to the A184 eastbound carriageway. This becomes a shared footway/cycleway towards the eastern end of the A184 in close proximity to Testo's roundabout. There is an at grade dropped crossing located across the slip roads on the north side of the junction. No pedestrian facilities are provided to the east of the development.
- 4.1.12 The most direct walking route from the development to Fellgate Metro station would be to the north of the site travelling via Durham Drive or winding through the estate via a series of footways and footpaths. The distance from the north of the site to the Metro Station is approximately 800m as the crow flies. Durham Drive and the residential cul-de-sacs it serves provides a surfaced link with street lighting, a 20mph speed restriction, making it suitable for both cyclists and pedestrians.

### **Cycling Provision Audit**

- 4.1.13 The DfT's latest Cycling Infrastructure Design Local Transport Note 1/20 (DfT, July 2020) notes that two out of every three personal trips are less than five miles in length (Transport Statistics Great Britain, DfT, 2016). In 2019, the average length of a commuting trip was 14.6km with a duration of 31 minutes. In the same year, the average person used a bike for only 2% of their trips, made 16 cycling trips, cycled 54 miles and for 23 minutes per cycling trip. The distances covered by bike have been increasing steadily since 2002 (from 39 to 54 miles per year on average) but the number of cycling trips and stages has remained similar. Over a third of all cycling trips made (36%) were for commuting in 2019 (National Travel Survey, DfT, 2020).
- 4.1.14 Within the near vicinity of the proposed land allocation, there are a number of cycle routes, including the National Cycle Network (NCN) Routes 7 (south) and 14 (north). The Bowes Railway Path, a traffic free cycle route, runs for 17.6km south westwards from Jarrow through Wardley, parallel to the western boundary of the site. Local routes exist for example on Abingdon Way and the A184 west of the White Mare Pool junction. The land allocation in the context of the wider NCN routes can be seen on Figure 37.

**Figure 37. South Tyneside Cycling Map**



(Source: [Cycle-Map-South-Tyneside-South.pdf \(gateshead.gov.uk\)](http://gateshead.gov.uk/Cycle-Map-South-Tyneside-South.pdf))

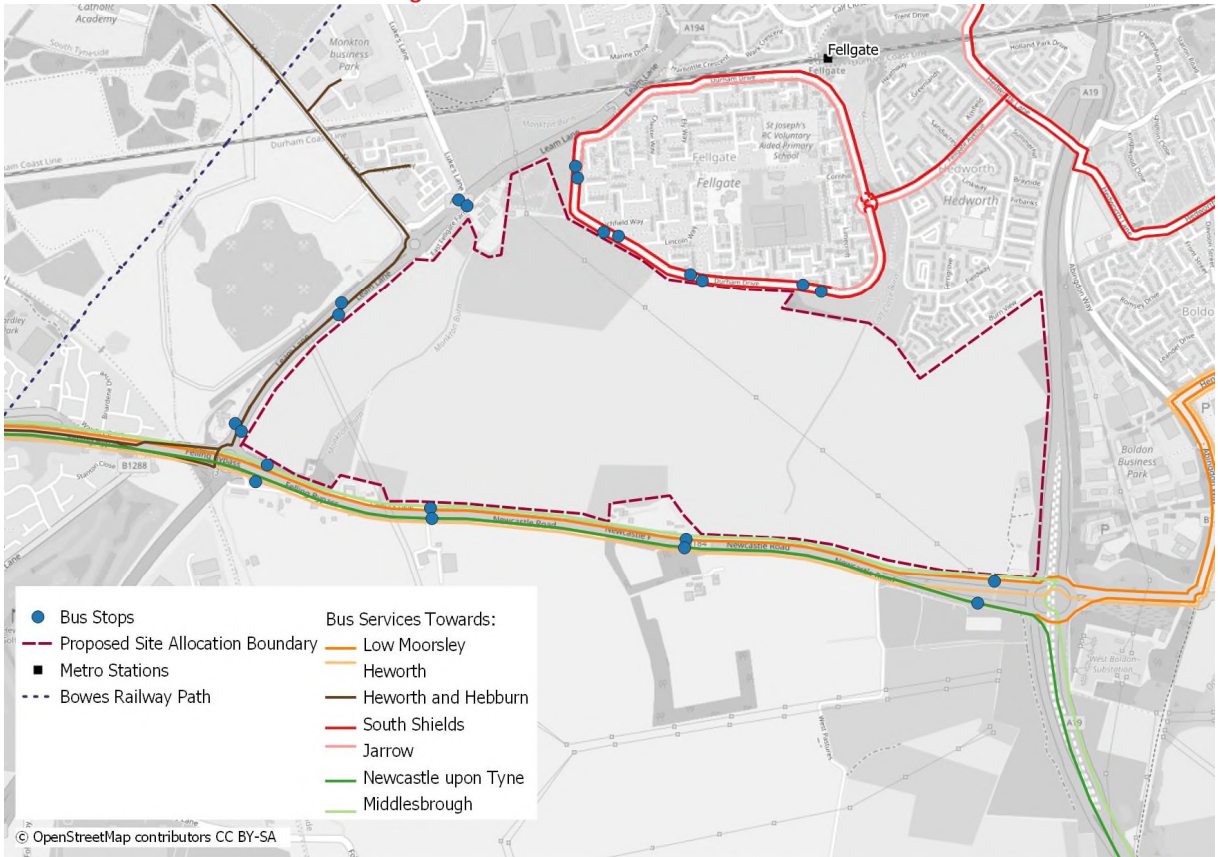
## **Audit of Public Transport Provision**

### **Local Bus Services**

- 4.1.15 From the north-eastern boundary of the land allocation, the nearest bus stops are 320m away on the A194 Leam Lane ('Leam Lane Lakeside') on both carriageways of the A194, however these stops are served only by two services, the 556 and 558 operated by Gateshead Central Taxis on an hourly basis.
- 4.1.16 Along the northern boundary of the site, there are bus stops on Durham Drive ('Durham Drive Lichfield Way') which are served by more services with a greater frequency.
- 4.1.17 To the south of the land allocation, there are stops along the A184, including 'Newcastle Road-Lodge, and 'Newcastle Road-Fellgate Farm', which both operate a half hourly service.
- 4.1.18 There are no bus stops located to the east of the development on the A19 corridor.
- 4.1.19 Figure 37 shows the location of surrounding bus stops in relation to the site boundary.



**Figure 38. Current Bus Services**



4.1.20 As illustrated in Figure 38, there is a lack of waiting facilities at the bus stops on the A194 with the stops having only a pole, flag and timetable information. Such facilities are mirrored at the stops along the A184. The stops on Durham Drive have brick shelters, but no seating.

**Figure 39. Images of Nearest Bus Stops**

Leam Lane-Lakeside (Stop ID: twrdjmgt)



Leam Lane-Lakeside (Stop ID: twrdjmaj)



Durham Drive Lichfield Way (Stop ID: twrdjpgt)



Durham Drive Lichfield Way (Stop ID: twrdmdad)



(Image Source: Google)

**Rail and Metro Services**

- 4.1.21 The nearest mainline railway station to the site is Newcastle Central Station, located 8.2km from the site. It is on the East Coast Mainline with regular services provided seven days a week to local destinations as well as further afield including London Kings Cross, Carlisle, Edinburgh, Plymouth and Liverpool Lime Street. The facilities at the station are extensive and well maintained. It is served by a range of retail and catering outlets, has protected waiting facilities, and a staffed ticket office is open seven days a week with a ticket machine available outside of these times.
- 4.1.22 The nearest rail station is at Heworth, located 3.0km from the site. It provides services to Middlesbrough, MetroCentre, Hexham and Newcastle. The facilities at the station are limited. Th station is unmanned with ticket machines. Metro and bus services are located in close proximity allowing for interchange between services.
- 4.1.23 The closest Metro station to the site is Fellgate, around 1.0km north of the centre of the land allocation. The station has regular direct services towards South Hylton and Newcastle Airport, with services operating Monday to Saturday daytime every 12-30 minutes.

**Figure 40. Fellgate Metro Station**



- 4.1.24 Commuting trip destination and mode data presented in Nexus and NECA’s Metro and Local Rail Strategy (2016) provides an insight into the strengths and weaknesses of the existing



Metro and local rail offer. Key corridors are highlighted, with particular reference made to the strength of performance of the Metro between South Tyneside and Newcastle where 41.6% of all workplace commuting trips are made using Metro as the main mode. But by contrast, the weaker performance for trips is between South Tyneside and Sunderland, where the proportion of rail-based trips is less than bus and car.

Originating Area	All Trips	Metro	Rail	Bus	% by Public Transport	% of Public Transport trips by Metro and Rail
County Durham	8682	93	726	862	19.3	48.7
Gateshead	19941	2215	164	4487	34.4	34.6
North Tyneside	24932	5016	321	3309	34.7	61.7
Northumberland	19289	340	739	2173	16.8	33.1
South Tyneside	6484	2703	143	278	48.1	91.1
Sunderland	6161	1277	111	713	34.1	34.1
TOTALS	85489	11644	2204	11822	31.2	53.9

Table 5- Workplace Commuting Trips into Newcastle upon Tyne, 2011 Census

Originating Area	All Trips	Metro	Rail	Bus	% by Public Transport	% of Public Transport trips by Metro and Rail
County Durham	15709	14	38	1000	6.6	4.9
Gateshead	5883	249	37	562	14.4	33.7
Newcastle	3220	360	36	244	19.9	61.8
North Tyneside	2207	163	20	75	11.7	70.9
Northumberland	1677	24	19	29	4.3	59.7
South Tyneside	8749	434	50	1039	17.4	31.7
TOTALS	37445	1244	200	2949	11.7	32.8

Table 6 - Workplace Commuting Trips into Sunderland, 2011 Census

## Smarter Driving

### Electric Vehicles and Charging Network

4.1.25 The provision of publicly available electric vehicle charging points is already well established in South Tyneside and those located in close proximity to the land allocation are identified below.

Table 2. Electrical Vehicle Charging Points in Close Proximity

No. of Connections	Speed	Location	Network	Tariff
3	Rapid	The Quadrus Centre Woodstock Way, East Boldon NE35 9PF	Charge Your Car	Free
1	Standard (7kw)	Monkton South Business Park NE31 2EZ	N/K	N/K
2	Standard (7kw)	Monkton Stadium, South Tyneside South Shields NE32 5NY	Charge Your Car	
3	Rapid (50kW)	Lidl, Pelaw NE10 0QD	PodPoint	25p/kWh
2	Rapid (50kW)	Gateshead College, SR5 3HZ	Ecotricity	Free

2	Standard (7kw)	Nissan Dealership, SR5 3NS	PodPoint	Free
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(Source: <https://www.zap-map.com/live/>)

### Car Clubs

4.1.26 Currently located in the south – east corner of the proposed site allocation is an Enterprise car and van rental site, offering convenient and local vehicle rental. Within Newcastle, Enterprise also offer access to the Enterprise Car Club, providing people with 24/7 pay-as-you-go access to cars and vans, including a range of fuel-efficient hybrid and electric vehicles.

### Accessibility Assessment (TRACC mapping)

4.1.27 Journey times by different travel modes have been mapped using the specialist travel time analysis software package ‘TRACC’ which provides realistic and informative assessments of the areas that can be reached within defined journey times as opposed to distance. Journey time duration is generally much better understood than journey distance.

4.1.28 The accessibility of the proposed allocation site has been mapped using this software. Given the size of the proposed allocation, accessibility has been analysed for the most achievable site access locations which would be:

- North – A junction onto Durham Drive;
- North West – Adjoining onto Leam Lane.

4.1.29 An indicative accessibility analysis was undertaken using a centrally located point within the site. The significant size of the proposed allocation means that the distance that can be reached in a journey time of up to 30 minutes by walking or cycling may vary greatly depending on both the origin / destination within the site, and the connections provided to the surrounding network. Use of a central located point however provides an indicative result which can be applied across the wider site. The outputs of the accessibility analysis with accompanying descriptions are provided in the following section as follows:

- Walking – Presented within 5 minute isochrones up to 30 minutes;
- Cycling – Presented within 10 minute isochrones up to 30 minutes;
- Public Transport – Presented within 10 minute isochrones up to 60 minutes; and
- Public Transport – Presented within 10 minute isochrones up to 120 minutes.

4.1.30 It should be noted that given the size of the site, additional runs have been undertaken for the above metrics from five points on the periphery of the site. This is to demonstrate that the current level of accessibility varies across the site and that potentially different parcels of the land allocation may have different levels of accessibility and the resultant ability to influence mode shift.

4.1.31 The five points are as follows and the maps from the TRACC assessment can be seen in Appendix A.

- North west periphery – Mill Lane junction;
- Northern periphery – Durham Drive;
- Eastern periphery – A19;
- Southern periphery – A184; and
- South west periphery – White Mare Pool.

4.1.32 A summary of the parameters used within TRACC for analysing accessibility via public transport are provided below:

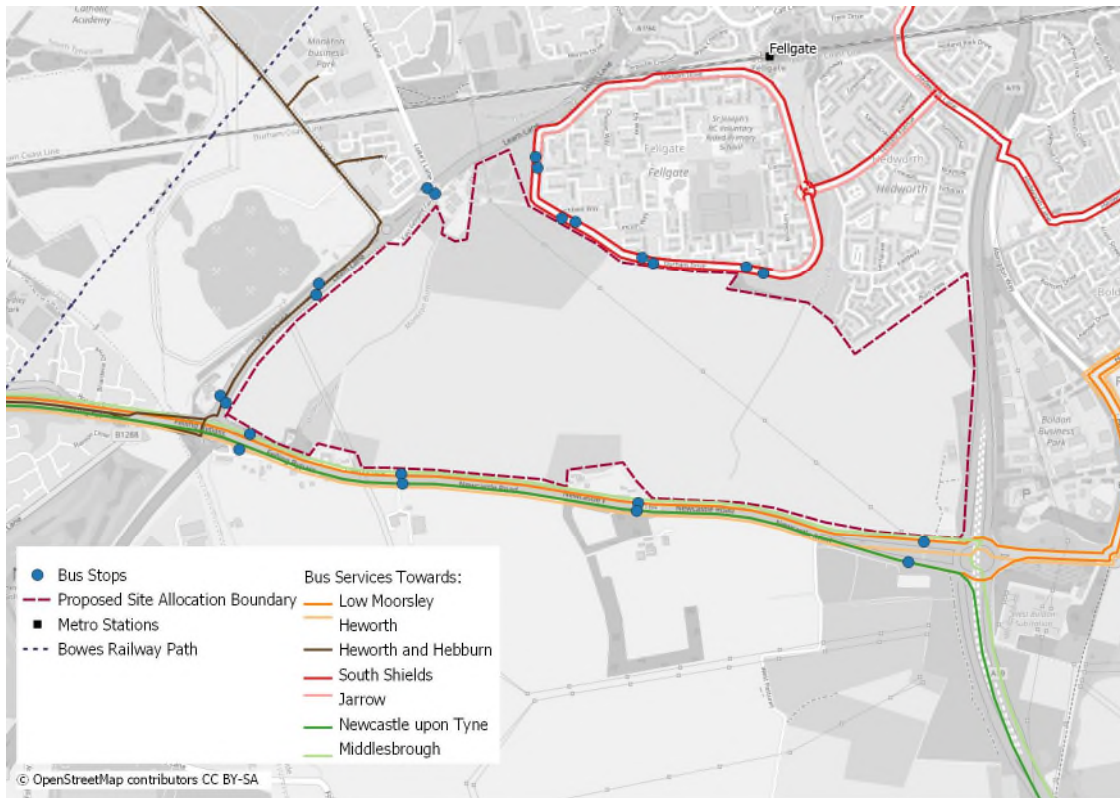
- Day: Monday;
- Time period: 07:00-19:00;
- Maximum external connection distance: 1,000m  
(The maximum straight line distance travelled from the origin to the nearest road and from the nearest road to the destination);
- Maximum internal connection distance: 500m  
(The interchange distance between public transport services);
- Maximum connection distance to first stop when in the road: 2,000m  
(A straight line buffer around the origin and destination point so only public transport stops within this buffer can be used as first and last stops); and
- In-vehicle Interchange penalty: 5 minutes
- Walk Interchange Penalty: 5 minutes  
(Times applied when interchanging between services;

4.1.33 Differing levels of accessibility were tested using TRACC as outlined below:

- A **baseline representation** of the existing network,
- A **future representation** with the inclusion of a Metro Station at Mill Lane South.
- **Medium accessibility** was defined as the implementation of Metro Flow with a service every 10 minutes in each direction on each line, and the inclusion of the Go North East service 5 (South Shields to Jarrow (and return)) via the internal road network within the proposed allocation using the existing frequencies.
- **High accessibility** was as above, with service provision on Go North East service 5 doubled throughout, and the inclusion of a new service running a circular route from Heworth Metro to Heworth Metro in an anti-clockwise loop via the proposed allocation, Fellgate Estate and Wardley with a bus running every 30 minutes though the assessed period.

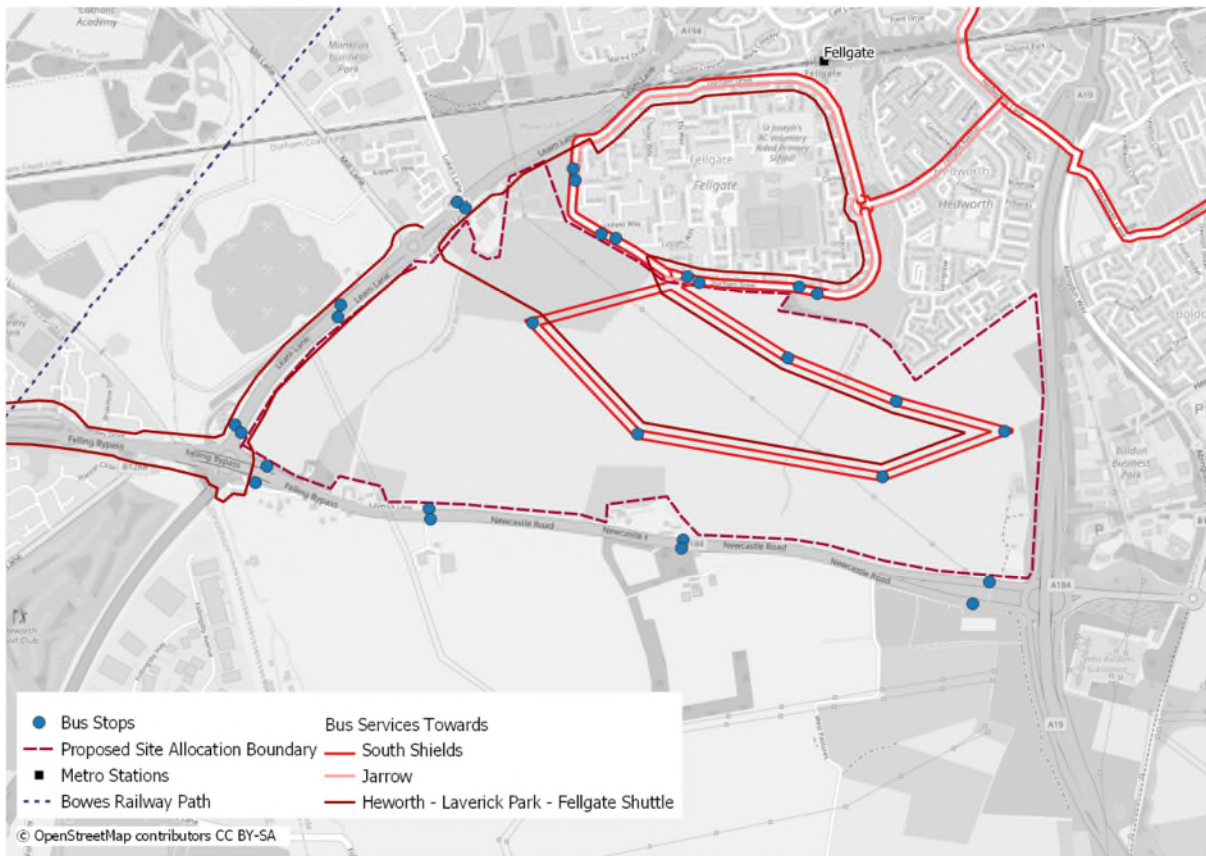
4.1.34 Figure 41 shows the existing bus routes in the vicinity of the proposed allocation:

**Figure 41. Existing Bus Routes**



4.1.1 Figure 42 shows proposed new routes, with the Go North East service 5 entering and leaving the site from the northern access, and a new shuttle bus service to Fellgate Metro and Heworth Interchange entering from the west access and leaving from the north while running a circular route to and from Heworth Interchange.

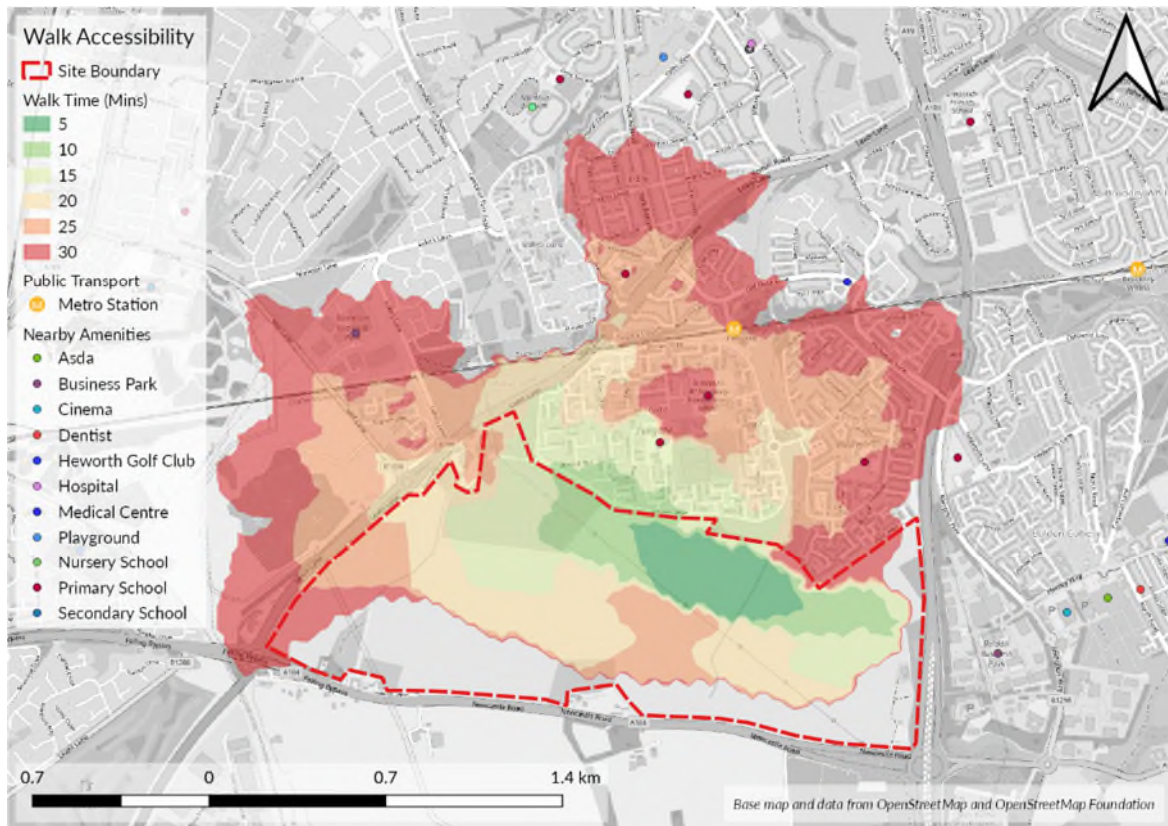
**Figure 42. New bus routes**



4.1.1 Figure 43 illustrates the areas that can be walked to within each 5 minute isochrone up to 20 minutes. This mapping considers any causes of severance or barriers and resulting walking time delay. A wide range of amenities are accessible within 20 minutes including Fellgate metro station, numerous primary schools and secondary schools, medical centres, supermarkets, and playgrounds.



**Figure 43. Existing Walking radius**

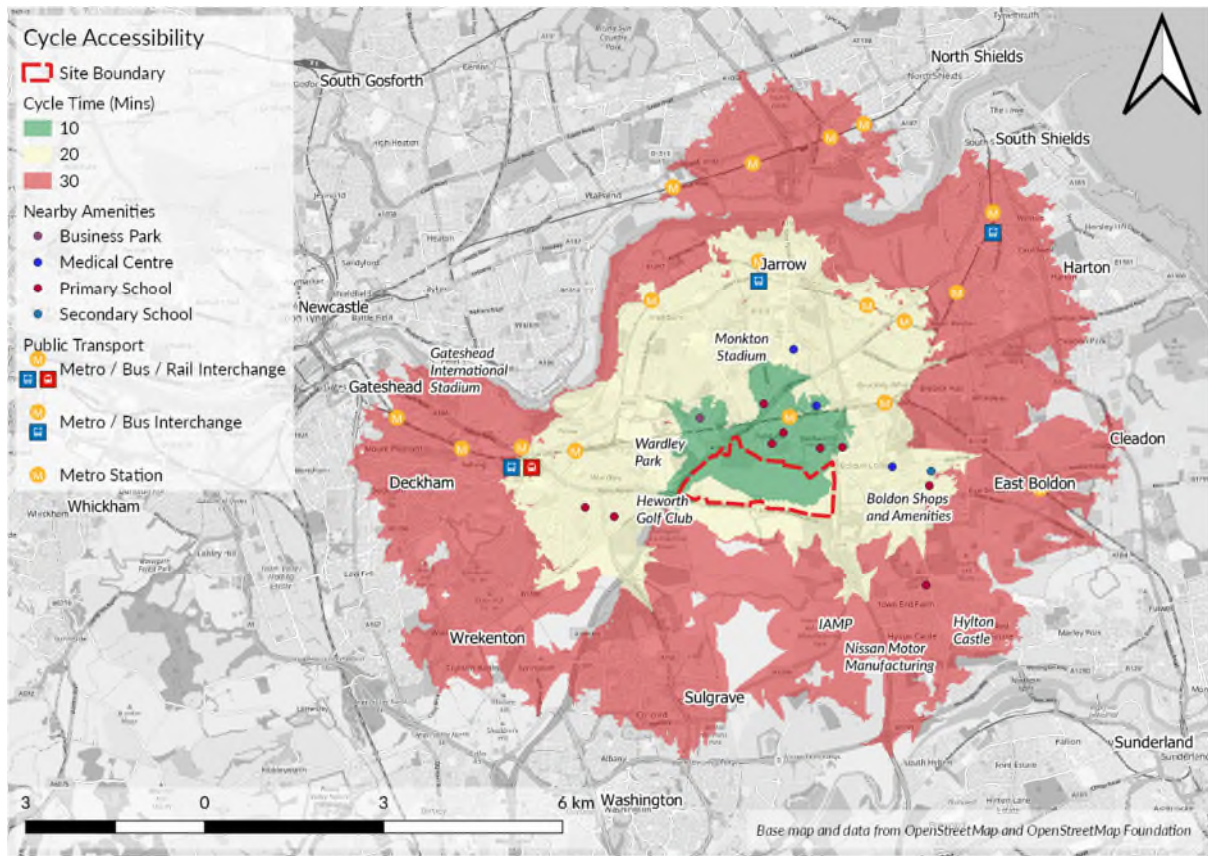


4.1.2 Figure 44 presents areas that can be cycled to/ from the land allocation within 10 minute isochrones up to 30 minutes. A much wider area can be reached when travelling by bicycle, with all of the aforementioned amenities cyclable within 5-10 minutes.

4.1.3 The residential areas of Jarrow, Wrekenton, and Cleadon are amongst those that are cyclable in up to 30 minutes. In addition to Fellgate, multiple metro stations can be reached within 30 minutes cycle time, including Heworth station, the closest to the site that offers access to the heavy rail network as well as the metro network.

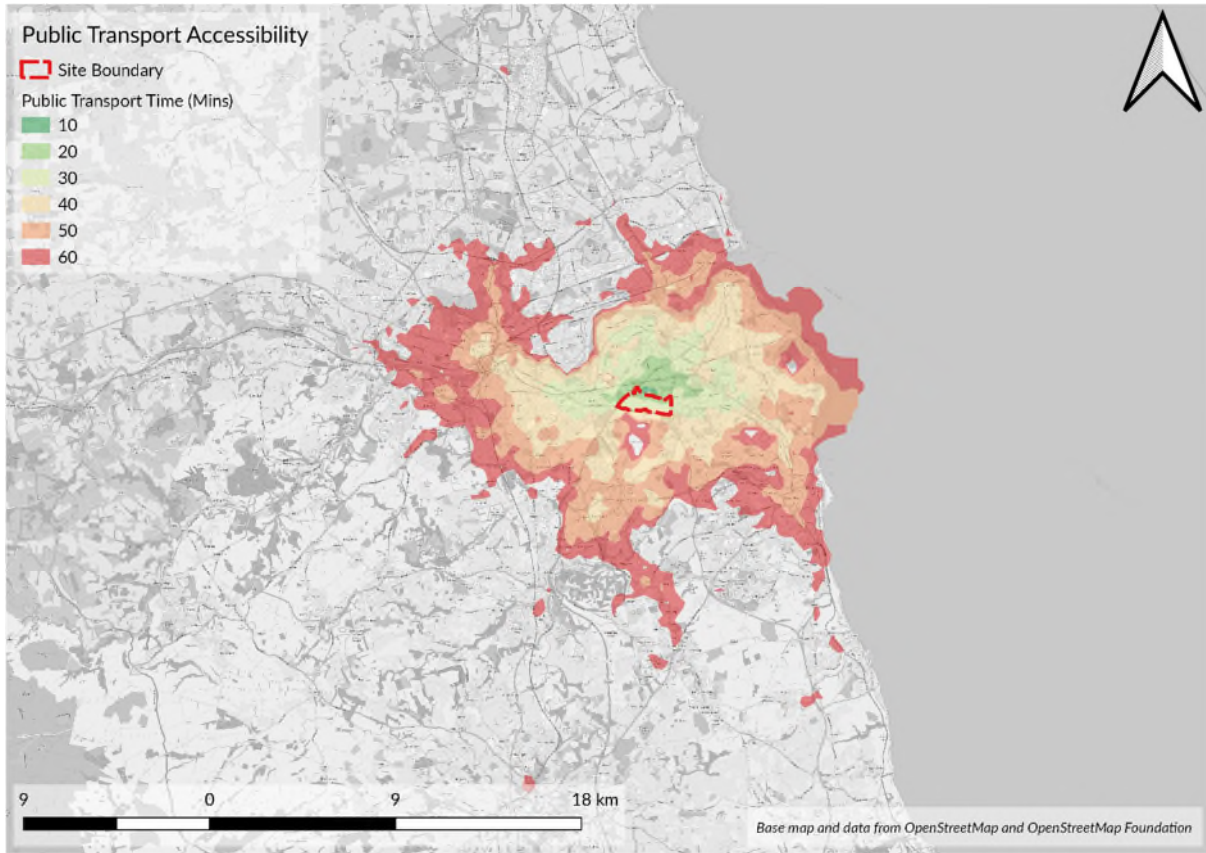


**Figure 44. Existing Cycling Radius**

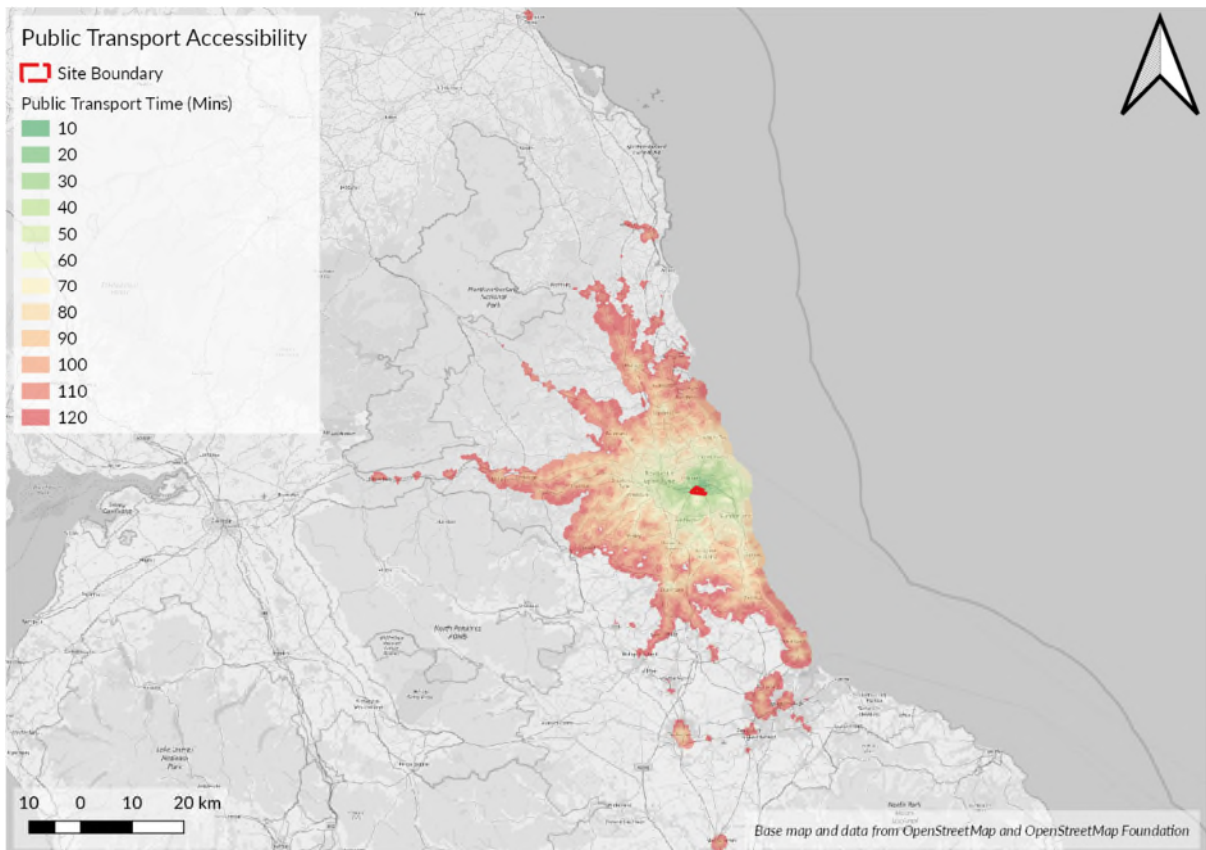


4.1.4 Figures 45 and 46 show the existing levels of accessibility achieved using the present PT network surrounding the site, with no network improvements for both 60 and 120 minutes of travel time. This shows levels of accessibility stretching as far north as Berwick on the Scottish border, Northallerton to the south and Haltwhistle to the West.

**Figure 45. Existing Public Transport Accessibility – 60 minutes**



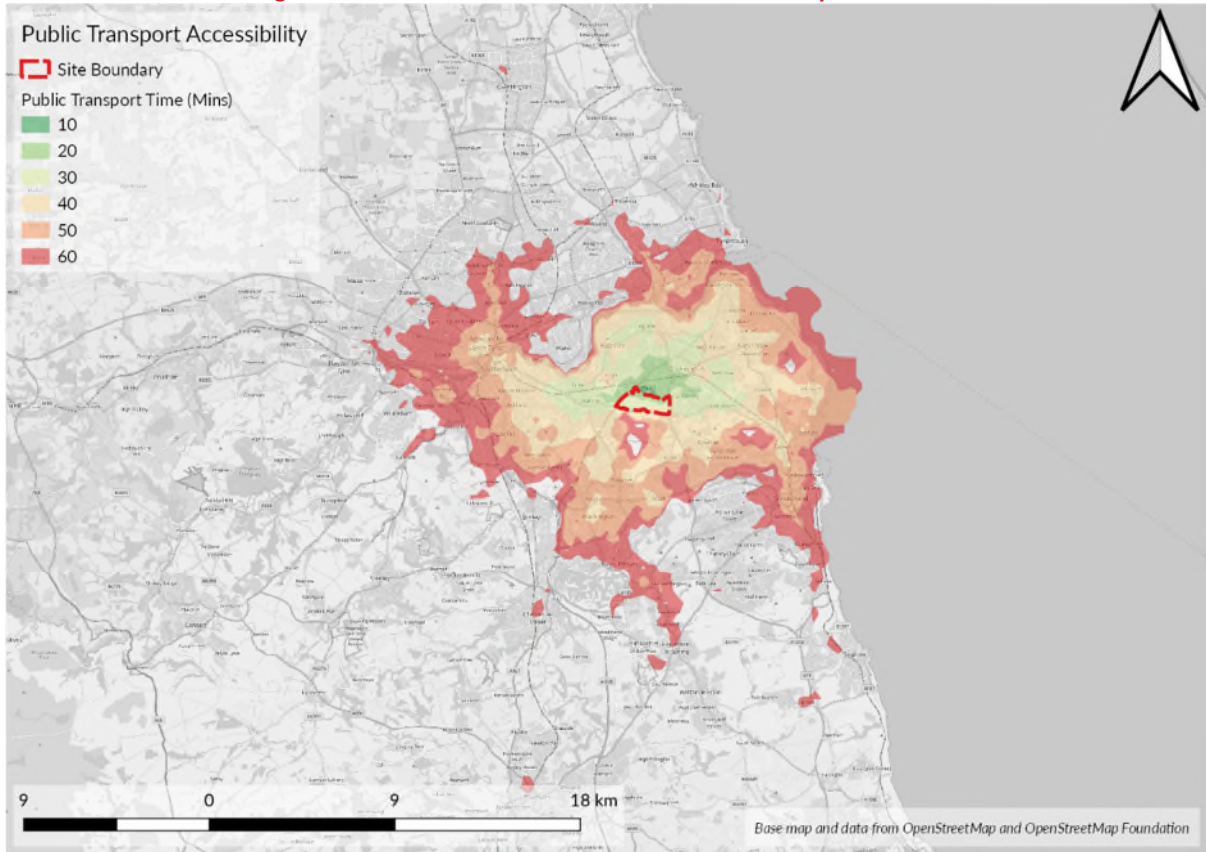
**Figure 46. Existing Public Transport Accessibility – 120 minutes**



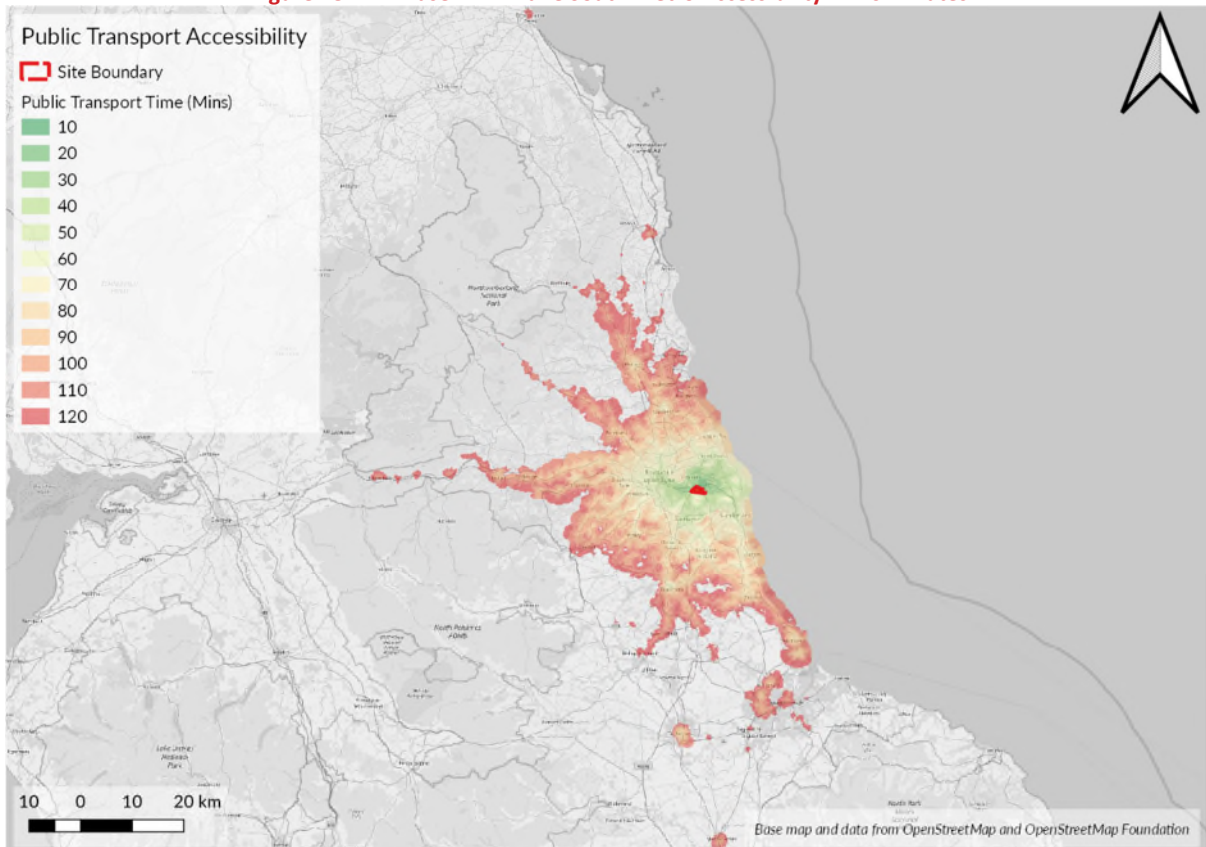
- 4.1.1 Figures 47 and 48 show the levels of accessibility achieved with the inclusion of a Metro Station at Mill Lane South. It is important to note that due to the distance from the land allocation to the Metro station, passengers from the land allocation are anticipated to choose to travel to and from Fellgate Metro station.
- 4.1.2 In addition, the provision of an additional Metro Station at Mill Lane South has the negative impact of increasing journey times (circa 2 minutes) for services from the other Metro stations as trains are required to now stop at a further location.



**Figure 47. Base + Mill Lane South Metro Accessibility – 60 minutes**

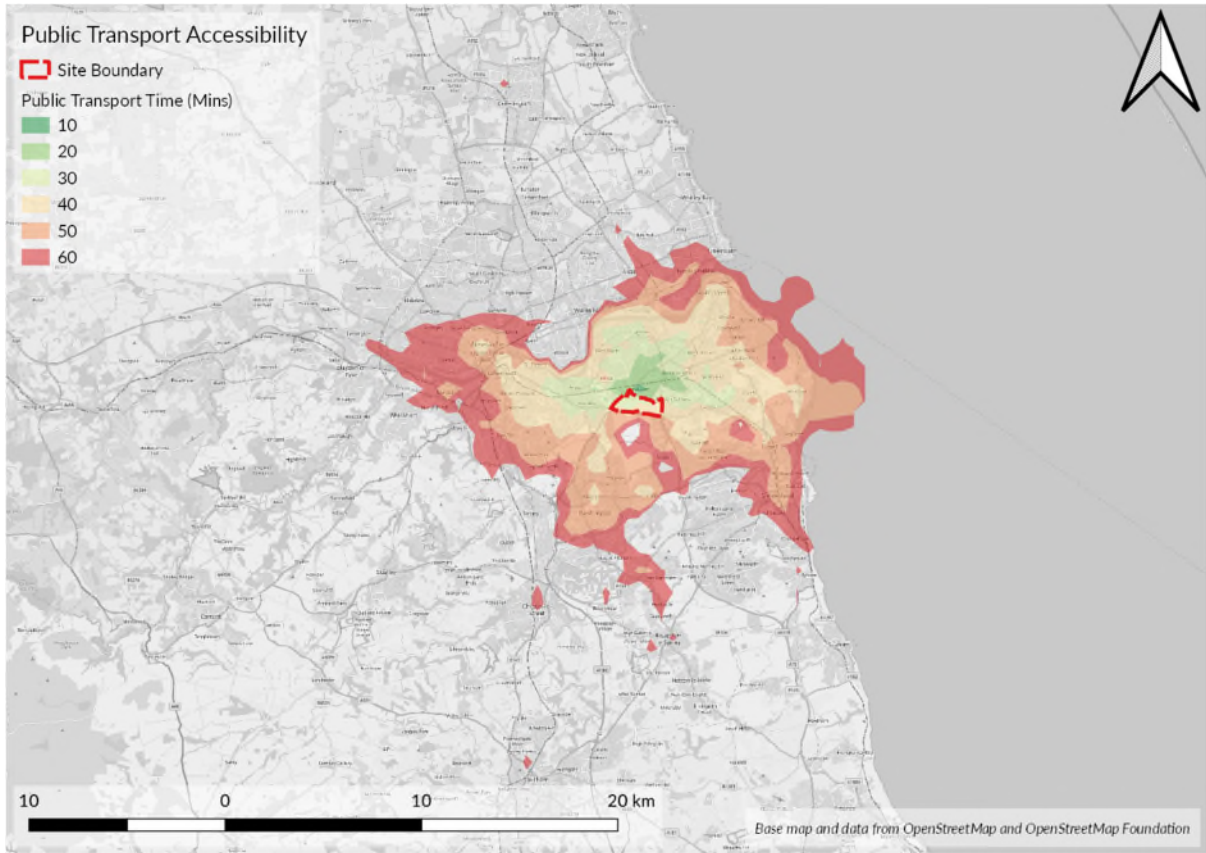


**Figure 48. Base + Mill Lane South Metro Accessibility – 120 minutes**

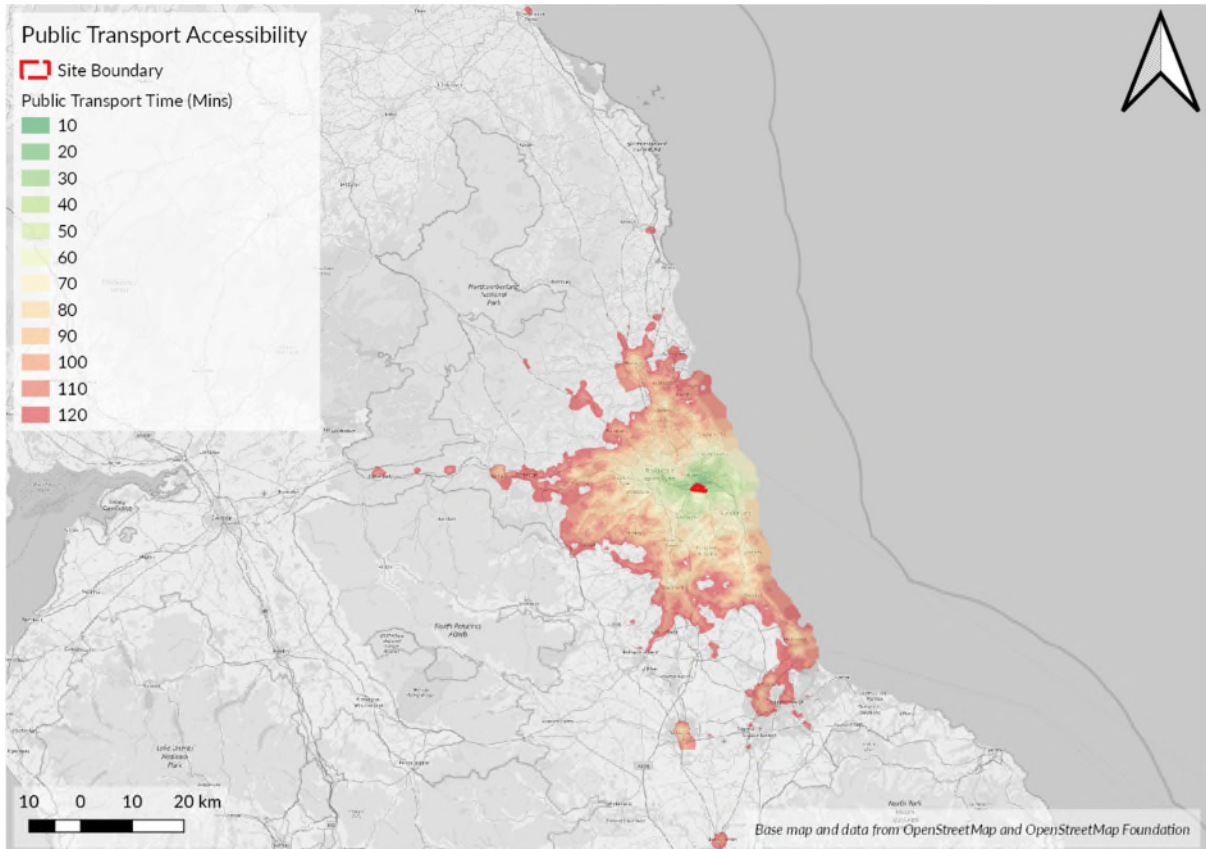


- 4.1.1 Figures 49 and 50 show the accessibility with the addition of the Metro station at Mill Lane and rerouting of existing services via the Land Allocation for both the 60 and 120 minutes journey time.
- 4.1.2 This highlights very little changes across the local metropolitan area, but does highlight some increased accessibility to the wider regional area, especially to the south of the site.

**Figure 49. Base + Mill Lane South Metro + Rerouted Buses Accessibility – 60 minutes**



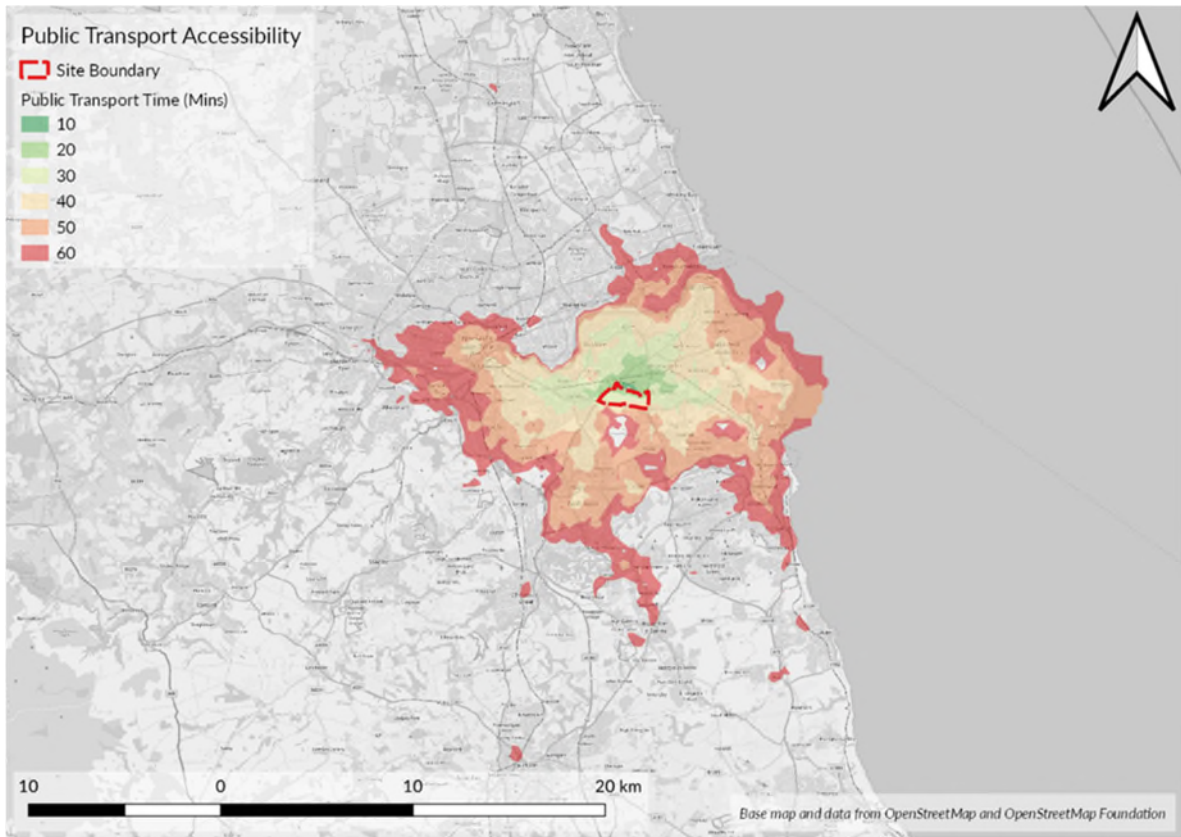
**Figure 50. Base + Mill Lane South Metro + Rerouted Buses Accessibility – 120 minutes**



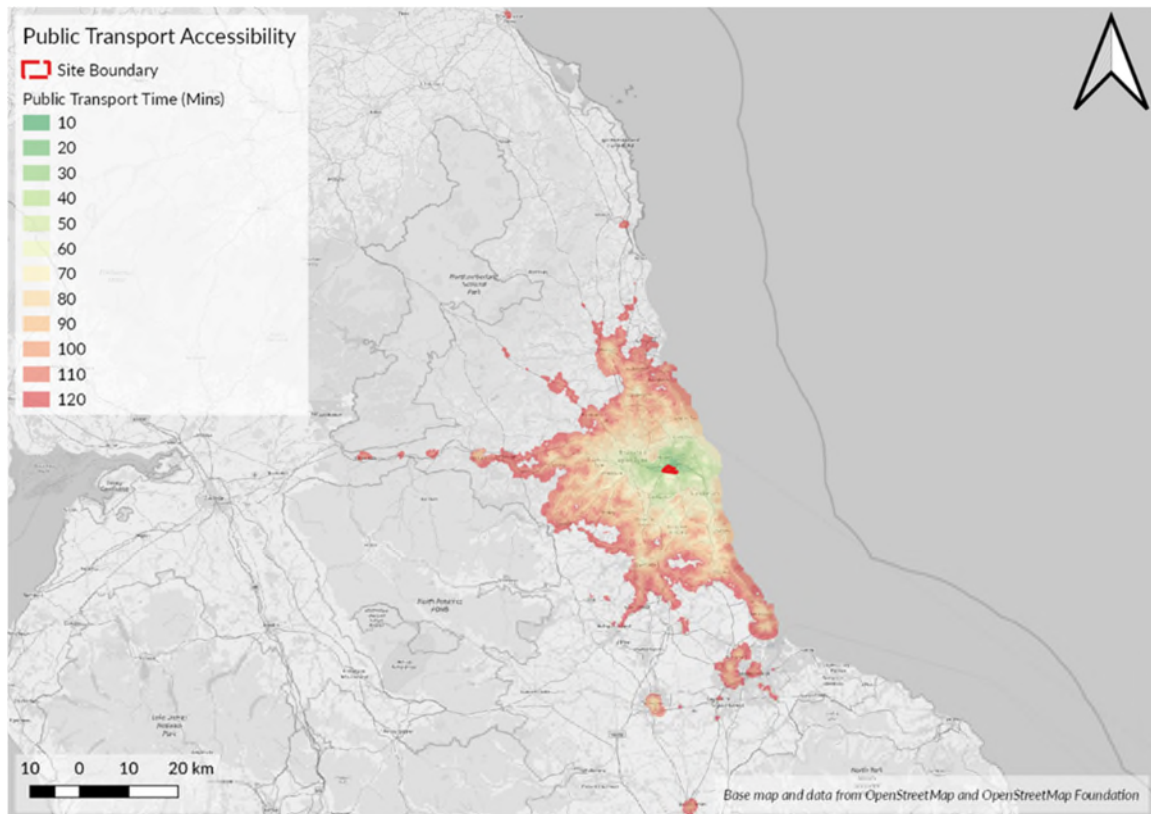


- 4.1.1 Figures 51 and 52 show the accessibility with the addition of the Metro station at Mill Lane and provision of new dedicated bus services via the Land Allocation for both the 60 and 120 minutes journey time.
- 4.1.2 These again show little significant change from the previous scenario, although there is an increase in accessibility to the Durham area.

**Figure 51. Base + Mill Lane South Metro + Dedicated Buses Accessibility – 60 minutes**

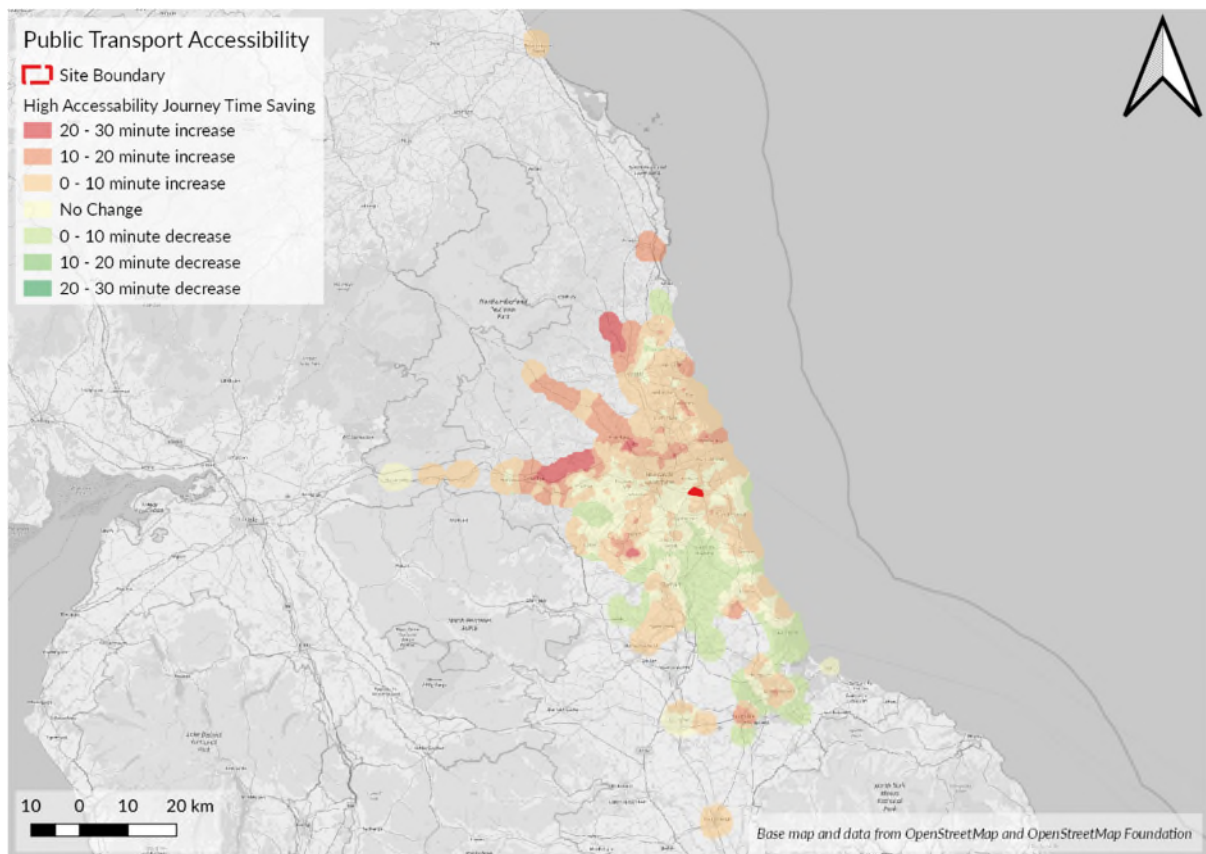


**Figure 52. Base + Mill Lane South Metro + Dedicated Buses Accessibility – 120 minutes**



- 4.1.1 Figure 53 shows the change in journey time between the existing situation and the high accessibility level of public transport provision i.e. with a new Metro Station at Mill Lane South and dedicated bus services as defined passing through the land allocation.
- 4.1.2 The journey times represented by the red colours actually increase to the north and west of the proposed allocation. This is in part as a result of the increased Metro journey times associated with the addition of the new station and subsequently missing connections to existing services.
- 4.1.3 Given that it is projected that residents will choose to use Fellgate Metro Station, it is anticipated that this may act as a deterrent to mode shift.
- 4.1.4 It is important to note that journey times do decrease to locations further north and south. This is anticipated to be as a result of the dedicated bus service which allows quicker connections to existing services.

**Figure 53. Comparison of Journey time for the Existing and Base + Mill Lane South Metro + Dedicated Buses Accessibility**



**Further Sustainable Transport Interventions**

4.1.5 Given the lack of substantial improvement to the accessibility as identified in the TRACC assessment, clearly further measures will be required to achieve meaningful mode shift. Some potential measures are outlined below.

**4.1.6 Area Travel Plan / Sustainable Transport Strategy**

- 4.1.7 An Area Travel Plan, referred to as a “cluster approach” in South Tyneside’s Travel Plan SPD, is essentially the idea that a collection of trip generating/attracting organisations and developments in proximity from each other work together to achieve economies of scale and maximise benefits in the delivery of Travel Planning measures. Collaboration in the collection of travel survey data, traffic counts and the presentation of results can have a greater influence when for instance discussing the commercial viability of new services with operators (buses, car club, bike hire etc.)
- 4.1.8 Guidance on when it may be beneficial for a cluster approach to be adopted is provided in paragraphs 6.18 and 6.19 of the SPD and how to deal with mixed-use and phased proposals in paragraph 6.20.
- 4.1.9 A good example from elsewhere includes Thorpe Park Office Park, The Springs Retail Park and residential developments in East Leeds (<http://www.thorpepark-parklife.co.uk/amenities/>). Thorpe Park is a large, out of town, mixed-used development. The new phase of Thorpe Park comprises 1.43 million sq ft of mixed-use accommodation with 300 new homes by Redrow and 140 acres of parkland and public realm. Extensive work has been undertaken to ensure the sustainability of the community.
- 4.1.10 Critical success factors in the delivery of Area or Cluster Travel Planning include:
- An Area Travel Plan with a shared vision, objectives and targets, ratified by all involved parties, organisations and developers;
  - A Travel Plan Co-ordinator that has a remit for all phases of the development;
  - Consideration of development phasing, ensuring that adequate facilities and amenities are in place for the number of dwellings/employees built out;
  - An ongoing funding mechanism needs to be in place to enable the delivery of Area Travel Plan measures. Options include for example; a percentage of service charges within an employment site, a fee per dwelling contribution, community infrastructure levy etc. This needs to be secured as part of any Section 106 agreement.
  - Agreement about what happens in the event of targets and/or lower forecast trip rates not being achieved. These could take the form of sanctions to be paid by all parties to fund additional sustainable transport measures agreed at the outset, later phases of development not being permissible until targets have been achieved etc.
- 4.1.11 Pedestrian Network Upgrades**
- 4.1.1 Substantial pedestrian upgrades would be required to embed the development into the surrounding network. Good, high quality pedestrian infrastructure throughout the development will be required to ensure that connectivity to the external network can be achieved. This would include to the north, south and west of the development. Existing pedestrian routes exist in those areas but due to the undeveloped nature of the land allocation, they are often on the opposing side of the carriageway or of a poor standard in terms of widths, crossings, signage etc.
- 4.1.2 A prospective applicant of the land allocation should be required to investigate measures to connect a development to existing pedestrian networks.

**4.1.3 Cycle Upgrades**

4.1.4 Substantial cycle upgrades would be required to embed the development into the surrounding network. Good, high quality cycling infrastructure throughout the development will be required to ensure that connectivity to the external network can be achieved. This would include to the north, south and west of the development. Existing cycle routes exist but due to the undeveloped nature of the land allocation they are remote and not connected.

4.1.1 A prospective applicant of the land allocation should be required to investigate measures to connect a development to existing cycle routes.

#### **4.1.2 Cycle Parking Standards**

4.1.3 Sufficient cycle parking is essential to enable people to make more trips by cycle – without confidence that there will be safe, secure parking at their destination, people may choose not to cycle. Without adequate cycle parking at home, they may not be able to own a cycle in the first place.

4.1.4 Given the challenges of retrofitting cycle parking, provision must be sufficient from the outset in order to meet future need as well as current demand. Provision that is of insufficient quality is more likely to go unused even where demand exists, so it is vital that good quality parking is provided from the outset.

4.1.5 As such, it is recommended that each dwelling has the requirement to provide a minimum of one cycle space per bedroom. This could be via the provision of garages or cycle storage within gardens.

4.1.6 In order to promote cycling to local public transport interchanges, it is recommended that high quality cycle parking is extended or provided. This is likely to include secure lockers, good lighting and the provision of CCTV to give cyclists comfort that their belongings are secure.

#### **4.1.7 Public Transport Network Upgrades**

4.1.1 Substantial upgrades would be required to improve access to the development by public transport. This would include upgrades to the existing provision on the periphery of the site.

4.1.2 In addition, given the scale of the site, it is considered essential that public transport would need to penetrate the development. This could be either via the diversion of existing services or the provision of new dedicated services. Whilst the diversion of existing services is cheaper, it has been demonstrated via the TRACC exercise as having limited mode shift potential.

4.1.3 Therefore, the provision of dedicated services may need to be required which would allow for bespoke routes to be identified. This could be for example a route that internally circles the development; travels to Fellgate Metro Station; to the nearest retail and leisure facilities e.g. Boldon Leisure Park and via employment locations such as Boldon Business Park, IAMP and the Nissan plant.

4.1.4 A prospective applicant of the land allocation should be required to investigate measures to investigate upgrades to the bus network.

4.1.5 On site facilities should include the provision of shelters, clear timetabling and potentially real time information.



4.1.6 The Masterplan for the development should be designed to ensure that all homes are located within easy walking distance of any bus stop that is provided within the development.

**4.1.7 Metro Extensions – the Leamside Line**

4.1.8 The TRACC exercise included for the development of a new Metro station at Mill Lane. This was demonstrated as having limited mode shift potential.

4.1.9 However, there is a longheld aspiration to reopen the ‘Leamside Line’ as stated in the recently adopted North East Transport Plan (March 2021). *“We want to deliver new stations on existing lines and reopen routes, such as the Northumberland Line and the Leamside Line”.*

4.1.10 If the Leamside Line was reopened and passenger trains restored to the route, this would help increase public transport connectivity to the site and strengthen the case for wider trip banking.

**Figure 54. Metro Extensions Map**



(Source: North East Transport Plan, 2021)

**4.1.1 Electric Vehicles**

4.1.2 As of 2020, there were 2,960 registered electric vehicles (EVs) and over 800 public chargers in the seven North East authorities.

4.1.3 As outlined above, there are publicly available chargers in close proximity to the land allocation. However, it is considered to achieve real change, then all new homes should be fitted with electric charge points which will making charging easier, cheaper and more convenient for drivers.



4.1.4 A prospective applicant of the land allocation should be required to consider the provision of electrical vehicle charging points at all dwellings.

#### **4.1.5 Trip banking**

4.1.6 The principle of trip banking is about adopting an approach that acknowledges the wider benefits of smarter travel initiatives and interventions that enable a reduction in existing traffic levels, which is then ‘credited back’ to the applicant to negate the impact of their own development.

4.1.7 For example, the provision of a Metro station at Mill Lane, which demonstrated very little benefit for the land allocation itself in terms of its level of accessibility, could be demonstrated that its provision reduces existing trips on the network. For example, people who are currently driving to Monkton Business Park may choose to use a new Metro station which would remove a quantifiable number of trips from the White Mare Pool junction.

4.1.8 It is however essential that the smarter choices options are tested rigorously at planning application stage to demonstrate the principal; but also, that the measures are implemented and monitored to ensure their effectiveness is as predicted.

4.1.9 The principle of trip banking is agreed in policy and has been accepted by inspectors at planning inquires (Haywards Heath, north of Brighton – 25% modal shift).

4.1.10 A prospective applicant of the land allocation should be required to investigate potential benefits of trip banking from measures that they implement or are required to contribute to.

#### **4.1.11 Trip Internalisation**

4.1.12 Internalisation is the principle of quantifying the percentage of trips generated that will both begin and end within the boundary of the Land Allocation. As these internal trips will make up a portion of a developments total trip generation, the higher the rate of internalisation, the lower the impact on the wider highway network.

4.1.13 Clearly trip internalisation warrants the need for mixed uses on the development. This could include for education, leisure, health or retail.

4.1.14 A study will be required to analyse all these trip types to estimate the overall residential trip internalisation rates achievable in the Land Allocation.

#### **4.1.15 Working from home**

4.1.16 One benefit of the COVID-19 pandemic has been the development and continuing good practice of people working from home. The technology to work from home with videoconferencing has been clearly demonstrated.

4.1.17 A wide range of research, including a YouGov survey, indicates that after the pandemic, the majority of workers want to continue to work from home at least some of the time.

4.1.18 According to data from the Office of National Statistics, prior to COVID-19, only around 5% of the workforce worked mainly from home. Surveys suggest that 40% of employers said they expect more than half their workforce to work regularly from home after the pandemic has ended.

- 4.1.19 While some employees want to work from home all the time after the pandemic, it is anticipated that most would prefer a balance where they are in the office for some of the week and at home for the remainder. This has led to the use of a new term ‘hybrid working’.
- 4.1.20 The impact of hybrid working will have different impacts depending on geographical locations. For example, it is envisaged that it will most likely impact white collar workers rather than blue collar workers and therefore may have greater impacts on city centres than more industrial areas. Regardless of which, it is anticipated that it will lead to a reduction in trips on the highway network.
- 4.1.21 As we move out of the COVID-19 pandemic and a return to a more normal way of working, it is essential that the capacity for people to work from home is locked into new development. This includes the provision of dedicated offices within dwellings and the provision of high-speed broadband. It may also prove beneficial to provide shared working space at distinct locations within the development where people can benefit from working collaboratively and have access to meeting rooms.
- 4.1.1 A study will be required to analyse all these trip types to estimate the overall residential trip internalisation rates achievable in the Land Allocation.

### **Emerging Sustainable Transport Interventions**

- 4.1.2 In addition to sustainable transport options and schemes already or soon to be available, ‘emerging’ schemes and concepts that are in early development phases or currently unavailable have also been considered. Where it is known that plans for any of these emerging concepts have been included in funding bids or programmes, they are outlined below.

#### **4.1.3 Demand responsive transport efficiency**

- 4.1.4 Demand responsive transport is a service that responds to user needs. It is a flexible, on-demand service, where the public transport vehicle serves various points where people have requested it.
- 4.1.5 One example is Transport for London’s on demand service for Sutton (<https://tfl.gov.uk/modes/buses/demand-responsive-bus-service>).
- 4.1.6 In Sutton, the demand-responsive bus takes multiple passengers heading in the same direction and books them into a shared vehicle. The services operate from ‘corner to corner’, so there are no fixed routes or bus stops.
- 4.1.7 An app shows people a clear map of where their virtual bus stop is located. They are picked up and dropped off within 200m of their requested destinations. This helps ensure that even with multiple pick-ups, there are no lengthy detours.
- 4.1.8 The viability of the service is crucial and would need to be quantified and demonstrated at planning stage.

#### **4.1.9 Mobility Hubs and MaaS**

- 4.1.10 A **Mobility Hub** is defined as a: ‘dedicated locations for switching modes of transport’ *‘a recognisable place with an offer of different and connected transport modes supplemented with enhanced facilities and*



transport provision, including car clubs, shared taxis, options to travel by private car and the functionality to plan Park & Ride journeys from outlying areas of the region. In other words, a fit-for-the-region Mobility as a Service (MaaS) solution.

4.1.4 The description Mobility Gateways put forward as proposal four of the FMZ bid match those for Mobility Hubs. The aim being *“to provide modern and comfortable future mobility gateways where interchange between future transport modes and mass transit modes can be focussed”*.

4.1.5 Study work was carried out by Nexus looking at the potential locations of Future Mobility Gateways in April 2019 considering the demographic, housing, healthcare and transport patterns of residents to identify potential Metro stations and bus interchanges that have the most scope for becoming Gateways.

4.1.6 New 'mobility hub' stations featuring, bus, park and ride and active travel connections are also mentioned in the North East Transport Plan in relation to a large-scale package of Metro and rail expansion.

#### **4.1.7 Mobility/Lifestyle Credits**

4.1.8 Future mobility trials have been conducted elsewhere, notably in the West Midlands (Coventry) by West Midlands Combined Authority. <https://www.coventry.gov.uk/mobilitycredits>

4.1.9 This system rewards commuters for leaving their car at home during peak periods and/or giving up their car altogether through financial incentives referred to as Mobility Credits. These can be spent on public transport services such as car clubs, bike share, taxis and on-demand bus services.

#### **4.1.10 15-Minute Cities and 20-Minute Neighbourhoods**

4.1.11 Relatively new concepts that are gaining a lot of attention in the UK Transport and Planning sectors are 15-minute cities and/or 20-minute neighbourhoods. Essentially, they centre around the idea that we should be creating places in which most of people's daily needs can be met within a short walk or cycle journey. The benefits of this approach to placemaking and land use planning include increases in physical activity, improved physical and mental wellbeing, less motorised traffic, better air quality, a thriving local economy of shops and businesses, increased sense of community, socialising and interaction.

4.1.12 These concepts are being realised elsewhere in the world including the cities of Melbourne and Paris. They have also gained momentum through the restrictions placed on travel during the COVID-19 pandemic of 2020/21. There has been an increase in people living locally; shopping, working from home and undertaking 'daily exercise' on foot and bicycle within closer radii of their homes.

4.1.13 Work is being done to understand how such concepts can be delivered through the UK planning system. For example, the Town and Country Planning Association have been running webinars and have produced a comprehensive Guidance document: (<https://www.tcpa.org.uk/the-20-minute-neighbourhood> ).

**Figure 56. Features of a 20-Minute Neighbourhood**



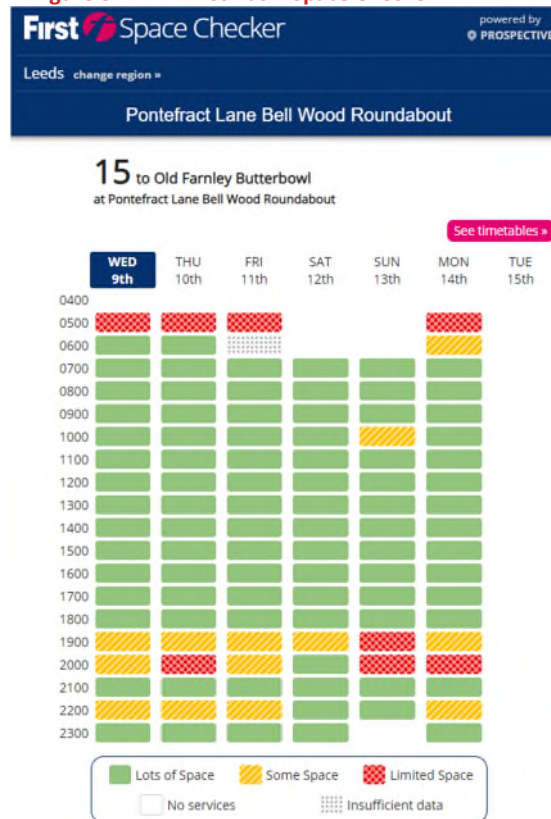
(Source: <https://www.tcpa.org.uk/guide-the-20-minute-neighbourhood> )

**4.1.14 Real-time Capacity Data**

4.1.15 The availability of real-time information about the location of services has been available for some time on most services across the North East with information online (including Nexus’ Live Travel Map: <https://livemap.nexus.org.uk/#/liveDepartures>) and in many bus stops. A more recent development has been the availability of real-time information about capacity both on services and the availability of parking at interchanges, stations, P&R vs city centre to discourage onward travel to city centres. Assuming that Park and Ride car parks are already full or experiencing over-capacity public transport services in the peak periods can be a real and perceived barrier to travelling by sustainable modes. Conversely, knowing that city centre car parks are already full can deter drivers from continuing into city centres and instead using alternative modes for either all or the last leg of their journey.

4.1.16 For example, [First Bus](https://spacechecker.firstgroup.com/leeds) are now offering information about capacity on their App and a ‘Space Checker’ service to find out when the quietest times to travel on each service are <https://spacechecker.firstgroup.com/leeds>

Figure 57. First Bus – Space Checker



4.1.17 Providers of data regarding car parking capacity are available. An example of one providing trials in partnership with Calderdale Council in Halifax is [AppyWay](#). This two-year trial is enabling visitors to the town to find parking spaces easily and have the option to use cash-free payments. Users can see ‘real time’ availability so that they can check where its best to park before the start of their journey, reducing the distance travelled and time spent trying to find parking. Charges are made by the minute and end automatically as the car leaves the bay.

**4.1.18 EV Bikes**

4.1.19 HMRC updated their guidance on the Cycle to Work scheme in June 2019 and made it clear that there is no £1000 upper cap and therefore confirmed that the purchase of electric bikes (which can exceed this price), are viable on the scheme.

**4.1.20 EV Scooters**

4.1.21 From July 4th 2020, the Government started limited, legal trials of rented electric scooters on public roads, cycle paths and lanes as part of its review of transport following the easing of lockdown. During the year-long trial, e-scooters will be classified as motor vehicles and people will need a driving licence and insurance to ride one. Use of the rental scooters will be legal and insurance will be provided by the rental provider.

4.1.22 Trials are being held for 12 months to assess whether the devices reduce motor traffic and what impact they have on the safety of users and those around them. Riders who participate in the pilots will need a full or provisional car, motorcycle or moped licence, must be aged at least 16 and will be urged to wear a helmet. Only rental e-scooters will be allowed on roads, and they will be limited to 15.5mph.



4.1.23 Across the UK, more than 50 councils and regional authorities are in the process of planning and putting in place e-scooter pilots, including in Newcastle City Centre <https://www.newcastle.gov.uk/our-city/transport-improvements/transport-and-air-quality/e-scooter-trial-launches-newcastle/neuron>.

#### **4.1.24 Park and Pedal/Stride**

4.1.25 Park and Ride as a commuting option has been implemented in various places including in Leeds where there are now sites (Elland and Temple Green) with a third planned (Stourton). Whilst the concept can remove some vehicle trips from links, depending on the 'Park' element's location and proximity to the SRN, there is a risk that trips will still use the SRN for the first and driven part of the commute. Notwithstanding this risk, encouraging the concept of parking and travelling the remaining journey leg by a non-car mode could be encouraged for cycling and walking i.e. riding and striding.

4.1.26 This concept is already promoted in UK locations such as [York](#), [Oxford](#), [Salford](#) and [Canterbury](#). It was also proposed in the Transport Secretary's address in relation to commuting safely in May 2020. Schemes could assist in reducing trips on radial routes whilst also helping the operation of SRN junctions.

### **Research into Modal Shift**

4.1.27 This section provides some evidence for the potential of sustainable travel measures and effective travel planning to reduce the trip generation from developments where sustainable travel options are prioritised, incorporated by design and therefore maximised from the outset.

#### **4.1.28 Transport Analysis Guidance (TAG)**

4.1.29 It was acknowledged in the TAG unit 'Modelling Smarter Choices' UNIT M5.2 Transport Analysis Guidance (TAG) (DfT, January 2014) <https://www.gov.uk/transport-analysis-guidance-tag> that formal modelling of Smarter Choices is a developing area.

4.1.30 They reference two studies; "Modelling and Appraisal of Smarter Choices: A Literature Review" (Jotisankasa and Polak, 2008) and "Modelling and Appraisal of Smarter Choices: Scope for Further Research" (Polak, 2009) which were undertaken to begin addressing this gap.

4.1.31 The evidence provided in the TAG unit is primarily taken from a meta-analysis carried out by Möser and Bamberg (2008) titled "The effectiveness of soft transport policy measures: a critical assessment and meta-analysis of empirical evidence". Journal of Environmental Psychology, Vol 28, pp10-26.

4.1.32 These summarised the various impacts of smarter choice measures and are replicated in Table 3.

**Table 3. Summary of the Impacts of Smarter Choices on Car and Non-car trips**

SMARTER CHOICE MEASURE	REDUCTION IN CAR TRIPS	INCREASE IN NON-CAR TRIPS
Workplace Travel Plan	18%	34%
School Travel Plan	10%	7%
Targeted Marketing	8%	14%

*(Source: Möser and Bamberg (2008))*

4.1.33 The research goes on to discuss how the above percentages could be applied. For instance, within a study area where 50% of workplaces have a Travel Plan, the reduction in trips could be 9%. Further advice is given on the modelling of soft and hard measures with reference to modifying model parameters including trip rates to reflect the impact of measures.

4.1.34 Another example is suggested to reflect the impacts of remote working (“teleworking”) and compressed working weeks by using “estimates of the percentage reductions to apply to trip rates.... making assumptions about the numbers of workers who might work some of the time from home and the average number of days they would do so.”

4.1.35 A further study ‘Smarter Choices – Changing the Way We Travel’ undertaken by Cairns S, Sloman L, Newson C, Anable J, Kirkbride A & Goodwin P (2004) identified the following:

*“most travel plans achieve cuts in car use of 0-35%, with a few best practice plans achieving cuts of over 40% and some delivering no reduction at all”.* Data from the case study areas suggests that, broadly:

- 10% of travel plans achieve no change
- 20% reduce car use by >0-10%
- 35% reduce car use by >10-25%
- 25% reduce car use by >25-35%
- 10% reduce car use by over 35%.

The average reduction (including poor-performing, middle-range and good performing plans) was 18%. This is consistent with results from the literature, which highlight that even minimalist plans can be expected to have some impact.

4.1.36 Research undertaken by the Irish National Transport Authority has found that where workplaces actively engage with their Workplace Travel Plan, the average reduction in car commuting is 18%. A review of the Smarter Travel Areas programme found that these behavioural change programmes had been most effective in the University of Limerick where they had been combined with a “carrot” in the provision of sustainable mobility infrastructure and a “stick” in the form of parking charges.

4.1.37 A study conducted by Gruyter, C et al in 2017 focused on Travel Planning at new developments as opposed to pre-existing sites. It highlighted some of the difficulties experienced in securing effective Travel Plans through the planning process. In particular:

- a tick-box approach adopted by developers focused on gaining planning approval only;
- a lack of ownership and implementation by ultimate occupiers of sites. A study by Addison & Associates (2008) noted that of 233 workplace travel plans secured through the planning process between 2001 and 2006, only 36% had been implemented.
- the lack of resources or willingness within local authorities to enable sufficient monitoring and enforcement.

4.1.38 In terms of outcomes it is stated that;

*“Where evaluation results have been expressed in terms of a percentage change in car use, results have ranged from a reduction in car use of 5 percentage points to as much as 42 percentage points”.*

*“However, most of the evaluations reported a reduction in car use of around 10-20 percentage points” (p18, Gruyter, C et al, 2017). (p18)”*

4.1.39 A further piece of work undertaken by Gruyter, C et al in 2015 titled “Understanding Travel Plan Effectiveness for New Residential Developments” compared four new residential sites that had Travel Plans against four similar residential developments without Travel Plans. Results indicated that the average weekday mode share for car driver trips was 14 percentage points lower at the case sites than at the control sites.

4.1.40 However it is acknowledged though that *“there is a paucity of robust evidence concerning the effectiveness of travel plans for new developments”.* (p20)

4.1.41 The Standardised Assessment Methodology (SAM) for monitoring Travel Plans was developed by the providers of the TRICS database. Some authorities, particularly London Boroughs specifically require monitoring surveys that meet the SAM criteria.

4.1.42 Four case studies are provided by TRICS on their website for sites which were monitored in 2005 and 2008 documenting reductions in trip rates and mode shift. These demonstrated a shift of between 2% and 5% as a result of hard and soft travel planning measures.

#### **4.1.43 Summary of Research**

4.1.44 The evidence for the success of Travel Plans and smarter choice measures is far from conclusive. Whilst it is acknowledged that the majority of studies that have been undertaken identify that mode shift is achievable (ranging from 2%, to in excess of 40%), the lack of research does raise concerns with the validity of the findings.

4.1.45 In terms of this land allocation, we consider that if sufficient measures are put in place, then in the region of 5 - 15% mode shift should be achievable.

4.1.46 A prospective applicant of the land allocation should be required to provide an evidence base of how they will achieve any identified modal shift.

## 5. ACCESS TO THE DEVELOPMENT

### Introduction

- 5.1.1 A number of new vehicular accesses have been considered to provide access to the land allocation.
- 5.1.2 Preliminary designs of the proposed access arrangements are included in Appendix B.

### Eastern Access to B1298 Abingdon Way

- 5.1.3 The eastern extent of the site is bounded by the A19 trunk road. Given the proximity to the A19/A184 Testo's and A19 Hedworth Lane junctions, it would not be possible to create a new access directly onto the A19. Therefore, bridge options over the A19, linking to the local road network, have been considered. The options outlined below have used open source LiDAR data to provide an indication of the existing ground profile.

#### Eastern Bridge – Option 1

- 5.1.4 To the north of Boldon Business Park is an area of woodland. Option 1 proposed to use this space for a bridge over the A19, linking to Abingdon Way at Romsey Drive with a potential signalised junction. However, due to the limited space available, it was not possible to design a vertical alignment in accordance with Design Manual for Roads and Bridges (DMRB) in this area. This option has therefore been excluded from any further assessment work as part of the next tranche of work.
- 5.1.5 Option 1 is shown in drawing **21A77-SYS-HGN-A19-DR-CH-01-P01**.

#### Eastern Bridge – Option 2

- 5.1.6 Brooklands Way runs east to west from the B1298 Abingdon Way/Henley Way roundabout through Boldon Business Park. Option 2 proposed to increase the height of the roundabout to the west of Brooklands Way to allow for it to connect to a bridge over the A19.
- 5.1.7 CD 116 of DMRB states that the longitudinal gradients on approach to a roundabout should be no greater than 2% before entry. Therefore, the existing roads are shown to be raised at 2% gradients to determine the maximum achievable height of the roundabout, whilst maintaining existing access points. This produced a gradient of 5.96% for the proposed western link over the A19 which greatly exceeds the maximum 2% gradient. This option has therefore been excluded from any further assessment work as part of the next tranche of work.
- 5.1.8 Option 2 is shown in drawing **21A77-SYS-HGN-A19-DR-CH-02**.

#### Eastern Bridge – Option 3

- 5.1.9 Due to the constraints highlighted in Option 2, Option 3 includes the removal of the roundabout to the west of Brooklands Way. The removal of a junction at the very end of the slope from the bridge allows for a maximum gradient of 6% between bridge level and the existing ground.

- 5.1.10 The Brooklands Way / Burford Way junction remains as existing. However, an alternative route would be required to access the northern section of Boldon Business Park. Alternative routes could include a new junction on Abingdon Way or a new link road to the north of Brooklands Way which would require demolition of a unit.
- 5.1.11 The new bridge would require demolition of the unit to the west of the Brooklands Way roundabout. There are also overhead lines in the vicinity of the new bridge which would require diverting.
- 5.1.12 The bridge levels may require increasing slightly due to the grade separation of Testo's junction not being shown on the LiDAR data. However, as the location of the bridge is close to the northern merge and diverge of the junction, it is not anticipated that the levels would need to change significantly. Amendments would be required to the access road to the attenuation pond to the west of the A19 due to being in close proximity to the new bridge/link road. A new access for pond maintenance could be formed from the new link road.
- 5.1.13 It is anticipated that cost of land acquisition; diversion works and the bridge construction itself make this scheme likely to be unviable and therefore it has been excluded from any further assessment work as part of the next tranche of work.
- 5.1.14 Option 3 is shown on drawing **21A77-SYS-HGN-A19-DR-CH-03**.

### **Southern Access to A184**

- 5.1.15 The southern extent of the site is bounded by the A184, which in this location forms part of the strategic road network, linking the A194 (M) to the A19. A proposal was considered to create a new left-in, left-out priority junction to the west of the existing parking lay-by on the A184.
- 5.1.16 However, following discussions with Highways England, it was deemed that creating a new junction on this section of the strategic road network would be contrary to policy.
- 5.1.17 This option has therefore been excluded from any further assessment work as part of the next tranche of work.

### **Southern Access to local road network**

- 5.1.18 As a result of the discussions with Highways England, other options were considered to provide an access to the south of the development. As the site is bounded by the strategic road network, bridges over the A184 were considered. Two potential routes for bridges are shown on drawing **21A77-SYS-HGN-A184-DR-CH-01**. These could potentially link to Follingsby Lane, the Wardley Colliery local plan allocation or the International Advanced Manufacturing Park.
- 5.1.1 It is anticipated that cost of land acquisition and the bridge construction itself make these schemes likely to be unviable and therefore it has been excluded from any further assessment work as part of the next tranche of work.

### **South-western access to A194 / A184 White Mare Pool**

- 5.1.2 The A194 / A184 White Mare Pool junction is located to the south-west of the site.



- 5.1.3 To accommodate a potential access to the development from the roundabout, the geometry of the roundabout requires elongating to the north to allow for a development access to be located between the A194 north entry and the A184 east exits of the roundabout. This lengthens the north-south links of the roundabout by 70m, providing additional inter-visibility between entries and exits and additional storage space on the roundabout circulatory.
- 5.1.4 The proposed roundabout utilises a parking area of the hotel/restaurant complex to the north-west of the junction. Consultation with the operators of the hotel and restaurant would be required. There is a potential to relocate this section of parking to the south-west of the buildings in currently unoccupied land.
- 5.1.5 Consideration was given to increasing the existing roundabout diameter to the north-east to provide the development access. However, due to the potential costs of creating a new underpass and realignment of the A184, this was deemed to be unviable.
- 5.1.6 It should be stressed that this scheme has not been discussed with Highways England and a lengthy process to achieve agreement on this solution would be required.
- 5.1.7 It is considered that this scheme should be taken forward for further assessment as part of the next tranche of work.
- 5.1.8 The proposed elongated roundabout is shown on drawing **21A77-SYS-HGN-WMP-DR-CH-01**.

#### **Western Access to A194 / Mill Lane**

- 5.1.9 The A194 / Mill Lane junction is a partially signalised roundabout located to the west of the development.
- 5.1.10 The existing eastern arm provides access to West Fellgate Farm and The Lakeside public house. To increase capacity at the junction, a scheme elongating the roundabout to the east has been proposed which includes full signalisation. The elongation provides additional inter-visibility between entries and exists and additional storage space on the roundabout circulatory.
- 5.1.11 The eastern arm would provide direct access into the proposed development. An indicative location for a priority junction providing access to West Fellgate Farm and The Lakeside public house has been included. This option is shown on drawing **21A77-SYS-HGN-MLN-DR-CH-01**.
- 5.1.12 An additional option has also been proposed, replacing the existing roundabout with a signalised junction. This can be provided largely within the existing footprint of the roundabout. This option is shown on drawing **21A77-SYS-HGN-MLN-DR-CH-02**.
- 5.1.1 It is considered that these schemes should be taken forward for further assessment as part of the next tranche of work.

#### **Northern accesses to Durham Drive**

- 5.1.2 To the north of the site is Durham Drive, a residential access road subject to a 20mph speed limit with traffic calming features. It provides connections from the A194 to the west and to the A19 via Hedworth Lane to the east.
- 5.1.3 Two potential simple priority junctions have been identified on the south side of Durham Drive. This option is shown on drawing **21A77-SYS-HGN-DD-DR-CH-01**.

5.1.4 It is considered that these schemes should be taken forward for further assessment as part of the next tranche of work.

#### 5.1.5 **Summary**

5.1.6 It is recommended that three access options are taken forward to the next stage of assessment work. This consists of the following:

- Option 1 – Elongated roundabout at White Mare Pool;
- Option 2 – Upgraded junction at Mill Lane;
- Option 3 – Durham Drive.

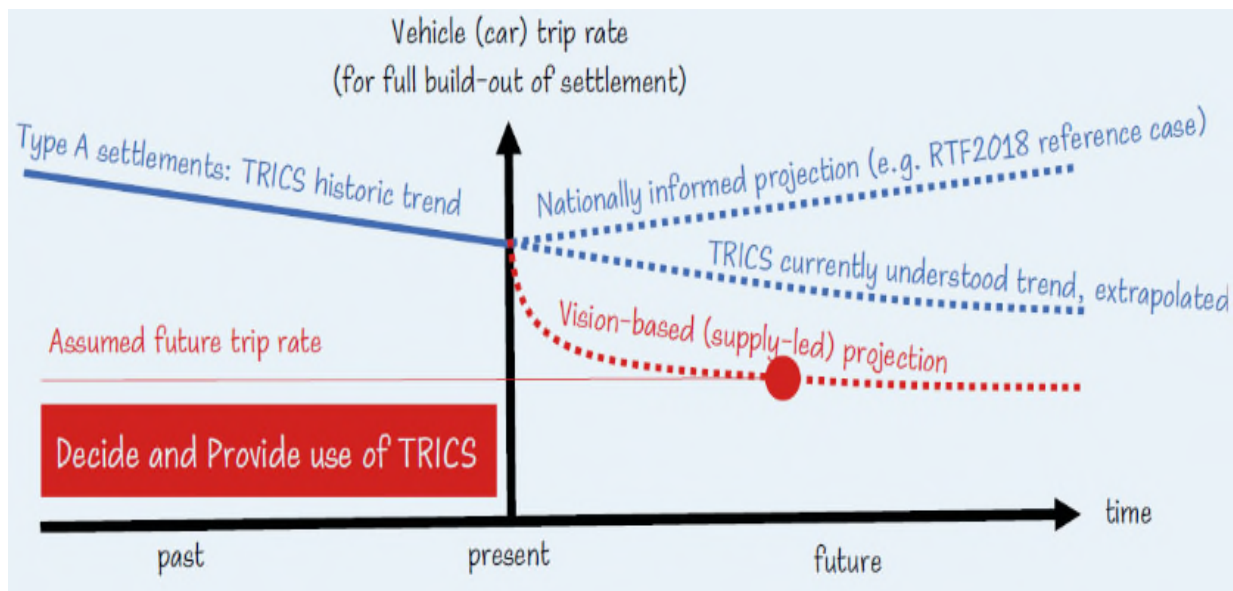
5.1.7 Given the volume of traffic anticipated to be generated by the site, it is envisaged that all three options will need to be required. However as stated, Option 1 has not been discussed with Highways England and therefore there is uncertainty around its delivery. If Option 1 is unacceptable, then it is anticipated that a more substantial upgrade will be required as Option 2 in unison with a separate upgrade at White Mare Pool.

## 6. TRIP GENERATION AND DISTRIBUTION

### Decide and Provide

- 6.1.1 As outlined in Section 2, decisions around this development are anticipated to require consideration using the Decide and Provide principal.
- 6.1.2 Decide and Provide is vision-led, rather than forecast-led and aims to improve the resilience of planning decisions by taking account of deep uncertainty about the future. At its heart is deciding on a preferred future and providing a development path best suited to achieving it.
- 6.1.3 The Decide & Provide approach is still informed by TRICS survey data but instead of predicting one future trip rate, multiple plausible trajectories are considered and then a decision is made on a justifiable projection.
- 6.1.4 The starting point is to decide on a vision for the development. It is for the Local Authority or the applicant to put forward the vision for the development accompanied by an evidence-led approach.
- 6.1.5 The vision and its supporting strategy will influence assumptions for trip characteristics and mode splits and consequently, will inform the future assessment year
- 6.1.6 This approach is summarised in Figure 58.

**Figure 58. The Decide and Provide Principal**



### TRICS Historic Average - Local Plan Assessment Trip Rates

- 6.1.7 The draft *South Tyneside Council Local Road Network – Traffic Capacity Assessment* has identified person trip rates that have been used in the assessment. This is an assumed person trip rate based on TRICS historic averages akin to the predict and provide methodology. However, as discussed in section 2, the ‘Decide and Provide’ methodology should be considered for a development of this scale.

6.1.8 Person trip generation for the sites within the Local Plan have been based on generic trip rates derived from the TRICS database. The land use, person trip rates and resultant generic person trip rates can be seen in Table 4.

**Table 4. Local Road Network – Traffic Capacity Assessment - Person Trip Rates**

LAND USE	UNIT	MORNING PEAK			EVENING PEAK		
		Arrivals	Departures	Two Way	Arrivals	Departures	Two Way
Mixed Private Dwellings	Dwelling	0.178	0.572	0.75	0.51	0.3	0.81

6.1.9 Person trip rates have been translated into vehicle trip rates using modal splits taken from the 2011 Journey to Work Census Data for individual middle super output areas. The MSOA where the proposed development is located has a modal split of 61% of trips by private car as driver. The resultant vehicle trip rate can be seen in Table 5.

**Table 5. Local Road Network – Traffic Capacity Assessment – Vehicle Trip Rates**

LAND USE	UNIT	MORNING PEAK			EVENING PEAK		
		Arrivals	Departures	Two Way	Arrivals	Departures	Two Way
Mixed Private Dwellings	Dwelling	0.11	0.35	0.46	0.31	0.183	0.493

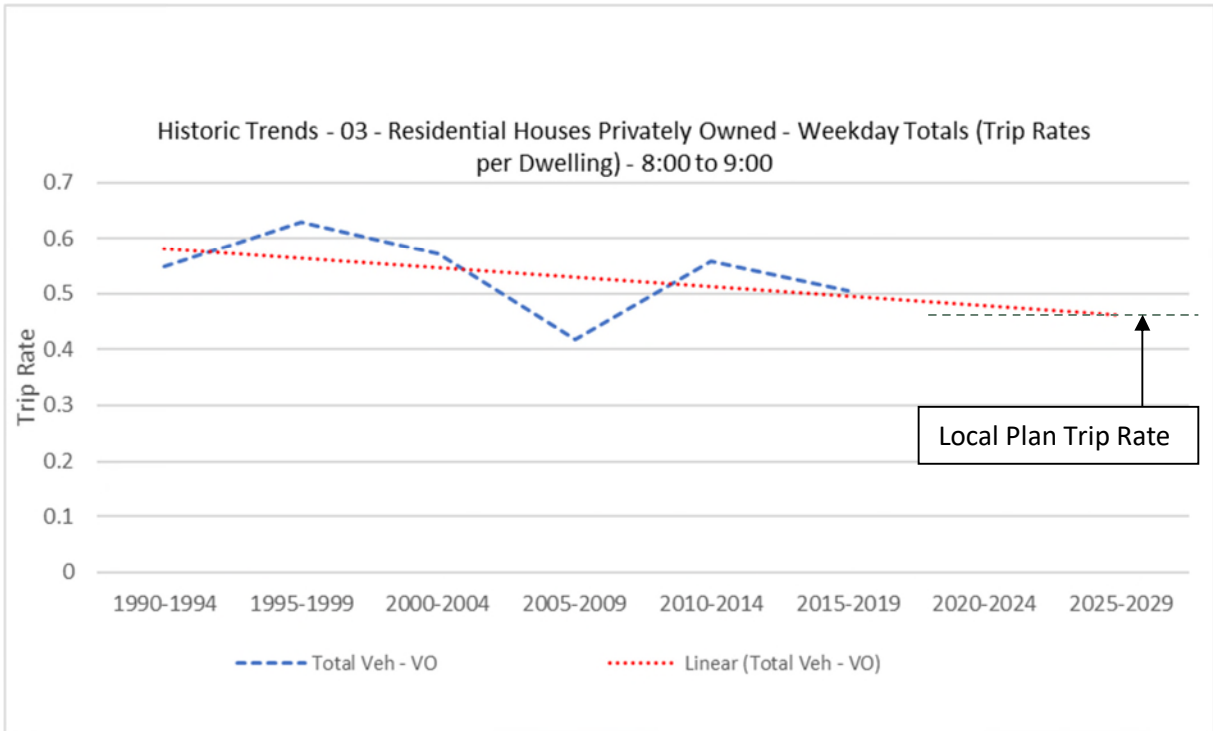
### TRICS currently understood trend (extrapolated)

6.1.10 An assessment of historic trends of data held within the TRICS database has been undertaken using sites considered comparable to the development. The parameters used are as follows:

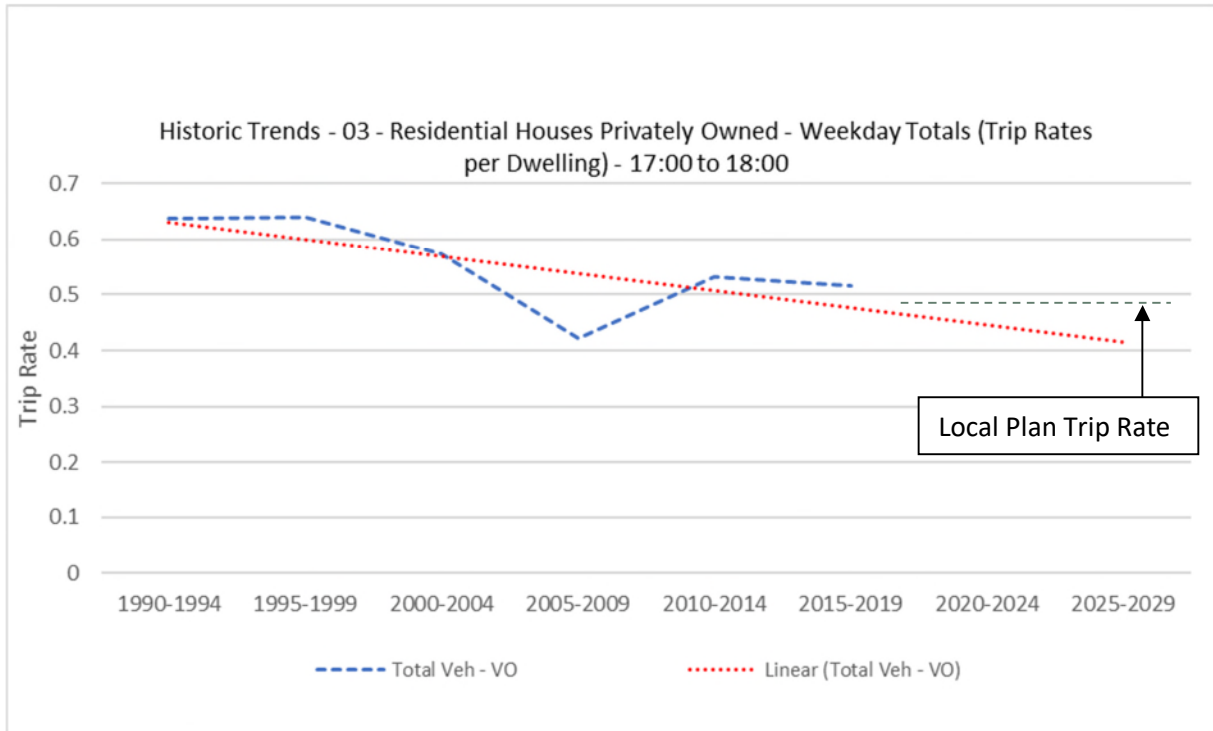
- 03 – Residential Houses Privately Owned
- Range – 250 to 4000 dwellings
- Days – Weekdays
- Locations – Suburban, Edge of Town, Neighbourhood Centre

6.1.11 Figures 59 to 61 show the historic trend of data held in TRICS for vehicle trips during the morning peak (08:00 – 09:00), the evening peak (17:00 – 18:00) and the 24 hour period (00:00 – 23:59). The graphs demonstrate that vehicle trip rates have fallen over the 20 years of data assessed and that a trend can be projected forward to show potential future trip rates.

**Figure 59. Historic Vehicle Trip Trends – Houses Privately Owned – Morning Peak Period**

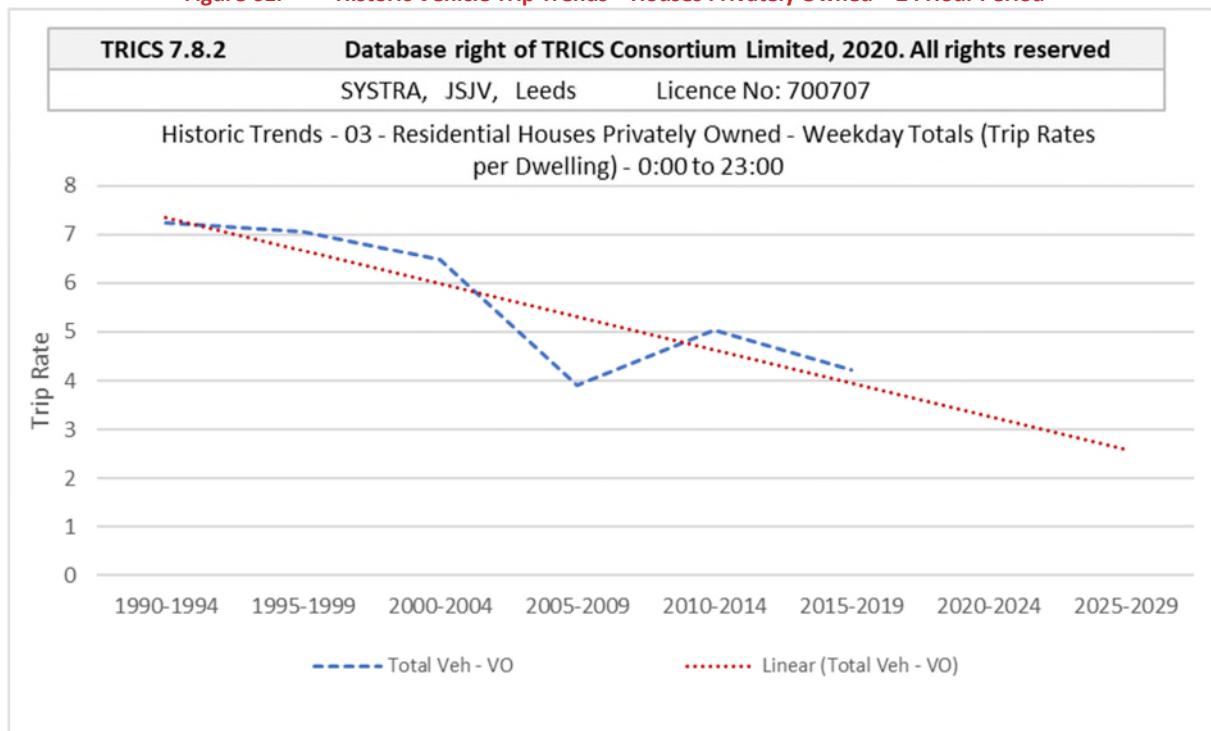


**Figure 60. Historic Vehicle Trip Trends – Houses Privately Owned – Evening Peak Period**





**Figure 61. Historic Vehicle Trip Trends – Houses Privately Owned – 24 Hour Period**



6.1.12 The assessment would suggest that the trip rates used in the draft *South Tyneside Council Local Road Network – Traffic Capacity Assessment* are broadly consistent with the predictions from the trend analysis for the next ten years for the morning peak period. However, the trip rates used in the draft *South Tyneside Council Local Road Network – Traffic Capacity Assessment* are considerably higher than the predictions from the trend analysis for the next ten years for the evening peak period.

**Vision Based Supply Led Prediction**

6.1.13 The Decide and Provide principal requires the applicant to decide on the preferred future and provide the means to work towards it accompanied by an evidence led approach.

6.1.14 In its publication *Better planning, better transport, better places* the CIHT states (p.38):

*“A simple rule to apply at the early visioning stage is as follows: planning for people will result in places for people; planning for cars will result in places dominated by cars”.*

6.1.15 Integral to creating a place-based vision is understanding how people will live and move and the development of a transport strategy to support this. The transport strategy should have clearly stated aims and objectives that sit within the overarching vision. The vision and the transport strategy emerging from it have a direct bearing on, amongst others, the following parameters or levers:

- Trip Rate – the measure of total movement or activity associated with a specific land use or land uses.
- Mode Split – specifically the percentage (%) active travel (walking and cycling) mode share, the % public transport user mode share and the % car driver (and passenger) mode share.

6.1.16 The ultimate vision for the development is for the applicant to determine, however, consideration can be given to potential modal splits and resultant trip rates for the development and the resultant level of trip generation. Table 6 summarises the person trips and resultant vehicle trips under different mode split scenarios. This is based upon 3000 dwellings.

6.1.17 The mode split and resultant vehicle trip level that the vision needs to target may be driven by other factors, for example the requirement to avoid expensive highway infrastructure improvements required to facilitate traffic generated by the development.

**Table 6. Vehicle Trips Resulting from Potential Mode Split Scenarios**

SCENARIO	MODE SPLIT	MORNING PEAK			EVENING PEAK		
		Arrivals	Departures	Two Way	Arrivals	Departures	Two Way
Person Trip Rates		0.178	0.572	0.75	0.51	0.3	0.81
Person Trips		534	1716	2250	1530	900	2430
Vehicle Trips	61%	326	1047	1373	933	549	1482
Vehicle Trips	56%	299	961	1260	857	504	1361
Vehicle Trips	51%	272	875	1148	780	459	1239
Vehicle Trips	46%	246	789	1035	704	414	1118
Vehicle Trips	40%	214	686	900	612	360	972

**TRICS Historic Average - Local Plan Assessment Trip Rates**

**TRICS currently understood trend (extrapolated)?**

**Vision Based Supply Led Prediction?**

6.1.18 Section 4 of this study gives an overview of potential sustainable travel and transport initiatives that could be implemented to improve accessibility, including measures already identified and associated with the implementation of the Local Plan and Local Authority Transport Plan schemes. This includes the consideration of new Metro stations at Follingsby or Mill Lane, improved bus routes adjacent to and through the development, and wider improvements to the pedestrian and cycle network.

- 6.1.19 In addition, it is discussed how the beneficial aspects of a new working from home more and travelling less way of life, that has been forced upon the majority of non-keyworkers and office-based commuters during the Covid-19 pandemic, can be retained (or 'locked-in') as social distancing and 'lockdown' restrictions are eased. Embracing the idea that we can 'build-back better'.
- 6.1.1 It also provided some evidence for the potential of sustainable travel measures and effective travel planning to reduce the trip generation from development where sustainable travel options are prioritised, incorporated by design and therefore maximised from the outset.

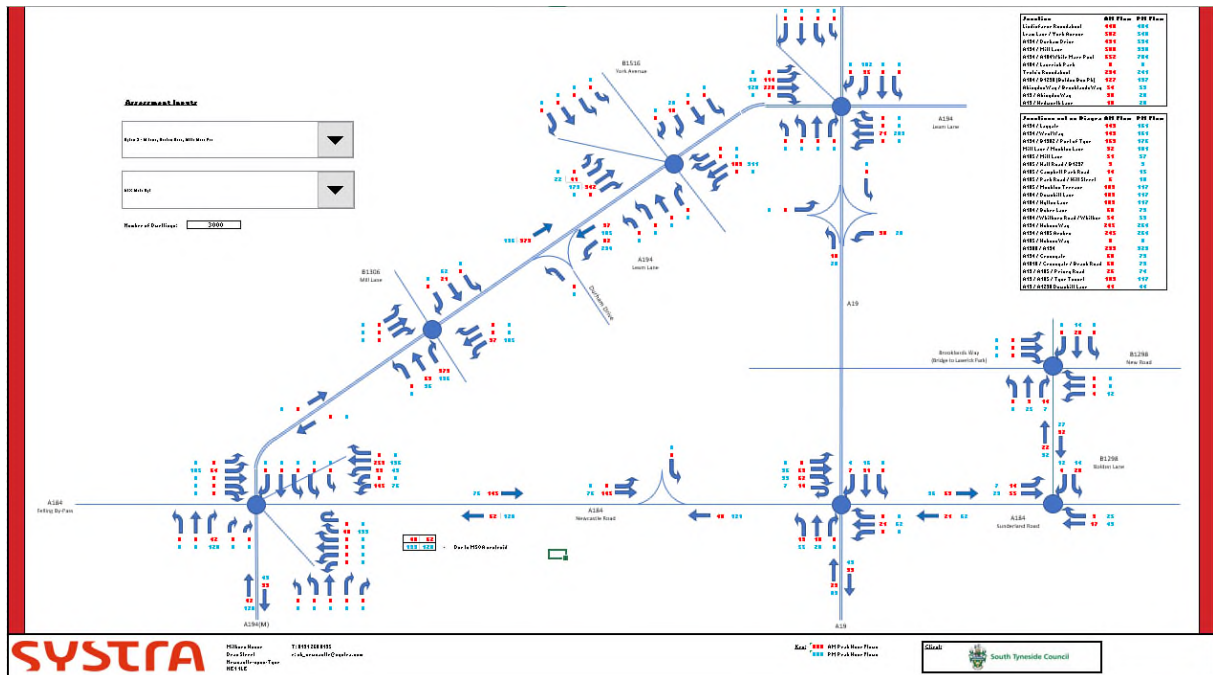
### **Trip Distribution – GraHAM modelling**

- 6.1.2 This information will be used to prepare the matrices for the modelling study proposed to be undertaken as part of the next tranche of work.
- 6.1.1 Trip assignment has been undertaken using Highways England's GraHAM tool. This was to ensure the assignment of traffic was agreed with Highways England and for use in their assessment of the Strategic Road Network.
- 6.1.2 The GraHAM tool uses 2011 Census Journey to Work data to determine the location of employment for people who live in a particular ward and the location of housing for people who work in a particular ward.
- 6.1.3 The assignment of trips is undertaken through a quickest route algorithm, with reference to the free flow speed (which depends upon the road class).
- 6.1.4 The assignment from GraHAM has been sense checked at a local level and re-routing undertaken where considered appropriate.

### **Anticipated Impact at Junctions**

- 6.1.5 The traffic generated at different levels of development and the trip distribution assuming different site access options has been prepared in an Excel tool which has been provided as part of this report (*Large Greenbelt Release – Traffic Flow Diagram*). This can be used to test various scenarios as considered appropriate. A screenshot from the tool is provided in Figure 62.

Figure 62. Screenshot from Large Greenbelt Release – Traffic Flow Diagram



- 6.1.6 This assessment is based upon 3000 dwellings which is considered to be the upper aspiration for the land allocation.
- 6.1.7 As outlined in Section 5, the most realistic access options are anticipated to be via provision of three points as outlined below.
  - Option 1 – Elongated roundabout at White Mare Pool;
  - Option 2 – Upgraded junction at Mill Lane;
  - Option 3 – Durham Drive.
- 6.1.8 As outlined in Table 4, three levels of mode split have been included as 61%, 51% and 40% to tie in with the levels identified from the Decide and Provide assessment above.
- 6.1.9 The increase in traffic through junctions under these scenarios is provided in Figure 63 and a discussion follows.

**Figure 63. Summary of Impact by Junction under different modal split scenarios**

Junction	61% Modal Split		51% Modal Split		40% Modal Split		
	AM Flow	PM Flow	AM Flow	PM Flow	AM Flow	PM Flow	
Lindisfarne Roundabout	448	484	375	405	294	318	
Leam Lane / York Avenue	502	540	419	451	329	354	
A194 / Durham Drive	491	534	411	447	322	350	
A194 / Mill Lane	500	398	418	333	328	261	
A194 / A184 White Mare Pool	652	704	545	589	428	462	
Testo's Roundabout	234	241	195	201	153	158	
A184 / B1298 (Boldon Bus Pk)	127	137	106	115	83	90	
Abingdon Way / Brooklands Way	54	59	45	49	36	38	
A19 / Abingdon Way	38	20	32	17	25	13	
A19 / Hedworth Lane	10	28	8	23	6	18	
A194 / Laygate	149	161	125	135	98	106	
A194 / West Way	149	161	125	135	98	106	
A194 / B1302 / Port of Tyne	163	176	136	147	107	115	
Mill Lane / Monkton Lane	92	101	77	84	60	66	
A185 / Mill Lane	51	57	43	48	33	37	
A185 / Hall Road / B1297	3	9	3	8	2	6	
A185 / Campbell Park Road	14	15	11	12	9	10	
A185 / Park Road / Hill Street	6	18	5	15	4	12	
A185 / Monkton Terrace	109	117	91	98	71	77	
A184 / Downhill Lane	109	117	91	98	71	77	
A184 / Hylton Lane	109	117	91	98	71	77	
A184 / Boker Lane	68	73	57	61	45	48	
A184 / Whitburn Road / Whitburn Terrace	54	59	45	49	36	38	
A194 / Hobson Way	245	264	204	221	160	173	
A194 / A185 Arches	245	264	204	221	160	173	
A1300 / A194	299	323	250	270	196	212	
A194 / Crossgate	68	73	57	61	45	48	
A1018 / Crossgate / Beach Road	68	73	57	61	45	48	
A19 / A185 / Priory Road	26	74	22	62	17	48	
A19 / A185 / Tyne Tunnel	109	117	91	98	71	77	
A19 / A1290 Downhill Lane	41	44	34	37	27	29	
Junctions anticipated to require reassessment within emerging Local Plan assessment							

- 6.1.10 The junctions that have been marked with a red box are those that are considered to be materially different from that assessed in the emerging Local Plan work undertaken to date.
- 6.1.11 Two junctions (A194 Leam Lane / York and A194 / Durham Drive) which will see a substantial increase in flows that have not been highlighted red because the majority of the traffic is travelling in a straight ahead movement on the A194 rather than impacting the junction.
- 6.1.12 Similarly Testo's and Downhill Lane roundabout have not been highlighted red because those junctions have recently been subjected to, or identified for a major scheme improvement which should have provided substantial future capacity at the junction. However, consultation would be required with Highways England to confirm that position.
- 6.1.13 As can be seen from Figure 45, the reduction in trips brought about as a result of the reduced modal split can be substantial. For example, there is a reduction in trips at Lindisfarne and

White Mare Pool of in excess of 150 and 200 trips respectively between the lower (61%) and higher (40%) levels of accessibility. This can make a substantial difference in the ability to deliver standard highway mitigation.

- 6.1.14 To seek to understand this in terms of dwelling numbers; if say the modelling assessment demonstrated that at the lower level of accessibility (61%) the network could accommodate half of the aspirational level of dwellings i.e. 1500, this would equate to 2300 dwelling at a higher level of accessibility (40%).



## 7. SUMMARY

- 7.1.1 As outlined in Section 6, and summarised in Table 6, the potential trip generation associated with the land allocation will be substantial. The assessment has considered 3000 dwellings and this is forecast to generate circa 1400 vehicle trips during the network peak hours.
- 7.1.2 As outlined in Figure 63, the impact upon the road network will be substantial. This relates to the strategic and local road network.
- 7.1.3 It is considered unrealistic that the road network will be able to accommodate this level of trips without resulting in substantial congestion. This will be tested simultaneously with this study through use of Highways England's AIMSUN model. In addition, the junction modelling undertaken as part of the draft *Local Road Network – Traffic Capacity Assessment* will need to be revisited with the additional level of trips.
- 7.1.1 This study has identified how the parcel of land could be accessed and made recommendations for their testing within the AIMSUN model. It has undertaken trip generation and the distribution of trips which will feed into the model.
- 7.1.2 As outlined in Section 6, the trip generation can be reduced through a number of means. Firstly, the quantum of development can be reduced until an acceptable level of impact is reached or the vehicle trip generation associated with the quantum can be reduced through encouraging modal shift.
- 7.1.3 Section 4 outlined various means to encourage modal shift. This included some site-specific testing using TRACC software, which demonstrated the challenge faced by a future developer to achieve a meaningful modal shift at the land allocation.
- 7.1.4 However, Section 4 also summarised various research that demonstrates the capacity for sustainable transport improvements and Travel Planning to achieve modal shift. The majority of studies that have been undertaken identify that mode shift is achievable ranging from 2%, to in excess of 40%.
- 7.1.5 With that in mind, it is considered that the land allocation could achieve in the region of 5 - 15% mode shift. Though clearly a prospective applicant of the land allocation would need to submit a comprehensive evidence base demonstrating how they will achieve any identified modal shift.
- 7.1.1 It is recommended that if the land allocation is taken forward that an Area Action Plan is prepared for the site that outlines the design requirements of any prospective development. This should include measures that ensure that sustainable travel is the natural first choice. Various measures that could be considered have been outlined throughout this report.
- 7.1.2 It is recommended that the findings of this study are given due consideration within the next tranche of work assessing the impact of development within the AIMSUN model.

## 8. REFERENCES

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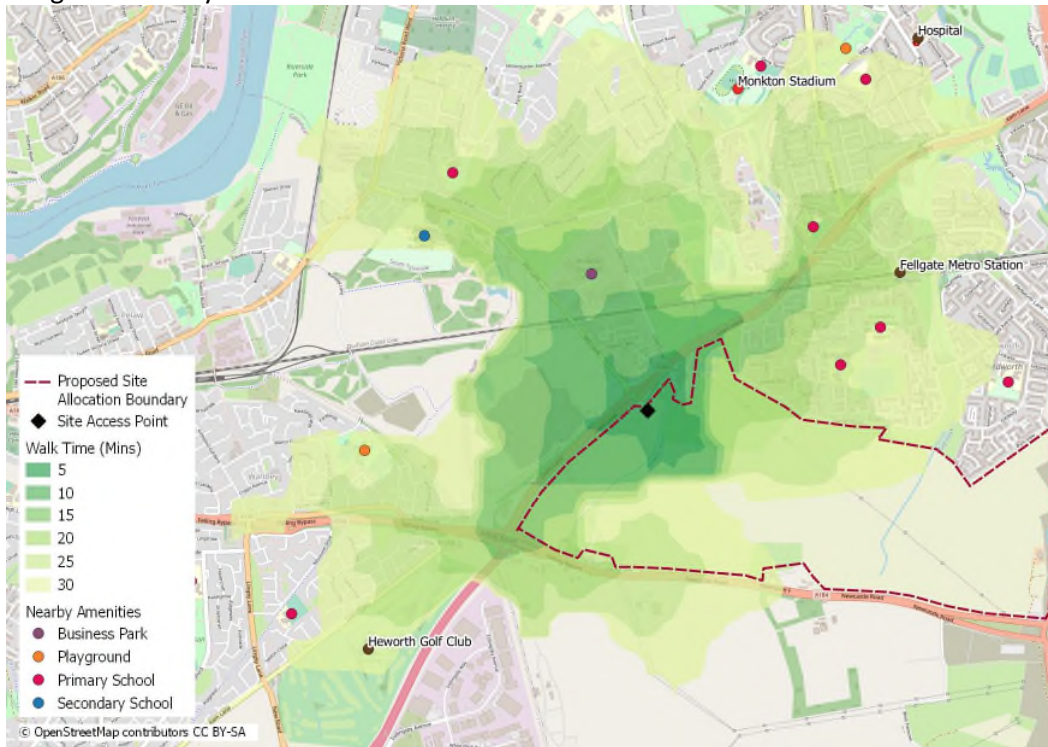
Polak, J., (2009) 'Modelling and Appraisal of Smarter Choices: Scope for Further Research'. Centre for Transport Studies Department of Civil and Environmental Engineering Imperial College London

# Appendices

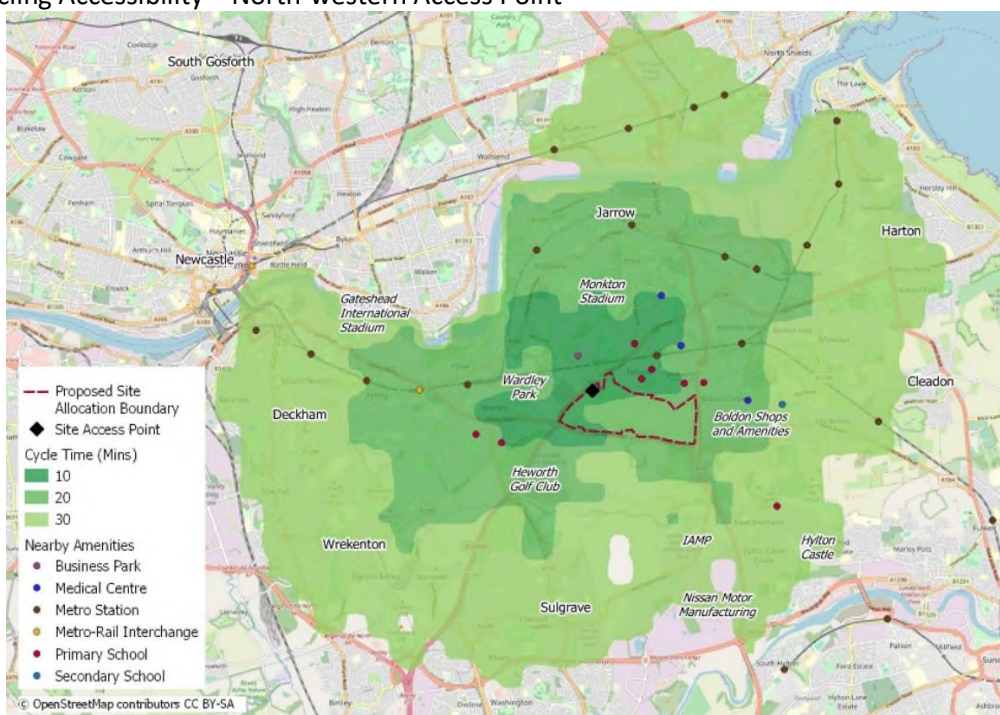
## Appendix A: Current Accessibility Maps (TRACC Outputs)

### North Western Access

#### Walking Accessibility – North-western Access Point

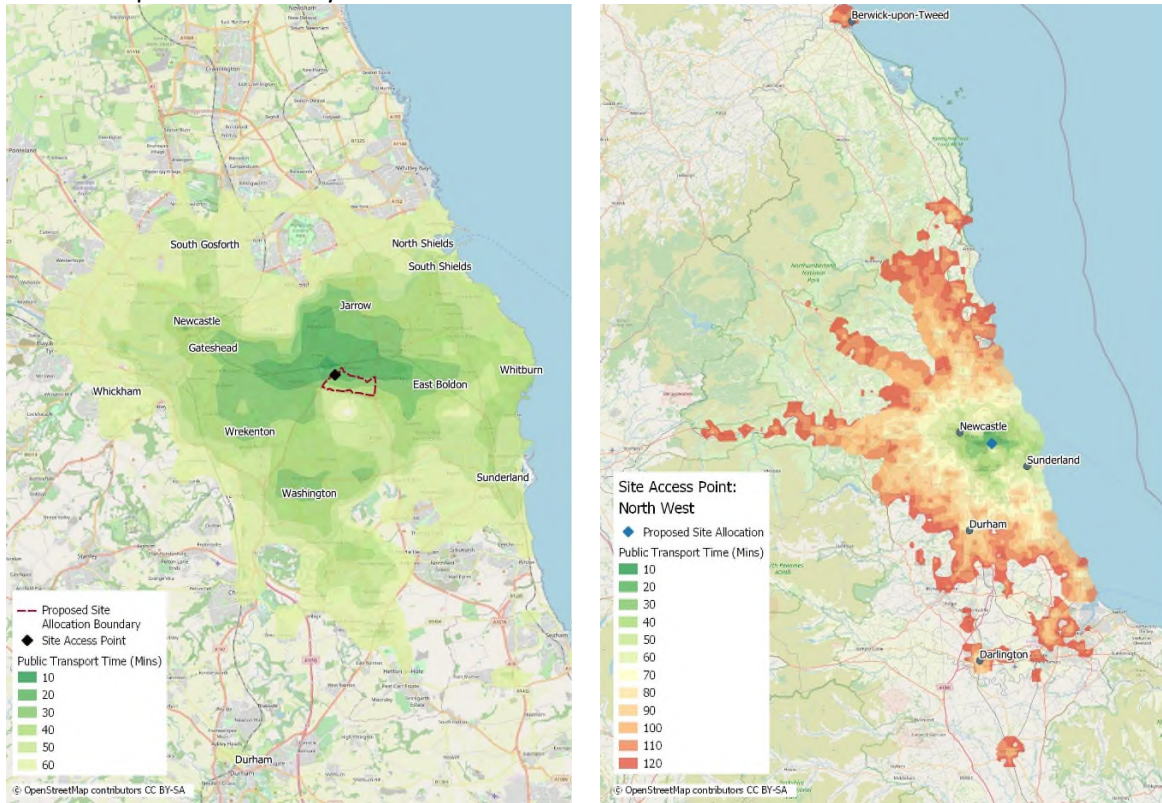


#### Cycling Accessibility – North-western Access Point



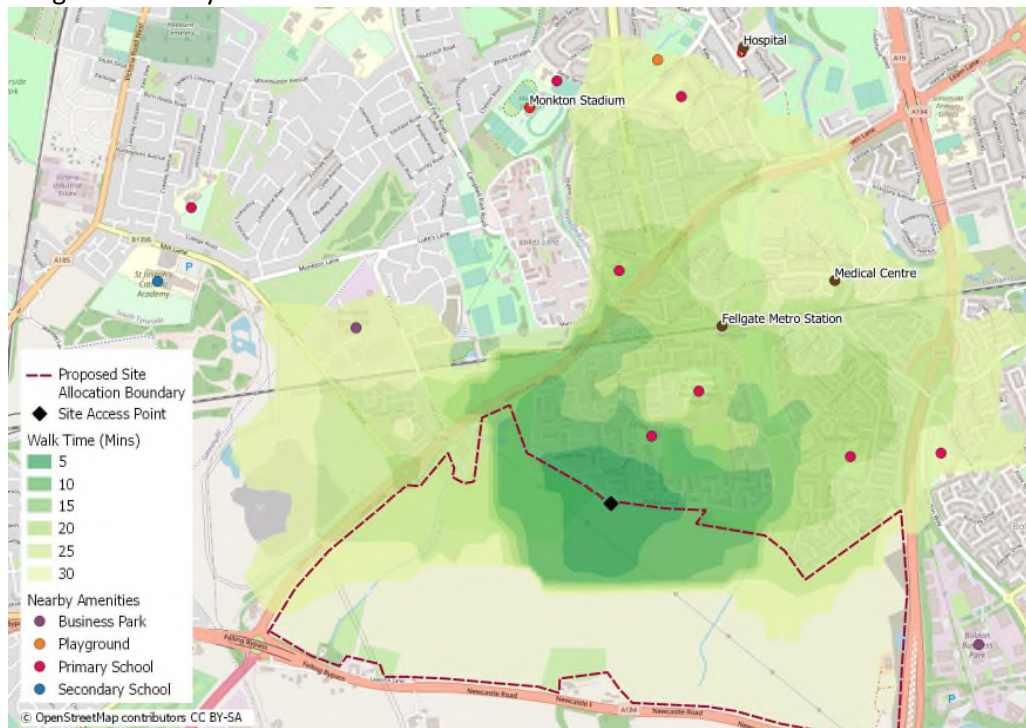


## Public Transport Accessibility Within 60 and 120 Minutes – North-western Access Point



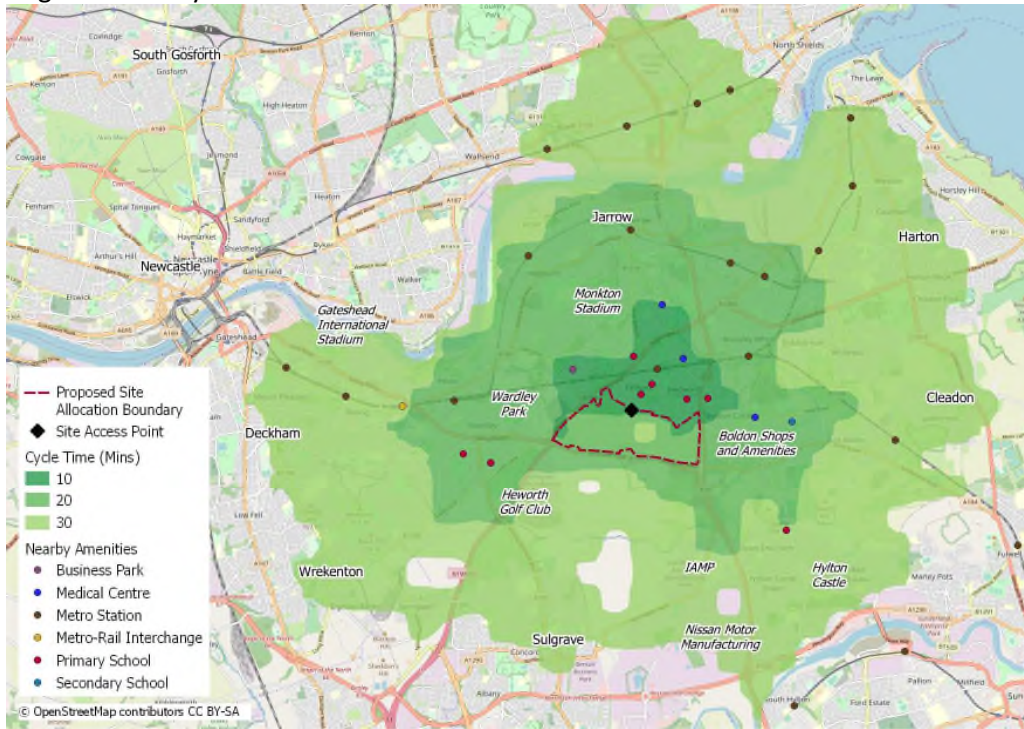
## Northern Access

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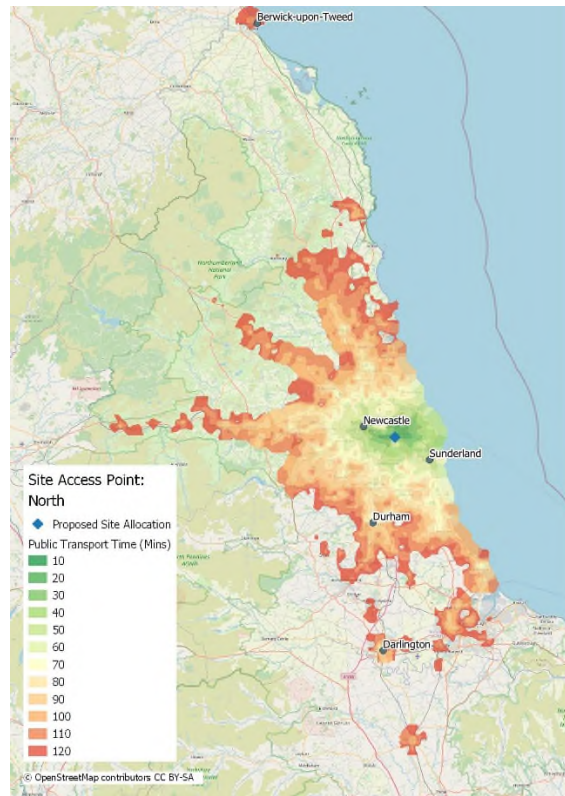
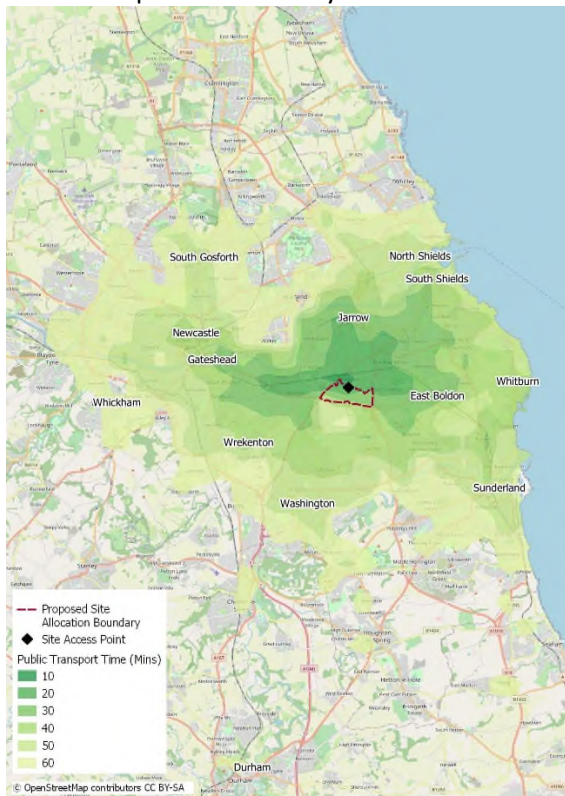




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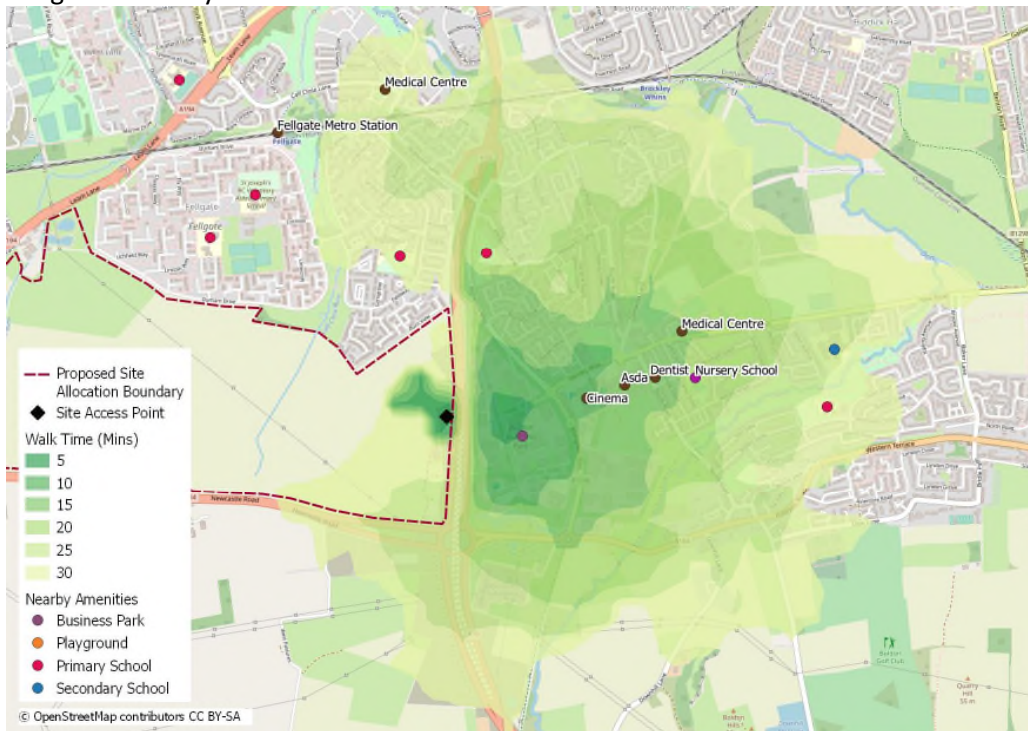
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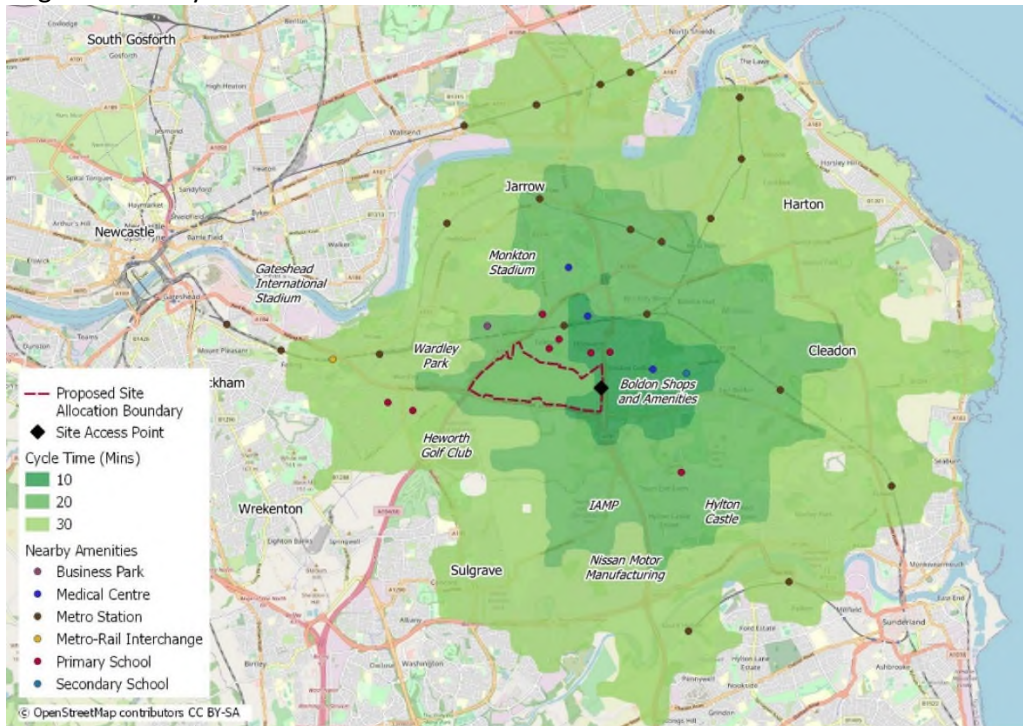


## Eastern Access

### Walking Accessibility – East Access Point

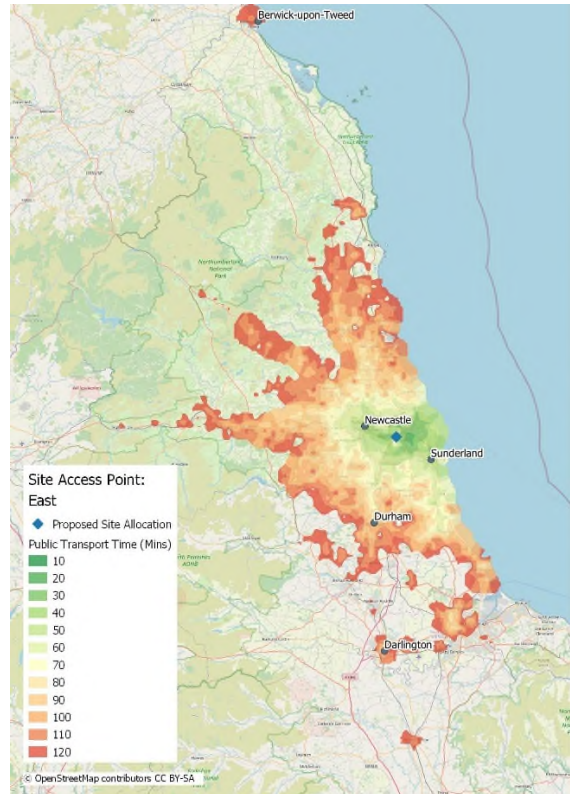


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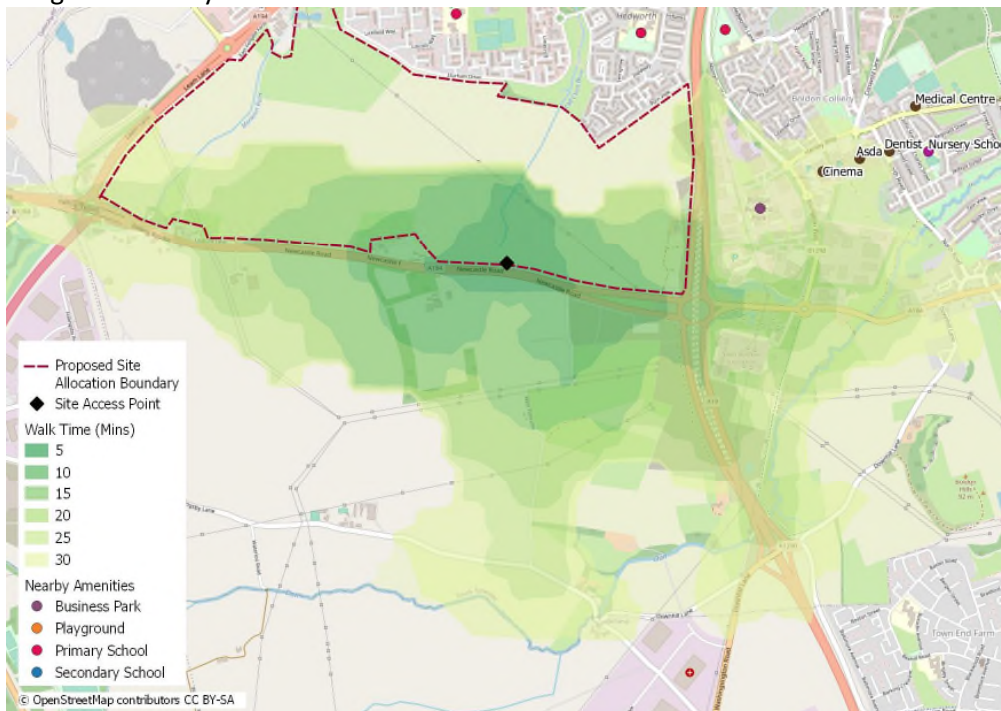


**Public Transport Accessibility Within 60 Minutes – East Access Point**



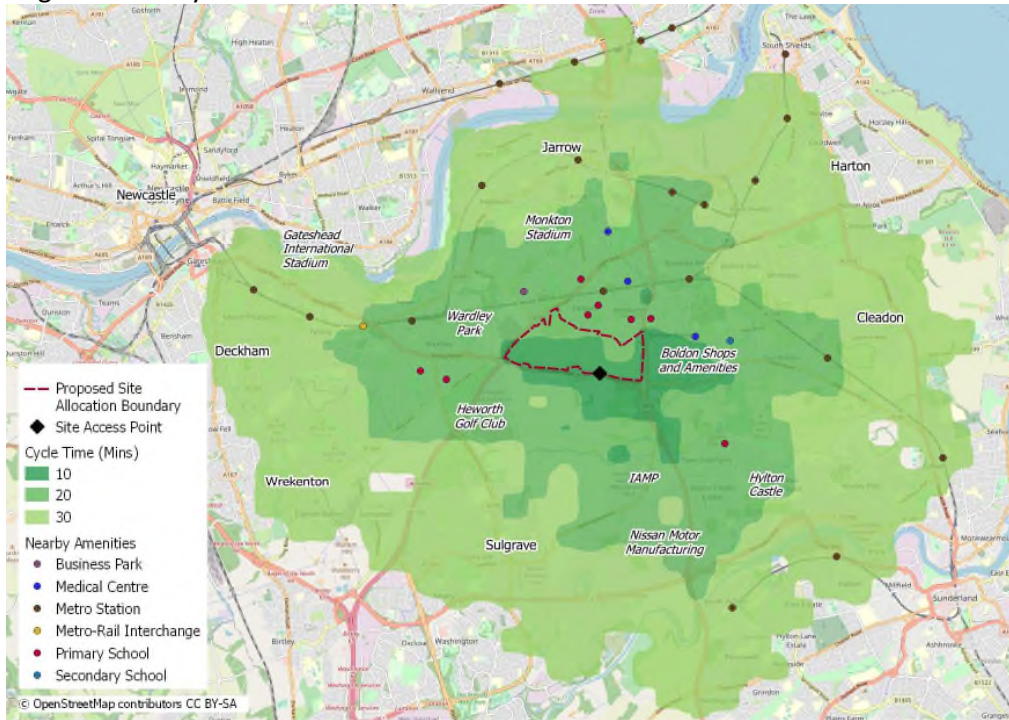
**Southern Access**

**Walking Accessibility – South Access Point**

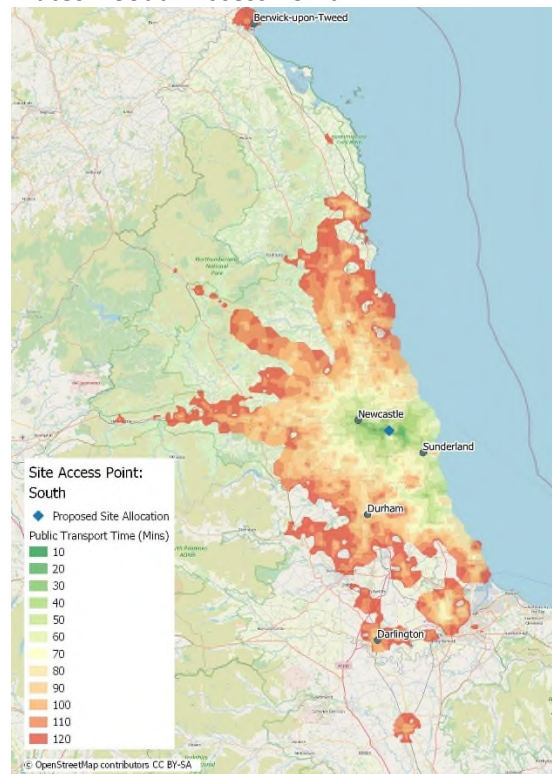
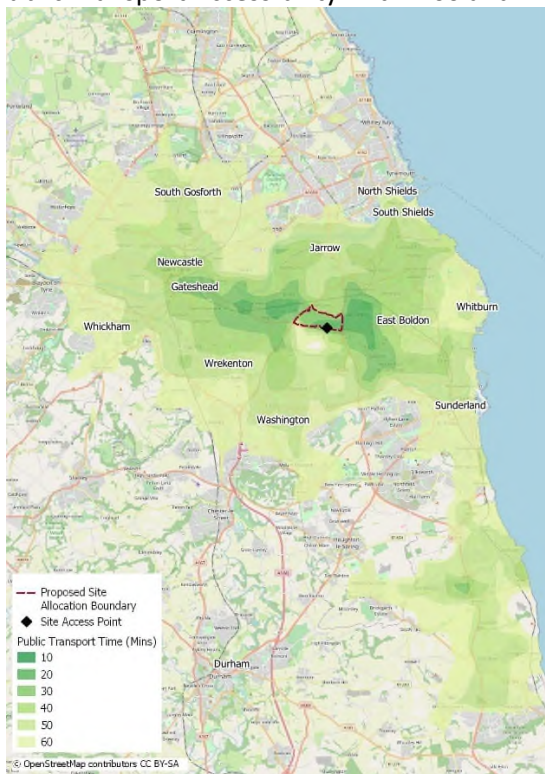




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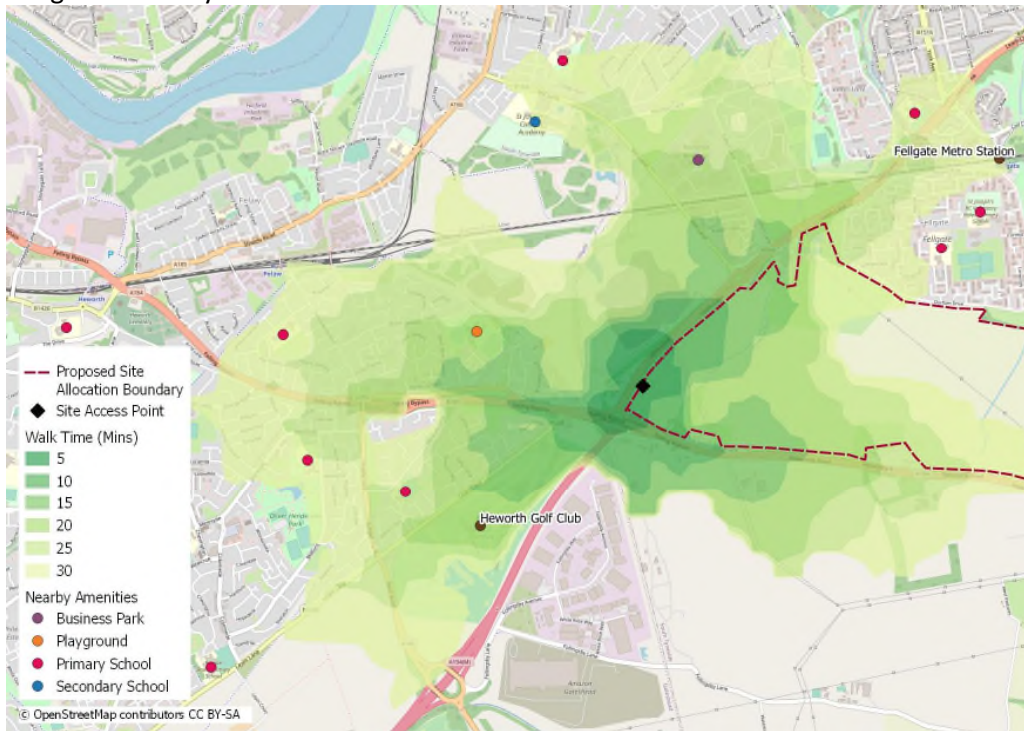


**Public Transport Accessibility Within 60 and 120 Minutes – South Access Point**

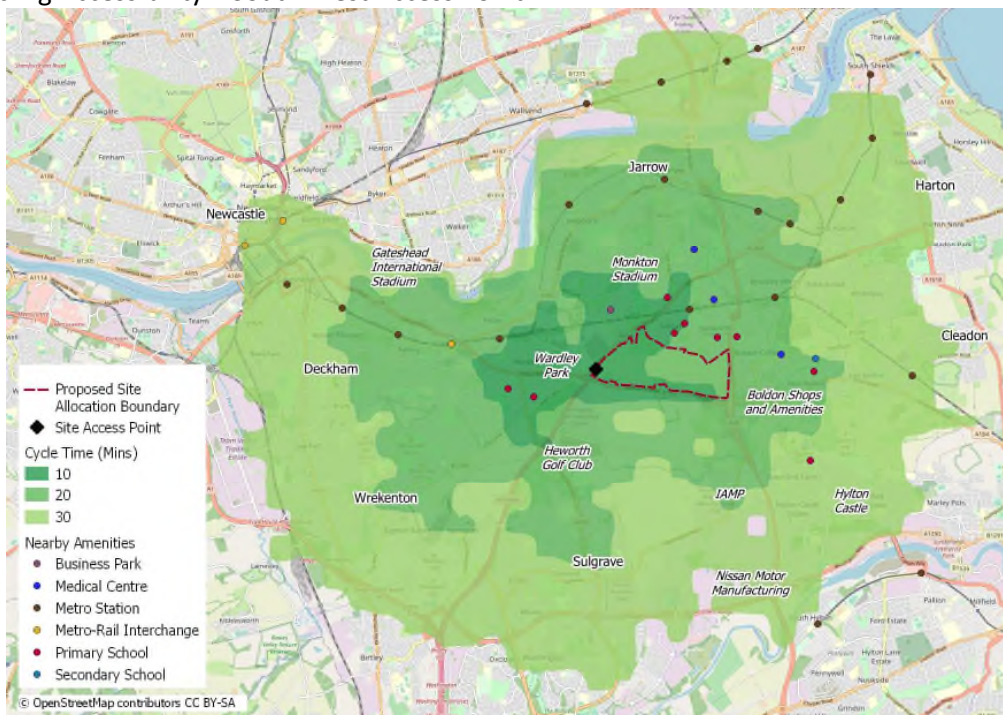


**South-western Access**

**Walking Accessibility – South West Access Point**

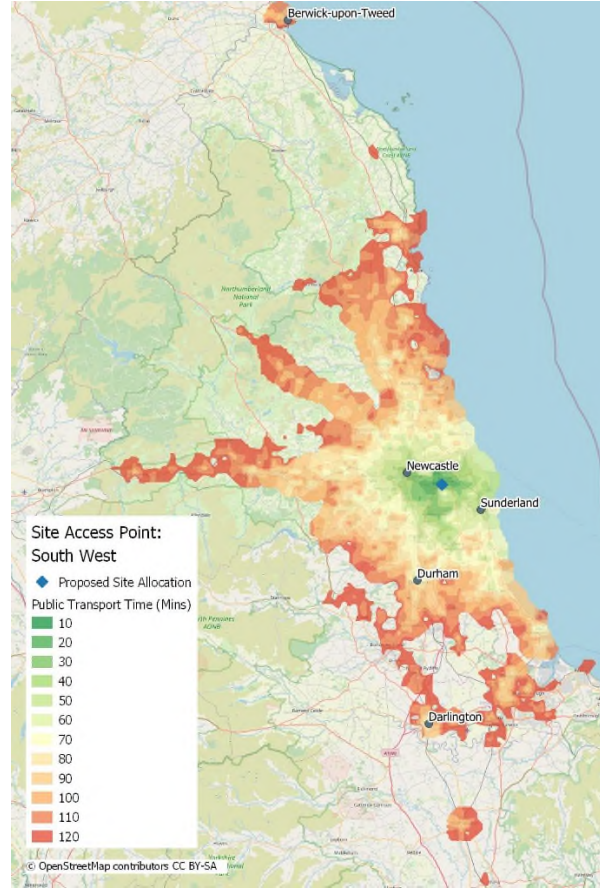
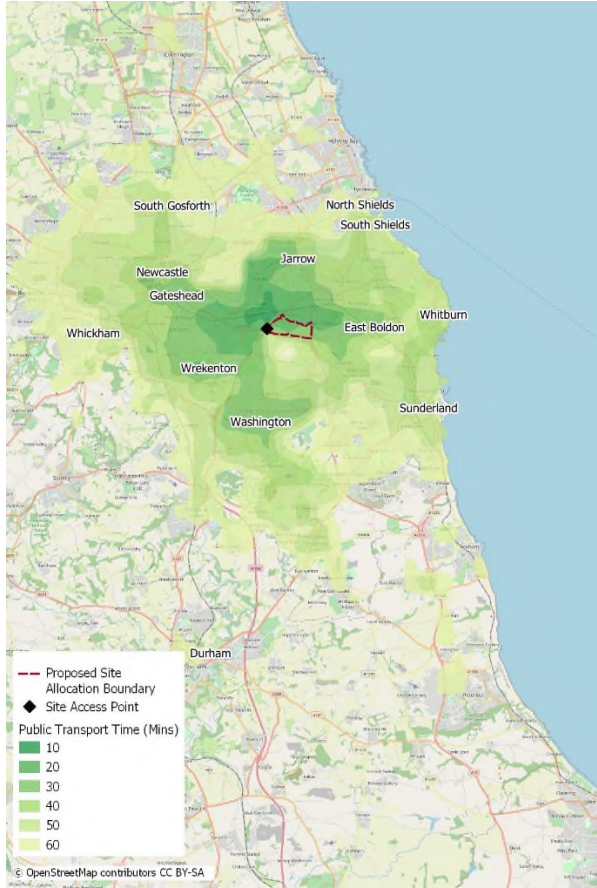


**Cycling Accessibility – South West Access Point**





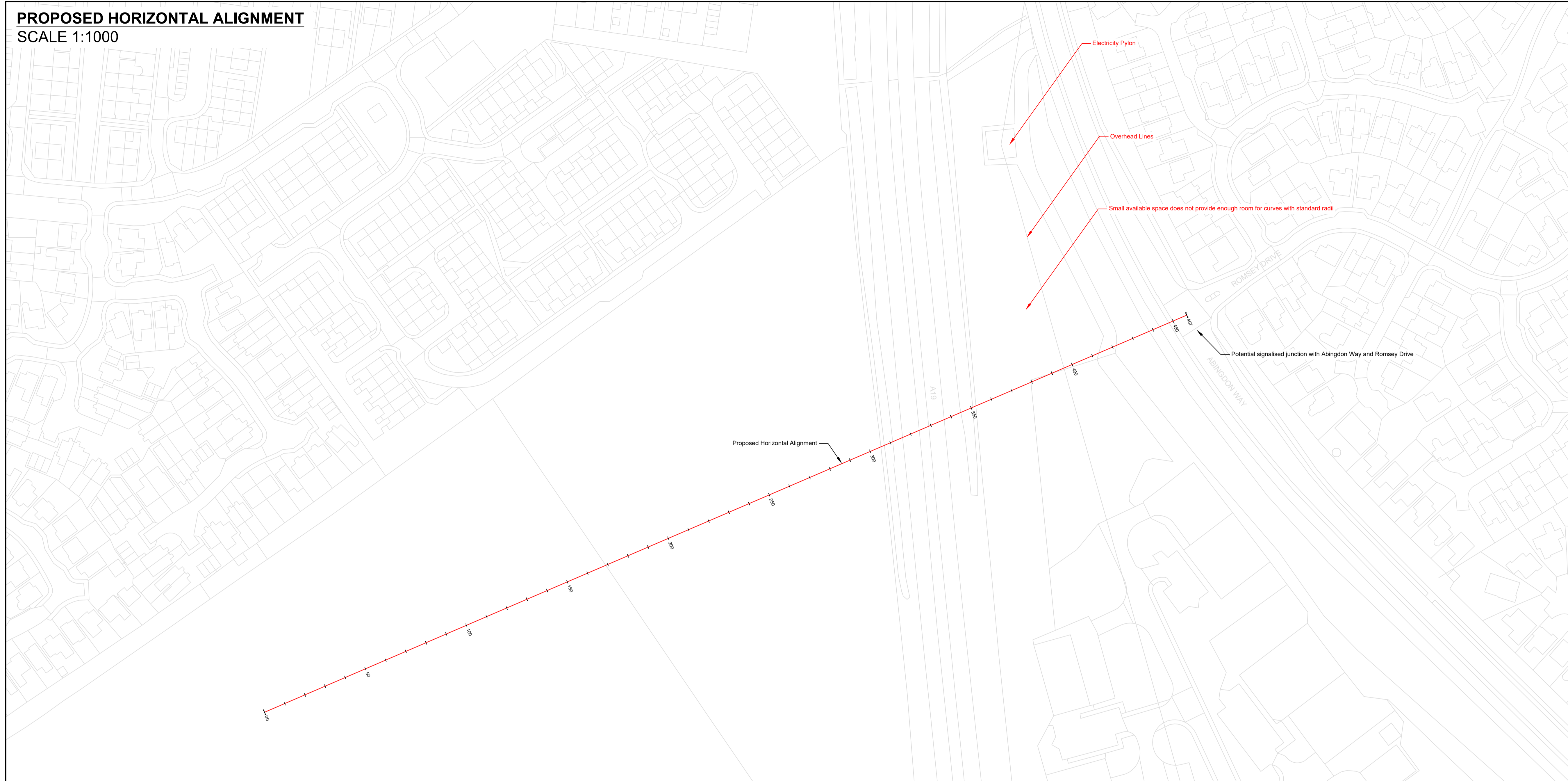
Public Transport Accessibility Within 60 Minutes – South West Access Point



**Appendix B: Site Access Options**



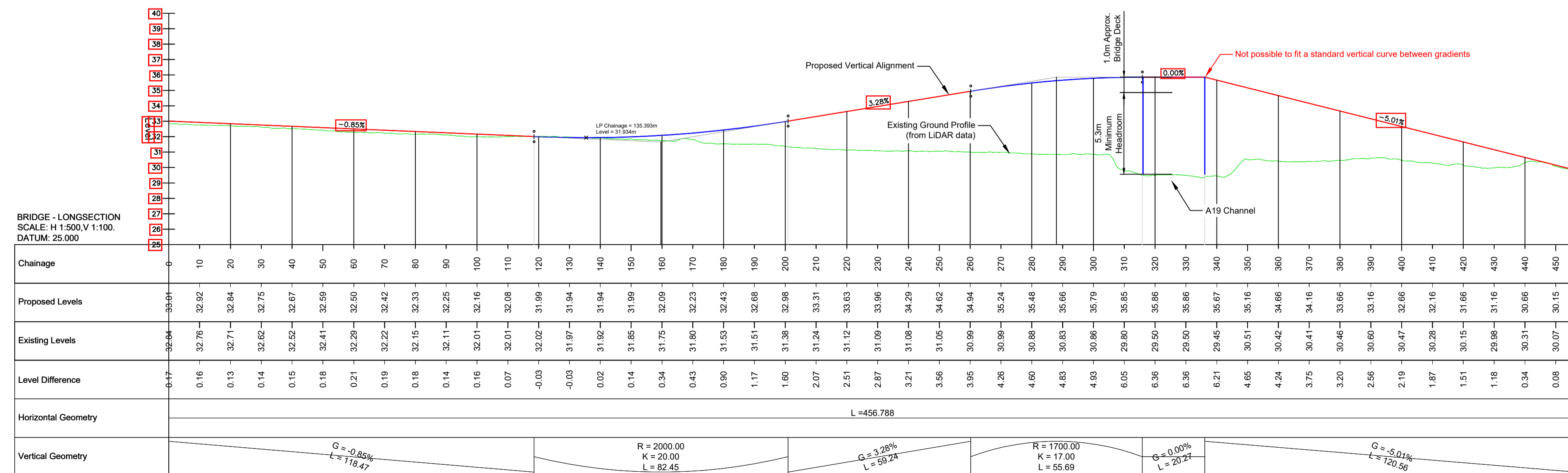
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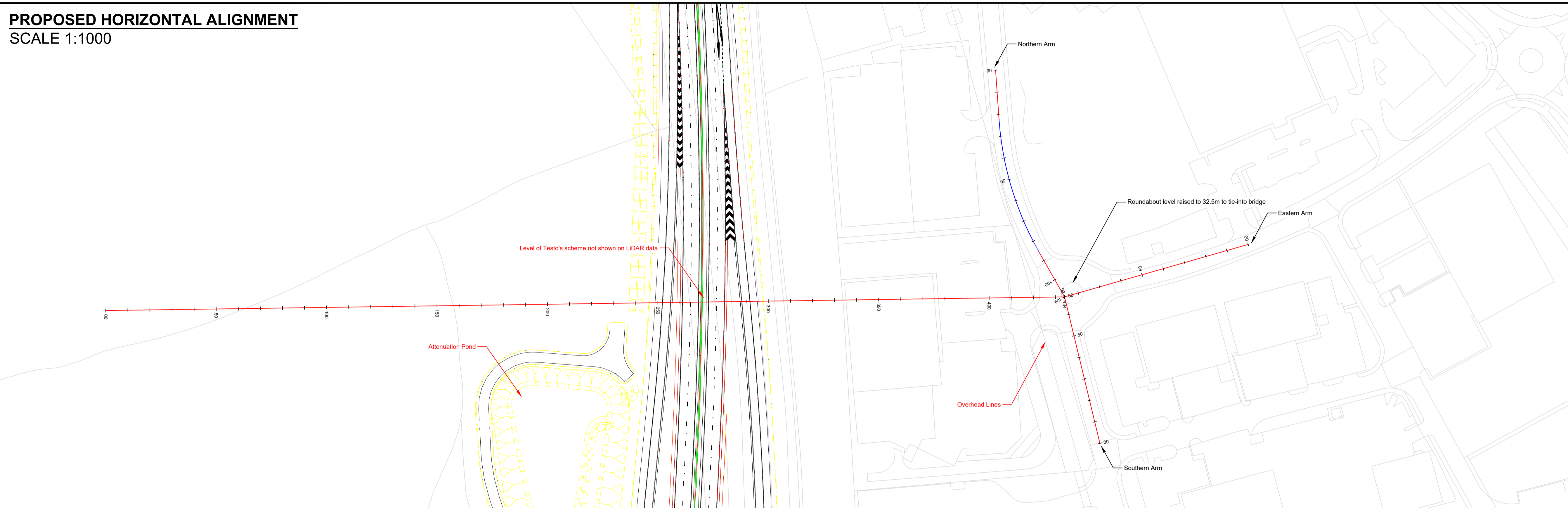
Project: GREENBELT RELEASE SUSTAINABLE TRANSPORT STRATEGY

BRIDGE ALIGNMENT FEASIBILITY  
FROM DEVELOPMENT TO ABINGDON WAY

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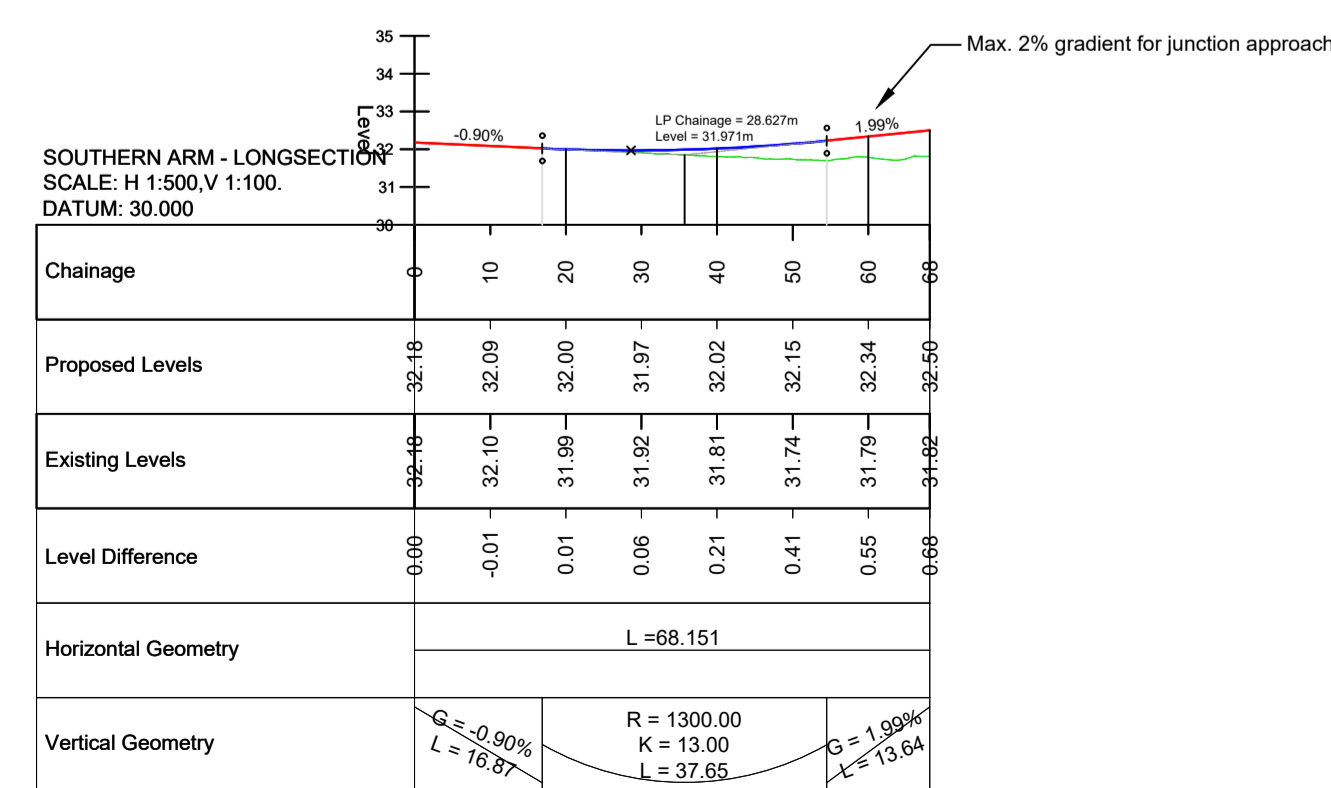
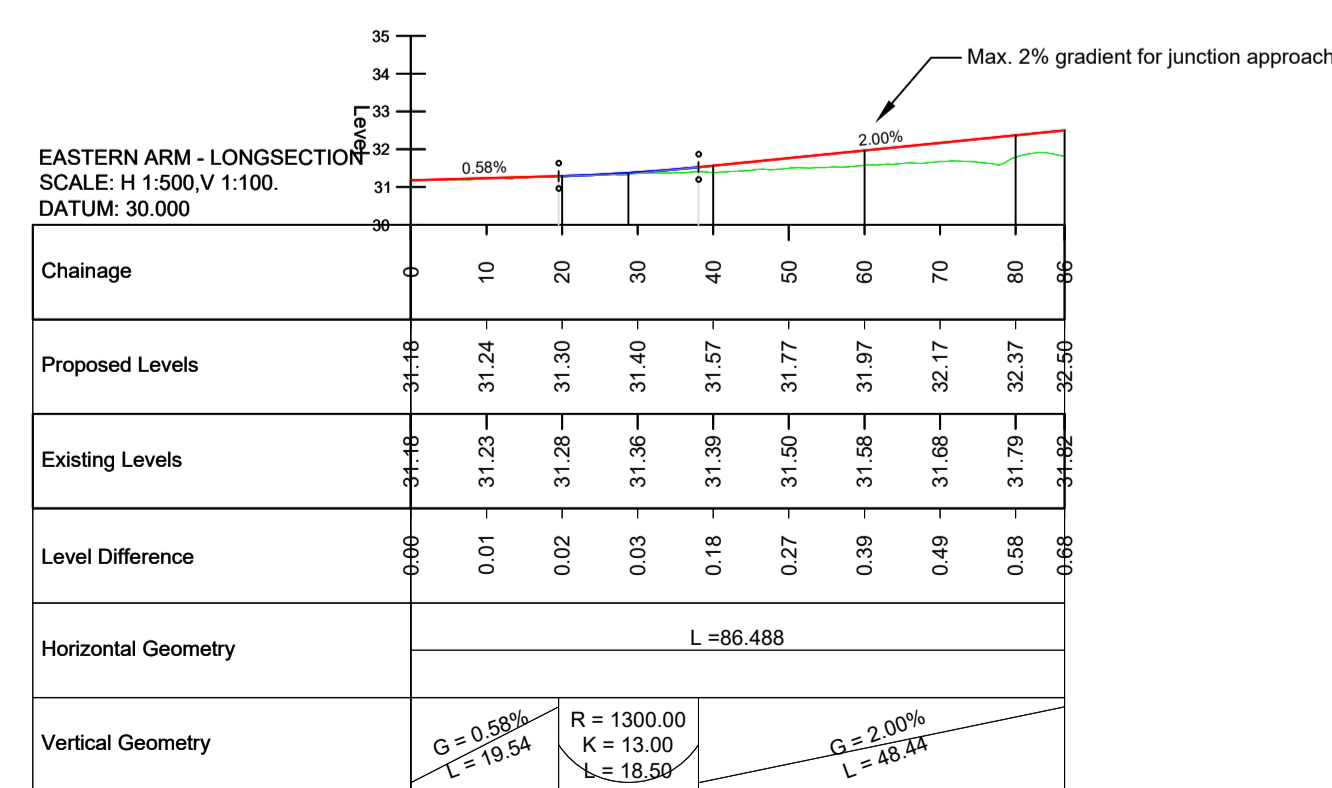
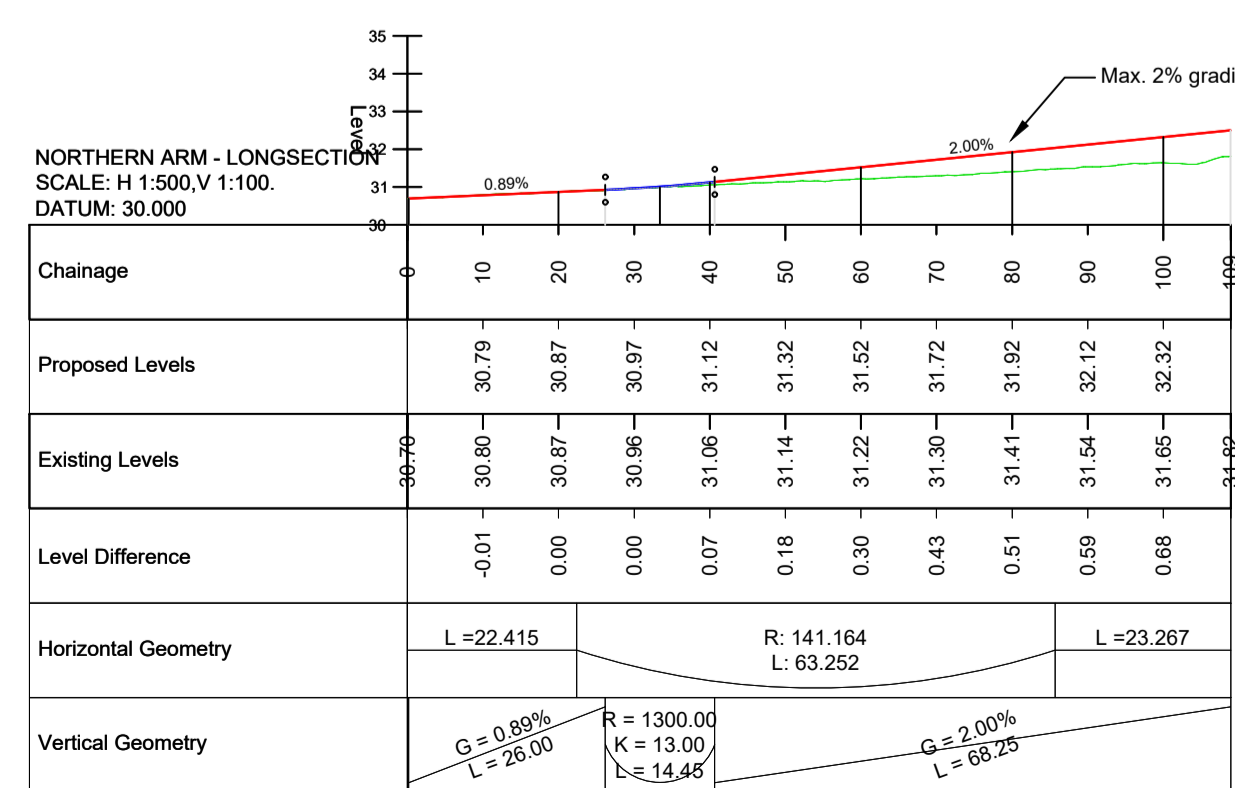
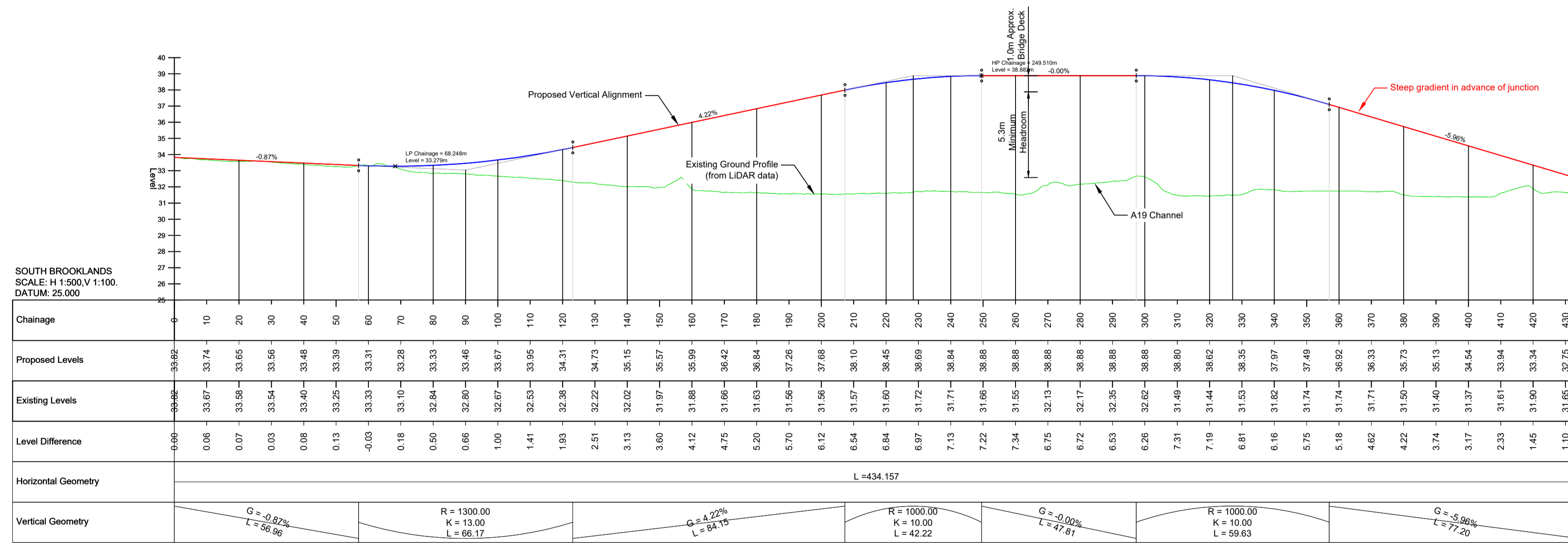


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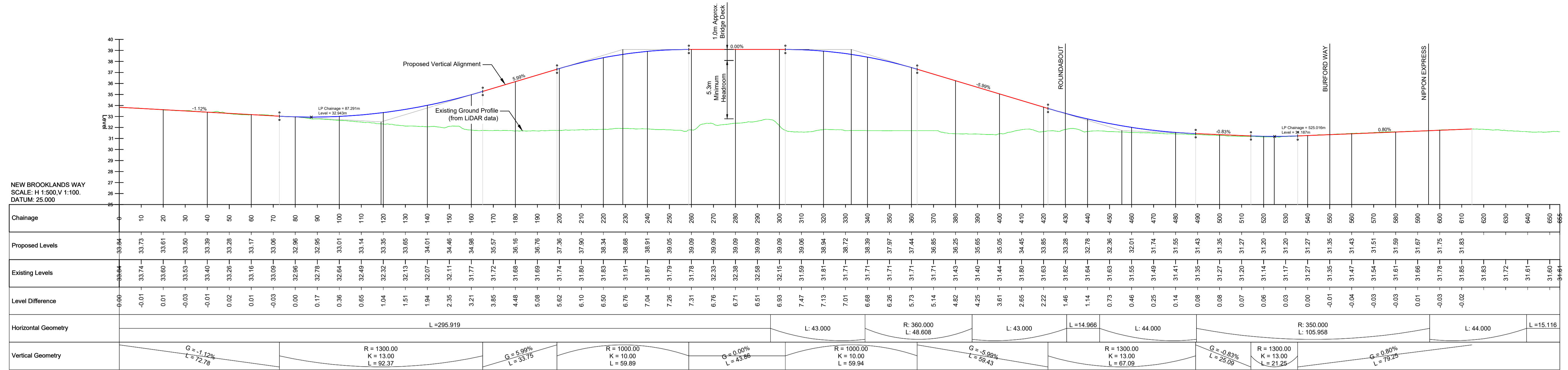
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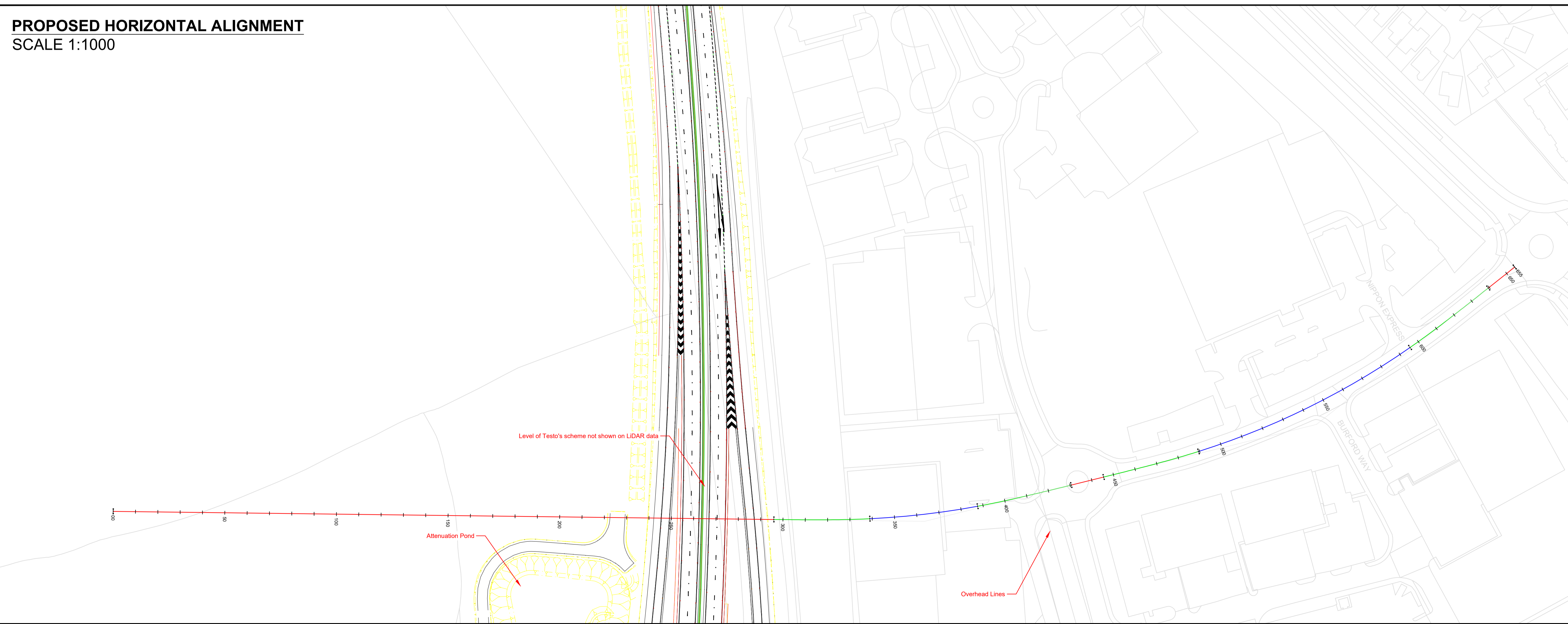
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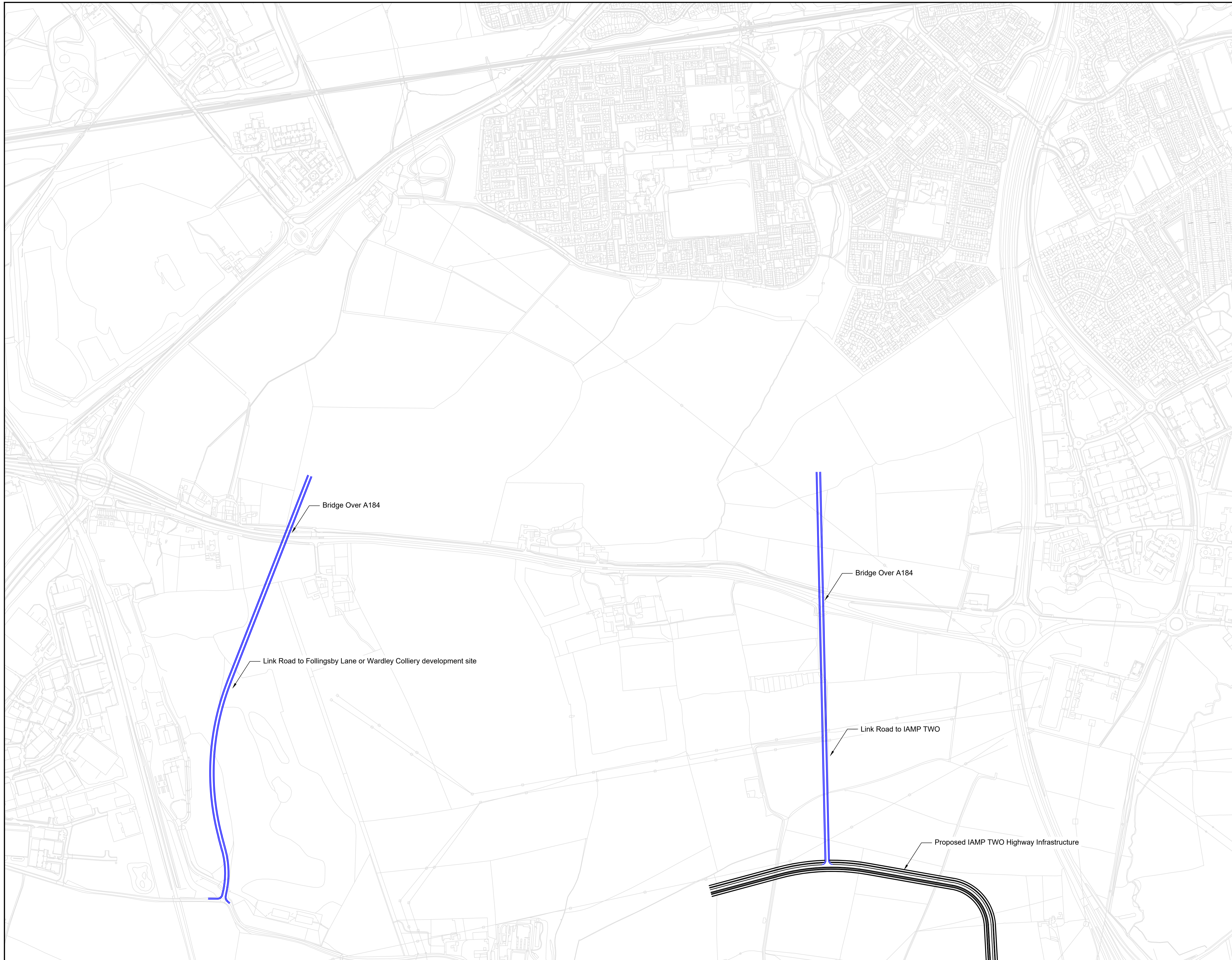


Project: GREENBELT RELEASE  
SUSTAINABLE TRANSPORT STRATEGY

Title: BRIDGE ALIGNMENT FEASIBILITY  
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TO ABINGDON WAY/BROOKLANDS WAY

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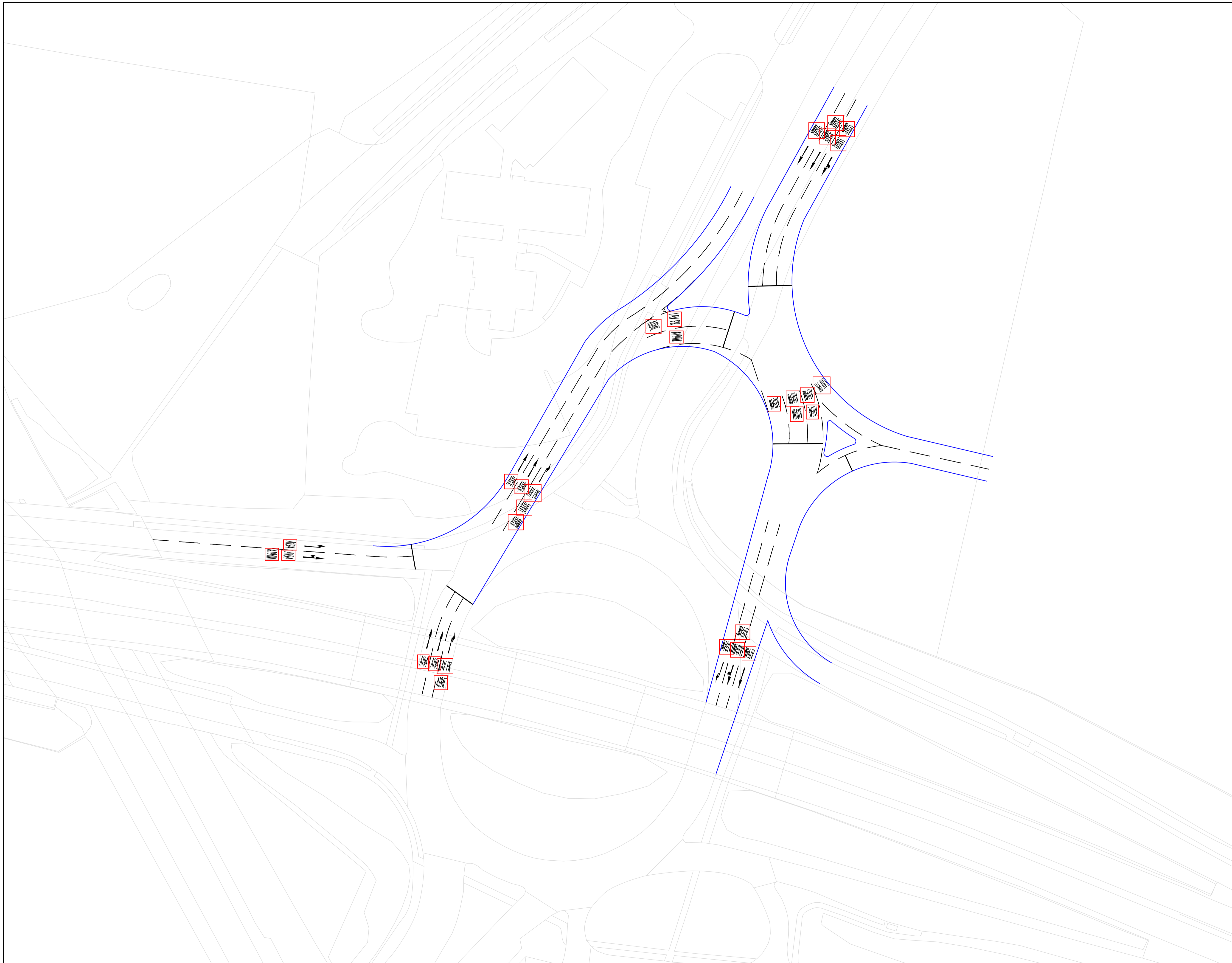


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Title: A184 BRIDGE OPTIONS

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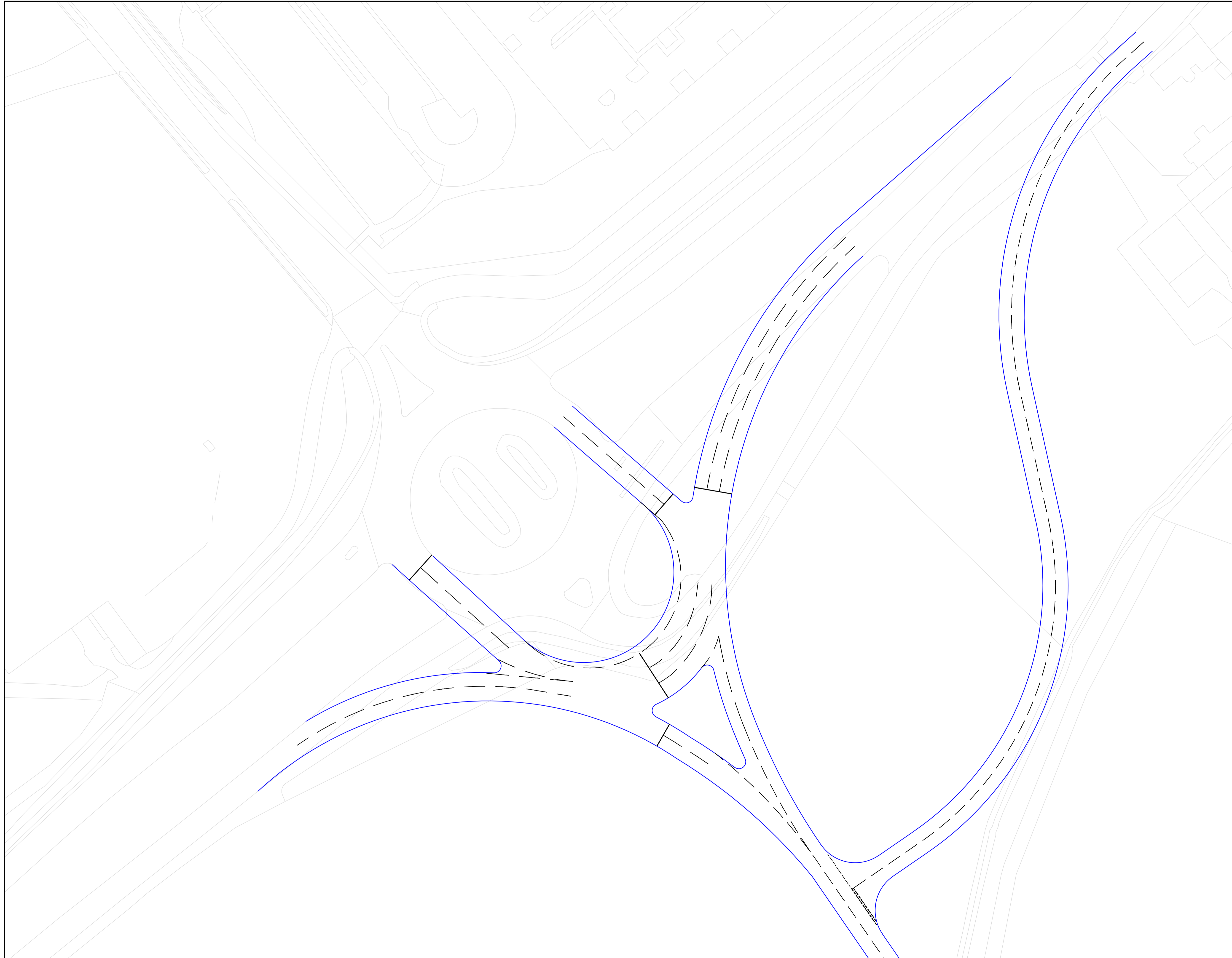
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SUSTAINABLE TRANSPORT STRATEGY

Title: WHITE MARE POOL  
ELONGATED ROUNDABOUT

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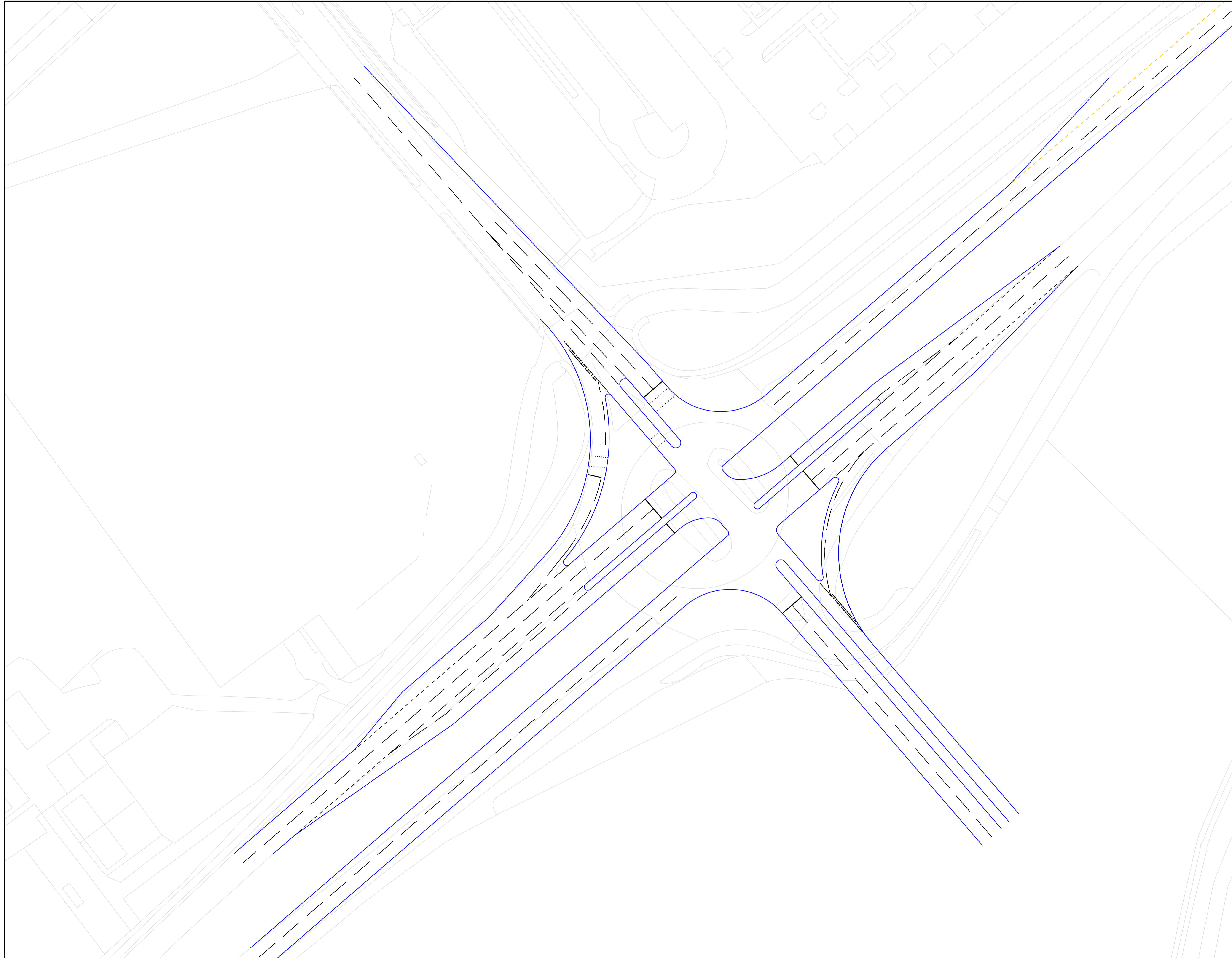
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Project: GREENBELT RELEASE  
SUSTAINABLE TRANSPORT STRATEGY

Title: A194 / MILL LANE  
EXTENDED SIGNALISED ROUNDABOUT

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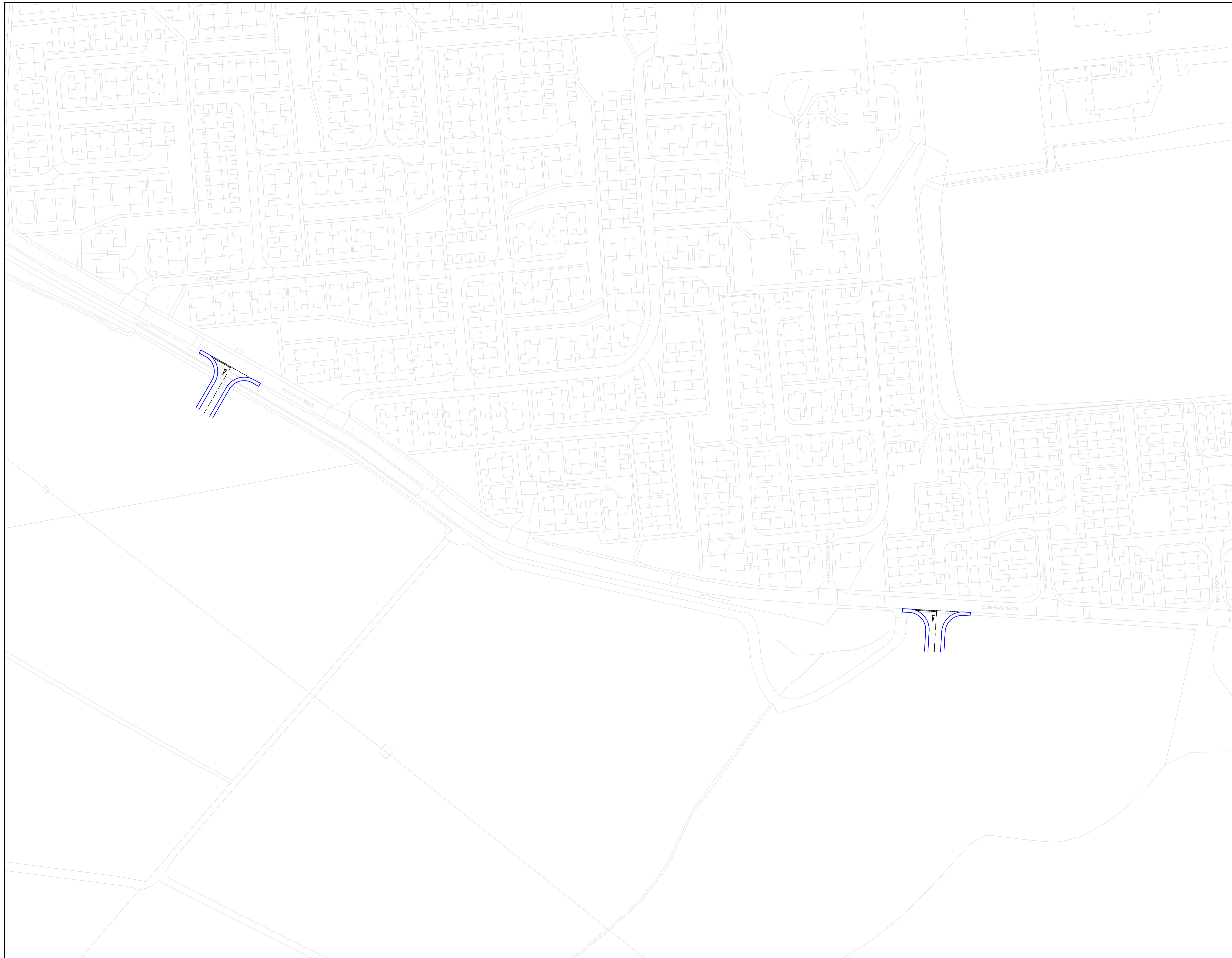


Project: GREENBELT RELEASE  
SUSTAINABLE TRANSPORT STRATEGY

Title: A194 / MILL LANE  
SIGNALISED JUNCTION

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Project  
**GREENBELT RELEASE  
SUSTAINABLE TRANSPORT STRATEGY**

Title  
**PROPOSED ACCESSSES TO DURHAM DRIVE**

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Drawing Number			Rev
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The SYSTRA logo is rendered in a bold, red, sans-serif font. The letters are thick and closely spaced, with a slight shadow effect that gives it a three-dimensional appearance. The 'S' and 'Y' are particularly prominent due to their size and the way they connect to the rest of the word.