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North East Joint Transport Committee

Tuesday, 17th November, 2020 at 2.30 pm

Meeting to be held virtually via Microsoft Teams

AGENDA

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NORTH EAST JOINT TRANSPORT COMMITTEE

DRAFT MINUTES FOR APPROVAL

DATE: **20 October 2020**

Meeting held: Virtually using Microsoft Teams and streamed live on YouTube

Present:

Councillor: M Gannon (Chair)

Councillors: C Johnson, C Marshall, G Miller, M Walsh and Mayor J Driscoll

In attendance:

Councillors: R Dodd, J McCarty, G Sanderson

Statutory Officers: M Barker (Deputy Monitoring Officer)
P Darby (Deputy S73 Officer)
T Hughes (Managing Director, Transport North East) and

Officers: G Armstrong, R Broadbent, T Collins, J Fenwick, P Fleming, R Forsyth-Ward, M Jackson, P Meikle, P Melia, R O'Farrell, S Ramsey, E Reynard, J Sparkes and M Wilson

1. APOLOGIES FOR ABSENCE

Apologies were received from Councillor I Malcolm and Mayor N Redfearn.

2. DECLARATIONS OF INTEREST

There were no declarations of interest.

3. MINUTES OF THE PREVIOUS MEETING HELD ON 15 SEPTEMBER 2020

The minutes of the previous meeting were agreed as a correct record.

Matters arising from the minutes:

Councillor Miller requested that a report be presented at the next JTC meeting in relation to how train services will be extended from Newcastle into Durham and the Wear Valley once the Northumberland Line has opened.

RESOLVED: A report will be presented to the next meeting of the Joint Transport Committee in relation to rail services connected with the Northumberland Line.

4. DISCHARGE OF TRANSPORT FUNCTIONS BY NORTHUMERLAND COUNTY COUNCIL

The Committee received a report providing an update on transport functions discharged by Northumberland County Council for the financial year 2019/20.

Rick O'Farrell highlighted that the bus services provided in the rural areas of Northumberland continue to provide an essential service.

He added that Northumberland County Council had commissioned Passenger Focus to undertake a passenger satisfaction survey in Autumn 2019. The results of the survey showed that satisfaction rates were down overall, but above the national average.

Councillor Sanderson commented that this was an important area of work for the Council to involved with. He added that he had requested work be carried out in relation to this and hoped that the situation would improve. It was felt that the satisfaction rates could have reduced due to fare increases.

RESOLVED: The North East Joint Transport Committee noted the report.

5. TYNE AND WEAR LEVY AND NEXUS MEDIUM TERM FINANCIAL STRATEGY

The Committee received a report which provided an update on Nexus' financial performance, based on the position at September 2020 together with forecasts to the year end, to inform budget planning for 2021/22.

Paul Darby advised the Committee that this report is the start of the budget considerations for 2021/22. It outlines initial proposals based on a standstill levy but also provides other options. More detailed proposals will be presented to the Joint Transport Committee at its next meeting on 17 November 2020. The final budget for 2021/22 will be agreed at the meeting on 19 January 2021.

John Fenwick drew the Committee's attention to the table at paragraph 1.1 of the report which provided more detail about Nexus' budget. He added that there is a reliance on Nexus' budget on revenue and Government grants. Because of the pandemic, the fare box revenue has decreased, and this has had a significant impact.

Revenue and monitoring forecasts to year end, estimated at the end of September 2020 shows that there is a £0.5m deficit predicted by the end of the

reporting period, and that in the event Covid emergency funding is withdrawn, a deficit for the year of £6.1m is forecast. Negotiations are continuing with the Department for Transport in relation to emergency funding continuing after 26 October, and Nexus are also seeking clarity on the budget position for the new financial year.

John added that patronage was increasing on Metro until local restrictions were imposed; since then it has reduced again. Consideration will need to be given to Nexus' position should funding from Government not be maintained.

Councillor Miller asked what was the worst case scenario if this did happen?

John Fenwick advised that it was hoped that funding would continue; there have been very positive discussions, but planning is being carried out should funding be withdrawn. He added that the worst case scenario would mean that service levels would need to be looked at. Reserves would be used as a cushion while this work was carried out.

Councillor Miller felt there should have been more detailed discussions regarding finance with the Joint Transport Committee before this point.

Councillor Gannon advised that strong representations have been made to Government about this issue but clarity around this uncertainty was required as soon as possible about the funding issue. He added that if funding was withdrawn then Nexus would be in dire straits and there would need to be very difficult discussions about the service provision.

Councillor Walsh commented that this was a very interesting but frightening report. Transport models have been exposed by the covid pandemic; the bus model has been looked at already, but Metro is equally as important. He hoped that Nexus were pressing for a longer funding strategy from Government and the wider public transport system.

John Fenwick advised that there has been a lot of lobbying of Government from Nexus, Leaders and Elected Mayors and local MPs – who have recently received a response from the Secretary of State for Transport. In addition, Nexus works with the Urban Transport Group who lobby across the country, as well as Nexus' own links with officials from the Department for Transport.

Councillor Miller added that he felt the language used in paragraph 8.1 was incorrect. The paragraph refers to 'Equality and Diversity' implications. In this report, it states that there are no immediate equality and diversity implications, but Councillor Miller felt that this was not true in this case. If funding is withdrawn, then it will have an impact on all residents who cannot access Metro or other forms of public transport, or if it becomes too expensive.

Paul Darby responded to Councillor Miller. He explained that in this case, the report reflected that there were not any recommendations for the Committee to consider. However, he accepted Councillor Miller's comments and said he would ensure they were reflected in future reports.

Councillor Gannon added that this is a crisis and continuation of the grant was required as the fare box is dropping. In addition, there has been an issue around the local levy for a number of years due to the years of austerity suffered by local authorities. He added that Nexus' budget is unsustainable in the long term and a resolution was required. Fares cannot be raised as this will make the service unsustainable.

RESOLVED: The North East Joint Transport Committee noted the report.

6. NORTH EAST TRANSPORT PLAN: NEXT STEPS

The Committee received a report which provided an update on the timescales and the draft structure of the North East Transport Plan. It is intended to bring the final version of the Plan to the Joint Transport Committee on 17 November 2020 for approval.

Once agreed, an eight week wide ranging consultation will take place across the region which will end on 14 January 2021.

Councillor Miller felt it was important that views were sought from as wide a cross-section of the public as possible.

Councillor Gannon agreed and added that the Committee had previously agreed that the consultation process would be innovative.

Philip Meikle agreed with comments and advised that the consultation process will also be shared with the Joint Transport Committee at its next meeting. He added that social distancing rules would make it difficult for the usual types of public consultation to take place, but officers were developing new ways of working.

Councillor McCarty agreed with Councillor Miller's comments and added that it was important that the views of young people were sought as they needed to encouraged not only to use public transport but to also walk or cycle. She added that the Transport Plan was an important document and that progress needed to be made on it as it had been discussed many times and now needed to be delivered.

RESOLVED: The North East Joint Transport Committee approved the timescales and draft structure for the Transport Plan as set out in the report.

7. TRANSPORT NORTH EAST, REGIONAL TRANSPORT UPDATE

The Committee received a report which provided an update on various regional transport issues.

Tobyn Hughes advised that most of the region's Emergency Active Travel Fund (EATF) tranche 1 cycling and walking schemes are now complete with a decision on the bid for tranche 2 funding expected shortly.

As highlighted earlier in the agenda, a decision is still awaited from the Department for Transport on emergency funding for Tyne and Wear Metro which ends on 26 October 2020.

Funding has also been confirmed from the Department for Education to provide additional bus services for school travel for the next half term.

The Committee were advised that it is expected that the Integrated Rail Plan will be published by the Government soon. Several JTC Members have been involved in meetings where the importance of improving the East Coast Main Line (ECML) has been raised. The Transport for the North Board will be asked to consider options for the Northern Powerhouse Rail scheme at its next meeting in November, including the proposed re-opening of the Leamside Line to divert freight away from the ECML. Capacity continues to be an issue on the ECML, and it is expected that further information regarding this will be issued soon.

Councillor Miller commented that focus on the ECML should not disadvantage other rail routes and added that it was important that the Leamside Line be reopened, and that places such as Washington be added back onto the network.

He added that it was also important that further focus needs to be given to HS2 to ensure that the links to Edinburgh are maintained by the ECML to ensure that the economic benefits that it would bring to the region remain.

Councillor Gannon commented that he was involved in discussions pre-covid regarding capacity issues on the ECML, particularly in relation to daily services to London being increased to three per hour at the expense of daily services to Manchester. He asked whether there was an update on this?

Tobyn Hughes advised that this remained an issue and that although rail industry processes are considering ways to tackle it, but it was important that the Joint Transport Committee was consulted on this matter.

The Committee agreed that a letter should be drafted in this regard.

RESOLVED: The North East Joint Transport Committee noted the contents of the report and agreed that a letter be drafted in relation to capacity issues on the East Coast Main Line.

8. Connected North East: Our Blueprint

The Committee received a report which introduced the 'Connected North East: Our Blueprint' document as a key element of the North East's recovery and renewal processes from covid. The Blueprint is centred around asking Government to fund a package of connectivity measures which would enable to the region to get back on track and allow the upgrade of infrastructures and assets. It is intended that the Blueprint is used by stakeholders and elected members as part of their discussions with Government.

RESOLVED: The North East Joint Transport Committee noted the contents of te report and approved the 'Connected North East: Our Blueprint' documents for use in discussions with Government.

9. CHANGES TO COMMITTEE MEMBERSHIPS

The Committee received a report which outlined proposed changes to the Joint Transport Committee Overview and Scrutiny Committee and the Joint Transport Committee Audit Committee.

RESOLVED: The North East Joint Transport Committee agreed:

1. to appoint Councillor Gregah Roughead as the substitute representative for Northumberland County Council on the Joint Transport Committee Audit Committee, replacing Councillor Jeff Watson.

2. to appoint Councillor Gregah Roughead as a representative for Northumberland County Council on the Joint Transport Committee Overview and Scrutiny Committee, replacing Councillor Glen Sanderson.

3. to note Sunderland City Council have also advised that Councillor Paul Stewart wishes to stand down from the Joint Transport Committee Overview and Scrutiny Committee but his proposed replacement has not yet been identified; and there is currently also a vacancy for a representative of Gateshead Council.

4. to delegate the appointment to any outstanding vacancies on the Joint Transport Committee Overview and Scrutiny Committee to the Deputy Monitoring Officer (Transport) once nominations are received from the respective Councils, so that the vacancies on the Committee can be filled as soon as possible.

10. EXCLUSION OF THE PRESS AND PUBLIC

The North East Joint Transport Committee agreed to exclude the press and public during consideration of items 10 and 11 by virtue of paragraphs 2, 3 and 4 of Part 1 of Schedule 12A of the Local Government Act 1972.

The live stream of the meeting on YouTube was suspended after this resolution was agreed.

North East Joint Transport Committee

Date: **17 November 2020**

Subject: **North East Transport Plan - Agree to Consult**

Report of: **Managing Director, Transport North East**

Executive Summary

The North East Transport Plan is being developed to set out transport's role in our region up to 2035.

To 2035, our region requires an initial estimated £6.1 billion of capital investment, an amount which will grow as further schemes are developed over the lifetime of the Plan.

The Plan's vision is 'Moving to a green, health, dynamic and thriving North East' and the Plan objectives are:

- Carbon-neutral transport;
- Overcome inequality and grow our economy;
- Healthier North East;
- Appealing sustainable transport choices;
- Safe, secure network.

The purpose of this report is to seek agreement from Joint Transport Committee to move the draft of North East Transport Plan to a phase of public consultation. It is recommended that public consultation should commence on 19 November 2020 and run until 14 January 2021. During the consultation we will reach out to as many people as possible and invite them to provide feedback on the Plan. It is intended that the Plan will be formally endorsed and published March 2021.

The report also asks that Joint Transport Committee grants delegated authority to The Proper Officer for Transport to agree any technical or minor amends to the draft Transport Plan and Integrated Sustainability Assessment prior to and during consultation and pending its formal approval by the Committee, following consultation with the Chair.

The report also draws attention to particular key points within the plan:

- Draft policy statements which are included in the Plan;
- Integrated Sustainability Assessment; and
- Consultation approach.

The draft Transport Plan is attached to this report as Appendix A.

Recommendations

The Joint Transport Committee is recommended to agree to progress the draft North East Transport Plan to public consultation.

The Joint Transport Committee is also recommended to grant delegated authority to The Proper Officer for Transport to agree, following consultation with the Chair, any technical or minor amends to the Transport Plan and Integrated Sustainability Assessment prior to and during consultation.

1. Background Information

1.1 At the October meeting JTC agreed that every effort should be made to publish our region's Transport plan in March 2021. Prior to publication, it is both necessary and desirable to undertake public consultation to obtain stakeholder feedback to enrich the finalised plan for publication.

1.2 The vision set out in the Transport Plan is as follows: "Moving to a green, healthy, dynamic and thriving North East". Underpinning the Plan are a set of accompanying JTC endorsed objectives. These objectives have driven the content of the Plan.

1.3 Our programme of schemes will enable the vision and objectives to be delivered and an initial estimated funding requirement of £6.1 billion worth of capital investment, an amount which will grow as further schemes are developed over the lifetime of the Plan, would enable us to begin to deliver the programme of schemes.

2. Policy statements included in the plan

2.1 Policy Statements

This consultation draft of the plan includes a series of policy statements which outline the approach our region could take to transport in the years up to 2035.

Using these policy statements, a clear and ambitious pipeline of schemes has been developed. These schemes will enable us to achieve the Plan's vision and objectives.

The policy statements set out in the Plan are as follows:

- We will help people make greener and healthier travel choices whenever they can and make sure our sustainable network takes everyone where they need to go, at a price they can afford.
- We will ensure all our actions improve transport in the region and relate to the objectives of this Plan so that we are greener, thriving, inclusive, healthier and safer.
- We will help more people use active travel by making the cycle network better across the North East. This will include being flexible in how we use road space to help cyclists and pedestrians.
- We will initiate actions to make travel in the North East net carbon zero and improve transport safety and security.
- We will improve bus travel and attract more passengers with new rapid bus corridors. This will include changing how road space is used to help buses move more quickly.
- We will work with our partners to make travelling and moving goods around our region more efficient and greener.
- We will take action to continue to support the Shields Ferry and develop potential improvements where possible.
- We'll help more people reach the sustainable transport network with more 'on

demand' solutions.

- We will make our roads flow better for goods and essential car journeys.
- We will strengthen use of cleaner, greener cars, vans and lorries.
- We will invest in Metro and local rail to extend and improve the network.
- We will work with partners to make movement of people and goods to and from our region greener and more efficient.
- We must work with partners to strengthen connections from destinations in our region to everywhere in the UK and beyond.
- We will embrace new technologies to meet our transport objectives and set innovation challenges to industry creating new opportunities with our network as the testbed.
- We will strive to integrate different types of transport, so that each contributes its full potential and people can move easily between them.
- We will constantly seek funding opportunities to deliver our Transport Plan objectives.
- We will take action to make travel in the North East net carbon zero and improve transport safety and security.
- We will ensure that we work with partner organisations to drive new, quality roles and innovate in the transport sectors.

2.2

Integrated Sustainability Assessment (ISA)

An independently produced draft ISA is included as Appendix B of this report. The purpose of this ISA is to evaluate the impact of the plan on factors such as environment, health and accessibility.

2.3

Consultation Approach

We aim to reach out to as many people as possible and invite them to respond to the North East Transport Plan consultation.

Robust communications and marketing tactics will be ongoing throughout the eight-week consultation period alongside significant stakeholder engagement activity to ensure as many people as possible are aware of the consultation.

Planned marketing, intended to raise the profile of the consultation process, will include social media advertising and local media advertising including newspaper and radio adverts. We will also liaise closely with our partners, including local authorities, to expand the reach of the consultation by using partner communication channels where possible to boost visibility of the campaign.

We will reach out directly to stakeholders including the public, national and local Government agencies, business organisations, community and interest groups as well as our extensive network of partners and operators to inform them of the consultation and to gather feedback.

All stakeholders will be able to engage with the Plan easily – by calling, emailing, filling out a form online or uploading a video. The public will have ample opportunity

to ask questions or discuss their feedback.

In our planning the consultation process, we have been mindful of the need to take in to account current Covid related restrictions. Respondents will have the opportunity to engage with us using a variety of methods including phone, email and video call meeting as alternatives to face to face engagement.

3. Reasons for the Proposals

3.1 The purpose of this report is request agreement from members to consult on the draft North East Transport Plan.

4. Alternative Options Available

4.1 No alternative options.

5. Next Steps and Timetable for Implementation

5.1 Next steps will involve progressing to the consultation period which, providing JTC approval is granted, will start 19 November and close 14 January 2021.

Consultation feedback will be brought to a future JTC meeting for review.

Subject to JTC's approval, the North East Transport Plan will be published March 2021.

6. Potential Impact on Objectives

6.1 Objectives agreed by JTC are included within the Transport Plan. The Plan contains the steps necessary to achieve these objectives and therefore the step of publishing a consultation draft of the Plan will have positive implications.

7. Financial and Other Resources Implications

7.1 All costs associated with the consultation process are being met from the Transport Strategy Unit's budget in year.

8. Legal Implications

8.1 At this stage, there are no foreseen legal implications from the approach we are taking to Transport Plan production or consultation.

9. Key Risks

9.1 Any delay to the launch of the consultation process, will delay the ultimate publication date of the Transport Plan.

10. Equality and Diversity

10.1 The Transport Plan is intended to positively address equality and diversity issues within the region by enhancing transport provision for all users. The ISA document seeks to independently verify this.

Our approach to consultation is designed to maximise involvement for all in the

development of the Plan.

11. Crime and Disorder

11.1 There are no specific crime and disorder implications arising from this report.

12. Consultation/Engagement

12.1 All local authorities across the NECA and NTCA areas have been engaged in the development of the plan to date, with further informal engagement with transport operators and other interested parties. This paper is designed to launch a consultation process to maximise engagement in the development of the Transport Plan.

13. Other Impact of the Proposals

13.1 No specific impacts.

14. Appendices

14.1 Appendix A- Consultation Draft North East Transport Plan

Appendix B- Draft Integrated Sustainable Appraisal

15. Background Papers

15.1 Agenda Item 8 “North East Transport Plan Update” North East Joint Transport Committee, 9th June 2020

16. Contact Officers

16.1 Rachelle Forsyth-Ward, Strategic Transport Advisor, rachelle.forsyth-ward@northeastca.gov.uk

17. Sign off

- Head of Paid Service:
- Monitoring Officer:
- Chief Finance Officer:

18. Glossary

ISA- Integrated Sustainability Assessment

JTC- Joint Transport Committee

LA7- 7 North East local authorities

North East Transport Plan 2021-2035

Moving to a green, healthy, dynamic and thriving North East

CONSULTATION DRAFT

Contents

Foreword

On behalf of the North East Joint Transport Committee (NEJTC), I am delighted to present the draft North East Transport Plan.

This is the first regional Transport Plan which sets out our collective ambitions up to 2035. Through its delivery, we will create a modern transport network that we are all proud of.

Our schemes are ambitious and are so far worth £6.1 billion an amount which will grow as further schemes are developed over the lifetime of the Plan. We believe this to be a fair share of national transport funding which should be allocated to our region from Central Government to 2021-2035.

These projects will help to protect our environment by providing attractive carbon-neutral sustainable transport for people across the North East. Our plans will also significantly fuel regional economic growth which will help to boost job creation.

Our region not only has the passion to drive forward this exciting plan, we also have the existing transport assets to provide a strong foundation upon which we can build. Here we set out how we will deliver this game-changing system, including greener travel options which will greatly improve the physical and mental health of people across the North East.

As we reflect on the significant challenges our region has faced in 2020, I am pleased to now turn to the future and consider how transport across the North East will look and feel in 2035. Developing our network is key to unlocking our green transport ambitions. It will boost our economy, increase connectivity across the North East and help us to overcome long-standing health, social and economic inequalities.

It is my hope that the public will fully engage with our draft plan to drive forward our vision of 'moving to a green, healthy, dynamic and thriving North East'. We welcome members of the public to feedback on this document and share their aspirations for the future of regional transport.

On behalf of the NEJTC I would like to thank the public, our partners and stakeholders for playing their part in the development of this strategic Transport Plan. We look forward to the many discussions and debates that will take place in the coming months throughout this consultation.

Cllr Martin Gannon
Leader of Gateshead Council and
Chair of the North East Joint Transport Committee

Executive summary

This is our first region-wide Transport Plan for the seven local authority areas in the North East, covering two combined authorities, brought together by the North East Joint Transport Committee:

The North East Combined Authority
(comprising Durham, Gateshead, South Tyneside and Sunderland)

The North of Tyne Combined Authority
(comprising Newcastle upon Tyne, North Tyneside and Northumberland)

This North East Transport Plan sets out the transport priorities for our region up to 2035.

Home to two million people, our region is distinct and diverse. It consists of urban and rural communities all with a rich history and positive people who want to contribute to moving our country forward.

This mixture of urban, suburban and rural communities results in a range of transport challenges, from rural isolation in more remote areas to poor air quality and congestion in parts of our cities, along with pockets of 'transport poverty' across the entire region.

We already have a well-established integrated public and sustainable transport system which makes a real difference to people's everyday lives, allowing them to get to work, to visit friends and family, to the shops, and to get to essential services such as schools and hospitals.

This Plan will show that our region has the potential to improve it further to expand its reach, capability and quality.

In some areas of our region, the existing network needs to be improved and expanded so that it better connects the people and communities which it is supposed to serve, leaving no one and nowhere behind. Creating, one, total network with integration at the heart is key. Solving our transport challenges will go a long way in enabling the region's long-standing health, social and economic inequalities to be overcome.

Recent years have seen rising levels of car use and ownership in the region and reductions in the use of public transport, cycling and walking, resulting in congestion and poor air quality. However, the Covid-19 pandemic lockdowns in 2020 gave us cleaner and quieter towns, cities and neighbourhoods. **We will work to sustain some of the benefits this afforded and this Plan will help take us towards carbon neutrality**.

Ultimately, our approach recognises that different communities across the North East have different transport needs and will need different transport solutions. For example, the role of the car and of public transport is very different in rural and urban communities.

Those transport links need to be fast, reliable, resilient, accessible and affordable. They must have the capacity we need and, crucially, be sustainable. **Better integration is also key**.

This is our Plan for how we will rectify our wider regional and transport challenges and grasp future opportunities by 2035.

We already have the foundations to launch a world-class sustainable transport network. This Plan builds on our existing assets and gives us the framework to enable us to deliver a more seamless, co-ordinated and integrated transport system across the region.

The Plan sets out our priorities and forms the basis for bids and requests for funding for transport investment in the North East up to 2035.

This Plan is for the whole of the North East. It recognises the different needs of communities. It considers why we travel and how those trips are made and how journeys can be improved. Our Plan is for everyone, young and old and for people traveling to, from, and within North East England.

The North East Transport Plan vision is:
'Moving to a green, healthy, dynamic and thriving North East'.

The objectives of the Transport Plan are:

- **Carbon-neutral transport**
- **Overcome inequality and grow our economy**
- **Healthier North East**
- **Appealing sustainable transport choices**
- **Safe, secure network.**

Implementation Plan

We have an ambitious but deliverable timeline which will lead us towards delivering our vision and achieving our objectives by 2035. We have clearly set out the timeline showing our priorities and ambitions in our Delivery section of this Plan and this will be accompanied by a forthcoming Implementation Plan.

A programme of schemes has been developed and this will be managed as a live programme with regular updates to the schemes and evidence that underpins them to ensure that the region can continue to address our challenges and grasp opportunities. Our Plan is divided into the following timescales:

- Shovel-ready schemes
- Schemes for delivery in the next five years – requiring funding to be accelerated
- Schemes for development and delivery in the next 10 years
- Schemes for development and delivery beyond 10 years

We have set schemes across 7 work programmes consistent with our Policy Areas:

- Making the right travel choice;
- Upgrading North East active travel infrastructure;
- Public transport: travelling by bus, ferry and on demand public transport;
- Public transport: travelling by local rail and Metro;
- Private transport: travelling by car and using road infrastructure;
- Maintaining and renewing our transport network; and
- Connectivity beyond our own boundaries.

We have complied a Technical Appendix, available on request, containing all of our data sources and evidence used.

The Integrated Sustainability Appraisal (ISA) also accompanies this Plan. The appraisal seeks to identify any impact of our programme on key factors.

Delivering this Plan, achieving our vision and objectives will support a shift to a more sustainable and healthier way of life in the North East, through lowered emissions, better air quality and travel choices.

- Easier access to, education, skills, and higher value jobs
- Health levels at least equal to other regions in the UK
- Better connections from the North East to national and international destinations
- A transport network with improved environmental credentials including mores sustainable journeys, better air quality and reduced carbon output
- A safer and more reliable integrated transport network which is more intuitive for customers with a sustainable cost base
- Direct job opportunities in the transport and infrastructure sectors
- Enabling new development and housing sites and improving accessibility to existing communities

This Plan will deliver profound and lasting improvements that will shape the North East and its people for decades to come.

To 2035, our region requires an estimated £6.1 billion of capital investment, an amount which will grow as further schemes are developed over the lifetime of the Plan.

We believe this to be a fair share of national transport funding which should be allocated to our region from Central Government to 2021-2035.

What is the North East Transport Plan?

The North East Transport Plan is the first ever comprehensive transport plan for the region, bringing together the seven local authorities in North East England: Durham, Gateshead, Newcastle upon Tyne, North Tyneside, Northumberland, South Tyneside and Sunderland.

A single Plan giving a truly regional focus is a step forward for the North East. Travel patterns in our region are complex but 95% of our population live and work within our seven local authority areas[1] and travel behaviour isn't constrained by administrative boundaries.

This is not a 'business as usual' Transport Plan. It sets out the region's transport priorities up to 2035 and how the North East can address our main future challenges, ultimately delivering profound and enduring improvements to our transport network.

The Plan is centred around connecting people to good employment opportunities, generating economic growth, while enabling the region and its people to move to healthier and greener more sustainable ways of travel.

The improvements we have identified have been agreed by the region and will be delivered by a number of organisations through the range of programmes and schemes set out in the Implementation section of this Plan.

We will use this Plan to communicate opportunities for investment and improvements to our transport network. The Plan is our bedrock for bids and requests for funding inward transport investment to the region from Central Government and other sources. This is the long-term transport strategy for our forward-looking region.

Making journeys is good

Covid-19 accelerated the demand, ambition and delivery of both digital transformation and mobility but we want to encourage people to make trips around the North East. We travel to school, to work, to shop, to care for others and to socialise with friends. For businesses, the ability to travel enables the opportunity to acquire, move and sell products and goods. Doing so benefits local economies of communities which make up our region. Transport can also enable social connectivity to people who are isolated, and can enhance independence and opportunity. It is also the key to tackling inequality and deprivation by facilitating access to jobs and leisure. High-quality and integrated transport links can also help promote and strengthen tourism and regional development. Making journeys of course leaves an impact on our environment and plays a big role in our health and wellbeing, so how we choose to travel is important. That is why connecting people to opportunities using greener, healthier and sustainable is key to this Plan.

Why is transport important?

Transport is a means to an end, a way of being able to do the things that make up our lives and enables our region and its people to keep moving. It enables physical connectivity between people and jobs, businesses and workers, and businesses to suppliers and customers. Within our region, it's important that our population of two million residents can reach work, education and healthcare and visit friends and loved ones. Links to and from other regions and to other countries are also fundamental for facilitating economic growth and trade.

Well-coordinated transport investment and land use planning can foster social mobility (OECD 2018), and collectively lead to better economic performance of specific areas as businesses are located closer together.

£42-50m

For example, if the economies of Ashington, Blyth and Newcastle are brought 'closer' together through restored passenger rail links, there will be an increase in the level of interaction between the two, resulting in economic growth for both areas. £42m to £50m wider economic benefits.

Successful delivery of the Plan will lead to the North East having a world-class sustainable transport network. Carrying out our Plan and achieving our vision and objectives will lead to better outcomes for our region's residents, businesses and visitors and overcome our long-standing challenges:

- We have a growing population but a one that is ageing over time (2m people, average age 43.7).
- There are major health and income based inequalities. High percentage of economically inactive people in the region are long-term sick (North East: 28.5%, UK 22.1%)
- Plans for substantial housing growth need to be supported by good public and sustainable transport connections: 109,555 new homes planned by 2036.
- Average productivity in our region remains 16% below the output for England. This has an impact on the potential competitiveness and resilience of our businesses.
- Gross Value Added output rising but challenged by external pressures with a persistent productivity gap GVA of £20,338. This is below the national average of £24,181.
- We have fewer businesses per head and fewer jobs in high skilled occupations than other areas.
- Analysis by IPPR North suggests that in 2019, planned Government on transport in London was £3,636 per person, over seven times more than the £519 per head in the North East.
- A range of transport issues has led to a contrast between rural isolation in our remoter areas and poor air quality and congestion in parts of our cities.
- Commuting to workplaces is dominated by car travel, so congestion is a significant issue on our roads, which affects public transport access and attractiveness, reduces productivity and increases inactivity and vehicle emissions.
- Public transport use is falling over the long-term, despite an increase in bus use in 2019 as a result of investment by bus operators.
- Transport contributes a significant proportion of carbon emissions and we have an air quality problem in our region.
- Cars are our region's most used form of transport and car ownership in the North East is increasing, leading to more traffic congestion and vehicle emissions.

What this Plan covers

Interaction with other policies and strategies

This Plan builds on Connected North East – Our Blueprint, published in October 2020, which sets out how a connected North East can increase the prosperity, quality of life and health of the region by uniting the potential of digital and transport.

The aim of this Plan is to help support our region's wider goals of creating and sustaining 100,000 more and better jobs in a growing and decarbonised economy, where social and health inequalities are greatly reduced.

The Plan is therefore closely aligned and interfaces with the North East Local Enterprise Partnership (LEP) Strategic Economic Plan and Local Industrial Strategy, Central Government strategy, as well as all relevant policies and Plans of Transport for the North (TfN), the seven North East local authorities and Nexus. See the Call to Action page for a timeline of strategic interventions.

Our upcoming Transport Strategies which will be aligned to this Plan:

2021/22	2022/23
• Refresh of Metro and Local Rail Strategy • TNE Engagement Strategy • Bus Strategy	• Active Travel Strategy • Roads and Electric Vehicle (EV) Infrastructure Strategy

The table to the right shows what is in Plan and what is available elsewhere, for each form of transport, based on our policy areas:

- Active travel
- Public transport: travelling by bus, ferry and on demand public transport
- Private transport: travelling by car and using road infrastructure
- Public transport: travelling by local rail and Metro
- Connectivity beyond our own boundaries

Transport type	What this Plan covers	What you'll find elsewhere
 **Active travel**	How Active Travel contributes to our region's transport network, future development and policy aims.	Information on pop up cycle routes, local cycling and walking improvement plans, and rights of way improvement plans (Local Authority websites).
 **Public transport: travelling by bus, ferry and on demand public transport**	How buses, the Ferry and 'on demand' public transport contribute to our region's transport network.	Details of, and decisions about specific ferry and bus services, fares, ticketing, timetables and routes: NEBus is the bus operators' association which encompasses the providers of services across the North East. (Nexus website).
 **Private transport: travelling by car and using road infrastructure**	How roads contribute to our region's transport network and their future development.	Local Highway management and investment proposals. Highway Asset Management Plans and Traffic Asset Management Plans. Highway Design Standards. Parking standards and car park CCTV. Roadworks management (Local Authority websites). Tyne Tunnel Toll information.
 **Public transport: travelling by local rail and Metro**	How Metro and Local rail contribute to our region's transport network and their future development.	Details of, and decisions about, specific services, times fares and ticketing. (Northern trains and Nexus website).
 **Connectivity beyond our own boundaries**	How our national and global gateways contribute to our region's transport network for both passengers and freight. How we will work with partners to strengthen connections from destinations in our region to everywhere in the UK and beyond.	Details of, and decisions about, specific routes and port and airport operations. (Newcastle Airport, Port websites, Main Line railway services, flight and sailing schedules).

Our vision and objectives

The vision and objectives for the Plan set the standard of what we want to achieve and where we want to be by 2035.

The Vision

"Moving to a green, healthy, dynamic and thriving North East"

The Objectives

Carbon neutral North East

We will initiate actions to make travel in the North East net carbon zero, helping to tackle the climate emergency declared by our two Combined and seven Local Authorities, addressing our air quality challenges, and helpin to achieve the UK's net zero by 2050 commitment.

Overcome inequality and grow our economy

The Plan is aligned with the North East LEP's long term goals to first return the region to pre-Covid-19 GDP and employment levels and then to move forward in pursuit of the economic ambitions set down in their Strategic Economic Plan (SEP).

Healthier North East

The North East has the lowest life expectancy of all the English regions. The Plan will help achieve better health outcomes for people in the region by encouraging active travel and getting people to travel by more sustainable means, improving air quality, helping our region to attain health levels at least equal to other regions in the UK.

Appealing sustainable transport choices

We will introduce measures which make sustainable travel, including cycling and walking, a more attractive, greener, and easy alternative to getting around.

Safe, secure network

We will improve transport safety and security, ensuring that people are confident that they will be able to feel safe and secure when travelling around the North East.

Policy areas

Making the right travel choice

We will enable people to make greener and healthier travel choices whenever they can and ensure our sustainable network takes everyone where they need to go at a price they can afford.

We must ensure all our actions improve transport across the region and deliver to the objectives of this Plan so we are greener, more inclusive, healthier, safer and our economy thrives.

Active travel

We will enable people to make greener and healthier travel choices whenever they can and ensure our sustainable network takes everyone where they need to go at a price they can afford.

We must ensure all our actions improve transport across the region and deliver to the objectives of this Plan so we are greener, more inclusive, healthier, safer and our economy thrives.

Public transport: travelling by bus, ferry and on demand public transport

We will improve bus travel and attract more passengers with new rapid bus corridors. This will include changing how road space is used to help buses move more quickly.

We will take action to continue to support the Ferry and develop potential improvements where possible.

We must help more people to reach the sustainable transport network with more 'on demand' solutions.

Private transport: travelling by car and using road infrastructure

We must make our roads flow better for goods and essential car journeys

We must strengthen use of cleaner, greener cars, vans and lorries.

Public transport: travelling by local rail and Metro

We must invest in Metro and local rail to extend and improve the network.

We will take action to drive our partners to make travelling and moving goods around our region more efficient and greener.

Connectivity beyond our own boundaries

We must work with partners to make movement of people and goods to and from our region, more efficient and greener.
We must work with partners to strengthen connections from destinations in our region to everywhere in the UK and beyond.

Research, Development and Innovation

We must execute research and development opportunities to identify, trial and deploy future transport solutions to make our transport network greener and more efficient and meet the travel needs of our people.

Overarching policy areas

We will strive to integrate within and between different types of transport, so that each contributes its full potential and people can move easily between them.

We must constantly seek funding opportunities to deliver our transport plan objectives.

We will take action to make travel in the North East net carbon zero and improve transport safety and security.

We must ensure that we work with partner organisations to drive new, quality roles and innovate in the transport sectors.

North East England – our region

Home to **2 million people**

5 sea ports
Port of Berwick, Port of Blyth, Port of Sunderland, Port of Tyne and Seaham Harbour

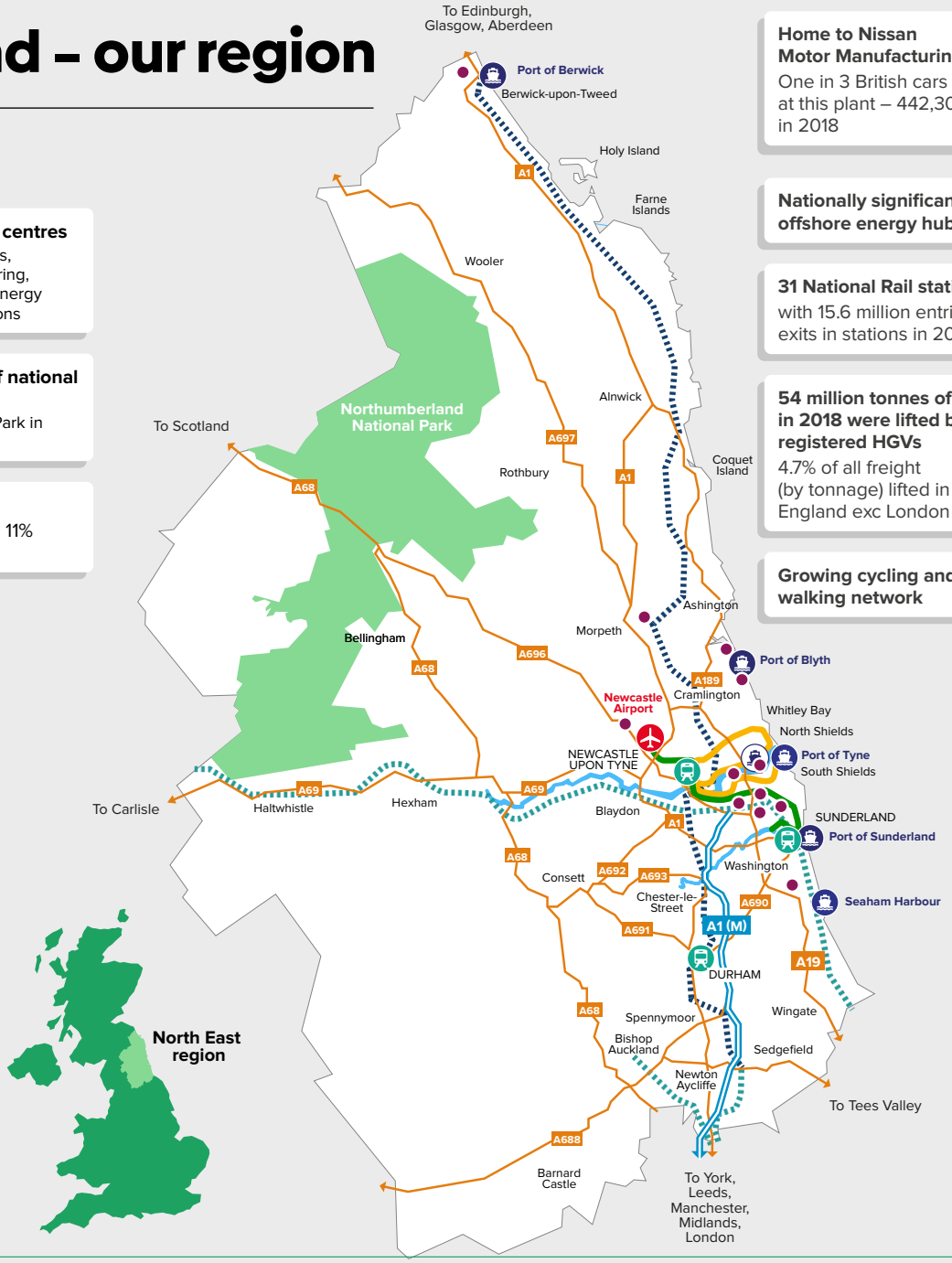
Newcastle International Airport – 80 direct routes, 5.2 million passengers, 4,745 tonnes of freight in 2019.

Value of exports
£13.3 billion (2019)
Value of imports
£14.4 billion (2019)

5 national catapult centres
Digital, Energy Systems, High Value Manufacturing, Offshore Renewable Energy and Satellite Applications

Home to a range of national innovation centres
Newcastle Helix, NETPark in Durham

Manufacturing
15% of our GVA and 11% of employment



Key

- Ports
- Port of Tyne – Ferry Terminal
- Newcastle International Airport
- Tyne and Wear Metro
- Railway Line
- East Coast Main Line
- Motorway
- Major Road Network
- Enterprise Zones

Home to Nissan Motor Manufacturing
One in 3 British cars is made at this plant – 442,300 in 2018

Nationally significant offshore energy hub

31 National Rail stations
with 15.6 million entries and exits in stations in 2018/19

54 million tonnes of freight in 2018 were lifted by GB registered HGVs
4.7% of all freight (by tonnage) lifted in England exc London

Growing cycling and walking network

Shields Ferry
400,000 passenger journeys a year

Two UNESCO World Heritage sites

Tyne and Wear Metro
60 stations
89 trains
36m passenger journeys in 2018/19

Every journey on our Metro and Local Rail network brings an **£8.50 direct benefit to our economy**

28% of households do not own a car – the highest proportion outside of London – shrunk by 9% since 2002/03

162.4 million bus passenger journeys in 2018/19

Home to the largest purpose built datacentre campus in the UK
Stellium Data Centres, Cobalt Business Park, North Tyneside

Four universities
80,000 students, 17,000 international

Our environment

Carbon Neutral North East

In recent years there has been a general increased awareness of the need to take action on climate change. In June 2019 the UK Government became the first major global economy to pass a law that requires the UK to achieve 'net zero' greenhouse gas (GHG) emissions by 2050.[7]

All seven local authorities and both combined authorities **have declared climate emergencies.**

How can transport help?

Transport can play a significant role in providing solutions to achieve the UK's net-zero carbon emissions commitment by 2050. This will require further development and use of low carbon technology. It will also require helping people to make the right travel choice for their journey.

In early 2020, the UK Government announced a consultation on bringing forward the end to the sale of new petrol and diesel cars and vans from 2040 to 2035, or earlier if a faster transition appears feasible. The Independent Committee on Climate Change (CCC) concluded that this is required for the UK to end its contribution to climate change by 2050.

Over the coming years, there will need to be substantial investment in new fleets of cars, buses, and other road vehicles as well as trains, together with the necessary infrastructure (including Electric Vehicle charging points and railway electrification) for them to operate.

This means that interventions are required in the North East to create a sustainable transport network that is attractive throughout our region and beyond for both existing and potential users.

If we do not address our carbon emissions from transport, then the locations of emission exceedance in several urban communities will continue to have a significant detrimental impact not only on the environment but on the health of the people living and working in our region.

Over the period to 2035, we need to focus on a decarbonised future and this Plan will take us towards carbon neutrality.

Air Quality

The North East has air quality hotspots in cities and towns. We face environmental directions from Government to improve air quality in parts of the region as soon as possible.

Although 92% of days were classed as 'low emissions' on the Air Quality Index in the North East in 2019, it is estimated that **poor air quality is responsible for around 360 deaths each year** in Central Tyneside alone.

The region has the following air quality management areas:

Authority	Authority Location(s)
Durham County Council	Durham City, Chester Le Street
Gateshead Council	Gateshead Town Centre
Newcastle City Council	Newcastle City Centre, Gosforth
South Tyneside Council	Boldon Lane/Stanhope Road Leam Lane/Lindisfarne Roundabout

Some of the measures we have included in our AQMAs are:

- Reducing the volume of traffic entering the area
- Working with bus operators on emission standards for buses and to encourage the use of cleaner vehicles
- Encouraging cycling and walking.

The aim of these management areas is to improve air quality for a continued period. If this could be achieved, then the AQMA in question could be revoked on the grounds that air quality has improved sufficiently that it is no longer a concern.

To compound this issue, people in the North East of England live shorter lives and have shorter healthy life expectancy. Peak-hour congestion, particularly at city centre river crossings, is leading to poor air quality and unreliable bus journeys.

We need to increase the volume and proportion of journeys made by low-carbon, sustainable transport types. This will bring about improvements in air quality across the region, with a focus on areas that exceed target levels.

While **28% of households in the North East do not own a car** – the highest proportion outside of London – this has shrunk from 37% in 2002/3. The proportion of households owning two or more cars has increased from 20% to 32% over the same period.

Most current vehicles on our roads significantly contribute to carbon emissions. Dominance of the private car for commuting trips is a significant challenge for the region that we must address.

Commuting data suggests that rural residents are more dependent on a car than people living in urban areas and make less use of buses largely as a result of service provision and levels of density.

Congestion

Our region has significant road congestion problems. High proportions of car and van use in the region results in road corridors into the centres of Durham, Newcastle, Gateshead and Sunderland being regularly congested, especially at peak times and particularly at city centre river crossings.

However, car use is continuing to rise and remains the most common mode of transport for commuting. As with the rest of the UK, recent decades have seen rising levels of car use and ownership in the North East.

Demand for higher levels of car ownership in the coming years suggests increased future traffic congestion if alternative provision is not made.

Road transport contributes 37% to the North East's carbon emissions **– the most out of any sector**.

The North East is the lowest ranked region for transport CO2 emissions per person outside London. This gives us solid foundations on which to build a greener and more sustainable transport network.

Our environment

Overall carbon emissions per capita – 5.8 tonnes per person per year (2017).

We are the third highest region in England for carbon emissions per capita as a result of having higher than average per capita emissions from industrial, commercial, public and domestic sectors.

Cleaner fuels

The rise of cleaner fuels in particular electric will continue over the next decade following legislation to end the sale of all new petrol and diesel cars by 2040; the region has a clear opportunity to accelerate and assist in the uptake of these vehicles. Currently there are almost 3000 registered electric vehicles in our region, over 800 chargers and through programmes such as Go Ultra Low North East we are confident that the adoption of these vehicles will grow. Other sectors including the bus and logistics industries are also investing in this area. A cleaner vehicle fleet results in potentially improved air quality and a more efficient energy sector. However, an increase in the uptake of electric vehicles will not enable us to achieve our objectives alone, as it will not fully resolve health impacts, make efficient use of road space or improve road safety.

The future

The North East has been at the forefront of decarbonisation and developing low-carbon solutions for our transport network, with successes in offshore wind technologies and electric vehicles.

The North East Automotive Alliance (NEAA) is an internationally significant automotive cluster that brings together regional organisations on workstreams including advanced propulsion. Transport operators are also reducing emissions from buses and freight vehicles, including the successful deployment of biomethane operated buses in Sunderland by Stagecoach and the roll-out of nine electric buses for Go North East (funded through the Government's Ultra Low Emission Bus Fund). Our new Metro fleet will be 32% more energy efficient, saving tonnes of carbon. Over the coming years, we are extremely well placed to explore the connections between low emission transport, advanced propulsion and energy systems to improve our region's environment.

As a region with a world-leading natural and historical environment it is our duty to protect it for future generations against harmful pollution levels. Making better decisions about transport provision can lead to a more sustainable (and therefore healthier) way of life in the North East for our residents, commuters and visitors.

This Plan will address these challenges and embrace the opportunities, taking the North East towards carbon neutrality, achieving our objective of **Carbon Neutral North East.**

Our economy

Our economy, measured by GVA levels (total and per capita), is performing below the national average, with a significant productivity gap and we have a smaller than average private sector economy.

Measured in 2018, our region had a workday population of almost one million people and the GVA of the North East was £40.9 billion, which is **2.5% of English GVA**.

In 2018, the GVA per head of the North East was £20,617 – **well below the GVA per head of England** excluding London (£25,346) and England as a whole (£29,356).

Our economy

The North East economy was historically dominated by mining and manufacturing. Our region's traditional heavy industries such as coal mining and shipbuilding ceased by the early 21st century, leaving us with an unemployment rate higher than many other areas despite our best efforts to take advantage of new economic opportunities. While manufacturing remains an important part of the regional economy, it has diversified over recent decades. This has led to a strong service sector including education, financial, professional and business services, transport and logistics, and construction.

We have key assets in the energy sector, including offshore energy and subsea technologies, regional energy, and demonstration and innovation. We are home to a world-leading clinical research sector that supports a growing health and life sciences sector.

We have plans to build on our manufacturing strengths with the development of the International Advanced Manufacturing Park (IAMP) in Sunderland and South Tyneside near Nissan's car plant close to the A19. Providing infrastructure to bring businesses here is a key element of our Plan.

In recent years, a vibrant digital community with a combination of start-up, high growth and established businesses across a wide range of specialisms has been established.

But above all, our region has significant employment in the public sector across both local services and Central Government back office and shared services.

Wages

Within the North East, the median gross weekly wage for a full-time employee also varied by local authority of residence and workplace:

Wages and salaries (62%) and income from self-employment (5%) accounted for a smaller percentage of total household income in the North East region in 2018/19 than across England as a whole (63% and 10%, respectively). In contrast, pension income and benefits accounted for a larger proportion of household income than across England.

It is also important to note that the employment rate also differed widely in different parts of the region:

Authority	Employment rate
Newcastle	67%
Northumberland	74%
North Tyneside	78%
Gateshead	76%
South Tyneside	70%
Sunderland	72%
County Durham	72%

The above figures were recorded to the period July 2019 – June 2020.

Many of the long-standing economic challenges and inequalities that the region has always been vulnerable to have re- emerged as a result of the Covid-19 pandemic. **It took until 2016 for North East employment to return to 2008 levels following the last recession** – the speed of this recovery must be faster and transport can play a key role.

Economic inactivity

23.4% of the North East's working age population (16-64) were not in work or actively seeking employment in the year to June 2020 (economically inactive).

This was above the England excluding London rate of 20.2%.

Public/private sector employment challenges

There is a gap between the North East and other regions on private sector employment density.

In 2018, North East private sector employment per head of working age population was 0.52. For England excluding London the figure was 0.62.

In March 2020, there were 53,530 private sector enterprises in the North East LEP area. This is equivalent to 325 private sector enterprises for every 10,000 adults in the North East. If the North East LEP area had the same rate of private sector enterprises per head as England excluding London, there would be an additional 26,000 enterprises.

Productivity challenges

The key issues that underpin our lower level of GVA per head compared to England excluding London are:

- A lower proportion of the population that are in employment
- A lower level of productivity

GVA per hour worked in the North East LEP in 2018 was £29.94. This is below the rates for England (£35.57) and England excluding London (£32.74) It is the third lowest GVA per hour among the eight core city LEP areas.

Average productivity in our region remains **16% below the output for England.**

Our economy

Housing and commercial development

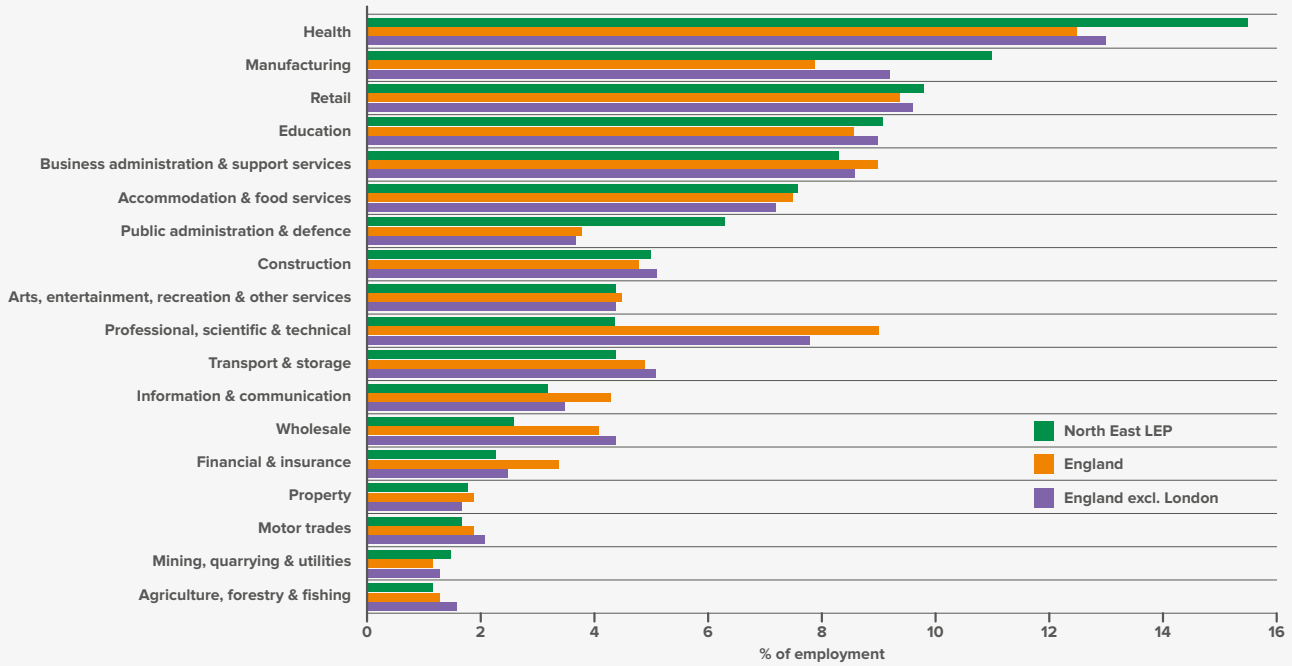
The North East has ambitious plans to provide new housing and commercial development in order to address demographic trends and drive economic growth. Some of our significant employment sites, including out of town business parks and Enterprise Zones, are successful but have relatively limited public transport connectivity. To support their onward vitality and growth there is an opportunity to address the connectivity that is available and the quality of those connections.

Approximately 110,00 new homes planned in the region by 2036

Many new housing estates are located and designed in a way that encourages car primacy and the growth in out of town retail and business park development has reinforced this trend.

Transport development cannot work in isolation and we will ensure that there is joined up working in the North East on transport, land use and housing. Doing so will help to reduce inequality and grow our economy.

Addressing these challenges and embracing the opportunities will allow us to **overcome inequality and grow our economy**, by creating a faster, more attractive and affordable transport system.



Employment by broad industrial grouping (% of total), 2018

The six largest employing sectors in our region are responsible for over three-fifths of employment.

While broadly similar to the national picture, our region has some key differences:

- A higher percentage of employment in the North East is in manufacturing, health, public administration and defence
- A smaller percentage of employment in the North East is in professional, scientific and technical activities, wholesale, information and communication, financial and insurance.

The largest employing sectors in the North East are:

Health	**15.5% of total employment**
Manufacturing	**11% of total employment**
Retail	**9.8% of total employment**
Education	**9.1% of total employment**
Business administration and support services	**8.3% of total employment**
Accommodation and food services	**7.6% of total employment**

Our economy

Key sectors

The North East LEP's Strategic Economic Plan (SEP) identifies four areas of strategic importance, where our region has a distinct opportunity to improve its economic competitiveness:

- **Digital**
- **Advanced manufacturing**
- **Health and life sciences**
- **Offshore, subsea and energy technology**

Digital

Our vibrant digital community is one of the most productive and fastest developing in the UK, across industry and public services. A combination of start-up, high-growth and established businesses exist across the region.

PROTO, an emerging technology centre, located in Gateshead, is home to some of the region's most innovative businesses. The Digital Catapult Centre in Sunderland provides localised and tailored services to drive digital adoption across the North East.

In the near future, the North Atlantic Optical Fibre Loop cable will link Stellium Datacenters in North Tyneside - the largest purpose-built datacentre campus in the UK - to mainland Europe, giving the region faster and more reliable digital connectivity and interconnecting national and international networks.

As well as this, our schools, colleges and universities are leading the development and uptake of digital skills.

The Covid-19 pandemic accelerated the demand, ambition and delivery of digital transformation, and has presented our region with significant opportunities as well as considerable challenges.

PROTO in Gateshead – an emerging technology centre home to some of the region's most innovative businesses

Advanced manufacturing

Across the North East, advanced manufacturing and engineering are globally focused with strong clusters in automotive manufacturing. Manufacturing accounts for 15% of our GVA and 11% of employment.

Nissan Motor Manufacturing UK, based in Sunderland, employs over 6,000 people and supports over 27,000 supply chain jobs, 75% of which are in the North East. IAMP is designated a Nationally Significant Infrastructure Project (NSIP) by the UK Government and has the potential to deliver over 7,000 new jobs over the next 10-15 years.

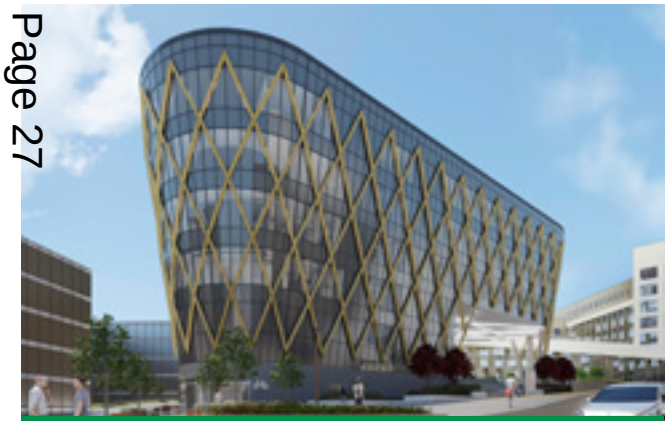
Nissan UK and IAMP – connecting these major employment sites to our public and sustainable transport network is a key element of our Plan.

Our economy

Health and life sciences

Our region is home to pharmaceutical manufacturing and world health and life science innovation. In combination with the NHS and our universities, this is our largest sector.

The Newcastle Campus for Ageing and Vitality is Europe's largest multidisciplinary site focused on ageing and the National Innovation Centre for Ageing will drive innovation delivery in this area.



Newcastle Helix – home to world-leading Health and Life sciences research

Offshore, subsea and energy technology

There are huge economic, social and environmental opportunities for the North East to contribute to new solutions that provide clean, secure and accessible energy. Our assets are categorised into three key areas: regional energy, offshore energy and subsea technology, demonstration and innovation.

The Port of Blyth is a nationally significant offshore energy hub. In 2017, Northumberland generated the second highest amount of electricity from onshore wind of any English local authority.

A March 2020 research study found that the total number of jobs created in and supported by the supply chain for offshore wind could reach 8,600 in the North East by 2025.

Port of Blyth in Northumberland – the second largest port in the region by turnover and a nationally significant offshore energy hub

Urban events, rural getaways

The Great North Run brings 43,000 participants and supporters to our region each year. The logistics of the event rely heavily on our transport network and it is a key contributor to our visitor economy in our cities.

Our rural economy, particularly in Durham and Northumberland, places a significant reliance on tourism. In 2018, tourism made up 11.8% of Northumberland's economy, 2.7% higher than the national average, and it contributes £665 million to the economy, underpinning an estimated 1,500 jobs. The growth in 'staycations' and people seeking holidays in more remote outside spaces also benefitted rural tourism in the North East in 2020.

On average, between 2017 and 2019, 3.4 million trips were taken each year to the North East. These equated to 1.06 million nights per year and the annual value of these trips was £656 million (Visit England).

Beamish in County Durham– the living museum of the North

Key insight

These sectors are critical to harnessing future growth, and our transport networks have a role to play in facilitating that potential, by moving people and goods.

Improving connections from our major employment sites to our public and sustainable transport network is also a key element of our Plan.

Our health and social inequalities

Deprivation and Inequality

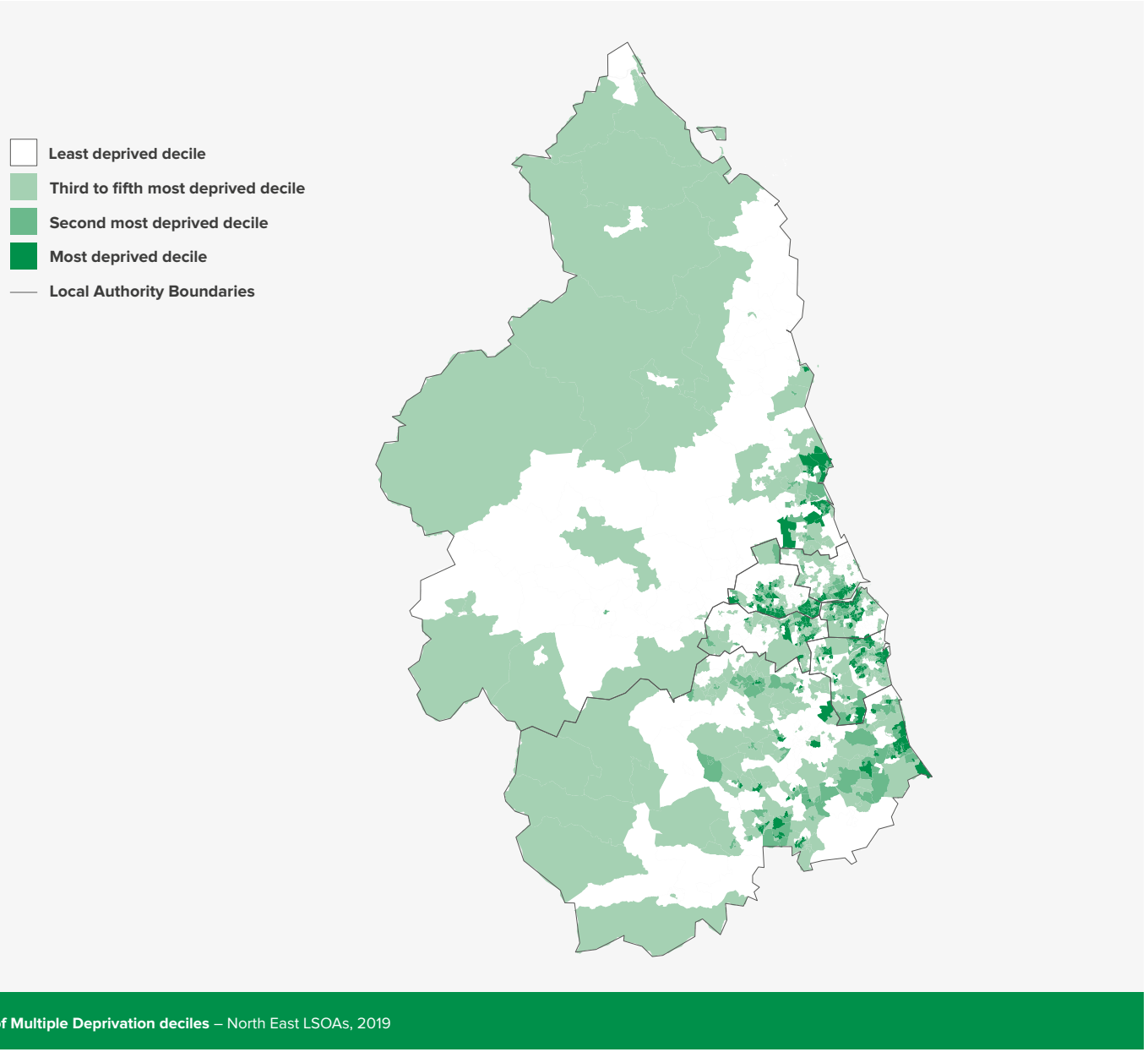
Pockets of health and income inequalities are seen across the North East, with deprivation being largely concentrated in urban areas. Public transport provision is also poor in some of our more deprived urban areas.

The 2019 Index of Multiple Deprivation (IMD) concluded that all areas of Tyne and Wear have above average levels of multiple deprivation. Accessible public transport which allows people to reach employment, education and training opportunities outside of their immediate area can help to reduce these disparities.

In the map to the right, the darkest shaded areas are within the most deprived 10% in England, with the next darkest within the second most deprived 10%. The lightest shading shows areas among the least deprived 50%. Some of the most deprived areas in the North East border some of the least deprived areas.

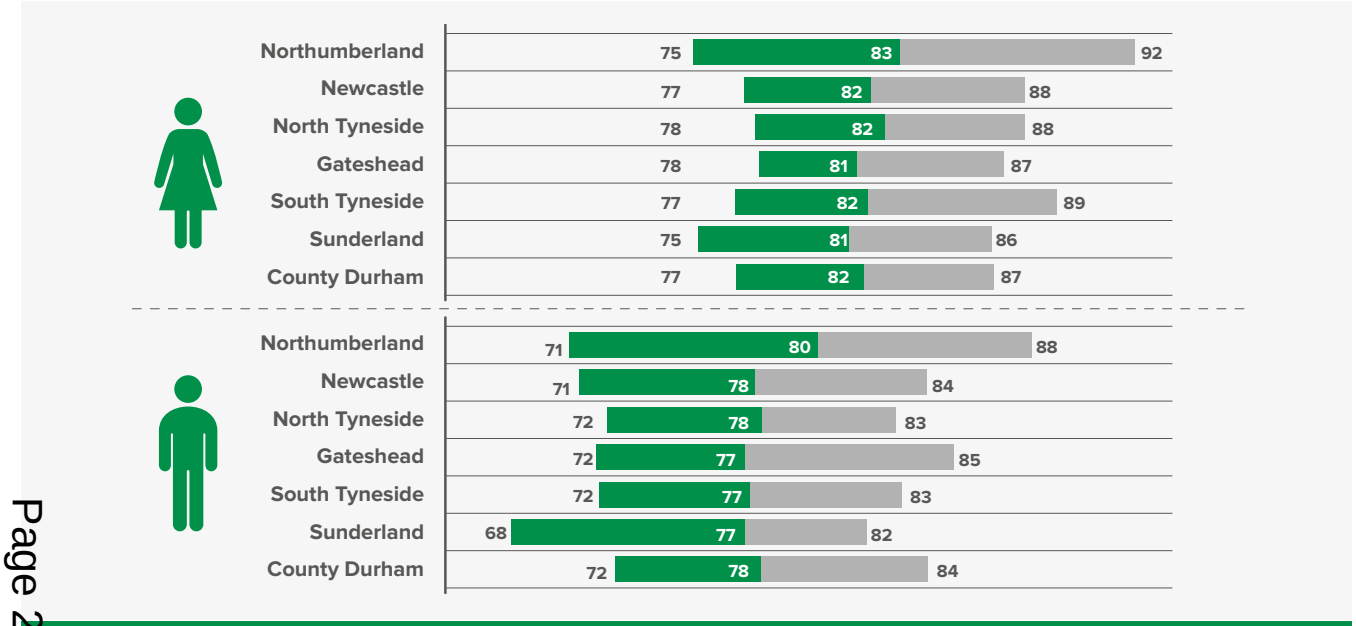
Transport and socio-economic inequality are linked. Inequalities in the provision of transport services are strongly linked with where people live, and the associated differences in access to employment, healthcare, education, and local shops. The 'Making the right travel choice' policy page details 'Transport poverty'.

The map shows lower layer super output areas (LSOAs). They are the most used small area geography for statistics



Index of Multiple Deprivation deciles – North East LSOAs, 2019

Our health and social inequalities



Life expectancy at birth – median, minimum and maximum values within North East local authority areas, 2013-2017

Life expectancy at birth for both men and women is about **one year lower** in the region compared with England. Similarly, healthy life expectancy is about **four years lower.**

Life expectancy at birth in the UK in 2017 to 2019 was 79.4 years for males and 83.1 years for females.

Transport can help to reduce inequalities by enabling people to access a range of services quickly and easily. Good transport links also play a role in reducing deprivation by enabling people to access job opportunities which in turn can improve quality of life and reduce inequality.

Life expectancy

Estimates of life expectancy at a local authority level are similar across the North East LEP area. However, this conceals major differences within each local authority which can be seen using small area (MSOA) data. There are gaps of nine years or more between highest and lowest life expectancy for both males and females in all seven North East local authorities. The largest range is in Northumberland in both cases.

Disability

The incidence of disability is higher in the North East region than England, with 28% of the North East population having a disability in 2018/19, compared to just 21% across England. A person is considered to have a disability if they have a long-standing illness, disability or impairment which causes substantial difficulty with day-to-day activities.

We will ensure that our transport network leaves no one and nowhere behind and is accessible to all.

Household poverty

Between 2016 to 2019, 19% of people in the North East region were living in households with below 60% of median household income before housing costs. This compares to 17% across England as a whole.

If housing costs are included, in the North East region 35% of children, 24% of working age people and 14% of pensioners lived in households in poverty, compared to, respectively, 31%, 21% and 16% for England as whole.

Quality of employment opportunities

In the last quarter of 2019, 47,000 individuals in the North East region were employed on a zero-hours contract. This is equivalent to 3.9% of those in employment – the second highest rate amongst English regions.

In 2018, the Low Pay Commission estimated that about 74,500 employees in the North East were paid at or below the National Living Wage (NLW) or equivalent for their age group. This is 9.6% of all employees, a higher percentage than England (6.9%) and England excluding London (7.5%).

An estimated 20,000 jobs in the North East region were paid below the National Minimum Wage (NMW) or equivalent in 2019, about 1.9% of the total. This is the highest percentage of any English region.

Free school meals

In the North East, almost a quarter of pupils are eligible for free school meals, the highest proportion of any English region.

Addressing these challenges and embracing the opportunities will allow us to **overcome inequality and grow our economy**, creating a faster, more attractive and affordable transport system.

Our geography and people

The North East is diverse, comprising a mix of urban and rural communities with a proud heritage and flexible economy that make our region an attractive place to live, learn and do business.

Located between Scotland, Cumbria, the Tees Valley, North Yorkshire and the North Sea, it consists of seven council areas in two Combined Authorities:

- The North East Combined Authority (comprising Durham, Gateshead, South Tyneside and Sunderland)
- The North of Tyne Combined Authority (comprising Newcastle, North Tyneside and Northumberland)

Our mix of urban, suburban and rural landscapes results in complex demands for travel and is reflected in our varied transport challenges, from rural isolation in our remoter areas to poor air quality and congestion in parts of our cities.

Our cities, towns, villages and countryside are home to a wide range of leisure, cultural, sporting and historical attractions, including two UNESCO World Heritage sites (Hadrian's Wall and Durham Cathedral and Castle). The region also boasts miles of unspoilt coastline as well as Northumberland National Park.

The North East is well connected to the UK, Europe and the rest of the world by rail, sea, road and air through key gateways for freight and passengers including mainline rail stations, five sea ports and Newcastle International Airport.

Our people

But above all, it is our people that make our region unique. The North East is home to just under two million people who want to contribute to moving our country forward.

Two million people

Diverse urban / rural mix

Ageing population

	Population 2019	Rural* %	Urban* %
County Durham	530,094 (27%)	45	55
Gateshead	202,055 (10%)	8	92
Newcastle	302,820 (15%)	2	98
North Tyneside	207,913 (10%)	4	96
Northumberland	322,434 (16%)	46	54
South Tyneside	150,976 (8%)	0.4	99.6
Sunderland	277,705 (14%)	1	99
North East	**1,993,997**		

* Based on Rural Urban Classification (2011) of Local Authority Districts in England

Key insight

Our Plan considers different solutions for different communities across our region as we map out how to develop the North East transport network and grow our economy by 2035.

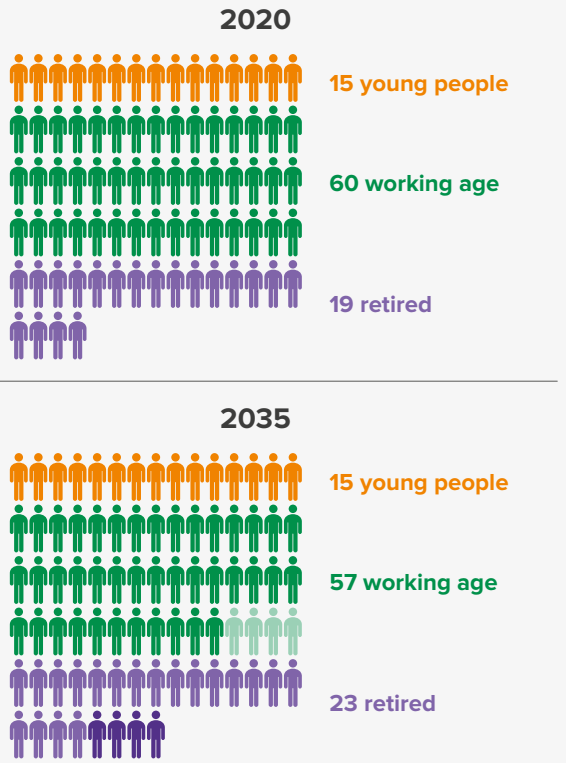
Population

Age profile

The proportion of the population that are of working age (aged 16 to 64) in the North East is 62.8%, similar to that of England 62.6%.

However, we have a larger proportion of our population aged 50 to 64 and 65+ and a smaller proportion of people aged 0 to 15 and 25 to 49 compared to the national average. This means that our population is ageing and the infographic below shows that by 2035 more of our residents are expected to be of retirement age and fewer will be of working age.

Per 100 people living in our region



Our geography and people

Skills

The working age population of the North East has a lower qualifications profile than England as a whole. A higher proportion of those aged 16 to 64 have no qualifications and fewer are qualified to degree-level or above (NVQ Level 4 or above). However, the North East has made progress on this since 2014, with the percentage of people with higher level qualifications increasing and the percentage with none decreasing.

Education

The region's academic sector includes four major universities: Durham, Newcastle, Northumbria and Sunderland.

In 2018/19, North East universities had almost 90,000 undergraduate and postgraduate students.

The North East has nine further education colleges:

- Bishop Auckland College
- Derwentside College
- East Durham College
- Gateshead College
- Newcastle College
- New College Durham
- Northumberland College
- Sunderland College
- Tyne Coast College

Apprenticeships

In 2018/19, there were 16,990 apprenticeship starts in the North East.

Over 80% of North East apprenticeship starts were in one of four subject areas:

- Business, administration and law (32%)
- Health, public services and care (22%)
- Engineering and manufacturing technologies (16%)
- Retail and commercial enterprise (11%)

Although the North East is home to just 3.6% of England's working age population, the proportions of apprenticeship starts in 2018/19 were higher:

- 4.3% of all apprenticeships in England
- 4.5% of intermediate apprenticeships
- 4.3% of advanced apprenticeships
- 4.1% of higher apprenticeships

In particular, the North East had:

- 6.3% of all apprenticeship starts in construction, planning and the built environment
- 5.8% of higher apprenticeship starts in engineering and manufacturing technologies
- 4.5% of higher apprenticeship starts in information and communication technology

We will use transport to improve health and wellbeing outcomes for local people, enabling the North East to attain health levels at least equal to other regions in the UK, achieving a **Healthier North East**.

Our transport network and travel habits

The infographics on this and the next pages show a range of facts and information about our transport network. They demonstrate that our travel patterns are complex, but we know that commuting in our region is dominated by car use (60.5%). Travel on foot is just over 10% over short distances, while bus (10%) and Metro (3%) are also important contributors.

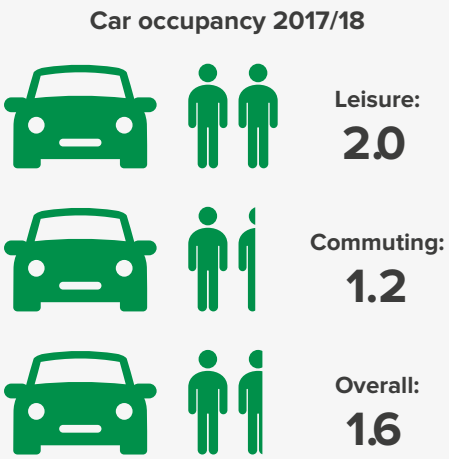
This only represents trips taken for work purposes, which is around 15% of all trips in our region, and the low share of the Metro is because it operates only within Tyne and Wear, while the above figures and the statistics on the following pages show the total number of travel to work journeys across the entire region.

Integration

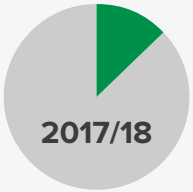
Our region currently has the basis of a fully integrated public transport network. Currently, our ticketing offer does include some products that allow interchange between different operators and types of transport. New technology has also helped make comprehensive information more easily available. However, the complex range of brands, fares offers and timetables has significant limitations – for example not all the tickets valid on different forms of public transport in Tyne and Wear currently extend across the whole of our region. In addition, some types of ticket still exist only in paper versions rather than using smarter forms of payment, while timetables at important interchange points are not co-ordinated.

Therefore, by 2035 we want to create a properly integrated and efficient public transport network across the whole of our region, including simpler ticketing and payment, easily available and accurate travel information and seamless interchange between different forms of transport.

Car occupancy by journey purpose and car sharing to work 2017/18



13%
of commuters car share



Congestion on our region's Strategic Road Network and how it compares

Strategic Road Network:

congestion = overage delay
(seconds per vehicle mile)

Ranked 5th out of 9 English regions for congestion
Yorkshire and The Humber best, London worst

Of the LA7, 5 exceed national average congestion
Sunderland and County Durham below average

1% improvement in LA7 between 2017 - 2018
Compared to 2% worsening in North East

12.1 seconds of delay per vehicle mile in LA7
Compared to the best, Harrow at 3.8 seconds and the worst, Sandwell at 48.2 seconds

Over last 10 years:

1.2 mins
slower commute

0.5 miles
longer commute

8 roads
on the Strategic Road Network in LA7

A1	A1(M)
A19	A194(M)
A184	A66
A69	A696

Our transport network and travel habits

The distance, time and cost of our travel

8.4 miles
Compared to 9.2 in England outside London

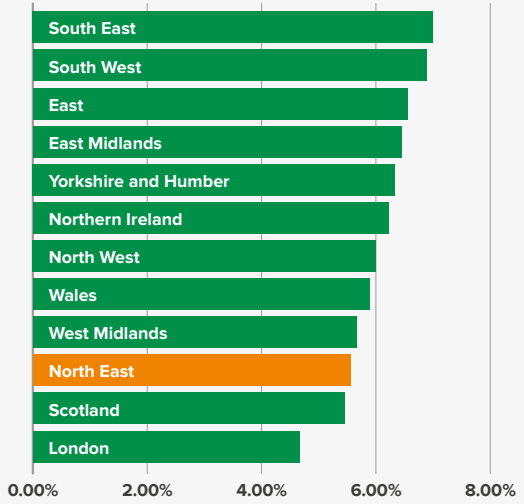
25 mins
Compared to 28 in England outside London

£5.12 daily
Plus parking charge

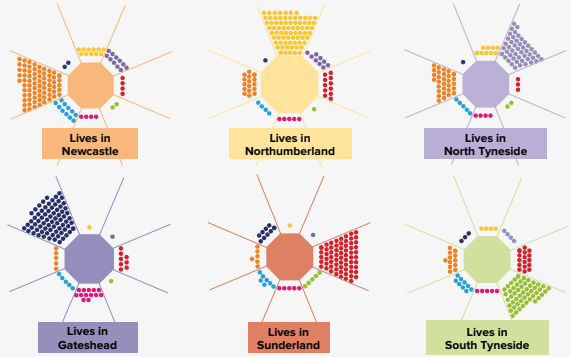
Average spend per person on all transport reasons and modes:

£1,487 pa

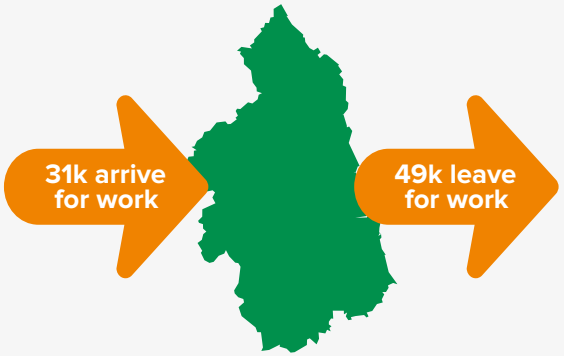
Average spend on all transport as a proportion of median income



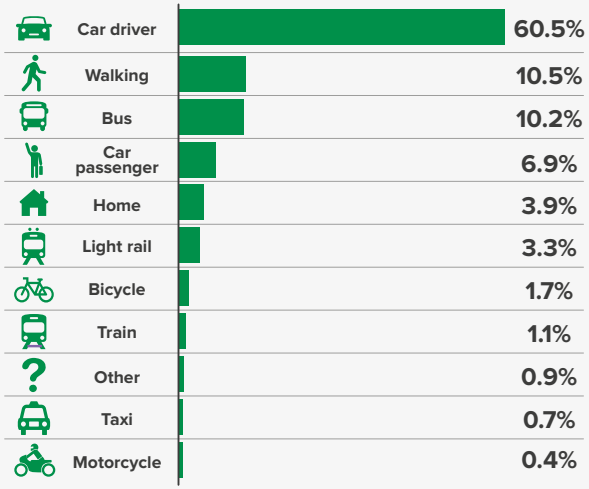
Travel to work – within, to and from our region



Commuting into and out of our region



Travel to work – what transport we use



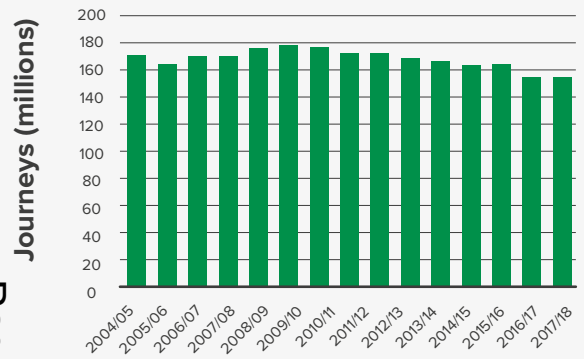
Method of travel to work – all transport modes
(Source: Census 2011)

Method	Number of people
Private transport Car, taxi, motorcycle	**595,000**
Public transport Bus, Metro, Train	**127,000**
Active travel Walking, cycling	**106,000**
Other & home Other, work at home	**41,000**

Our transport network and travel habits

Travel by bus – journeys, punctuality and how fares have risen

Bus patronage in our region

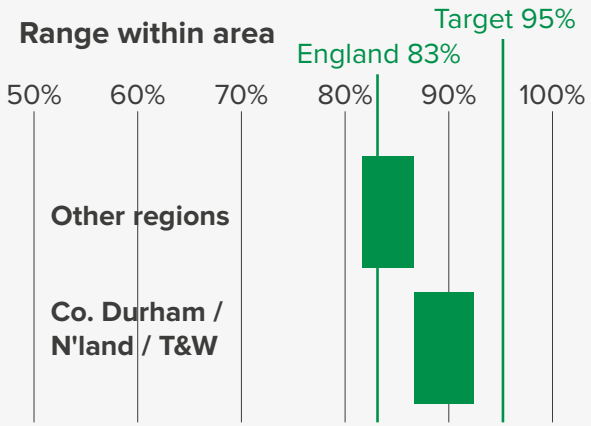


6% of those on buses in T&W use tickets which connect them to other modes

64 million bus vehicle miles in our region

6km average journey distance in T&W

Bus punctuality



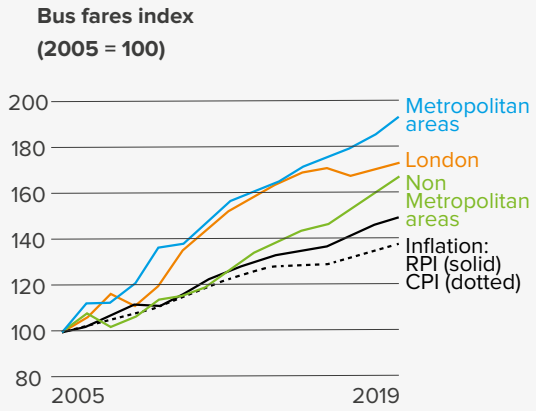
Cost of travel after RPI

43% real terms increase in metropolitan areas

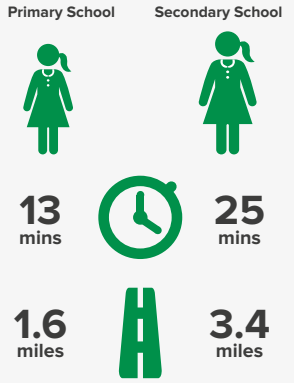
23% in London

18% Non metropolitan areas

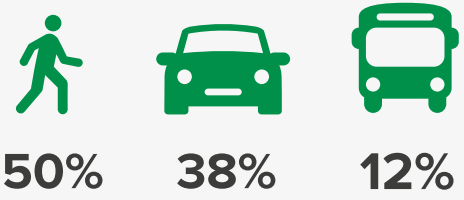
Bus fares index (2005 = 100)



Travel to education – time, distance, numbers travelling and how



304,000 School age population + **88,000** University students during term time



Our transport network and travel habits

Travel by Metro and local rail – stations, costs, passenger numbers and what passengers want

On the Metro, the 5 most popular stations to commute to are:

Monument, Central, Haymarket, Gateshead, Regent Centre

And the 5 most popular starts to commute from are:

South Gosforth, Gateshead, Heworth, Monument, Central

A single Metro ticket for a journey from South Gosforth to Gateshead of 3.8 miles costs £1.55 with a pop card, compared to £2.40 for a comparable journey in London between Elephant and Castle to Angel, and £4.60 on national rail between Kings Cross and Harringay.

Metro passengers want to see improvements in the punctuality of trains and ticket cost; and like the fair treatment, effectiveness of signage and the condition of the lighting and escalators in Metro stations.

5% of Metro journeys included use of a car to get to Metro

Tyne and Wear Metro

36 million passenger trips per year

60 stations

77.5km of electrified track

New trains arriving from 2023

Local Rail

5 million passenger trips per year

31 stations

1980s diesel powered trains

Collectively, Metro and Local Rail supported

34,800 daily commuting trips

within the North East in 2018

Appealing sustainable transport choices
We will introduce measures which make sustainable travel, including cycling and walking, a more attractive, greener, and easy alternative to getting around.

Safe, secure network

Safe, secure networks means people being able to travel as much as they want, whenever they choose, however they wish and to wherever they decide to go, without worries about being involved in an accident or becoming a victim or witness of crime.

Active travel

A transport network needs to be safe and secure. In addition to high quality roads and public transport the walking and cycling conditions should also be safe in order to encourage active travel. Several studies have found that concerns about safety are a barrier to active travel. In addition to a lack of time, perceived dangers from traffic are a barrier for schoolchildren contemplating active travel to and from school. Older children travelling without an adult also have concerns about personal safety, including strangers, bullies and busy traffic. Environmental factors such as poor lighting, secluded areas or woodland on the journey exacerbate these fears. Other studies have found that people from deprived areas consider safety to be a barrier to walking for travel or leisure and that women are constricted by perceived dangers from the external environment. Traffic is an issue for older people, who also mention that narrow pavements and obstacles such as parked cars on pavements impact on safety and cycle tracks and bus lanes create hazards.

86% of an insight survey feel more footpaths should be built alongside current roads and 81% feel the same for cycle paths. (Source Nexus 2020)

Public transport

Perceptions of Safety on Buses

In our region 88% of bus passengers are very or fairly satisfied with their personal safety when on a bus. This is higher than the national figure of 81%.

Perceptions of Safety at Railway Stations and on Trains

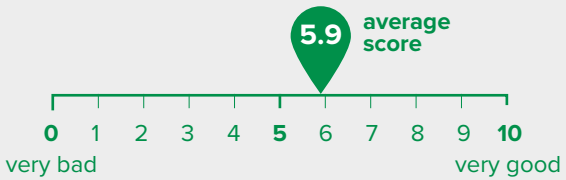
Nationally 73% of rail users rated personal security whilst using stations as good, rising to 75% when on board a train.

When broken down by journey purpose, commuters were most concerned about personal safety.

National Results by Journey Purpose	Station	Train
Commuter	69	70
Business	76	78
Leisure	76	79
Long distance	80	83
Regional	74	74
By operator		
CrossCountry	83	83
Grand Central	78	88
London North Eastern Railway	79	88
TransPennine Express	79	81
Northern	68	71

Source: National Rail Passenger Survey, Spring 2020

How would you rate the behaviour of other passengers?



February 2020 Metro customer satisfaction survey

If extra staff were available on the Metro, which of the following would you like the staff to do?

94% Keep trains free of anti-social behaviour

91% Keep stations free of anti-social behaviour

Tackling anti-social behaviour is seen as a priority

Perceptions of safety on the Metro 2019 survey

Security when using public transport

This refers not only to actual incidents of crime, but also whether people believe they may be victims of, or witnesses to, crime while travelling. A number of surveys have identified that crime and fear of crime limits the use of public transport, second only in many surveys to reliability and accessibility, so that reducing fear of crime could increase patronage by three percent at peak and ten percent at off peak times. The benefits of concentrating resources on tackling perceptions of crime on our transport network rather than actual crime are borne out by indications that the gap between perceived and actual risk is more marked on public transport than for general patterns of fear of crime.

The regions main bus operators have invested in safety measures including onboard CCTV and vehicle location system using mobile technology is also used on many buses which immediately pinpoints the location of any bus or incident in real time, improving response times and passenger support.

Crime rates on the Metro remain low and Nexus work closely with the police to limit anti-social behaviour on the system. Nexus spends £1m a year on dedicated police patrols for Metro, and have stepped up patrols in the evening to provide customers with reassurance and to ensure that more staff and police are visible on Metro in recent years.

Safe, secure network

Road safety

This will remain a challenge as long as anyone is killed or injured on our roads – there can never be an acceptable level or number of road accident casualties, so zero must always be our target. Despite good progress in reducing serious accidents on our road network compared to other parts of the country, we need to determine how to tackle our child (0-15) casualty rates, which are higher than the rest of England, with children in deprived communities at particularly higher risk.

In addition, pedestrian injuries still make up a high proportion of the number of people killed or seriously injured on our roads, while cyclists and Powered Two-Wheeler (PTW) riders are involved in more accidents than their respective share of the general traffic.

Walking, cycling and powered two wheelers (PTWs).

Evidence suggests that concerns about safety when walking or cycling are a significant deterrent factor. Among cyclists and would-be cyclists, concerns about negotiating roads, the risk from other traffic and potential cycle theft appear to be prominent, while the most significant concern regarding walking was the possible threat from other people in a poorly supervised urban environment. The security of parked bicycles and PTWs can also be a concern.

Although there has been a slight drop in the number of cyclist injuries between 2014 and 2019, the number remains too high.

Cyclist

fatalities / serious injuries / slight injuries

349 (2014) ▸ **264** (2019)

What can we learn from elsewhere?

Rating systems are available that can give an indication of service quality for cycling and for pedestrians. For cyclists this can include motor vehicle traffic volumes and speeds and the proportion of heavy vehicles. While for pedestrians, in addition to vehicle traffic speeds and volumes, pavement and path conditions and the perceived separation between pedestrians and motor vehicle traffic can be included.

In order to achieve our **Safe, secure network objective** we need to improve the safety and security, and perceptions of our region's transport system, so our residents are confident that wherever, whenever and how often they travel they can do so without fear.

Where we are now

The facts and figures provided in this consultation draft of the Transport Plan are correct at the time of writing and will be updated prior to publication as latest data is released.

Many of the long-standing social and economic challenges and inequalities that the region has always been vulnerable to re-emerged in 2020 as a result of effects of the Covid-19 pandemic. We must acknowledge and address these challenges and inequalities so that we can move forward and deliver our vision and 2021 will be the point that we start to rebuild from.

Furlough

267,000 people in the North East had been furloughed at some point between March and July 2020 – **32% of our workforce**.

Unemployment

The working age **employment rate was 74.6%**, the lowest among the nine English regions May to July 2020.

Claimant count

In August 2020, almost **91,000 people in the North East LEP were claiming unemployment benefits**, an increase of over 36,400 since March 2020.

Working from home

We estimated 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.

Tourism

Many businesses in the region's rural areas (e.g. self-catering accommodation, campsites, restaurants, cafes) recouped some of the income lost during early 2020. The growth in staycations and people seeking holidays in more remote outside spaces has benefitted rural tourism in the North East. By contrast, hotels and hospitality businesses in urban areas are operated at low levels of capacity. For example, in Newcastle the **occupancy rate for city centre hotels was approximately 30% in summer 2020, compared to 70%** in a normal summer. Low occupancy rates are a result of a lack of tourist visitors, as well as a downturn in the corporate and wedding markets.

Environment

Early 2020 gave us cleaner and quieter towns, cities and neighbourhoods. Over the coming years, we want to sustain and improve on some of the benefits this has afforded us.

Recovery

Despite the severity of the impacts felt earlier in the year, there are signs of recovery. Economic recovery in the region is expected to vary widely between sectors. For example, the arts, culture and hospitality sectors are expecting huge job losses, business closures and a recovery that will take many years. Other sectors, such as construction, are already well on the road to recovery. Transport will play a key role in enabling the region's recovery.

It took until 2016 for North East employment to return to 2008 levels following the last recession – the speed of this recovery must be faster.

Transport emissions per capita = 1.7 (tonnes CO2)

the best performing region outside of London.

Digital connectivity

2020 brought a reduction in personal mobility never seen before and changed behaviours. Covid-19 sharply accelerated the demand for internet connectivity when going online was the only way to access healthcare, education and employment opportunities.

In 2020 there has been regular reporting of **poor internet connectivity in parts of the region** – a persistent problem for North East people and businesses.

Only 2.5% of households in the North East have access to 'fibre to the premises' (FTTP), compared with 18.6% of UK households.

High streets – retail footfall

North East retail footfall has been in decline since 2015 and Covid-19 has impacted this further with a decline of 66% in June.

2020 compared to last year. One of the key reasons for visiting the high street less is shop closures; as shops close, fewer people visit the high street making it less economically viable for remaining shops to trade.

Regional retail footfall

June 2020 – down 66% compared to June 2019

July 2020 – down 53% compared to July 2019

For example, if the economies of Ashington and Newcastle are **brought 'closer' together** through restored passenger rail links, there will be an the increase in the level of interaction between the two, resulting in economic growth for both areas.

Key insight

The region must meet these opportunities and challenges head-on by 2035, enabling an ambitious and productive North East in the 2030s.

Measures of success (Key Performance Indicators)

We have developed a set of Key Performance Indicators that are designed to monitor the overall progress of our Plan with respect to our five key objectives. In this respect they can be thought of as a cross-cutting set of indicators showing the direction of travel that our region needs to achieve to deliver our Plan's vision, objectives and principles

Sustainable travel

Sustainable journeys:

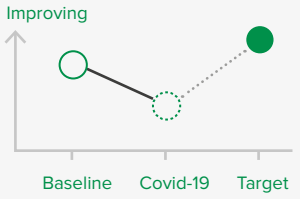
33%

Journeys made by public transport, walking & cycling

Key insight

Covid-19 has reduced the demand for public transport but greatly increased walking and cycling. Prior to Covid-19, one in three journeys were made sustainably; by public transport, walking or cycling. Because sustainable travel is greener and healthier, **we want to maximise use of sustainable forms of transport** to help achieve net zero and reduce demand on health services.

Target: Increase journey share



Public transport accessibility

Accessibility:

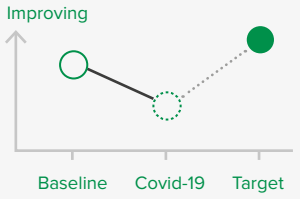
45%

People within 25 minutes of key employment, education and retail sites by public transport

Key insight

Excellent accessibility to an integrated public transport network that enhances employment and education opportunities is vital in the Covid-19 recovery. We will increase the proportion of people within 25 minutes of key employment and education sites, **reducing journey times and increasing productivity.**

Target: Increase accessibility



Climate action

CO2 emissions per capita:

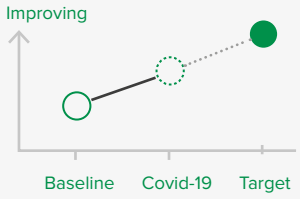
1.7 tonnes

CO2 emitted per person annually using transport

Key insight

Ranking the lowest for transport CO2 emissions per capita outside London, the North East has solid foundations on which to build the greenest transport network. This is crucial in addressing the climate emergency and **achieving net-zero carbon emissions.**

Target: Greener travel



Take-up of ultra-low emission vehicles (ULEVs)

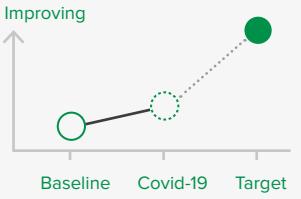
0.34%

Proportion of licensed vehicles in our region that are classed as ultra-low emission (end of 2019)

Key insight

Since the end of 2015 the proportion of ULEVs in our region has doubled. Accelerated take-up of ULEVs is an essential component for meeting net zero carbon emissions from transport.

Target: Increased adoption of ULEVs



Air quality

For 2019, the highest, median, hourly nitrogen dioxide reading was

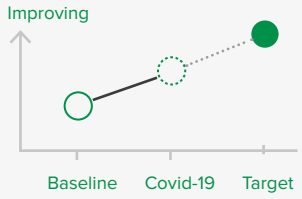
26.9 ug/m3

occurring in the morning traffic peak

Key insight

The impact of measures to combat Covid reduced traffic levels and, consequently, reduced levels of nitrogen dioxide. For the first nine months of 2020, median levels were down by about a third. The expected fall in economic activity and an expected rise in home working will reduce transport emissions. Government support to encourage a switch from car to active travel will also reduce emissions.

Target: Improved air quality



Network performance

In terms of efficiency, in 2019 our regional network scored

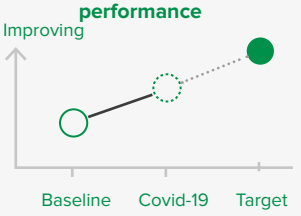
71.8%

Key insight

Efficiency can improve if peak speeds improve or if free flow speeds fall. The latter may occur if speed limits are reduced or restrictions limiting speeds are introduced.

The impact of measures to combat Covid has reduced traffic levels and changed travel patterns. The most likely outcome is that network performance has improved.

Target: Improved network performance



Measures of success (Key Performance Indicators)

Motor vehicle traffic

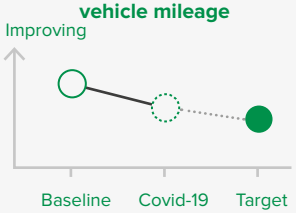
Estimated vehicle miles per capita in our region in 2019

5,077

Key insight

Estimated vehicle miles per capita in our region and nationally both reached a peak in 2007. Vehicle miles per capita in our region reached 5,077 in 2019, an 11% rise since 2007 peak. Although vehicle mileage per capita is likely to fall due to the economic impact of Covid,without successful interventions and alternatives motor vehicle mileage per capita will recover and follow an upward trend

Target: Managing motor vehicle mileage



Road safety – numbers killed and seriously injured.

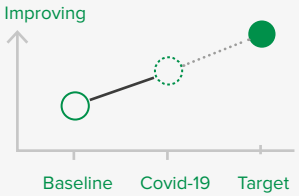
Numbers killed and seriously injured, three year rolling average (2016-17 to 2018-19).

778

Key insight

Travel patterns during lockdown were different to pre-lockdown trends, this has contributed to large differences between the casualty reductions seen by different road user groups. However, the change has led to a reduction in all severities of injury.

Target: Improving road safety



Road safety – number of slight injuries

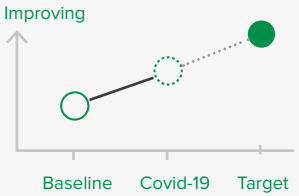
Number of slight injuries, three year rolling average (2016-17 to 2018-19).

3,275

Key insight

The trend in the number of slight injuries has fallen recently.

Target: Improving road safety



Monitoring and evaluation

To ensure that our Plan policies and interventions are helping to meet our objectives, we will monitor and evaluate the performance of our Key Performance Indicators and use the data to enable us to adjust our approach if necessary. Performance will be reported to the Joint Transport Committee at key points.

Individual projects will be required to submit Monitoring and Evaluation Plans within the business cases at stage gates of the framework.

These projects should undertake a detailed impact assessment of the transport, employment and economic impacts of investment in line with DfT guidance. Results will help us better understand the overall plan's performance against the KPIs To make best use of our local and national data assets the Transport North East Strategy Unit will continue to work in partnership with:

The seven local authorities in our region;

- Nexus;
- The Transport Accident and Data Unit (TADU);
- The North East Regional Road Safety Resource;
- The North East Local Enterprise Partnership and our two Urban
- Traffic Management Control centres (UTMCs);
- Central Government Sources Department for
- Transport, the Department of Business, Energy and Industrial
- Strategy, the Office for National Statistics and Public
- Health England;
- Transport for the North;
- Public Transport Operators

What do our users think?

Ultimately, the people of the North East are at the centre of our Plan. To enable us to know what we are doing well and where there is room for improvement, we have listened to the people who use our transport network.

Their experience of using the North East's transport network is fundamental to the development of this Plan.

Their feedback informs our decisions on where change is required and ensures that the schemes we include in our Implementation section are the right ones, addressing people's concerns and aspirations.

Recent surveys have shown that our regional transport network has many positive aspects and strong support from the public. For example, the Bus Passenger Survey from autumn 2019 revealed 91% of passengers were satisfied with their overall bus journey, while 89% were satisfied with their journey time on the bus.

The 2019/20 Tyne and Wear Metro survey also showed that there was a high level of satisfaction with signage and lighting in and around stations, the professionalism of Metro staff and the clarity of announcements at stations.

The reliability and customer satisfaction for the Shields Ferry was high. In 2019/20 the Tyne and Wear Ferry had a 93.4% service operation and a satisfaction score of 9.5 out of 10 (source: Nexus).

Car and motorcycle users said the best aspects of using these types of transport were convenience, travelling door-to-door and travelling exactly where you want to be (2018 Nexus Household Survey).

However, there are is number of areas where improvement is required. Satisfaction with value for money for bus fares fell from 71% in autumn 2018 to 65% in autumn 2019 .

User perceptions are also important. The 2019/20 Tyne and Wear Metro survey highlighted an appetite from users that improvements are needed in the punctuality of trains, information provided during times of disruption, availability of staff, reliability of trains, value for money and availability of seats on trains. Often improving perceptions of an issue that users have identified is key. For example, improving satisfaction with staff availability could also be achieved by reducing the apparent need for staff through improving real time and online information and by improving safety and security, not just by simply introducing more staff.

In addition to this, based on a Sustrans survey on cycling in Gateshead, Newcastle and North Tyneside carried out in 2019, 65% of men and 69% of women surveyed felt cycle safety needs to be improved, while 62% felt there was a need to build more cycle tracks separated from traffic. The most common areas for cycle safety improvements were better road quality and fewer potholes, better lighting on cycle routes in poorly lit areas, and improving the behaviour of people driving cars.

Three of the most regular comments on the worst aspects of travelling by car/motorcycle were the constant roadworks, the lack of parking spaces and their cost, and the stress caused by traffic (2018 Nexus Household Survey).

The consultation will provide a great opportunity for us to listen to what our users truly require from their transport network. This page will reflect the conversations that are held throughout this period and will set the scene for the key decisions contained within the Plan.

"I started cycling again after an episode of depression. I'd put on fifty kilos in weight and been unable to go out of the house. I started to feel better. I went to new places and met new people. I cycled for a year with an average of 25-30 miles a day. I lost thirty five kilos.

I avoid the roads as they are so polluted, and stick mainly to traffic free routes. Cycling sharpens my mind and my perspective to life is better as it makes me think in a different way – I don't feel trapped any more. (Sustrans)

Amir – Newcastle

"Where I work now is up a big hill and at rush hour I don't feel safe cycling after I got knocked off twice despite having hi-vis and lights. The drivers were apologetic but it doesn't seem worth the risk. (Sustrans)

Claire – Gateshead

Car / Motorcycle

"Lots of traffic so not as relaxing as public transport"
Car/motorcycle user
(2018 Nexus Household Survey)

Bus

"Always there for people who have a disability and offer help so they can bring the best experience to everyone."
Bus user (2018 Nexus Household Survey)

Bus

"Always late, never run to timetable."
Bus user
(2018 Nexus Household Survey)

Metro (negative points)

"The negatives are reliability, journey time, price, number of people using at peak times, service at non-peak times."
Metro user
(2018 Nexus Household Survey)

Metro

"Quick journey times compared to travelling by road."
Metro user
(2018 Nexus Household Survey)

Our transport network

Over the following pages, we will introduce and discuss our current transport network and the issues that need to be addressed to enable us to deliver a world class transport network for the North East. For each component which brings together our transport network, a visionary policy statement which outlines where we want our network to be by 2035 will be set out. In the meantime, the table below shows the relationship between our Policy Statements, Policies and Objectives.

Policy statement	Policy area	Objectives it will achieve
We will help people make greener and healthier travel choices whenever they can and make sure our sustainable network takes everyone where they need to go, at a price they can afford.		
We will ensure all our actions improve transport in the region and relate to the objectives of this Plan so that we are greener, thriving, inclusive, healthier and safer.		
We will help more people use active travel by making the cycle network better across the North East. This will include being flexible in how we use road space to help cyclists and pedestrians.		
We will initiate actions to make travel in the North East net carbon zero and improve transport safety and security.		
We will improve bus travel and attract more passengers with new rapid bus corridors. This will include changing how road space is used to help buses move more quickly.		
We will work with our partners to make travelling and moving goods around our region more efficient and greener.		
We will take action to continue to support the Ferry and develop potential improvements where possible.		
We'll help more people reach the sustainable transport network with more 'on demand' solutions..		
We will make our roads flow better for goods and essential car journeys.		
We will strengthen use of cleaner, greener cars, vans and lorries.		
We will invest in Metro and local rail to extend and improve the network.		
We will work with partners to make movement of people and goods to and from our region greener and more efficient.		
We must work with partners to strengthen connections from destinations in our region to everywhere in the UK and beyond.		
We will embrace new technologies to meet our transport objectives and set innovation challenges to industry creating new opportunities with our network as the testbed.		
We will strive to integrate different types of transport, so that each contributes its full potential and people can move easily between them.		
We will constantly seek funding opportunities to deliver our transport plan objectives.		
We will take action to make travel in the North East net carbon zero and improve transport safety and security.		
We will ensure that we work with partner organisations to drive new, quality roles and innovate in the transport sectors.		

Policies

- Making the right travel choice
- Active travel
- Public transport: travelling by bus, ferry and on demand public transport
- Private transport: travelling by car and using road infrastructure
- Public transport: travelling by local rail and Metro
- Connectivity beyond our own boundaries
- Research, Development and Innovation

Objectives

- Carbon neutral North East
- Overcome inequality and grow our economy
- Healthier North East
- Appealing sustainable transport choices
- Safe, secure network

Making the right travel choice

Central to this Plan is our ambition to provide solutions to help people make greener travel choices where it is appropriate to do so and at a price they can afford.

With 56% of trips under 10km and 36% under 5km, there is a significant opportunity to encourage shifts to active, sustainable and public transport types across the region, particularly in urban areas.

In 2018/19 there were 1,016 trips per person per year made in the North East. Of these, 442 were car journeys. (NUTS1 region)

Over the coming years, we have a significant opportunity to influence how people access public and sustainable transport across the region with better quality links.

We want to get more people in the North East to use sustainable travel types, such as walking, cycling and public transport, and encourage more sustainable travel patterns to achieve all of the Plan's objectives. People want public and sustainable transport infrastructure and services to be good enough that they offer a credible alternative to the use of their cars for some trips.

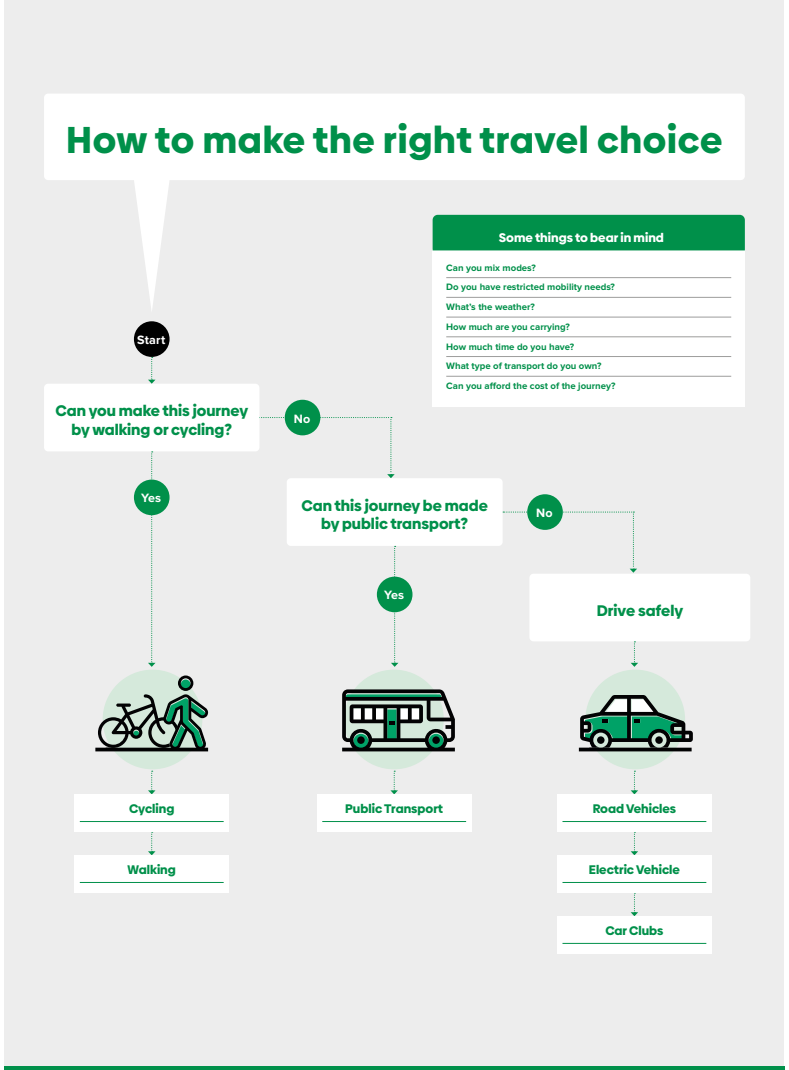
Why?

The reason behind why we want to do this is a simple one. If we can effectively help people make the most sustainable transport choice when it is viable, it will be the most cost-effective way of achieving the North East Transport Plan's vision and objectives. Transitioning the number of journeys people make onto more sustainable and public transport types will drive our economy and improve our environment.

Transport underpins our daily lives and we specifically want to encourage people to make trips around the North East. Travelling to school, to work, to shops, to care for others and to socialise with friends improves our prospects, health and wellbeing, as well as benefiting the communities and local economies that make up our region.

Helping people to make the right travel choice – Decision tree

We want as many journeys in the region as possible to be made in a sustainable way; this means people in our region stopping to thing about their travel choices before a journey gets underway. It is a "hearts and minds" exercise which encourages people to use alternatives to the car and enjoy the benefits of doing so, whilst essential road journeys for which there is no alternative can be improved as there will be fewer cars on the road.



How to travel during Covid-19 diagram

The decision does not sit exclusively in the hands of the motorist. Work is the catalyst to many journeys; and therefore the message must be extended to those who take travel decisions at a corporate level encouraging businesses in our region to rethink how they move employees around where alternatives to road journeys exist and as they newly come online during the currency of this plan.

Background

The reasons why people make the travel and transport choices they do is often complicated and dependent on several factors and circumstances, which can change on a journey-by-journey basis. People's travel choices are also repetitive and often undertaken out of habit rather than journeys being thought through on a regular basis to take differing circumstances into account. We are aware that there are a variety of factors that influence a person's travel choice.

For example, a person may be making a journey of under two miles but is required to carry several heavy items of shopping and therefore needs to use a car. The same person may make the same journey to the shop the following day, but as they are only buying a few items which can be easily carried, they decide to walk. For some journeys, people may be travelling alone or with others. People may or may not have a disability.

Our decisions are influenced by what mode is available (or what we believe is available) and how it suits our circumstances. Affordability also plays a

Making the right travel choice

major role. People may consider that the cost of a ticket on public transport is too expensive, or may own a car and want to get maximum use out of it and cannot afford not to use it. Transport poverty is also an important factor to consider.

People may be persuaded to walk or cycle instead of using the car for a shorter journey in good weather, during the daytime in an area we know and where a footpath or cycleway is clearly marked. However, we are less likely to do so at night, when it is raining or in an unfamiliar location. To achieve our objectives, we must encourage and enable people to make more journeys by sustainable alternatives to the car and work to change attitudes towards public and sustainable transport.

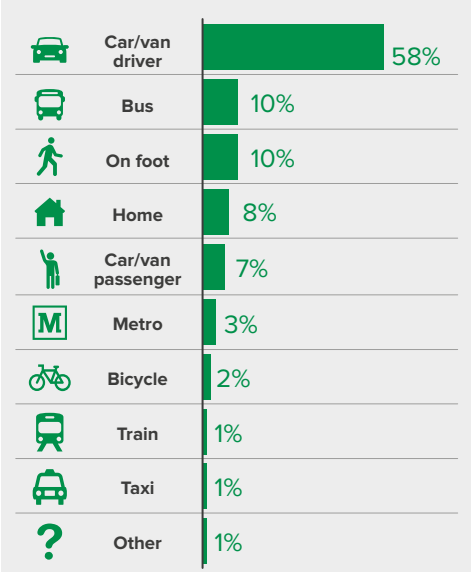
Our approach recognises that different parts of the North East have different transport needs and require different transport solutions. The place of the car and public transport is very different in rural and urban areas. We recognise that the car will be the only option for some journeys and is likely to continue to be the most popular form of transport in the region.

We want to provide people in the North East with the information and awareness necessary to enable them to move away from using the private car to more sustainable transport types when there is an alternative available for their journey that meets their circumstances.

Transport Poverty

While transport disadvantage and social disadvantage are not the same, they do interact, resulting in transport poverty. Transport poverty refers to households and individuals who struggle or are unable to make the journeys that they need. This can be the result of low income, poor availability of public transport and needing a long time to access essential services. The impacts of transport poverty are worst for disadvantaged people in rural areas according to a recent Transport and Inequality Evidence Review for the Department for Transport.

In the North East, the average weekly household expenditure on transport was £72.40 for 2017-19. With the average weekly wage in our region being £532.50 for the same period, this means that the average North East household spends on transport is 13.6% of a gross weekly wage.



Method of travel to work – all transport modes
(Source: Census 2011)

How do people travel in the North East currently?

Understanding why and how people make journey choices will enable us to transform our transport offer in a way which has never been done before in the North East.

Travel patterns are complex but we know that commuting in our region is dominated by car use (58%). Travel on foot is 10% over short distances, while bus (10%) and Metro (3%) are also important contributors. This only represents trips taken for work purposes, which is around 15% of all trips

The above infographic illustrates that the dominant mode of travel to work is by car, with a healthy proportion of trips by bus and a small but not insignificant number by rail and Metro. It is important to note that the low share of the Metro is a result of it operating within Tyne and Wear only, and this table shows the total number of travel to work journeys across the entire region.

Where we want to be

We want to continue to expand the number of people who can use sustainable transport for their journeys. Central to this is to make it as easy as possible to travel sustainably.

We recognise that the car will be the only option for some journeys and is likely to continue to be the most popular form of transport in the region. Through various interventions over the coming years, we will work towards enabling people in the North East to consider transitioning to more sustainable transport modes when there is an alternative available for the right journey circumstances.

Due to our region's diverse urban and rural mix, there will need to be different solutions and expectations to successfully encourage shifts away from private cars to more sustainable transport types.

For those people who don't have alternative travel solutions to the car, we will deliver transport solutions in which will broaden the opportunity for people to make more sustainable transport choices.

Information and ticketing solutions are central to achieving this. Over the coming years, improvements to deliver mobility options that are right for the customer, are easily accessible to all and are available in one comprehensive offer to ensure that customers can choose multiple types of transport modes will be developed. By blurring the lines between public and private transport, connectivity will be improved for all.

Although in some of our rural areas transport options are more limited, by providing an information solution that embraces all forms of transport options, including car clubs, carpooling, the location of electric vehicle charge points, and park and ride facilities, it will be easier for people to make a clear decision on their door-to-door journey regardless of their location.

By implementing solutions that showcase existing transport infrastructure that a person has at their disposal, we can be confident the package of projects which are set out later on in the Plan are ones that will encourage more people out of their cars.

Our region has access to vast amounts of data from different sources; providing developers access to this through an open data protocol will enable innovative and bespoke solutions to be developed by businesses. Through this innovative partnership, transport planning and application developers can unite to create a truly revolutionary regional product.

Information provided to people needs to be comprehensive and include specific journey costs, up-to-date journey times and their environmental footprint to enable travellers to make informed decisions. Providing real-time information and live updates is also central to any information solutions, such as informing people of congestion and major disruptions.

Information solutions could allow people to think through their journey choices before reaching straight for the car keys.

Making the right travel choice

In a competitive market, businesses use loyalty schemes to retain their customer base through incentive offers. A regional survey undertaken by Nexus highlights how popular loyalty schemes are within the region and should be considered as a method to encourage the shift away from the private car to more sustainable modes of transport.

A fares and ticketing offer that is reflective of changing travel habits and offers the best value for money is fundamental to our region. In these challenging economic times, products that are simple and affordable will open and expand labour markets by enhancing access to opportunity. Customers should feel confident that they will receive a best price promise, meaning that a smart travel system will charge a customer the best fares possible for the journeys they have made. A survey undertaken by Price Waterhouse Cooper highlights that there is "obvious need to make pricing more "reasonable" especially when compared with the cost of a journey made in the car".

Key insight

Flexible information and payment options need to align with changing travel habits, particularly as home working and shopping become ever more prevalent.

We recognise that enabling transformative change in the way people travel in our region will not be easy. Therefore, to help people transition to a sustainable alternative, we will establish a Dedicated Regional Behaviour Change Team. This will look at how we can ensure people in our region can make the right travel choice and that we make the right interventions by 2035 to migrate people over to more sustainable transport types.

The team will also consider:

- Information and ticketing solutions
- Education in schools
- Marketing and information campaigns
- Gamification incentives
- Engagement with local communities and employers
- Perceived and actual barriers to public and sustainable transport use
  - Why do people just not want to use public transport?
  - Travel poverty and affordability

Policy Statement

We will enable people to make greener and healthier travel choices whenever they can and ensure our sustainable network takes everyone where they need to go at a price they can afford.

We must ensure all our actions improve transport across the region and deliver to the objectives of this Plan so we are greener, more inclusive, healthier, safer and our economy thrives.

Active travel

Our growing cycle network has had £60m investment in recent years and encompasses rural and urban areas, with 16 routes that are part of the National Cycling Network. In some urban parts of our region, cycling to work has increased by 2.5 times in 6 years. The public support measures to increase space for socialising, cycling and walking on high streets, which also benefits retailers.

Active travel means walking, cycling or journeys by wheelchair. Whilst we frequently refer to walking and cycling, our network should be accessible to everyone, and we will design it as such. Active travel journeys can be for any reason and includes instances where they are part of a journey involving other forms of transport, typically public transport.

We already have significant active travel assets in our region, but we want to grow the numbers of people using the cycling and walking tunnels and expand our active travel network across the region.

Our growing cycle network in our region includes 16 routes that are part of the National Cycling Network, while the Tyne Pedestrian and Cyclist Tunnels first opened to the public back in 1951.

The region's walking and cycling network has had around £60m investment over recent years both from local funding and from Government. This investment has begun to change how we view active travel and we work closely with partners including Living Streets and Sustrans to build on these successes, while taking into account the needs of all pedestrians including anyone with sensory impairments or other disabilities.

Our climate is no worse than places with higher levels of cycling

Amsterdam	2°C
Copenhagen	1°C
Durham	3°C

Lowest average December temperatures

Everyone benefits when more people cycle

In Central Tyneside alone, cycling:

- Takes up to **16,000 cars off the road every day**
- Prevents **277 serious long-term health conditions**
- Saves **9,400 tonnes of greenhouse gas emissions**
- And creates **£58.8 million in economic benefit**

The second is their Rights of Way Improvement Plan (RoWIP) . These set out how improvements made by Councils to their public rights of way network will provide a better experience for walkers, cyclists, people with mobility problems, horse riders, horse and carriage drivers and anyone using motorised vehicles such as motorbikes.

Evidence also shows support for reallocation of space to walking, cycling and socialising and measures to restrict traffic, including around schools at peak times.

50% of Central Tyneside residents think there are too many people driving in their neighbourhood

72% support increasing space for socialising, cycling and walking on high streets and

57% agree with closing streets outside schools at peak times

We also know there are still many barriers to people cycling and walking. In our region currently, especially in rural areas, communities are isolated if roads lack even a pavement. Higher speed limits also deter people from walking and cycling. Matters are then made worse if any cycling and pedestrian infrastructure that is in place is in poor condition.

86% of an insight survey feel more footpaths should be built alongside current roads and 81% feel the same for cycle paths

56% of Central Tyneside residents want more spent on walking provision and 49% on cycling provision

Living Streets emphasise that fears over personal safety can be a major barrier to walking. They point out that perceptions of risk will be interpreted differently according to the individual and in different places; women, for instance, may vary their walking routes away from quiet streets according to the time of day. Meanwhile, subways with blind corners and no clear entrance and exit points can make people feel trapped, while graffiti, litter and vandalism may also increase fears. On the other hand, suitably designed street frontages as part of public realm will help to maximise natural surveillance and provide reassurance. It is also important that streets are well lit, with vegetation located and maintained to ensure maximum visibility.

Keeping active and a better pedestrian environment can contribute to both mental and physical health and our economy.

Keeping active can reduce the risk of early death by as much as **30%**

and of major depression by **26%**

And as a direct result of improvements to the pedestrian environment retail turnover can increase by **17%**

Active travel

Our starting point

Covid-19 has seen a considerable increase in walking (37%) and cycling (15%) in our region between April and July 2020, with increases in cycling up to and over 100% at some locations. Sustrans suggest that people in the North East already felt positively about cycling as a form of transport and from March 2020 there were positive increases in walking, cycling and cycle sales. A further welcome development is that families have been more active outdoors together, and indications from recent Tyne and Wear surveys indicate that individuals and families expect to walk more when the pandemic restrictions are lifted.

In response to this, and in addition to the funding we have described above, we have received £2.2m from the first tranche of the Government's Emergency Active Travel Fund (EATF) which has been used to reallocate road space towards active travel. This funding delivered over 30 emergency schemes in the region and drove an upsurge in cycling and walking activity during the Covid-19 pandemic, the benefits of which are continuing to be felt. As well as the £2.2m EATF we have already received, we have now submitted an ambitious programme to Government requesting £15.7m from Tranche 2 of the Fund. This expands on the success of our Tranche 1 schemes and will further reallocate road space to pedestrians and cyclists.

We will build upon Department for Transport developments such as 'Gear change' and the Cycling and Walking Investment Strategy to move closer to where we want to be long-term, with an even better Active Travel offer including not only infrastructure but behaviour change measures. Because so much active travel takes place near where people live, any initiative where everyone has been involved in its design will naturally be more popular.

However, by July 2020, 35% of insight panel respondents said they were shopping online instead of travelling to the shops, leading to less walking and cycling.

Maintaining existing and new infrastructure remains a concern. Cycling UK emphasise that: potholes, ruts, loose surfaces and ice make walking and cycling uncomfortable, and can cause serious, sometimes fatal injuries. Addressing our maintenance backlog could cost as much as £490m.

Micromobility

Micromobility refers to a range of small, lightweight vehicles which include bicycles, E-bikes, electric scooters, and electric pedal assisted bicycles. The rise of micro-mobility is evident in our region and the UK as a whole. As previously highlighted, a percentage of journeys made in our region are under 5km which are currently being made by the private car. These journeys could be replicated by these micro modes and potentially reduce congestion, air pollution and carbon emissions, whilst improving health, making our street space more attractive, and supporting the local economy. The region will work with partners to investigate the roll-out of these micro-mobility modes and integrate them to the wider transport network.

Where we want to be

We know that facilities for active travel are a vital component of our region's transport network.

We will work with partners to deliver the improvements to the relevant Key Performance Indicators (see page 26) by investing in a series of measures to make active travel an attractive option for short journeys for anyone able to make use of this method of transport.

For this to happen, walking and cycling need to be perceived to be a safe and enjoyable means of everyday travel. Like many other policies in this Transport Plan, delivery of this can only be by a partnership, involving local and Central Government, walking and cycling advocacy groups and local communities.

Our aim is for there to be no fatalities or serious injuries on the regions' road network by 2025.

This means addressing the problems set out here so that active travel can achieve the Plan's Vision and Objectives In designing infrastructure and solutions, we will make full use of guidelines such as the Government's Cycle infrastructure design guideline document (LTN 1/20), which shows how to deliver high quality cycle infrastructure.

Our developing cycling network requires further investment to deliver its full potential, economically, environmentally and as a way of improving health.

Therefore, communities should lead on how space is best used in their localities, so they feel confident that actual and perceived safety issues have been addressed.

We need to ensure that our towns, cities and neighbourhoods enable safe and easy walking for all, with adequate space, good design, crossings, lighting and signage so that walking becomes the natural choice for short everyday journeys and combines with public transport for longer travel.

In the early 1970s, improving public health in Finland became a priority. A programme including promoting active travel meant that in four decades, there has been an increase in life expectancy of almost 11 years for men and 9 years for women.

On a wider scale, we also need the funding to create a grade-separated regional cycle network, and maintain it in excellent condition, that links both urban and rural communities, is designed to a common standard and has a strong, identifiable brand; this will mean cyclists do not conflict with other road users and can travel longer distances including to link into bus, Metro and rail services.

We've already said that maintenance is essential. We will look at targeting investment in maintenance activities and work with partners to ensure they get the financial resource to ensure that maintenance is completed at pace to maintain reliability, resilience and drive up safety of the region's network.

This includes ensuring that maintenance issues can be easily reported by stakeholders. We will also secure funds for strategic maintenance activities that cannot be undertaken through existing budgets.

We will encourage highways authorities to repair footpaths / cycle ways before repairing roads.

We will always design infrastructure schemes to include cycling and walking

The rest of this Plan contains work programmes aimed at transforming our urban and rural environment, to achieve what we have said in this section.

Policy Statement

We will help more people use active travel by making the cycle network better across the North East. This will include being flexible in how we use road space to help cyclists and pedestrians.

Public transport: travelling by bus, ferry and on demand public transport

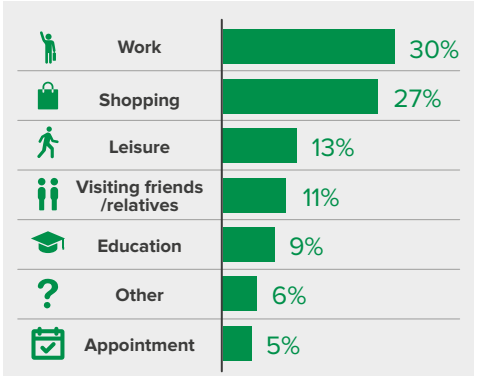
Buses

Public transport, including the bus network, is instrumental in enabling economic growth. It enables people to get to work, school, shopping, health appointments and everything else that is vital. Without it, a great swathe of our population could not travel as they do now, leaving them isolated, or dependent on cars.

Our region's reliance on buses is demonstrated by the 162.4million bus passenger journeys in 2018/19, making buses our region's most-used form of public transport.

Only 68% of North East households own a car, compared to 74% nationally

2019/20 saw bus operator investment delivering results with a notable increase in passenger numbers in some parts of our region, in contrast to a long-term decline over previous years and the national picture. This investment has seen new vehicles that feature emissions controls, passenger real time information announcements, wi-fi and charging sockets, and new depot facilities to ensure effective, up-to-date maintenance. As a result, the October 2019 Transport Focus survey showed overall bus passenger satisfaction in our region remaining high at 91%.



Bus journeys by purpose (Source: ?)

89% of bus services are commercially operated.

The vast majority (89%) of all the bus mileage in our region is operated on a commercial basis, whilst the remaining is subsidised by the local transport authorities.

These subsidised services cater for passenger demand that is enough to demonstrate a need, but not sufficient to sustain a commercial bus service so extra public sector financial support is required.. The bus network varies across our region; in large towns and cities it is much sparser at night-time and on Sundays than during the daytime, while many smaller towns have fewer buses and our smallest rural villages perhaps only one per week or sometimes none at all. Customer facilities range widely from high quality city centre interchanges to bus stops with only a flag and perhaps a timetable display.

Coaches are part of our tourist offer and have a role in school transport in Northumberland and Durham, together with educational activities.

Our region's bus and coach sector employs around 8,000 people, which makes a further vital contribution to our economy.

We want to upgrade and improve our Park and Ride offer and increase the use of existing facilities in our region to encourage more people to continue their journeys by bus. This is fully explained in the Roads section on page 37.

Our starting point

The Covid-19 national lockdown's immediate impact was a dramatic fall in patronage on all public transport, with corresponding service reductions. Coordination between our local bus operators and our two combined authorities has been constructive throughout the Covid-19 pandemic, with agreement about what services are most needed, different bus companies accepting each other's tickets and joint contributions to a face covering awareness week. We are working to build on this close cooperation to help improve our local bus network further. The network is returning to pre-Covid levels, although we need to remember that passenger numbers could remain low both because of concerns about Covid-19 and lifestyle changes with less travel. In July, 35% of participants in a transport insight panel said they were shopping online instead of travelling to the shops, and over half said they working from home more. Over a third of participants intended to use public transport (not just buses) less when things return to normal. If this trend continues it will have a major impact on bus usage, given that the table earlier shows that 27% of bus travel is for shopping. There is also a positive point to emerge: consistently from April to July, around 75% of participants said bus operators had responded well to the pandemic, which hopefully bodes well for the future.

As regards the transport decarbonisation agenda, the region's bus operators continue to equip their fleet with better technology and accompanying maintenance regimes to reduce emissions. Whilst welcome progress has occurred, only around 32% of the commercial bus fleet in our region will have the latest "Euro VI" standard engines by the end of 2020.

Where we want to be

We know how important buses are to our transport network and therefore to so many people. We also know there are parts of our region with little or no access to a bus and the survey quoted above, if applied to our region, suggests too many of our region's population don't see buses as an attractive form of travel. Tackling these issues needs partnership between all the Authorities in our region, our bus operators and Central Government.

Our immediate task is to secure the survival of our region's bus network in at least its present form. To do this, very significant levels of on-going funding from Central Government are needed in the short term for the bus network, so it does not stop playing its vital role in the life of our region of firstly serving anyone who relies on buses to get around and secondly driving car users away from their vehicles.

As well as this, we must also help buses travel faster and more reliably around our region. This will mean dealing with the many traffic "pinch points" in towns and cities across our region, including lack of capacity for buses at river crossings, that particularly affect buses and make journey times longer and more uncertain, which deters passengers and increases bus operator costs. But tackling these piecemeal, although important, is not the full answer. Major investment is needed in long-term solutions, including radical new rapid bus corridors offering faster, more

Public transport: travelling by bus, ferry and on demand public transport

reliable journeys through bus priority schemes such as bus lanes, together with lower fares, greener vehicles and better frequencies. These step changes will help overcome the less than excellent image that bus services have in the minds of many in our region.

We must also address the sparsity of transport in our rural and other isolated areas, where different solutions are needed such as demand responsive transport.

When improvements such as bus priority on the road network, integrated ticketing, better information, incentives to change travel choices and greener vehicles are all combined, people won't see buses as slow, expensive and inconvenient. Instead, buses will play an even greater part in enabling economic growth, achieving better and more equal outcomes for communities, and contributing to healthy and vibrant places to live and work in our region.

As well as all these measures, we will encourage all the Councils in our area to take active steps to make bus travel more appealing than using a car.

Policy Statement

We will initiate actions to make travel in the North East net carbon zero and improve transport safety and security;

We will improve bus travel and attract more passengers with new rapid bus corridors. This will include changing how road space is used to help buses move more quickly;

We will work with our partners to make travelling and moving goods around our region more efficient and greener.

The Shields Ferry

The Shields Ferry links North and South Tyneside for pedestrians and cyclists in a way that nothing else can. Taking just 7 minutes to cross the river Tyne, it carried 374,529 passengers in 2019.

Background

Operated by Nexus, the Ferry runs up to every 30 minutes during the day and serves as an important connection for work, leisure and tourism. There are two vessels, one in use and one kept as a spare.

Satisfaction with the ferry service is particularly high, with overall satisfaction rated a score of 9.4 out of 10 and value for money rated 9.5 out of 10.

Our starting point

Like all other forms of public transport, the ferry experienced an immediate fall in patronage as a result of the Covid-19 lockdown. The service was severely curtailed but is now getting back to the pre-Covid timetable. However, although usage has been rising, by September 2020 it was still only around 53% of the pre-Covid level and is likely to remain so into 2021.

Where we want to be

If the ferry is going to continue to be an important part of the region's sustainable transport network, it is vital that passenger numbers are increased and the ferry made more sustainable through a reduction in its emissions, with new, greener vessels. We will support Nexus in delivering their Ferry Strategy action plan published in 2019.

Policy Statement

We will take action to continue to support the Ferry and develop potential improvements where possible.

"On demand" public transport

Promoting existing public transport alone will not encourage car users away from their vehicles. Getting to and from a station or bus stop, and the accompanying information to support that choice, is a vital part of the journey, otherwise the only option is to rely on a car.

Background

Integrated public transport on demand feeds into the wider public transport network at "hub" points – major bus stops and stations, Metro and rail stations and interchanges. Available options may depend on location; for instance, anyone living in or wanting to visit isolated (particularly rural) areas of our region may find that distance and lack of alternatives makes them reliant on a car. By 2035, we want to provide more demand responsive transport options for people, leaving no one and nowhere behind when it comes to transport provision. We also want to replicate successful examples elsewhere of on demand transport as an alternative to secured bus services, which would offer a more flexible service for isolated communities while allowing us to reallocate funds to other public transport in our region.

Our starting point

Taxis have the potential to play a big role in any on demand solution, but need to be more joined up with the rest of the transport network in terms of journey planning, booking and payment. We have nearly 9,000 licensed Hackney Carriages and PHVs in our region, with each of our seven Councils having its own taxi policies that suit local needs.

Most large stations, transport interchange and town and city centres have taxi ranks. Taxis represent the only form of public transport to serve all locations, 24 hours per day, including when and where other transport alternatives are not available, such as late at night.

To improve the environmental and air quality footprint of our taxi fleet, external funding has been received from the Office for Low

Public transport: travelling by bus, ferry and on demand public transport

There are nearly 9,000 licensed Hackney Carriages and Private Hire Vehicles in our region

Emission Vehicles (OLEV) to install charging facilities specific to the taxi trade. We've invested in rapid electric vehicle charging points dedicated for the taxi and private hire vehicle industry, located at strategic points across our region. Taxis are also used on several bus-type services operating around the region where demand is low, or the road layout makes access for conventional buses difficult.

Where we want to be

Our current public transport network cannot serve all parts of our region and all times of day equally well. To serve anyone without a car, and to encourage others to make the switch away from cars, a combination of existing and radical new solutions is needed.

Investment is needed, particularly to provide our rural and other isolated communities, and the people who want to visit them, with financially and environmentally sustainable options, together with good, integrated information on what is available.

In addition, night workers now account for nearly 15% of employees in the wider North East (including Tees Valley) which is the highest proportion of anywhere in Britain. These workers play a crucial role in our nation and our region. On demand services have great potential here and we could offer advice about setting them up. For example, a factory may want to organise bespoke transport around shift times using (with the employees' consent) a database of everyone committed to paying for transport together with their home addresses. Employees would then be confident of having door-to-door transport, which would also overcome concerns about walking to or from bus stops late at night. Similar services for schools could be accompanied by an app activated by school bus passes, assuring parents of their children's safe travel to school.

Therefore, we also need a range of on demand services to close the gap between everyone's travel origins and destinations. By 2035 we will have in place technology solutions for journey planning, booking and payment catering for all forms of transport which are currently being trialled to deliver efficient, integrated public transport on demand across our region leaving no one and nowhere behind when it comes to transport.

Policy Statement

We will initiate actions to make travel in the North East net carbon zero and improve transport safety and security;

We'll help more people reach the sustainable transport network with more 'on demand' solutions; and

We will work with our partners to make travelling and moving goods around our region more efficient and greener

Private transport: travelling by car and using road infrastructure

The North East has a combined road network length of 12,241 miles enabling cars, freight vans, lorries, buses, taxis, and cyclists to get around our region. Around 10 billion vehicle miles were driven in 2019.

Our road network is instrumental in enabling economic growth and our approach is to ensure that connectivity and capacity constraints on the network are addressed. The network is divided as described below

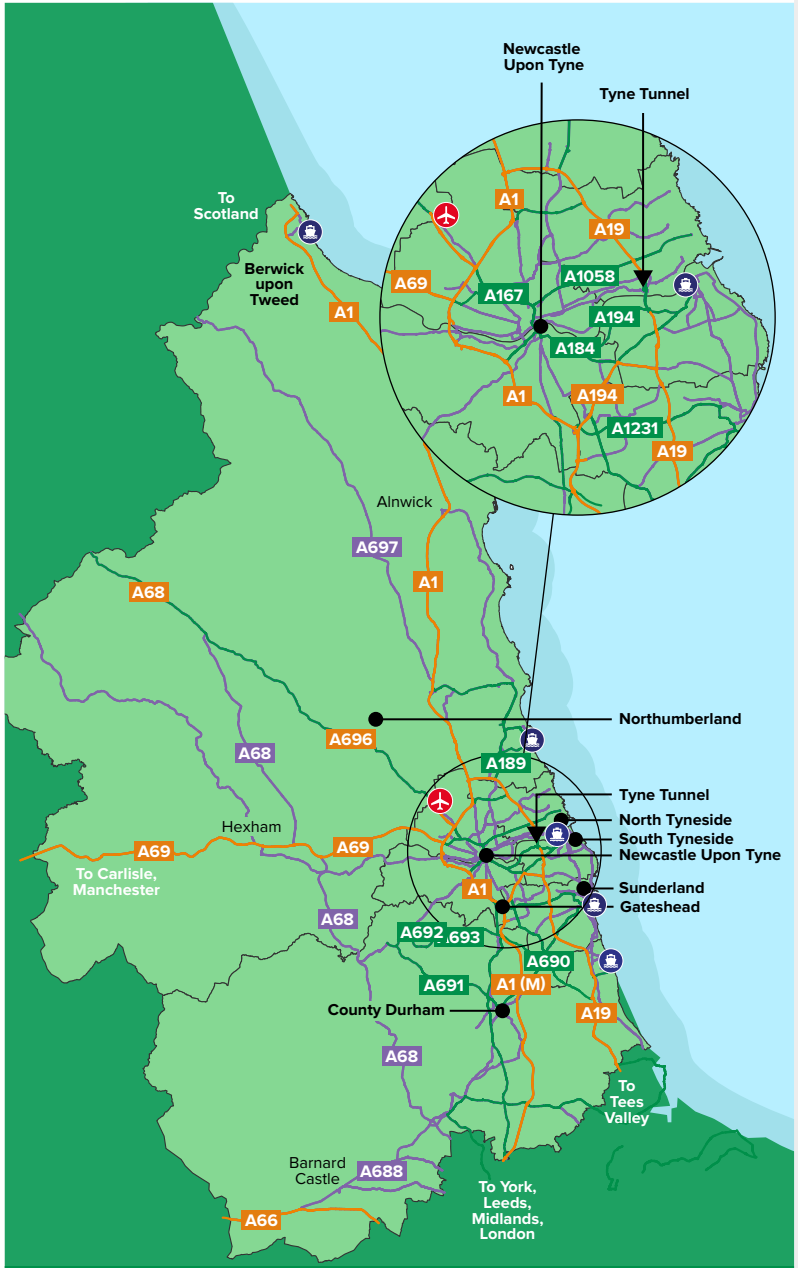
Road Network	Description	Features
SRN **Strategic Road Network (SRN)**	National A Roads and Motorways form part of the SRN managed by Highways England. Examples include the A1, A19, A66 and A69 within the region.	The SRN in the region has a combined length of 1511 miles. The network provides the region with the important national and pan Northern connectivity for goods and people as well as for intra-regional journeys.
MRN **Major Road Network (MRN)**	The MRN as defined by Department for Transport and Transport for the North comprises the most economically important and high flow routes that support the Strategic Road Network (SRN) and link to economic centres. The roads that make up the MRN remain Local Authority controlled and maintained	The MRN in the region comprises 3,389miles. This network can be characterised by routes that connect major centres, ports and airports and centres of industry to the strategic road network as well as those routes that provide relief to the Strategic Road Network. Local Highway Authorities are responsible for the operation and management of this network with investment strategies coordinated by Transport North East and Transport for the North.
KRN **Key Road Network (KRN)**	The KRN in the region is the network which represents the regionally economically important movement routes and supports the function of the MRN and SRN.	The KRN routes typically have a strategic function around routes that carry large numbers of people and goods, congestion corridors, 10 or more buses per hour in urban areas or 6 in rural locations. Local Highway Authorities are responsible for the operation and management of this network with investment strategies and in part Urban Traffic Management functions coordinated by Transport North East.
Local roads **Local Roads**	Local Roads form the vast majority of the region's network and are fundamental to everyday journeys.	The Local Road Network across the region comprises of 7,341miles across the region. These roads are managed by Local Highway Authorities across the region.

Combined Effect

The Road network across the region interfaces with every journey we make from door to door on a daily basis.

This Plan will place effective strategies across all road typologies around delivering a safe, well maintained network that provides journey reliability.

We equally must ensure that the environmental credentials of road use from the vehicles that use it and the infrastructure that carries them deploys the most sustainable solutions.



The North East's Road Network

Private transport: travelling by car and using road infrastructure

Our road network accounts for 88% of all commuter journeys per day across the region and provides substantial connectivity for passenger and freight movement, in both rural and urban areas.

It needs to operate more efficiently - for example, there is significant scope to improve the flow of vehicles: 100% efficiency means that all traffic is flowing without any hold-ups or delays, but our network currently operates at 71.8% of this. While our Urban Traffic Management Centres have significant assets, from connected signals, Variable Messaging Signs and cameras, and can provide and react to information, there is clearly more that can be done.

Car ownership in the North East

As with the rest of the UK, recent decades have seen rising levels of car use and ownership in the North East, albeit in our region it remains lower than elsewhere.

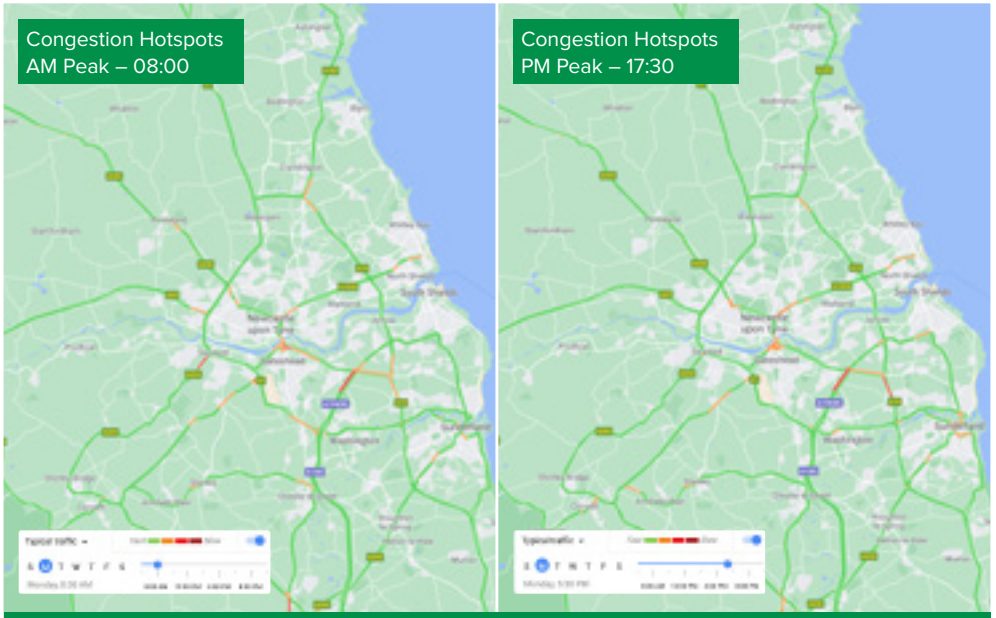
Congestion

Our region has significant road congestion problems including on arterial routes and into the centres of Durham, Newcastle, Gateshead and Sunderland. Congestion on the local road network can lead to impacts on the Strategic Road Network, with extra short journeys on the SRN (i.e. for a small number of junctions) prevalent on the A1 and A19. Data from TomTom shows journeys take on average an extra 15 minutes in the peak period in Newcastle and Sunderland. This results in lost time to the economy and has negative road safety and sustainability implications such as poor air quality. This can impact on the reliability and therefore attractiveness of bus services. Congestion in our region is estimated to cost around £400 per driver per year according to Inrix.

Percentage of North East households...[1]	2002/03	2018/19
With no car or van	37%	28%
With one car or van	44	40
With two or more cars or vans	20	32
Cars/vans per household	0.86	1.10

The busiest link in the region is on the A1 Western Bypass between junctions 73 (Bells Corner) and 74 (A69), and it saw an annual average daily flow in 2019 of 104,999 vehicles.

On sections of our network including the A1 Western Bypass we are reaching the limits of where we can reasonably upgrade the road to address capacity constraints and this is in the forefront of our planning. Congestion is also worsened by our geography. Around the riverbanks of the Tyne and the Wear, some communities are spatially close to employment and other opportunities but cannot easily reach them. This can result in deprived urban communities becoming isolated from nearby jobs and training. In Durham, East-West linkages often involve vehicles routing through the city centre. This is also the case in Sunderland, South and North Tyneside and South East Northumberland, affecting junctions on our road network and causing congestion and delays.



Congestion Hotspots in Tyne & Wear, County Durham and South East Northumberland ©Google

Environment

Road transport significantly contributes to poor air quality. It is estimated that poor air quality is responsible for around 360 deaths each year. To deal with this, Councils in Newcastle, Gateshead and North Tyneside have been working together to develop proposals for improving air quality. These proposals will result in a "Category C" charging Clean Air Zone covering Newcastle city centre that affects non-compliant buses, coaches, taxis (both Hackney Carriages and Private Hire vehicles), heavy goods vehicles and vans. The original date for implementation of January 2021 has been postponed due to Covid-19.

Maintenance

Good maintenance of all roads, cycleways and pavements is essential to keep traffic and people flowing. It is also crucial to our economy and environment. Around 2% of the region's principal road network and 5% of the non-principal road network requires urgent maintenance attention. Maintenance requirements can often be different for rural locations, due to climate impacts and the remote and exposed nature of some of the network, rather than because of traffic volumes. This can impact on the safety of the network and leave communities isolated. Structural integrity is a key consideration of this Plan, with the need to maintain assets to avoid catastrophic failures. Many such assets were built in the 1960s and 1970s and are reaching the end of their life expectancy.

Road transport contributes the most out of any sector to carbon emissions (37% across our region)

Private transport: travelling by car and using road infrastructure

Heavy Goods Vehicles are disproportionate contributors to pollution, representing less than one tenth of all vehicles but roughly 40% of their carbon emissions

Park and ride

The region has an established Park and Ride offer with our current sites providing over 4,300 spaces at:

- 30 Tyne and Wear Metro stations
- Three sites in Durham city centre (bus-based)
- Newcastle Great Park (bus-based)
- 19 National Rail stations across the area

Park and Ride provision removes car traffic from town and city centres where congestion and pollution are highest. It therefore helps improve air quality and enhances our economy by tackling congestion. From Nexus' research, 75% of people using Metro Park and Ride are doing so for business and commuting purposes, compared to 42% of all Metro passengers. The research found that people choose to use Metro Park and Ride due to the cost and lack of parking near their destination.

Durham's Park and Ride sites are aimed at reducing congestion in the city centre. Demand for these is high and the sites benefit from single payment options and buses into the city every 10 minutes. Newcastle's Great Park site, located just off the A1, is an operator-led facility that offers free parking and buses into Newcastle every 15 minutes.

We want to upgrade and improve our Park and Ride offer and increase the use of existing facilities in our region to encourage more people to continue their journeys by public transport.

Ultra-Low Emission Vehicles (ULEVs)

As we emerge into a new era of energy generation and use, the region has a clear opportunity and advantage to accelerate the uptake of cleaner fuels. As of 2020, there are 2,960 registered electric vehicles (EVs) with over 800 chargers in our region. Sales of new EVs are expected to grow globally from 2.5 million in 2020 to 11.2 million in 2025, reaching 31.1 million by 2030. We have a regional Go Ultra Low (GUL) programme to encourage the uptake of ULEVs. This includes the UK's first electric vehicle charging station in Sunderland (opened in 2019) and a network of 11 rapid charging hubs to support this expansion. Other forms of propulsion such as hydrogen, Liquid Petroleum Gas (LPG) and completely new technologies are being investigated through organisations such as Integrel and the North East Automotive Alliance. We can use this work as a catalyst for change in the region.

Road Safety

Every incident across our road network, no matter how severe, is one too many. Across a three-year rolling average (2016-17 to 2018-19), 778 people were killed or seriously injured on the region's roads. Safety of all road users is a priority. Our Safety Camera Partnerships with the two Police Forces across the region, in conjunction with the monitoring work undertaken by our Councils and Traffic Accident and Data Unit, provide the ideal platform to take decisive action.

Tyne Tunnels

Our Tyne Road Tunnels are an important part of the region's transport network and before the Covid-19 pandemic average use was 55,000 vehicles per day or 16.7m journeys per year.

Urban Traffic Management Control and Intelligent Transport Systems

Over the past decade, the region has invested heavily in our Urban Traffic Management Control Systems (Tyne and Wear and Durham) which aim to provide key information to enhance reliability and efficiency on the network. This includes information of car parks and for 750,000 vehicles per day on the network through cameras, Variable Messaging Signs (VMS) and Real Time Information (RTI). The centres deal with 3, 000 incidents per year. The Tyne and Wear UTMC currently has 276 signals (junctions and pedestrian crossings) connected to UTMC, with plans for another 142 connected in the months to come. In Durham 138 signals are connected to the system that can be controlled. The centres have further camera, VMS and real time monitoring equipment. The region has developed an ITS Strategy group which is developing plans for improving the efficiency of the road network.

The Tyne Pass project will introduce barrierless charging which is due to be put in place at the end of 2021. This scheme will bring benefits to the region in terms of reduced carbon emissions and the creation of new local jobs.

Freight Consolidation Centres
The greatest impact of freight transport may be felt in the last mile of the journey, where goods are being delivered to congested town and city centres with safety concerns due to limited road space .. Freight consolidation hubs and low carbon last mile freight deliveries enable goods to be dropped at the edge of the urban core, consolidated and then to make the final part of the journey on fewer, greener vehicles.

Our Starting Point

The Covid-19 crisis generated a dramatic fall in vehicle traffic across our region. At the end of March 2020, weekday traffic had reduced by 60% leading to a reduction in congestion and an improvement in air quality. Road traffic volumes in the region have increased rapidly as lockdown restrictions have eased but, in October 2020, we remained circa 13% below expected road use on the region's network. In September 2020, occupancy of our 10 Park and Ride sites, which are on our Urban Traffic Management and Control (UTMC) system, was down by 78% when compared to the same period in 2019.

During Lockdown (March and April 2020) use dropped to approximately 17,000 vehicles per day, which is 30% of normal levels.

In July, 36% of participants in an insight panel said they were now "extremely" concerned about Covid-19, and over half said they would be working more from home. Although this is only a snapshot in time, it could well reflect what people may be thinking now, with a resultant impact on their travel patterns. Despite this, by the summer months traffic was gradually increasing before the local Covid-19 restrictions put in place from mid-September 2020 saw levels drop off again. Traffic is currently at 74% of normal levels.

The performance of the tunnel can impact on many surrounding routes including river crossings in central Newcastle and the Strategic Road Network. The region monitors the performance of the crossing to ensure it is maximizing its potential in an important North/South link in the region.

Car Parking levels on weekends in September 2020 were down by over 30% compared to the same period last year, demonstrating lower footfall in some of our major retail centres and the impact of the virus on the leisure and hospitality sectors.

Within the overall reduction in traffic, travel patterns have changed, including a reduction in traditional peak-time volumes.

Private transport: travelling by car and using road infrastructure

Attitudes towards the improvements in air quality as a result of the lockdown are also noteworthy: nearly half the respondents to the July 2020 insight panel we've just mentioned felt we should build on this improvement, and 71% believe the improvements should at least be maintained.

We've already explained the importance of maintenance, and a well-maintained transport network should contribute to the reduction of accidents and incidents. Once a road network is brought into good condition, money can be saved by not having to do more costly reactive maintenance in response to faults.

'Business as usual' road maintenance across the region is currently funded typically through the Highways Maintenance Block, Highways Maintenance Challenge Funding and specific pothole actions. However, the March 2020 Annual Local Authority Road Maintenance (ALARM) survey identified a huge maintenance backlog in our region that may cost around £700 million to deal with. Without a major injection of funds, this situation is set to get worse as Councils spend more money on other highway assets, such as bridges, cycleways and drainage work, to cope with the increased incidence of extreme weather events.

Where we want to be

We will ensure continued recognition that our road network is a central part of our region's transport network and is funded accordingly.

Successful working with partners to deliver targeted improvements to network efficiency through investing in a series of measures on the Key Road and Major Road networks.

Network management concerns are addressed by implementing measures to enable real-time decisions to be taken across the road network, supported by strong management policies to maximise its effectiveness.

We want to keep everyone safe when travelling across the region's road network.

The UK ranks highly in Europe for Road Safety with road fatalities dropping 39% from 2007-2017. Our performance has since plateaued, and we must take action to improve road safety working with all partners delivering safer people, safer vehicles and safer roads

We aim to reduce the number of fatalities or serious injuries on the region's road network.

Partnership working to understand patterns of incidents and the likely cause, to inform how we can prevent them.

We will take decisive action on the environmental performance of the road network (given road transport is responsible for most transport pollutants), including addressing the harmful pollutants associated with road use.

We will ensure the Plan and the schemes that we promote in the region clearly play their part in improving the region's air quality.

Consideration will be given to all measures to improve the environmental performance of the road network, including but not limited to investing in durable road infrastructure, increased Electric Vehicle charging coverage and supporting a transition towards alternative fuels.

There will be proper allowance for any climate emergency measures that may be needed. For example, steps to curb demand such as road pricing, workplace parking levies, restrictions on parking in new development etc.

We'll maximise the opportunities provided by investment in the road network. This includes reducing severance, ensuring the network works for all users and addressing environmental concerns around noise, air quality and flooding. We will also deliver digital connectivity upgrades to make the network ready for connected and autonomous vehicles at scale, implementing the recommendations of the National Infrastructure Commission.

Our goal is to achieve our targeted investment in maintenance activities. To do this we will work with partners to ensure they get the financial resource to complete maintenance at pace. This will ensure reliability and resilience and drive up the safety of the region's network.

£11.14 billion and 11 years to get the nation's roads back to a reasonable maintenance standard (Asphalt Industry Alliance)

Another part of our Plan is to make sure there are effective measures in place for maintenance issues to be easily reported by stakeholders. Alongside this, we want to achieve cross-industry working so that statutory assets can be managed and maintained in a coordinated way.

A further key focus will be securing funds for strategic maintenance activities that cannot be undertaken through existing allocations.

UTMC and ITS infrastructure plays a vital part in managing the regions transport network through information, controlling signal timings and assessing the speed and performance of the road network. We want to maximise the potential of this infrastructure investment by putting in place the resources to act on data gathering and provision, appropriate strategies across the region and develop consistent multi-modal information feeds for all road and public transport users.

We will ensure the Tyne Tunnels operate and are maintained and to formulate plans for 2037 when the Concession ends. The Planning may start from 2030 as to what shape the next model will take.

Where infrastructure development solutions are the right approach the region will plan to ensure these do not adversely impact on the existing network and its users and surrounding communities. This includes where there are competing priorities for space.

We will work with all partners and stakeholders to ensure that strategic priorities are achieved as established elsewhere in this Plan and the optimum solution is found ahead of the formal development of a scheme and consents being sought.

Policy Statement

We must make our roads flow better for goods and essential car journey.s

We must strengthen use of cleaner, greener cars, vans and lorries.

Public transport: travelling by local rail and Metro

We want to integrate and expand the reach of Metro and local rail into more communities, benefiting more people's lives across the region.

Background

Our Metro and local rail network plays a significant part in supporting the North East's economy, contributing up to £224 million each year. There are 533 route km of rail lines in the North East and our ambition is to improve, expand and integrate our network.

Tyne and Wear Metro

36 million passenger trips per year

60 stations

77.5km of electrified track

New trains arriving from 2023

Local Rail

5 million passenger trips per year

31 stations

1980s diesel powered trains

Over the past 40 years, the rail network in the North East has developed in two very different ways.

Much of the local rail network in Tyne and Wear was converted into the Metro system. It has continued its role at the heart of the local economy by transporting tens of thousands of people by rail to work, education and other activities each day.

The remainder of the local rail network has continued through decades of closures and cutbacks, maintaining some connectivity but characterised by poor-quality trains and low service frequencies.

Rail connectivity remains a challenge to some of the more remote rural and deprived urban areas of the region.

There are large areas and communities in the region that do not benefit from rail services at all because there are no local routes or stations, or they are hampered by the limitations of existing services.

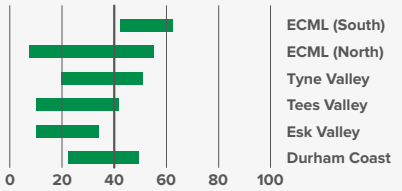
Our view is that we can make much more of our region's railways. In recent years, we opened a new local rail station in Horden, County Durham.

Over the coming years we want to expand the reach of local rail and Metro into more communities, benefiting more people's lives and unlocking access to opportunities such as restoring passenger services on the Northumberland Line and reopening the Leamside Line. We are already progressing schemes for delivery such as restoring passenger services on the Northumberland Line and removing constraints on the Metro network (Metro Flow project).

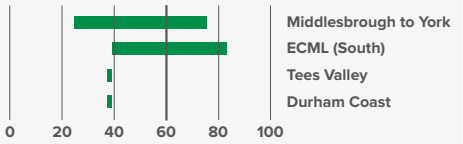
Metro Extensions map

Washington is the fourth largest town in the UK without a rail service.

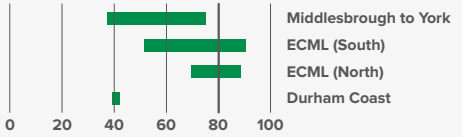
Local Rail (40mph) target



Regional Rail (60mph) target



National Rail (80mph) target



Key insight

We have enormous potential to exploit under-used and disused railway assets and alignments across the region. Network extensions and service improvements could alleviate road congestion, providing sustainable access for all.

Public transport: travelling by local rail and Metro

These aspirations are expressed in a Metro and Local Rail Strategy, which is to be refreshed in 2021.

Every journey made on our local rail and Metro network is worth £8.50 to our region's economy through the wider benefits it delivers. The case for improvement and expansion is simple: the more people who travel, the greater the benefits to the North East.

Tyne and Wear Metro

The Metro opened in 1980 and has been part of everyday life in our region ever since. In 2019, Metro carried 36 million passenger trips per annum to and from 60 stations along 77.5km of track. The 89 Metrocars in the current fleet allow Metro to run 450 trains each day with a three-minute peak frequency. All stations are accessible by level access, ramps or lifts.

Currently, a full Metro train has the potential to take 119 cars off the road network. Metro also plays an important role in multi-modal journeys, where passengers use two or more modes of transport.

In 2015, the Metro became the only UK railway outside London with network-wide pay as you go smart ticketing. Accountability to Tyne and Wear's residents is ingrained in the timetable, pricing and station location. Metro also has multi-modal ticketing with other types of transport such as the Shields Ferry and buses.

Large parts of the region are not served by the Metro, including several major employment and retail sites, such as Team Valley, Doxford Park and Metrocentre. Gateshead, for example, has only five stations to cover an area of 88 sq km in size.

In recent years, the Metro has experienced reliability and resilience problems due to ageing infrastructure and fleet, as well as capacity constraints. The existing infrastructure limits the frequency of the service and, as a result, impacts on the reliability and resilience of Metro.

There are still single-track sections on the network in South Tyneside. However, in early 2020, the region was successfully awarded funding to dual the remaining sections through the Metro Flow project, which will increase the frequency of trains and improve reliability and allow quicker recovery from major disruptions.

From 2023, 42 new trains carrying 600 passengers each will be introduced, which will transform performance and passenger experience and deliver huge energy savings. The new trains will cut Metro's high-voltage power consumption by 30% while providing Metro's passengers with modern features including wi-fi, charging points, air conditioning and a step-change in accessibility. Having a new train fleet makes the case for expansion stronger – the new trains will be more flexible, meaning that new routes are possible.

Each month, Metro produces a 'How Metro is performing' document measuring train punctuality, station facilities, information, cleanliness, security, ticketing and staff availability. Metro overall satisfaction was scored 7.9 out of 10 in August 2020.

25% of homes in Tyne and Wear are within walking distance of a Metro station.

Key insight

Current lack of service integration: Our Metro and Rail networks continue to operate essentially separately

Local Rail

In contrast to the Metro, the local rail network has not had the same focused investment, is not aligned to the local economy and previously lacked a clear plan for its long-term future. There are 533 route km of rail lines in the North East, however, only 31% of our lines are currently electrified, meaning that local rail trains operating across the region are diesel-powered.

Investment in services and trains has lagged behind the rest of the North. Although the troublesome 'pacer' trains have gone, they have been replaced with similar-aged trains that are only somewhat more reliable. In 2019, they were refurbished with improved seating, at-seat power, fully accessible toilets, free wi-fi, digital customer information screens, sustainable lighting and improved CCTV. Despite this, the trains are showing their age and lag behind modern passenger needs and expectations.

There are 31 local rail stations in the region ranging from remote rural stations to major intercity stations. The level of passenger facilities varies considerably. The local stations carry five million passengers per annum around the North East each year.

Public transport: travelling by local rail and Metro

Local rail services presently comprise:

- Durham Coast Line - linking Newcastle, Sunderland, Hartlepool and Middlesbrough.
- Tyne Valley Line – linking Newcastle, Gateshead Metro Centre, west Northumberland and Carlisle.
- Bishop Line – linking Bishop Auckland, East Durham and Darlington.
- A local service utilising the East Coast Main Line north of Newcastle – linking Northumberland towns and villages to Newcastle, the main station being at Morpeth.
- On the East Coast Main Line south of Newcastle three northbound-only morning services are operated by Northern.

There are large areas of the region that do not benefit from train services at all because there are no local routes or stations, or which are hampered by the limitations of existing services.

The earliest and latest arrivals and departures are also often outside the minimum standards of the Transport for the North's Long-Term Rail Strategy (LTRS) of reaching key economic centres before 7:00 and leaving them after 23:00. This is not conducive with modern-day life both for early morning work requirements and late-evening social requirements. The nighttime economy is a key part of the North East economic make-up.

The majority of local train services in the North East only offer hourly services at best. An hourly service reduces the convenience of train travel when compared to the private car.

The journey times, frequency and average speeds for local rail services in the North East are not comparable with the private car. Currently, a car is faster than a direct train to travel from Newcastle to Middlesbrough in Tees Valley.

Our starting point

Metro travel was significantly impacted by the Covid-19 lockdown and April 2020 saw passenger levels fall by 95.5% in comparison to the same month in 2019. In mid-2020, the system was operating at a loss of approximately £0.9m per week, excluding costs associated with making the system Covid secure. However, passenger numbers have started to climb to a higher level (albeit to around 30%) than the local rail services.

Local and regional train operators quickly moved to introduce emergency 'key worker timetables' in late March and early April 2020. Use was considerably down according to onboard train staff's ad hoc train counts from late March 2020. There were low numbers onboard local rail services in the North East (between 0 and 9). As with Metro, numbers have started to return but at a slower rate.

The uncertainty of the shape of the UK recovery from the Covid-19 pandemic, together with government messaging about only using public transport where essential, makes passenger projections and forecasts uncertain. Getting passengers back on the network safely is our first priority.

Where we want to be

For the North East to be able to integrate and expand the reach of Metro and local rail into more communities, achieving full devolution of local rail services is our number one priority.

The potential for further rail devolution from Central Government to the North

East to specify and manage the operations of our current local rail network in line with the Tyne and Wear Metro, will enable the region to deliver a responsive, integrated and accountable rail network with improved services and reach. The region already benefits from partial devolution through Transport for the North (TfN) but this is not far enough to realise the full benefits of a truly integrated North East public transport system.

We aim to get more people travelling by local rail and Metro in the region. Part of our approach could be to improve 'turn up and go' local rail service frequencies (similar to Metro) where demand exists. Improving cycling and walking links to and from stations and bike storage at stations will encourage rail users to start and finish their journeys using healthy travel types.

We want to eventually see the electrification of the whole of our rail network in the region and/or explore new technologies offering lower or zero-emissions trains on regional and local routes, such as hydrogen and battery. We will successfully withdraw the ageing 1970s-built Metrocar fleet and replace it with new trains, transforming the passenger experience and delivering huge energy savings.

We want to deliver new stations on existing lines and reopen routes, such as the Northumberland Line and the Leamside Line, alongside Metro network extensions to widen access to jobs and training, grow the economy and reduce deprivation.

The North East was the birthplace of passenger railways almost 200 years ago, so it is appropriate that we acknowledge our proud heritage and focus on how rail will meet our region's unique challenges and opportunities of the future.

We will ensure that people feel safe using our network on trains and in stations. Personal safety and security must also be a top priority so that our railways become genuinely inclusive and accessible.

The successful delivery of this Plan will drive up passenger experience and satisfaction which we will monitor through improved punctuality, reduced delays and overall performance upgrades to the region's local rail and Metro network.

Policy Statement

We must invest in Metro and local rail to extend and improve the network.

We will take action to drive our partners to make travelling and moving goods around our region more efficient and greener.

Connectivity beyond our own boundaries

Our excellent transport networks connect us to the rest of the UK and global markets.

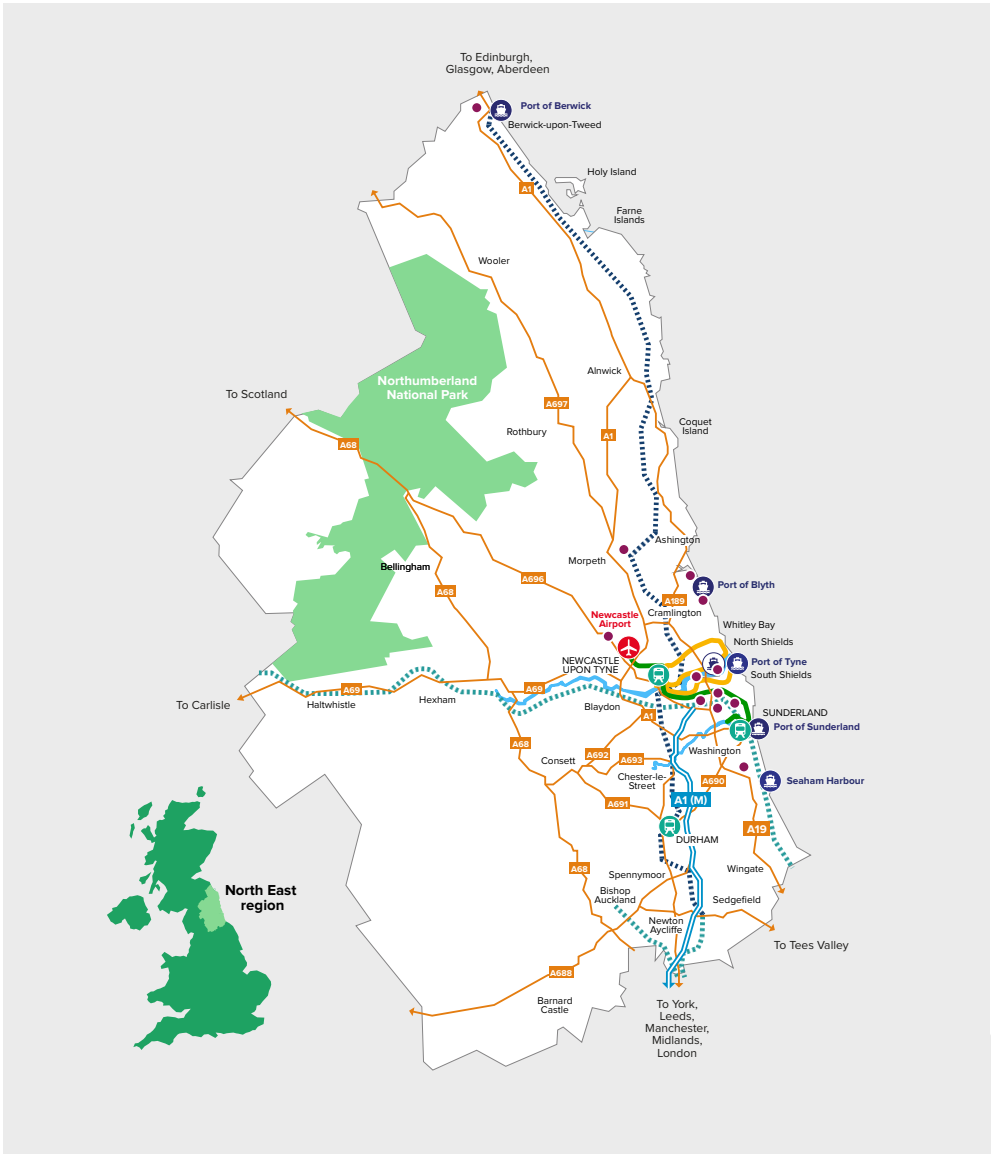
Background

National and international links from the region are already strong but we want to support and enable them to grow further, resulting in a positive impact on our economy. Our transport links are our national and global gateways, moving people and goods in and out of the North East. However, growth must be sustainable and carbon-neutral where possible.

Road and rail links to the rest of the UK and to and from our ports and airport are within the remit of our Plan. However, international connections are outside of our remit.

Key

- Ports
- Port of Tyne – Ferry Terminal
- Newcastle International Airport
- Tyne and Wear Metro
- City Train Stations
- Railway Line
- East Coast Main Line
- Motorway
- Major Road Network
- Enterprise Zones



National Rail connectivity

We are served by the East Coast Main Line (ECML) which connects us to London and Edinburgh, as well as the other main cities in the North and Midlands. The ECML is vital to our economy and approximately 15 million passengers from the North East travel on the line each year. The line currently combines long-distance, regional, local and freight traffic on the same two tracks. Over the last five years, punctuality of services on the line has been declining, with fragile infrastructure and other trains the main cause of delays. The ECML through the region is also used by 12 slow-moving freight trains each day, which prevent high-speed passenger trains from reaching maximum speeds of 125mph. This has an impact on passenger satisfaction, with only 79% of passengers rating punctuality as satisfactory or good. The potential for new and existing freight paths on the ECML is increasingly constrained without extra capacity and investment.

Sunderland has strong rail connections to London, with journeys taking 3 hours 45 minutes. However, the station, which is located in the city centre, is in urgent need of redevelopment.

As shown in the following table, the majority of train entries and exits in the North East are through Newcastle Central Station.

Durham	**23.2%**
Newcastle	**73.2%**
Sunderland	**3.6%**

The region's current rail freight market is subdued following structural changes in heavy industry and the decline of coal. Most freight traffic currently uses the Durham Coast Line. However, there are still operations on the constrained ECML network between York and Newcastle. The three main operators are DB Schenker, Freightliner and GB Railfreight. Strong growth is forecast in the

Connectivity beyond our own boundaries

intermodal market (where two or more modes of transport are used to transport goods) via domestic and international container services. North of Newcastle, rail freight flows mostly comprise a mix of container traffic, cement and nuclear cargos. Biomass has taken up many of the paths formerly used by coal trains. Unlike other parts of the United Kingdom, the north-east lacks a Strategic Rail Freight Interchange (SRFI) where goods can easily be transferred between road and rail.

Key insight

We want to grow the number of both freight and passenger train paths on the ECML in our region but we will need additional capacity and tracks. Reopening the Leamside Line and developing a Strategic Rail Freight Interchange for the region will enable this.

Strategic Road Network

The region's 201 miles of Strategic Road Network, which includes the A1, A19, A66 and A69, provide vital links to the rest of Britain and play a key role in the transportation of freight. In 2018, 54 million tonnes of freight was lifted by Great Britain-registered heavy goods vehicles in the region, 37% of which was transported out of the North East.

North East ports

Our five seaports handled 6.4 million tonnes of freight in 2019, 2.5% of all freight handled in England excluding Thames and Kent.

The Port of Tyne is a Trust Port with three car terminals. It plays a key role in ensuring that Nissan can transport their cars from their Sunderland plant to markets across the globe. The Port also handles biomass, which is transported by rail to Drax power station. In addition to the handling of freight, the port also operates a passenger terminal. Just over 600,000 ferry passengers travelled through the port in 2019, about 12% of passengers to English ports outside of the Thames and Kent region, a 6% increase since 2014, in contrast to a 5% decrease in the comparator area.

The Port of Blyth is a Trust Port offering a handling, storage and distribution service. The port is rail-served via the Northumberland line. The Offshore Renewable Energy Catapult is based in the port and provides a national research and development platform for offshore wind, wave and tidal.

The Port of Sunderland is the UK's second largest municipally owned port, handling approximately 600,000 tonnes per annum and providing deep water berths and dry docking facilities. Rail access to the port was restored in 2015.

There are also two smaller commercial ports in the region; the Port of Seaham, which offers 900 metres of berth for ships up to 8,000 tonnes handling fish, general goods, containers, timber and dry bulk cargoes; and the Port of Berwick which primarily handles cargoes linked to the agricultural industry.

Newcastle International Airport

Newcastle International Airport, the second largest airport in Northern England, is our global gateway. It connects our region to the rest of the world, with over 80 direct routes in 2019, including daily flights to seven international hubs, including Heathrow, Dubai, Amsterdam and Paris. In 2019 5.2 million passengers used the airport, 6.6% of all passengers in English airports outside of the five in London. The airport is predominantly used for international travel, with 22% of passengers travelling on UK domestic flights in 2019.

Our airport plays a key role in the freight industry and handled 4,745 tonnes in 2019. While this was a 7% increase on 2014, it is just 1% of freight handled by English airports outside of London.

Our starting point

In 2020, international and long-distance national travel was heavily suppressed as a result of the Covid-19 pandemic. Road traffic volumes fell, rail services were reduced and flights from the airport were reduced and, in some cases, suspended. As we navigate the challenges and changes that 2020 presents, we will support our existing transport assets so that passenger numbers recover and focus on outcomes that deliver benefits for freight.

Long-distance rail travel demand was massively suppressed from March 2020. Domestic rail passenger journeys were down 95% and Network Rail stations' daily footfall was down 94% compared with the same period in 2019. Open access operators such as Grand Central, which operates in the North East, suspended operations entirely. LNER on-train capacity was just 19% of normal to comply with social distancing. Rail travel on Fridays and weekends was and remains high, likely because of strong leisure travel on the ECML.

Road traffic flows through the region in 2020 are 15% lower than the previous year. This results in improved journey times and reduced congestion.

The pandemic has also had an impact on the transportation of freight by sea, with tonnage carried by the Port of Tyne and Port of Sunderland in 2020 down on the previous year. However, during the early stages of the pandemic the Port of Blyth was distributing 3 million essential consumer products to our supermarkets per day.

	Port of Sunderland Tonnage	Port of Tyne Tonnage
2019 Q1	0.203244	1.074798
2019 Q2	0.228328	1.378904
2020 Q1	0.171276	0.918792
2020 Q2	0.2217451	0.978956

There were no passenger flights from Newcastle International Airport during May 2020 and since then growth has been suppressed by quarantine policies. Recovery to pre-Covid levels is expected to take a number of years.

Where we want to be

Investing in and supporting the transport assets that enable us to connect with the rest of the world has never been a higher priority for the North East. Quality infrastructure will make for reliable, fast journeys with connectivity into national and international freight and passenger networks. This network will be the enabler to sustainable growth and opportunity, and to the North East being an outward-looking economy attracting trade, investment and visitors from across Europe and the world.

We continue with our ambitious plans for more, faster and better rail connectivity to the rest of the UK and we will continue to work closely with the Government to seek maximum benefits for our region. We are pressing Government for urgent investment in the ECML over the period 2024-34 (particularly to provide four tracks in the North East), together with a connection to HS2 and development of the Northern Powerhouse Rail Network, to ensure our region is a strong part of our nation's rail network and does not get left behind. We strongly support

Connectivity beyond our own boundaries

construction of the eastern leg of HS2 which we view as complementary to investment in the East Coast Main Line and development of Northern Powerhouse Rail. All three schemes, supported by our station gateway sites programme, are essential for this region and, if not achieved, the separation between the North East and the rest of the UK will only be exaggerated, with negative economic consequences as businesses locate away from the North East in favour of places with better connections.

It is crucial, however, that the link from HS2 to the ECML is built, and that the ECML between York and Newcastle receives a major upgrade between now and the opening date for HS2b/ NPR– if the programme is not delivered in full then we are concerned that a truncated HS2 Phase 2b may report negative economic impacts.

Making sure that freight can travel sustainably by rail is also an important element of our Plan. This means ensuring a fair allocation of network capacity and delivering additional capacity where required including facilities for transfer of goods between road and rail.

This approach also applies to roads, with a package of works at a local level that supports the investments planned on the Strategic and Major Road Network to free up space for those who need it most and boosting efficiency and journey times for road freight and road-based public and sustainable transport.

Additional road capacity is essential to help freight traffic continue to move efficiently; the National Infrastructure Commission has highlighted that increasing road congestion costs the freight industry £3.7 billion annually. Moreover, due to drivers' hours regulations and the fact that diversionary routes are not always suitable for large vehicles, congestion and disruption on the road network can have a more serious effect for freight vehicles than for other types of traffic. The trend towards home deliveries of goods, accelerated by the pandemic, is also leading to growth in freight traffic that could add to further congestion if not addressed.

The East Coast Main Line – vital to our region, in urgent need of investment

The A1 is our main road link to Scotland and is vital to our economy. However, sections of the route north of Newcastle are single carriageway, which results in congestion, longer journey times, resilience and safety concerns. Highways England are progressing plans to upgrade the route to dual carriageway as far as Ellingham in Northumberland. We are fully supportive of this and want to see the dualling extend to the Scottish Border and beyond together with important servicing, information and safety upgrades.

We will support our seaports and airport to grow their markets in a sustainable way that minimises greenhouse gas emissions.

This Plan supports the future development of Newcastle Airport and is aligned with its target to become a Net Zero Airport by 2035, including plans for solar energy and electric vehicles.

The region has an ambitious proposal for a 'virtual free trade zone' which would boost international trade, employment and economic growth for our region.

We will ensure improved sustainable access to our airport and seaports to minimise congestion and environmental impacts, including the provision of electric vehicle infrastructure and enhanced public transport.

Key insight

Our Ports and Airport have published their own strategic plans setting out their long term visions which are centred around growing the North East's economy. These include the Port of Tyne's 'Tyne 2050' and Newcastle International Airport's 'Masterplan 2035'. Our Transport Plan is fully aligned with these plans. Highways England are working on Route Strategies and we will feed in information.

Policy Statement

We must work with partners to make movement of people and goods to and from our region, more efficient and greener.

We must work with partners to strengthen connections from destinations in our region to everywhere in the UK and beyond.

Research, Development and Innovation

Technological advancement is inevitable during the timescale of this Plan. Our region, well placed through its academic, clean energy and advance manufacturing sectors, can influence this evolution, potentially using its transport assets as a test bed.

eCargo bike – North Tyneside Photo credit: John Millard

Background

Transport offers challenges to solve and opportunities to grasp. Zeroing emissions, reducing fares, improving information, promoting active travel and making journeys safer are just some of the opportunities it offers to innovators.

Continuous change in customer preferences, transport technology and development mean we need to adopt the best innovations available elsewhere and develop new transport products and services of our own, not just to improve our transport network, but to boost economic growth by selling them worldwide. This process must be customer-oriented, so we must produce what is needed, not try to make people have what we can produce.

Our starting point

Regional assets such as the National Innovation Centre for Data, National Innovation Centre for Ageing and PROTO provide us with outstanding capability in the field of analytics, enabling us to identify transport challenges to solve.

Sectors such as digital transformation and promoting clean energy give us aptitude to develop solutions and manufacture products which will be applied to evolve new methods of work.

Our network is the backdrop to live trials. A flavour of these currently underway include a connected and autonomous project led by Sunderland Council, which will trial the use of 40 tonne trucks to deliver assembly at the Nissan plant as part of a proof-of-concept, and the Metro ticketing application in which customers will be able to store their tickets and season tickets on their mobile. The trial will also enable customers to tap in and out of the stations making their journeys much easier. In North Tyneside, small businesses are benefiting from a fleet of electric cargo bikes to deliver their products to communities.

Industry continues to demand evolved technology and innovators speak openly of the possibilities that may come online during the currency of this Plan.

"There has never been a better time to create a faster, more dependable and environmentally friendly method of transporting medical supplies."

(quoted in The Independent 17.10.20}

Drones have already transform a range of industries and activities, especially deliveries. Already a reality for shoppers in parts of Asia, the service is set to be worth £42 billion in the UK alone by 2030. The US-based Aerospace Industries Association suggests that drones will be used for short-haul, low altitude freight deliveries outside cities from 2025; long-haul cargo flights by the mid-2030s and then passenger flights by 2040.

Hyperloop is a proposed mode of passenger and freight transport, comprising a sealed tube or tubes through which a 'pod' containing passengers, freight or both would be propelled substantially free of air resistance or friction. The concept aspires to travel at airline or hypersonic speeds while being very energy efficient, drastically reducing travel times with virtually no atmospheric pollution.

hyperloop image to be inserted prior to Consultation

Caption...

Where we want to be

We want to embrace new technologies, whether they are developed here or further afield. This transport plan should also provide opportunities for North East innovators to accelerate us towards our objectives.

Working with the North East LEP, we consider launching a series of innovation challenges once the transport plan is live, which could include:

- How do we get the cost of power to our network down, understand what the market-led solutions are, and where the public sector need to step in;
- Effectively implementing 5G as an enabler for transport;
- What can we do about street lighting as a solution for personal security as well as road safety in an affordable and eco way;
- How do we empower people to use the transport solution that is already there.

Policy Statement

We will embrace new technologies to meet our transport objectives and set innovation challenges to industry, creating new opportunities with our network as the testbed.

Our call to action

We must deliver schemes and initiatives if we are to achieve the objectives of this Plan.

This section of the Plan sets out our emerging proposals for interventions on our regions transport network. It contains a mix of potential projects. Some are pan regional, designed to touch every corner of the North East; many are targeted, place specific physical interventions. They are aligned to specific work packages, derived from the policy pages earlier in this Plan.

For the most part, they will be recognised as transport schemes; however investment in these projects will enable significant benefits to society, the economy and environment, benefits which are identified in the outcomes section.

Schemes are assessed against their ability to meet the Plan's objectives and range of reasonable alternatives to meet the Plan objectives and vision is presented in the Integrated Sustainability Appraisal (ISA) which accompanies this Plan. The appraisal seeks to identify any impact of our programme on factors including biodiversity, water and soil, the historic environment, landscape, air quality and noise, climate change and flood risk, population, human health, equalities and rurality. Mitigations will be found where necessary to ensure that the impact of this Plan remains overwhelmingly positive.

The region has considered a range of future travel scenarios to look not just at the response to Covid-19 but additionally longer-term journey horizons.These scenarios have been developed using the Government Office for Science Futures Toolkit, which provides a flexible and structured approach to thinking about future scenarios and future proofing across all aspects of Government. The scenarios also draw upon work undertaken by Government Office for Science (GOS) and Transport for the North (TfN).

The interventions selected demonstrate a plan to deliver our vision and objectives. Individually they will be subject to further scrutiny, consent and assurance processes. As such there will be further opportunities for comments on the individual components of this Plan. **We are keen to hear from stakeholders on whether this is the right package as we prepare the Plan for launch in March 2021.**

We have set out the programme of interventions into seven work packages and these are set out across a 15 year time horizon. These are:

- Making the right travel choice;
- Upgrading North East active travel infrastructure;
- Public transport: travelling by bus, ferry and on demand public transport;
- Public transport: travelling by local rail and Metro;
- Private transport: travelling by car and using road infrastructure;
- Maintaining and renewing our transport network; and
- Connectivity beyond our own boundaries.

Vision and objectives

What is our vision?

Moving to a green, healthy, dynamic and thriving North East

What are our objectives?

- **Carbon neutral North East**
- **Overcoming inequality and grow our economy**
- **Healthier North East**
- **Appealing sustainable public transport choices**
- **Safe, secure network**

Vision and objectives

What options might we consider to deliver our vision and objectives?

- Encouraging people to make journeys by sustainable means.
- Encouraging active travel through behaviour change initiatives.
- Delivering affordable services.
- Expanding the reach of the active travel, public transport and road networks.
- Reducing adverse environmental effects.
- Reducing accidents.
- Increasing speed, frequency and reliability of the public transport network and highways.
- Reducing severance of major infrastructure projects.
- Understanding demand associated with future travel scenarios.
- Working with partners to connect people and places to the wider North, UK and internationally.

How we will monitor success? Our Key Performance Indicators

What options might we consider to deliver our vision and objectives?

- Increase sustainable transport mode share.
- Increase accessibility of public transport.
- Improve greener journeys by reducing carbon output per capita.
- Increase the take up of ULEVs.
- Improve Air Quality.
- Improve Network Performance.
- Managing Motor Vehicle Mileage.
- Improving Road Safety.

Outcomes we can achieve

What options might we consider to deliver our vision and objectives?

- Easier access to, education, skills, and higher value jobs.
- Health levels at least equal to other regions in the UK.
- Better connections from the North East to national and international destinations.
- A transport network with improved environmental credentials including mores sustainable journeys, better air quality and reduced carbon output.
- A safer and more reliable integrated transport network which is more intuitive for customers with a sustainable cost base.
- Direct job opportunities in the transport and infrastructure sectors.
- Enabling new development and housing sites and improving accessibility to existing communities.

Call to action – timeline (strategic interventions)

We have an ambitious but deliverable timeline shown below which will lead us towards delivering our vision of a Moving to a green, healthy, dynamic and thriving North East and enable us to meet our objectives.

This timeline of interventions demonstrates the dates we can achieve and informs our development and delivery planning. This is subsequently expanded through the delivery maps on pages 51-54.

This programme is live and will be regularly updated through changes to the Implementation Plan which will be developed to accompany the final plan in March 2021.

Potential schemes to get us there ↓	2020	2025	2030	2035
Connectivity funding	Transforming Cities Fund schemes delivered by 2023 across the region Prioritising schemes from the Blueprint	Stimulating growth through connecting growth areas (rolling programme)	Sustainable funding programmes for scheme delivery and development	
Public transport: travelling by local rail and Metro	New Metro fleet and flow delivered Timetable enhancements 21/22 and Northumberland Line opens	System enhancements / station refurbishments. Incl Monument, Sunderland, Cramlington and Metro in North and South Tyneside (2025- 2030) Frequency and line of route enhancements (2026)	First trains run on extensions (2029) incl Leamside services to IAMP New stations opening East Gateshead and Gilsland (2031/2)	Further Metro and local rail extensions implemented incl. the remainder of Leamside and the Cobalt Link (2035) Enhanced rail fleets and new line openings including to Consett (2035)
Active travel	Capitalising on the growth in active travel through targeted measures (now-2025) Emergency active travel measures strengthened with quick wins.	Local cycling and walking delivery and Regional Active Travel Network with a segregated signed network takes shape (2027)	Significant programme of road space reallocation (2030)	Onward maintenance and monitoring of the network with targeted enhancements
Making the right travel choice	Capitalising on the growth in active travel through targeted measures (now-2025) Information and ticketing (integrated and contactless) delivered by 2025 with contactless on Metro first	Using Information to shape how we plan and monitor (models and UTMC) – by 2027		Innovation exercises on future fuels, autonomous and connected vehicles (2030)
Public transport: travelling by bus, ferry and on demand public transport	Bus Measures. 10 x bus corridors across the region upgraded by 2023 New cleaner buses delivered (rolling programme)	Micromobility solutions trialled and implemented (urban and rural) 2030 Bus asset renewal and safety initiatives, with DRT trials and P&R sites (2026)	Bus infrastructure investment (next phase, including stations and stops (2032)	Renewal of ferry infrastructure (Piers and Vessels) 2032 Next Phase of Demand responsive transport delivered (2032)
Private transport: travelling by car and using road infrastructure	Roads Strategy in place in 2021 with electric vehicle charging expansions region wide by 2024	Major road network schemes including Blyth Relief and Sunderland Strategic Transport Corridors and pinch point schemes delivered (2024/5)	Upgrades of Urban Traffic Management Centres and signals to maximise efficiency (2030)	Continued focus on efficiency and safety schemes on the network – connectivity study undertaken looking at challenges including opportunities for river crossings. (2030)
Connectivity beyond our own boundaries	Initial Strategic Road investments including the A1 Western Bypass delivered by 2025 Station improvements and frequency improvements on long distance services – Durham Coast and Tyne Valley	Business case acceleration of a range of SRN proposals including: A1 to Scotland; Whitemare Pool; A69 – Dualling / Safety enhancements; Airport Link Road & A19 Moor Farm and Seaton Burn Line of route study improvements delivered by 2030 ECML local service improvements	RIS 2 and 3 schemes delivered by 2030 (schemes listed to the left)	A1 and A69 upgraded ECML upgraded and HS2 and NPR services start calling at the region (2033)

Shovel ready schemes – delivery plan

Delivery of these schemes can commence at short notice

Private transport: travelling by car and using road infrastructure

Overall Approach: We will expand the EV charging network in the region, part of a multi-phase approach to deliver an electric revolution and play a leading national role in the transition towards zero carbon mobility. We will invest in enabling infrastructure for our growth sites and town centres, part of a phased approach to unlocking our growth creating direct and indirect jobs embracing digital construction and solve congestion at pinch points through targeted action

Specific schemes that will get us there	
100	Enforcement of 'engine idling' at taxi ranks and bus stops
142	Creating Electric Vehicle charging points across Nexus car parks
143	Installing Solar panels at Nexus infrastructure
179	A688 Eastern Access Road and car park at Jocks Bridge
208	Expansion of Electric Vehicle chargers and hubs across the region

Upgrading North East active travel infrastructure

Overall Approach: We will invest in improvements outlined in our recent Transforming Cities Fund proposal transforming active and public transport across the region, delivering cycle parking solutions regionwide and implementing permanent solutions for emergency active travel measures

Specific schemes that will get us there	
6	Small scale cycling improvements (Gateshead)
23	Newcastle Urban Core Pedestrian and Cycling Improvements
25	Improvements to cycling and walking routes in North Tyneside
98	Improving strategic links between University of Sunderland and Sunderland city centre
209	Delivering the residual Transforming Cities Fund ask
217	Permanent solutions for emergency active travel measures
241	Strategic Transport Corridors: All user improvements along strategic corridors in South Tyneside
248	Sponsoring cycle training in schools
144	New cycle parking hubs at Metro and bus stations

Maintaining and renewing our transport network

Overall Approach: We will seek sustainable transport maintenance funding, target decarbonisation solutions and maximising technology for asset management. This will keep the network operational for all

Specific schemes that will get us there	
16	Tyne Bridge and Central Motorway Major Maintenance
35	Northumberland – Rural Road Strengthening Works
96	Reducing the highway maintenance Backlog
97	Upgrading existing traffic signals in Sunderland
121	Road network maintenance
122	Highway structures major maintenance
162	Highway Maintenance Backlog
211	Revenue and Maintenance Funding for Metro, Bus, Rail, Ferry and Highways
268	Transport Maintenance

Connectivity beyond our own boundaries

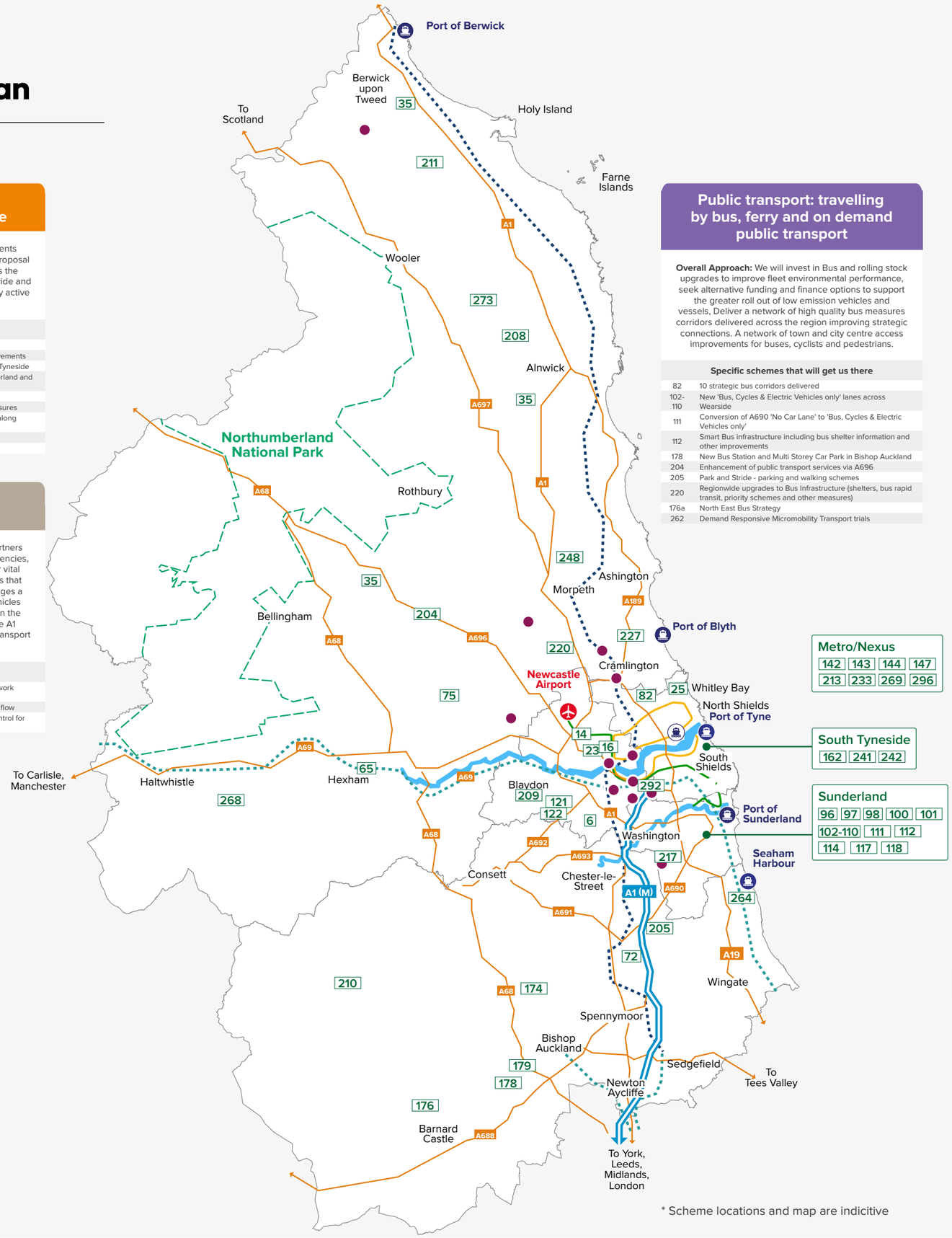
Overall Approach: We will work closely with partners including Central Government and its delivery agencies, Transport for the north and operators to deliver vital national and international connectivity upgrades that improves capacity including for freight, encourages a switch to alternative fuels including Electric Vehicles and delivers a highway pinch points package on the major and strategic road network including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Roads

Specific schemes that will get us there	
227	Accelerating the business cases for major road network improvements
292	A194 White Mare Pool Interim Measures to improve flow
276	Upgrades to the two Urban Traffic Management Control for command and control of the network

Making the right travel choice

Overall Approach: We will invest in Introduce a number of 'School Streets', Low traffic neighbourhoods across the region as well as targeted placed approaches and Comprehensive cross modal ticketing, information and planning services, This will encourage improved journey choice.

Specific schemes that will get us there	
72	Durham City Urban Traffic Management Centre upgrades
75	Enhancing Public Transport passenger information
101	Installation of environmental monitoring systems at traffic junctions
112	Creation of a digital Smart City Parking System
114	Smart Bus infrastructure including bus shelter information and other improvements
117	Installation of vehicle sensor technology and real time road usage software
118	Dynamic route management - providing journey time data from multiple sources
147	Rationalise local rail and Metro fares and ticketing
174	Go Smarter to School - sustainable travel projects
210	Regional Transport Model and Monitoring package
213	Bringing contactless payment to Metro
242	Delivery of School Streets approach - focus on reducing car trips and improving the environment
273	Comprehensive ticketing and information package - including single smart transport payment system



Public transport: travelling by bus, ferry and on demand public transport

Overall Approach: We will invest in Bus and rolling stock upgrades to improve fleet environmental performance, seek alternative funding and finance options to support the greater roll out of low emission vehicles and vessels, Deliver a network of high quality bus measures corridors delivered across the region improving strategic connections. A network of town and city centre access improvements for buses, cyclists and pedestrians.

Specific schemes that will get us there	
82	10 strategic bus corridors delivered
102-110	New 'Bus, Cycles & Electric Vehicles only' lanes across Wearside
111	Conversion of A690 'No Car Lane' to 'Bus, Cycles & Electric Vehicles only'
112	Smart Bus infrastructure including bus shelter information and other improvements
178	New Bus Station and Multi Storey Car Park in Bishop Auckland
204	Enhancement of public transport services via A696
205	Park and Stride - parking and walking schemes
220	Regionwide upgrades to Bus Infrastructure (shelters, bus rapid transit, priority schemes and other measures)
176a	North East Bus Strategy
262	Demand Responsive Micromobility Transport trials

Public transport: travelling by local rail and Metro

Overall Approach: Overall Approach: We will build on existing investments to Metro fleet and infrastructure by investing in the next generation stations and interchange upgrades programme that test and trial design and technology solutions. We will enhance Local rail timetable improvements to connect undeserved communities and Rationalise local rail and Metro fares and ticketing reacting to Covid-19 changes. We will deliver enhancements to CCTV and safety and security on the transport network.

Specific schemes that will get us there	
14	Regent Centre Interchange Upgrade
65	Improved facilities at information at North East stations
233	Ticketing, fares and zone restructuring to meet the new travel patterns post COVID
264	Delivery of North East Connect and improving calling patterns of local rail services
269	Safety and Security plans for Metro
296	Refresh of Metro and Local Rail Strategy
205	Park and Stride - parking and walking schemes
220	Regionwide upgrades to Bus Infrastructure (shelters, bus rapid transit, priority schemes and other measures)
176a	North East Bus Strategy

Map key

- Ports
- Port of Tyne – Ferry Terminal
- Newcastle International Airport
- Tyne and Wear Metro
- Railway Line
- East Coast Main Line
- Motorway
- Major Road Network
- National Park

* Scheme locations and map are indicitive

Schemes for delivery in the next five years – requiring funding to be accelerated – delivery plan

Delivery of these schemes can commence at short notice

Private transport: travelling by car and using road infrastructure

Overall Approach: We will target approaches to reduce severance of the road network with new bridges and delivering streets for people. We will also seek to deliver enabling and next generation connectivity to unlock further strategic growth sites. We will Project Managing a programme of schemes to Improve junction efficiency and address network pinch points , including intelligent road network to reduce delays. We will seek to introduce freight consolidation solutions for the region.
the region

Specific schemes that will get us there	
2	A692 all user improvements
3	A694 all user improvements
4	A167 all user improvements
17	All User Improvements on the Urban Core Distributor Route in Newcastle
18	Ponteland Road Corridor al user upgrade
19	Scotswood Bridgehead junction improvements in Newcastle
20	Rotary Way junction upgrade to facilitate growth
28	Upgrade of the A187 to facilitate growth at the North bank of the Tyne Enterprise Zones
29	A191 East - A192 Foxhunters highways improvements
34	Blyth Relief Road
40	"Sunderland Strategic Transport Corridor SSTC4 - Upgrades to Wessington Way / A19 junction
41	Sunderland Strategic Transport Corridor (SSTC5) Port to the City
42	"A690 all user highway improvements"
43	St Michael's Way / High Street West junction improvements
45	A182 Route Action Plan including Congestion pinch point junction schemes;
74	Air Quality systems upgrade in Tyneside
81	Vaux Site car park
86	IAMP Transport Infrastructure Phase 2 - Dualling of the A1290 and Public Transport enhancements
92	Hetton Downs Access Road
93	Penshaw / Philadelphia / Sedgeletch Link Road
94	Queen Alexandra Bridge southern bridgehead junction
95	Toll Bar Bus priority improvements
99	Energy Generation and Storage Projects in Sunderland
129	A195 Follingsby Roundabout Improvements
134	Newbiggin to Ashington link road
135	Stobhill to Loansdean link road, Morpeth
136	New East - West link road, Cramlington
137	Lancastrian Road Link, Cramlington
164	Commercial Road Strategic Corridor Improvements
165	A185 Dualling
180	Capacity improvements to junctions around Bishop Auckland
183	A693 Stanley Bypass
206	Access to the HGV Compressed Natural Gas (CNG) facilities in Gateshead.
212	Accelerating a series of junction upgrades across the region to stimulate economic growth.
216	A193 Wallsend Road Bridge deck replacement and repairs
277	A regionwide programme of road network upgrades to accommodate growth across the region
278	Regionwide - Maximising the efficiency of the existing network with pinch points addressed
279	Regionwide Addressing Severance of the Road network through targeted approaches
280	Integrate taxi services with other public transport provision
285	Freight consolidation
286	Using technology to improve connectivity to our Ports and Airport
287	Increased Lorry Parking and Servicing opportunities across the region
294	Strategic Corridor Improvements between Testo's and Boldon Asda junctions
295	Strategic Junction Improvements at Abingdon Way / Hedworth Lane Junction

Upgrading North East active travel infrastructure

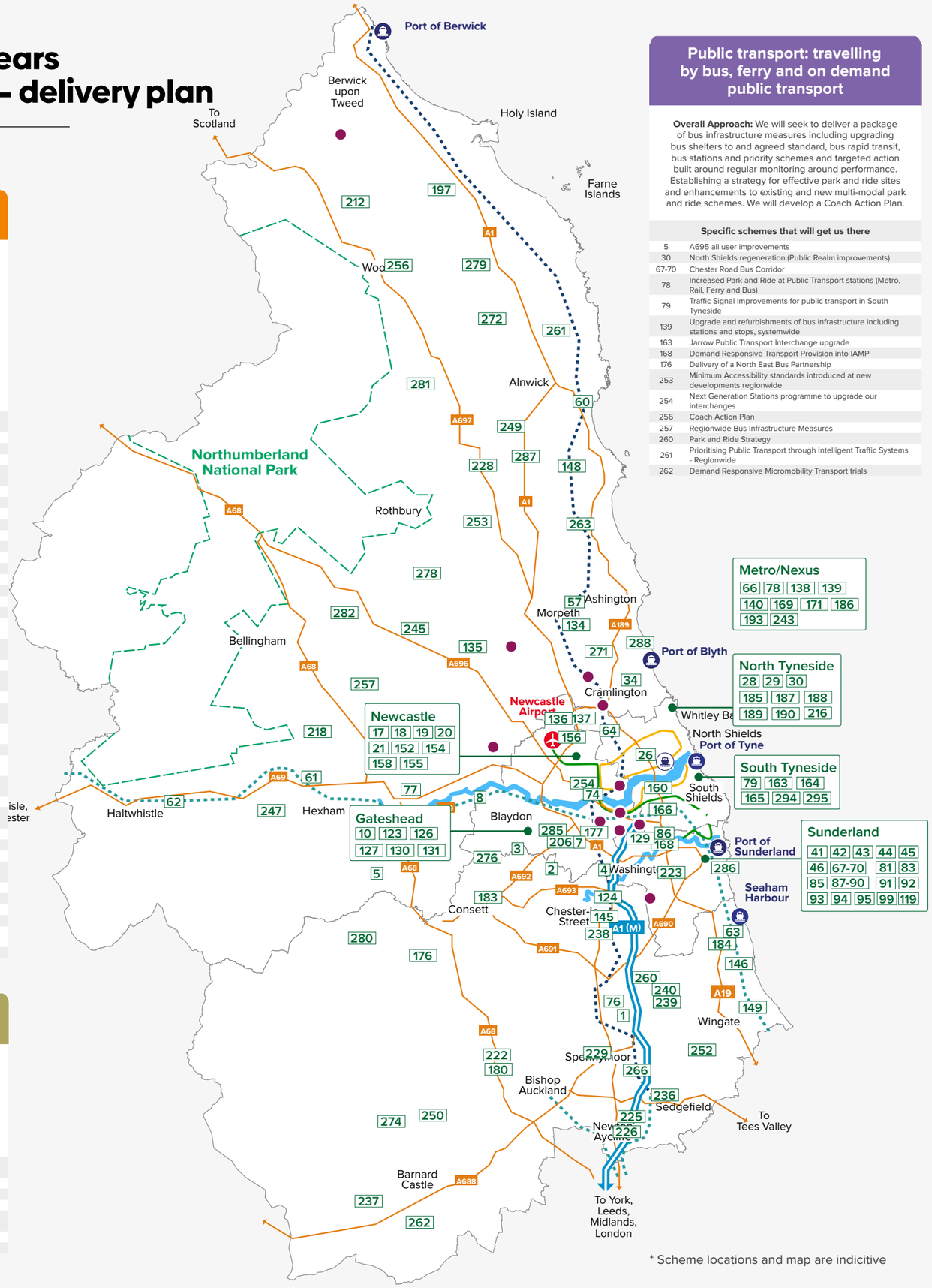
Overall Approach: We will targeting an Increase in Active Travel across the region by introducing a new Active Travel Strategy, which leads to the delivery of a connected grid of active travel interventions including cycle parking strategies delivered to the highest design standards between destinations across the region. We will implement best practice by looking at Demonstrator projects for e-cargo bikes and sharing schemes and will make targeted active travel interventions on strategic corridors across the region including local bridges. A common approach to monitoring and evaluating use on the active travel network, linked to a placed based management approach will be introduced.

Specific schemes that will get us there	
1	Walking and cycling improvements in Durham City Centre
7	Gateshead Central Integrated Transport Improvements
8	Blaydon station to town active travel link
21	Cycle City Ambition 3 programme to invest in corridor improvements
26	All user roads and junction upgrades around the A19
46	Improving Strategic Cycle Networks in Sunderland
83	Vaux-Stadium Village Footbridge
85	Stadium Village -St Peters Subway
123	Gateshead Local Cycling and Walking investment proposals
124	Portobello to Washington footbridge access improvements
126	High Spen to Greenside cycle route
127	Upgrading the National Cycle Routes in Gateshead
130	New Derwent Walking and Cycle Crossing at Metrogreen
131	Derwent Cycle Route Improvements
146	Upgrades to Active travel routes to all NE rail stations
152	Low Traffic Neighbourhoods (Citywide)
154	Central Newcastle - Walking, Cycling and Public Transport improvements
158	Delivery of local walking and cycling improvements across Newcastle
160	Improved Cycling Links to Tyne Pedestrian Tunnel
184	Improvements to the national Cycle Network Route 1 in County Durham
185	A191 all user improvements
187	Improving Wallsend town centre public realm delivery and managing traffic flows
188	Improving Whitley Bay town centre public realm delivery and managing traffic flows
189	Local Cycle and Walking improvements across North Tyneside
190	Improvements to strategic cycling and walking routes in North Tyneside phase 2 (A192 and A1058)
190	Improvements to strategic cycling and walking routes in North Tyneside phase 3 (A186, A193 and B1318)
236	A689 walking/cycling improvements
237	Bishop Auckland to Barnard Castle disused railway line cycling improvements
238	Great North Cycle Route improvements in County Durham
239	A177 cycling improvements, linking Coxhoe with Net Park
240	Belmont to Newton Hall cycle route
245	Targeting an Increase in Active Travel across the Region Active Travel Strategy leading to a active travel grid of improvements
246	Access to Active Travel Equipment scheme
247	Active Travel Ambassadorial Programme
249	Improved mapping and promotion of the Active Travel network
250	Active Travel Evaluation
251	Integrating health and transport planning with active travel prescriptions
252	Accessibility Audits Fund

Maintaining and renewing our transport network

Overall Approach: We will seek to ensure targeted investment in digital connectivity is included when making physical alterations to the network, we will bolster the quality of our active travel network through a Hotspot and Accessibility Audit Programme , will make continued improvements to our road network for all users and communities and will upgrade rail and Metro signalling so it can continue to operate successfully.

Specific schemes that will get us there	
10	Traffic signals repair across Gateshead
155	Flood and Climate Resilience (Newcastle citywide)
193	Upgrade of Switchgear at Nexus Substations
218	Hotspot funding to improve conditions for pedestrians and cyclists
229	Burnigill Bank Maintenance
282	Increasing Strategic Maintenance budgets



* Scheme locations and map are indicitive

Public transport: travelling by bus, ferry and on demand public transport

Overall Approach: We will seek to deliver a package of bus infrastructure measures including upgrading bus shelters to and agreed standard, bus rapid transit, bus stations and priority schemes and targeted action built around regular monitoring around performance. Establishing a strategy for effective park and ride sites and enhancements to existing and new multi-modal park and ride schemes. We will develop a Coach Action Plan.

Specific schemes that will get us there	
5	A695 all user improvements
30	North Shields regeneration (Public Realm improvements)
67-70	Chester Road Bus Corridor
78	Increased Park and Ride at Public Transport stations (Metro, Rail, Ferry and Bus)
79	Traffic Signal Improvements for public transport in South Tyneside
139	Upgrade and refurbishments of bus infrastructure including stations and stops, systemwide
163	Jarrow Public Transport Interchange upgrade
168	Demand Responsive Transport Provision into IAMP
176	Delivery of a North East Bus Partnership
253	Minimum Accessibility standards introduced at new developments regionwide
254	Next Generation Stations programme to upgrade our interchanges
256	Coach Action Plan
257	Regionwide Bus Infrastructure Measures
260	Park and Ride Strategy
261	Prioritising Public Transport through Intelligent Traffic Systems - Regionwide
262	Demand Responsive Micromobility Transport trials

Public transport: travelling by local rail and Metro

Overall Approach: We will target the upgrade of Metro and Rail stations across the network with timetable improvements and will seek improvements to local rail services through a North East rail concession that leads to calling patterns and infrastructure regionwide

Specific schemes that will get us there	
57	Northumberland Line - Opening
61	Expanding the number and role of Community' stations
63	Local rail Diesel fleet replacement – regional
64	Delivering a North East Rail Concession
138	Small Metro Station Upgrades systemwide
140	Airport Metro Station Refurbishment
145	Increasing local rail frequency in Durham
148	Introducing earlier and later local rail services systemwide
149	Small scale local rail reliability measures networkwide
169	East Boldon Metro Station Park and Ride Enhancements
171	Jarrow Metro Station Park and Ride Enhancements
186	Coast to Airport through train - Metro service
263	Line of Route Audits
266	Freight Gauge Clearance

Making the right travel choice

Overall Approach: We will invest in Ambassadorial programme and a region wide behavioural change initiative to cement best practice; we will introduce new payment technologies across our modes of transport and radically transform information provision. We will upgrades our Urban Traffic Management Control functionality including utilising traffic infrastructure and monitoring capabilities to prioritise public transport services and will develop and test new smart place initiatives across the region.

Specific schemes that will get us there	
76	Durham City Urban Traffic Management Centre upgrades
77	Regionwide Travel behaviour change package
87-90	Sunderland City Centre ANPR cameras
91	Queen Alexandra Bridge (A1231) / Camden Street Gyratory improvements
119	Temperature monitoring road sensors
197	Development of a Multimodal smart ticketing solution for the region
221	Deliver a clear Decarbonisation pathway and investment in alternative fuels to fuel our regions economy
222	Revisions to Webtag and Government Greenbook to facilitate greater investment in North East projects including active travel schemes;
243	New payment technologies for Metro and Public Transport
271	Innovation Challenge Fund for Smart Places
272	Regionwide Infrastructure Mapping Application
274	Regionwide mapping and real-time information package for pubic transport
276	Upgrades to the two Urban Traffic Management Control for command and control of the network

Connectivity beyond our own boundaries

Overall Approach: We will work closely with partners to deliver vital national and international connectivity upgrades including introducing free flowing routes to our ports and airport through enhanced connectivity, autonomous vehicles and environmental performance initiatives enabling free and smart port status and Accelerating the business cases for strategic road network studies and completing committed improvements. Includes accelerated economic enabling highway infrastructure.

Specific schemes that will get us there	
60	Improving Rail Connectivity in Northumberland
62	Tyne Valley journey time improvements
66	Integrated and Smart Ticketing project
156	A696/A167 and Airport Junction upgrade
166	A19 Southbound Lane Gain / Lane Drop
177	A1 Western Bypass improvements by Highway England
223	Addressing the severance of major infrastructure working with infrastructure providers; 1b) Revisions to Webtag and Government Greenbook to facilitate greater investment in North East projects including active travel schemes;
225	Autonomous vehicle tests on the strategic network
226	Enhancing the Electric Vehicle offer on the strategic road network
228	Ensuring targeted investment in digital connectivity when making physical alterations to works
288	Ports and Airports Access Strategy
276	Upgrades to the two Urban Traffic Management Control for command and control of the network
276	Upgrades to the two Urban Traffic Management Control for command and control of the network

Schemes for development and delivery in the next ten years – delivery plan

Delivery of these schemes can commence at short notice

Private transport: travelling by car and using road infrastructure

Overall Approach: We will target approaches to deliver enabling and next generation connectivity to unlock further strategic growth sites

Specific schemes that will get us there	
15	Airport Link Road
38	A1068 Fisher Lane dualling
80	Civic Centre Car Park
84	Kier Hardie Way All user improvements
167	A185 / Howard Street Junction Improvements
234	Toft Hill Bypass
235	Barnard Castle Bypass
283	Future Fuels Innovator
293	A184 Corridor Improvements between Testo's and Local Highway Network

Making the right travel choice

Overall Approach: Overall Approach: We will Increase regional capability and capacity in data analytics to support data-led connectivity initiatives including an autonomous vehicle testbed and will develop further smart place solutions.

Specific schemes that will get us there	
71	Regional Intelligent Transport System Package
116	Smart Car Parking (Entry/Exit monitoring)
275	Regional Autonomous Vehicles testbed

Connectivity beyond our own boundaries

Overall Approach: We will work closely with partners to deliver vital national and international connectivity upgrades including delivery of the restoring our railway fund schemes connecting communities to the rail network, Accelerating the business cases for strategic road network studies and major road network improvements, achieving High speed, long distance rail services calling at Newcastle International Airport ECML North of Newcastle - Capacity improvements to allow more frequent local stopping service and a region-wide approach to local rail timetable improvements to connect underserved communities. We will also ensure NE stations high speed ready with enhanced existing and high speed services. East Coast Mainline upgrades to enable High Speed 2 and Northern Powerhouse Rail to fully connect with the region

Specific schemes that will get us there	
22	Newcastle Station : High Speed Ready
31	Upgrades to Seaton Burn/Fisher Lane A1/A19 Junctions
32	Upgrades to Moor Farm Junction
48	Durham Station High Speed Ready
49	A1 North of Newcastle - dualled
51	A19 junction improvements and capacity upgrades in North Tyneside, Sunderland and County Durham
55	Sunderland Station capacity improvements and track layout improvements
56	Durham Coast Line (route upgrade and service improvements)
59	Reopening the Leamside Line between Pelaw junction and Tursdale
181	Upgrades to J60 of the A1M
224	ECML North of Newcastle - Capacity improvements to allow more frequent local stopping service.
289	High Speed Gateways in the region
291	A66 Dualling

Upgrading North East active travel infrastructure

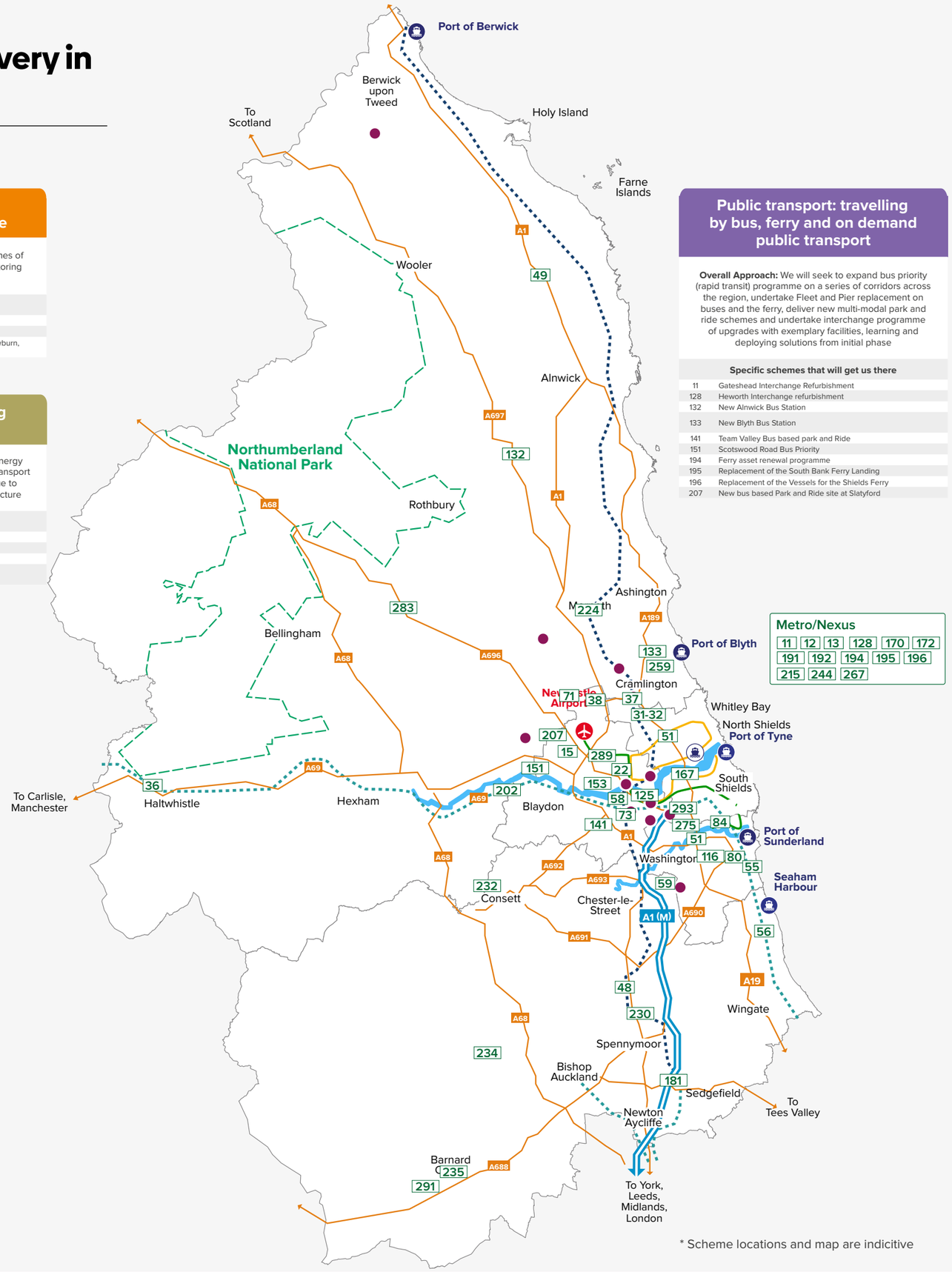
Overall Approach: We will delivering the outcomes of the active travel strategy with continuous monitoring and evaluation

Specific schemes that will get us there	
73	West Tyneside cycle route (bridge over ECML)
125	Bill Quay pedestrian link to a future Metro Station
202	New Bridges to remove severance e.g. Blaydon / Newburn, A194M/Follingsby, A1 Coalhouse

Maintaining and renewing our transport network

Overall Approach: We will explore a regional energy package focused on generating energy on our transport assets, depots, stops and stations and continue to maintain our road and public transport infrastructure

Specific schemes that will get us there	
153	Skinnerburn Road Maintenance
191	Metro Essential renewals (post 2025)
192	Metro Signalling System upgrade
259	A regional energy Package



Public transport: travelling by bus, ferry and on demand public transport

Overall Approach: We will seek to expand bus priority (rapid transit) programme on a series of corridors across the region, undertake Fleet and Pier replacement on buses and the ferry, deliver new multi-modal park and ride schemes and undertake interchange programme of upgrades with exemplary facilities, learning and deploying solutions from initial phase

Specific schemes that will get us there	
11	Gateshead Interchange Refurbishment
128	Heworth Interchange refurbishment
132	New Alnwick Bus Station
133	New Blyth Bus Station
141	Team Valley Bus based park and Ride
151	Scotswood Road Bus Priority
194	Ferry asset renewal programme
195	Replacement of the South Bank Ferry Landing
196	Replacement of the Vessels for the Shields Ferry
207	New bus based Park and Ride site at Slatyford

Public transport: travelling by local rail and Metro

Overall Approach: We will target expanding Metro, rail and bus connectivity through infrastructure corridors with high quality kerbside connected assets. This includes the Local Rail Enhancements package (Cobalt Link, South of Tyne and Wearside Loop, West Newcastle/Gateshead Links, Airport Link). We will Identifying the location of and deliver new railway stations to improve access to our communities and improving the sustainable transport links to others and will continue with the package of Metro station refurbishments.

Specific schemes that will get us there	
12	Upgrading Heritage Stations on Tyne and Wear Metro
13	Monument Metro Station Refurbishment
36	Gilsland Railway Station
37	Cramlington Station improvements
58	East Gateshead Station
170	Tyne Dock Metro Station Park and Ride Enhancements
172	Hebburn Metro Station Park and Ride Enhancements
215	Mill Lane Metro Station
230	Reopening Ferryhill Station
232	Reopening of Derwent Valley Line
244	Murton Gap and Killingworth Moor - New Metro stations in North Tyneside
267	Metro and Local Rail Enhancements and Extensions

Metro/Nexus

11 12 13 128 170 172 191 192 194 195 196 215 244 267

Map key

- Ports
- Port of Tyne – Ferry Terminal
- Newcastle International Airport
- Tyne and Wear Metro
- Railway Line
- East Coast Main Line
- Motorway
- Major Road Network
- National Park

* Scheme locations and map are indicitive

Schemes for development and delivery beyond 10 years – Delivery plan

Delivery of these schemes can commence at short notice

Private transport: travelling by car and using road infrastructure

Overall Approach: We will target approaches to deliver enabling and next generation connectivity to unlock further strategic growth sites and investigate gaps in the network, including river crossings and dedicated bus only routes

Specific schemes that will get us there	
24	Investigating a new Strategic River Crossing
33	Ponteland Relief Road
39	Coalfield Area Central Route - Cross Authority project
175	Oyston Street Multi-Storey Car Park
283	Future Fuels Innovator
293	A184 Corridor Improvements between Testo's and Local Highway Network

Public transport: travelling by local rail and Metro

Overall Approach: We will target expanding Metro, rail and bus connectivity through infrastructure corridors deliver New Metro stations and a further package of railway stations

Specific schemes that will get us there	
150	New Metro Station - Ouseburn
157	New PT Route delivered to the West of Newcastle
161	New Metro Station - Boldon
182	Consett to Newcastle Restoring your Railway fund improvements delivered
198	Metro extension - Cobalt and Silverlink
199	Metro extension - Leamside and Wearside loop
200	East Coast Main Line spur to Newcastle Airport
201	Metro extension - West Newcastle / Gateshead including Team Valley and Metro Centre

Connectivity beyond our own boundaries

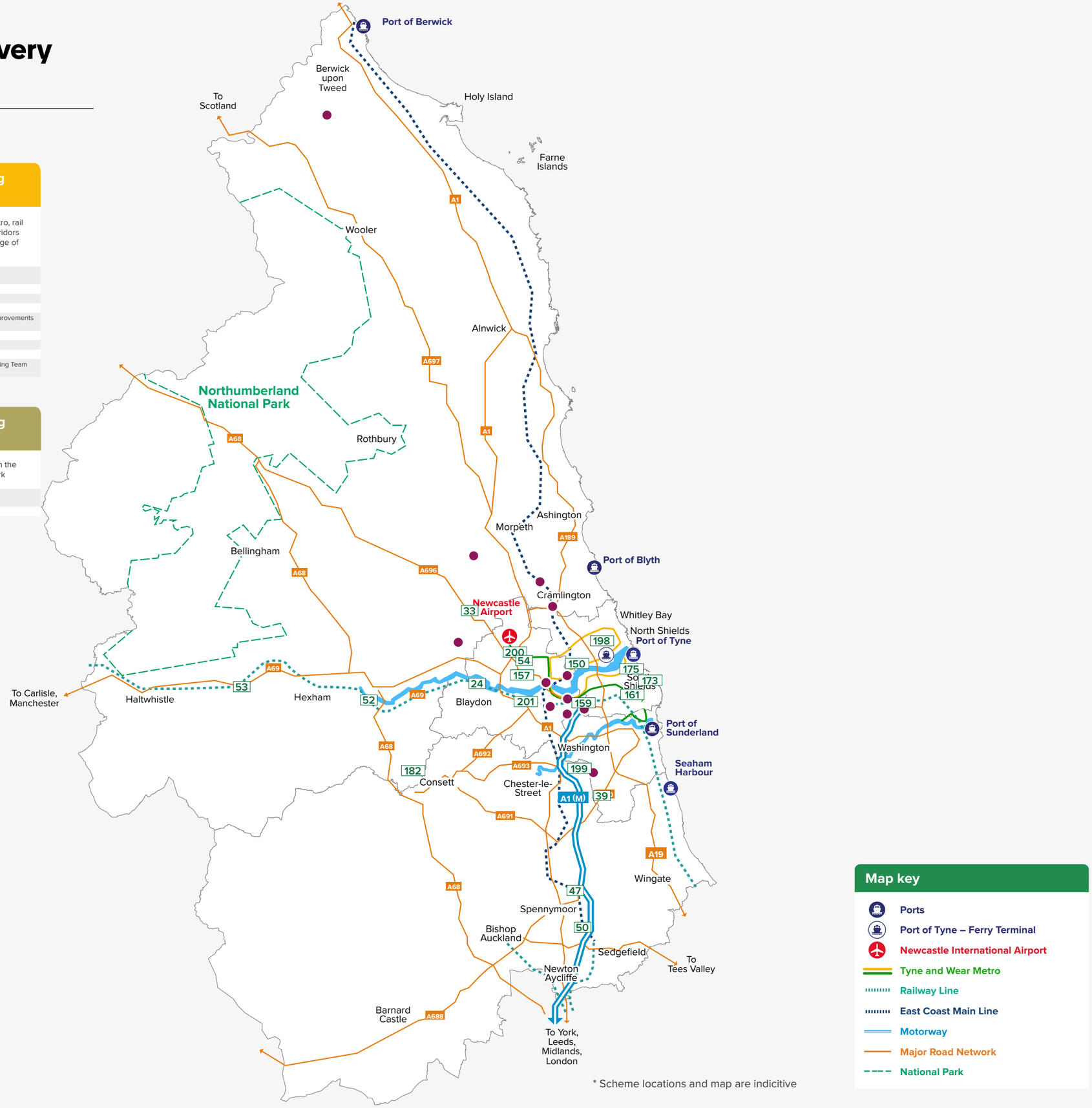
Overall Approach: We will work closely with partners to deliver vital national and international connectivity upgrades including delivering rail and strategic road network improvements

Specific schemes that will get us there	
47	Major upgrade to the East Coast Mainline
50	A1(M) Barton to Chester-Le-Street widening (J56-J57 and J60-J63)
52	Tyne Valley Line (route upgrade and journey time improvements)
53	A69 route improvement, potential dualling and/or climbing lanes and targeted junction improvements (including the B6351 Hexham west junction)
54	East Coast Main Line spur to Newcastle Airport
159	White Mare Pool Slip Road Improvements

Maintaining and renewing our transport network

Overall Approach: We will continue to invest in the maintenance of schemes across the network

Specific schemes that will get us there	
173	A183 Coast Road Realignment Scheme



* Scheme locations and map are indicitive

Map key

- Ports
- Port of Tyne – Ferry Terminal
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- Motorway
- Major Road Network
- National Park

How we will deliver this Plan

The North East region has a well-developed governance structure and associated assurance process in place to agree and deliver transport policies, strategies and investment opportunities. This regional programme is ambitious but deliverable in order to achieve the aims, objectives and principles associated with the Plan. Realising this programme will involve partnership working to ensure the Plan also supports the achievement of objectives nationally, regionally and locally.

We will deliver the programme in collaboration with Central Government and its delivery agents, Transport for the North, the National Infrastructure Commission, transport operators, our constituent local authorities, the North East LEP, businesses, the third sector, and crucially local people.

The Plan will continue to be developed throughout the consultation period. All views and continued support are critical to making it a success.

Governance

These existing structures will be deployed to deliver the Transport Plan. This governance structure and assurance process has successfully delivered our Local Growth Fund monies held by the North East Local Enterprise Partnership (LEP) and is being used for our successful Transforming Cities Fund submission. Fundamental to decision-making for devolved funding from TCF is the new political arrangements in the region with two combined authorities and transport matters decided across the two combined authority areas by a Joint Transport Committee.

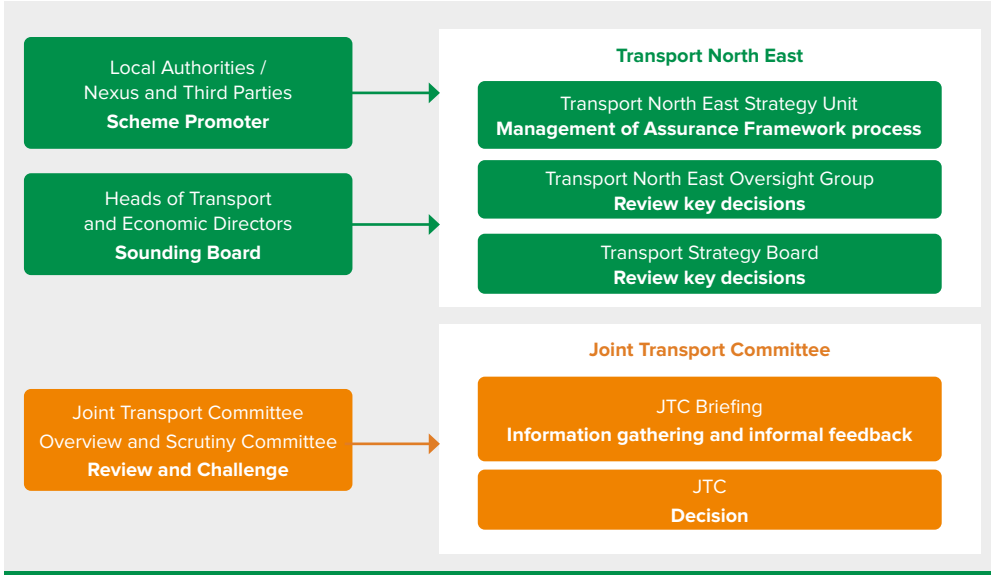


Figure X: North East Governance

Sequencing and prioritisation

A set of interventions has been developed which sit within work programmes demonstrating that delivering strategically and at scale has substantial benefits. The programme has been designed to be flexible to respond to potential funding opportunities. To ensure the Plan demonstrates a robust pipeline, the interventions selected were initially appraised against the Plan vision, objectives and principles to ensure strategic fit. The interventions that form part of the pipeline for the Plan have to be developed to Stage 0 in accordance with the region's assurance framework. This ensures a consistent level of detail is available for all schemes.

Sequencing has been developed into a series of five-year blocks over the lifetime of this Plan, linked to stages of development through the region's Transport Assurance Framework. Crucially, where there is evidence around the need for a project to be developed in a certain timeframe to realise wider benefits, this has been reflected into the framework.

The North East has a track record in selecting and prioritising projects which balance objectives around the economy, environment and society. It is important that the Plan is flexible to respond to funding opportunities and as such a prioritisation process has been designed incorporating the assessment against the vision, objectives and principles that can be deployed based on the fund that is available.

Costs

The main source of funding for transport is from Central Government. Previous rounds of the Local Growth Fund (LGF) and Transforming Cities Fund show how the region can deliver significant packages of investment.

A pipeline shows that the region is committed to delivering a significant change in the transport and connectivity network to benefit the whole region. A £100m fund over the first five years of this programme will set us on our way.

The following funding is required:

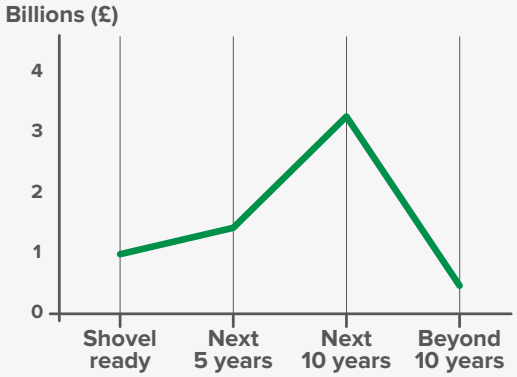
- Revenue funding to keep the North East's public transport network operating, highways and structures in good condition, and subsidising services for those who need it;
- Long term capital funding to invest in new infrastructure and make improvements to the current network.

As this Plan will be updated on a yearly basis, and is over a 15-year time horizon to 2035, it is largely dependent on the availability of funding from Central Government. This means that the exact costs will vary and will need to be carefully monitored. Based on our latest estimates, a funding requirement of £6.1 billion worth of capital investment would fund the entire regional programme. This will grow as further schemes are developed over the lifetime of the Plan. We believe this to be a fair share of national transport funding which should be allocated to our region from Central Government to 2021-2035.

This funding requirement includes schemes that can be promoted and delivered by the region and excludes investment on Network Rail and Highways England infrastructure. It includes the request over the next five years which was established in the Connectivity Blueprint.

How we will deliver this Plan

Package costs



Funding and delivery

The options for delivery of this Plan includes

- National grant funding;
- Local funding
- Prudential borrowing, or private sector funding models

The ability of the region's local authorities and delivery agencies to fund strategic capital and revenue investments at this time against the resources is limited, especially when considering their budgetary positions following a decade of austerity and the impacts of Covid-19.

Prudential borrowing levels of funding is a possibility however the ability to pay this back over time is a consideration given the scale of investment at a sustained period. Importantly funding for capital schemes will generally be met with a decent amount of local match funding showing a commitment from local partners.

We will work with government and partners to establish how the benefits can be unlocked with funding approaches.

Investment in the first five-year period of the programme as demonstrated in the Connectivity Blueprint would help provide a boost to the construction sector in the economy at what may be a difficult economic period.

Funding asks

Our funding asks of Government and its partners to make this Plan a reality include:

- Transport and digital funding of £200m each year to support our region's Covid recovery, as set out in our Connectivity Blueprint;
- A multi-year settlement of £6.1bn over 15 years to commence delivery of the programme;
- Affirm commitment to strategic investments identified in the TfN Investment Programme, including the delivery of upgrades to the East Coast Mainline, rail lines and upgrades to Highways England Infrastructure; Continue to fund local transport;
- Devolve further powers to provide for integrated management of our network;
- Sustain revenue funding to support public services.

Our programme requires an estimated £6.1bn of capital investment, an amount which will grow as further schemes are developed over the lifetime of the Plan.

We believe this to be a fair share of national transport funding which should be allocated to our region from Central Government to 2021-2035

Programme management and assurance

The funding required to realise the ambitions of this Plan is substantial, however the region is fortunate to have a well-established and ratified Transport Assurance Framework in place that has guided the delivery of our devolved £270 million Local Growth Fund for the last six years and was flexible enough to deliver our Transforming Cities Fund programme. The heart of our Transport Assurance Framework is a scalable series of gateways that provide our governance structure with the confidence that each component investment is delivering on the requirements of the programme and delivering the transport plan outcomes that have been ascribed to that investment.

The Transport North East Strategy Unit will manage this programme and will be responsible for sponsoring the development of various strategies and policies that support this Plan, as well as a series of region-wide initiatives.

Implementation of the interventions that form part of this of this Plan will, for the most part, be undertaken by scheme sponsors across the region in local authorities and Nexus.

We have identified projects in this Plan that are national or pan-Northern in nature. To deliver these we will work with organisations including Transport for the North, Highways England, Northern Acceleration Council, Network Rail and others to secure investment.

This Plan is supported across our region

Our Consultation Plan has support from a wide range of stakeholders across the North East.

Connectivity within the region, as well as with the rest of the UK and the world, will be more important than ever to our economy, businesses and the public. Newcastle International Airport will enable the North East to compete in the global marketplace and to attract inbound tourists into the region.

We are very pleased to see this ambitious plan which will help to shape the exciting future of North East transport.

Nick Jones
Chief Executive of Newcastle International Airport

Living Streets supports the vision for this Plan, that focuses on healthy and sustainable ways of getting around. As the UK charity for everyday walking, we share your ambitions to make walking the easy, accessible, enjoyable and safe choice for local journeys and its crucial role alongside public transport for longer journeys. We also welcome the recognition that a combination of infrastructure improvements, alongside engagement with communities and behaviour change, is key to success. We look forward to supporting the North East on it's path to a sustainable transport future.

Jenny Wiles
Regional Director (North), Living Streets

Transport is a vitally important catalyst of local economic growth, connecting people with jobs and places, and customers with goods and services. This comprehensive Transport Plan will enhance the North East's productivity and competitive edge, reduce inequality and crucially, move us ever closer to our carbon neutral goal. It is fantastic to see the North East Joint Transport Committee working with our seven local authorities to deliver transformative and on-demand transport solutions that will change everyone's lives for the better.

Lucy Winskell, OBE
Chair of the North East Local Enterprise Partnership

Without doubt transport is fundamental to our region's future prosperity. Excellent connectivity unlocks so much economic potential. This transport plan is a perfect roadmap for the future of the North East spelling out clearly the benefits of effective links not just around the North East but nationwide for businesses as well as individuals.

James Ramsbotham
Chief Executive of the North East England Chamber of Commerce

Sustrans welcomes the publication of the North East Transport Plan.

Active travel has a significant role to play in the transport mix for the region and evidence shows us that safe infrastructure, separated from vehicles, is key to giving people the confidence to travel by foot or bike.

In partnership with the region's authorities, we will continue to invest in improving the National Cycle Network. Alongside government and local authority investment, we will help make the changes we need to see. This change is critical to making our cities and towns more liveable and equitable.

Safer and more inclusive streets and places for everyone are vital not just in the response to the Covid-19 pandemic but for the health and wellbeing of people across the region and for changing the way we improve our neighbourhoods in the future.

Jonah Morris
Partnerships Manager – North East & Cumbria

Bus operators welcome and support the call for investment to boost our regional economy by placing good local transport at the heart of this.

We look forward to continuing to work collaboratively with partners in playing our part to make public transport an even more sustainable and obvious choice as the best way to connect our communities as an integral part of a post Covid recovery.

Martijn Gilbert
Chair NEbus operator's association

Conclusion

This is not a 'business as usual' transport plan. It sets out the region's transport priorities up to 2035 and how the North East can address our main future challenges, ultimately delivering profound and enduring improvements to our transport network over the next 15 years.

By implementing this Plan in full we will seek to deliver a number of fundamental outcomes that will shape our region for decades to come. These high level outcomes form the basis for the development of the Plan and interface with our vision, objectives and key performance indicators.

2021 – Our regional challenges

- We have a growing population but a one that is ageing over time (2m people, average age 43.7).
- There are major health and income based inequalities. High percentage of economically inactive people in the region are long-term sick (North East: 28.5%, UK: 22.1%)
- Plans for substantial housing growth need to be supported by good public and sustainable transport connections: 109,555 new homes planned by 2036.
- Average productivity in our region remains 16% below the output for England. This has an impact on the potential competitiveness and resilience of our businesses.
- Gross Value Added output rising but challenged by external pressures with a persistent productivity gap GVA of £20,338. This is below the national average of £24,181.
- We have fewer businesses per head and fewer jobs in high skilled occupations than other areas.
- Analysis by IPPR North suggests that in 2019, planned Government on transport in London was £3,636 per person, over seven times more than the £519 per head in the North East.
- A range of transport issues has led to a contrast between rural isolation in our remoter areas and poor air quality and congestion in parts of our cities.
- Commuting to workplaces is dominated by car travel, so congestion is a significant issue on our roads, which affects public transport access and attractiveness, reduces productivity and increases inactivity and vehicle emissions.
- Public transport use is falling over the long-term, despite an increase in bus use in 2019 as a result of investment by bus operators.
- Transport contributes a significant proportion of carbon emissions and we have an air quality problem in our region.
- Cars are our region's most used form of transport and car ownership in the North East is increasing, leading to more traffic congestion and vehicle emissions.

Our vision

"Moving to a green, healthy, dynamic and thriving North East"

Our objectives

- **Carbon-neutral transport**
- **Overcome inequality and grow our economy**
- **Healthier North East**
- **Appealing sustainable transport choices**
- **Safe, secure network**

By 2035, we'll achieve our objectives by:

- Easier access to, education, skills, and higher value jobs .
- Health levels at least equal to other regions in the UK.
- Better connections from the North East to national and international destinations.
- A transport network with improved environmental credentials including mores sustainable journeys, better air quality and reduced carbon output .
- A safer and more reliable integrated transport network which is more intuitive for customers with a sustainable cost base.
- Direct job opportunities in the transport and infrastructure sectors.
- Enabling new development and housing sites and improving accessibility to existing communities.

This Plan will deliver profound and lasting improvements that will shape the North East and its people for decades to come.

To 2035, our region requires an estimated £6.1 billion of capital investment, an amount which will grow as further schemes are developed over the lifetime of the Plan.

We believe this to be a fair share of national transport funding which should be allocated to our region from Central Government to 2021-2035.

We have the ambition, drive and knowledge needed to improve regional transport dramatically over the coming years. We'd welcome your feedback as we look to the future for the North East.

TransportPlan@transportnortheast.gov.uk
transportnortheast.gov.uk

North East Combined Authority

NORTH OF TYNE COMBINED AUTHORITY

Transport North East

Integrated Sustainability Appraisal for the North East Transport Plan 2021-2035

ISA Report: Consultation version

Transport North East Strategy Unit

November 2020

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
V1.0	28th October 2020	Initial draft for client comment	28th October 2020	Nick Chisholm-Batten	Associate Director
V2.0	4th November 2020	Updated draft for client comment	4th November 2020	Nick Chisholm-Batten	Associate Director
V3.0	6th November 2020	Consultation version	6th November 2020	Iain Bell	Regional Director

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Non-Technical Summary

What is an Integrated Sustainability Appraisal?

An Integrated Sustainability Appraisal (ISA) has been carried out to inform the preparation of the emerging North East Transport Plan 2021-2035 (NETP).

ISA is a process that transport authorities such as the North East Joint Transport Committee undertake to inform their transport plans. ISA fulfils the requirements for Strategic Environmental Assessment (SEA)[1] and discharges the duties for Equalities Impact Assessment (EqIA)[2] and Health Impact Assessment (HIA). It also enables issues relating to rural areas to be effectively considered through a rural proofing exercise. Transport authorities use ISA to assess transport plans against a set of sustainability objectives and the baseline developed in consultation with interested parties.

The purpose of the appraisal is to help identify (and so be in a better position to avoid) negative environmental and socio-economic effects. It is also designed to identify opportunities to improve the environmental quality of the North East and the prosperity and quality of life of the region's residents through the NETP. It also helps ensure that equalities and health considerations are considered appropriately through plan development and rural issues are addressed.

What is the North East Transport Plan?

The North East Transport Plan 2021-2035 (NETP) is the first comprehensive transport plan to be developed for the North East region, comprising the local authority areas of Durham, Gateshead, Newcastle Upon Tyne, North Tyneside, Northumberland, South Tyneside and Sunderland. It brings together the region's two local transport authorities (the North East Combined Authority and the North of Tyne Combined Authority) and meets the requirement under the Transport Act 2000 that they produce a single local transport plan via the North East Joint Transport Committee (JTC).

Prior to the NETP, ten-year Local Transport Plans (LTPs) were published in 2011. These did not cover the North East as a whole; instead they presented three separate transport plans focusing on each local transport authority area: Tyne and Wear, Durham and Northumberland.

The NETP, which will comprise an overarching strategy document accompanied by an Implementation Plan, will supersede the LTPs which are set to expire in 2021. It will set out the North East's transport priorities up to 2035 and will communicate opportunities for investment and improvements to the region's transport network. The NETP will form the basis for bids and requests for funding inward transport investment to the region from central government and other sources.

Purpose and content of this ISA Report

This ISA Report, which accompanies the public consultation version of the NETP, is the second document to be produced as part of the ISA process. The first document was the ISA Scoping Report[3], which includes information about the North East region's environment and communities and the 'framework' against which the NETP has been assessed.

The purpose of this ISA Report is to:

- Identify, describe and evaluate the likely environmental and socio-economic effects of the NETP and alternatives; and
- Provide an opportunity for statutory consultees, interested parties and the public to offer views on the ISA process carried out to date.

[1] As set out by the Environmental Assessment of Plans and Programmes Regulations 2004
[2] As public sector organisations, the North Tyne Combined Authority and the North East Combined Authority have a duty under the Equality Act 2010 and the associated Public Sector Equality Duty (PSED) to ensure that the objectives and policy options within the NETP eliminate unlawful discrimination (direct and indirect), as well as advancing equality of opportunity.
[3] AECOM (April 2020) North East Transport Plan: Integrated Sustainability Appraisal Scoping Report

The ISA Report contains:

- An outline of the contents and main objectives of the NETP and its relationship with other relevant policies, plans and programmes;
- Relevant aspects of the current state of the environment and key environmental issues;
- The ISA Framework of objectives and assessment questions against which the NETP has been assessed;
- An assessment of alternative approaches for the NETP;
- The likely significant environmental and socio-economic effects of the NETP;
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects as a result of the NETP; and
- The next steps for the NETP and accompanying ISA process.

The information presented in this ISA Report has been presented through ten ISA themes, as follows:

- Biodiversity
- Water and Soil Resources
- Historic Environment
- Landscape
- Air Quality and Noise
- Climate Change and Flood Risk
- Population
- Human Health
- Equalities
- Rurality

Assessment of alternative approaches for the NETP

Assessing options for six different areas of the North East

A central element of the ISA process is the appraisal of 'reasonable alternatives' for the NETP, which should be undertaken in time to inform development of the draft plan. The appraisal of reasonable alternatives is a key requirement of the SEA Regulations.

To address this requirement, a number of alternative approaches have been considered in relation to the delivery of transport infrastructure in the North East. The assessment of reasonable alternatives has informed the preferred strategy for the NETP.

A central role of appraising reasonable alternatives is to help identify the relative sustainability merits of different approaches to delivering enhanced transport provision in the region. In recognition of the diversity of the region, the approach to the appraisal of reasonable alternatives subdivides the North East region into a number of distinct geographical areas.

The six areas are as follows:

- **Tyne and Wear:** This area covers the main Tyne and Wear conurbation, encompassing much of the local authority areas of Newcastle city, North Tyneside, South Tyneside, Sunderland and Gateshead.
- **City of Durham:** This area covers the city of Durham and its surrounding area.
- **Post-industrial communities:** This area incorporates the former coal-mining and steel working areas in the region. This includes the area around Consett, Stanley and Catchgate; the area around Peterlee, Easington, Shotton Colliery and Blackhall Colliery; a corridor between Peterlee

and Ferryhill; a corridor along the A182 encompassing South Hetton, Hetton-le-Hole, and Houghton-le-Spring; and the area around Shildon.

- **Market towns:** This area incorporates the larger market towns in the region, including Bishop Auckland, Barnard Castle, Alnwick, Berwick-upon-Tweed, Morpeth and Hexham.
- **Coastal areas**: This area includes coastal areas located to the south and north of the main Tyne and Wear conurbation. It incorporates: the coastal areas between South Shields and Roker, including Marsden, Whitburn and Seaburn; Hendon to Seaham; and Blyth to Amble.
- **Rural areas:** This covers the rural areas of the region, including the rural parts of Northumberland and County Durham. It includes the parts of the region within the Northumberland National Park and the two AONBs (Northumberland Coast AONB and North Pennines AONB).

For each of these areas, a number of options have been identified and subsequently appraised. For all areas a 'do minimum' option is described which would be applied in all circumstances, together with one or more options for additional levels of intervention over and above the do minimum. These options are designed to reflect the key issues facing that area, and the different approaches that can be taken to intervention/investment in transport infrastructure and management.

A summary of the sustainability performance of the options against the ISA themes, including rankings, is presented below. Full appraisal findings are presented in **Chapter 3** of the main body of the ISA Report.

Table NTS1: Rankings of options for Tyne and Wear

Option TW1: Do minimum
Option TW2: Optimise use of existing infrastructure
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

	Rank of preference		
ISA theme	**TW1**	**TW2**	**TW3**
Biodiversity	**1**	**2**	**3**
Water and Soil Resources	**2**	**1**	**3**
Historic Environment	**2**	**1**	**3**
Landscape	**2**	**1**	**3**
Air Quality and Noise	**2**	**1**	**3**
Climate Change and Flood Risk	**2**	**1**	**2**
Population	**3**	**2**	**1**
Human Health	**3**	**1**	**2**
Equalities	**3**	**2**	**1**
Rurality	**3**	**2**	**1**

Table NTS2: Rankings of options for the city of Durham

Option D1: Do minimum.
Option D2: Make better use of existing transport infrastructure in the city.

	Rank of preference	
ISA theme	**D1**	**D2**
Biodiversity	**1**	**2**
Water and Soil Resources	**=**	**=**
Historic Environment	**2**	**1**
Landscape	**2**	**1**
Air Quality and Noise	**2**	**1**
Climate Change and Flood Risk	**2**	**1**
Population	**2**	**1**
Human Health	**2**	**1**
Equalities	**2**	**1**
Rurality	**2**	**1**

Table NTS3: Rankings of options for post-industrial communities

Option PI1: Do minimum.
Option PI2: Deliver road and rail infrastructure enhancements to support post-industrial communities' connectivity

	Rank of preference	
ISA theme	**PI1**	**PI2**
Biodiversity	**1**	**2**
Water and Soil Resources	**1**	**2**
Historic Environment	**2**	**1**
Landscape	**1**	**2**
Air Quality and Noise	**1**	**2**
Climate Change and Flood Risk	**1**	**2**
Population	**2**	**1**
Human Health	**2**	**1**
Equalities	**2**	**1**
Rurality	**2**	**1**

Table NTS4: Rankings of options relating to coastal areas

Option C1: Do minimum.
Option C2: Support the regeneration of coastal settlements through targeted interventions

	Rank of preference	
ISA theme	**C1**	**C2**
Biodiversity	**1**	**2**
Water and Soil Resources	**=**	**=**
Historic Environment	**2**	**1**
Landscape	**1**	**2**
Air Quality and Noise	**2**	**1**
Climate Change and Flood Risk	**2**	**1**
Population	**2**	**1**
Human Health	**2**	**1**
Equalities	**2**	**1**
Rurality	**N/A**	**N/A**

Table NTS5: Rankings of options relating to market towns

Option MT1: Do minimum.
Option MT2: Optimise the use of existing transport infrastructure

	Rank of preference	
ISA theme	**MT1**	**MT2**
Biodiversity	**1**	**2**
Water and Soil Resources	**1**	**2**
Historic Environment	**2**	**1**
Landscape	**1**	**2**
Air Quality and Noise	**2**	**1**
Climate Change and Flood Risk	**2**	**1**
Population	**2**	**1**
Human Health	**2**	**1**
Equalities	**2**	**1**
Rurality	**2**	**1**

Table NTS6: Rankings of options for rural areas

Option R1: Do minimum
Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas
Option R3: Initiate more significant interventions, including with regards to multimodal interchange

	Rank of preference		
ISA theme	**R1**	**R2**	**R3**
Biodiversity	**1**	**2**	**3**
Water and Soil Resources	**1**	**1**	**3**
Historic Environment	**2**	**1**	**3**
Landscape	**2**	**1**	**3**
Air Quality and Noise	**3**	**1**	**2**
Climate Change and Flood Risk	**3**	**1**	**2**
Population	**3**	**1**	**1**
Human Health	**3**	**1**	**2**
Equalities	**2**	**1**	**3**
Rurality	**3**	**2**	**1**

Assessment of alternative approaches: overall conclusions

The assessment of the options considered as reasonable alternatives for the six areas has shown that in many cases that the 'do minimum' option performs less favourably against the ISA themes. This is given these options will do less to deliver enhancements which will help address some of the key accessibility and social inclusion issues experienced in different parts of the region, or support economic vitality. Whilst in some cases the do minimum options may reduce the potential for direct adverse environmental effects, they also preclude opportunities to deliver key environmental enhancements in the region, including relating to air and noise quality, the quality of the townscape, landscape and the public realm, or relating to the rejuvenation of features and areas of historic environment interest. In addition, the do minimum options limit opportunities for utilising transport infrastructure enhancements to deliver regional, sub-regional or local environmental net gain or for limiting greenhouse gas emissions.

The options which focus to a greater degree on 'soft' measures and demand management measures are less likely than the options supporting physical transport capacity enhancements to lead to direct adverse impacts on key environmental and socio-economic receptors in the region. These options also have the potential to deliver significant environmental enhancements and quality of life benefits through the encouragement of modal shift, a reduction in the need to travel, a limitation in traffic flows and improved traffic management.

The options which propose significant transport capacity enhancements have the potential to have a range of direct impacts on key receptors, including from landtake and impacts on the quality of the public realm. Physical transport capacity enhancements also have the potential to stimulate induced demand, with the potential to lead to direct and indirect impacts on features, areas and networks of environmental sensitivity, air and noise quality and greenhouse gas emissions.

The significance of effects from these interventions will though depend on the design, layout and scale of the schemes, and the mitigation and avoidance measures proposed. It is also recognised that the implementation of appropriate measures to 'lock in' the benefits of physical transport capacity enhancements is possible with the implementation of an appropriate package of complementary 'soft' transport and demand management measures. It is also recognised that such capacity enhancements have the potential to offer environmental benefits and deliver net gain, if designed appropriately.

Appraisal of the consultation version of the NETP

Chapter 4 of the ISA Report presents appraisal findings in relation to the current consultation version of the NETP.

The appraisal is presented through an assessment of the seven work programmes currently put forward through the NETP. These work programmes are as follows:

1) Helping people to make the right travel choice
2) Upgrading North East Active Travel Infrastructure
3) Bus, ferry and first and last mile
4) Local rail and metro
5) Road infrastructure
6) Maintaining and renewing our transport network
7) National and international connectivity

This is accompanied by an assessment of the 'in-combination' effects of the different work programmes together. In response to the findings of these assessments, a series of proposed mitigation and enhancement measures are also proposed. These are designed to offset the potential significant adverse effects identified and maximise the opportunities for enhancements which are potentially available through the implementation of the NETP.

A summary of the key significant effects identified, and proposed mitigation and enhancement measures, is presented below by ISA theme.[4]

Table NTS7: Summary of likely significant effects and recommendations / proposed mitigation

Biodiversity

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Impacts on biodiversity from land take, habitat loss and fragmentation and disturbance from road, rail and public transport schemes proposed through the NETP.	Direct, short, medium and long-term, permanent and negative.	Potential impacts on habitats and species from landtake, loss of vegetation and trees and light pollution should be addressed through appropriate avoidance and mitigation measures. Opportunities to enhance green infrastructure networks along routes should be sought, supporting a premise of environmental net gain and delivering multifunctional benefits. This should be informed at the project level by a robust Environmental Impact Assessment[5] process.
Potential impacts on European designated biodiversity sites from new transport infrastructure schemes.	Direct and indirect, short, medium and long-term, permanent and negative.	Apply the recommendations of the Habitats Regulations Assessment process undertaken alongside the NETP.
Impacts on biodiversity from increased noise, light and air pollution linked to traffic increases resulting from the release of induced demand from new road schemes.	Indirect, medium and long-term, permanent and negative.	Ensure benefits of road improvements are 'locked in' through provision of complementary public transport and walking and cycling measures which limit road traffic increases.

[4] Further mitigation measures are proposed for specific work programmes in the main body of the ISA Report.
[5] Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development. It is undertaken in association with the provisions of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

Impacts on internationally and nationally designated sites present on the coast from enhancements to the resilience of coastal transport infrastructure.	Direct, short, medium and long-term, permanent and negative.	Biodiversity enhancements should be facilitated alongside network improvements. Key habitats should be retained and the integrity of ecological linkages should be secured. Programmes of works should be developed to help ensure an increased proportion of the SSSIs and other important designated sites present locally are brought into favourable condition.
Impacts of new lighting and signage on nocturnal species.	Direct short and medium term effects, temporary and negative.	New lighting and signage should be designed to minimise impacts on nocturnal species. This should be informed by appropriate ecology surveys.

Water and Soil Resources

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved management of surface water run off through enhanced maintenance of the road network and the delivery of sustainable drainage schemes alongside new transport infrastructure.	Direct, short, medium and long term, permanent and positive.	New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates. Opportunities to improve strategic sustainable drainage solutions should be sought where possible.
Improvements to soil quality from improved management of surface water run off through enhanced maintenance of the road network and the delivery of sustainable drainage schemes alongside new transport infrastructure.	Direct, medium and long term, permanent and positive.	New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates. Opportunities to improve strategic sustainable drainage solutions should be sought where possible.

Historic Environment

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
The delivery of new transport infrastructure schemes has the potential to lead to significant impacts on the key assets (including designated and non-designated features and areas) of historic environment interest located in the vicinity of the key routes and areas targeted for interventions.	Direct and indirect, short, medium and long term, permanent and negative.	Transport infrastructure schemes should be accompanied by a comprehensive package of avoidance and mitigation measures, as well as, where possible, enhancement measures. This should be informed at the project level by a robust EIA process. New infrastructure should be designed to facilitate enhancements to the fabric and setting of the historic environment. It should also seek to maximise opportunities for enhancing access to and understanding of the historic environment.
Enhancement to the fabric and setting of the historic environment through improved maintenance regimes.	Direct, short, medium and long term, permanent and positive.	Maintenance regimes should seek to facilitate enhancements to the fabric and setting of designated and undesignated features and areas of historic environment interest.
Enhanced accessibility to, and additional opportunities for enjoyment of the North East's heritage resource.	Direct, short, medium and long term, permanent and positive.	None proposed.

Landscape		
Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
The delivery of new transport infrastructure schemes (in particular, road schemes) has the potential to lead to significant impacts on landscape and townscape character.	Direct and indirect, short, medium and long term, permanent and negative.	Transport infrastructure schemes should be accompanied by a comprehensive package of avoidance and mitigation measures, as well, where possible, enhancement measures. This should be informed at the project level by a robust EIA process. New infrastructure should be designed to limit impacts on landscape and townscape character, and facilitate enhancements.
Enhancement to landscape and townscape character through improved maintenance regimes.	Direct, short, medium and long term, permanent and positive.	Maintenance regimes should seek to facilitate enhancements to the quality of the public realm and local distinctiveness.
Enhanced accessibility to, and additional opportunities for enjoyment of the North East's landscape/townscape resource, including associated with valued landscapes and townscapes.	Direct, short, medium and long term, permanent and positive.	None proposed.
Air Quality and Noise		
Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Air quality enhancements at key 'pinchpoints' on the network which have existing air quality issues.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Impacts from road schemes on air and noise quality over a wider area, including through the stimulation of induced demand.	Direct and indirect, medium and long term, permanent and negative.	Initiation of complementary measures alongside road capacity enhancements to limit increases in traffic flows resulting from a release of induced demand.
Support for electric vehicles and cleaner fuels, with benefits for air and noise quality.	Indirect, medium and long term, permanent and positive.	None proposed.
Climate Change and Flood Risk		
Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Limitation of greenhouse gas emissions from transport, including through the stimulation of modal shift from the private car towards public transport and active travel, and enhanced connectivity and smart travel.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Promotion of electric vehicle use, supporting the decarbonisation of the transport network.	Direct and indirect, medium and long term, permanent and positive.	None proposed.

Impacts on greenhouse gas emissions through the release of induced demand from new road schemes.	Direct and indirect, medium and long term, permanent and negative.	Initiation of complementary measures alongside road capacity enhancements to limit increases in traffic flows resulting from a release of induced demand. Identify, assess and integrate measures to further reduce carbon through on or off-site offsetting or sequestration.
Increased resilience of the transport network to the likely effects of climate change.	Direct, medium and long term, permanent and positive.	None proposed.

Population

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved accessibility to services, facilities and employment opportunities.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Support for a reduction in deprivation from accessibility, congestion and severance issues, and elements relating to social exclusion.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Enhanced economic opportunities through improved connections with the strategic and local transport network and key employment and growth areas.	Indirect, medium and long term, permanent and positive.	None proposed.
Support for the visitor economy from enhancements in transport infrastructure.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Enhancements to the quality of the neighbourhoods through a reduction of the impact of traffic and congestion.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Enhanced maintenance of the road network, supporting its resilience, with associated benefits for the quality of life of residents.	Direct, medium and long term, permanent and positive.	None proposed.

Human Health

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved accessibility to health services and leisure and recreational facilities.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Facilitation of healthier lifestyles through the encouragement of active modes of travel.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.

Support for a reduction in deprivation, which is one of the key contributors to poor health and wellbeing in the region.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Enhancements to the quality of the neighbourhoods through a reduction of the impact of traffic and congestion.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Improvements to road safety.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Benefits for health and wellbeing from air and noise quality enhancements at key 'pinchpoints' on the network.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Impacts on health and wellbeing from road schemes linked to increased traffic flows, including from the stimulation of induced demand over a wider area.	Direct and indirect, medium and long term, permanent and negative.	Incorporate measures within scheme design to improve mobility by walking and cycling, limit severance and initiate green infrastructure enhancements.

Equalities

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved accessibility for groups with protected characteristics via a range of transport modes.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Reduction of impacts from the transport network on those groups with protected characteristics, including from severance, and contributions to a poor quality public realm.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Improvements to road safety.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Impacts on groups with protected characteristics from effects of road schemes on the quality of the public realm and increased severance.	Direct and indirect, medium and long term, permanent and negative.	Incorporate measures within scheme design to improve mobility, limit severance and initiate green infrastructure enhancements.

Rurality

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Enhanced accessibility to the services, facilities and amenities located in the urban areas of the North East from rural areas by all modes of transport.	Direct and indirect, medium and long term, permanent and positive.	None proposed.

Improvements to rural areas' vitality through enhanced connections to key services, facilities and economic and employment opportunities.	Indirect, medium and long term, permanent and positive.	None proposed.
Support for the visitor economy from enhancements in transport infrastructure.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Enhanced maintenance of the road network in rural areas, supporting its resilience.	Direct, medium and long term, permanent and positive.	None proposed.
Limitation of the impacts of transport movements associated with timber and quarrying on rural areas.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.

Overall summary of effects

As highlighted by the tables above, the NETP work programmes have the potential to lead to a range of significant positive environmental and socio-economic effects for the North East. These include relating to: enhanced accessibility; improvements to air and noise quality; enhancements to the quality of the public realm; improvements to road safety; a reduction of severance from the transport network; positive effects on deprivation; improvements to neighbourhood vitality; support for the needs of those living in rural areas; and contributions to the region's economic vitality.

The appraisal has also highlighted that the NETP work programmes have the potential to lead to a number of significant negative effects, if not appropriately avoided or mitigated. These include direct physical impacts on key environmental and socio-economic receptors from new and improved transport infrastructure, and indirect effects relating to the potential for transport infrastructure enhancements to generate increased demand for travel in the region. The significance of these potential negative effects however depend on the extent to which appropriate packages of avoidance and mitigation measures are initiated through the implementation of these programmes.

In response to this, the ISA Report has highlighted a series of avoidance and mitigation measures which could potentially be delivered alongside the work programmes to limit potential negative effects and facilitate enhancements.

Next steps

Following the closure of the consultation period on the NETP, comments will be reviewed and analysed. The final NETP will then be developed, accompanied by the finalised Implementation Plan, with a view to adoption in early 2021. Any changes arising to the NETP following consultation will be assessed where they alter the assessment findings presented in this report.

An ISA Adoption Statement will be then published to accompany the adopted NETP and will present:

- The reasons for choosing the preferred measures for the NETP as adopted in the light of other reasonable alternatives dealt with;
- How environmental and socio-economic considerations have been integrated into the NETP;
- How consultation responses have been taken into account; and
- Measures that are to be taken to monitor the significant environmental effects of the NETP.

1. Introduction

Background

1.1 AECOM has been commissioned to undertake an independent Integrated Sustainability Appraisal (ISA) in support of the emerging North East Transport Plan 2021-2035 (NETP).

1.2 The ISA undertakes an integrated assessment that incorporates a Strategic Environmental Assessment (SEA), Equality Impact Assessment (EqIA), Health Impact Assessment (HIA), and Rural Proofing process.[6] This integrated assessment will identify the potential impacts of the NETP on the environment, community and vitality of the North East region, with a view to promoting a more sustainable plan making process.

1.3 This ISA Report accompanies the NETP for consultation. The NETP highlights the key transport challenges and opportunities in the North East region along with the transport infrastructure that needs to be delivered within the short, medium and longer term. This is with a view to connecting people to good employment opportunities, generating economic growth, whilst enabling the region and its people to move to greener more sustainable ways of travel.

The North East Transport Plan 2021-2035

Overview of the NETP

1.4 The North East Transport Plan 2021-2035 (NETP) is the first comprehensive transport plan to be developed for the North East region, comprising the local authority areas of Durham, Gateshead, Newcastle Upon Tyne, North Tyneside, Northumberland, South Tyneside and Sunderland. It brings together the region's two local transport authorities (the North East Combined Authority and the North of Tyne Combined Authority) and meets the requirement under the Transport Act 2000 that they produce a single local transport plan via the North East Joint Transport Committee (JTC).

1.5 Prior to the NETP, ten-year Local Transport Plans (LTPs) were published in 2011. These did not cover the North East as a whole; instead they presented three separate transport plans focusing on Tyne and Wear, Durham and Northumberland.

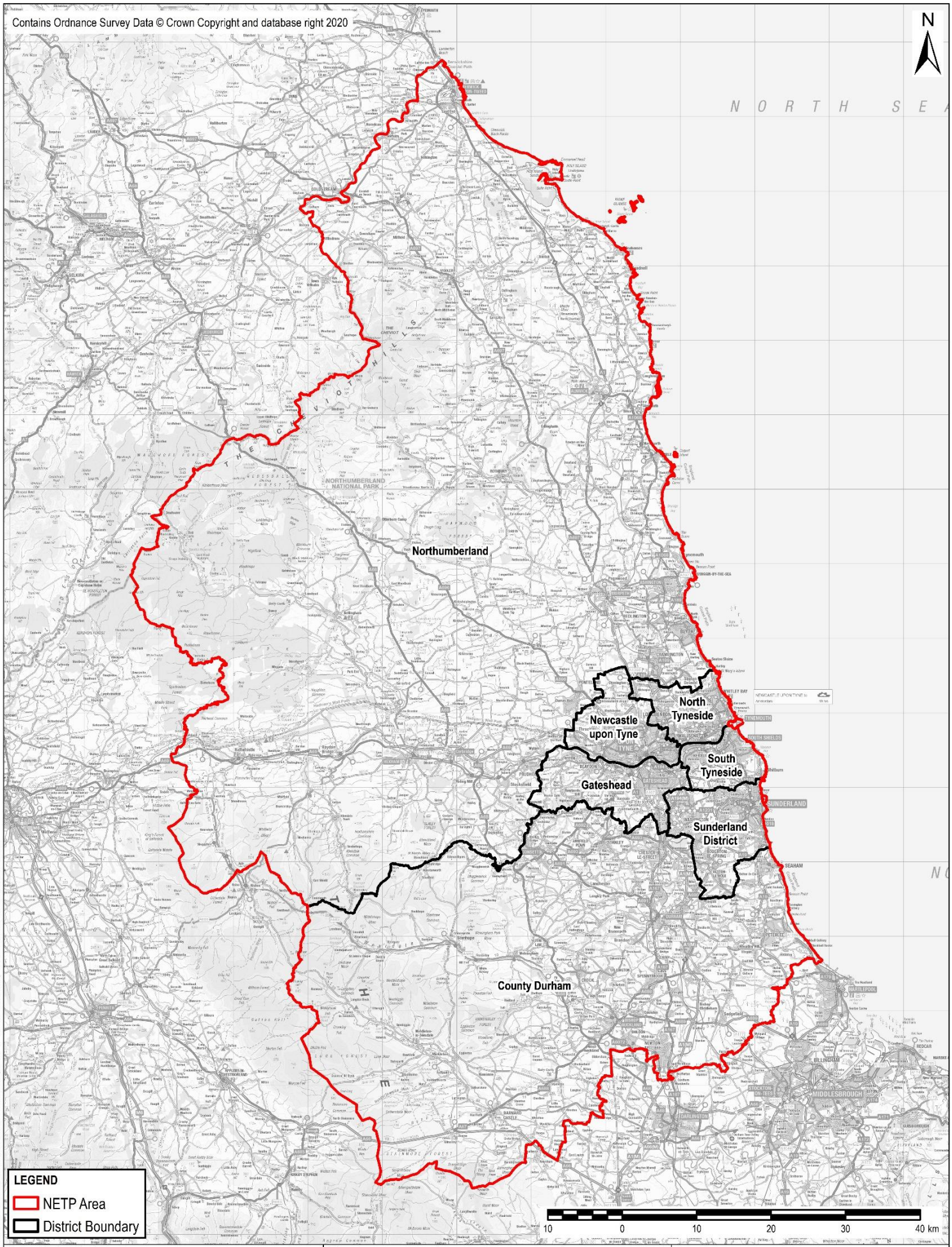
1.6 Given the complexities of travel patterns in the North East, which cross administrative boundaries, the decision was made to prepare a joint transport plan for the whole region. This has been taken forward through the governance of the North East Joint Transport Committee. which represents each of the seven local authorities.

1.7 The NETP, which will comprise an overarching strategy document accompanied by an Implementation Plan, will supersede the LTPs which are set to expire in 2021. It will set out the North East's transport priorities up to 2035 and will communicate opportunities for investment and improvements to the region's transport network. The NETP will form the basis for bids and requests for funding inward transport investment to the region from central government and other sources.

1.8 This NETP builds on the '*Connected North East – Our blueprint*' document published in October 2020, which set out how a connected North East can increase the prosperity, quality of life and health of the region. The aim of the blueprint is to help create and sustain 100,000 more and better jobs in a growing and decarbonised economy, where social and health inequalities are greatly reduced. The NETP is seen as fundamental to achieving these wider regional objectives.

1.9 The NETP is also closely aligned and interfaces with the North East Local Enterprise Partnership (LEP) Strategic Economic Plan and Local Industrial Strategy, central government

[6] A habitats regulations assessment is also being undertaken to support the development of the NETP; this has been reported on separately to the ISA.



File Name:i:\5004 - Information Systems\6XX_NECA_Transport_Plan\02_Maps\Figure 1-1 - Area Covered by the North East Transport Plan.mxd

Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

AREA COVERED BY THE NE TRANSPORT PLAN

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
16/03/2020	1:650,190	DRAFT
Drawing Number		Rev
FIGURE 1.1		01

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1.10 Key information relating to the NETP is presented in **Table 1.1** below.

Table 1.1: Key facts relating to the North East Transport Plan

Responsible authorities	The North Tyne Combined Authority and the North East Combined Authority. The North Tyne Combined Authority is a legal body that brings together Newcastle City Council, North Tyneside Council, Northumberland County Council under an elected Mayor. The North East Combined Authority (NECA) is a legal body that brings together Durham County Council, Gateshead Council, South Tyneside Council and Sunderland City Council. The plan is being delivered through the North East Joint Transport Committee.
Title of plan	North East Transport Plan 2021-2035
Subject	Transport plan
Purpose	The North East Transport Plan will provide a strategic framework for future transport planning across the seven local authority areas in the North East.
Timescale	To 2035
Area covered by the plan	The plan area covers the administrative area of Newcastle, North Tyneside, Northumberland, County Durham, Gateshead, South Tyneside and Sunderland (see **Figure 1.1**).
Summary of content	The North East Transport Plan will set strategic transport planning policy for the region in the period 2021-2035. It will set out which transport interventions the area intends to deliver during the plan period, and how these schemes will be funded. It will comprise an overarching strategy document, accompanied by an Implementation Plan. The vision and objectives for the NETP are presented in **Figure 1.2**.
Contact point	Andrew Dorrian, Specialist Transport Planner, Transport North East Strategy Unit Andrew.Dorrian@transportnortheast.gov.uk

Vision and objectives for the NETP

1.11 The vision and objectives for the NETP have been endorsed by the leaders of the seven local authorities in the North East as well as the North of Tyne Combined Authority Mayor. They set out the key principles as to what should be achieved by 2035.

1.12 An overview of the vision and objectives for the NETP is presented in **Figure 1.2** below.

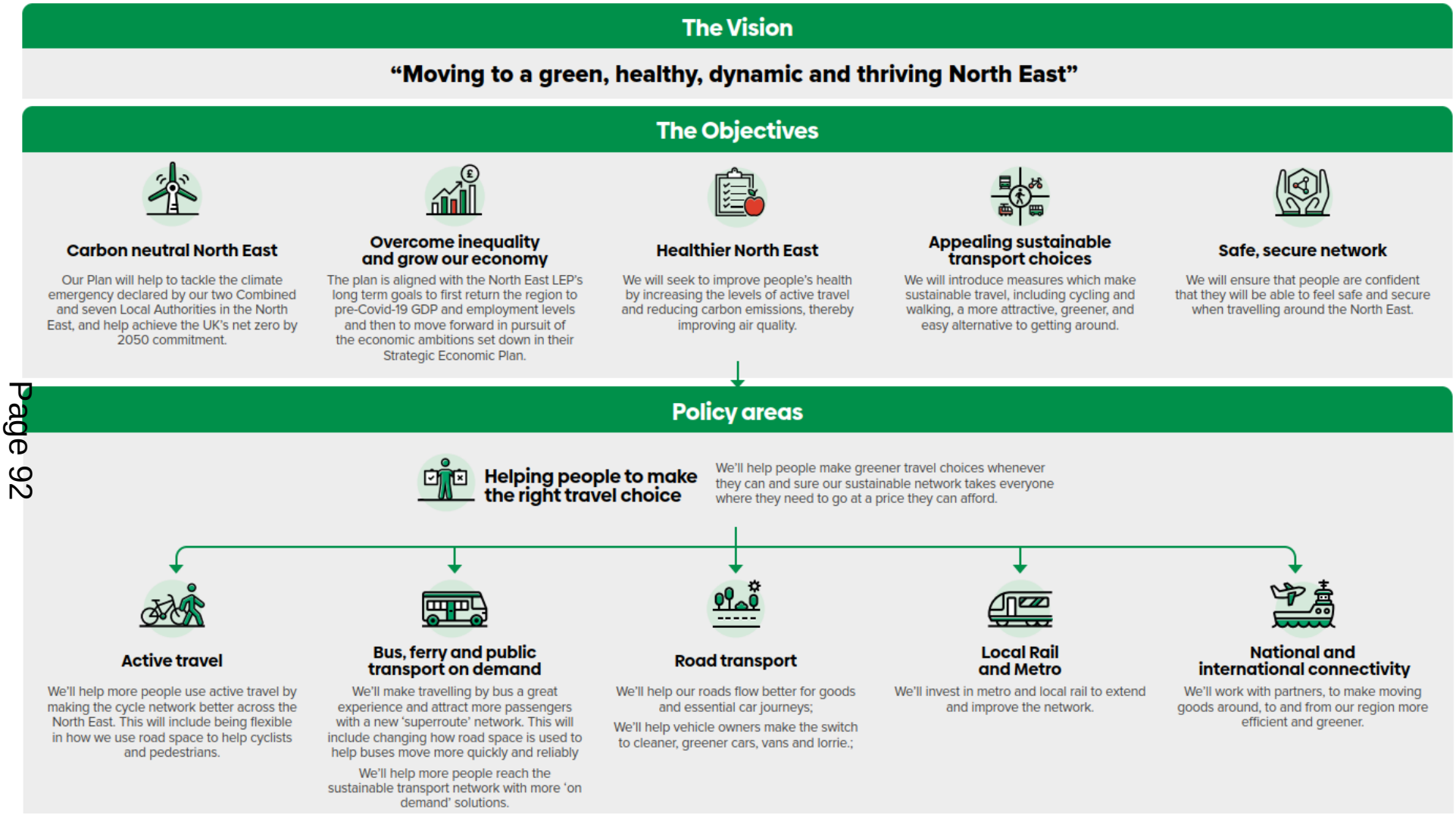


Figure 1.2: Vision and objectives for the NETP

Integrated Sustainability Appraisal explained

1.13 Integrated Sustainability Appraisal (ISA) fulfils the requirements for Strategic Environmental Assessment (SEA) and discharges the duties for Equality Impact Assessment (EqIA) and Health Impact Assessment (HIA). It also incorporates Rural Proofing.

1.14 AECOM has also been commissioned to undertake a Habitats Regulations Assessment (HRA) of the NETP[7]. The findings of the HRA have been reported separately from, but will inform, the ISA.

1.15 An overview of SEA, EqIA, HIA and Rural Proofing is presented below.

Strategic Environmental Assessment (SEA)

1.16 SEA is undertaken to address the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations) which transpose into national law the EU Strategic Environmental Assessment (SEA) Directive[8]. It also widens the scope of the assessment from focusing on environmental issues to further consider social and economic issues. The SEA Regulations only formally apply to plans and programmes for which there is a statutory requirement; transport plans fall within this definition.

1.17 Two key procedural requirements of the SEA Directive are that:

- When deciding on 'the scope and level of detail of the information' which must be included in the Environmental Report there is a consultation with nationally designated authorities concerned with environmental issues; and
- A report (the 'Environmental Report') is published for consultation alongside the draft plan for consultation that presents an assessment of the draft plan (i.e. discusses 'likely significant effects' that would result from plan implementation) and reasonable alternatives.

Equality Impact Assessment (EqIA)

1.18 As public sector organisations, the North Tyne Combined Authority and the North East Combined Authority have a duty under the Equality Act 2010[9] and the associated Public Sector Equality Duty (PSED) to ensure that the objectives and policy options within the NETP eliminate unlawful discrimination (direct and indirect), as well as advancing equality of opportunity and fostering good relations between those with a protected characteristics[10] and all others. An Equality Impact Assessment (EqIA) is often used by public sector organisations to demonstrate how this duty has been met.

1.19 The Equality Act 2010 legally protects people from discrimination both in the workplace and in wider society. It replaces previous anti-discrimination laws which include the Sex Discrimination Act 1975, Race Relations Act 1976 and the Disability Discrimination Act 1995. The Act ensures that individuals with certain 'protected characteristics' are not indirectly or directly discriminated against. The protected characteristics include:

- **Age:** this refers to persons defined by either a particular age or a range of ages;
- **Disability:** a disabled person is defined as someone who has a physical or mental impairment that has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities;
- **Gender reassignment:** this refers to people who are proposing to undergo, are undergoing, or have undergone a process for the purpose of reassigning their gender identity;

[7] The requirement for HRA is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by the Conservation of Habitats and Species Regulations 2010
[8] Directive 2001/42/EC
[9] Equality Act 2010 [online] available at: http://www.legislation.gov.uk/ukpga/2010/15/contents
[10] Protected characteristics under the Equality Act 2010 include age, sex, marital status, disability, gender reassignment, ethnicity, religion, pregnancy and maternity, sexual orientation and deprived/disadvantaged groups.

- **Marriage and civil partnership:** marriage can be between a man and a woman or between two people of the same sex. Same-sex couples can also have a civil partnership. Civil partners must not be treated less favourably than married couples;
- **Pregnancy and maternity:** pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth;
- **Race:** the Equality Act 2010 defines race as encompassing colour, nationality (including citizenship) and ethnic or national origins;
- **Religion or belief:** religion means any religion a person follows. Belief means any religious or philosophical belief, and includes those people who have no formal religion or belief;
- **Gender:** this refers to a man or to a woman or a group of people of the same sex, while gender refers to the wider social roles and relationships that structure men's and women's, boys' and girls' lives;
- **Sexual orientation:** a person's sexual orientation relates to their emotional, physical and/or sexual attraction and the expression of that attraction.
- **Socio-economic status:** a person's socio-economic status referring to combined economic and sociological measure of a person's work experience and economic and social position in relation to others, based on income, education, and occupation.

1.20 EqIA aims to assess how a particular policy or service will affect different groups of people with these protected characteristics. The EqIA process identifies alternative approaches which may mitigate adverse impacts; and aims to enhance equality of opportunity and manage relations between different groups of people.

Health Impact Assessment (HIA)

1.21 There are numerous links between planning and health highlighted throughout national policy. For example Paragraph 69 of the National Planning Policy Framework states that the planning system can play an important role in facilitating social interaction and creating healthy, inclusive communities and the National Planning Practice Guidance (NPPG) states that Local Authorities should ensure that health and wellbeing, and health infrastructure are considered within their decision making processes.[11]

1.22 In this context, Health Impact Assessment (HIA) is a process which seeks to ensure that the effect of proposals on both health and health inequalities are considered and responded to during the plan's development process. This is with a view to informing decision-making.

Rural Proofing

1.23 In addition to these three assessments this appraisal will also 'rural proof' the NETP. Rural proofing recognises that rural areas have some significant barriers to economic growth and quality of life improvements which urban areas do not have. These barriers may, for example, include a lack of access to goods and services, more limited public transport services, or fuel poverty exacerbated by more costly fuels. This is particularly relevant for the North East as there are extensive rural areas, mainly in Durham and Northumberland.

1.24 Government guidance states that the aim of rural proofing is to: "*Make sure that the needs and interests of rural people, communities and businesses in England are properly considered*"[12]. This ensures that the action required to ensure fair outcomes from policy/plan delivery across rural and urban areas is determined and addressed in the plan/policy making process.

11 National Planning Practice Guidance. Paragraph: 001 Reference ID: 53-001-20140306 [online] available at: https://www.gov.uk/guidance/health-and-wellbeing

12 Department for environment and rural affairs (Defra) (2013) Rural Proofing Guidance [online] available at: https://www.gov.uk/guidance/rural-proofing-guidance [accessed 27/02/20]

Habitats Regulations Assessment

1.25 A Habitats Regulations Assessment (HRA) will be undertaken parallel to this work. The primary aim of HRA is to ensure the protection of sites that host habitats and species of European importance. This process is set out in Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (the 'Habitats Directive') and the Conservation of Habitats and Species Regulations 2010 (the 'Habitats Regulations).

This ISA Report

1.26 The SEA Regulations require that a report is published for consultation alongside the draft plan that 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'. The report must then be taken into account, alongside consultation responses, when finalising the plan.

1.27 In line with the SEA Regulations this report - which for the current ISA comprises the 'ISA Report' – must essentially answer four questions:

- What is the scope of the ISA?
- What has Plan-making / ISA involved up to this point?
    - Preparation of the draft plan must have been informed by at least one earlier plan-making / ISA iteration. 'Reasonable alternatives' must have been assessed.
- What are the assessment findings at this current stage?
    - i.e. in relation to the draft plan.
- What happens next?

1.28 These questions are derived from Schedule 2 of the SEA Regulations, which present 'the information to be provided within the report. **Table 1.2** presents the linkages between the regulatory requirements and the four ISA questions.

Table 1.2: Questions to be answered by the ISA Report in order to meet Regulatory[13] requirements

ISA Report question		In line with Schedule II the report must include…
What is the scope of the ISA?	What is the plan seeking to achieve?	An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes
	What is the sustainability 'context' and baseline?	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan The environmental characteristics of areas likely to be significantly affected Any existing environmental **problems** which are relevant to the plan including those relating to any areas of a particular environmental importance
	What are the key issues and objectives that should be a focus?	Key **problems** / **issues** and **objectives** that should be a focus of (i.e. provide a 'framework' for) assessment
What has plan-making / ISA involved up to this point?		Outline reasons for selecting the **alternatives** dealt with (and thus an explanation of the 'reasonableness' of the approach) The likely significant effects associated with **alternatives** Outline reasons for selecting the preferred approach in-light of **alternatives** assessment / a description of how environmental objectives and considerations are reflected in the draft plan.
What are the assessment findings at this current stage?		The likely significant effects associated with **the draft plan** The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing **the draft plan**
What happens next?		The next steps for plan making / ISA process.

N.B. The right-hand column of Table 1.2 does not quote directly from Schedule II of the Regulations. Rather, it reflects a degree of interpretation.

[13] Environmental Assessment of Plans and Programmes Regulations 2004

2. What is the scope of the ISA?

ISA Scoping Report

2.1 The SEA Regulations require that '*When deciding on the scope and level of detail of the information that must be included in the Environmental Report, the responsible authority shall consult the consultation bodies*'. In England, the consultation bodies are Natural England, the Environment Agency and Historic England.[14] As such, these authorities were consulted on an ISA Scoping Report in April 2020.

2.2 The information in the Scoping Report was presented by the following ISA themes:

- Biodiversity
- Water and soil resources
- Historic environment
- Landscape
- Air quality and noise
- Climate change and flood risk
- Population
- Human health
- Equalities
- Rural Proofing

2.3 The selected ISA themes incorporate the 'SEA topics' suggested by Annex I (f) of the SEA Directive[15]. These were refined to reflect a broad understanding of the anticipated scope of NETP effects. They also incorporate the aspects considered through the EqIA and Rural Proofing elements of the ISA.

2.4 Comments received on the Scoping Report, and how they have been considered and addressed through the ongoing development of the ISA process, are presented in **Table 2.1**.

[14] In line with Article 6(3).of the SEA Directive, these consultation bodies were selected because 'by reason of their specific environmental responsibilities,[they] are likely to be concerned by the environmental effects of implementing plans and programmes.'

[15] The SEA Directive is 'of a procedural nature' (para 9 of the Directive preamble) and does not set out to prescribe particular issues that should and should not be a focus, beyond requiring a focus on 'the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors' [our emphasis]

Table 2.1 Consultation responses received on the ISA Scoping Report

Consultation response	How the response was considered and addressed
Natural England *Response received via email on 2nd June 2020 from Michael Miller: Lead Sustainable Development Advisor, Northumbria Team*	
Natural England welcomes the comprehensive approach to the Scoping report and notes specific attention to: • Designated and Protected sites, including comprehensive identification of the same. • Biodiversity Strategy and policy Context • Water and Soils Resource Policy context • Landscape Policy Context • Air Quality and Noise Policy Context • Habitats and Species protection, conservation and enhancement.	Comment noted.
We welcome the detailed research approach to the above assessment headings and advocate the flexibility within the report to allow changes should they become necessary.	Comment noted.
Natural England consider the scoping report covers all necessary requirements for the purposes of this report.	Comment noted.
Historic England *Response received via email on 1st June 2020 from Henry Cumbers: Principal Adviser, Historic Environment Planning Adviser (North East and Yorkshire)*	
Page 14, Section 2.18: Historic assets across the region, including two UNESCO assets and a National Park. This bullet point would benefit from revision, replacing the word historic assets with heritage assets as a more universally recognised term. Also UNESCO World Heritage Sites in place of UNESCO assets and National Parks are landscape designations rather than heritage designations and would therefore benefit from being listed separately.	Information has been updated to reflect comment.
In respect of the historic environment and the planning system, the three key European legislative conventions are the UNESCO World Heritage Convention, The Convention for the Protection of the Architectural Heritage of Europe, The European Convention on the Protection of Archaeological Heritage. The Convention on the Value of Cultural Heritage for Society is primarily related to heritage and human rights and democracy. It promotes a wider understanding of heritage and its relationship to communities and society, and therefore has less of a role in relation to transport policy.	Information has been updated to reflect comment.
It is considered that the Culture White Paper is of limited relevance to the North East Transport Plan.	Reference to White Paper has been removed as suggested.
3.50-3.51: Whilst this paragraph contains key messages from the NPPF relating to the historic environment, it also include elements concerning landscape and the natural environment, given the specific focus on the historic environment it may be advisable to amend this paragraph to focus specifically on the conservation and enhancement of the historic environment.	Paragraph has been amended to focus specifically on the conservation and enhancement of the historic environment.
We have it noted that there are 70 conservation areas within Northumberland rather than 71.	This information has been updated.

Consultation response	How the response was considered and addressed
The National Heritage List for England identifies the following number of entries for listed buildings for the authorities comprising the NETP area: • County Durham: 3,108 • North Tyneside: 225 • Gateshead: 248 • South Tyneside: 195 • Northumberland: 5614 • Newcastle upon Tyne: 774 • Sunderland: 375	This information has been updated.
In providing an explanation of scheduling, it should be stated that it is the designation used for sites of an archaeological character of national importance. Current legislation is provided by the Ancient Monuments and Archaeological Areas Act 1979.	Description of scheduling has been revised.
The National Heritage List for England identifies the following number of entries for scheduled monuments for the authorities comprising the NETP area: • County Durham: 233 • North Tyneside: 8 • Gateshead: 16 • South Tyneside: 5 • Northumberland: 975 • Newcastle upon Tyne: 42 • Sunderland: 10	Updated with up-to-date information on scheduled monuments.
The list identifies a number of Registered Parks and Gardens that are not within the North East Region, which include…(*list supplied*)	References to these Registered Parks and Gardens have been removed.
There are 47 registered battlefields in England.	Information updated.
The Heritage at Risk Register contains assets other than listed buildings. The number of assets on 2019 list are as follows: • County Durham: 97 • Gateshead: 8 • Newcastle upon Tyne: 16 • North Tyneside: 1 • South Tyneside: 6 • Sunderland: 13	Comment noted. Information on assets at risk has been updated.
It would be worth stating that transport infrastructure can often be an important historic asset in its own right	Key issues for historic environment have been updated to reflect comment.
Proposed ISA objectives and assessment questions: To be consistent with the NPPF, conserve is preferred over preserve as this acknowledges managed change within the historic environment.	Terminology updated.
Assessment questions: Whilst acknowledging the range of assets identified under the questions of the first objective, a further question should also be provided in relation to Registered Parks and Gardens.	Additional question added: “Conserve and enhance the significance of Registered Parks and Gardens”.
Context review: In addition to legislation, plans programmes and strategies identified at a national level we would advise inclusion of Planning (Listed Buildings and Conservation Areas) Act 1990 and Ancient Monuments and Archaeological Areas Act 1979 which together form the two primary pieces of legislation	This has now been acknowledged.

Consultation response	How the response was considered and addressed
concerning the historic environment within the UK.	
Context review: We would advise including both the World Heritage Site Management Plans for Durham Castle and Cathedral 2017-2023 and Hadrian's Wall Management Plan 2015-2019.	The Management Plans have been added to the policy context review.
Environment Agency	
Response received via email on 15th June 2020 from Lawry Cook Economic Development Specialist	
I really appreciated the amount of detail the scoping report went in to and the level information provided for aspects surrounding rural proofing, biodiversity, and climate change and flood risk.	Comment noted.
A key point within the Proposed ISA Framework which needs to remain is around utilising green infrastructure to increase habitat connectivity across the transport network. As the report states, there is a risk of habitat degradation during transport development, therefore to mitigate that, infrastructure that minimises this is crucial. It is worth referencing that green/blue infrastructure has many co-benefits associated with it that can be attached to other aspects of the proposed framework – water and soil resources, climate change mitigation and flood resilience, air quality and health. It can also be linked back to economic growth and prosperity across the region with more GDP generated from tourism, more resilient businesses and a better state of health and wellbeing. I certainly think there could be a stronger section on green infrastructure with the co-benefits highlighted above.	Comment noted. These elements relating to green and blue infrastructure have been considered through the assessment (including assessment of reasonable alternatives and the draft plan).
The point within the proposed framework on reducing the need to travel is interesting. I suppose the main question and I would have on this is, is it time to diversify transport plans to incorporate other infrastructure such as digital? This feeds into the section on rural proofing, with connectivity being the main issue associated with reduced economic growth in rural areas. There could even be scope for increased rural connectivity in the energy sector to reduce the issues associated with fuel poverty etc.	Digital connectivity has been considered through the assessment, including through options considered as reasonable alternatives for rural areas in the region.
I am really eager to hear about how emissions are not increased from new transport infrastructure, especially with emissions associated from constructing these new assets, on top of those from using them. Is there any scope to consider offsetting emissions? This could be linked to the prospect of Biodiversity Net Gain – create a new habitat that enhances the biodiversity and sequesters the carbon from the development. Again this sort of work could be linked to other aspects of the plan – i.e. flood resilience through green infrastructure.	Elements relating to emissions and possibilities for Biodiversity Net Gain have been considered throughout the appraisal.
Again, really positive points throughout the report and I am excited to see what opportunities this presents for environmental improvements and economic growth across the North East.	Comment noted.
Northumberland National Park Authority	
Response received via email on 2nd June 2020 from Duncan Wise, Visitor Development and Marketing Manager	
The North East Transport Plan – Introduction Emergent Challenges and opportunities from the Covid 19 pandemic. Bullet Point should be modified: "Potential reduction in international tourism and increase in domestic tourism"	Comment fed back to NETP development team

Consultation response	How the response was considered and addressed
Links with other plans and programmes: Additional information should be included on the Northumberland National Park Local Plan.	Provisions of new National Park Local Plan have been considered in the assessment. However, unlike the Scoping Report, detailed information on each authority's Local Plan has not been included in the ISA Report to limit the size of the report.
We are pleased to see reference to the Government's 25 Year Environment Plan in Para 3.58, the NNPA Management Plan in Para 3.59, and a summary of the Aims of the Management Plan in Para 3.60.	Comment noted.
Biodiversity: Generally, we feel that you have covered all the statutory sites and mentioned priority habitats and species in the National Park. We welcome reference in paragraph 4.39 to Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, but believe it would be appropriate to also highlight the requirements of Section 40 of the NERC Act 2006 within Chapter 4 of the ISA. However, there is no mention of the Government's intention to improve the planning system in England in order to protect the environment (biodiversity net gain) and build places to live and work. This could be referred to and emphasised more in Para 4.45. At a practical level, it would be good to see how management of the transport network can positively improve things for biodiversity. Currently, the need for tidiness is often prioritised over the need to enhance biodiversity e.g. cutting of road verges when they are flowering and removing trees from railway line corridors. We suggest a modification to Para 4.51 to reflect the opportunities to improve bio-diversity through the careful management of these transport corridors.	Comments noted. Opportunities for Biodiversity Net Gain and Government's intention to increase the role of Net Gain have been recognised through the appraisal, including the appraisal of reasonable alternatives and the draft plan. Additional elements with regard to biodiversity enhancements have also been considered through the assessment.
Water and Soil Resources: Para 5.20 – Actions to improve bio-diversity through the careful management of the transport corridors (roads and rail) would also contribute to slowing water run-off.	Comment noted and considered through ISA process.
There is no recognition that the National Park Authority is an independent Local Authority (single-purpose). See our comments on Para 3.25	Comment noted.
Para 6.6 - Threats to Hadrian's Wall identifies "visitors and tourism". However, we also recognise that tourism brings opportunities, so there is a need for balance here. As Hadrian's Wall is a linear monument that passes through urban, peri-urban and rural areas, there are a number of concerns facing the monument from inappropriate development, agriculture and forestry.	Comment noted and considered through ISA process.
We suggest the ISA makes a more formal reference to the Hadrian's Wall World Heritage Site Management Plan.	Reference included.
Para 6.14 –We suggest that you list the 71 Conservation Areas in Northumberland.	Conservation areas have been mapped. Conservation area will be considered as appropriate through the appraisal.
Para 6.25 - Heritage at Risk – Only Listed Buildings are mentioned. Why aren't Scheduled Monuments and historic places such as Registered Parks or Battlefields broken down by each Authority?	Updates to information recognise that Heritage at Risk incorporates a wider range of designations.
After Para 6.25 - The plan needs to take account of undesignated heritage assets as a material consideration in the planning process and vulnerable to harm from inappropriate development including harm to their settings. This undesignated heritage accounts for	The importance of the fabric and setting of undesignated heritage assets has been recognised throughout the ISA process.

Consultation response	How the response was considered and addressed
some 90% of the heritage resource. Greater attention to Grade II buildings also needs to be made, including local heritage assets.	
Para 6.33 – We welcome the inclusion of the positive contribution of careful and well planned transport infrastructure can have on the historic environment, would like to see how the historic environment makes a positive contribution to carefully planned transport infrastructure which avoids harm and contributes to making more attractive places to live and work.	Comment noted. Contribution of transport to the fabric and setting of the historic environment (and vice versa) has been considered throughout the ISA process.
Key Sustainability Issues - A key question for inclusion should be "do the options/proposals take full account of the historic environment, enabling informed, constructive conservation grounded upon sound principles and values, including the contribution the historic environment makes to society, economy and people's health and wellbeing?"	These elements have been considered throughout the ISA process.
Para 7.1 – Summary of Current Baseline. We are pleased to see the National Park's purposes and duty are explained here.	Comment noted.
Para 7.4 – We suggest a modification to list the National Park's special qualities, as outlined in its Management Plan (2016 – 2021).	Section discussing the special qualities has been updated as suggested.
A special quality associated with the sense of tranquillity here in Northumberland National Park is its pristine dark skies, due to the lack of light-pollution. The CPRE Night Blight Report (2016), stated that "Northumberland comes out top with 72% of its skies in the darkest category " Other than a brief mention in Para 7.69 and Para 7.73, there is no indication of their significance, both to the quality of life and wellbeing of residents, and to wildlife, as well as the fact that they contribute to the region's economy with the resultant development of astro-tourism in the last 12 years; all of which could be threatened by the proliferation of badly designed and installed lighting infrastructure associated with transport developments such as street lighting and illuminated highway signs. In 2013, an area of 1400 Km^2 comprising the whole of Northumberland National Park and 70% of the adjacent Kielder Water & Forest Park was designated England's first (and at the time) Europe's largest International Dark Sky Park (aka Northumberland International Dark Sky Park), obliging both the Northumberland County Council and the National Park Authority respectively to monitor and implement measures to minimise light pollution by adhering to the joint Exterior Lighting Master Plan. Government Guidance in the form of Planning Practice Guidance has recently been updated (November 2019) on lighting and advises how the planning system should consider light pollution. Government planning policy is set out in the NPPF (para 180).	Elements highlighted by comment noted. Potential impacts on tranquillity and light pollution have been assessed through the ISA process.
Para 7.17 - Areas of Tranquillity: We suggest you either amend this or add another paragraph to specifically reference the impact of large vehicles such as timber haulage upon the fabric of our rural roads, many of which were not constructed to a specification suited to modern timber haulage vehicles, and the tranquillity of associated villages and hamlets. There is no reference to the Forestry and Timber Industry's North East Timber Transport Forum and their Agreed Routes map.	Additional key issue included. Comment fed back to NETP development team

Consultation response	How the response was considered and addressed
After Para 10.14: Northumberland National Park has an identified need of 160 dwellings over their 20-year planning period 2017-2037, an average of 8 per annum. The National Park's need is not discounted from the figures for the whole of Northumberland (see Para 10.14), used by Northumberland County Council.	Information for Northumberland National Park has been included alongside housing needs for other Local Planning Authorities in the region.
13.29 You have missed the Off-grid electricity issue. - It may well be worth mentioning here that rural Northumberland has the largest off-grid electricity community anywhere in the Country. On site electricity generation can cost up to 3 times as much as that obtained by the local distribution network so contributes towards fuel poverty. Additionally, off-grid communities are likely to miss out on initiatives focused on decarbonising transportation.	Issue now acknowledged in key issues.

Content of the ISA Scoping Report

2.5 Reflecting the requirements of the SEA Regulations, the following information was presented in the Scoping Report for the ten ISA themes:

- **Context review:** This explored the environmental and sustainability 'context' for the ISA/NETP through reviewing high level messages (e.g. internationally, from central government and at the regional level) with a view to establishing the focus for the ISA.
- **Baseline data:** This established the baseline situation in the area in the absence of the NETP (including the future baseline) in order to help identify the plan's likely significant effects.
- **Key issues:** This identified particular problems or opportunities ('issues') that should be a focus of the ISA.

2.6 Drawing on the key issues established through the above process, the Scoping Report presented an ISA Framework of objectives and assessment questions which would be used to assess the draft plan and alternatives. A summary of the key issues and the full ISA Framework is presented below. The context review and baseline data, which has been updated to reflect comments received on the Scoping Report consultation, is presented in **Appendix A**.

Key issues for the ISA and ISA Framework

2.7 The ISA Scoping Report identified a range of sustainability problems / issues that provide the focus of the ISA process. Presented by each of the ten environmental themes, this drew on the review of the sustainability context and baseline.

2.8 The key issues were then translated into an ISA Framework of objectives and assessment questions. The ISA Framework has been used to inform the assessment of likely significant effects on the baseline, as presented in Chapter 4 below. This enables the environmental effects of the NETP and alternatives to be defined and subsequently analysed based on a structured and consistent approach.

2.9 The key issues identified through scoping are presented below. **Table 2.2** subsequently presents the objectives and assessment questions for each ISA theme.

Key issues: Biodiversity

2.10 Transport infrastructure enhancements have the potential to place increasing pressures on habitats and species and ecological networks in the North East.

2.11 There are a large number of internationally designated and nationally designated sites within the North East which are likely to come under increasing pressures from human activity including from transportation.

2.12 A number of the internationally designated nature conservation sites found within the North East have exceeded the critical load for nitrogen and acid deposition.

2.13 There is a need to sensitively manage visitor and recreational access to these areas. While tourism and recreation can provide a significant benefit to the local economy the impact on designated sites through increasing number of visitors should be considered fully. The NETP has a bearing on the impact which visitors may have on such sites.

2.14 Generally there is a slight upward trend in the condition of SSSIs within the North East, however there are still a number of sites particularly in the Tyne and Wear county where they are classed as 'unfavourable no change' or 'unfavourable declining'.

2.15 Wildlife transport corridors provide important wildlife links and facilitate the dispersal of plants and animals creating habitat networks[16]. There are a number of pressures on these corridors associated with:

- Direct loss due to development;
- Simplified landscaping schemes failing to maximise the benefits to wildlife;
- Loss/disturbance due to road improvement schemes;
- Over intensive or lack of management;
- Vulnerable to vandalism, accumulations of litter and fly tipping;
- A number of priority species are killed on busy roads every year, as there are few or no opportunities for their safe crossing;
- Pollution of wetland habitats adjacent to roads from salt and petrochemical runoff can also have detrimental effects;
- Management of village and urban verges for non-native species removes local distinctiveness provided by a wild flora, and will eventually lead to loss of wild flora;
- Tree planting in inappropriate places shades out wildflower rich grassland;
- Salt piles can leach into the surrounding soils; and
- Disused railways becoming multi-user routes could lead to habitat loss, without careful planning of routes.

2.16 The North East should explore opportunities to enhance, and where appropriate, create wildlife corridors in the delivery of transport schemes. This could be achieved through using animal bridges/tunnels across transport corridors to increase wildlife permeability, and be implemented as part of wider green infrastructure initiatives that many Local Authorities are pursuing[17].

Key issues: Water and Soil Resources

2.17 Watercourses in the North East support a range of rare and important species such as fresh water pearl mussel. Physical modifications are a key issue in all three of the catchments within the North East particularly in relation to fish passage. This will need to be taken into consideration in any schemes taken forward under the NETP.

2.18 Urban transport and pollution pressures have been identified as a specific pressure in the Northumbria River Basin District. Schemes taken forward under the NETP should, where possible, seek to improve the existing road drainage. In addition, opportunities to reduce deposition of pollutants on European sites through the encouragement of a model shift and phasing out of older vehicles with poor emissions should be investigated.

[16] Natural England (2014) making space for wildlife [online] available at: publications.naturalengland.org.uk/file/6737795561291776 [accessed 27/02/20]
[17] Further guidance and information on green infrastructure can be found at: http://publications.naturalengland.org.uk/publication/35033

2.19 There is a limited amount of best and most versatile agricultural land within the North East, where this is present it is restricted to low lying areas along river valleys.

Key issues: Historic Environment

2.20 The fabric and setting of heritage assets in the North East are sensitive to enhanced transport infrastructure.

2.21 Transport infrastructure can often be an important historic asset in its own right from prehistoric trackways and Roman roads, to medieval bridges, the development of canals and railways during the industrial revolution and the introduction of motor transport and aviation in the 20th century. To name but a few, examples in the North East include the Grade I listed Central Station in Newcastle, the Grade I listed Barnard Castle Bridge over the River Tees, the Grade II listed Tyne Pedestrian and Cyclist Tunnels, and the historic infrastructure associated with the many ports in the region.

2.22 The historic environment can be impacted from increasing traffic levels through emission levels, congestion, visual impact and noise pollution. There can also be direct or indirect impact from the new development associated with transport infrastructure.

2.23 High levels of visitors to historic sites can be a major economic benefit for local areas, however this can put a number of pressures on these sites including from transport.

2.24 New development need not however be harmful to the significance of a heritage asset, and in the context of the NETP there may be opportunity for new transport infrastructure to enhance the historic settings of localities and better reveal assets' cultural heritage significance.

Key issues: Landscape

2.25 New transport infrastructure has the potential to have an impact on local landscape character.

2.26 A large proportion of the North East is made up of a sparsely populated rural landscape with small nucleated villages accesses only by minor roads. In particular; the Border Moors and Forests, together with the neighbouring Cheviots NCA is sparsely populated with very few major settlements and transport links, and is valued for its dark night skies. Landscape character in these areas are particularly sensitive to change.

2.27 The growth of towns such as Morpeth and Ponteland in Northumberland, pressures to expand villages; and changes in use of farm buildings to residence and business premises has increased the number of privately owned vehicles travelling through the area. This is also corresponding with the upgrades of the A1 and other major transport routes such as the A68, A696 and A697.

2.28 There is a need to ensure that landscape sensitivity is considered in the provision or improvement of transport links. Measures to minimise landscape impacts, such as through planting to provide screening, should be implemented. In urban areas there are opportunities for transport infrastructure developments to incorporate green infrastructure and links to existing and planned greenspace and the open countryside.

2.29 There is a need to sensitively manage visitor and recreational access to the rural landscapes. This will need to include the careful planning of transport routes, and the provision of public transport, walking and cycling to minimise the use of the private car.

2.30 There is a significant impact of large vehicles such as timber haulage vehicles on the fabric of the region's rural roads, many of which were not constructed to a specification suited to modern haulage vehicles, and the tranquillity of associated villages and hamlets.

2.31 There is a need to support dark skies and tranquillity in rural areas, including through the management of lighting in settlements and along transport routes.

Key issues: Air Quality and Noise

2.32 Key issues include the exceedances of air quality objectives within AQMAs in the North East. Transport is the significant contributor to issues in the majority of these AQMAs.

2.33 The presence of Noise Action Plans for a number of major routes within Newcastle upon Tyne and Durham indicating that environmental noise levels are being adversely affected by transport.

Key issues: Climate Change and Flood Risk

2.34 Greenhouse gas emissions from transport have reduced at a lower rate than emissions from industrial/commercial sources and domestic sources. In terms of the proportion of overall emissions which originate from transport in the North East, this has increased in the last ten years.

2.35 There will be an ongoing need to decarbonise the transport sector in the North East to help meet international, national and local commitments and to reflect the declaration of climate emergencies by Local Authorities across the region.

2.36 Climate change has the potential to increase the occurrence of extreme weather events in the North East, with increases in mean summer and winter temperatures, increases in mean precipitation in winter and decreases in mean precipitation in summer. This is likely to increase the risks associated with climate change (including surface water and fluvial flood risk, as well as flooding by sea). This will result in an increased need for resilience and adaptation for transport infrastructure.

Key issues: Population

2.37 Population growth in the North East is lower than that of the England average, and in some council areas is decreasing. All seven councils have a lower proportion of the population within the 0-15, and 25-44 age groups than the national average and in turn there are a proportionally higher number of residents within the 45-59 and 60+ age groups. Supporting a proportional increase of older people within the population is an issue which requires important consideration; especially in an area estimated to have slow population growth.

2.38 The North East has a higher proportion of residents with no formal qualifications than the national average, and in there are also fewer people with level 4 qualifications than the national average, suggesting that there may be barriers to educational opportunities.

2.39 The affordability ratios for the North East are lower than the average ratios for England, showing that homes are more affordable. The majority of NETP council areas also have a higher proportion of residents traveling by bus than national average showing that there is considerable demand for good quality public transport links.

Key issues: Human Health

2.40 The NETP council areas have a higher proportion of households which are deprived in 2 or 3 dimensions than the national deprivation average. This suggests that overall residents within the North East are more likely to experience lower standards of living than in other areas of the country. According to the IMD, relative to the other NETP authority areas, County Durham, South Tyneside, and Sunderland all have on average, higher levels of deprivation while Northumberland and North Tyneside have lower levels of deprivation.

2.41 Although Northumberland and North Tyneside have female life expectancy rates which are slightly more favourable than the national average, throughout the North East male life expectancy is lower - in some cases significantly. Female life expectancy rates are lower or comparable to the national average in the remaining NETP council areas.

2.42 Other health issues include that all NETP council areas have a higher proportion of people who consider themselves to be in bad health than the national average and also a higher proportion of residents whose day to day activities are limited a lot by disability. Sunderland has the highest levels of obesity in the North East at 28.6% of residents compared to the national average of 26.7%.

2.43 Enhancements in walking and cycling networks, including improved linkages to public transport networks, have significant potential to support the health and wellbeing of residents. This will be

supported by green infrastructure enhancements. There are also significant opportunities for enhancements to road safety across the North East.

Key issues: Rural Proofing

2.44 Key issues relating to rurality in the North East Region include as follows:

- Proportionally older populations;
- Disabilities causing more limitations on people's activity than in urban areas;
- Access to, and use of, public transport appears to be lower; and
- Higher levels of deprivation in sparsely populated areas – both urban and rural
- Higher levels of deprivation with regards to the Barriers to Housing and Services domain.
- Northumberland has the largest off-grid electricity community nationally. On site electricity generation can cost up to three times as much as that obtained by the local distribution network so contributes towards fuel poverty. Additionally, off-grid communities are likely to miss out on initiatives focused on decarbonising transportation.

Table 2.2 ISA Framework for the North East Transport Plan 2021-2035

ISA theme	Objectives	Assessment questions – will the option/proposal help to:
Biodiversity	Support the integrity of nationally and locally designated sites.	• Protect the integrity of the internationally designated Ramsar sites, SACs and SPAs in the North East? • Avoid negative impacts, and where possible improve the condition of SSSIs within the North East? • Manage pressures on locally designated sites for biodiversity and geodiversity in the North East? • Maintain, and where possible, enhance the status of NNRs and LNRs in the North East and people's access to these?
	Protect and enhance habitats and species.	• Protect and enhance semi-natural habitats? • Protect and enhance priority habitats, and the habitat of priority species? • Achieve a net gain in biodiversity? • Increase the resilience of the North East's biodiversity to the potential effects of climate change?
	Increase habitat connectivity across the transport network.	• Contribute to the creation of coherent and resilient ecological networks? (i.e. allow passage of wildlife across roads, railway lines, cycle paths through the use of animal bridges/tunnels or support green infrastructure enhancements)?
Water and Soil Resources	Minimise the impact which transport and transport infrastructure has on water quality, and on the physical state of water bodies.	• Support improvements to water quality, including through minimising the impacts of diffuse run off from road surfaces? • Protect surface water and groundwater resources? • Minimise physical alterations to water bodies? • Minimise the impacts to, and where possible enhance the quality of water bodies of strategic significance for water supply?
	Promote the efficient use of land.	• Facilitate the use of previously developed land? • Avoid the development of the best and most versatile agricultural land (Grade 1 to 3a agricultural land)?
	Promote sustainable waste management solutions that encourage the reduction, re-use and recycling of waste during construction.	• Encourage recycling of materials and minimise consumption of resources during construction, operation and maintenance of new transport infrastructure? • Encourage the use of alternative transport methods for the movement of waste in the region?

ISA theme	Objectives	Assessment questions – will the option/proposal help to:
Historic Environment	Conserve and enhance the North East's' cultural heritage resource, including its historic environment and archaeological assets.	• Conserve the outstanding universal value of World Heritage Sites? • Conserve and enhance the significance of buildings and structures of architectural or historic interest, both designated and non-designated, and their setting? • Conserve and enhance the significance of Registered Parks and Gardens? • Conserve and enhance the special interest, character and appearance of conservation areas and their settings? • Conserve and enhance archaeological remains and support the undertaking of archaeological investigations and, where appropriate, recommend mitigation strategies?
	Promote understanding of the North East's cultural heritage resource.	• Support access to, interpretation and understanding of the historic environment?
Landscape	Protect and enhance the character and quality of the North East's landscapes.	• Support the purposes and duty of the Northumberland National Park? • Support the management objectives and special qualities of the AONBs in the North East? • Support the integrity of the LCAs and Heritage Coast in the North East? • Conserve and enhance locally important landscape features? • Improve accessibility by sustainable transport to the North East's landscape and townscape resource, including within the National Park and AONBs?
Air Quality and Noise	Deliver improvements in air quality in the North East.	• Reduce emissions from transport? • Contribute to improvements in air quality within AQMAs? • Promote the use of low emission vehicles? • Promote enhancements to green infrastructure networks to facilitate increased absorption and dissipation of nitrogen dioxide and other pollutants?
	Reduce the impact on environmental noise from transportation sources in areas with Noise Action Plans.	• Will it contribute to lowering noise levels in Noise Action Plan Areas?

ISA theme	Objectives	Assessment questions – will the option/proposal help to:
Climate Change and Flood Risk	Support climate change mitigation in the North East through limiting the contribution of transport to greenhouse gas emissions.	• Limit the increase in the carbon footprint resulting from new transport infrastructure provision? • Promote the use of sustainable modes of transport, including walking, cycling and public transport? • Reduce the need to travel? • Reduce energy consumption from non-renewable resources? • Encourage the update of electric and alternatively fuelled vehicles?
	Support the resilience of the North East's transport networks to the potential effects of climate change.	• Increase the resilience of the transport network to the potential effects of climate change? • Promote a coordinated approach to the management of flood risk across public infrastructure provision? • Improve and extend green infrastructure networks as part of transport infrastructure provision to support adaptation to the potential effects of climate change? • Sustainably manage water run-off, reducing surface water runoff? • Ensure the potential risks associated with climate change are considered through new transport network programmes? • Reduce the impact of extreme weather events on the condition of the road network?
Population	Promote sustainable transport use and reduce the need to travel.	• Encourage modal shift to more sustainable forms of travel? • Reduce the need to travel?
	Cater for existing and future residents' needs as well as the needs of different groups in the community, and improve access to local, high-quality community services and facilities.	• Maintain or enhance the quality of life of residents? • Address the needs of all age groups? • Meet the needs of those living in rural areas? • Improve accessibility of key local facilities, including specialist services for disabled and older people?

ISA theme	Objectives	Assessment questions – will the option/proposal help to:
Health	Improve the health and well-being of the North East's residents.	• Reduce the impacts of air and noise pollution on health? • Promote accessibility to a range of leisure, health and community facilities, for all age groups? • Promote the use of healthier modes of travel? • Reduce health inequalities? • Enhance the provision of, and access to, green infrastructure in the county, in accordance with national standards? • Avoid any negative impacts to the quality and extent of existing recreational assets, such as formal or informal footpaths? • Improve access to the countryside for recreation?
	Improve road safety.	• Improve road safety and reduce road accidents?
	Reduce the community severance effects of transport routes.	• Reduce community severance (i.e. through improved crossing facilities, reduced traffic speeds and reduced traffic levels)?
Equalities	Advance equality of opportunity for all.	• Promote access to transport services for all including those with and without shared Protected Characteristics? • Provide opportunities to foster good relations between groups?
Rurality	Increase access via a range of transport modes for rural communities.	• Improve the sustainable transport network in rural areas (i.e. improvements to public and active travel) whilst also recognising that for some in rural areas the car is still essential for accessibility? • Better enable people with specific needs to access transport and day to day activities?
	Enable economic growth, and employment diversification in rural areas.	• Support diversified economic activities in rural areas? • Enhance access to rural employment opportunities? • Improve people's ability to work or run a business from home?

3. Assessment of reasonable alternatives for the NETP

Reasonable alternatives in ISA

3.1 A key element of the ISA process is the assessment of 'reasonable alternatives' for the NETP. The SEA Regulations[18] are not prescriptive as to what constitutes a reasonable alternative, stating only that the Environmental Report (i.e. ISA Report) should present an appraisal of the '*plan and reasonable alternatives taking into account the objectives and geographical scope of the plan*'.

3.2 The ISA process has therefore assessed a range of potential options as reasonable alternatives, which consider different approaches for six areas within the North East region.

An area-led approach to considering reasonable alternatives

3.3 The NETP covers a large and diverse region, with a wide range of transport challenges. These regional challenges sit within diverse environmental and socio-economic settings.

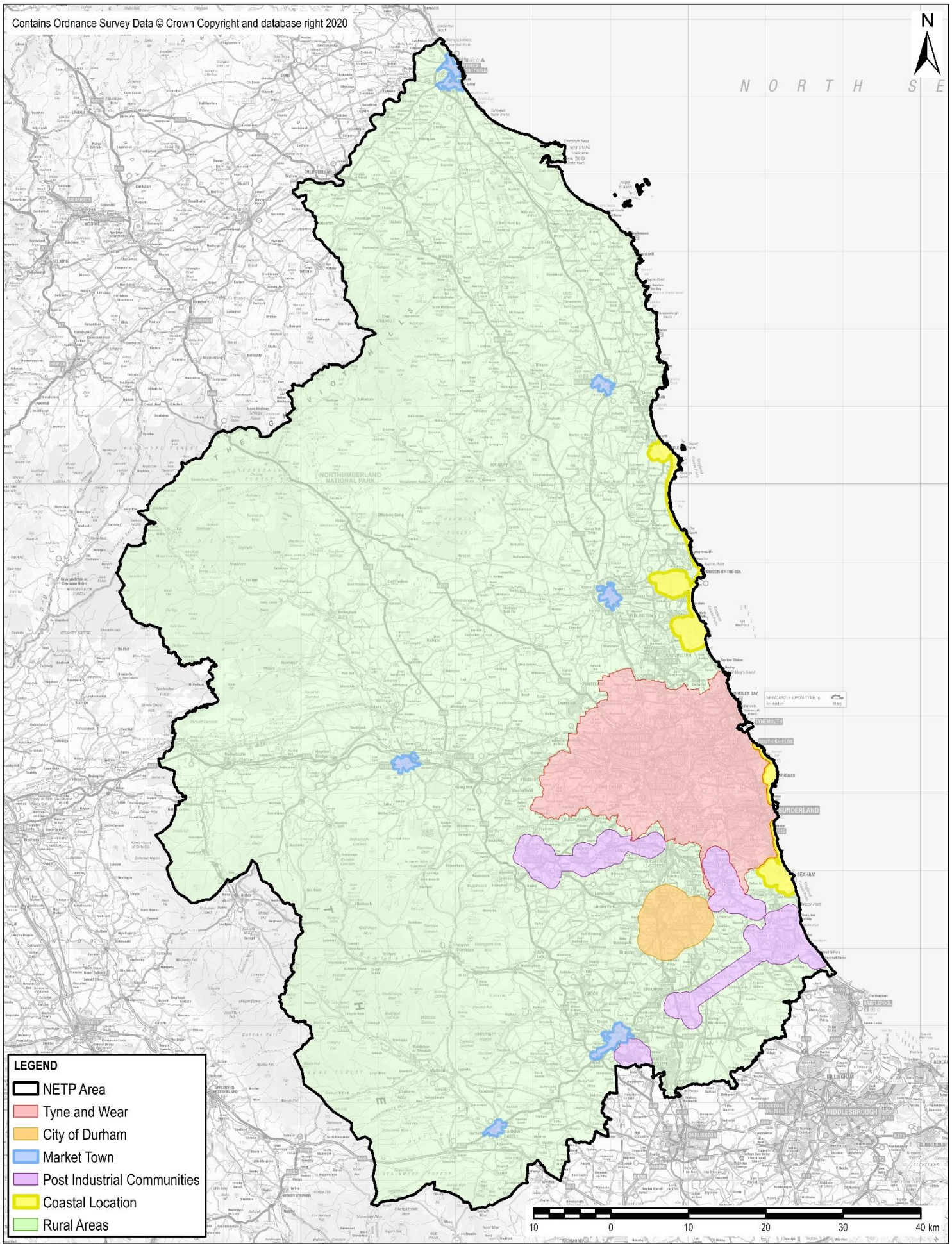
3.4 A central role of appraising reasonable alternatives through the ISA process is to help identify the relative sustainability merits of different approaches to delivering enhanced transport provision in the region. In recognition of the diversity of the region, the approach to the appraisal of reasonable alternatives subdivides the North East region into a number of distinct geographical areas.

3.5 The six areas are as follows:

- **Tyne and Wear:** This area covers the main Tyne and Wear conurbation, encompassing much of the local authority areas of Newcastle city, North Tyneside, South Tyneside, Sunderland and Gateshead.
- **City of Durham:** This area covers the city of Durham and its surrounding area.
- **Post-industrial communities:** This area incorporates the former coal-mining and steel working areas in the region. This includes the area around Consett, Stanley and Catchgate; the area around Peterlee, Easington, Shotton Colliery and Blackhall Colliery; a corridor between Peterlee and Ferryhill; a corridor along the A182 encompassing South Hetton, Hetton-le-Hole, and Houghton-le-Spring; and the area around Shildon.
- **Market towns:** This area incorporates the larger market towns in the region, including Bishop Auckland, Barnard Castle, Alnwick, Berwick-upon-Tweed, Morpeth and Hexham.
- **Coastal areas:** This area includes coastal areas located to the south and north of the main Tyne and Wear conurbation. It incorporates: the coastal areas between South Shields and Roker, including Marsden, Whitburn and Seaburn; Hendon to Seaham; and Blyth to Amble.
- **Rural areas:** This covers the rural areas of the region, including the rural parts of Northumberland and County Durham. It includes the parts of the region within the Northumberland National Park and the two AONBs (Northumberland Coast AONB and North Pennines AONB).

3.6 **Figure 3.1** highlights the broad locations covered by these areas.

[18] Environmental Assessment of Plans and Programmes Regulations 2004



Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

AREAS CONSIDERED THROUGH THE ASSESSMENT OF REASONABLE ALTERNATIVES

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:325,000	FINAL
Drawing Number		Rev
FIGURE 3.1		01

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File Name:i:\5004 - Information Systems\60630031_NECA_Transport_Plan\02_Maps\Figure 3-1 - Sub Areas.mxd

3.7 For each of these areas a number of options have been identified and subsequently appraised. For all areas a do minimum is described which would be applied in all circumstances, together with one or more options for additional levels of intervention over and above the do minimum. These options are designed to reflect the key issues facing that area, and the different approaches that can be taken to intervention/investment in transport infrastructure and management.

3.8 The detail of the options appraised, and the appraisal findings, are presented below.

Tyne and Wear

3.9 This area (**Figure 3.2**) covers the main Tyne and Wear conurbation, encompassing much of the local authority areas of Newcastle city, North Tyneside, South Tyneside, Sunderland and Gateshead. Three options have been considered as alternatives for the ISA, as follows:

Option TW1: Do minimum

3.10 A do minimum option would rely on committed investment, which would continue. This includes the Transforming Cities Fund package, which would deliver a short-term programme of investments. The Metro would receive a new fleet in 2023 as currently planned and further investment in bus fleets would take place.

Option TW2: Optimise use of existing infrastructure

3.11 This option would comprise enhancements to the existing urban transport network. It would incorporate improved bus services on key corridors, enhancements to walking and cycling linkages, demand management measures and more effective use of Park and Ride provision.

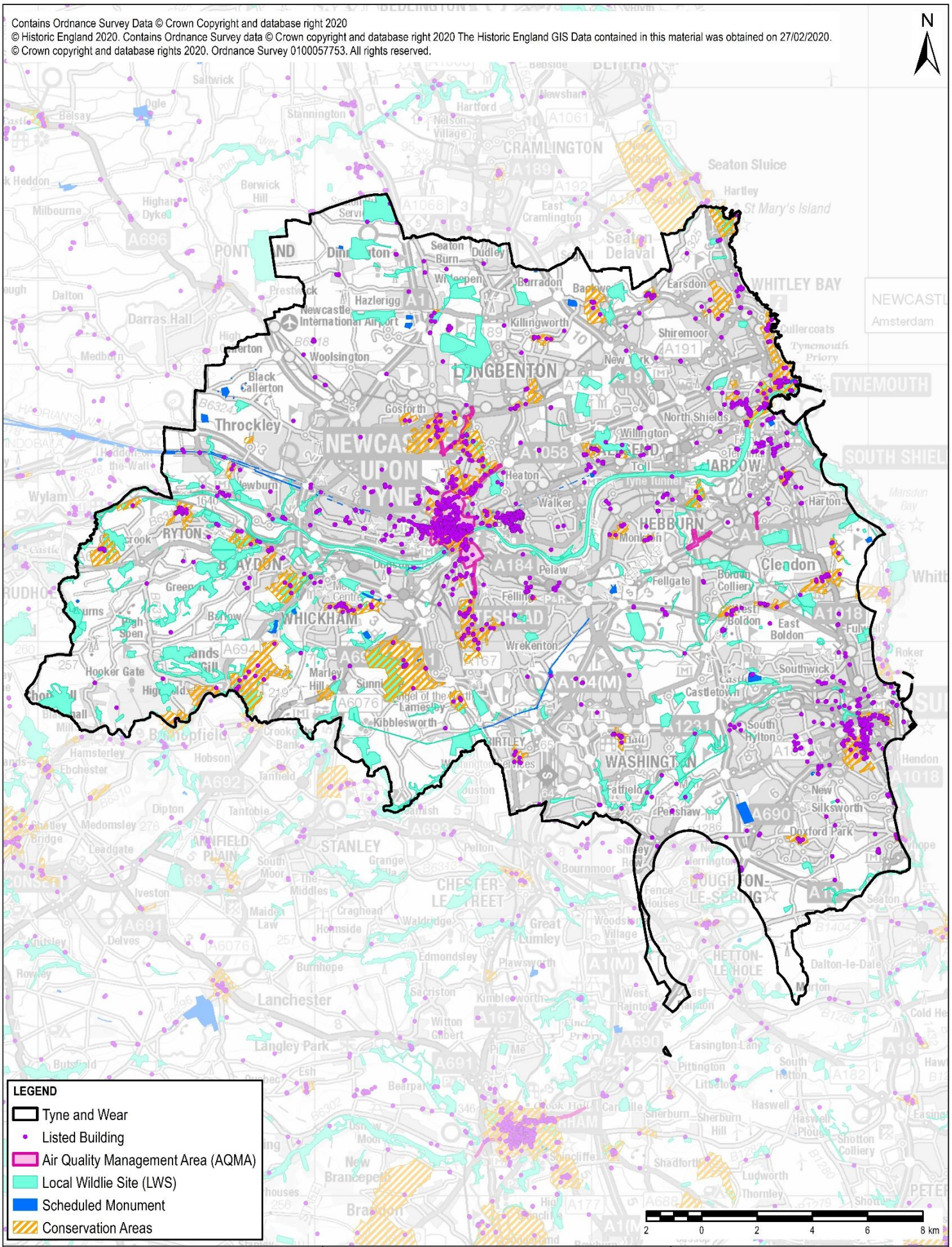
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

3.12 This option would seek to take forward significant capacity enhancements to the urban transport network. This would include, for example, an expansion of the Metro network (including potentially, new lines), delivery of new local rail lines, and an expansion of Park and Ride provision. In terms of the road network it would initiate significant junction capacity enhancements at key ‘pinchpoints’ and potentially, initiate new local links. There would also be a focus on connectivity across the Tyne.

Appraisal findings

3.13 The following table presents appraisal findings in relation to the three options introduced above. These are organised by the ten ISA themes.

3.14 For each ISA theme, a commentary on the likely effects is presented. Options are also ranked numerically reflecting their relative sustainability performance, with ‘1’ the most favourable ranking and ‘3’ the least favourable ranking.



File Name:i:\5004 - Information Systems\60630031_NECA_Transport_Plan\02_Maps\Figure 3-2 - Tyne and Wear.mxd

Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

KEY ENVIRONMENTAL CONSTRAINTS: TYNE AND WEAR CONURBATION

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:75,000	FINAL
Drawing Number		Rev
FIGURE 3.2		01

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Table 3.1: Appraisal of options for Tyne and Wear

Option TW1: Do minimum
Option TW2: Optimise use of existing infrastructure
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

ISA theme	Discussion of potential effects and relative merits of options	Rank of preference		
		TW1	TW2	TW3
Biodiversity	Key designated sites in the vicinity of the Tyne and Wear urban area include the Northumberland Shore SSSI and Durham Coast SSSI, a number of relatively small SSSIs on the edge of the urban area, and numerous Local Wildlife Sites. Key habitats in the urban area include open mosaic habitats on previously developed land and the following BAP Priority Habitats: wood pasture and parkland; deciduous woodland; good quality semi-improved grassland; and lowland dry acid grassland. Option TW3, through facilitating the delivery of significant new transport infrastructure in the Tyne and Wear urban area, has increased potential to lead to significant effects on biodiversity habitats, species and networks. This includes from land take, habitat loss and fragmentation and disturbance. In this respect Option TW1, which relies on committed investment, and Option TW2, which focuses on enhancing existing transport infrastructure, would lead to fewer physical impacts on key areas of sensitivity. Option TW2 however has the potential to lead to impacts on habitats and ecological networks on existing transport corridors. This is given many existing transport routes are important biodiversity corridors, containing and linking key habitats, and frequently, designated sites. These corridors support a significant number of protected species. As such Option TW2 still has the potential to lead to significant effects without the implementation of appropriate avoidance and mitigation measures. However, the scale of effects is less likely to be significant than those which result from Option TW3. It should be noted though that the delivery of new and enhanced transport infrastructure may support some enhancements to biodiversity networks. For example, the Government's 25-year Environment Plan seeks to embed an environment net gain principle for infrastructure development. In addition, Highways England's Road Investment Strategy states that by 2040 its schemes must deliver a net gain in biodiversity and Network Rail has committed to make a net positive contribution to biodiversity. In this context there is scope for transport infrastructure enhancements to support environmental net gain in Tyne and Wear. This includes through delivering enhancements in the Network Enhancement Zones[19] and Network Expansion Zones[20] identified to the south west, north west and south east of the Tyne and Wear conurbation by Natural England.	**1**	**2**	**3**
Water and Soil Resources	Option TW3, through facilitating the delivery of significant new transport infrastructure, will require larger landtake than Option TW1 and TW2. This has increased potential to lead to the development of previously undeveloped land, including, potentially productive agricultural land. Without mitigation measures, an increased delivery of new transport infrastructure has the potential to have impacts on water and soil quality through increases in surface water run-off. However, no significant impacts on water quality would be anticipated from schemes if the required embedded mitigation measures are incorporated within the construction and operational stage. Option TW2 also offers additional opportunities to deliver enhancements to surface water management on existing transport corridors.	**2**	**1**	**3**

[19] Network Enhancement Zones comprise land within close proximity to existing habitat components that have been identified by Natural England as likely to be suitable for habitat re-creation for the particular habitat.
[20] Network Expansion Zones are areas identified with potential for expanding, linking and joining biodiversity networks.

Option TW1: Do minimum
Option TW2: Optimise use of existing infrastructure
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

Historic Environment	The Tyne and Wear urban area has a rich historic environment resource, as highlighted by the significant number of features and areas designated for their heritage value. The historic environment of the urban area is also framed by the significant number of undesignated features of heritage value which are vulnerable to change given their lack of statutory and local protections. In addition, transport corridors are often themselves important heritage resources. The urban area also has a rich and diverse archaeological resource. The increased number of 'hard' transport infrastructure schemes likely to be initiated through Option TW3 have the potential to lead to impacts on the key assets (including designated features and areas) located in the vicinity of the key routes and areas targeted for interventions. The significance of effects from these interventions will however depend on design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm, with benefits for the setting of the historic environment. In relation to Option TW2, an approach which focuses to a greater degree on soft measures and demand management measures is less likely to lead to direct adverse impacts on the historic environment and townscape character. The setting of the historic environment also has the potential to benefit from initiatives taken forward through this option by an encouragement of modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic on the setting of historic environment assets. In this respect a 'do minimum' approach taken forward through Option TW1 has reduced potential to bring similar benefits.	**2**	**1**	**3**
Landscape	Option TW3, through facilitating the delivery of significant new transport infrastructure, has increased potential to have impacts on townscape and landscape character in Tyne and Wear. Option TW1 and TW2, through focusing on the existing urban transport network, is less likely to deliver new infrastructure which has significant impacts on local character, distinctiveness or a sense of place. The significance of effects from schemes initiated by Option TW3 would however depend on the design, layout and scale of the schemes, and the mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and townscape/landscape character. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm. With regards to Option TW2, an approach which focuses to a greater degree on soft measures and demand management measures is less likely to lead to direct adverse impacts on townscape and landscape character. Local character also has the potential to benefit from initiatives taken forward through this option by an encouragement of modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic on the townscape and landscape character. In this respect a 'do minimum' approach taken forward through Option TW1 has less potential to initiate measures which bring these benefits.	**2**	**1**	**3**

Option TW1: Do minimum
Option TW2: Optimise use of existing infrastructure
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

Air Quality and Noise	There are seven AQMAs found within the Tyne and Wear area. Two of these are in Newcastle, one around the B1318 and the A189 between Gosforth and West Jesmond; and a second in central Newcastle stretching to the River Tyne. There is one AQMA in central Gateshead stretching north to the River Tyne. There are also two in South Tyneside; one at Lean Lane around the junction with the B1516 and the A19, and a second in West Harton along Boldon Lane. Through delivering a more comprehensive package of schemes which supports modal shift to alternative modes of transport to the private car, Option TW2 has more potential than Option TW1 to support air and noise quality enhancements in Tyne and Wear. Option TW3, through bringing forward junction capacity enhancements and new road schemes has the potential to lead to air quality enhancements at key 'pinchpoints' on the network which have existing air quality issues. This has the potential to support significant enhancements of air quality at specific locations. However, through contributing to an overall increase in traffic flows on the wider road network, the option has the potential to increase traffic flows over a broader area, including through stimulating induced demand. This may contribute to increases in emissions of the key pollutants which affect air quality over a wider area. For the same reason, the option also has the potential to lead to more significant effects on noise quality.	**2**	**1**	**3**
Climate Change and Flood Risk	Option TW3's promotion of road schemes that relieve congestion and / or increase capacity has the potential effect of releasing demand for vehicle trips currently suppressed. As such the release of this induced demand may lead to increases in greenhouse gas emissions. Option TW2, through delivering a more comprehensive package of schemes that Option TW1, will do more to support modal shift to alternative modes of transport to the private car. As such the option has additional potential to support a limitation of greenhouse gas emissions from transport. In terms of adapting to the effects of climate change, Option TW3, and to a lesser extent, Option TW2, has more potential than Option TW1 to lead to proposals which enhance the resilience of particular locations to climate change. This is given the option will deliver transport schemes with the potential to initiate physical measures which will limit climate change impacts. However, the effect of initiatives depends on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including location, design and layout and the implementation of measures such as sustainable drainage systems.	**2**	**1**	**2**

Option TW1: Do minimum
Option TW2: Optimise use of existing infrastructure
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

Population	A do minimum approach promoted through Option TW1 would do less to help address the key socio-economic and quality of life issues influenced by transport in Tyne and Wear. In this context a range of issues are less likely to be addressed without appropriate interventions, including accessibility issues, congestion and severance issues, and elements relating to social exclusion. Option TW2, through providing a focus on improved bus services, enhancements to walking and cycling linkages and demand management measures would do more than Option TW1 and Option TW3 to encourage public transport use and active travel. In addition to supporting social inclusion and community vitality, this will contribute to the quality of life of residents through limiting the impact of traffic and congestion on neighbourhoods and on severance issues. In addition to increasing travel choice through initiating significant transport capacity enhancements, Option TW3 has the potential to lead to a range of economic opportunities through enhancing connections with the strategic and local transport network and key employment and growth areas. This mirrors a core aim of the North East Local Enterprise Partnership and its Strategic Economic Plan, which seek to maximise economic opportunities and enhance the vitality of the region's economy through improvements in transport connectivity.	**3**	**2**	**1**
Human Health	Option TW3, through enabling a reduction of congestion at key bottlenecks on the network, has the potential to reduce the impacts of traffic and congestion on health and wellbeing at these locations. This includes through enhancements to air and noise quality, and improvements in the quality of the public realm. However, a potential stimulation of traffic growth over a larger area due to induced demand has the potential to have wider negative effects on health and wellbeing of residents through impacts on the quality of the public realm and a contribution to air and noise pollution. This does however have the potential to be offset by the additional enhancements to the rail and Metro network facilitated by the option. Option TW2 has increased potential to support modal shift from the private car. This will support healthier modes of travel, including through encouraging active travel modes such as walking and cycling. Through promoting modal shift, and limiting induced demand, it also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents. Options TW2 and TW3 have increased potential to facilitate enhancements to multifunctional green infrastructure networks in Tyne and Wear alongside transport infrastructure improvements, including along existing transport corridors. This will provide benefits for health and wellbeing. Option TW1, through initiating a do minimum approach, has the least potential to address the transport issues which adversely affect health and wellbeing.	**3**	**1**	**2**

Option TW1: Do minimum
Option TW2: Optimise use of existing infrastructure
Option TW3: Initiate more significant interventions, including with regards to the rail, Metro and road network

Equalities	Groups with 'protected characteristics' tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, and the effects of traffic and congestion on health and wellbeing. These groups are also disproportionately affected by accessibility issues. In this context, Option TW2, which seeks to 1) enhance accessibility by public transport and walking and cycling and 2) limit the impact of the private car on the built environment, including through demand management measures, will do more to support the needs of groups with protected characteristics. Whilst a significant expansion of transport capacity proposed through Option TW3 has the potential to support accessibility for certain groups, the option has some potential to impact on equalities groups through stimulating car use. This includes through impacting on the quality of local neighbourhoods and increasing severance issues. In addition, the option has increased potential to impact on the health and wellbeing of these groups through undermining air and noise quality and impacting on road safety. However, it should be noted that the benefits from the more significant interventions through this option, including with regards to the additional enhancements to the rail and Metro network will help offset these potential impacts. With regard to Option TW1, a do minimum approach would do less to help address the key socio-economic and quality of life issues influenced by transport in Tyne and Wear and is less likely to address the transport and accessibility needs of groups with protected characteristics.	**3**	**2**	**1**
Rurality	In the context of rural needs, the performance of the options for Tyne and Wear are closely linked to accessibility from rural areas to this key urban area in the North East. In this respect, the significant enhancement of transport capacity in Tyne and Wear facilitated through Option TW3 would do most of the options to support accessibility to services, facilities and employment opportunities in the Tyne and Wear urban area for those living in rural areas.	**3**	**2**	**1**

City of Durham

3.15 This area (**Figure 3.3**) covers city of Durham and the surrounding area. Two options have been considered as alternatives for the ISA, as follows:

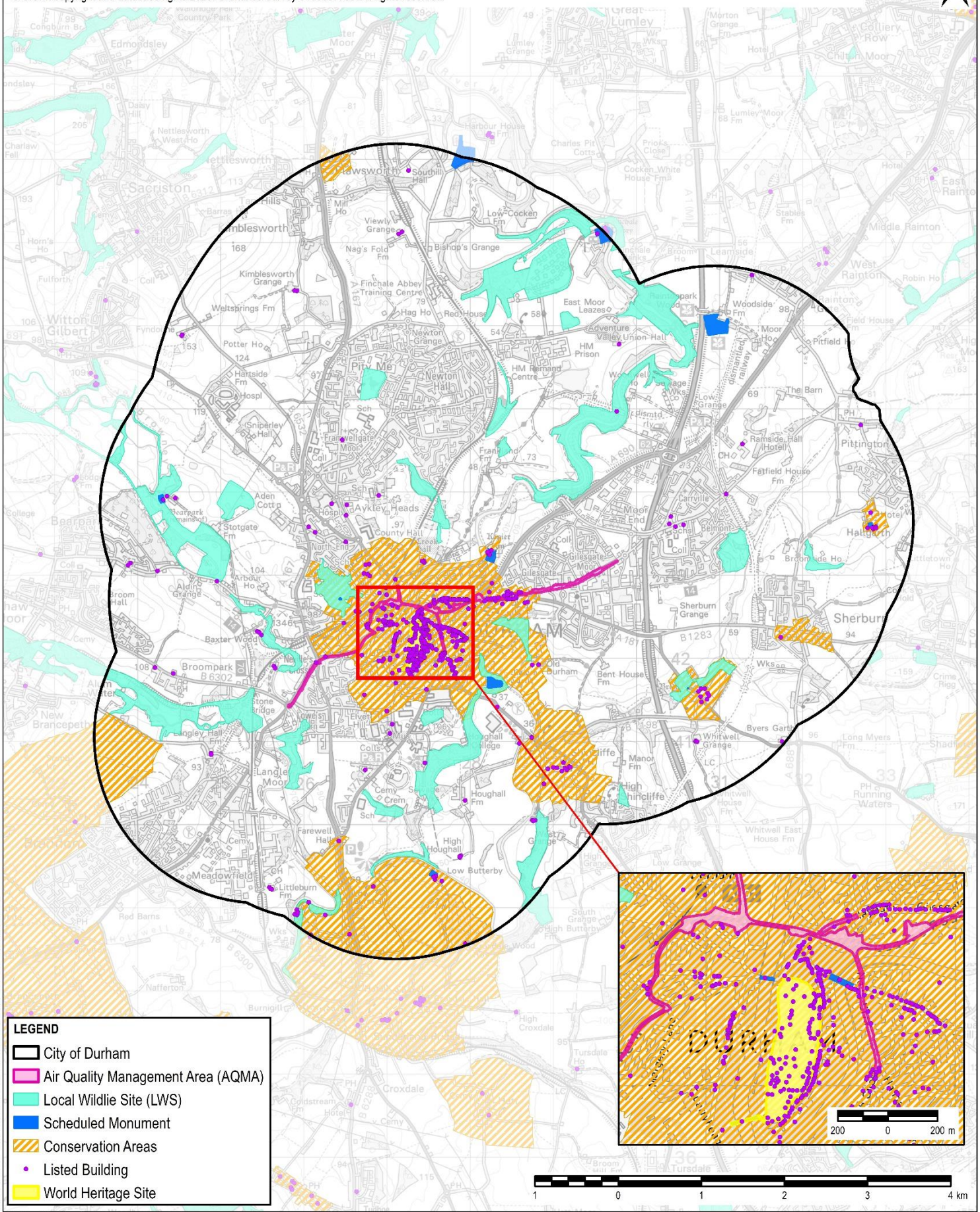
Option D1: Do minimum

3.16 A do minimum option would rely on committed investment, which would continue at a local and strategic level.

Option D2: Make better use of existing transport infrastructure in the city

3.17 This option would seek to deliver measures which maximise the potential of the existing transport network in the city. It is likely to include schemes such as enhanced walking and cycling networks, bus service improvements and demand management measures.

3.18 No major road schemes are included in the options. This recognises the outcomes of the recent examination on the County Durham Plan, which highlighted that the Northern and Western Relief Roads should be removed from the Plan.



File Name:I:\5004 - Information Systems\60630031_NECA_Transport_Plan\02_Maps\Figure 3-3 - City of Durham.mxd

Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

KEY ENVIRONMENTAL CONSTRAINTS: CITY OF DURHAM

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:50,000	FINAL
Drawing Number		Rev
FIGURE 3.3		01

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Appraisal findings

3.19 The following table presents appraisal findings in relation to the two options introduced above. These are organised by the ten ISA themes.

3.20 For each ISA theme, a commentary on the likely effects is presented. Options are also ranked numerically reflecting their relative sustainability performance, with '1' the more favourable ranking and '2' the less favourable ranking.

Table 3.2: Appraisal of options relating to the city of Durham

Option D1: Do minimum.
Option D2: Make better use of existing transport infrastructure in the city.

ISA theme	Discussion of potential effects and relative merits of options	Rank of preference	
		D1	D2
Biodiversity	Key designated sites in the vicinity of the city of Durham include the Butterby Oxbow SSSI, the Brasside Pond SSSI, and a number of Local Wildlife Sites. Key habitats in the vicinity of the city include the following BAP Priority Habitats: deciduous woodland; lowland heathland; lowland raised bog; and lowland dry acid grassland. Through delivering additional transport measures, Option D2 has the potential to lead to additional impacts on habitats and ecological networks on existing transport corridors, where any enhancements would be focused. This is given many existing transport routes are important biodiversity corridors, containing and linking key habitats and which support a significant number of protected species. However, the option would not implement significant additional physical infrastructure. The do minimum approach of Option D1 would continue to take forward schemes from committed investment; potential effects though from Option D1 are likely to be more limited than Option D2. Both options however have the potential to lead to effects without the implementation of appropriate avoidance and mitigation measures. It should also be noted that delivery of new and enhanced transport infrastructure may support some enhancements to biodiversity networks. In this context there is scope for transport infrastructure enhancements in the vicinity of the city to support environmental net gain locally. This includes through delivering enhancements in the Network Enhancement Zones and Network Expansion Zones identified to the north, west and south of the city.	**1**	**2**
Water and Soil Resources	In terms of impacts on land and soils resources, given Option D2 would not lead to significant additional landtake in the vicinity of the city, there is unlikely to be a significant difference between the two options in terms of the loss of productive agricultural land. No significant impacts on water quality would be anticipated from schemes linked to the two options if the required embedded mitigation measures are incorporated within the construction and operational stage.	**=**	**=**
Historic Environment	The city of Durham has a rich historic environment resource. This is highlighted by the presence of the Durham Castle and Cathedral World Heritage Site, the coverage of conservation areas over large parts of the city, and the significant number of listed buildings and scheduled monuments present in the area (**Figure 3.3**). In addition, the city has a rich archaeological resource. The significance of direct effects on the historic environment from the interventions taken forward through each option will depend on design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment. Potential effects from both options will though be limited by the limited number of new physical infrastructure schemes taken forward. However, Option D2 will initiate a range of measures which have the potential to deliver a greater degree of modal shift from the private car than Option D1. This includes a combination of measures to encourage public transport use and walking and cycling, as well as demand management measures. In this respect the fabric and setting of the historic environment has additional potential to benefit through modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic and congestion on the fabric and	**2**	**1**

Option D1: Do minimum.
Option D2: Make better use of existing transport infrastructure in the city.

	setting of historic environment assets. In this respect a 'do minimum' approach taken forward through Option D1 has reduced potential to bring similar benefits.		
Landscape	Both options, through focusing on the existing transport network, are less likely to deliver new physical infrastructure which have significant impacts on local character, distinctiveness or a sense of place. Option D2 will however initiate a range of measures which have the potential to deliver a greater degree of modal shift from the private car than Option D1. This includes a combination of measures to encourage public transport use and walking and cycling, as well as demand management measures. This will support townscape and landscape character through encouraging modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic and congestion on townscape and landscape character in the vicinity of the city. In this respect a 'do minimum' approach taken forward through Option D1 has less potential to initiate measures which bring these benefits.	**2**	**1**
Air Quality and Noise	Monitoring and detailed assessment of Air Quality in the city of Durham has determined that levels of nitrogen dioxide from road traffic emissions in some areas exceeds the annual mean National Air Quality Objective for nitrogen dioxide. In response to this an AQMA in the city centre that incorporated Highgate, Milburngate and the Gilesgate areas of the city was declared in 2011. This was later extended in 2014 to cover the western part of the city. Through delivering a more comprehensive package of schemes which supports modal shift from the private car to public transport and walking and cycling, Option D2 has more potential than Option D1 to effectively support air and noise quality improvements at key air pollution hotspots in the city. This includes through limiting traffic flows and reducing congestion.	**2**	**1**
Climate Change and Flood Risk	Through delivering a more comprehensive package of schemes which supports modal shift from the private car to public transport and walking and cycling, Option D2 has more potential than Option D1 to effectively support a limitation of greenhouse gas emissions from transport in the city. In terms of adapting to the effects of climate change, the effect of initiatives taken forward through the options depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems. As such it is not possible to differentiate between the options at this level of detail in terms of climate change adaptation.	**2**	**1**
Population	Option D2, through delivering additional packages of schemes focusing on walking and cycling network improvements, improved bus services and demand management measures would do more than Option D1 to encourage public transport use and active travel. In addition to supporting social inclusion and community vitality, this will contribute to the quality of life of residents through limiting the impact of traffic and congestion on neighbourhoods and on severance issues. In this respect a do minimum approach promoted through Option D1 would do less to help address socio-economic and quality of life issues influenced by transport in the city; for example, bus service patronage may suffer and the city may do less to benefit from investment at Durham railway station. In addition to increasing travel choice through initiating additional packages of enhancements, Option D2 has the potential to support economic opportunities in the city through enhancing connections with the strategic and local transport network and key employment and growth areas.	**2**	**1**
Human Health	Option D2 has increased potential to support modal shift from the private car. This will support healthier modes of travel, including through encouraging active travel modes such as walking and cycling. Through promoting modal shift, it also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents. Option D1, through initiating a do minimum approach, has less potential to address the transport issues which adversely affect health and wellbeing in the city.	**2**	**1**

Option D1: Do minimum.
Option D2: Make better use of existing transport infrastructure in the city.

Equalities	Groups with 'protected characteristics' tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, and the effects of traffic and congestion on health and wellbeing. These groups are also disproportionately affected by accessibility issues. In this context, Option D2, which seeks to 1) enhance accessibility by public transport and walking and cycling and 2) limit the impact of the private car on the built environment, including through demand management measures, will do more to support the needs of groups with protected characteristics. With regard to Option D1, a do minimum approach would do less to help address the socio-economic and quality of life issues influenced by transport in the city and is less likely to address the transport and accessibility needs of groups with protected characteristics.	**2**	**1**
Rurality	In the context of rural needs, the performance of the options for the city of Durham are closely linked to accessibility from rural areas to the city. In this respect, the more comprehensive measures proposed through Option D2 would do more to support accessibility to services, facilities and employment opportunities in the city from the rural hinterland.	**2**	**1**

Post-industrial communities

3.21 This area (**Figure 3.4**) incorporates the former coal-mining and steel working communities in the region. This includes the area around Consett, Stanley and Catchgate; the area around Peterlee, Easington, Shotton Colliery and Blackhall Colliery; a corridor between Peterlee and Ferryhill; a corridor along the A182 encompassing South Hetton, Hetton-le-Hole, and Houghton-le-Spring; and the area around Shildon.

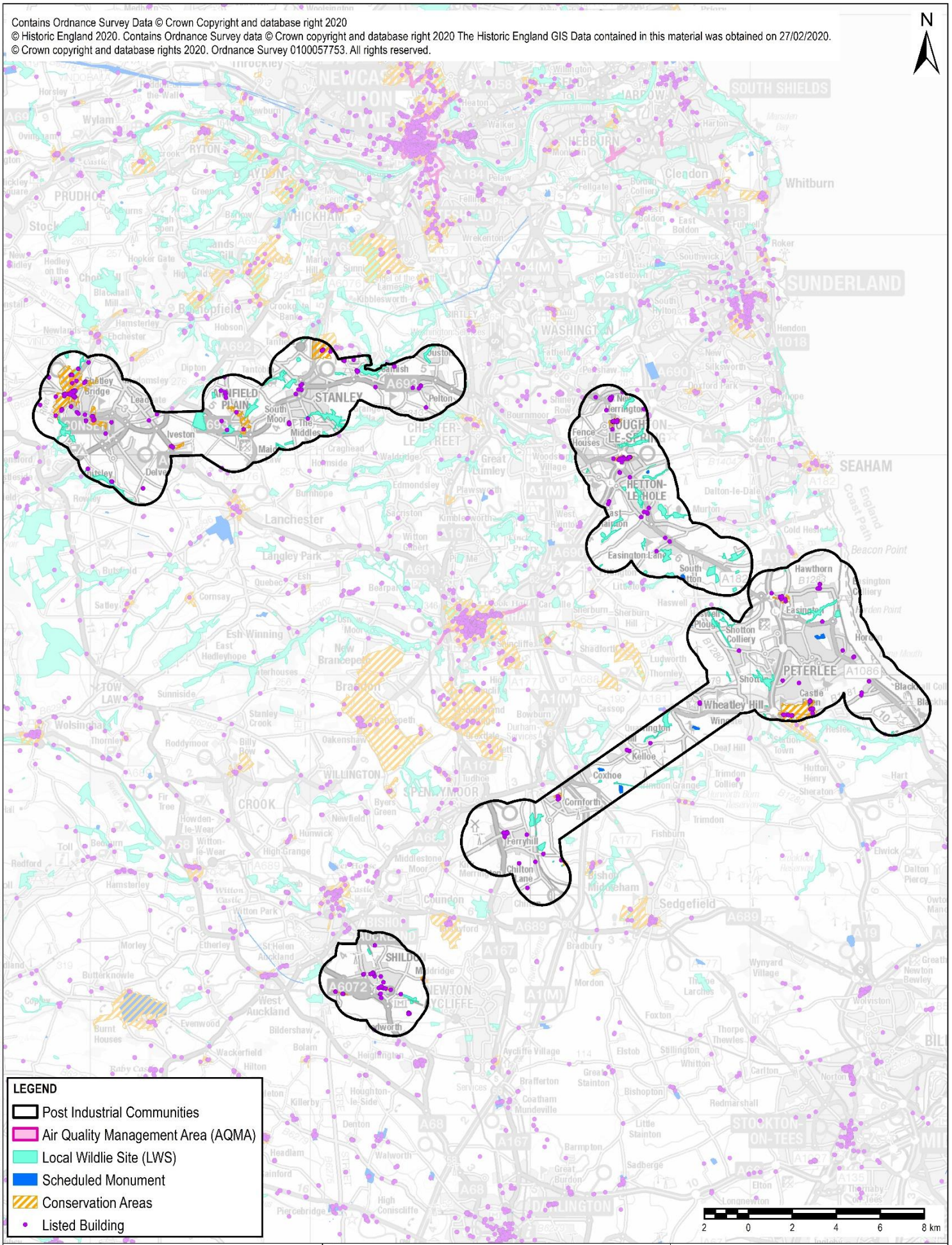
3.22 Two options have been considered as alternatives for the ISA, as follows:

Option PI1: Do minimum

3.23 A do minimum option would rely on committed investment, which would continue at a local and strategic level.

Option PI2: Deliver road and rail infrastructure enhancements to support post-industrial communities' connectivity

3.24 Enhancements would include new and enhanced links to central Newcastle from these communities. In terms of rail infrastructure, this could include the reopening of railway lines (for example the Consett to Newcastle line and the reopening of the Leamside Line from Pelaw junction to Tursdale) and enhancing existing services and delivering improvements to rolling stock. In terms of road schemes, these could include some bypass schemes as well as targeted corridor-based approaches between these communities and other destinations, incorporating enhancements at key 'pinchpoint' junctions.



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Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

KEY ENVIRONMENTAL CONSTRAINTS: POST-INDUSTRIAL COMMUNITIES

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:320,000	FINAL
Drawing Number		Rev
FIGURE 3.4		01

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Appraisal findings

3.25 The following table presents appraisal findings in relation to the two options introduced above. These are organised by the ten ISA themes.

3.26 For each ISA theme, a commentary on the likely effects is presented. Options are also ranked numerically reflecting their relative sustainability performance, with '1' the more favourable ranking and '2' the less favourable ranking.

Table 3.3: Appraisal of options relating to post-industrial communities

Option PI1: Do minimum.
Option PI2: Deliver road and rail infrastructure enhancements to support post-industrial communities' connectivity

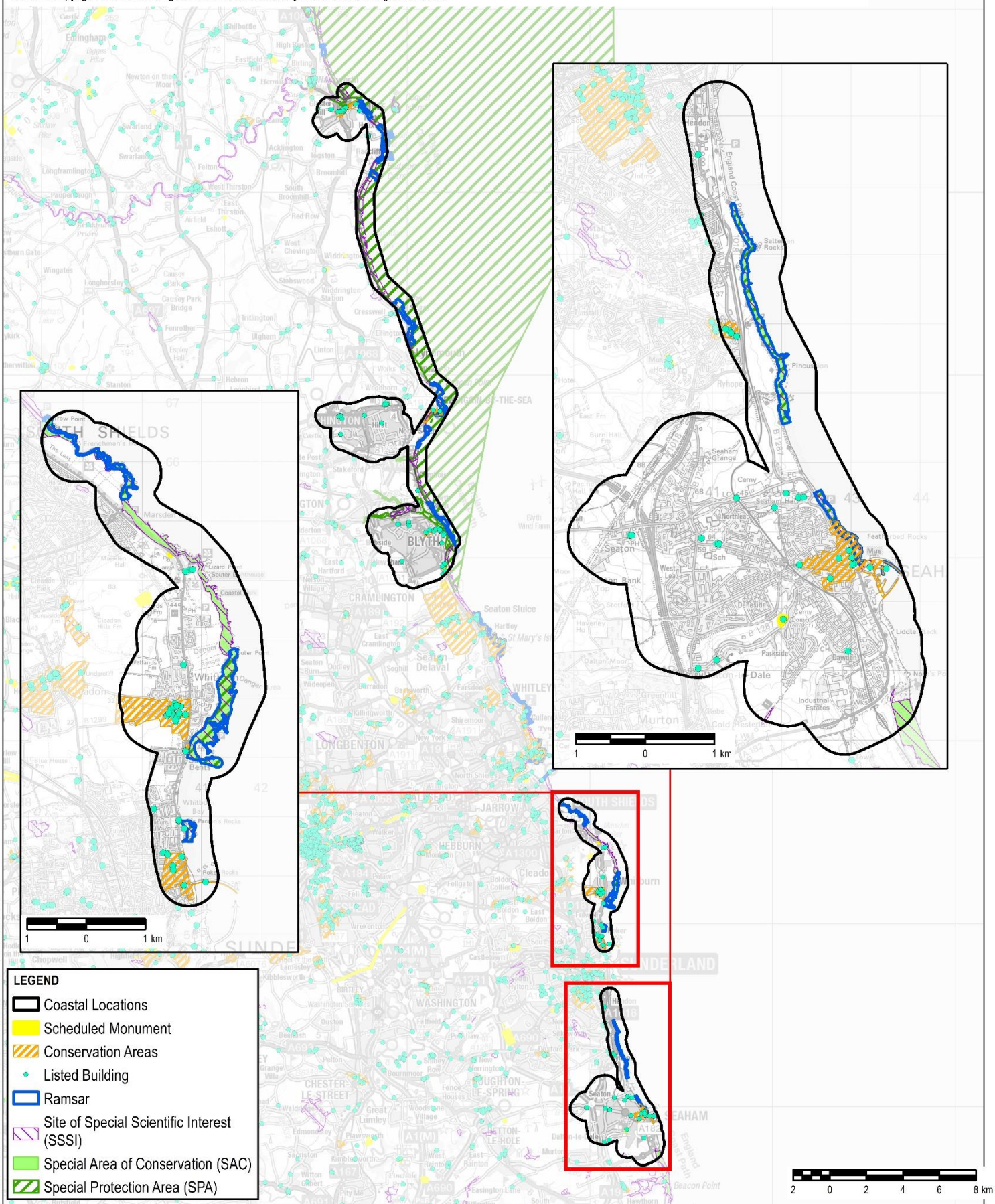
ISA theme	Discussion of potential effects and relative merits of options	Rank of preference	
		PI1	PI2
Biodiversity	Option PI2, through facilitating the delivery of new bypasses and junction improvement schemes has increased potential to lead to significant effects on biodiversity habitats, species and networks. This includes from land take, habitat loss and fragmentation and disturbance. In terms of the reopening of railway lines, existing railway corridors are often important biodiversity corridors, containing and linking key habitats. These corridors support a significant number of protected species. This is highlighted by the designation of some of these corridors as Local Wildlife Sites and the presence of BAP Priority Habitats. As such, the reopening of these lines has significant potential to have impacts on biodiversity through loss of habitat from landtake, habitat fragmentation and disturbance from noise and light pollution. It should be noted though that the delivery of new and enhanced transport infrastructure may support some enhancements to biodiversity networks. For example, the Government's 25-year Environment Plan seeks to embed an environment net gain principle for infrastructure development. In addition, Highways England's Road Investment Strategy states that by 2040 its schemes must deliver a net gain in biodiversity and Network Rail has committed to make a net positive contribution to biodiversity. In this context there is scope for transport infrastructure enhancements to support environmental net gain in some locations. However, this should be carefully managed and been undertaken through a landscape-scale approach.	**1**	**2**
Water and Soil Resources	Option PI2, through facilitating the delivery of significant new transport infrastructure, will require increased landtake. This has increased potential to lead to the development of previously undeveloped land, including, potentially, productive agricultural land. Without mitigation measures, an increased delivery of new transport infrastructure also has the potential to have impacts on water and soil quality through increases in surface water run-off. However, no significant impacts on water quality would be anticipated from schemes if the required embedded mitigation measures are incorporated within the construction and operational stage. Option PI2 also offers additional opportunities to deliver enhancements to surface water management on existing transport corridors.	**1**	**2**
Historic Environment	The communities located in these areas have a rich historic environment resource, as highlighted by the significant number of features and areas designated for their heritage value. This includes associated with the diverse industrial heritage resource linked to the legacy of industrial activities in these areas. The historic environment of these areas is also framed by the significant number of undesignated features of heritage value which are vulnerable to change given their lack of statutory and local protections, and the large number of heritage assets 'at risk'. In addition, these areas have a rich archaeological resource, and existing railway corridors are also often themselves important heritage resources. The increased number of physical transport infrastructure schemes likely to be initiated through Option PI2 have the potential to lead to impacts on the key heritage assets (including designated features and areas) located in the vicinity of the key routes and areas targeted for interventions. This includes from new road schemes and in the vicinity of disused railway lines. The significance of effects	**2**	**1**

Option PI1: Do minimum.
Option PI2: Deliver road and rail infrastructure enhancements to support post-industrial communities' connectivity

	from these interventions will however depend on design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment. Alongside, the reopening of railway lines could be viewed as positive from a heritage assessment given this will rejuvenate their usage. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm, with benefits for the setting of the historic environment. Well-designed transport schemes may also support the reuse and rejuvenation of underutilised designated and undesignated features of historic environment interest or support enhancements to the setting of features and areas of interest.		
Landscape	Option PI2, through facilitating the delivery of significant new transport infrastructure, has increased potential than Option PI1 to have impacts on townscape and landscape character in the vicinity of these areas. This includes through visual impacts, the loss of features which contribute to the distinctiveness of the landscape, impacts on a sense of place, impacts on historic landscape character and impacts on noise pollution. The significance of effects from schemes initiated by the option would however depend on the design, layout and scale of the schemes, and the mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and townscape/landscape character. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm.	**1**	**2**
Air Quality and Noise	Option PI2, through bringing forward junction capacity enhancements and new road schemes has the potential to lead to air quality enhancements at 'pinchpoints' on the network which have existing air quality issues. This has the potential to support significant enhancements of air quality at specific locations. However, through contributing to an overall increase in traffic flows on the wider road network, the option has the potential to increase traffic flows over a broader area, including through stimulating induced demand. This may contribute to increases in emissions of the key pollutants which affect air quality over a wider area. For the same reason, the option also has the potential to leading to more significant effects on noise quality. The reopening of railways and rail service improvement schemes will help support modal shift from the private car. This will support a limitation of pollutants from transport and have positive effects for noise quality.	**1**	**2**
Climate Change and Flood Risk	Option PI2's promotion of road schemes that relieve congestion and / or increase capacity has the potential effect of releasing demand for vehicle trips currently suppressed. As such the release of this induced demand may lead to increases in greenhouse gas emissions. However, the reopening of railways and rail service improvement schemes will help support modal shift from the private car. This will support a limitation of greenhouse emissions from transport. In terms of adapting to the effects of climate change, Option PI2 has more potential than Option PI1 to lead to proposals which enhance the resilience of particular locations to the effects of climate change. This is given the option will deliver transport schemes with the potential to initiate physical measures which will limit climate change impacts. However, the effect of initiatives depends on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including location, design and layout and the implementation of measures such as sustainable drainage systems.	**1**	**2**
Population	The post-industrial communities of the region suffer from significant deprivation issues. This is in part linked to accessibility to key services, facilities and employment opportunities. In this respect a do minimum approach promoted through Option PI1 would do less to help address the key socio-economic and quality of life issues influenced by transport in post-industrial communities. In this context a range of issues are less likely to be addressed through this option	**2**	**1**

Option PI1: Do minimum.
Option PI2: Deliver road and rail infrastructure enhancements to support post-industrial communities' connectivity

	without appropriate interventions, including accessibility issues, congestion and severance issues, and elements relating to social exclusion. Option PI2, through proactively initiating a focus on significant rail and road enhancements will help address some of the key accessibility issues seen in the area. This includes relating to the lack of choices relating to public transport and its affordability and reliability (including during off peak times), and existing pressures on the road network. In addition to increasing travel choice through initiating significant transport capacity enhancements, Option PI2 has the potential to lead to a range of economic opportunities through enhancing connections with the strategic and local transport network and key employment and growth areas. This mirrors a core aim of the North East Local Enterprise Partnership and its Strategic Economic Plan, which seek to maximise economic opportunities and enhance the vitality of the region's economy through improvements in transport connectivity.		
Human Health	Option PI2, through enabling a reduction of congestion at key bottlenecks on the network, has the potential to reduce the impacts of traffic and congestion on health and wellbeing at these locations. This includes through enhancements to air and noise quality, and improvements in the quality of the public realm. However, a potential stimulation of traffic growth over a larger area due to induced demand has the potential to have wider negative effects on health and wellbeing of residents through significant impacts on the quality of the public realm and a contribution to air and noise pollution. Through initiating significant rail enhancements in these areas (including through the reopening of disused rail lines), Option PI2 will also support modal shift from the private car to public transport. This will indirectly support healthier modes of travel, including through encouraging active travel modes such as walking and cycling for at least part of journey. Through promoting modal shift, it also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents. The option also has increased potential to facilitate enhancements to multifunctional green infrastructure networks in these communities alongside transport infrastructure improvements. This will provide benefits for health and wellbeing. Option PI2 also has the potential to deliver accessibility enhancements which will help reduce some of the causes of deprivation in these communities. This is significant given deprivation levels are a key contributor to health and wellbeing issues.	**2**	**1**
Equalities	A do minimum approach taken forward through Option PI1 would do less to help address the key socio-economic and quality of life issues influenced by transport in the region's post-industrial communities. As such it is less likely to address the transport needs of groups with protected characteristics, groups who are disproportionately affected by accessibility issues. In this context Option PI2, through proactively initiating a focus on significant enhancements by rail and road will help address some of the key accessibility issues seen in the area. This includes relating to the lack of choices relating to public transport and its affordability and reliability (including during off peak times). This will do more to support the needs of groups with protected characteristics. However, groups with protected characteristics tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, and the effects of traffic and congestion on health and wellbeing. In this respect, the road schemes promoted through Option PI2 may impact on equalities groups through effects on the public realm through a stimulation of car use. This however depends on the extent to which proposals taken forward through this options support enhancements to the public realm through limiting the adverse impacts of the transport network on neighbourhoods.	**2**	**1**
Rurality	The significant rail and road infrastructure enhancements proposed through Option PI2 have increased potential to enhance accessibility from the rural areas surrounding post-industrial communities to key urban areas in the North East. This includes through enhancing rail links and supporting enhancements to the road network. As such Option PI2 will do more to address rural accessibility issues.	**2**	**1**



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Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

KEY ENVIRONMENTAL CONSTRAINTS: COASTAL AREAS

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:275,000	FINAL
Drawing Number		Rev
FIGURE 3.6		01

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Coastal areas

3.27 This area (**Figure 3.6**) includes coastal areas located to the south and north of the main Tyne and Wear conurbation. It incorporates the coastal areas between South Shields and Roker, including: Marsden, Whitburn and Seaburn; Hendon to Seaham; and Blyth to Amble.

3.28 Two options have been considered as alternatives for the ISA, as follows.

Option C1: Do minimum

3.29 A do minimum option would rely on committed investment, which would continue at a local and strategic level.

Option C2: Support the regeneration of coastal settlements through targeted interventions

3.30 The option would seek to deliver enhanced public transport and active travel infrastructure. Given the coastal location of these settlements, interventions would seek to help relieve pressures on junctions linked to the east-west pattern of movements by car and deliver targeted improvements in unlocking growth sites, supporting the visitor economy, and improving job prospects. The option would also seek to ensure the maintenance and upkeep of key assets.

Appraisal findings

3.31 The following table presents appraisal findings in relation to the two options introduced above. These are organised by the ten ISA themes.

3.32 For each ISA theme, a commentary on the likely effects is presented. Options are also ranked numerically reflecting their relative sustainability performance, with '1' the more favourable ranking and '2' the less favourable ranking.

Table 3.4: Appraisal of options relating to coastal areas

Option C1: Do minimum.
Option C2: Support the regeneration of coastal settlements through targeted interventions

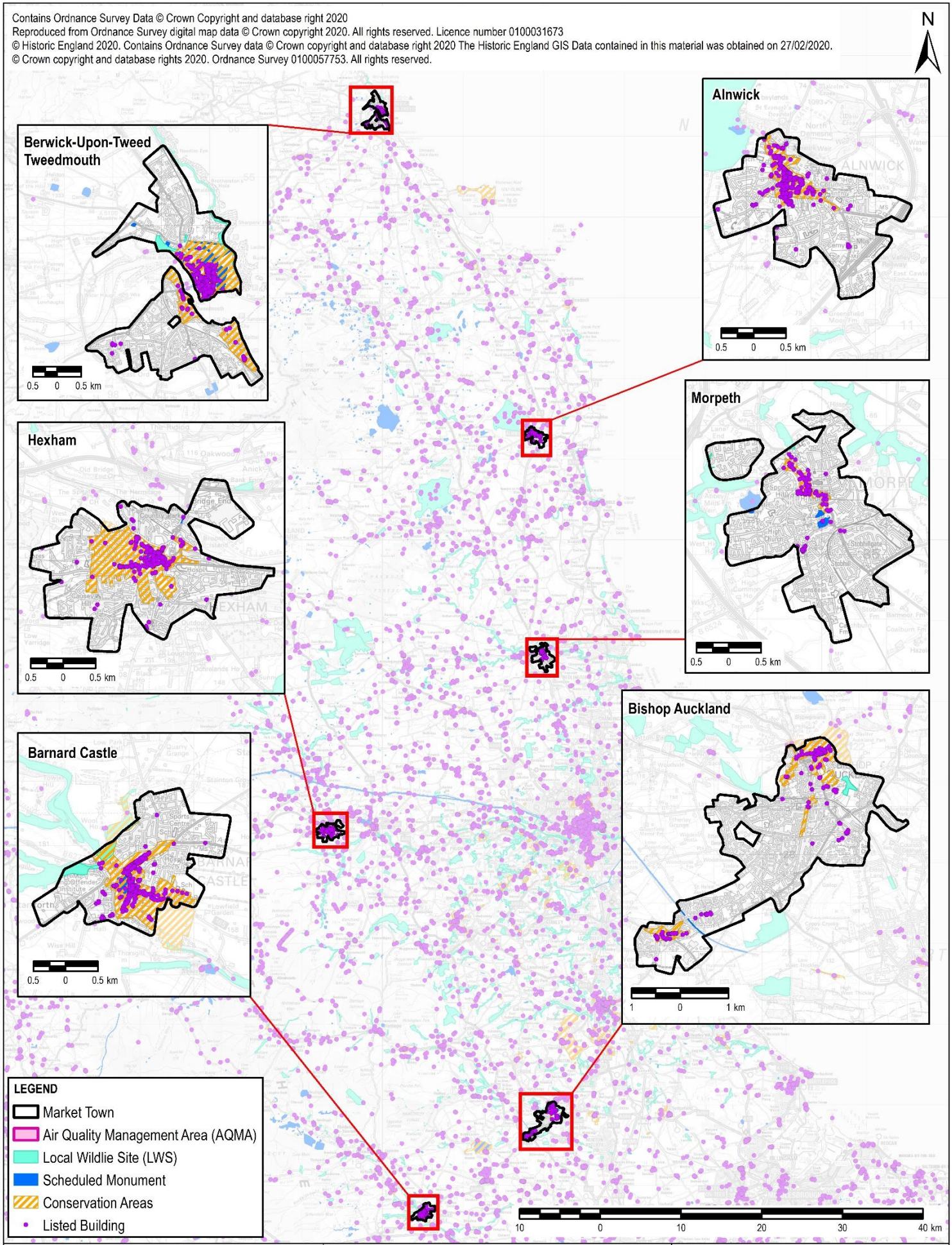
ISA theme	Discussion of potential effects and relative merits of options	Rank of preference	
		C1	C2
Biodiversity	A range of internationally and nationally designated sites are present in the vicinity of the coastal area. This includes the Northumbria Coast SPA, the Durham Coast SAC, the Durham Coast SSSI, the Northumberland Shore SSSI and the Cresswell and Newbiggin Shores SSSI. Through delivering additional transport measures, Option C2 has the potential to lead to additional impacts on habitats and ecological networks on existing transport corridors, where any enhancements would be focused. This is given many existing transport routes are important biodiversity corridors, containing and linking key habitats and which support a significant number of protected species. However, the option would not implement significant additional physical infrastructure, and would be unlikely to take place in locations which would directly affect the internationally and nationally designated sites on the coast. The do minimum approach of Option C1 would continue to take forward schemes from committed investment; however, potential effects from Option C1 have the potential to be more limited than Option C2. Both options though have the potential to lead to effects without the implementation of appropriate avoidance and mitigation measures. It should also be noted that delivery of new and enhanced transport infrastructure may support some enhancements to biodiversity networks. In this context there is scope for transport infrastructure enhancements in coastal areas to support environmental net gain locally. This includes through delivering enhancements in the expansive area of Network Enhancement Zones and Network Expansion Zones identified in the coastal area.	**1**	**2**

Option C1: Do minimum.
Option C2: Support the regeneration of coastal settlements through targeted interventions

Water and Soil Resources	In terms of impacts on land and soils resources, given Option C2 would not lead to significant additional landtake, there is unlikely to be a significant difference between the two options in terms of the loss of productive agricultural land. No significant impacts on water quality would be anticipated from schemes linked to the two options if the required embedded mitigation measures are incorporated within the construction and operational stage.	=	=
Historic Environment	A number of the coastal communities have a rich historic environment resource, as highlighted by clusters of features and areas designated for their heritage value. The Durham Heritage Coast also extends south of Sunderland, which has been designated in part for its distinctive historic coastal landscape. The significance of direct effects on the historic environment from the interventions taken forward through each option will depend on the design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment. Potential effects from both options will though be limited by the limited number of new physical infrastructure schemes taken forward. However, Option C2 will initiate a range of measures which have the potential to deliver a greater degree of modal shift from the private car than Option C1. This includes a combination of measures to encourage public transport use and active travel modes. As such, the fabric and setting of the historic environment has additional potential to benefit through modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic and congestion on the fabric and setting of historic environment assets. In this respect a 'do minimum' approach taken forward through Option C1 has reduced potential to bring similar benefits.	**2**	**1**
Landscape	Whilst no nationally designated landscapes are located within the area (with the exception of the Northumberland Coast AONB, which is located to the north of Amble), the coastal area has a distinctive landscape and seascape which is valued by residents and visitors. The Durham Heritage Coast also extends south of Sunderland, which has been designated for its distinctive coastal landscape associated with its natural, historical and geological interest. Both options, through focusing on the existing transport network, are less likely to deliver new physical infrastructure which have significant impacts on local character, distinctiveness or a sense of place. Option C2 will however initiate a range of measures which have the potential to deliver a greater degree of modal shift from the private car than Option C1. This includes a combination of measures to encourage public transport use and active travel modes. This will support landscape character through encouraging modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic and congestion on landscape character in the vicinity of these coastal areas. In this respect a 'do minimum' approach taken forward through Option C1 has less potential to initiate measures which bring these benefits.	**1**	**2**
Air Quality and Noise	Whilst no AQMAs exist in the area (the AQMA in Blyth was revoked in 2012), Option C2 will do more than Option C1 to support air quality at key hotspots. This includes through delivering a more comprehensive package of schemes which supports modal shift from the private car to public transport and walking and cycling.	**2**	**1**
Climate Change and Flood Risk	Through delivering a more comprehensive package of schemes which supports modal shift from the private car to public transport and walking and cycling, Option C2 has more potential than Option C1 to effectively support a limitation of greenhouse gas emissions from transport. In terms of adapting to the effects of climate change, the effect of initiatives taken forward through the options depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems.	**2**	**1**

Option C1: Do minimum.
Option C2: Support the regeneration of coastal settlements through targeted interventions

	However, Option C2, through seeking to enhance the resilience of the existing transport network, has the potential to respond more positively to the impacts from climate change relating to coastal change in the area.		
Population	Option C2, through delivering additional packages of schemes with a focus on public transport and active travel enhancements will support social inclusion and community vitality. The option also has the potential to contribute to the quality of life of residents through limiting the impact of traffic and congestion on neighbourhoods and on severance issues. In this respect a do minimum approach promoted through Option C1 would do less to help address some of the key accessibility issues seen in coastal areas. This includes relating to the lack of choices relating to public transport and its affordability and reliability (including during off peak times), and existing pressures on the road network. In addition to increasing travel choice through initiating additional packages of enhancements, Option C2 has the potential to support economic opportunities in coastal areas through enhancing connections with the strategic and local transport network and key employment and growth areas. In this respect, under Option C1, local economic regeneration opportunities could be held back and not delivered with the most sustainable transport choices. The option would also do less to support local high streets or the visitor economy, both of which provide vital contributions to the economic vitality of these coastal areas.	**2**	**1**
Human Health	Option C2 has increased potential to support modal shift from the private car. This will support healthier modes of travel, including through encouraging active travel modes such as walking and cycling. Through promoting modal shift, it also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents. Option C1, through initiating a do minimum approach, has less potential to address the transport issues which adversely affect health and wellbeing in coastal areas.	**2**	**1**
Equalities	Groups with 'protected characteristics' tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, and the effects of traffic and congestion on health and wellbeing. These groups are also disproportionately affected by accessibility issues. In this context, Option C2, which seeks to enhance accessibility by public transport and walking and cycling and deliver increased transport choice will do more to support the needs of groups with protected characteristics. With regards to Option C1, a do minimum approach would do less to help address the socio-economic and quality of life issues influenced by transport in coastal areas and is less likely to address the transport and accessibility needs of groups with protected characteristics.	**2**	**1**
Rurality	Whilst the public transport infrastructure enhancements proposed through Option C2 have increased potential to enhance accessibility from areas surrounding these coastal areas, they are unlikely to have significant benefits for those living in the more rural areas of the North East.	**N/A**	**N/A**



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Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

KEY ENVIRONMENTAL CONSTRAINTS: MARKET TOWNS

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:500,000	FINAL
Drawing Number		Rev
FIGURE 3.5		01

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Market towns

3.33 This area (**Figure 3.5**) incorporates the larger market towns in the region, including Bishop Auckland, Barnard Castle, Alnwick, Berwick-upon-Tweed, Morpeth and Hexham.

3.34 Two options have been considered as alternatives for the ISA, as follows.

Option MT1: Do minimum

3.35 A do minimum option would rely on committed investment in transport infrastructure in the vicinity of the market towns, which would continue at a local and strategic level.

Option MT2: Optimise use of existing transport infrastructure

3.36 This option would seek to support the region's market towns to make better use of existing transport networks. This includes through delivering measures such as enhancements to bus services, improved road maintenance regimes, electric charging infrastructure and enhanced walking and cycling links. Park and ride could also play a role in some towns. The option would also seek to support the vitality of town centres and the visitor economy.

Appraisal findings

3.37 The following table presents appraisal findings in relation to the two options introduced above. These are organised by the ten ISA themes.

3.38 For each ISA theme, a commentary on the likely effects is presented. Options are also ranked numerically reflecting their relative sustainability performance, with '1' the more favourable ranking and '2' the less favourable ranking.

Table 3.5: Appraisal of options relating to market towns

Option MT1: Do minimum.
Option MT2: Optimise the use of existing transport infrastructure

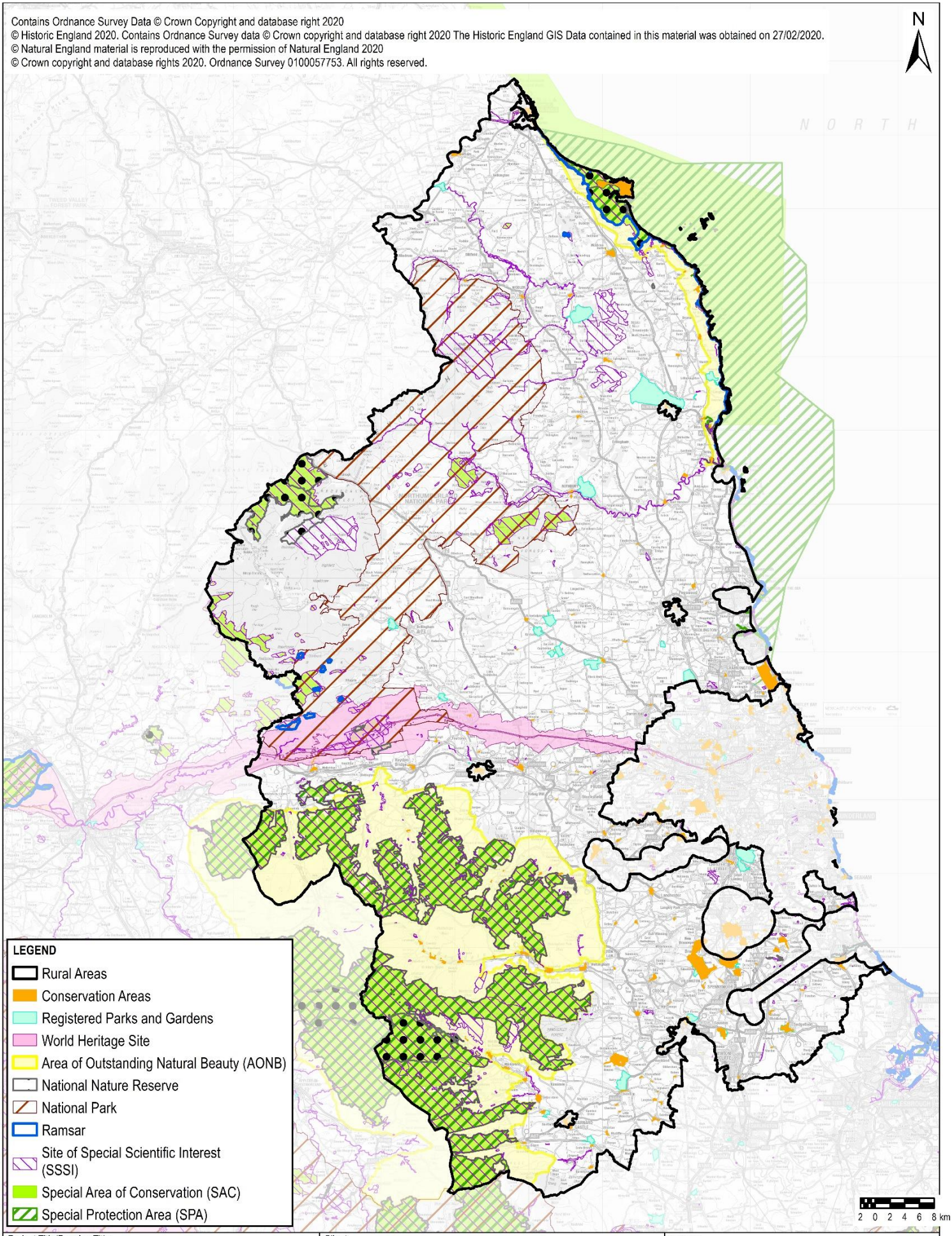
ISA theme	Discussion of potential effects and relative merits of options	Rank of preference	
		MT1	MT2
Biodiversity	In terms of internationally and nationally designated sites present in the vicinity of the market towns, the main concentration of such sites is around Berwick-upon-Tweed, where the Tweed Estuary SAC, the Berwickshire & North Northumberland Coast SAC, the Tweed Catchment Rivers SSSI and the Northumberland Shore SSSI are present locally. The Tyne Watersmeet SSSI is also located to the north west of Hexham. All of the settlements have a range of important biodiversity habitats present locally, including BAP Priority Habitats, and also Local Wildlife Sites. Through delivering a broader range of transport measures, Option MT2 has the potential to lead to additional impacts on habitats and ecological networks in the vicinities of market towns. However, the option would not in most cases implement significant additional physical infrastructure (with the exception of potential additional Park & Ride provision, which may be delivered in a few of the settlements). Alongside, any physical infrastructure would be unlikely to take place in locations which would directly affect the internationally and nationally designated sites or near Berwick-upon-Tweed or Hexham. Both options though have the potential to lead to effects on habitats and species without the implementation of appropriate avoidance and mitigation measures. It should also be noted that delivery of new and enhanced transport infrastructure may support some enhancements to biodiversity networks. In this context there is scope for transport infrastructure enhancements in the vicinities of the market towns to support environmental net gain locally. This includes through delivering enhancements in the numerous Network Enhancement Zones and Network Expansion Zones identified in the vicinities of the six towns.	**1**	**2**
Water and Soil Resources	In terms of impacts on land and soils resources, Option MT2 has the potential to lead to additional land take through the delivery of new Park & Ride provision. This has the potential to lead to land take on productive agricultural land, potentially	**1**	**2**

Option MT1: Do minimum.
Option MT2: Optimise the use of existing transport infrastructure

	leading to the loss of land classified as the best and most versatile agricultural land. No significant impacts on water quality would be anticipated from schemes linked to the two options if the required embedded mitigation measures are incorporated within the construction and operational stage.		
Historic Environment	The market towns have a rich historic environment resource. This is highlighted by the presence of significant clusters of listed features in around the settlements, as well as the presence of conservation areas covering the historic cores of each of the six towns. The significance of direct effects on the historic environment from the interventions taken forward through each option will depend on design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment. Potential effects from both options will though be limited by the relatively limited number of new physical infrastructure schemes taken forward. However, Option MT2 will initiate a range of measures which have the potential to deliver a greater degree of modal shift from the private car than Option MT1. This includes a combination of measures to encourage public transport use and active travel modes. In this respect the fabric and setting of the historic environment has additional potential to benefit through modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic and congestion on the fabric and setting of historic environment assets. In this respect a 'do minimum' approach taken forward through Option MT1 has reduced potential to bring similar benefits.	**2**	**1**
Landscape	Whilst no nationally designated landscapes are located within the immediate vicinities of the six market towns (with the exception of the coastline to the south east of Berwick-upon-Tweed), the hinterland of each of the towns have a distinctive landscape character which is valued by residents and visitors alike. In addition the towns have a distinctive townscape, as highlighted by the presence of conservation areas in many parts of the towns. Both options, through focusing on the existing transport network, are less likely to deliver new physical infrastructure which have significant impacts on local character, distinctiveness or a sense of place. However, Park & Ride provision potentially taken forward through Option MT2 may lead to negative impacts on landscape character locally. Option MT2 will however initiate a range of measures which have the potential to deliver a greater degree of modal shift from the private car than Option MT1. This includes a combination of measures to encourage public transport use and active travel modes. This will support landscape character in the vicinity of the market towns through encouraging modal shift, a limitation in traffic flows and improved traffic management. In this respect a 'do minimum' approach taken forward through Option MT1 has less potential to initiate measures which bring these benefits.	**1**	**2**
Air Quality and Noise	Whilst no AQMAs exist in the market towns, Option MT2 will do more than Option MT1 to support air quality (and noise quality) at hotspots. This includes through delivering a more comprehensive package of schemes which supports modal shift from the private car to public transport and walking and cycling.	**2**	**1**
Climate Change and Flood Risk	Through delivering a more comprehensive package of schemes which supports modal shift from the private car to public transport and walking and cycling, Option MT2 has more potential than Option MT1 to effectively support a limitation of greenhouse gas emissions from transport. Whilst car travel will remain the predominant choice for many, especially for those accessing the towns from the surrounding rural areas, the option will do more to support modal shift. However, R2's effect on climate change mitigation may be undermined through the option's support for Park & Ride provision. Whilst Park & Ride provision will support modal shift for at least part of users' journey, it also has the potential to encourage car use. However, this option recognises that car travel will remain the predominant choice for many living in rural areas, and such provision has the potential to support modal shift for at least part of the journey. In this respect the detailed location and design of such multi-modal provision should be carefully	**2**	**1**

Option MT1: Do minimum.
Option MT2: Optimise the use of existing transport infrastructure

	considered to ensure that newly generated trips are limited, and benefits maximised. In terms of adapting to the effects of climate change, the effect of initiatives taken forward through the options depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems.		
Population	Option MT2, through delivering additional packages of schemes with a focus on public transport and active travel enhancements, will support social inclusion and community vitality. The option also has the potential to contribute to the quality of life of residents through limiting the impact of traffic and congestion on neighbourhoods and on severance issues. In this respect a do minimum approach promoted through Option MT1 would do less to help address some of the key accessibility issues seen in the vicinities of market towns, including from their surrounding hinterlands. This includes relating to the lack of choices relating to public transport, its affordability and reliability (including during off peak times), and existing pressures on the road network. In addition to increasing travel choice through initiating additional packages of enhancements, Option MT2 has the potential to support the economic vitality of market towns through enhancing connections with the strategic and local transport network. In this respect, Option MT1 would do less to support the economic vitality and viability of the six town centres or support their visitor economy.	**2**	**1**
Human Health	Option MT2 has increased potential to support modal shift from the private car. This will support healthier modes of travel, including through encouraging active travel modes such as walking and cycling. Through promoting modal shift, the option also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents. Option MT1, through initiating a do minimum approach, has less potential to address the transport issues which adversely affect health and wellbeing in market towns.	**2**	**1**
Equalities	Groups with 'protected characteristics' tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, and the effects of traffic and congestion on health and wellbeing. These groups are also disproportionately affected by accessibility issues. In this context, Option MT2, which seeks to enhance accessibility by public transport and walking and cycling will do more to support the needs of groups with protected characteristics. With regards to Option MT1, a do minimum approach would do less to help address the socio-economic and quality of life issues influenced by transport in market towns and their catchment areas, and is less likely to address the transport and accessibility needs of groups with protected characteristics.	**2**	**1**
Rurality	The six market towns are key service centres serving their rural hinterlands. In this respect Option MT2 has increased potential to support accessibility from rural areas through delivering an increased range of transport interventions. This includes through investment in rural bus service and improved transport interchange.	**2**	**1**



File Name:I:\5004 - Information Systems\60630031_NECA_Transport_Plan\02_Maps\Figure 3-7 - Rural Areas.mxd

Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

KEY ENVIRONMENTAL CONSTRAINTS: RURAL

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
23/10/2020	1:650,000	FINAL
Drawing Number		Rev
FIGURE 3.7		01

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Rural areas

3.39 This area (**Figure 3.7**) covers the rural area of the region, including the rural parts of Northumberland and County Durham. It includes the parts of the region within the Northumberland National Park and the two AONBs (Northumberland Coast AONB and North Pennines AONB).

Option R1: Do minimum

3.40 A do minimum option would rely on committed strategic and local level investment, which would continue.

Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas

3.41 This option would seek to make best use of existing infrastructure. It would include measures such as supporting rural bus services, providing an additional impetus on smart travel / 'on demand' community transport, communications enhancements (including broadband and mobile phone infrastructure improvements) and improvements to electric charging infrastructure.

Option R3: Initiate more significant interventions, including with regards to multimodal interchange

3.42 This option would seek to enhance multi-modal interchanges serving rural areas, including through the delivery of new Park and Ride facilities, additional car parking provision at key transport nodes and new walking and cycle links.

Appraisal findings

3.43 The following table presents appraisal findings in relation to the three options introduced above. These are organised by the ten ISA themes.

3.44 For each ISA theme, a commentary on the likely effects is presented. Options are also ranked numerically reflecting their relative sustainability performance, with '1' the most favourable ranking and '3' the least favourable ranking.

Table 3.6: Appraisal of options for rural areas

Option R1: Do minimum
Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas
Option R3: Initiate more significant interventions, including with regards to multimodal interchange

ISA theme	Discussion of potential effects and relative merits of options	Rank of preference		
		R1	R2	R3
Biodiversity	The rural areas of the North East have a significant number of internationally designated sites, including SACs, SPAs and Ramsar sites, and nationally designated sites including SSSIs and National Nature Reserves. These cover a range of internationally and nationally significant habitats and form important components of regional and national ecological networks. In addition, there are numerous areas of biodiversity value which are not covered by statutory designations, which hold a range of important habitats and protected species. Option R3, through initiating more significant transport interventions, including Park & Ride facilities, has increased potential to lead to significant effects on biodiversity habitats, species and networks. This includes from land take, habitat loss and fragmentation and disturbance. In this respect Option R1, which relies on committed investment, and Option R2, which focuses on enhancing existing transport infrastructure with limited physical interventions would lead to fewer physical impacts on key areas of sensitivity. It should be noted though that given the lack of internationally and nationally designated sites in the vicinities of the settlements where such enhancements are likely to take place, significant adverse effects on these sites would be unlikely through Option R3. It should also be noted that the delivery of new and enhanced transport infrastructure may support some enhancements to biodiversity networks. For example, the Government's 25-year Environment Plan seeks to embed an environment net gain principle for infrastructure development. In this context there is scope for the delivery of new transport infrastructure to support environmental net gain in rural areas. This includes through delivering enhancements in the Network Enhancement Zones[21] and Network Expansion Zones[22] identified in many rural areas of the North East by Natural England.	**1**	**2**	**3**
Water and Soil Resources	Option R3, through facilitating the delivery of additional new physical transport infrastructure (including Park & Ride sites), will require increased landtake than Option R1 and R2. This has increased potential to lead to the development of previously undeveloped land, including potentially productive land classified as the best and most versatile agricultural land. Without mitigation measures, additional delivery of new transport infrastructure such as Park & Ride sites has the potential to have impacts on water and soil quality through increases in surface water run-off. However, no significant impacts on water quality would be anticipated from schemes if the required embedded mitigation measures are incorporated within the construction and operational stage.	**1**	**1**	**3**

[21] Network Enhancement Zones comprise land within close proximity to existing habitat components that have been identified by Natural England as likely to be suitable for habitat re-creation for the particular habitat.
22 Network Expansion Zones are areas identified with potential for expanding, linking and joining biodiversity networks.

Option R1: Do minimum
Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas
Option R3: Initiate more significant interventions, including with regards to multimodal interchange

Historic Environment	The rural areas of the North East have a rich historic environment. This is accompanied by distinctive historic landscapes, including the internationally designated Frontiers of the Roman Empire World Heritage Site and the two AONBs designated in the region. The increased number of 'hard' transport infrastructure schemes likely to be initiated through Option R3 have the potential to lead to impacts on the key assets (including designated features and areas) located in the vicinity of the locations targeted for interventions. The significance of effects from these interventions will however depend on design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm, with benefits for the setting of the historic environment. In relation to Option R2, an approach which focuses to a greater degree on soft measures, technological solutions and demand management measures is less likely to lead to direct adverse impacts on the historic environment and historic landscape/townscape character. The setting of the historic environment also has the potential to benefit from initiatives taken forward through this option by an encouragement of modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic on the setting of historic environment assets. In this respect a 'do minimum' approach taken forward through Option R1 has reduced potential to bring similar benefits.	**2**	**1**	**3**
Landscape	The landscapes of the rural areas of the North East are diverse, incorporating upland areas, forest, limestone plateaus, undulating agricultural landscapes, lowland areas and distinctive coastlines. The value of the landscape is recognised by the presence of the nationally designated landscapes of the Northumberland National Park, the Northumberland Coast AONB and the North Pennines AONB. Whilst, given the likely locations of interventions, the option is unlikely to lead to significant effects on nationally designated landscapes, Option R3, through facilitating the delivery of additional transport infrastructure, including Park & Ride, has additional potential to lead to impacts on landscape character locally. This includes through the loss of features of landscape value, impacts on local distinctiveness and effects on tranquillity. Options R1 and R2, through focusing less on the delivery of physical infrastructure enhancements, are unlikely to deliver transport initiatives which have significant impacts on landscape character. The significance of effects from schemes initiated by Option R3 would however depend on the design, layout and scale of the schemes, and the mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and local character. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm. With regards to Option R2, an approach which focuses to a greater degree on soft measures, technological solutions and demand management measures is less likely to lead to direct adverse impacts on landscape character. Local character also has the potential to benefit from initiatives taken forward through this option by an encouragement of modal shift, a limitation in traffic flows and improved traffic management. This will help limit adverse effects from traffic on landscape character. In this respect a 'do minimum' approach taken forward through Option R1 has less potential to initiate measures which bring these benefits.	**2**	**1**	**3**

Option R1: Do minimum
Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas
Option R3: Initiate more significant interventions, including with regards to multimodal interchange

Air Quality and Noise	Air quality is not a significant issue for most rural areas in the North East. However, noise quality is a key issue for some rural areas. Options R2 and R3 will do more though than Option R1 to deliver packages of schemes which supports modal shift from the private car to public transport and walking and cycling, with benefits for noise and air quality. Option R3, through introducing new Park & Ride provision at some locations, may however increase noise and air quality issues at locations closer to such facilities. In addition, Option R2, through delivering improved communications infrastructure such as broadband and mobile phone infrastructure enhancements, may do more to reduce the need to travel for key services and facilities. This will support noise and air quality.	**3**	**1**	**2**
Climate Change and Flood Risk	Option R2 has a close focus on technical solutions to transport challenges. Through delivering improved communications infrastructure such as broadband and mobile phone infrastructure enhancements, the option will support a reduction of the need to travel to key services, facilities and opportunities. The option also has a focus on smart travel, community transport and maintaining existing public transport links, and on enhancing electric charging infrastructure. In this context, the option will initiate a range of approaches which will help limit greenhouse gas emissions from rural transport. Option R3, as part of its proposed package of interventions, seeks to deliver enhanced multimodal interchange, including new Park & Ride provision. The overall effect of these interventions on greenhouse gas emissions is uncertain. Whilst Park & Ride provision will support modal shift for at least part of users' journey, it also has the potential to encourage car use. However, this option recognises that car travel will remain the predominant choice for many living in rural areas, and such provision has the potential to support modal shift for at least part of the journey. In this respect the detailed location and design of such multi-modal provision should be carefully considered to ensure that newly generated trips are limited, and benefits maximised. Option R1 will do less to initiate interventions which will limit greenhouse gas emissions from transport in rural areas, including through providing least support to alternative modes of transport to the private car or the decarbonisation of the transport network. As such, Option R2, through combining an approach which seeks to limit the need to travel, promote modal shift from the private car, whilst supporting the decarbonisation of private travel, will do most of the options to support climate change mitigation in rural areas through limiting greenhouse gas emissions from transport. In terms of adapting to the effects of climate change, the effect of initiatives taken forward through the options depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems.	**3**	**1**	**2**

Option R1: Do minimum
Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas
Option R3: Initiate more significant interventions, including with regards to multimodal interchange

Population	A 'do minimum' approach promoted through Option R1 would do the least of the options to address the key socio-economic and quality of life issues influenced by transport in rural areas. In this context a range of issues are less likely to be addressed without appropriate interventions, including rural accessibility issues, the availability and affordability of public transport, and social exclusion. Option R2, through seeking to maintain existing rural bus services, support smart travel and 'on demand' community transport, will help support accessibility for those without access to a private car. In addition, through delivering improved communications infrastructure such as broadband and mobile phone infrastructure enhancements, the option will support a reduction of the need to travel to key services, facilities and opportunities, with benefits for social inclusion. Option R3 recognises that car use will remain the predominant and necessary choice for many in rural areas through seeking to enhance multimodal interchange, including potentially through Park & Ride. This will support accessibility for those with access to private transport. Options R2 and R3 will therefore both bring benefits for the quality of life of rural residents. In this context a mixture of the schemes taken forward through these options would be likely to deliver most benefits for those living in rural areas. In addition to increasing travel choice, Options R2 and R3 have the potential to support economic vitality through enhancing connections to key services, facilities and employment opportunities and supporting the visitor economy. Option R2 will also support the diversification of the rural economy through enhancing digital connectivity in rural areas.	**3**	**1**	**1**
Human Health	Health and wellbeing are closely linked to deprivation issues. In this context deprivation in rural areas is directly influenced by accessibility and social exclusion issues. This is highlighted by the higher levels of deprivation seen in rural areas relating to the 'Barriers to Housing and Services' domain. In this respect Options R2 and R3 will do more to deliver accessibility enhancements which will help limit deprivation in rural areas. Option R2, through supporting rural bus services and providing an additional impetus on smart travel / 'on demand' community transport will help enhance accessibility to those without access to a private car. Communications enhancements, including to broadband and mobile phone infrastructure will also help overcome some of the barriers to accessing services and facilities. Taking a different approach, Option R3 recognises that car use will remain the predominant and necessary choice for many in rural areas through seeking to enhance multimodal interchange, including potentially through Park & Ride. This will support accessibility for those with access to private transport. Option R1, through initiating a do minimum approach, has the least potential to address the transport issues which adversely affect health and wellbeing in rural areas	**3**	**1**	**2**

Option R1: Do minimum
Option R2: Optimise use of existing infrastructure and take a technological approach to transport challenges in rural areas
Option R3: Initiate more significant interventions, including with regards to multimodal interchange

Equalities	In rural areas, groups with 'protected characteristics' tend to be disproportionately affected by accessibility issues. For those lacking their own transport, including the young, the elderly, and those with mobility issues, access to services and facilities is a significant challenge. These groups are often the least able to afford high costs of public transport and research shows that, on average, people on lower incomes in rural areas pay a higher proportion of their income on travel costs. In this respect Options R2 and R3 will do more to deliver accessibility enhancements which will support the needs of equalities groups in the rural areas of the North East. Option R2, through supporting rural bus services and providing an additional impetus on smart travel / 'on demand' community transport will help enhance accessibility to those groups without access to a private car. Communications enhancements, including to broadband and mobile phone infrastructure will also help overcome some of the barriers to accessing services and facilities for those with protected characteristics. Option R3 recognises that car use will remain the predominant and necessary choice for many of those with protected characteristics in rural areas through seeking to enhance multimodal interchange, including potentially through Park & Ride. This will support accessibility for those with access to private transport. Option R1, through initiating a do minimum approach, has the least potential to enhance accessibility for those groups with protected characteristics in the rural areas of the North East.	**2**	**1**	**3**
Rurality	A 'do minimum' approach promoted through Option R1 would do the least of the options to address the key socio-economic and quality of life issues influenced by transport in rural areas. In this context a range of issues are less likely to be addressed without appropriate interventions, including rural accessibility issues, the availability and affordability of public transport, and social exclusion. Option R2, through seeking to maintain existing rural bus services, support smart travel and 'on demand' community transport, will help support accessibility for those without access to a private car. In addition, through delivering improved communications infrastructure such as broadband and mobile phone infrastructure enhancements, the option will support a reduction of the need to travel to key services, facilities and opportunities, with benefits for social inclusion in rural areas. Option R3 recognises that car use will remain the predominant and necessary choice for many in rural areas through seeking to enhance multimodal interchange, including potentially through Park & Ride. This will support accessibility for those with access to private transport. Options R2 and R3 will therefore both bring benefits for the quality of life of rural residents. In this context a mixture of the options would be likely to deliver most benefits for those living in rural areas. In addition to increasing travel choice, Options R2 and R3 have the potential to support economic vitality in rural areas through enhancing connections to key services, facilities and employment opportunities and supporting the visitor economy. Option R2 will also support the diversification of the rural economy through enhancing digital connectivity in rural areas.	**3**	**2**	**1**

Overall conclusions

3.45 The assessment of the options considered as reasonable alternatives for the six areas has shown that in many cases that the 'do minimum' option performs less favourably against the ISA themes. This is given these options will do less to deliver enhancements which will help address some of the key accessibility and social inclusion issues experienced in different parts of the region, or support economic vitality. Whilst in some cases the do minimum options may reduce the potential for direct adverse environmental effects, they also preclude opportunities to deliver key environmental enhancements in the region, including relating to air and noise quality, the quality of the townscape, landscape and the public realm, or relating to the rejuvenation of features and areas of historic environment interest. In addition, the do minimum options limit opportunities for utilising transport infrastructure enhancements to deliver regional, sub-regional or local environmental net gain or for limiting greenhouse gas emissions.

3.46 The options which focus to a greater degree on 'soft' measures and demand management measures are less likely than the options supporting physical transport capacity enhancements to lead to direct adverse impacts on key environmental and socio-economic receptors in the region. These options also have the potential to deliver significant environmental enhancements and quality of life benefits through the encouragement of modal shift, a reduction in the need to travel, a limitation in traffic flows and improved traffic management.

3.47 The options which propose significant transport capacity enhancements have the potential to have a range of direct impacts on key receptors, including from landtake and impacts on the quality of the public realm. Physical transport capacity enhancements also have the potential to stimulate induced demand, with the potential to lead to direct and indirect impacts on features, areas and networks of environmental sensitivity, air and noise quality and greenhouse gas emissions.

3.48 The significance of effects from these interventions will though depend on the design, layout and scale of the schemes, and the mitigation and avoidance measures proposed. It is also recognised that the implementation of appropriate measures to 'lock in' the benefits of physical transport capacity enhancements is possible with the implementation of an appropriate package of complementary 'soft' transport and demand management measures. It is also recognised that such capacity enhancements have the potential to offer environmental benefits and deliver net gain, if designed appropriately.

4. Appraisal of the current version of the NETP

Background

4.1 The ISA Report must include:

- The likely significant effects associated with the draft plan approach; and
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan approach.

4.2 This chapter of the ISA Report therefore presents appraisal findings in relation to the current consultation draft of the NETP

4.3 The appraisal is presented through an assessment of the seven work programmes currently put forward through the NETP. This is accompanied by an assessment of the 'in-combination' effects of the different work programmes together. In response to the findings of these assessments, a series of proposed mitigation and enhancement measures are also proposed. These are designed to avoid, reduce or offset the potential significant adverse effects identified and maximise the opportunities for enhancements which are potentially available through the implementation of the NETP.

Current version of the NETP

4.4 At the current stage, the North East Joint Transport Committee is consulting a full draft of the NETP.

4.5 As discussed above, the draft plan presents a vision and strategic objectives for the NETP. To deliver the vision and strategic objectives for the NETP, the current version of the plan sets out seven work programmes. These work programmes propose a number of packages of transport schemes that have been identified as 'shovel ready' for delivery, or can be delivered over the next five years, over the next ten years, or beyond a ten-year period.

4.6 The packages of transport schemes are grouped as follows:

1) Helping people to make the right travel choice
2) Upgrading North East Active Travel Infrastructure
3) Bus, ferry and first and last mile
4) Local rail and metro
5) Road infrastructure
6) Maintaining and renewing our transport network.
7) National and international connectivity

4.7 The schemes taken forward through these work programmes will be implemented through the Implementation Plan accompanying the overall strategy document for the NETP.

4.8 An overview of the preferred approach for the NETP and proposed interventions is presented in **Figure 4.1** and **Figure 4.2**.

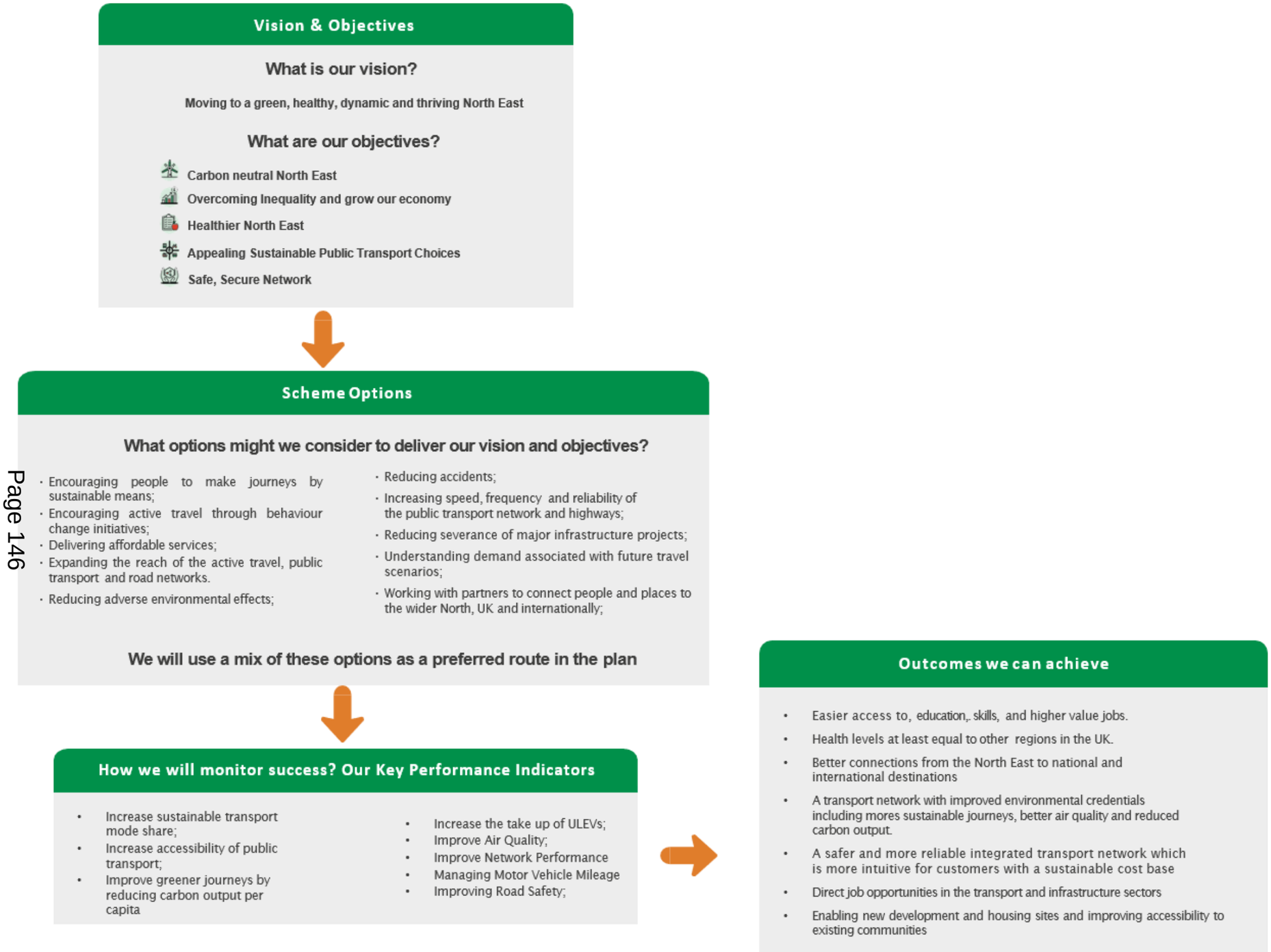

Figure 4.1: Overview of approach taken by the NETP

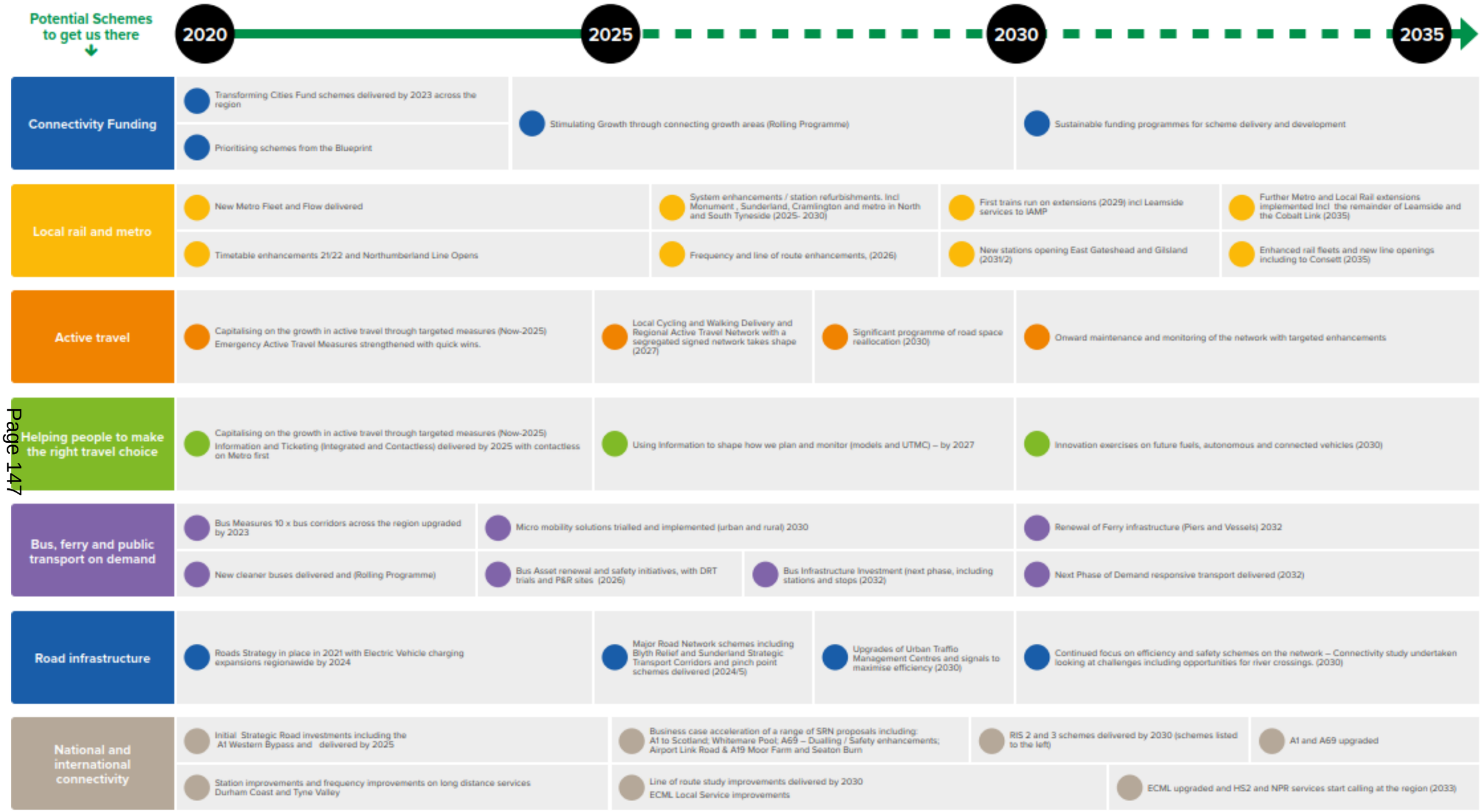

Figure 4.2: Overview of strategic interventions proposed for the NETP

Appraisal of the NETP work programmes

4.9 The following sections presents the appraisal of the current consultation version of the NETP.

4.10 The appraisal identifies and evaluates the likely significant effects of each work programme of schemes on the baseline, informed by the ISA Framework developed through scoping (**Chapter 2**). Findings have been presented through the ten ISA themes developed during scoping:

- Biodiversity
- Water and soil resources
- Historic environment
- Landscape
- Air quality and noise
- Climate change and flood risk
- Population
- Human health
- Equalities
- Rurality

4.11 Under each of the above ISA themes, assessment findings have been discussed for each potential work programme. In response to the assessment findings, potential mitigation measures have also been proposed, and opportunities identified. This is with a view to informing the ongoing development of the work programmes' schemes to implementation.

4.12 A commentary of the in-combination effects of the work programmes against each ISA theme is subsequently presented, with additional recommendations/mitigation to cover assessed effects.

Biodiversity

Appraisal of work programmes

4.13 The following table presents an appraisal of the seven work programmes against the Biodiversity ISA theme.

Table 4.1: Appraisal of work programmes: Biodiversity

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed through this work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. The measures introduced under this programme include; introducing 'School Streets' and low-traffic neighbourhoods, delivering cross-modal ticketing and enhanced passenger travel technology (including improved mapping services), traffic management schemes and technology test-bed initiatives. The focus on technology and user experience translates to a limited introduction of physical infrastructure and landtake in terms of the schemes proposed. As a result, no significant effects are anticipated in relation to biodiversity. Ultimately the measures support a reduction in local car journeys to the benefit of air and noise quality, and by this means, minor indirect positive effects are considered likely for biodiversity. However, technology/ signage improvements may need to consider the effects of light pollution at the project-scale.	• Opportunities for 'urban greening' of routes, particularly active travel networks should be sought where possible. • Strategic opportunities to maximise biodiversity net gains should be sought where possible. • Technology and signage improvements should seek to limit impacts on nocturnal species.

2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. This includes physical development that has the potential to affect biodiversity. With most of the proposed schemes focused in the urbanised areas of Newcastle, Gateshead, Sunderland and North and South Tyneside, the potential for effects in relation to European designated sites is limited. Alternatively, a focus here on reducing vehicle use and dominance may support improvements to air quality overall, indirectly benefiting biodiversity. However, there are multiple designated sites, habitats and ecological corridors within these urban areas that have the potential to be affected through habitat fragmentation, increased disturbance and noise, light and air pollution, particularly during the construction phase (where applicable). Notably, a new crossing over the River Derwent (GA46) has the potential to affect habitats and ecology in the area with multiple SSSI habitats associated with the river. It will be important to deliver mitigation alongside development to avoid/ minimise any negative effects arising. New hard surfaces also have the potential to affect water run-off and attenuation rates that may affect habitats. In the more rural areas of County Durham the proposed schemes focus on cycle route improvements, including new tracks and route extensions. These schemes are predominantly focused along existing transport corridors such as the A689, A688, A177 as well as existing cycle routes. NCN1 is notably set a series of works to improve the quality of the route taking into account biodiversity and appearance of the section running between Seaham and Stockton. With further urban greening measures, such as a new tree-lined boulevard in Gateshead (GA04) and public realm improvements in Sunderland (SU29), minor positive effects can be anticipated. It is noted that some of the proposed schemes run in close proximity to European designated sites, and the Habitats Regulations Assessment accompanying the NETP will explore the 'likely significant effects' in greater detail in due course. Ultimately though the focus on promoting alternative modes of travel to the car could bring about positive effects for air quality in the vicinity of designated sites.	• Public realm enhancements should seek to enhance ecological networks through appropriate planting and green infrastructure enhancements, and where possible, employing the premise of environmental net gain.

3: Bus, ferry and first and last mile	A number of significant schemes are proposed through this work package that will result in the development of physical infrastructure with the potential to affect designated biodiversity, as well as local habitats and ecological connectivity. Schemes of particular significance in relation to biodiversity include a proposed new bus station at Blythe (NO09) and the replacement of the South Bank ferry landing (NX23), which are in the vicinity of European designated coastal habitats. Further, significant urban construction works, including additional new bus stations (at Alnwick and Bishop Auckland) and new park and ride facilities (at Team Valley and Slatyford), alongside existing infrastructure upgrades, have the potential to indirectly affect nationally designated habitats associated with SSSIs and more directly affect locally designated habitats. Potential effects include direct habitat loss, habitat fragmentation, increased disturbance, noise, light and air pollution. These effects are likely to be most prominent in the short-term during construction phases. It is noted that some of the proposed schemes run in close proximity to European designated sites. In this context the Habitats Regulations Assessment accompanying the NETP will explore the 'likely significant effects' of these schemes in greater detail in due course. Ultimately though, the focus on promoting alternatives modes of travel to the car could bring about positive effects for air quality in the vicinity of designated sites.	• Development should seek to limit potential impacts on habitats and species from landtake, loss of vegetation and trees and light pollution through appropriate avoidance and mitigation measures. • Opportunities to enhance ecological networks through appropriate planting and green infrastructure enhancements should also be sought where possible.
4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. Due to the sensitivity of these transport corridors, enhancements to local rail and Metro networks have the potential to have adverse effects on habitats, species and ecological corridors without the integration of appropriate mitigation and avoidance measures. This may also have impacts on nationally and locally designated sites. Whilst the potential for negative effects through disturbance, noise and light pollution is identified, there is some potential for positive effects also to take place. For example the focus on improving strategic rail connectivity, for example in the Derwent Valley Line, provides significant support for increasing access to key employment areas by more sustainable modes of transport. This is expected to reduce the dominance of vehicle traffic and congestion on roads, which may have indirect positive effects for biodiversity from air and noise quality enhancements and a reduction of impacts from the transport network on local habitats.	• Potential impacts on biodiversity habitats should be considered during scheme development, avoidance and mitigation measures implemented, and opportunities for net gain explored.

5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. The likely effects of these schemes in relation to European designated sites will be assessed in greater detail through the Habitat Regulations Assessment accompanying the NETP in due course. However, more localised impacts are considered likely. Negative effects can be anticipated in relation to nationally designated SSSIs, locally designated sites and Priority Habitats as a result of habitat loss and fragmentation, disturbance, noise, light and air pollution. Further, road infrastructure improvements ultimately have the potential to attract more road users, which in turn can negatively effect biodiversity, particularly in terms of air quality in the vicinity of designated sites. However, technological advances are also proposed which seek to integrate air quality monitoring and real-time information to the benefit of air quality in the longer-term. Overall however, effects on habitats, species, ecological networks and designated sites will depend on the detailed location and design of schemes, and the integration of biodiversity-friendly design within new infrastructure. Potential effects, including cumulative effects between schemes will need to be carefully considered through the project stage.	• Potential impacts on biodiversity habitats should be considered during scheme development, avoidance and mitigation measures implemented, and opportunities for net gain explored. • Opportunities to enhance green infrastructure networks along routes should also be sought, supporting a premise of environmental net gain and delivering multifunctional benefits. This should be informed at the project level by a robust EIA process.
6: Maintaining and renewing our transport network	This package provides a focus on future funding, targeted decarbonisation solutions and asset energy generation potential, and technological advances. Enhanced maintenance regimes may have impacts on biodiversity assets locally, including from landtake and disturbance. Increasing the resilience of coastal transport infrastructure has the potential to have impacts on internationally and nationally designated sites present on the coast.	• Biodiversity enhancements should be facilitated alongside network improvements. • Development of a programme of works to ensure that SSSIs and other important designated sites are brought into favourable condition.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). Effects on habitats, species, ecological networks and designated sites will depend on the detailed location and design of schemes, and the integration of biodiversity-friendly design within new infrastructure. Potential effects, including cumulative effects between schemes will need to be carefully considered through the project stage. Cumulatively, the increased strategic connectivity has the potential to further increase visitor trips and recreational pressures on key areas of biodiversity value in the region, such as coastal habitats, As such, potential cumulative effects will need to be carefully managed.	• Potential impacts on biodiversity habitats should be considered during scheme development, avoidance and mitigation measures implemented, and opportunities for net gain explored. • Strategic connectivity improvements that result in increased visitor and recreational pressures at designated sites will need to be carefully managed.

Key significant effects resulting from the NETP packages: Biodiversity

4.14 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Biodiversity ISA theme.

Table 4.2: Likely significant effects, Biodiversity

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Impacts on biodiversity from land take, habitat loss and fragmentation and disturbance from road, rail and public transport schemes proposed through the NETP.	Direct, short, medium and long-term, permanent and negative	Potential impacts on habitats and species from landtake, loss of vegetation and trees and light pollution through should be addressed through appropriate avoidance and mitigation measures. Opportunities to enhance green infrastructure networks along routes should be sought, supporting a premise of environmental net gain and delivering multifunctional benefits. This should be informed at the project level by a robust EIA process.
Potential impacts on European designated biodiversity sites from new transport infrastructure schemes.	Direct and indirect, short, medium and long-term, permanent and negative	Apply the recommendations of the Habitats Regulations Assessment process undertaken alongside the NETP.
Impacts on biodiversity from increased noise, light and air pollution linked to traffic increases resulting from the release of induced demand from new road schemes.	Indirect, medium and long-term, permanent and negative	Ensure benefits of road improvements are 'locked in' through complementary public transport and walking and cycling measures which limit road traffic increases.
Impacts on internationally and nationally designated sites present on the coast from enhancements to the resilience of coastal transport infrastructure.	Direct, short, medium and long-term, permanent and negative	Biodiversity enhancements should be facilitated alongside network improvements. Key habitats should be retained and the integrity of ecological linkages should be secured. Programmes of works should be developed to help ensure an increased proportion of the SSSIs and other important designated sites present locally are brought into favourable condition.
Impacts of new lighting and signage on nocturnal species	Direct short and medium term effects, temporary and negative.	New lighting and signage should be designed to minimise impacts on nocturnal species. This should be informed by appropriate ecology surveys.

Water and Soil Resources

Appraisal of work programmes

4.15 The following table presents an appraisal of the seven work programmes against the Water and Soil Resources ISA theme.

Table 4.3: Appraisal of work programmes: Water and Soil Resources

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The schemes proposed under this work programme largely focus on user experience of more sustainable modes of travel, such as active travel and bus travel. Given the lack of significant physical infrastructure to be delivered through the package no significant effects are anticipated in relation to the Water and Soil Resources ISA theme. Despite this, measures which seek to enhance active travel networks, particularly new or extended routes have the potential to increase the amount of hard surfacing and affect surface water run-off and attenuation rates.	• None proposed
2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. This includes physical infrastructure that has the potential to affect soil and water resources. No significant development is proposed under this programme which would result in significant greenfield loss or significant effects in relation to agricultural land resources. The effects are considered likely to predominantly relate to water quality, as a result of the introduction of hard surfacing requiring the management of surface water run-off and attenuation rates, as well as development in the vicinity of rivers and other waterbodies. Whilst no significant effects are anticipated in this respect, it is recognised that the use of permeable surfaces supported by integrated sustainable drainage systems where appropriate can reduce the potential for minor negative effects arising. Construction Environmental Management Plans (CEMPs) can further contribute to minimising effects arising during construction, particularly relevant to the proposed new crossing at the River Derwent at Metro Green (GA46).	• Promoting the use of Construction Environmental Management Plans (CEMPs). • Use of permeable surfaces in any new or extended routes should be sought where possible. • New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates.
3: Bus, ferry and first and last mile	Whilst its main focus is on improving the quality and functioning of existing transport infrastructure, a number of significant development proposals are included within this package. This includes the development of new bus stations, new park and ride facilities, and rapid transit corridors. It is assumed that key transport interchange locations, such as new bus station and rapid transit corridors will maximise the use of brownfield land opportunities where these exist. The short-term priorities outline intentions to establish a strategy for effective park and ride sites, with potential schemes identified at this stage at Team Valley and Slatyford, again maximising the use of urban land. Should future development sites include greenfield sites then negative effects of greater significance could be anticipated in relation to soil resources. At this stage though, no significant effects are anticipated. It is assumed that appropriate consultation with water companies will occur as the plan progresses, to ensure the timely provision of infrastructure servicing new stations and asset locations. Further, all schemes which propose new development will need to consider the effects of introducing new hard surfacing and manage the effects of surface-water run-off in relation to water quality. Overall, no significant effects are considered likely at this stage.	• New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates.

4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. As above, it is assumed that key transport interchange locations, such as new rail and metro stations and associated car parking facilities will maximise the use of brownfield land opportunities where these exist. A significant focus on existing infrastructure across the schemes on the whole minimises the likelihood of significant effects arising in relation to soil resources. Again, it is assumed that appropriate consultation with water companies will occur as the plan progresses, to ensure the timely provision of infrastructure servicing new stations and asset locations. Further, all schemes which propose new development will need to consider the effects of introducing new hard surfacing and manage the effects of surface-water run-off in relation to water quality. Overall, no significant effects are considered likely at this stage.	• New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates.
5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. The package includes significant development schemes, including a number of new link roads and relief roads, dualling schemes and corridor-based improvements. The associated construction works have the potential for negative effects in relation to soil resources, particularly where works encroach upon greenfield land. Further, new roads and new bridges have potential for effects in relation to water quality through the introduction of hard surfacing affecting water run-off and attenuation rates and potentially water quality. Negative effects can be anticipated in this respect, and it will be important for development to deliver sustainable drainage systems where possible to minimise the effects arising. No significant impacts on water quality are anticipated from schemes if the required embedded mitigation measures are incorporated within the construction stage.	• Provision of sustainable drainage systems should be sought where possible.
6: Maintaining and renewing our transport network	The package has a close focus on enhancing the maintenance of the road network, including to provide greater resilience to climate change. This has the potential to support significant enhancements to water and soil quality given maintenance schemes are likely to incorporate measures to more sustainably manage surface water run off.	• None proposed.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). The focus on strategic connectivity and existing infrastructure minimises the likelihood of significant effects arising in relation to both soil and water resources. However, it is recognised that strategic interventions also present opportunities to improve aspects such as drainage and positively affect water quality in this respect. Such strategic opportunities should be capitalised upon where available.	• Opportunities to improve strategic sustainable drainage solutions should be sought where possible.

Key significant effects resulting from the NETP packages: Water and Soil Resources

4.16 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Water and Soil Resources ISA theme.

Table 4.4: Likely significant effects, Water and Soil Resources

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved management of surface water run off through enhanced maintenance of the road network and the delivery of sustainable drainage schemes alongside new transport infrastructure.	Direct, short, medium and long term, permanent and positive.	New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates. Opportunities to improve strategic sustainable drainage solutions should be sought where possible.
Improvements to soil quality from improved management of surface water run off through enhanced maintenance of the road network and the delivery of sustainable drainage schemes alongside new transport infrastructure.	Direct, medium and long term, permanent and positive.	New infrastructure should be supported by appropriate drainage systems where necessary, to reduce surface water run-off and maintain or improve attenuation rates. Opportunities to improve strategic sustainable drainage solutions should be sought where possible.

Historic Environment

Appraisal of work programmes

4.17 The following table presents an appraisal of the seven work programmes against the Historic Environment ISA theme.

Table 4.5: Appraisal of work programmes: Historic Environment

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed for work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. As such, no direct impacts on the fabric and setting of the historic environment (including both designated and non-designated heritage assets). However, through encouraging modal shift, a limitation in traffic flows and improved traffic management, the package of measures has the potential to support the setting of historic environment assets, both designated and non-designated, and historic townscapes and landscapes. Minor indirect positive effects could be anticipated in this respect.	• Urban greening measures can support a high-quality public realm and support the setting of the historic environment.

2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. This includes physical development that has the potential to affect the fabric and setting of the historic environment. A significant focus of the package is on extending cycle and pedestrian infrastructure. This has the potential for multiple benefits relating to the historic environment, including through reduced vehicle presence and increased access to and enjoyment of heritage assets and their settings. This is particularly demonstrated through schemes such as the proposed new cycle track along the disused railway between Bishop Auckland and Barnard Castle, which traverses the setting of three Registered Parks and Gardens, and multiple Listed Buildings and Scheduled Monuments. Despite this, it is recognised that there is a potential for short-term negative effects during construction (e.g. groundworks and diversions). In light of this, new infrastructure should be designed to support the setting of the historic environment, and maximising opportunities for public realm improvements, including green infrastructure provision, to secure longer term positive effects.	• Development should seek to manage and minimise impacts on the setting of the historic environment during construction phases. • New infrastructure should be designed to support the setting of the historic environment and maximise opportunities for public realm improvements.
3: Bus, ferry and first and last mile	Whilst great focus is paid to improving the quality and functioning of the existing transport infrastructure network, a number of significant development proposals are included within this package. This includes the development of new bus stations, new park and ride facilities, and rapid transit corridors. A number of proposals under this work package are likely to affect different sensitive heritage receptors. Of significance, the proposed South Bank Ferry Landing replacement scheme (NX23) lies close to the 'Frontiers of the Roman Empire' (Hadrian's Wall) World Heritage Site and its buffer zone. Development here has the potential for effects of significance, both positive and negative. Negative effects are likely to predominantly relate to construction phases, provided that high-quality design ensures that in the long-term development supports the setting of the historic environment. However, the South Bank Ferry Terminal replacement could unlock further regeneration and investment in the vicinity of the World Heritage Site, bolstering the rejuvenation of heritage assets in this locality. Proposals such as the new bus stations at Alnwick (NO08) and Bishop Auckland (DU11) are also likely to affect sensitive heritage settings. Similar to above, it will be important to ensure that high-quality design proposals support the setting of the historic environment. However, modal shift facilitated by the package have the potential to support enhancements to the setting of the historic environment and increase access to and enjoyment of key heritage assets. This is particularly relevant for more localised schemes, and within designated conservation areas.	• New infrastructure should be designed to facilitate enhancements to the fabric and setting of the historic environment. It should also seek to maximise opportunities for enhancing access to and understanding of the historic environment.

4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. Of significance within this work package, the re-opening of Gilsland Railway Station is proposed, which lies within the buffer zone of the 'Frontiers of the Roman Empire' (Hadrian's Wall) World Heritage Site. Development here has the potential for effects of significance, both positive and negative. Negative effects are likely to predominantly relate to construction phases, provided that high-quality design ensures that in the long-term development supports the setting of the historic environment. Positive effects can also be anticipated as a result of increased access to and enjoyment of designated heritage assets.	• New infrastructure should be designed to facilitate enhancements to the fabric and setting of the historic environment. It should also seek to maximise opportunities for enhancing access to and understanding of the historic environment.
5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. The delivery of these schemes has the potential to lead to impacts on the key assets (including designated features and areas) located in the vicinity of the key routes and areas targeted for interventions. There are likely to be trade-off effects. For example, bypass routes that alleviate congestion in certain areas to the benefit of certain settings may also introduce new traffic into other areas affecting designated assets and heritage settings in these locations. The significance of effects on the historic environment from the interventions taken forward through this package will depend on design, layout and scale of the schemes, and mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and the setting of the historic environment.	• Road schemes should be accompanied by a comprehensive package of avoidance and mitigation measures, as well, where possible, enhancement measures. This should be informed at the project level by a robust EIA process. • New infrastructure should be designed to facilitate enhancements to the fabric and setting of the historic environment. It should also seek to maximise opportunities for enhancing access to and understanding of the historic environment.
6: Maintaining and renewing our transport network	Enhancements to maintenance regimes taken forward through this package has the potential to deliver enhancements to the fabric of designated and undesignated features of historic environment interest, including those associated with the transport network. The package also has the potential to support enhancements to the setting of the historic environment, including through improvements to visual amenity and enhancements to noise quality through enhanced road surfacing.	• Maintenance regimes should seek to facilitate enhancements to the fabric and setting of designated and undesignated features and areas of historic environment interest.

7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). The focus on strategic connectivity and existing infrastructure minimises the likelihood of direct significant effects on the historic environment. Cumulatively, the increased strategic connectivity which is sought through this package has the potential to support enhancements in accessibility to key heritage assets in the region, including the World Heritage Sites, Registered Parks and Gardens, city and town centres and other areas of significance for their historic environment interest.	• None proposed.

Key significant effects resulting from the NETP packages: Historic Environment

4.18 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Historic Environment ISA theme.

Table 4.6: Likely significant effects, Historic Environment

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
The delivery of new transport infrastructure schemes has the potential to lead to significant impacts on the key assets (including designated and non-designated features and areas) of historic environment interest located in the vicinity of the key routes and areas targeted for interventions.	Direct and indirect, short, medium and long term, permanent and negative.	Transport infrastructure schemes should be accompanied by a comprehensive package of avoidance and mitigation measures, as well, where possible, enhancement measures. This should be informed at the project level by a robust EIA process. New infrastructure should be designed to facilitate enhancements to the fabric and setting of the historic environment. It should also seek to maximise opportunities for enhancing access to and understanding of the historic environment.
Enhancement to the fabric and setting of the historic environment through improved maintenance regimes.	Direct, short, medium and long term, permanent and positive.	Maintenance regimes should seek to facilitate enhancements to the fabric and setting of designated and undesignated features and areas of historic environment interest.
Enhanced accessibility to, and additional opportunities for enjoyment of the North East's heritage resource.	Direct, short, medium and long term, permanent and positive.	None proposed.

Landscape

Appraisal of work programmes

4.19 The following table presents an appraisal of the seven work programmes against the Landscape ISA theme.

Table 4.7: Appraisal of work programmes: Landscape

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed for work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. As such, no direct impacts on the landscape and townscape character. However, through encouraging modal shift, a limitation in traffic flows and improved traffic management, the package of measures has the potential to support the quality of the public realm, local distinctiveness and townscape and landscape character. Minor indirect positive effects could be anticipated in this respect.	• Urban greening measures can support a high-quality public realm and support the setting of the townscape.
2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. This includes physical development that has the potential to affect landscape and townscape character. A significant focus of the package is on extending cycle and pedestrian infrastructure. This has the potential for multiple benefits relating to the landscape and townscape character, including through reduced vehicle presence and increased access to and enjoyment of the public realm. Despite this, it is recognised that there is a potential for short-term negative effects during construction (e.g. groundworks and diversions). In light of this, new infrastructure should be designed to support local character and maximising opportunities for public realm improvements, including green infrastructure provision, to secure longer term positive effects.	• New cycle infrastructure should be designed and located to support high-quality landscape abd townscape settings. • Opportunities for 'urban greening' and green infrastructure enhancements should be sought where possible. • Development should avoid the loss of existing trees and landscape features where possible.

3: Bus, ferry and first and last mile	Whilst the focus of the package is on improving the quality and functioning of the existing infrastructure network, a number of significant development proposals are included within this package. This includes the development of new bus stations, new park and ride facilities, and rapid transit corridors which have significant implications for landscape and townscape character. It is assumed that key transport interchange locations, such as new bus stations and rapid transit corridors will maximise the use of brownfield land opportunities where these exist to improve upon the townscape. Further, development should seek to avoid the loss of trees and existing landscape/ townscape features. Greater emphasis on public realm improvements and urban greening factors in the schemes could enhance the potential for development to lead to positive townscape effects. This will be particularly relevant in the more rural areas of the region, particularly targeted measures within the setting of the AONBs or National Park such as at Alnwick. The short-term priorities outline intentions to establish a strategy for effective park and ride sites, with potential schemes identified at this stage at Team Valley and Slatyford, again maximising the use of urban land. Should future development sites include greenfield sites, then negative effects of additional significance could be anticipated in relation to landscape character, particularly in greenfield sites in the more rural areas of the region and areas within, or within the setting of, designated landscapes.	• New infrastructure should be designed to facilitate enhancements to the quality of the public realm and townscape and landscape character.
4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. Similar to above, it is assumed that key transport interchange locations, such as new stations and car parking facilities, will maximise the use of brownfield land opportunities where these exist to improve upon the townscape. Schemes involving greenfield development have the potential for potential negative effects on landscape, particularly those within the setting of distinctive and valued landscapes (such as at Consett, located within the setting of the North Pennines AONB). The reinstatement of disused railway lines and stations (e.g. DU17 & NO04) has the potential tor impact on the historic townscape and landscape, and much of the Metro network has a distinctive historical lineage forming part of the development of townscape character in these locates. High-quality design supported by public realm enhancements and green infrastructure development can support overall long-term positive effects in the re-establishment and enhancement of these routes.	• New and enhanced infrastructure should be designed to facilitate enhancements to the quality of the public realm and townscape and landscape character.

5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. The package includes significant development schemes, such as new relief and link roads, dualling schemes, new bridges and corridor-based improvements. Given the scale of these schemes, a number of these have the potential to have significant effects on landscape character, particularly those schemes on greenfield land and those that encroach on valued countryside or coastal settings. The significance of effects from schemes taken forward by the package however depend on the design, layout and scale of the schemes, and the mitigation and avoidance measures proposed. It should also be noted that well designed schemes have the potential to lead to enhancements to the public realm and townscape/landscape character. Furthermore, the schemes taken forward through this work package may in some cases contribute to a reduction in severance and contribute to a more cohesive settlement and townscape form. Similarly, measures which help to relieve congestion may support improvements to local distinctiveness and the quality of the public realm.	• Road schemes should be accompanied by a comprehensive package of avoidance and mitigation measures, as well, where possible, enhancement measures. This should be informed at the project level by a robust EIA process. • New infrastructure should be designed to facilitate enhancements to landscape and townscape character.
6: Maintaining and renewing our transport network	Enhancements to maintenance regimes taken forward through this package has the potential to deliver enhancements to landscape and townscape character, including through improvements to visual amenity and enhancements to noise quality through enhanced road surfacing. The package seeks to repair and strengthen key roads underpinning the rural and regional economy. This will support the enjoyment of key tourism destinations in the key designated landscapes of the North East, including the Northumberland National Park (including the International Dark Skies Park) and Hadrian's Wall World Heritage site. It also seeks to limit the impacts from transport of timber extraction and quarrying. This recognises the impact of such activities on the landscape character and quality of the public realm in some rural areas, with associated impacts on the tranquillity of these areas.	• Maintenance regimes should seek to facilitate enhancements to landscape and townscape character.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). The focus on strategic connectivity and existing infrastructure minimises the likelihood of direct significant effects on the historic environment. Cumulatively, the increased strategic connectivity which is sought through this package has the potential to support enhancements in accessibility to valued landscapes and townscapes, including with the Northumberland National Park, the two AONBs and the two World Heritage Sites in the region.	• None proposed.

Key significant effects resulting from the NETP packages: Landscape

4.20 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Landscape ISA theme.

Table 4.8: Likely significant effects, Landscape

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
The delivery of new transport infrastructure schemes (in particular, road schemes) has the potential to lead to significant impacts on landscape and townscape character.	Direct and indirect, short, medium and long term, permanent and negative.	Transport infrastructure schemes should be accompanied by a comprehensive package of avoidance and mitigation measures, as well, where possible, enhancement measures. This should be informed at the project level by a robust EIA process. New infrastructure should be designed to limit impacts on landscape and townscape character, and facilitate enhancements.
Enhancement to landscape and townscape character through improved maintenance regimes.	Direct, short, medium and long term, permanent and positive.	Maintenance regimes should seek to facilitate enhancements to the quality of the public realm and local distinctiveness.
Enhanced accessibility to, and additional opportunities for enjoyment of the North East's landscape/townscape resource, including associated with valued landscapes and townscapes.	Direct, short, medium and long term, permanent and positive.	None proposed.

Air Quality and Noise

Appraisal of work programmes

4.21 The following table presents an appraisal of the seven work programmes against the Air Quality and Noise ISA theme.

Table 4.9: Appraisal of work programmes: Air Quality and Noise

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The schemes proposed under this work programme largely focus on user experience of more sustainable modes of travel, such as active travel and bus travel. A number of schemes proposed in this package (e.g. TNE04, NE10, SU32 and TNE21) will specifically target air quality improvements and improved air quality monitoring and modelling. This is considered likely to lead to significant long-term positive effects. The targeted reduction in vehicle dominance is also considered likely to reduce the impacts of noise, particularly at the neighbourhood scale.	• None proposed.

2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. The measures seek to enhance the use of more sustainable modes of transport, with a predominant focus on walking and cycling routes, that will ultimately support long-term air quality improvements, as well as reduce the noise impacts associated with vehicular traffic. Whilst road infrastructure improvements may attract more road users, the targeted interventions seek to reduce vehicle congestion and traffic, and the associated impacts on air quality. Measures to support urban greening, such as tree-lined streets (GA04) are likely to provide further support for clean air in the long-term, with positive effects are likely in this respect. It is recognised that a greater emphasis on the urban greening of these routes could enhance the significance of these effects.	• None proposed.
3: Bus, ferry and first and last mile	The measures seek to enhance the use of more sustainable modes of transport that will ultimately support long-term air quality improvements, as well as reduce the noise impacts associated with vehicular traffic. Any negative effects arising are likely to be short-term during construction phases, e.g. as a result of road closures or delays causing localised impacts.	• None proposed.
4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. The measures seek to enhance the use of more sustainable modes of transport that will ultimately support long-term air quality improvements, as well as reduce the noise impacts associated with vehicular traffic. The expansion of car parking facilities may create more local journeys/ trips in certain locations, with impacts on air quality. Negative effects are also likely to arise in the short-term during construction phases, e.g. as a result of road closures or delays causing localised impacts.	• None proposed.

5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. Expansion of the EV network will continue to support improved air quality and is also considered likely to reduce the noise impacts associated with vehicular traffic. Of note, the collaborative scheme with Newcastle University to integrate new demand data with real-time air quality modelling and pilot a new and innovative support tool for traffic management (TNE02) is likely deliver long-term positive effects of significance. New road schemes have the potential to lead to air quality enhancements at key 'pinchpoints' on the network which have existing air quality issues. This has the potential to support significant enhancements of air quality at specific locations. However, through contributing to an overall increase in traffic flows on the wider road network, the schemes also have the potential to increase traffic flows over a broader area, including through stimulating induced demand. This may contribute to increases in emissions of the key pollutants which affect air quality over a wider area. For the same reason, the option also has the potential to leading to more significant effects on noise quality. It is recognised that interventions are largely sought to alleviate the impacts of congestion, particularly in the form of relief roads drawing vehicles away from the more congested centres of settlement areas. Residual positive effects are therefore considered likely.	• None proposed.
6: Maintaining and renewing our transport network	This package provides a focus on future funding, targeted decarbonisation solutions and asset energy generation potential, and technological advances, alongside general maintenance measures. The schemes also seek to support the move to more sustainable, cleaner fuels which will ultimately reduce harmful emissions and particulates from vehicle usage. Enhanced maintenance regimes also have the potential to limit noise pollution from the road network.	• None proposed
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). Enhanced strategic connectivity, particularly linkages to high speed rail, provides opportunities to support more sustainable cross-country travel, particularly with key destinations further afield, such as London, which provide significant economic links. This is likely to lead to minor positive effects for air quality. However, it is also recognised that strategic highways infrastructure improvements may also attract more road users.	• None proposed

Key significant effects resulting from the NETP packages: Air Quality and Noise

4.22 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Air Quality and Noise ISA theme.

Table 4.10: Likely significant effects, Air Quality and Noise

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Air quality enhancements at key 'pinchpoints' on the network which have existing air quality issues.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Impacts from road schemes on air and noise quality over a wider area, including through the stimulation of induced demand.	Direct and indirect, medium and long term, permanent and negative.	Initiation of complementary measures alongside road capacity enhancements to limit increases in traffic flows resulting from a release of induced demand.
Support for electric vehicles and cleaner fuels, with benefits for air and noise quality.	Indirect, medium and long term, permanent and positive.	None proposed.

Climate Change and Flood Risk

Appraisal of work programmes

4.23 The following table presents an appraisal of the seven work programmes against the Climate Change and Flood Risk ISA theme.

Table 4.11: Appraisal of work programmes: Climate Change and Flood Risk

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed to address this work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. The measures introduced under this programme include; introducing 'School Streets' and low-traffic neighbourhoods, delivering cross-modal ticketing and enhanced passenger travel technology (including improved mapping services), traffic management schemes and technology test-bed initiatives. The focus on technology and user experience translates to the limited delivery of physical infrastructure in terms of the schemes proposed. As a result, no significant effects are anticipated in relation to flood risk. The expansion of technological transport solutions and focus on smart travel and improved connectivity is likely to initiate a range of approaches that will help to limit greenhouse gas emissions and contribute towards aims for carbon neutrality. The focus on installing more sustainable travel behaviours, particularly within the young is also likely to bolster climate change mitigation. Long-term positive effects are anticipated in this respect. A number of schemes proposed in this package (e.g. TNE04, NE10, SU32 and TNE21) will specifically target air quality improvements and improved air quality monitoring and modelling, which is considered likely to further support climate resilience.	• None proposed

2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. The significant focus on extending and improving both cycle and pedestrian access under this work package is considered likely to reduce vehicle use, particularly with regards to local trips and commuter journeys. This will support a limitation of greenhouse gas emissions from transport. Despite this, the introduction of new hard surfacing will need to consider the effects of surface-water run-off in terms of flood risk. The use of permeable surfaces should be prioritised where possible. More broadly, in terms of adapting to the effects of climate change, the effect of initiatives taken forward through the package depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision (e.g. tree-lined streets – GA04) and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems.	• Transport infrastructure should seek to prioritise the use of permeable surfaces. • Any introduction of new hard surfacing will need to consider the effects of run-off on surface water flood risk. • Opportunities to improve and extend green infrastructure provision alongside the development of transport infrastructure should be sought.
3: Bus, ferry and first and last mile	The measures seek to enhance the use of more sustainable modes of transport that will ultimately support a limitation of greenhouse gas emissions associated with vehicular traffic. This will support climate change mitigation The overall effect of new Park & Ride provision on greenhouse gas emissions is uncertain. Whilst Park & Ride provision will support modal shift for at least part of users' journey, it also has the potential to encourage car use. However, this recognises that car travel will remain the predominant choice for many, including those living in rural areas, and such provision has the potential to support modal shift for at least part of the journey. In this respect the detailed location and design of such multi-modal provision should be carefully considered to ensure that newly generated trips are limited, and benefits maximised.	• The detailed location and design of such multi-modal provision should be carefully considered to ensure that newly generated trips are limited, and benefits maximised.
4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. The measures seek to enhance the use of more sustainable modes of transport that will ultimately support modal shift and long-term climate resilience and enhance the accessibility of growth locations. However, the expansion of car parking facilities may encourage car use and create more local journeys/ trips in certain locations. In terms of adapting to the effects of climate change, the effect of initiatives taken forward through the package depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision (e.g. tree-lined streets – GA04) and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems.	• Transport infrastructure should seek to prioritise the use of permeable surfaces. • Any introduction of new hard surfacing will need to consider the effects of run-off on surface water flood risk. • Opportunities to improve and extend green infrastructure provision alongside the development of transport infrastructure should be sought.

5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. The expansion of the EV network and focus on smart travel will support a limitation of greenhouse gas emissions from the private vehicle and contribute towards aims for carbon neutrality. Long-term positive effects are anticipated in this respect. However, the promotion of road schemes that relieve congestion and / or increase capacity has the potential effect of releasing demand for vehicle trips currently suppressed. As such, the release of this induced demand may lead to increases in greenhouse gas emissions. In terms of adapting to the effects of climate change, the effect of initiatives taken forward through the package depend on detailed interventions, including scheme design and layout, the integration of green infrastructure provision and other measures to help regulate the effects of extreme weather events. Similarly, the effect of initiatives on fluvial, surface water and groundwater flooding depend on scheme design considerations, including design and layout and the implementation of measures such as sustainable drainage systems. It is recognised that a greater emphasis on the urban greening of these routes could enhance the significance of these effects.	• Comprehensive monitoring of greenhouse gas emissions from transport. • Identify, assess and integrate measures to further reduce carbon through on or off-site offsetting or sequestration. • Opportunities to improve and extend green infrastructure provision alongside the development of transport infrastructure should be sought.
6: Maintaining and renewing our transport network	The package proposes a number of maintenance schemes targeted at existing infrastructure. This has the potential to support the effective management of surface run off, contribute to flood risk management, and increase the resilience of the transport network to extreme weather events. The maintenance schemes further seek to address issues arising as a result of climate change, including roads affected by coastal erosion (ST25) and areas affected by subsistence (DU19). In this respect, the work package will help increase the resilience of the region's transport network to the likely effects of climate change, with significant long-term positive effects anticipated. The package also provides a focus on targeted decarbonisation solutions and asset energy generation potential, which will support efforts to move to carbon neutrality in the coming years.	• Development should seek to deliver sustainable drainage solutions and enhancements alongside maintenance works where possible.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). Enhanced strategic connectivity, particularly linkages to high speed rail, provides opportunities to support more sustainable cross-country travel, particularly with key destinations further afield, such as London, which provide significant economic links. This is likely to support a limitation of greenhouse gas emissions. However, it is also recognised that strategic highways infrastructure improvements may also attract more road users, and enhanced strategic connectivity may increase longer distance travel. This will have implications for greenhouse gas emissions.	• None proposed

Key significant effects resulting from the NETP packages: Climate Change and Flood Risk

4.24 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Climate Change and Flood Risk ISA theme.

Table 4.12: Likely significant effects, Climate Change and Flood Risk

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Limitation of greenhouse gas emissions from transport, including through the stimulation of modal shift from the private car towards public transport and active travel, and enhanced connectivity and smart travel.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Promotion of electric vehicle use, supporting the decarbonisation of the transport network.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Impacts on greenhouse gas emissions through the release of induced demand from new road schemes.	Direct and indirect, medium and long term, permanent and negative.	Initiation of complementary measures alongside road capacity enhancements to limit increases in traffic flows resulting from a release of induced demand. Identify, assess and integrate measures to further reduce carbon through on or off-site offsetting or sequestration.
Increased resilience of the transport network to the likely effects of climate change.	Direct, medium and long term, permanent and positive.	None proposed.

Population

Appraisal of work programmes

4.25 The following table presents an appraisal of the seven work programmes against the Population ISA theme.

Table 4.13: Appraisal of work programmes: Population

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed to address this work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. The measures introduced under this programme include; introducing 'School Streets' and low-traffic neighbourhoods, delivering cross-modal ticketing and enhanced passenger travel technology (including improved mapping services), traffic management schemes and technology test-bed initiatives. The schemes are likely to benefit residents and passengers with improved accessibility (particularly in terms of more local journeys such as school runs), a move towards more seamless journeys for multi-modal travel, and higher-quality user experience. The package supports technological advances, such as enhanced mapping and real-time information which will support residents in travel planning with improved journey times. Technological advances further provide the opportunity to give users information on the environmental impact of their transport choices, shaping their future travel decisions. Schemes under this programme make targeted efforts to enhance social and behaviour change initiatives, including bolstering community engagement through schemes such as ambassadors for walking and cycling initiatives (e.g. TNE23). Further schemes targeting promotion of active travel in schools (e.g. TNE05) can contribute to development of lifelong healthy travel behaviours for future generations. In this respect package provides significant support for residents in addressing behaviour change and reducing the dominance of traffic to support high-quality neighbourhoods and improved public safety. As a result, significant long-term positive effects are considered likely.	• Promote high-quality public realm and green infrastructure improvements alongside active travel opportunities to maximise benefits in relation to resident health and wellbeing.

2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. The focus on improved active travel connections is likely to benefit residents with increased accessibility and support active and healthy lifestyles. New and extended cycle routes will also provide better connections between settlements, particularly with key employment locations. Measures such as the new crossing over the River Derwent at Metro Green seek to reduce severance and increase permeability for pedestrians and cyclists. Further measures to deliver green infrastructure and biodiversity enhancements (e.g. GA04 and DU16) and public realm improvements (SU29) are likely to benefit residents with high-quality routes and amenity spaces. Schemes such as the proposed new cycle track along the disused railway between Bishop Auckland and Barnard Castle, traversing the setting of three Registered Parks and Gardens, and multiple Listed Buildings and Scheduled Monuments will further increase access to and enjoyment of the historic environment for residents. Significant positive effects are therefore anticipated for residents under this work package.	• None proposed.
3: Bus, ferry and first and last mile	The work package provides significant support for the enhancement and upgrading of the existing infrastructure network to reduce congestion in the network, improve journey times and support multi-modal travel. The work package includes the development of new bus stations, new park and ride facilities, and rapid transit corridors. New bus stations and park and ride facilities are expected to provide residents with improved access to key central locations. Coupled with bus priority measures, residents should be provided more direct and quicker access to key employment locations and service centres. Further, this will contribute to a limitation of traffic and congestion in urban centres, allowing residents to move more freely and safely through these locations. Significant positive effects can therefore be anticipated. The South Bank Ferry Terminal replacement could unlock further regeneration and investment in the vicinity of the World Heritage Site, bolstering the local economy and heritage values. Minor long-term positive effects are anticipated in this respect.	• Maximise opportunities to unlock further investment in local areas and key regional economies and tourism attractions, including the Hadrian's Wall World Heritage Site.
4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. Improved and extended rail connectivity is likely to benefit residents with improved accessibility to key employment areas, service locations and tourism/ leisure attractions. This includes improved connections between the rural and urban areas of the region (e.g. through the reinstatement of the Derwent Valley Line from Consett to Newcastle). Significant long-term positive effects can be anticipated in this respect. The extended rail coverage can further contribute to reducing traffic and congestion, particularly within urban centres, supporting ease of pedestrian movement and increased safety.	• Maximise opportunities to encourage inward investment and growth in areas of improved rail transport access.

5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. The focus on reduced severance will increase local accessibility for residents and improve settlement connectivity. Furthermore, new bypass schemes are likely to support town and village centres by alleviating the pressures of congestion within them. Bypass schemes are outlined for many areas including; Ponteland, Blyth, Farringdon and Barnard Castle. New link roads, dualling schemes and junction improvements will further improve access and relieve congestion in certain locations across the region and along key strategic transport corridors. In addition to increasing travel choice through initiating significant transport capacity enhancements, the package has the potential to lead to a range of economic opportunities through enhancing connections with the strategic and local transport network and key employment and growth areas. This mirrors a core aim of the North East Local Enterprise Partnership and its Strategic Economic Plan, which seek to maximise economic opportunities and enhance the vitality of the region's economy through improvements in transport connectivity.	• None proposed.
6: Maintaining and renewing our transport network	This package provides a focus on future funding, targeted decarbonisation solutions and asset energy generation potential, and technological advances, alongside a focus on enhanced maintenance measures for the road network. The package will ensure the general upkeep of the existing network to support continued access to employment areas, service centres and tourism/ leisure attractions. This includes along coastal roads which suffer from coastal erosion and in areas with issues associated with ongoing landslip and subsidence. Furthermore, the schemes seek to ensure that key roads underpinning the rural and regional economy are repaired and strengthened where necessary – including those providing access to key tourist destinations such as Hadrian's Wall World Heritage Site, Northumberland National Park and the International Dark Skies Park. The focus on future funding, and opportunities to generate income and capital will support continued investment and growth in the transport network and deliver against key transport priorities for the future. In this respect, long-term positive effects are anticipated with regards to the quality of life of residents.	• None proposed.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). Cumulatively this can support increased accessibility within and beyond the region for residents, unlocking further employment and leisure opportunities.	• None proposed.

Key significant effects resulting from the NETP packages: Population

4.26 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Population ISA theme.

Table 4.14: Likely significant effects, Population

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved accessibility to services, facilities and employment opportunities.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Support for a reduction in deprivation from accessibility, congestion and severance issues, and elements relating to social exclusion.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Enhanced economic opportunities through improved connections with the strategic and local transport network and key employment and growth areas.	Indirect, medium and long term, permanent and positive.	None proposed.
Support for the visitor economy from enhancements in transport infrastructure.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Enhancements to the quality of the neighbourhoods through a reduction of the impact of traffic and congestion.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Enhanced maintenance of the road network, supporting its resilience, with associated benefits for the quality of life of residents.	Direct, medium and long term, permanent and positive.	None proposed.

Human health

Appraisal of work programmes

4.27 The following table presents an appraisal of the seven work programmes against the Human Health ISA theme.

Table 4.15: Appraisal of work programmes: Human Health

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed to address this work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. The measures introduced under this programme include; introducing 'School Streets' and low-traffic neighbourhoods, delivering cross-modal ticketing and enhanced passenger travel technology (including improved mapping services), traffic management schemes and technology test-bed initiatives. Schemes under this work programme include targeted plans to integrate initiatives between the NHS, Public Health Directors and Transport North East (TNE31), with a view to encouraging activity and healthy behaviours. Further schemes target promotion of active travel in schools (e.g. TNE05). These measures will promote healthier lifestyles and support road safety. Recognising the recovery from the Covid-19 pandemic, the measures proposed also include initiatives to reduce the need for physical contact when using the transport network, including with ticket machines, barriers and physical cash. A number of schemes proposed in this package (e.g. TNE04, NE10, SU32 and TNE21) specifically target air quality improvements and improved air quality monitoring and modelling. The targeted reduction in vehicle dominance is also considered likely to reduce the impacts of noise, particularly at the neighbourhood scale. A reduction of air and noise quality issues will support health and wellbeing. Considering the above, long-term positive effects are considered likely overall.	• Promote high-quality public realm and green infrastructure improvements alongside active travel opportunities to maximise benefits in relation to resident health and wellbeing.
2: Upgrading North East Active Travel Infrastructure	The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. A significant focus of the package is on increasing the coverage and quality of cycle routes and active travel connections. This will promote health and wellbeing through supporting healthy and active lifestyles, and increasing access to green infrastructure networks and the countryside. The measures will also support road safety. Opportunities to link these routes with key regional green and blue infrastructure and heritage assets (for example through the proposed new Bishop Auckland to Barnard Castle track – scheme DU24) are likely to further enhance wellbeing benefits for residents. Through promoting modal shift, the package also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents.	• Maximise opportunities to link new active travel routes with existing green/ open and recreational spaces and features of heritage interest.

3: Bus, ferry and first and last mile	The proposed schemes provide significant focus on extending and improving the quality of sustainable transport corridors. Proposals include the development of new bus stations, new park and ride facilities, and improvements to bus and rapid transit corridors. These measures will support resident access to healthcare services, recreational/leisure facilities and employment opportunities. Given deprivation issues (which are a key contributor to health and wellbeing in the region) are closely linked to accessibility issues (particularly in less well-connected areas such as the rural areas and post-industrial communities of the North East), these measures will support health and wellbeing. Through promoting modal shift, the package also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents.	• None proposed.
4: Local rail and Metro	The work package focuses on existing rail infrastructure (including the reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. These measures will support resident access to healthcare services, recreational/leisure facilities and employment opportunities. Given deprivation issues (which are a key contributor to health and wellbeing in the region) are closely linked to accessibility issues (particularly in less well-connected areas such as the rural areas and post-industrial communities of the North East), these measures will support health and wellbeing. Through promoting modal shift to rail and Metro, the package also offers the potential to support air and noise quality enhancements and enhancements to the quality of the public realm. This will support the health and wellbeing of residents.	• Opportunities to improve and extend green infrastructure provision alongside the development of transport infrastructure should be sought.
5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. These measures will support resident access to healthcare services, recreational/leisure facilities and employment opportunities. Through enabling a reduction of congestion at key bottlenecks on the network, the package the potential to reduce the impacts of traffic and congestion on health and wellbeing at a number of locations. This includes through enhancements to air and noise quality, and improvements in the quality of the public realm. However, a potential stimulation of traffic growth over a larger area due to induced demand has the potential to have wider negative effects on health and wellbeing of residents through impacts on the quality of the public realm and a contribution to air and noise pollution.	• Maximise opportunities to increase road safety where possible. • Road capacity enhancements should be accompanied by measures to ‘lock in’ benefits for traffic flows and congestion levels. • Opportunities to improve and extend green infrastructure provision alongside the development of transport infrastructure should be sought.

6: Maintaining and renewing our transport network	This package provides a focus on future funding, targeted decarbonisation solutions and asset energy generation potential, and technological advances, alongside an enhancement of maintenance measures. The schemes also seek to support the move to more sustainable, cleaner fuels which will ultimately reduce harmful emissions and particulates from vehicle usage. This will support air quality. Enhanced maintenance regimes also have the potential to limit noise pollution from the road network. Positive impacts on air and noise quality from these measures are therefore anticipated to support health and wellbeing.	• None proposed.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). Cumulatively this can support increased accessibility within and beyond the region for residents. This has the potential to support health and wellbeing.	• None proposed.

Key significant effects resulting from the NETP packages: Human Health

4.28 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Human Health ISA theme.

Table 4.16: Likely significant effects, Human Health

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved accessibility to health services and leisure and recreational facilities.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Facilitation of healthier lifestyles through the encouragement of active modes of travel.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Support for a reduction in deprivation, which is one of the key contributors to poor health and wellbeing in the region.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Enhancements to the quality of the neighbourhoods through a reduction of the impact of traffic and congestion.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Improvements to road safety.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Benefits for health and wellbeing from air and noise quality enhancements at key ‘pinchpoints’ on the network.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Impacts on health and wellbeing from road schemes linked to increased traffic flows, including from the stimulation of induced demand over a wider area.	Direct and indirect, medium and long term, permanent and negative.	Incorporate measures within scheme design to improve mobility by walking and cycling, limit severance and initiate green infrastructure enhancements.

Equalities

Appraisal of work programmes

4.29 The following table presents an appraisal of the seven work programmes against the Equalities ISA theme.

Table 4.17: Appraisal of work programmes: Equalities

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The short, medium and long-term schemes proposed to address this work programme are largely focused on user experience of more sustainable modes of travel, such as active travel and bus travel. The measures introduced under this programme include; introducing 'School Streets' and low-traffic neighbourhoods and specifically targeting the young with behaviour change initiatives. Further schemes delivering cross-modal ticketing and enhanced passenger travel technology (including improved mapping services), traffic management schemes and technology test-bed initiatives are likely to increase accessibility and improve journey planning. Schemes under this work programme include targeted plans integrating initiatives between the NHS, Public Health Directors and Transport North East (TNE31) which seek to encourage health benefits. These measures are likely to particularly benefit groups with 'protected characteristics' who tend to be disproportionately affected by accessibility issues. For those lacking their own transport, including the young, the elderly, and those with mobility issues, access to services and facilities is a significant challenge. These groups are often the least able to afford high costs of public transport and research shows that, on average, people on lower incomes in rural areas pay a higher proportion of their income on travel costs.	• None proposed.
2: Upgrading North East Active Travel Infrastructure	Groups with 'protected characteristics' tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, road safety issues and the effects of traffic and congestion on health and wellbeing. These groups are also disproportionately affected by accessibility issues. The interventions proposed under this work programme range in type but can be broadly grouped as measures to improve and extend active travel routes, and road infrastructure improvements which seek to reduce the dominance of road traffic. These interventions are therefore likely to have particular benefits for groups with protected characteristics.	• Encourage design which supports the needs of mobility-impaired groups.
3: Bus, ferry and first and last mile	The work package provides significant support for the enhancement and upgrading of the existing infrastructure network to reduce congestion in the network, improve journey times and support multi-modal travel. The work package includes the development of new bus stations, new park and ride facilities, and rapid transit corridors. This is likely to benefit groups with 'protected characteristics' who tend to be disproportionately affected by accessibility issues. For those lacking their own transport, including the young, the elderly, and those with mobility issues, access to services and facilities is a significant challenge. These groups are often the least able to afford high costs of public transport and research shows that, on average, people on lower incomes in rural areas pay a higher proportion of their income on travel costs.	• Maximise opportunities to increase sustainable transport access for more vulnerable groups such as the elderly and disabled.

4: Local rail and Metro	The work package focuses on existing rail infrastructure (including reinstatement of disused lines), with a number of significant proposals, including a new station at East Gateshead, the extension of the Northumberland Line, reinstatement of the Derwent Valley Line from Consett to Newcastle, and new metro stations. Significant car park expansions at rail connection areas in South Tyneside are also proposed. For those lacking their own transport, including the young, the elderly, and those with mobility issues, access to services and facilities is a significant challenge. These groups are often the least able to afford high costs of public transport and research shows that, on average, people on lower incomes in rural areas pay a higher proportion of their income on travel costs. These measures are therefore likely to benefit groups with 'protected characteristics' who tend to be disproportionately affected by accessibility issues.	• None proposed.
5: Road infrastructure	This package provides a focus on road infrastructure upgrades. In the short-term there is a predominant focus on expanding the EV network and supporting planned growth with enabling infrastructure. In the medium to longer term focus shifts to reducing severance with the delivery of new bridges, enabling next generation connectivity, and local bypass schemes. Enhancements to the quality of the built environment facilitated by road schemes This is likely to support groups with 'protected characteristics' who tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, and the effects of traffic and congestion on health and wellbeing. However, a potential stimulation of traffic growth over a larger area due to induced demand has the potential to have wider negative effects on the needs of groups with protected characteristics through impacts on the quality of the public realm, severance issues and a contribution to air and noise pollution.	• Maximise opportunities to increase road safety, particularly for more vulnerable groups such as the elderly and disabled.
6: Maintaining and renewing our transport network	Groups with 'protected characteristics' tend to be disproportionately affected by the negative effects of transport infrastructure, including from the physical and severance effects of transport corridors, effects on the quality of the public realm, road safety issues and the effects of traffic and congestion on health and wellbeing. As such, enhanced maintenance of the transport network facilitated by the package has the potential to help improve the usability of the transport network and reduce some of the negative effects of the network on those with protected characteristics.	• Maximise opportunities to increase road safety, particularly for more vulnerable groups such as the elderly and disabled.
7: National and international connectivity	This work package focuses on strategic road, rail and airport connection enhancement opportunities to better manage future growth in the region and accelerate existing business cases for strategic interventions. This includes future rail connectivity with High Speed 2 and Northern Powerhouse Rail, as well as a package of measures to address highway pinchpoints (including the A1 Western Bypass, A19 and Sunderland Strategic Transport Corridors and Blyth Relief Road). Cumulatively this can support increased accessibility within and beyond the region for residents. This has the potential to support the accessibility needs of groups with protected characteristics.	• None proposed.

Key significant effects resulting from the NETP packages: Equalities

4.30 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Equalities ISA theme.

Table 4.18: Likely significant effects, Equalities

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Improved accessibility for groups with protected characteristics via a range of transport modes.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Reduction of impacts from the transport network on those groups with protected characteristics, including from severance, and contributions to a poor quality public realm.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Improvements to road safety.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Impacts on groups with protected characteristics from effects of road schemes on the quality of the public realm and increased severance.	Direct and indirect, medium and long term, permanent and negative.	Incorporate measures within scheme design to improve mobility, limit severance and initiate green infrastructure enhancements.

Rurality

Appraisal of work programmes

4.31 The following table presents an appraisal of the seven work programmes against the Rurality ISA theme.

Table 4.19: Appraisal of work programmes: Rurality

Work Programme	Appraisal findings	Mitigation and / or enhancement opportunities
1: Helping people to make the right travel choice	The measures will offer a more flexible approach to public transport provision and increase the accessibility and ease of use of the public transport network in rural areas. This includes through enhancing linkages between transport modes (including car and public transport), the provision of enhanced information for users, simplification of ticketing and soft measures such as travel plans. More effective management of the highways network and the provision of enhanced information for users will also support those travelling by private car, which will continue to comprise a key transport mode for those living in rural areas. The encouragement of car clubs will enable access to mobility opportunities that would not otherwise be accessible and have the potential to reduce individuals' expenditure on transport use through reducing the need for the private car. Car clubs also provide opportunities to increase the use of public transport use through the greater flexibility enabled by making a car available as an option rather than a first choice. These elements therefore have the potential to bring a range of benefits for the quality of life of residents and support social inclusion, which is a key issue in rural areas. Intelligent transport networks also will support accessibility through implementing systems which balance the needs of public transport users and pedestrians / cyclists with the needs of private car users.	• None proposed.

2: Upgrading North East Active Travel Infrastructure	Enhancements to the rural cycle network promoted by the work package will promote accessibility to services, facilities and amenities by cycle, with benefits for the quality of life of rural residents. Improvements in cycle infrastructure also has the potential to support the visitor economy in rural areas. Enhancements of urban walking and cycle networks will increase travel choice for those living in rural areas who travel into the towns and cities of the region, and will support accessibility through promoting the ease of multi-modal transport use. Enhancements to the active travel network through enhanced information provision, active travel programmes, behavioural change initiatives and cycle parking improvements will also support the use of active travel modes for those living in rural areas, with benefits for health and wellbeing and accessibility.	• None proposed.
3: Bus, ferry and first and last mile	The package of measures will support rural accessibility by enhancing the quality of rural bus networks and links to urban areas from rural areas. This includes through the implementation of bus infrastructure enhancements, priority schemes, performance enhancement measures and behaviour change programmes. Establishing a strategy for effective park and ride sites and enhancements to existing and new multi-modal park and ride schemes will also support accessibility for those with access to private transport in rural areas. This recognises that car use will remain the predominant and necessary choice for many in rural areas.	• None proposed.
4: Local rail and Metro	The package of measures will support rural accessibility through enhancing rail and Metro networks and the quality of services in the region. This includes through enhancing accessibility from rural areas to the services, facilities, amenities and employment/economic opportunities available in the urban areas of the North East. Recognising that such stations are key nodes for those travelling from rural areas into the urban areas of the North East, and to destinations further afield, enhancements to multi modal interchanges and car parking at railway and metro stations also have the potential to have significant positive effects on accessibility for those living in rural areas.	• None proposed.
5: Road infrastructure	The package will initiate a range of road network enhancements. Recognising that car use will remain the predominant and necessary choice for many in rural areas, this will support accessibility for those living in rural areas, including to the amenities and opportunities available in the region's market towns and urban areas. The schemes also have in some cases the potential to support accessibility by non-car modes. In this respect a number of the road schemes seek to reduce severance for non-car users and enhance public transport connectivity. The measures may also in some cases support enhancements to the quality of the public realm through supporting a reduction in localised congestion in some rural locations. The package also has the potential to support economic vitality in rural areas through enhancing connections to key services, facilities and employment opportunities and supporting the visitor economy.	• None proposed.

6: Maintaining and renewing our transport network	The package seeks to repair and strengthen key roads underpinning the rural and regional economy. This will help support access to key tourism destinations in the rural part of the North East, including Hadrian's Wall World Heritage site and Northumberland National Park (including the International Dark Skies Park), with benefits for the visitor economy. It also seeks to limit the impacts from transport of timber extraction and quarrying. This recognises the impact of such activities on the landscape character and quality of the public realm in some rural areas, with associated impacts on the rurality and tranquillity of these areas. More broadly, enhanced maintenance of the road network in rural areas will support the resilience of transport links in rural areas and help overcome some of the barriers to accessibility associated with a poorly maintained network.	• None proposed.
7: National and international connectivity	Enhanced strategic-level investment in the transport network will support accessibility for those living in rural areas to key urban centres in the region and further afield. The package also has the potential to support economic vitality in rural areas through enhancing connections to key services, facilities and employment opportunities and supporting the visitor economy.	• None proposed.

Key significant effects resulting from the NETP packages: Rurality

4.32 The following table sets out the key significant effects resulting from the in-combination effects of NETP packages in relation to the Rurality ISA theme.

Table 4.20: Likely significant effects, Rurality

Likely significant effect	*Effect dimensions*	*Recommendations, mitigation*
Enhanced accessibility to the services, facilities and amenities located in the urban areas of the North East from rural areas by all modes of transport.	Direct and indirect, medium and long term, permanent and positive.	None proposed.
Improvements to rural areas' vitality through enhanced connections to key services, facilities and economic and employment opportunities.	Indirect, medium and long term, permanent and positive.	None proposed.
Support for the visitor economy from enhancements in transport infrastructure.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.
Enhanced maintenance of the road network in rural areas, supporting its resilience.	Direct, medium and long term, permanent and positive.	None proposed.
Limitation of the impacts of transport movements associated with timber and quarrying on rural areas.	Direct and indirect, short, medium and long term, permanent and positive.	None proposed.

Cumulative effects with other plans and programmes

4.33 Cumulative effects occur from the combined impacts of policies and proposals on specific areas or sensitive receptors.

4.34 In the context of ISA, cumulative effects can arise as a result of the in-combination and synergistic effects of a plan's policies and proposals. Comprising 'intra-plan' effects, these interactions have been discussed above in the evaluation of the in-combination and synergistic[23] effects of the various work programmes of the NETP.

4.35 Cumulative effects can also result from the combined impacts of a plan with impacts of another plan, or the 'inter-plan' effects. These can affect the same receptor, resulting in in-combination or synergistic effects. The NETP therefore has the potential to combine with other planned or on-going activities in the vicinity of the North East to result in cumulative effects.

4.36 For example, the in-combination effects of NETP proposals with the development proposed through the adopted or emerging Local Plans for the Local Planning Authorities in the North East have the potential to lead to cumulative effects. This includes relating to housing and employment growth proposed through the adopted or emerging Local Plan documents for:

- Newcastle upon Tyne;
- Gateshead;
- Sunderland;
- North Tyneside;
- South Tyneside;
- County Durham;
- Northumberland; and
- Northumberland National Park.

Furthermore, the combination of NETP proposals and other proposals and activities being taken forward within and outside the North East region has the potential to lead to cumulative effects. Examples include:

- Proposals taken forward through the provisions of the North East Strategic Economic Plan
- Minerals proposals
- Proposals to increase visitor numbers to Northumberland National Park, the World Heritage Sites and AONBs in the North East
- Investment in the East Coast Mainline
- Development of the Northern Powerhouse Rail network
- Progression of HS2
- Upgrades to the strategic road network, including the A1, A1(M) and A19
- Proposed expansion of Newcastle Airport to facilitate growth from 5.4 million passengers in 2017 to to 9.4 million in 2035
- Port capacity expansion
- Activities designed to enhance sub-regional green infrastructure networks

[23] Synergistic effects arise between two or more factors to produces an effect greater than the sum of their individual effects.

In this context, potential effects (both positive and negative) which may occur as a result of the in-combination effects of the NETP and other plans and proposals include the following:

- Increases in traffic flows and congestion from the in-combination effects of development and transport capacity enhancements, with potential impacts on air and noise quality, landscape and townscape character and the setting of the historic environment. However, the in-combination effects of proposals on enhancing public transport and pedestrian and cycle infrastructure may help limit potential negative effects and secure positive effects in this regard.
- Cumulative impacts on ecological networks. This is from the in-combination effects of new development and associated infrastructure on habitats and biodiversity corridors. However, enhancements to green infrastructure provision facilitated through plan proposals and other projects in the area, as well as an increased focus on biodiversity net gain also have significant potential to support local, sub-regional and regional ecological networks.
- Cumulative and synergistic impacts on greenhouse gas emissions from growth areas and the NETP proposals which support them.
- Impacts from a release of induced demand for transport from the in-combination effects of the NETP and Nationally Significant Infrastructure Projects.
- Impacts on flood risk from the in-combination effects of new development, including relating to surface water and fluvial flooding.
- Enhancements to regional green infrastructure networks.
- Improvements in accessibility resulting from the in-combination effects of enhancements to public transport and walking and cycling networks and public realm enhancements.

For many potential cumulative effects, the policy approaches proposed by the various plans and programmes will help reduce the significance of these in-combination impacts. However, monitoring for the plans and programmes will be a key means of ensuring that unforeseen adverse environmental and socio-economic effects are highlighted, and remedial action can be taken where adverse effects arise.

5. What are the next steps?

Introduction

5.1 This section of the ISA Report explains next steps that will be taken as part of the plan-making / ISA process.

Plan finalisation

5.2 This ISA Report has been published to accompany the draft NETP and released alongside the plan for consultation. Following the consultation period, comments will be reviewed and analysed and the HRA will be undertaken and consulted on with Natural England. The final NETP will then be developed, with a view to adoption in 2021. Any changes arising to the NETP will need to be assessed as part of the ISA process.

5.3 SEA Regulations 16.3c)(iii) and 16.4 require that a 'statement' be made available to accompany the plan, as soon as possible after the adoption of the plan or programme. The purpose of the ISA Statement is to outline how the ISA process has influenced and informed the NETP development process and demonstrate how consultation on the ISA has been taken into account.

5.4 As the regulations outline, the statement should contain the following information:

- The reasons for choosing the preferred measures for the NETP as adopted in the light of other reasonable alternatives dealt with;
- How environmental considerations have been integrated into the NETP;
- How consultation responses have been taken into account; and
- Measures that are to be taken to monitor the significant environmental effects of the NETP.

5.5 To meet these requirements, an ISA Adoption Statement will be published with the adopted version of the North East Transport Plan.

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Appendix A Policy and plan review and baseline information

Policy context

Biodiversity policy context

Key messages from the National Planning Policy Framework (NPPF) in relation to biodiversity include:

- One of the three overarching objectives of the NPPF is an environmental objective to *'contribute to protecting and enhancing our natural, built and historic environment' including by 'helping to improve biodiversity.'*
- *'Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value[…], take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scape across local authority boundaries.'*
- *'Planning policies and decisions should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with the statutory status or identified quality in the development plan); and minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks that are more resilient to current and future pressures.'*
- *'To protect and enhance biodiversity and geodiversity, plans should:*

  a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

  b) Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity'.

The Natural Environment White Paper (NEWP)[24] sets out the importance of a healthy, functioning natural environment to sustained economic growth, prospering communities and personal well-being. It was in part a response to the UK's failure to halt and reverse the decline in biodiversity by 2010 and it signalled a move away from the traditional approach of protecting biodiversity in nature reserves to adopting a landscape approach to protecting and enhancing biodiversity. The NEWP also aims to create a green economy in which economic growth and the health of our natural resources sustain each other and markets, business and Government better reflect the value of nature. It includes commitments to:

- Halt biodiversity loss, support functioning ecosystems and establish coherent ecological networks by 2020;
- Establish a new voluntary approach to biodiversity offsetting to be tested in pilot areas;
- Enable partnerships of local authorities, local communities and landowners, the private sector and conservation organisations to establish new Nature Improvement Areas; and
- Address barriers to using green infrastructure to promote sustainable growth.

Reflecting the commitments within the Natural Environment White Paper and the EU Biodiversity Strategy, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' aims to *'halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people'*[25].

[24] DEFRA (2012) The Natural Choice: securing the value of nature (Natural Environment White Paper) [online] available at: <http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf> [accessed 21/02/20]
[25] DEFRA (2011): 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services', [online] Available to download from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services> [accessed 21/02/20]

The recently published 25 Year Environment Plan[26] sets out the Government's environmental plan of action over the next quarter century, in the context of Brexit. The Plan aims to tackle the growing problems of waste and soil degradation, improving social justice through tackling pollution and promoting the mental and physical health benefits of the natural world. It also sets out how the Government will address the effects of climate change. These aims are supported by a range of policies which are focused on the following six key areas:

- Using and managing land sustainably;
- Recovering nature and enhancing the beauty of landscapes;
- Connecting people with the environment to improve health and wellbeing;
- Increasing resource efficiency, and reducing pollution and waste;
- Securing clean, productive and biologically diverse seas and oceans; and
- Protecting and improving the global environment.

In this context, Goal 3 'Thriving plants and wildlife' and the policies contained within Chapter 2 'Recovering nature and enhancing the beauty of landscapes' and Chapter 5 'Securing clean, productive and biologically diverse seas and oceans' directly relate to the Biodiversity theme.

Published in June 2015, the Highways England (HE) Biodiversity Plan[27] identifies the approach which HE is taking to meet the challenge of a national decline in biodiversity. The Plan contains five specific outcomes, with a series of related actions. These outcomes aim to provide the most support for biodiversity across the HE networks, and include:

- Outcome 1: HE and our suppliers are equipped to produce good biodiversity performance;
- Outcome 2: The Strategic Road Network is managed to support biodiversity;
- Outcome 3: We have delivered biodiversity enhancements whilst implementing a capital programme of network improvements;
- Outcome 4: We have addressed the legacy of biodiversity problems on out network via a targeted programme of investment; and
- Outcome 5: We are fully transparent about our biodiversity performance (achieved via the production of annual progress reports).

The 2020 Biodiversity Strategy

The 2020 Biodiversity Strategy was published by Defra in 2011. It is a national strategy for England's wildlife and ecosystem services; and builds on the Natural Environment White Paper to provide a comprehensive picture of how international and EU commitments are being implemented. It was published in summer 2011. It sets out the strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea. A series of goals have been set as part of this strategy:

- better wildlife habitats – quality goals for priority habitat and Sites of Special Scientific Interest (SSSIs);
- more, bigger and less fragmented areas for wildlife – an increase in priority habitats by at least 200,000ha;
- the restoration of 15% of degraded ecosystems – as a contribution to climate change mitigation and adaptation establishing a Marine Protected Area network managing and harvesting fish sustainably;
- marine plans in place by 2022;

[26] HM GOV (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf [accessed 21/02/20]
[27] Highways England (2015): 'Biodiversity Plan', [online] available to access via: <https://www.gov.uk/government/publications/biodiversity-plan> last accessed [21/02/20]

- an overall improvement in status of our wildlife and prevention of further human induced extinctions of known threatened species; and
- significantly more people engaged in biodiversity issues, aware of its value and taking positive action.

Water and soil resources policy context

The EU's Soil Thematic Strategy[28] presents a strategy for protecting soil resources in Europe. The main aim of the strategy is to minimise soil degradation and limit associated detrimental effects linked to water quality and quantity, human health, climate change, biodiversity, and food safety.

The Water Framework Directive (WFD) drives a catchment-based approach to water management. In England and Wales there are 100 water catchments and it is Defra's intention to establish a 'framework for integrated catchment management' across England. The Environment Agency is establishing 'Significant Water Management Issues' and recently presented second River Basin Management Plans to ministers. The plans seek to deliver the objectives of the WFD namely:

- Enhance the status and prevent the further deterioration of aquatic ecosystems and associated wetlands which depend on aquatic ecosystems;
- Promote the sustainable use of water;
- Reduce the pollution of water, especially by 'priority' and 'priority hazardous' substances; and
- Ensure the progressive reduction of groundwater pollution.

Key messages from the NPPF include:

- '*Planning policies and decisions should contribute to and enhance the natural and local environment by:*
  - *i. protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils; and*
  - *ii. recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.'*
- Prevent new or existing development from being *'adversely affected'* by the presence of *'unacceptable levels'* of soil pollution or land instability and be willing to remediate and mitigate *'despoiled, degraded, derelict, contaminated and unstable land, where appropriate'.*
- *'Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land.'*
- *'Encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains.'*
- Planning policies and decisions should *'give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs'*, and *'promote and support the development of under-utilised land and buildings.'*
- Taking a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for water supply.
- Prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of water pollution.
- The government has produced a separate plan that specifically deals with planning policy in relation to waste management; this should be read in conjunction with the NPPF.

[28] European Commission (2006) Soil Thematic Policy [online] available at: <http://ec.europa.eu/environment/soil/index_en.htm> [accessed 27/02/20]

Along with the policies contained within Chapter 1 'Using and managing land sustainably' and Chapter 4 'Increasing resource efficiency, and reducing pollution and waste', Goal 2 'Clean and plentiful water', Goal 5 'Using resources from nature more sustainably and efficiently' and Goal 8 'Minimising waste' of the Government's 'A Green Future: Our 25 Year Plan to Improve the Environment' directly relates to the water and soil resources theme.

Other key documents at the national level include Safeguarding our Soils: A Strategy for England[29], which sets out a vision for soil use in England, and the Water White Paper[30], which sets out the Government's vision for a more resilient water sector. It states the measures that will be taken to tackle issues such as poorly performing ecosystems, and the combined impacts of climate change and population growth on stressed water resources. In terms of waste management, the Government Review of Waste Policy in England[31] recognises that environmental benefits and economic growth can be the result of a more sustainable approach to the use of materials.

Historic environment policy context

The three key European legislative conventions are the UNESCO World Heritage Convention (1972), The Convention for the Protection of the Architectural Heritage of Europe (1985), and The European Convention on the Protection of Archaeological Heritage (1992).

The Planning (Listed Buildings and Conservation Areas) Act 1990 and Ancient Monuments and Archaeological Areas Act 1979 together form the two primary pieces of legislation concerning the historic environment within the UK.

The Heritage Statement (2017)[32] replaces the 2010 Statement on the Historic Environment for England and sets out the Government's vision for supporting the heritage sector to help it to protect and care for heritage and the historic environment in the coming years, in order to maximise the economic and social impact of heritage and to ensure that everyone can enjoy and benefit from it.

Key messages from the National Planning Policy Framework (NPPF) include:

- Strategic policies should set out an overall strategy making provision for *'conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure.'*
- Planning policies and decisions should ensure that developments *'are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation of change (such as increased densities).'*
- Heritage assets should be recognised as an '*irreplaceable resource'* that should be conserved in a *'manner appropriate to their significance'*, taking account of '*the wider social, cultural, economic and environmental benefits'* of conservation, whilst also recognising the positive contribution new development can make to local character and distinctiveness.
- Plans should set out a 'positive strategy' for the *'conservation and enjoyment of the historic environment'*, including those heritage assets that are most at risk.
- *'When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.'*

The policies contained within Chapter 2 'Recovering nature and enhancing the beauty of landscapes' and Goal 6 'Enhanced beauty, heritage and engagement with the natural environment' of the

[29] Defra (2009) Safeguarding our Soils: A strategy for England [online] available at: <https://www.gov.uk/government/publications/safeguarding-our-soils-a-strategy-for-england> [accessed 21/02/20]
[30] Defra (2011) Water for life (The Water White Paper) [online] available at <http://www.official-documents.gov.uk/document/cm82/8230/8230.pdf> [accessed 21/02/20]
[31] Defra (2011) Government Review of Waste Policy in England [online] available at: <http://www.defra.gov.uk/publications/files/pb13540-waste-policy-review110614.pdf> [accessed 21/02/20]
[32] Department for Digital, Culture, Media and Sport (2017) Heritage Statement [online], available at: https://www.gov.uk/government/publications/the-heritage-statement-2017

Government's ''A Green Future: Our 25 Year Plan to Improve the Environment' directly relates to the Landscape and Historic Environment SEA theme.

Historic England is the statutory body that helps people care for, enjoy and celebrate England's spectacular historic environment. Guidance and advice notes provide essential information for local planning authorities, neighbourhood groups, developers, consultants, landowners and other interested parties on historic environment considerations, and are regularly reviewed and updated in light of legislative changes. The following guidance and advice notes are particularly relevant and should be read in conjunction with the others.

Conservation Area Designation, Appraisal and Management: Historic England Advice Note 1 (February 2019)[33] outlines ways to manage change that conserves and enhances historic areas in order to positively contribute to sustainable development. Principally, the advice note emphasises the importance of:

- Understanding the different types of special architectural and historic interest which underpin the designations; and
- Recognising the value of implementing controls through the appraisal and/or management plan which positively contribute to the significance and value of conservation areas.

Sustainability Appraisal (SA) and Strategic Environment Assessment (SEA): Historic England Advice Note 8 (December 2016)[34] provides support to all stakeholders involved in assessing the effects of certain plans and programmes on the historic environment. It offers advice on heritage considerations during each stage of the SA/SEA process and helps to establish the basis for robust and comprehensive assessments.

Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2nd Edition) (December 2017)[35] provides general advice on understanding setting, and how it may contribute to the significance of heritage assets and allow that significance to be appreciated, as well as advice on how views can contribute to setting. Specifically, Part 2 of the advice note outlines a five stepped approach to conducting a broad assessment of setting:

- Step 1: Identify which heritage assets and their settings are affected;
- Step 2: Asses the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated;
- Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it;
- Step 4: Explore ways to maximise enhancement and avoid or minimise harm; and
- Step 5: Make and document the decision and monitor outcomes.

In terms of the two World Heritage Sites in the North East, the Management Plans for Durham Castle and Cathedral 2017-2023 and Hadrian's Wall Management Plan 2015-2019 are the key documents which set out the approach to the management of these sites.

Landscape policy context

The European Landscape Convention of the Council of Europe, known as the Florence Convention promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. The European Landscape Convention introduced a Europe-wide concept centring on the quality of landscape protection, management and planning and covering the entire territory, not just outstanding landscapes.

Key messages from the National Planning Policy Framework (NPPF) (2019) include:

[33] Historic England (2019): 'Conservation Area Designation, Appraisal and Management: Advice Note 1', [online] available at: < https://historicengland.org.uk/images-books/publications/conservation-area-appraisal-designation-management-advice-note-1/heag-268-conservation-area-appraisal-designation-management/> [accessed 21/02/20]
[34] Historic England (2016): 'SA and SEA: Advice Note 8' [online] available at: <https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/> [accessed 21/02/20]
[35] Historic England (2017): 'Setting of Heritage Assets: 2nd Edition', [online] available to download via: <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/> [accessed 21/02/20]

- Give great weight to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited.
- Strategic policies should set out an overall strategy making provision for 'conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure.
- Planning policies and decisions should ensure that developments 'are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation of change (such as increased densities).
- Planning policies and decisions should contribute to and enhance the natural and local environment by:
    - protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
    - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
    - remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues.

The Government's 25 Year Environment Plan (2018) sets out a strategy for managing and enhancing the natural environment. Chapter 2 is dedicated to recovering nature and enhancing the beauty of landscapes, with the main focus on reviewing the National Park's and Areas of Outstanding Natural Beauty (AONBs) in order to better conserve and enhance landscapes. Along with the policies contained within Chapter 2, Goal 6 'Enhanced beauty, heritage and engagement with the natural environment' directly relates to the Landscape SA theme.

Northumberland National Park Authority has a duty to prepare a National Park Management Plan as the framework for the delivery of the National Park statutory purposes and duty. The Management Plan sets out the guiding principles, vision, objectives and actions for managing the National Park.

The Northumberland National Park Management Plan 2016-2021 was adopted in 2016, and is currently being updated. The key aims of the Management Plan are as follows:

- Aim 1: A Welcoming Park To put people and their connections with the landscape at the heart of the National Park.
- Aim 2: A Distinctive Place To manage, conserve and enhance the distinctive natural and cultural qualities of the National Park.
- Aim 3: A Living, Working Landscape for Now and the Future To adapt to change by applying new approaches, together with traditional techniques.
- Aim 4: Thriving Communities To ensure the thriving and vibrant communities have a strong sense of place and an economy grounded in the natural and cultural qualities of the National Park.
- Aim 5: A Valued Asset To ensure the National Park is valued as a local, regional and national asset, with influence beyond its boundaries that is worth looking after now and for generations to come.

Each AONB management unit is required to prepare and keep updated a Management Plan for the respective AONB.

The North Pennines AONB Management Plan 2019-2024[36] sets out the following '2030 Vision':

- There is wide recognition of the breadth of services and benefits provided for society through conserving our biodiversity, landscape and natural processes, and our cultural heritage.
- There is greater connectivity of priority habitats and it is enhanced by improvements in condition and ecological function. Work to restore our moors to fully functioning wetland ecosystems is complete and they are richer in wildlife.
- Declines in biodiversity have slowed, or have halted and are reversing.
- Local action for climate change adaptation and mitigation (eg. through peatland restoration) means the area is playing its full part in national efforts.
- Management of land allows opportunities for more natural processes to develop, over larger areas, including greater native woodland cover.
- Coniferous woodlands from the 20th century have been restructured and make a more positive contribution to the landscape and biodiversity; new well-designed and appropriately located mixed woodlands provide income for land managers.
- Action on pollution from abandoned metal mines has lead to an increase in water quality.
- High Nature Value farming prospers and farmers are well-rewarded for the public goods they produce, including more species-rich hay meadows, wading birds, pollinators and public access. The area has been at the forefront of shaping new Environmental Land Management Schemes which have sustained nature and farming.
- There are closer partnerships between conservation bodies and land managers of all kinds, focused on delivering more for nature together.
- The tourism industry is both environmentally responsible and economically sustainable, with a wealth of nature and culture-related things to see and do.
- A greater diversity of people are easily, safely and confidently exploring the area on foot, on horseback and by bike.
- The North Pennines is a much-used outdoor classroom, which inspires young and old.
- The area's historic environment is increasingly better understood, conserved and celebrated.
- Communities are increasingly proud of their natural and cultural heritage and are active in conserving and celebrating it.
- Development takes place to a high standard, meeting community need and contributing to the area's quality and character.
- The North Pennines AONB and UNESCO Global Geopark is increasingly recognised at a national level as an exemplar of what Protected Landscapes can do for conservation, local communities and local economies.

The Northumberland Coast AONB Management is currently being updated.[37] The 'Vision for 2040' set out by the consultation version of the Management Plan is as follows:

"*A sense of remoteness and wildness is maintained, with wide open coastal and sea views, a naturally functioning coastline rich in wildlife, and a clear distinction between settlements and open countryside. The AONB is a living, working area with a celebrated history and culture, and a vibrant present in which social and economic wellbeing is successfully integrated with the conservation and enhancement of the special qualities of the area*."

The aims of the Northumberland Coast Management Plan are as follows:

[36] North Pennines AONB (2019) North Pennines AONB Management Plan 2019-24 https://www.northpennines.org.uk/wp-content/uploads/2019/06/MPlan-220719-webres.pdf
[37] Northumberland Coast Area of Outstanding Natural Beauty Draft Management Plan 2020-2024 http://www.northumberlandcoastaonb.org/public-consultation-opens-on-plan-for-the-northumberland-coast/b295

- Aim 1: To ensure that the natural beauty and special qualities of the AONB are conserved and enhanced.
- Aim 2: To ensure that the communities in and around the AONB are thriving places to live and work.
- Aim 3: The designation of 'Area of Outstanding Natural Beauty' and the special qualities of the Area are understood and valued for their contribution to life in the wider region and are seen as being worthy of protection.
- Aim 4: The AONB provides a high quality, clean environment that is welcoming and accessible to all.

Air quality and noise policy context

The Clean Air Strategy released in 2019 sets out the Government plans for dealing with all sources of air pollution. The strategy sets out proposals in detail and indicates how devolved administrations intend to make their share of emissions reductions, and complements the Industrial Strategy, Clean Growth Strategy and 25 Year Environment Plan.

Key messages from the National Planning Policy Framework (NPPF) include:

- *'Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.'*
- *'Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.'*
- *New and existing developments should be prevented from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of air pollution.*

Published in January 2018 by the UK Government, 'A Green Future: Our 25 Year Plan to Improve the Environment'[38] sets out a number of goals and policies in order to help the natural world regain and retain good health. In this context, Goal 1 'Clean Air' and the policies contained within 'Chapter 4: Increasing resource efficiency and reducing pollution and waste' within the 25 year plan directly relate to the air quality ISA theme.

Local Authorities are required under Section 82 of the Environment Act (1995) to monitor air quality across the district, report regularly to DEFRA, and take action where nationally set levels are likely to be exceeded. Monitoring is undertaken to assess levels of nitrogen dioxide (NO_2), sulphur dioxide (SO_2), ozone (O_3), benzene (C_6H_6) and particulates (PM_{10}). Where exceedances exist, areas are declared as Air Quality Management Areas (AQMAs) and local authorities are required to produce an Air Quality Action Plan (AQAP) to improve air quality in the area.

A series of air quality directions made by the Government have required local authorities with concentrations of NO_2 forecast to exceed legal limits to consider whether establishment of clean air zones / low emission zones would deliver a way to meet air quality targets in the shortest possible time. These were delivered under the Environment Act 1995 in order to meet the obligations placed upon the UK under the EU Ambient Air Quality Directive 2017.

[38] HM GOV (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf [accessed 21/02/20]

Gateshead Council, Newcastle City Council and North Tyneside Council were provided with a legal direction in 2017, which was revised in mid-2019.[39] This was a legal order requiring the three local authorities to produce a feasibility study to identify measures to deliver compliance with legal limits for nitrogen dioxide in the Authorities' administrative areas, with a view to this being the first stage in identifying, exploring, analysing and developing options for measures which the Councils would implement to deliver compliance in the shortest possible time. Subsequent to this direction, a series of options were developed, evaluated and consulted on. Final proposals were then consulted on in October 2019. This resulted in the intention to introduce a charging Clean Air Zone covering Newcastle city centre affecting non-compliant buses, coaches, taxis (both Hackney Carriages and private hire vehicles), heavy goods vehicles and vans, to be enforced from 2021.

Climate change and flood risk policy context

In May 2019, the UK Parliament declared a climate emergency, with a view to explicitly acknowledging that human activities are significantly affecting the climate, and actions to mitigate and adapt to climate change should be paramount. This declaration has been mirrored by the authorities covering the North East, as follows:

- Newcastle City Council: Declared a climate emergency in April 2019, with the aim of making the city carbon neutral by 2030.
- North Tyneside Council: Declared a climate emergency in June 2019, with the aim of reducing the council's carbon footprint by 50% by 2027.
- Northumberland County Council: Declared a climate emergency in June 2019, with the aim of becoming carbon neutral by 2030
- Durham County Council: Declared a climate emergency in February 2019. Seeks to reduce emissions from Durham County Council's operations by 80% from 2008/09 levels by 2030 and is investigating what further actions are necessary to make County Durham carbon neutral by 2050.
- Gateshead Council: Declared a climate emergency in May 2019, with the aim of becoming carbon neutral by 2030.
- South Tyneside Council: Declared a climate emergency in July 2019, with the aim of becoming carbon neutral by 2030.
- Sunderland City Council: Declared a climate emergency in March 2019, with the aim of becoming carbon neutral by 2030.

The UK Climate Change Act[40] was passed in 2008 and established a framework to develop an economically credible emissions reduction path. It also highlighted the role it would take in contributing to collective action to tackle climate change under the Kyoto Protocol, and more recently as part of the UN-led Paris Agreement.

The Climate Change Act includes the following:

- Commits the UK government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. This includes reducing emissions from the devolved administrations (Scotland, Wales and Northern Ireland), which currently account for about 20% of the UK's emissions. The 100% target was based on advice from the CCC's 2019 report, '*Net Zero – The UK's contribution to stopping global warming'* and introduced into law through the Climate Change Act 2008 (2050 Target Amendment) Order 2019.
- The Act requires the Government to set legally binding 'carbon budgets'. A carbon budget is a cap on the amount of greenhouse gases emitted in the UK over a five-year period. The carbon budgets are designed to reflect the cost-effective path to achieving the UK's long-term objectives. The first five carbon budgets have been put into legislation and run up to 2032.

[39] Environment Act 1995 (Gateshead Council, Newcastle City Council and North Tyneside Council) Air Quality Direction 2019 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817394/air-quality-direction-tyneside.pdf

[40] GOV.UK (2008): 'Climate Change Act 2008', [online] available at: <http://www.legislation.gov.uk/ukpga/2008/27/contents> [accessed 21/02/20]

- The Committee on Climate Change was set up to advise the Government on emissions targets, and report to Parliament on progress made in reducing greenhouse gas emissions.
- The Act requires the Government to assess the risks and opportunities from climate change for the UK, and to prepare for them. The Committee on Climate Change's Adaptation Sub-Committee advises on these climate change risks and assesses progress towards tackling them. The associated National Adaptation Programme requires the Government to assess the risks to the UK from climate change, prepare a strategy to address them, and encourage key organisations to do the same.

The UK Climate Change Risk Assessment is published on a 5-yearly cycle in accordance with the requirements of the Climate Change Act 2008. It required the Government to compile an assessment of the risks for the UK arising from climate change, and then to develop an adaptation programme to address those risks and deliver resilience to climate change on the ground. For both the 2012 and the 2017 UK Climate Change Risk Assessment, the Adaptation Sub-Committee commissioned an evidence report aiming to understand the current and future climate risks and opportunities. The evidence report contains six priority risk areas requiring additional action in the next five years, see below[41] :

- Flooding and coastal change risks to communities, businesses and infrastructure;
- Risks to health, well-being and productivity from high temperatures;
- Risk of shortages in the public water supply, and for agriculture, energy generation and industry;
- Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity;
- Risks to domestic and international food production and trade; and
- New and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals.

The Committee of Climate Change published a 2012 report entitled 'How Local Authorities Can Reduce Emissions and Manage Climate Change Risk'[42] which emphasises the crucial role councils have in helping the UK meet its carbon targets and preparing for the impacts of climate change. It outlines specific opportunities for reducing emissions and highlights good practice examples from Local Authorities.

The Clean Air Strategy[43] released in 2019 sets out the Government plans for dealing with all sources of air pollution. The strategy sets out proposals in detail and indicates how devolved administrations intend to make their share of emissions reductions, and complements the Industrial Strategy, Clean Growth Strategy and 25 Year Environment Plan.

Key messages from the National Planning Policy Framework (NPPF) include:

- One of the three overarching objectives of the NPPF is an environmental objective to '*contribute to protecting and enhancing our natural, built and historic environment' including by 'mitigating and adapting to climate change' and 'moving to a low carbon economy.' 'The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.'*
- *'Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and*

[41] GOV UK: 'UK Climate Change Risk Assessment Report January 2017', [online] available at: <https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2017> [accessed 21/02/20]
[42] CCC (2012) 'How local authorities can reduce emissions and manage climate risks' [online] available at: https://www.theccc.org.uk/publication/how-local-authorities-can-reduce-emissions-and-manage-climate-risks/
[43]

infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.'

- *'Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning.'*
- *Direct development away from areas at highest risk of flooding (whether existing or future). 'Where development is necessary, it should be made safe for its lifetime without increasing flood risk elsewhere.'*

The Flood and Water Management Act[44] highlights that alternatives to traditional engineering approaches to flood risk management include:

- Incorporating greater resilience measures into the design of new buildings, and retro-fitting properties at risk (including historic buildings);
- Utilising the environment in order to reduce flooding, for example through the management of land to reduce runoff and through harnessing the ability of wetlands to store water;
- Identifying areas suitable for inundation and water storage to reduce the risk of flooding elsewhere;
- Planning to roll back development in coastal areas to avoid damage from flooding or coastal erosion; and
- Creating sustainable drainage systems (SuDS).[45]

Population policy context

Key messages from the NPPF include:

- One of the three overarching objectives of the NPPF is 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 wellbeing.'*
- To support the Government's objective of significantly boosting the supply of housing, strategic policies *'should be informed by a local housing need assessment, conducted using the standard method in national planning guidance. In addition to the local housing need figure, any needs that cannot be met within neighbouring areas should also be taken into account in establishing the amount of housing to be planned for.'*
- The size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies. Where a need for affordable housing is identified, planning policies should specify the type of affordable housing required, and expect it to be met on-site where possible.
- Recognise the important contribution of small and medium sized development sites in meeting housing needs. Local Plans should identify land to accommodate at least 10% of their housing requirement on sites no larger than one hectare, and neighbourhood planning groups should also consider the opportunities for allocating small and medium-sized sites.
- In rural areas, planning policies and decisions should be responsive to local circumstances and plan housing development to reflect local needs, particularly for affordable housing, including through rural exception sites where appropriate. Authorities should consider whether allowing some market housing would facilitate the provision of affordable housing to meet local needs.

[44] Flood and Water Management Act (2010) [online] available at: <http://www.legislation.gov.uk/ukpga/2010/29/contents> [accessed 21/02/20]
[45] N.B. The provision of Schedule 3 to the Flood and Water Management Act 2010 came into force on the 1st of October 2012 and makes it mandatory for any development in England or Wales to incorporate SuDs.

- Promote the retention and development of local services and community facilities such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship.
- Ensure that developments create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion. Places should contain clear and legible pedestrian routes, and high-quality public spaces, which encourage the active and continual use of public areas.
- Ensuring that there is a *'sufficient choice of school places'* and taking *a 'proactive, positive and collaborative approach'* to bringing forward *'development that will widen choice in education'.*

The 'Ready for Ageing?' report, published by the Select Committee on Public Service and Demographic Change[46] warns that society is underprepared for an ageing population. The report states that *'longer lives can be a great benefit, but there has been a collective failure to address the implications and without urgent action this great boon could turn into a series of miserable crises'*. The report recognises that the supply of specialist housing for the older generation is insufficient for the demand. There is a need for central and local Government, housing associations, and house builders to ensure that these housing needs are better addressed, giving as much priority to promoting an adequate market of social housing for the older generation as is given to the younger generation.

Human health policy context

Key messages from the NPPF include:

- One of the three overarching objectives of the NPPF is 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 wellbeing.'*
- *'Planning policies and decisions should aim to achieve healthy, inclusive and safe places which enable and support healthy lifestyles, especially where this would address identified local health and wellbeing needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.'*
- Policies and decisions should take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community.
- Access to a network of high-quality open spaces and opportunities for sport and physical activity is important for the health and wellbeing of communities. Development should avoid building on existing open space, sports and recreational buildings and land, including playing fields.
- Promote the retention and development of local services and community facilities such as local shops, meeting places, sports venues, cultural buildings, public houses and places of worship.

In relation to other key national messages in relation to health, Fair Society, Healthy Lives[47] ('The Marmot Review') investigated health inequalities in England and the actions needed in order to tackle them. Subsequently, a supplementary report was prepared providing additional evidence relating to spatial planning and health on the basis that that there is: "overwhelming evidence that health and environmental inequalities are inexorably linked and that poor environments contribute significantly to poor health and health inequalities".

[46] Select Committee on Public Service and Demographic Change (2013) Ready for Ageing? [online] available at: <http://www.parliament.uk/business/committees/committees-a-z/lords-select/public-services-committee/report-ready-for-ageing/> [accessed 21/02/20]

[47] The Marmot Review (2011) The Marmot Review: Implications for Spatial Planning [online] available to download from: < https://www.nice.org.uk/media/default/About/what-we-do/NICE-guidance/NICE-guidelines/Public-health-guidelines/Additional-publications/Spatial-planning/the-marmot-review-implications-for-spatial-planning.pdf > [accessed 21/02/20]

The increasing role that local level authorities are expected to play in providing health outcomes is demonstrated by recent government legislation. The Health and Social Care Act 2012 transferred responsibility for public health from the NHS to local government, giving local authorities a duty to improve the health of the people who live in their areas. This will require a more holistic approach to health across all local government functions.

Baseline

Biodiversity: Summary of Current Baseline

European designated sites

Special Areas of Conservation

Special Areas of Conservation (SACs) are protected sites designated under the EC Habitats Directive (Council Directive 92/43/EEC). Article 3 of the Habitats Directive requires the establishment of a European network of conservation sites to conserve the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). These listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Of the Annex I habitat types, 78 are believed to occur in the UK. Of the Annex II species, 43 are native to, and normally resident in, the UK.

There are 18 SACs within or partly within the North East; these are illustrated in **Figure 4.1.**

These SACs are predominantly located on the western boundaries of Northumberland and County Durham within the Pennines and Cheviot HIlls. However, there are also a number located on the North Sea coastlines of County Durham and Northumberland.

Information on the qualifying features of the SACs located within the North East is outlined below.

Border Mires, Kielder Butterburn

Border Mires, Kielder – Butterburn is made up of several individual sites running north-east from Carlisle. Collectively, these sites contain a wide range of bog-moss Sphagnum species, for example 11 on Caudbeck alone, along with an almost equally large number of Carex species. The transition mire element of these sites is relatively small, but is an important component of one of the least-damaged and more valuable species-rich mire complexes in England.

Berwickshire and North Northumberland Coast

This is an extensive and diverse stretch of coastline in north-east England and south-east Scotland. There is variation in the distribution of features of interest along the coast. Stretches of the coast in England support a very extensive range of intertidal mudflats and sandflats; large shallow inlets and bays; reefs; and submerged or partially submerged sea caves.

Castle Eden Dene

Castle Eden Dene in north-east England represents the most extensive northerly native occurrence of yew Taxus baccata woods in the UK. Extensive yew groves are found in association with ash-elm Fraxinus-Ulmus woodland and it is the only site selected for yew woodland on magnesian limestone in north-east England.

Durham Coast

The Durham Coast is the only example of vegetated sea cliffs on magnesian limestone exposures in the UK. These cliffs extend along the North Sea coast for over 20 km from South Shields southwards to Blackhall Rocks. Their vegetation is unique in the British Isles and consists of a complex mosaic of Para maritime, mesotrophic and calcicolous grasslands, tall-herb fen, seepage flushes and wind-pruned scrub.

Ford Moss

Ford Moss is a largely intact 46 ha bog in undulating topography in the rain-shadow of the Cheviot Hills. Although partially drained, the re-wetted surface contains many waterlogged areas with species typical of peat-formation. Thus, although there are drier purple moor-grass Molinia caerulea-dominated parts, it is considered to be predominantly active raised bog. There is a 12 m depth of peat within the confining basin. The vegetation includes species of raised bog as well as poor-fen, which is also indicated in places by the presence of white sedge Carex curta where water runs into the bog from the surrounding slopes.

Harbottle Moors

At a little under 400 m altitude, Harbottle Moors is a relatively low-lying example of upland European dry heath. Situated on Carboniferous rocks, the heathland community is dominated by heather Calluna vulgaris with some crowberry Empetrum nigrum, bilberry Vaccinium myrtillus and bracken Pteridium aquilinum. Some areas are relatively species-rich, with up to six different dwarf shrub species being found. This may suggest a fairly un-intensive management history with regard to grazing and burning.

Moor House Upper Teesdales

This large site in northern England consists of an upland complex on limestone and gritstone, with enclosed hay meadows and pastures as well as large tracts of mountain and moorland, with varied and extensive mires and flushes, acid and calcareous grasslands, and dwarf shrub heaths. Other valued habitats present include an upland water body, cliffs and screes of varying chemistry and the largest stands of juniper in England.

Newham Fen

Newham is a lowland short sedge fen in north-east England, a part of the UK in which alkaline fens are rare. The site is an example of basin fen, developed from the hydroseral succession of a small lake. The main fen community is black bog-rush – blunt-flowered rush (Schoenus nigricans – Juncus subnodulosus) mire and bottle sedge Carex rostrata –Calliergon cuspidatum/giganteum (moss) mire, and there are transitions to tall-herb fen grassland and woodland. A number of rare species occur at this site, including coralroot orchid Corallorhiza trifida and round-leaved wintergreen Pyrola rotundifolia.

North Northumberland Dunes

This site consists of a number of dune systems on the north-east coast of England. The embryonic shifting dune vegetation is both extensive and varied, with examples of all themain embryonic dune types. Lyme-grass Leymus arenarius communities are particularly strongly represented, but sand couch Elytrigia juncea communities and strandline species are also present. Most of the dune systems are accreting and forming suitable conditions for the development of shifting dunes with marram. Climbing dunes can occur on steep rocky coasts, as found at Bamburgh.

North Pennine Dales Meadows

This site contains a series of isolated fields within several north Pennine and Cumbria valleys, and encompasses the range of variation exhibited by mountain hay meadows in the UK. The grasslands included within the site exhibit very limited effects of agricultural improvement and show good conservation of structure and function. A wide range of rare and local meadow species are contained within the meadows, including globeflower Trollius europaeus, the lady's-mantles Alchemilla acutiloba, A. monticola and A. subcrenata, and spignel Meum athamanticum.

North Pennine Moors

The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of 7130 blanket bogs. The North Pennine Moors includes one major stand of juniper scrub in Swaledale as well as a number of small and isolated localities.

Roman Wall Loughs

Roman Wall Loughs comprises three natural eutrophic (nutrient-rich) lakes; Crag, Broomleeand Greenlee Loughs. Together the loughs contain 11 species of pondweed Potamogeton including P. lucens, P. pusillus, and P. obtusifolius. P. gramineus occurs in all three loughs in an unusual association with stone worts Chara spp. The nationally-rare autumnal water starwort Callitriche hermaphroditica occurs in Crag Lough. Shore weed Littorella uniflora grows in Broomlee and Greenlee Loughs, and greater bladderwort Utricularia vulgaris in the latter.

River Tweed

The River Tweed drains a large catchment on the east coast of the UK, with sub-catchments in both Scotland and England. It shows a strong nutrient gradient along its length, with oligotrophic (nutrient-poor) conditions in its headwaters, and nutrient-rich lowland conditions just before it enters the sea at Berwick. The river has a high ecological diversity which reflects the mixed geology of the catchment. Stream water-crowfoot Ranunculus penicillatus ssp. pseudofluitans, a species of southern rivers and streams, here occurs at its most northerly location as does fan-leaved water-crowfoot R. circinatus, along with river water-crowfoot R. fluitans, common water-crowfoot R. aquatilis, pond water-crowfoot R. peltatus and a range of hybrids.

River Eden

The River Eden flows through the Eden District of Cumbria. It consists of tidal rivers, estuaries, mud flats, sand flats, lagoons, inland water bodies, bogs, marshes, water fringed vegetation, fens and broad-leaved deciduous woodlad. It supports a number of Annex I habitats including oligotrophic to mesotrophic standing waters, water courses of plain to montane levels and alluvial forests with Alnus glutinosa and Fraxinus excelsior. Annex II species include austropotamobius pallipes, petromyzon marinus, lampetra planeri, lampetra fluviatilis, salmo salar, cottus gobio and lutra.

Simonside Hills

This site comprises part of the Simonside Hills, a sandstone-ridge in central Northumberland. It is particularly important for the extent of heather Calluna vulgaris moorland which grades into blanket mire on wetter ground. A large proportion of the dry heather moorland is managed by rotational burning for grouse and this has produced a characteristic pattern of even-aged stands of heather with few accompanying species.

Thrislington

Thrislington contains one of the most important stands of primary Magnesian Limestone grassland in Britain. Although a comparatively small site it nonetheless contains the largest of the few surviving examples of these blue-moor-grass – small scabious (Sesleria caerulea – Scabiosa columbaria) grasslands. A variety of grassland communities occur over this substrate, most notable, and completely restricted to the Durham Magnesian Limestone, are those characterised by blue moor-grass and small scabious Scabiosa columbaria.

Tweed Estuary

The Tweed Estuary is a complex estuary, which discharges into the North Sea. It is a long narrow estuary, which is still largely natural and undisturbed, with excellent water quality throughout. At its mouth there are substantial sandbanks and some areas of rocky shore. Further upstream, large areas of estuarine boulders and cobbles overlie sediment flats and extend into subtidal areas of the channel. Sheltered estuarine mud and sandflats occur away from the fast-flowing river channel. A wide range of intertidal sediments occurs within the estuary. These range from exposed east-facing sandy shores at the estuary mouth, including its sheltering sand-spit, to muddy gravels where the river is actively eroding the banks. The most exposed sandy shores are subject both to wave action and, in places, the scouring action of the out-flowing river; their mobile infauna (mainly crustaceans such as Eurydice pulchra and Bathyporeia spp. and a few polychaetes) and ephemeral algae reflect these conditions. Species and habitat diversity rises with increasing shelter, until increasingly low-salinity estuarine conditions upstream lead to naturally low infaunal diversity, dominated by characteristic species that are tolerant of brackish-water conditions.

Tyne and Allen River Gravel

This site in north-east England encompasses the most extensive, structurally varied and species-rich examples of riverine Calaminarian grasslands in the UK. The river gravels contain a range of structural types, ranging from a highly toxic, sparsely vegetated area with abundant lichens through to closed willow/alder Salix/Alnus woodland. In addition, the site is of considerable functional interest for the series of fossilised river channel features. Spring sandwort Minuartia verna and thrift Armeria maritima are particularly abundant, and there are several rare species, including Young's helleborine Epipactis youngiana, which has its main UK population at this site.

Special Protection Areas

Special Protection Areas (SPAs) are internationally protected sites classified in accordance with Council Directive 2009/147/EEC. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

There are eight SPAs within or partially within the North East, which are also illustrated on **Figure 4.1**. These are predominantly located in the south west corner of Northumberland and the west side of County Durham. There are also two SPAs located on the north east coast of Northumberland.

Coquet Island

Coquet Island is located 1 km off the coast of Northumberland. This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance. During the breeding season, the area regularly supports 33,448 individual seabirds including: Black-headed Gull Larus ridibundus, Puffin Fratercula arctica, Arctic Tern Sterna paradisaea, Common Tern Sterna hirundo, Roseate Tern Sterna dougallii, Sandwich Tern Sterna sandvicensis.

Farne Islands

The Farne Islands are a group of low-lying islands between 2-6 km off the coast of Northumberland. The islands are important as nesting areas for birds, especially terns, gulls and auks which are of European importance. The seabirds feed outside the SPA in the nearby waters, as well as more distantly in the North Sea. During the breeding season, the area regularly supports 142,490 individual seabirds including: Kittiwake Rissa tridactyla, Shag Phalacrocorax aristotelis, Cormorant Phalacrocorax carbo, Puffin Fratercula arctica, Guillemot Uria aalge, Arctic Tern Sterna paradisaea, Common Tern Sterna hirundo, Roseate Tern Sterna dougallii, Sandwich Tern Sterna sandvicensis.

Holburn Lake and Moss

The SPA of Holburn Lake and Moss is located about 5 km inland from the coast of Northumberland in north-east England. The site comprises part of a lowland raised mire and parts of the adjacent slopes that form its catchment area. The south-western outflow to the mire was dammed in 1934 to create Holburn Lake

Lindisfarne

Lindisfarne is situated off the Northumberland coast near Berwick-upon-Tweed. As well as the island of Lindisfarne (Holy Island), the site includes extensive mud-flats south of Holy Island and at Budle Bay. The area comprises a range of coastal habitats, including rocky shore, sand dunes, saltmarsh and intertidal sand- and mud-flats he area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl, including: Pink-footed Goose Anser brachyrhynchus, Golden Plover Pluvialis apricaria, Bar-tailed Godwit Limosa lapponica, Greylag Goose Anser, Light-bellied Brent Goose Branta bernicla hrota, Wigeon Anas penelope, Whooper Swan Cygnus, Knot Calidris canutus, Redshank Tringa totanus, Shelduck Tadorna, Eider Somateria mollissima, Common Scoter Melanitta nigra, Ringed Plover Charadrius hiaticula, Lapwing Vanellus, Dunlin Calidris alpina, Grey Plover Pluvialis squatarola.

Northumbria Coast

The Northumbria Coast SPA includes much of the coastline between the Tweed and Tees Estuaries in north-east England. The site consists of mainly discrete sections of rocky shore with associated boulder and cobble beaches. The SPA also includes parts of three artificial pier structures and a small

section of sandy beach. In summer, the site supports important numbers of breeding Little Tern Sterna albifrons, whilst in winter the mixture of rocky and sandy shore supports large number of Turnstone Arenaria interpres and Purple Sandpiper Calidris maritima.

North Pennine Moors

The North Pennine Moors SPA is situated in Cumbria, County Durham, Northumberland and North Yorkshire and includes parts of the moorland massif between the Tyne Gap (Hexham) and the Ribble-Aire corridor (Skipton). It encompasses extensive tracts of semi-natural moorland habitats. The site is of European importance for several upland breeding species, including birds of prey and waders. The southern end of the SPA is within 10 km of the South Pennine Moors SPA which supports a similar assemblage of upland breeding species. North Pennine Moors subsumes Moor House SPA, a site subject to separate classification.

Teesmouth & Cleveland Coast

The Teesmouth and Cleveland Coast SPA is a wetland of European importance, comprising intertidal sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes. Large numbers of waterbirds feed and roost on the site in winter and during passage periods; in summer Little Terns breed on the sandy beaches within the site. The existing Teesmouth and Cleveland Coast SPA was classified on 15 August 1995. However, an extension to that area has been recommended to enlarge the area within the Tees Estuary and along part of the foreshore to the north because of the site's European ornithological interest.

Northumberland Marine

Northumberland Marine SPA is located on the Northumberland coast between Blyth and BerwickUpon-Tweed. The coastal parts of the site consist of sandy bays separated by rocky headlands backed by dunes or soft and hard cliffs. There are extensive areas of inter-tidal rocky reef, long sandy beaches at Beadnell, Embleton and Druridge Bay and extensive sand and mud flats at Budle Bay and Fenham Flats at Lindisfarne. Discrete areas of intertidal mudflats and estuarine channels are also included where the site extends into the Aln, Coquet, Wansbeck and Blyth estuaries. The open coast habitats extend into the subtidal zone, where large shallow inlets and bays and extensive rocky reefs are present. Further offshore, soft sediments predominate.

Ramsar sites

The Convention on Wetlands of International Importance (the Ramsar Convention) is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. The convention was adopted in 1971 and came into force in 1975. In the UK, the initial emphasis was on selecting sites of importance to waterbirds, and consequently, many Ramsar Sites were also designated as Special Protection Areas (SPA) under the European Birds Directive (79/409/EEC). There are four Ramsar sites within or partially within the North East which are outlined in **Figure 4.1**.

Sites of Special Scientific Interest

Sites of special scientific interest (SSSIs) are protected by national legislation to conserve their wildlife or geology. 98.47% of sites in the North East are at favourable or unfavourable recovering status. The percentage of sites within each county that make up the North East, at each status is set out in the table below. Tyne and Wear has the highest percentage of sites (7.14%) in unfavourable declining status, however it also has the highest percentage of sites in favourable condition.

Table: Percentage of SSSIs within the North East within each status designation

	% of favourable or unfavourable recovering	Favourable	Unfavourable recovering	Unfavourable no change	Unfavourable declining	Destroyed
North East	98.47%	22.98%	75.98%	0.90%	0.62%	0.01%
County Durham	97.96%	12.81%	85.15%	0.99%	1.03%	0.03%
Northumberland	98.98%	30.97%	68.01%	0.79%	0.24%	0.00%
Tyne and Wear	92.28%	72.08%	20.20%	0.58%	7.14%	0.00%

National Nature Reserves

National Nature Reserves (NNRs) were established to protect some of the most important habitats, species and geology, and to provide 'outdoor laboratories' for research. The majority of NNRs offer opportunities to schools, specialist interest groups and the public to experience wildlife and to learn about nature conservation. There are 15 NNRs within the North East, concentrated in County Durham and Northumberland. These are illustrated in **Figure 4.1.**

Local Nature Reserves

Local Nature Reserves (LNRs) are places with wildlife or geological features that are of special interest locally. They offer people opportunities to study and experience nature. There are 84 LNRs within the North East.

Habitats and species

UK Biodiversity Action Plan (UKBAP) priority habitats cover a wide range of semi-natural habitat types, and were those that were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). UKBAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in July 2012. The UK list of priority habitats, however, remains an important reference source and has been used to help draw up statutory lists of priority habitats in England, as required under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

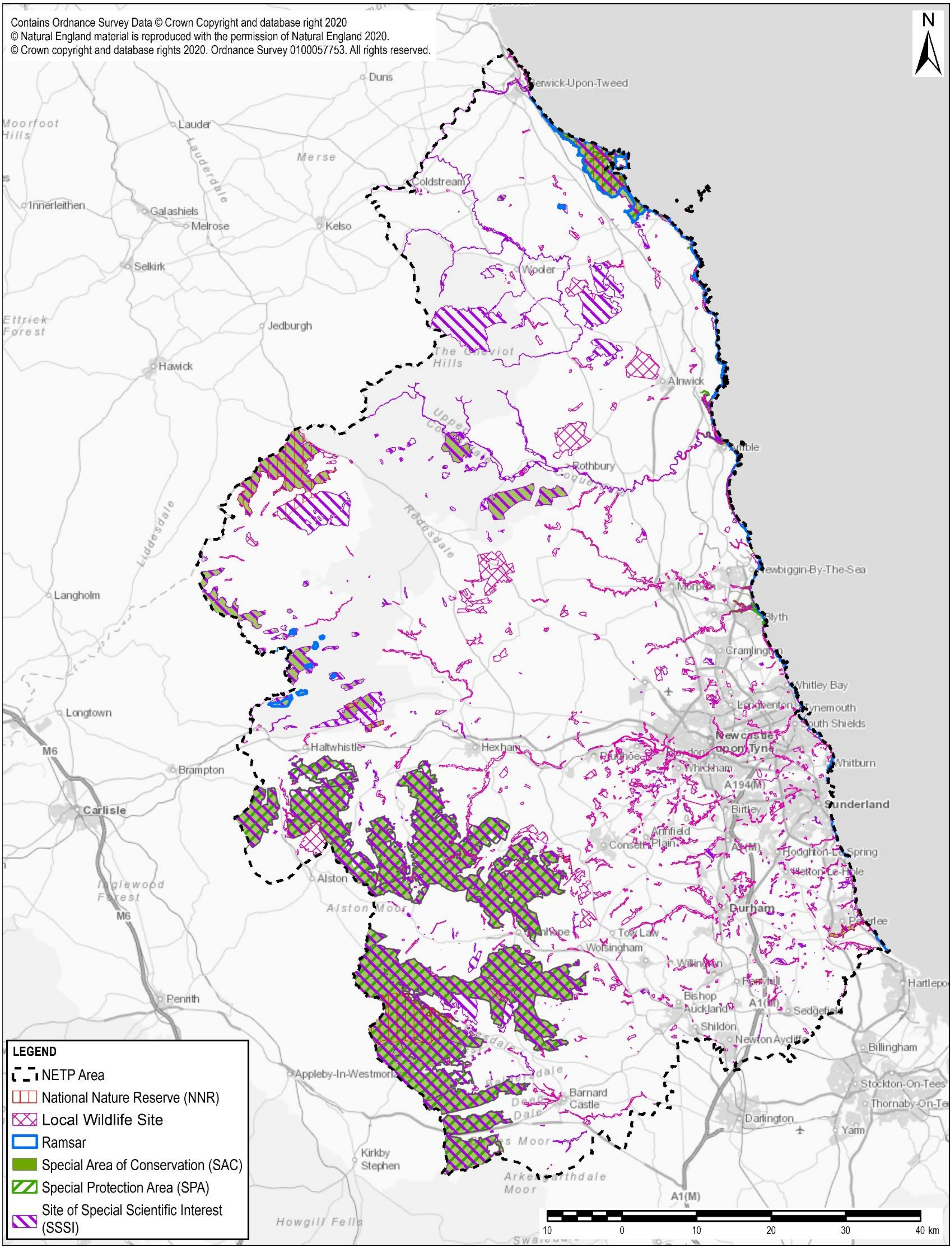
Local Biodiversity Action Plans (LBAPs) identify local priorities for biodiversity conservation and work to deliver agreed actions and targets for specific habitats and species. LBAPs are delivered through wide local partnerships that involve wildlife organisations, local authorities, businesses and other interested parties. The location of the BAP Priority Habitats in the North East are illustrated in **Figure 4.2**.

Ancient woodland

In England, ancient woodlands are defined as areas which have been continuously wooded since at least 1600 AD; and which display a high content of native species, typically of semi-natural or planted origin.[48] Ancient woodlands hold both very high biodiversity and cultural/historical value.

Ancient woodland is located throughout some of the North East as isolated stands. These are found in County Durham, Northumberland; and Gateshead.

[48] Natural England/Forestry Commission (2014) [online] available at: https://www.gov.uk/ancient-woodland-and-veteran-trees-protection-surveys-licences [accessed 27/02/20]



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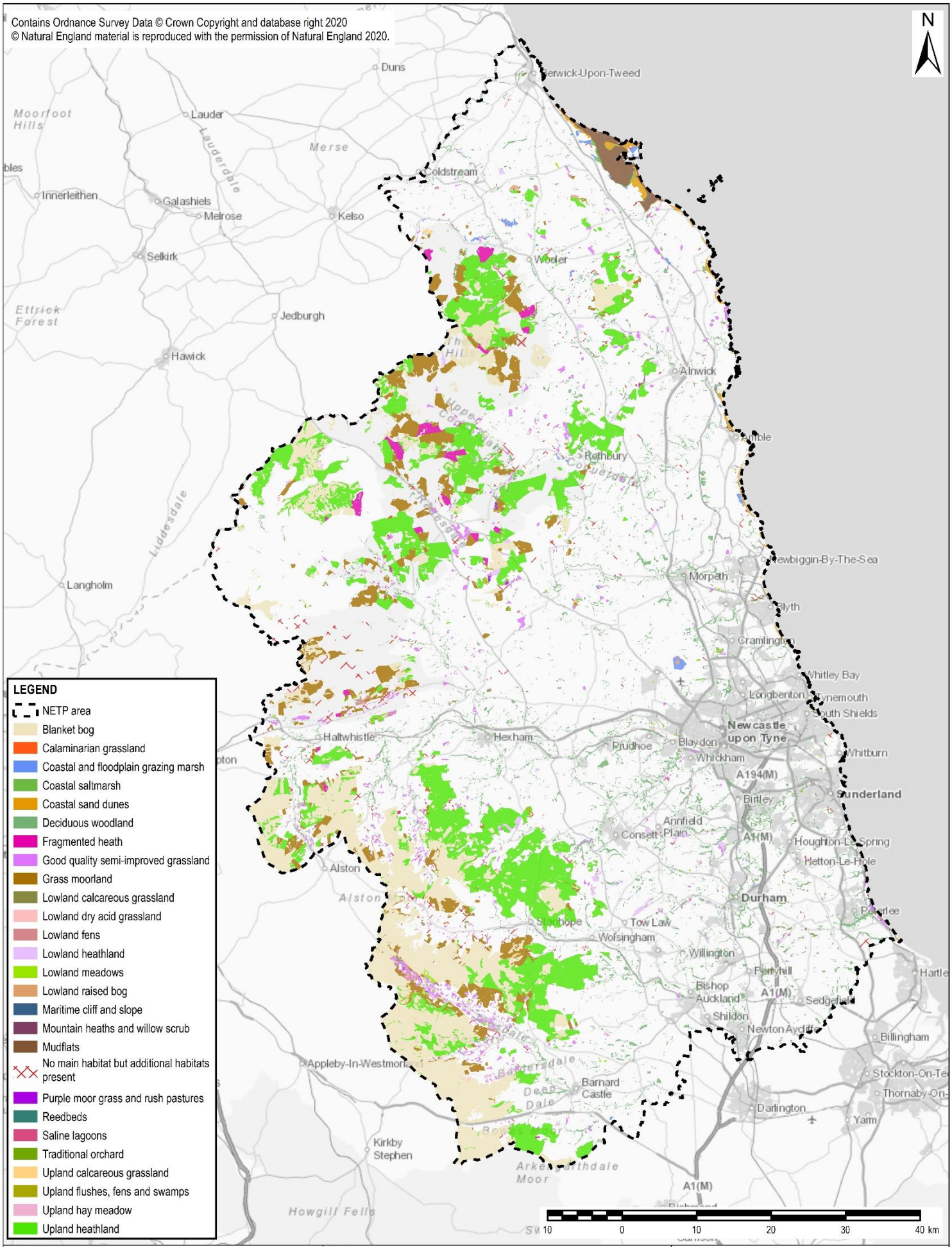

LEGEND

- NETP area
- Blanket bog
- Calaminarian grassland
- Coastal and floodplain grazing marsh
- Coastal saltmarsh
- Coastal sand dunes
- Deciduous woodland
- Fragmented heath
- Good quality semi-improved grassland
- Grass moorland
- Lowland calcareous grassland
- Lowland dry acid grassland
- Lowland fens
- Lowland heathland
- Lowland meadows
- Lowland raised bog
- Maritime cliff and slope
- Mountain heaths and willow scrub
- Mudflats
- No main habitat but additional habitats present
- Purple moor grass and rush pastures
- Reedbeds
- Saline lagoons
- Traditional orchard
- Upland calcareous grassland
- Upland flushes, fens and swamps
- Upland hay meadow
- Upland heathland

Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

BIODIVERSITY ACTION PLAN
PRIORITY HABITATS

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Biodiversity: Summary of Future Baseline

Habitats and species will potentially face increasing pressures from future housing, employment and infrastructure delivery within the North East, with the potential for negative impacts on the wider ecological network. This may include a loss of habitats and impacts on biodiversity networks. The potential impacts on biodiversity from climate change are likely to include changes in habitat, changes in species distribution, changes in hydrology, changes in ecosystem functioning and a range of others.

Internationally and nationally designated sites are particularly sensitive to air quality issues and recreational pressures. In regards to air quality, exceeding critical values for air pollutants may result in changes to the chemical status of habitat substrate, accelerating or damaging plant growth, altering vegetation structure and composition and thereby affecting the quality and availability of nesting, feeding or roosting habitats. Additionally, the nature, scale, timing and duration of some human activities can result in the disturbance of birds (i.e. – the notifying features of the European protected sites within the North East) at a level that may substantially affect their behaviour, and consequently affect the long-term viability of their populations.

The NETP presents an opportunity to maximise benefits for biodiversity by including consideration of important habitats, species, undesignated sites, and connections between designated sites and undesignated sites at a localised scale, and at an early stage of planning for future enhancements to transport infrastructure.

Water and Soil Resources: Summary of Current Baseline

Surface and Groundwater

The North East falls within the Northumbria River Basin District (RBD) which covers an area of 9,029km^2.

The RBD is divided into four catchments: Northumberland, Tyne, Wear and Tees. The Tees is the longest river in the RBD, and the Tyne has the largest catchment area. Other major rivers include the Wear, Aln and Coquet rivers. The RBD has 170km of coastline (much of which is designated as SAC, SPA and Ramsar). 25km^2 of estuaries and 34 designated bathing waters, as well as many important marine species and habitats. The Northumberland, Tyne and Wear catchments all fall within the North East.

Northumberland

The Northumberland catchment extends southwards from Berwick-upon-Tweed down to the Blyth Valley, with the Cheviot Hills to the west and the North Sea to the east. It includes Holy Island and the Farne Islands, both internationally recognised for their native wildlife.

The Northumberland Rivers catchment contains two groundwater bodies. Of these, The Devonian and Lower Carboniferous groundwater body has been classified as being at good chemical and quantitative status. The Carboniferous Limestone and Coal Measures groundwater body has been classified as being at poor chemical status (due to impact on surface waters from discharges from abandoned mine workings) and good quantitative status.

There are 95 river water bodies and seven lakes in the catchment. 22 are artificial or heavily modified. 42% of rivers currently achieve good or better ecological status/potential. 41% of rivers assessed for biology are at good or better biological status, with 30% at poor biological status, and 3% at bad status.

Physical modifications are a key issue for the ecological value of the catchment, especially in relation to land drainage, flood protection, urbanisation and water storage and supply.

Tyne

The rivers North and South Tyne rise in the rural Cheviot and North Pennine hills respectively, and converge at Warden. From Warden the Tyne flows through Hexham and Corbridge and on towards the large Tyneside conurbation. The Northern Tyne area is mostly covered by the Northumberland

National Park. The catchment includes areas of recognised national importance for nature conservation such as upland bogs and river shingle sites.

Many of the rivers have a high conservation and ecological value, supporting salmon, sea and brown trout, as well as coarse fish. The Tyne is one of the best salmon rivers in England and populations of otters and pearl mussels are also recorded in the catchment.

The Tyne catchment contains two groundwater bodies. The Tyne Carboniferous Limestone groundwater body and the Tyne Carboniferous Limestone and Coal Measures groundwater body have both been classified as being at poor chemical but good quantitative status. The failure to meet good status is predominantly due to historic mining, both coal and metal. Kielder Water, to the northwest of the area, is one of Northern Europe's largest man-made lakes and supports major water abstractions.

There are 116 river water bodies and 19 lakes in the catchment. 49 are artificial or heavily modified. 50% of rivers (456 km or 45% of river length) currently achieve good or better ecological status/potential. 51% of rivers assessed for biology are at good or better biological status now, with 12% at poor biological status, and there are no rivers assessed for biology at bad status.

Physical modifications are a key issue in relation to the passage of fish, urbanisation and water storage and supply. Disused mines are also a key pressure within the Tyne catchment.

Wear

This catchment covers the River Wear, which runs from the Pennines in the east then flows west to the estuary through Sunderland, and also includes southern coastal streams. The fish populations of the River Wear and its tributaries are generally of a high quality, with a good distribution of salmon and trout, and coarse fish in the lower and middle reaches.

The Wear catchment contains two groundwater bodies. The Wear Magnesian Limestone groundwater body has been classified as being at poor chemical and quantitative status. The Wear Carboniferous limestone and Coal Measures groundwater body has been classified as being at poor chemical but good quantitative status. Pressures are having an impact on the quality of the principal aquifer in this catchment, namely the Magnesian Limestone. This aquifer is the sole supply of potable water for Hartlepool and it fails the specific test due to rising trends in sulphate.

There are 68 river water bodies and 16 lakes in the catchment. 32 are artificial or heavily modified. 15% of rivers (60 km or 10% of river length) currently achieve good or better ecological status/potential. 22% of rivers assessed for biology are at good or better biological status now, with 35% at poor biological status, and 10% at bad status.

Point source releases from sewage works and combined sewage outfalls are key reasons for failures in the Wear catchment. Physical modifications that impede fish passage and water storage and abstraction also play a key role in determining the status of rivers and lakes in this catchment.

Pressures on water resources

Urban transport and pollution pressures have been identified as a specific pressure in the Northumbria River Basin District. There are 34 river water bodies at risk or probably at risk from urban diffuse pollution. Pollution issues related to the urban environment and transport networks include:

- A range of pollutants which are present in run-off from roads including contaminated sediment, metals, and organic substances;
- Air emissions from vehicles which are then deposited to water or land (and in some cases can cause acidification);
- Pesticides used to control weeds on roads, pavements, railway tracks and other amenity areas such as parks and playing fields;
- Run-off from air strips that may contain de-icers and pesticides to control weeds; and
- Dredging and maintenance of navigable waterways that can result in water quality issues from suspended solids and leaching of contaminants from the sediment.

Soil

Agricultural land

The Agricultural Land Classification (ALC) classifies land into size grades (plus 'non-agricultural land' and 'urban'), where Grades 1 to 3a are recognised as being the 'best and most versatile' land and Grades 3b to 5 of poorer quality. In this context, there is a need to avoid loss of higher quality 'best and most versatile' agricultural land.

A detailed classification has not been undertaken for the majority of the North East. As such, there is a need to rely on the national 'Provisional Agricultural Land Quality' dataset. The Provisional Agricultural Land Quality dataset shows that the majority of the western side of the North East is designated as Grade 5 land and non-agricultural land. The eastern side of Northumberland is predominantly covered by Grade 3, with pockets Grade 2 land located along the Scottish border, the east coast, and in the south. There are also small areas of land designated as urban. County Durham is predominantly covered by Grade 3 land with smaller pockets of Grade 2 land, and urban areas. The remaining councils within the Plan are covered predominantly by land classified as urban, but also with areas of Grade 3 outside of the major conurbations. Without the subset grading (3a or 3b) it is not possible to tell at this stage whether the Grade 3 agricultural land is considered to be 'best and most versatile'. It is also important to note that the national dataset is of very low resolution, and may not necessarily provide an accurate reflection of the agricultural land quality within the North East. Agricultural land classification in the North East is illustrated on **Figure 5.1**.

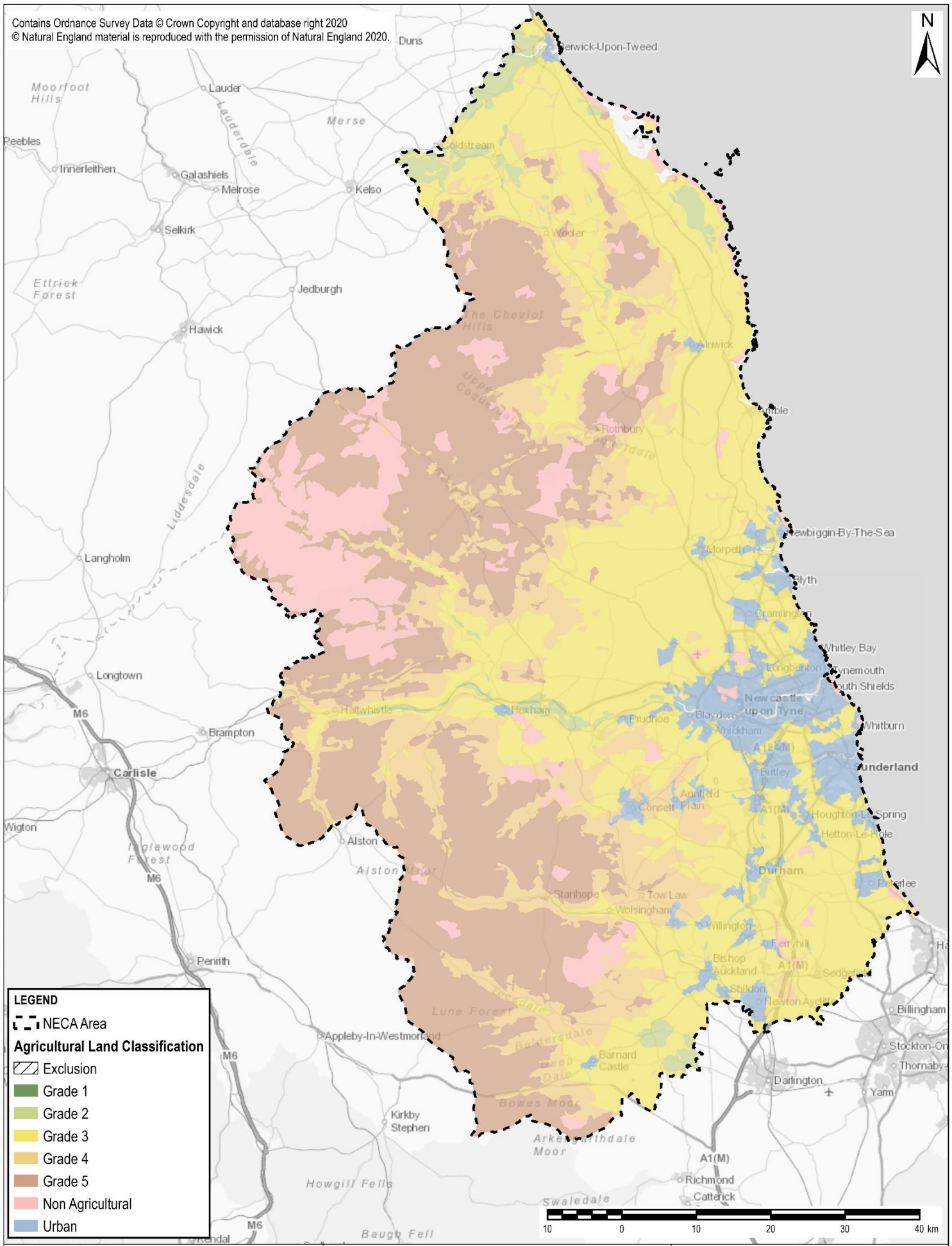
Contaminated Land

Contaminated land is used to describe land that is polluted by heavy metals, oils and tars, chemical substances, gases, asbestos or radioactive substances and it is land that could significantly harm people or protected species and cause pollution of surface waters or groundwater. There are a number of historical and active landfill sites throughout the North East with higher concentrations of contaminated land within the towns and cities in Tyne and Wear.

Water and Soil Resources: Summary of Future Baseline

Quality of surface waters is likely to improve slowly, in line with measures in the Northumbria River Basin Management Plan. However, population growth in most areas, development and climate change is likely to increase pressure on WFD objectives and water resources. Climate change could increase flooding which could lead to adverse effects on water quality from overflowing of storm water drains and leaching of contaminated soils into surface waters.

An increased number and severity of extreme rainfall events associated with climate change may lead to increased soil erosion. Contaminated areas will remain, however as development continues on previously developed land, contaminated areas will continue to be remediated. In addition legislation and pollution prevention measures should prevent new areas of land from becoming contaminated from new developments.



Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

AGRICULTRAL LAND CLASSIFICATION

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
13/03/2020	1:650,000	DRAFT
Drawing Number		Rev
FIGURE 4.3		01

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File Name:\\5004 - Information Systems\6XX_NECA_Transport_Plan\02_Maps\Figure 5-1 - Agricultral Land Classification.mxd

Historic Environment: Summary of Future Baseline

World Heritage Sites

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Sites are places, monuments or buildings which have been recognised as of "outstanding universal value" to humanity. There are two such World Heritage Sites within the North East: Frontiers of the Roman Empire: Hadrian's Wall[49], which extends across the North East from Wallsend to the west coast running parallel with the A69; and Durham Castle and Cathedral, which is located within Durham. The location of these sites are presented in **Figure 6.1**.

Frontiers of the Roman Empire- Hadrian's Wall World Heritage Site

The 'Roman Limes' represents the border line of the Roman Empire at its greatest extent in the 2nd century AD. It stretched over 5,000 km from the Atlantic coast of northern Britain, through Europe to the Black Sea, and from there to the Red Sea and across North Africa to the Atlantic coast. The remains of the Limes today consist of vestiges of built walls, ditches, forts, fortresses, watchtowers and civilian settlements. Certain elements of the line have been excavated, some reconstructed and a few destroyed. The 118-km-long Hadrian's Wall was built on the orders of the Emperor Hadrian c. AD 122 at the northernmost limits of the Roman province of Britannia. It is a striking example of the organization of a military zone and illustrates the defensive techniques and geopolitical strategies of ancient Rome. The Antonine Wall, a 60-km long fortification in Scotland was started by Emperor Antonius Pius in 142 AD as a defense against the "barbarians" of the north. It constitutes the northwestern-most portion of the Roman Limes.

A detailed description of the Outstanding Universal Value of the Hadrian's Wall WHS is presented at the following location:

https://whc.unesco.org/en/list/430/

Attributes are aspects of a World Heritage Site which are associated with, or express, its Outstanding Universal Value (OUV). The Attributes help to articulate that OUV and, within the decision-making process, they should assist the assessment of the impact of any proposed change to the site or in its immediate vicinity.

The key attributes of the Hadrian's Wall World Heritage Site are as follows:

- Hadrian's Wall is a frontier which was designed and constructed to protect the Roman Empire. It is a symbol of a common heritage.
- In its engineering and construction it illustrates the technological and organisational ability of the Roman Empire, and is a reflection of the way that resources were deployed by the Roman army.
- Hadrian's Wall displays the complexity and variety of the elements of the frontier system, their inter-relationships, and the relative completeness of the system as a whole.
- The frontier was occupied by the Romans for three centuries; its remains therefore display considerable evidence of repair, rebuilding, re-use, re-planning, and decay.
- The retrievable archaeological information that survives - in the form of buried structures, artefacts, ecofacts, and data about the palaeo-environment - is still extensive and is a significant attribute of the OUV.
- The setting of the WHS offers the opportunity to understand and appreciate Roman military planning and operations.
- The settlements associated with the frontier illustrate the impact and attraction of the Roman economy.

[49] UNESCO (2018) Hadiran's Wall Management Plan [online] available at: http://hadrianswallcountry.co.uk/hadrians-wall-management-plan [accessed 27/02/20]

- The course and extent of the frontier zone, its massive size, and its infrastructure, all influenced the subsequent development of the landscape, both in open country and in urban areas.
- Extensive stretches of the frontier within urban areas, and some other discrete associated elements, are not yet designated as Scheduled Monuments; they are therefore not included in the WHS but they represent an associated attribute of considerable significance which is worthy of protection.

UNESCO has identified the impact of visitors and tourism as a threat to the conservation state of Hadrian's Wall[50].

Durham Castle and Cathedral World Heritage Site

Durham Cathedral was built in the late 11th and early 12th centuries to house the relics of St Cuthbert (evangelizer of Northumbria) and the Venerable Bede. It attests to the importance of the early Benedictine monastic community and is the largest and finest example of Norman architecture in England. The innovative audacity of its vaulting foreshadowed Gothic architecture. Behind the cathedral stands the castle, an ancient Norman fortress which was the residence of the prince-bishops of Durham

The key elements of the World Heritage Site's Oustanding Universal Value are as follows:

- Significance 1: The Site's exceptional architecture demonstrating architectural innovation
- Significance 2: The visual drama of the Cathedral and Castle on the Peninsula and the associations with notions of romantic beauty.
- Significance 3: The physical expression of the spiritual and secular powers of the medieval Bishops Palatine that the defended complex provides.
- Significance 4: The relics and material culture of the three Saints, (Cuthbert, Bede, and Oswald) buried at the Site
- Significance 5. The continuity of use and ownership over the past 1000 Years as a place of religious worship, learning and residence
- Significance 6: The Site's role as a political statement of Norman power Imposed upon a subjugate nation, as one of the country's most powerful symbols of the Norman conquest of Britain
- Significance 7: The importance of the Site's archaeological remains, which are directly related to its history and continuity of use over the past 1000 years.
- Significance 8: The Cultural and Religious Traditions and Historical Memories Associated with the Relics of St Cuthbert and the Venerable Bede, and with the Continuity of Use and Ownership over the Past Millennium.

A detailed description of the Outstanding Universal Value of the Durham Castle and Cathedral World Heritage Site is presented at the following location:

https://whc.unesco.org/en/list/370/

Threats to Durham Castle and Cathedral include[51]:

- The expansion of development onto existing historic open spaces or landscape zones impacting on the World Heritage Site or its approaches and the underestimation the heritage significance of the landscape areas fringing the city core;
- New buildings of sufficient mass or height to impinge on views to and from or including the site;
- Major skyline developments or major developments impinging on the backdrop to the World Heritage Site;

[50] UNECSO (2020) Reporting and modelling [online] available at: http://whc.unesco.org/en/118/ [accessed 27/02/20]
[51] Durham County Council (2017) Durham Castle and Cathedral World Heritage Site Management Plan 2017-2023 [online] available at: < https://www.durhamworldheritagesite.com/files/Durham%20WHS%20Management%20Plan%202017.pdf> [accessed 27/02/20]

- Quality of development impacting on the integrity of views from, and of the site. Cumulative minor changes in historic areas close to World Heritage Site degrading the quality of approaches and townscape relationship to the World Heritage Site;
- Unmanaged tree areas being drawn into use as landscape mitigation against harm to the World Heritage Site by development without ensuring adequate analysis and continuing care; and
- New developments can impact on the dark setting of the World Heritage Site.

Conservation areas

Conservation areas are designated because of their special architectural and historic interest.[52] Conservation area appraisals are a tool to demonstrate the area's special interest, explaining the reasons for designation and providing a greater understanding and articulation of its character - mentioned within the 'Conservation Area Designation, Appraisal and Management' advice note by Historic England. Ideally, appraisals should be regularly reviewed as part of the management of the conservation area and can be developed into a management plan. Distribution of Conservation Areas within the North East are as follows:

There are 72 conservation areas in Tyne and Wear, distributed as follows:

- Gateshead: 22
- Newcastle: 12
- North Tyneside: 17
- South Tyneside: 11
- Sunderland: 14

There are 93 conservation areas in Country Durham, distributed as follows:

- Chester-le-Street: 2
- Derwentside: 16
- City of Durham: 14
- Easington: 4
- Sedgefield: 15
- Teesdale: 22
- Wear Valley: 20

There are 70 conservation areas in Northumberland.

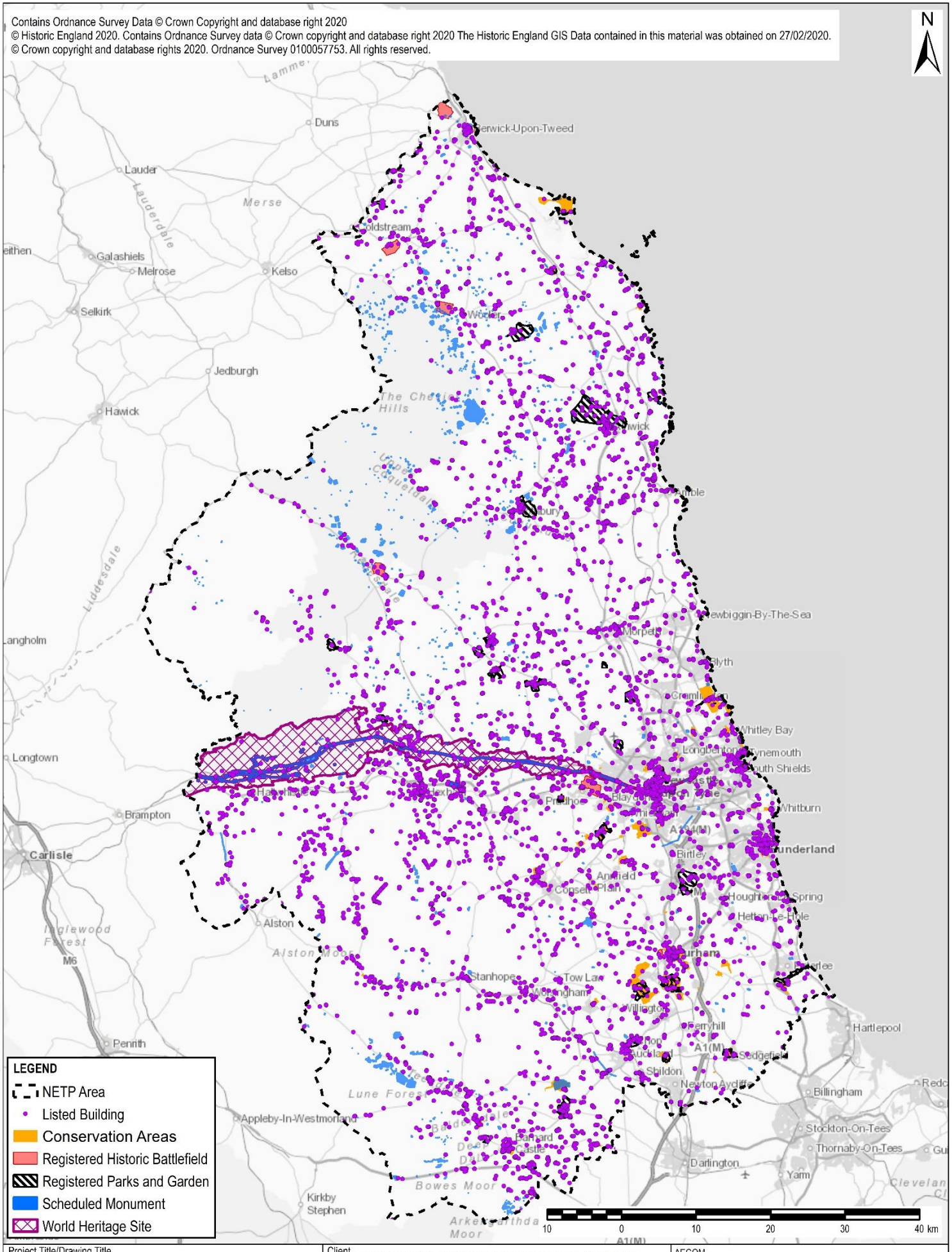
Listed buildings

A listed building is one which has been placed on the Statutory List of Buildings of Special Architectural or Historic Interest.

There are three categories of listed buildings:

- Grade I buildings are of exceptional interest, only 2.5% of listed buildings are Grade I.
- Grade II* buildings are particularly important buildings of more than special interest; 5.5% of listed buildings are Grade II*.
- Grade II buildings are of special interest; 92% of all listed buildings are in this class.

[52] Historic England (2019): 'Conservation Areas', [online] available at: <https://historicengland.org.uk/listing/what-is-designation/local/conservation-areas/> [accessed 20/09/19]



LEGEND

- NETP Area
- Listed Building
- Conservation Areas
- Registered Historic Battlefield
- Registered Parks and Garden
- Scheduled Monument
- World Heritage Site

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Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

HISTORIC ENVIRONMENT DESIGNATIONS

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
13/03/2020	1:350,000	DRAFT
Drawing Number		Rev
FIGURE 6.1		01

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There are a total of 10,539 of listed buildings within the North East. This number is split between the Local Authority areas as follows:

- County Durham: 3,108
- North Tyneside: 225
- Gateshead: 248
- South Tyneside: 195
- Northumberland: 5,614
- Newcastle upon Tyne: 774
- Sunderland: 375

Scheduled monuments

Scheduling is the designation used for sites of an archaeological character of national importance Current legislation is provided by the Ancient Monuments and Archaeological Areas Act 1979.

The National Heritage List for England identifies the following number of entries for scheduled monuments for the authorities in the North East region:

- County Durham: 233
- North Tyneside: 8
- Gateshead: 16
- South Tyneside: 5
- Northumberland: 975
- Newcastle upon Tyne: 42
- Sunderland: 10

Registered Parks and Gardens

Under Section 8C of the Historic Buildings and Ancient Monuments Act 1953 (inserted by section 33 of, and paragraph 10 of Section 4, to the National Heritage Act 1983) Historic England has compiled a Register of Parks and Gardens of special historic interest in England.

The table below lists the Registered Historic Parks and Gardens which are within the North East.

Table: Registered Historic Parks and Gardens in the North East

Registered Historic Parks and Gardens	
• Tillmouth Park Grade II* • Althorp Grade II* • Lindisfarne Castle Grade II • The Rookery Grade II • Belford Hall Grade II • Chillingham Grade II • Howick Hall Grade II • Alnwick Castle Grade II • Cragside Grade I • Hesleyside Grade II • Wallington Grade II* • Kirkharle Hall Grade II	• Newcastle General Cemetery Grade II* • Jesmond Dene, Armstrong and Heaton Parks Grade II • North and South Marine Parks and Bents Park Grade II • Saltwell Park Grade II • Gibside Grade I • Roker Park Grade II • Mowbray Park Grade II • Lambton Castle Grade II • Lumley Castle Grade II • Old Durham Gardens Grade II

- Capheaton Grade II
- Belsay Hall Grade I
- St Mary's Hospital, Stannington, Grade II
- Blagdon Grade II
- Seaton Delaval
- Woolsington Park Grade II
- Nunwick Grade II
- St Andrew's Cemetery Grade II
- The Hexham Parks Grade II
- Bradley Park Grade II
- St John's Cemetery Grade II
- Westgate Hill Cemetery Grade II
- Leazes Park Grade II
- Lartington Hall Grade II
- Croxdale Hall Grade II*
- Burn Hall Grade II
- Brancepeth Castle Grade II
- Pasmore Pavilion Grade II
- The Castle, Castle Eden, Grade II
- Ceddesfeld Hall Gardens Grade II
- Hardwick Park Grade II*
- Windlestone Hall Grade II
- Auckland Castle Park Grade II*
- Ramshaw Hall Garden Grade II
- Raby Castle Grade II*
- Rokeby Park Grade II*
- Bowes Museum Grade II

Registered Battlefields

The Historic England Register of Historic Battlefields identifies 47 important English battlefields. Its purpose is to offer them protection and to promote a better understanding of their significance. These maps are intended to be the starting point for battlefield conservation and interpretation by identifying the most visually sensitive areas. The following six Registered Battlefields are within the North East:

- Battle of Halidon Hill 1333;
- Battle of Flodden 1513;
- Battle of Homildon Hill 1402;
- Battle of Otterburn 1388;
- Battle of Newburn Ford 1640; and
- Battle of Neville's Cross 1346.

Heritage at Risk

Historic England has a programme known as the Heritage at Risk Programme, this Programme collecting information on the condition of built heritage in the United Kingdom to determine of the sites most at risk and most in need of safeguarding for the future.

Since 2008, as part of this Programme, Historic England has released an annual Heritage at Risk Register. The Heritage at Risk Register highlights the Grade I and Grade II* listed buildings, and scheduled monuments, conservation areas, wreck sites and registered parks and gardens in England deemed to be 'at risk'. It is worth noting that Grade II buildings are not included on the list.

The North East has 141 listed buildings currently listed on the Heritage at Risk Register (2019), these are split between council areas as follows:

- County Durham: 97
- Gateshead: 8
- Newcastle upon Tyne: 16
- North Tyneside: 1
- South Tyneside: 6
- Sunderland: 13

Historic Environment: Summary of Future Baseline

New housing, employment and infrastructure provision within the North East has the potential to impact on the fabric and setting of cultural heritage assets; for example through inappropriate design and layout. It should be noted, however, that existing historic environment designations offer a degree of protection to cultural heritage assets and their settings, and there are a range of existing initiatives to enhance the historic environment of the region.

Increasing traffic levels associated with an increase in population has the potential to negatively impact heritage assets. In urban areas this can be from vibration affecting the structural integrity of vulnerable buildings, emissions, and from the provision of street furniture affecting the setting of assets.

New development need not however be harmful to the significance of a heritage asset, and in the context of the NETP there may be opportunity for new transport infrastructure to enhance the historic settings of localities and better reveal assets' cultural heritage significance.

The number of heritage assets at risk is likely to continue to decrease in line with national trends; however funding sources will continue to be a constraint on this.

Landscape: Summary of Current Baseline

Northumberland National Park

National Parks are designated by Natural England under the provisions of The National Parks and Access to the Countryside Act, 1949, and have two statutory purposes:

- To conserve and enhance their natural beauty, wildlife and cultural heritage; and
- To promote opportunities for the public understanding and enjoyment of these special qualities.

National Park Authorities also have a duty, in taking forward the two purposes to:

- Seek to foster the economic and social well-being of local communities within the National Park.

Northumberland National Park was designated in 1956 and has a current population of approximately 2,000 people within its 1,030km^2 boundaries, which extend from Hadrian's Wall in the south to the Cheviots in the north (**Figure 7.1**). The National Park contains a number of cultural heritage assets, including Hadrian's Wall, remains of ancient settlements, prehistoric and medieval landscapes and burial monuments.

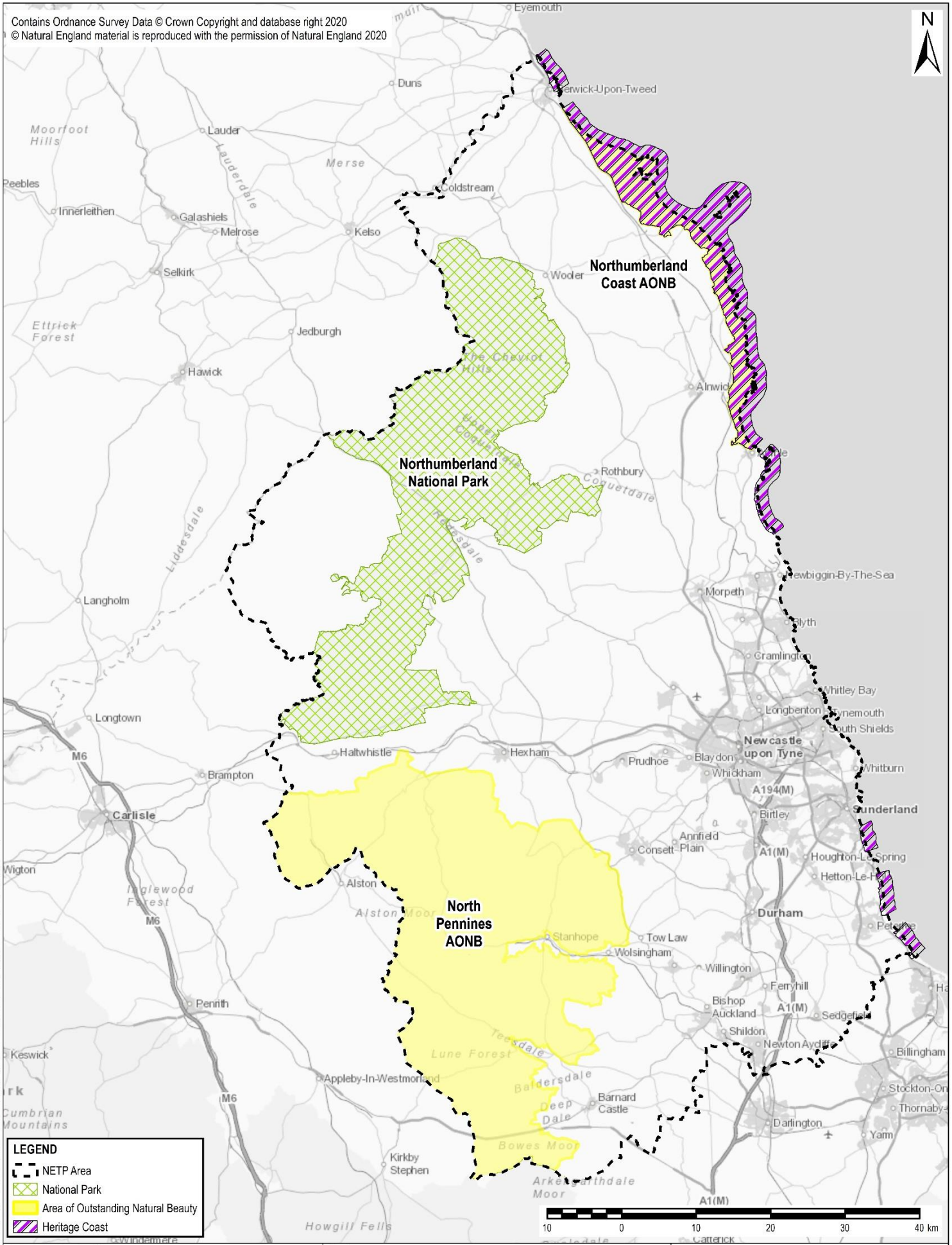
Each National Park in England, Wales and Scotland has an aim and purpose to promote understanding and enjoyment of the 'special qualities' of their area. The defined special qualities of the Northumberland National Park are as follows:

- Distinctive Landscape Character
- Rich Cultural Heritage
- Landscape Rich in Biodiversity and Geology
- True Sense of Tranquillity

More specifically, the special qualities of the National Park comprise the following elements:

- The landscape is ancient - and includes remains from the Stone Age, 7,000 years ago, and medieval buildings which illustrate this border country's history.
- The park is home to a World Heritage site - Hadrian's Wall - it's a stunning example of the dramatic legacy the Roman Empire left in the area.
- The community in the park has deep roots - and the cultural identity of the local people is reflected in their speech, traditions, folklore, knowledge and skills.

- The Cheviot Hills are home to ancient hill forts and pure rivers - and a landscape that even today seems barely touched by human intrusion.
- People come here to be inspired and to seek spiritual refreshment - those tranquil views and far horizons are good for the soul.
- The valleys of the North Tyne and Redesdale were once home of the Border Reivers - the wild landscape now supports habitats suitable for rare species such as red squirrel.
- It's an area rich in biodiversity - Northumberland National Park boasts a wide range of other rare or important species and habitats, for example curlew.
- The park offers a diverse landscape - from upland rivers and burns to ancient woodlands, upland hay meadows to blanket bogs and heather moorland.
- Extensive areas of the national park have been designated for their international importance for nature conservation such as Special Areas of Conservation and Ramsar sites.
- It's a geologically important landscape, too - there are five Sites of Special Scientific Interest designated for their geological importance, from the Cheviot volcanic and glacial features in the north to the Whin Sill intrusion and escarpments in the south.



Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

NATIONALLY DESIGNATED AND DEFINED LANDSCAPES IN THE NORTH EAST

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
13/03/2020	1:650,000	DRAFT
Drawing Number		Rev
FIGURE 7.1		01

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File Name:I:\5004 - Information Systems\6XX_NECA_Transport_Plan\02_Maps\Figure 7-1 - Nationally Designated and Defined Landscapes.mxd

Areas of Outstanding Natural Beauty

Areas of Outstanding Natural Beauty (AONBs) are designated by the Government for the purpose of ensuring that the special qualities of the finest landscapes in England, Wales and Northern Ireland are conserved and enhanced. The primary purpose of the AONB designation is to conserve and enhance the natural beauty of the area, as confirmed by Section 82 of the Countryside and Right of Way Act 2000 (CRoW Act). There are two AONBs designated within the North East which are outlined below and are illustrated in **Figure 7.1**.

Northumberland Coast AONB

The Northumberland Coast was designated as an AONB in 1958 under the national parks and access to countryside act 1949. It comprises a narrow coastal strip extending between Warwick in the south and Berwick-upon-Tweed in the north.

The following list of special qualities define the unique 'natural beauty' for which the Northumberland Coast AONB is designated as a nationally important protected landscape:

- Dramatic natural coastline of rocky headlands and cliffs contrasting with extensive sweeping sandy beaches and dynamic sand dune systems;
- Dramatic coastal and riverside setting of iconic historic and cultural landmark features which provide localised vertical emphasis within a predominantly horizontal landscape and seascape;
- Remote historic, cultural and spiritual qualities and ecclesiastical associations of the Holy Island of Lindisfarne;
- Distinctive rocky Farne Islands archipelago feature in many coastal views;
- Distinctive traditional coastal fishing villages clustered around small harbours;
- Views inland to the rounded sandstone hills and Cheviot Hills provide a dramatic and dynamic backdrop to the coast;
- Feeling of exposure and tranquillity on the flat, low lying open coastal plain and windswept coast, with sparse tree cover, huge skies and wide seascape views; and
- A number of nationally important geological sites occur within the boundary, including Loughoughton Quarry SSSI, Howick to Seaton Point SSSI, Bamburgh Coast and Hills SSSI and the Castlepoint to Cullernose Point SSSI.

North Pennines AONB

The designation of the North Pennines AONB was confirmed in 1988 and at 1983km^2, it is the second largest of the 40 AONBs in England and Wales. One of the most remote and unspoilt places in England, it lies between the National Parks of the Lake District, the Yorkshire Dales and Northumberland. The AONB crosses the boundaries of two English Regions, being in both the North East and the North West. It lies mostly within the political boundaries of Durham, Northumberland and Cumbria County Councils, with 2.6km^2 in North Yorkshire around Tan Hill. The North Pennines AONB is Britain's first European Geopark and a founding member of the Global Geoparks Network.

The North Pennines AONB comprises a landscape of open heather moors and peatlands, dales and hay meadows, upland rivers, wooded areas, rural communities, mining and industrial heritage and distinctive flora and fauna.

The defined special qualities of the North Pennines AONB[53] are linked to the following:

- Has 40% of the UK's upland hay meadows;
- Contains 30% of England's upland heathland and 27% of its blanket bog;
- Is home to 80% of England's black grouse;
- Is a place to see short-eared owl, ring ouzel, snipe and redshank;

[53] North Pennines AONB (2020) Special qualities [online] available at: https://www.northpennines.org.uk/whats-special/ [accessed 27/02/20]

- Has important habitats – 36% of the AONB is designated as Sites of Special Scientific Interest;
- Has red squirrels, otters and rare arctic alpine plants;
- Is the upland England's hotspot for breeding wading birds;
- Enjoys peace, tranquillity and fabulous night skies; and
- Boasts England's biggest waterfall – High Force in Upper Teesdale.

National Trails

There are two National Trails within the North East. These are the Pennine Way, which runs for 270 miles from Edale to the Border Inn; and the Kirk Yetholm and Hadrian's Wall Path, which runs for 86 miles from Segedenum Roman Fort, Wallsend and The Bank's Promenade, Bownes-on-Solway.

Durham Heritage Coast

Heritage Coasts were established to conserve the best stretches of undeveloped coast in England. The national policy framework and objectives for heritage coasts were developed by the Countryside Commission, a predecessor of Natural England, and ratified by government. Heritage coasts are 'defined' rather than designated, so there is not a statutory designation process like that associated with national parks and AONBs.

The Durham Heritage Coast is located within the North East, covering the part of the coast from Sunderland to Hartlepool. The Heritage Coast is a coastal landscape of magnesian limestone grasslands, cliffs, pebble and sandy beaches stretching between the two main conurbations of Tyne and Wear and Teesside.

Until the late 1990s the area was one of the most heavily polluted coastlines in Britain, the legacy of over a hundred years of dumping colliery waste from its six coal mines along the beaches, and of quarrying and subsequent landfill throughout the 20th Century. Wildlife, habitats and the landscape suffered heavily, discouraging visitors and leaving the local communities with little sense of pride. Parts of the coast became derelict and suffered from vandalism and misuse, excluded from mainstream use and appreciation.

A partnership of fourteen organisations came together between 1997-2002 to regenerate the coast of County Durham. The Turning The Tide Partnership successfully regenerated and cleaned up the coastal strip through a £10 million programme of environmental improvements. Following this the Heritage Coast Partnership has worked for over ten years to provide integrated management and continuing investment in gateway sites, habitat and access amelioration, interpretation, awareness raising and engagement. In recognition of the considerable improvements in the quality of the coastal landscape and the restored magnesian limestone grasslands, dunes, cliffs and stacks, the area was defined as a Heritage Coast in March 2001.

Areas of Tranquillity

Paragraph 180 of the NPPF notes that planning policies and decisions should aim to : "identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."

Northumbria University, on behalf of CPRE, developed methodology for mapping areas of tranquillity[54]. While urban centres within the North East have low levels of tranquillity, many of the rural areas - particularly those with landscape areas which are protected nationally such as National Parks and AONBs - have high levels of tranquillity. It should be noted that such protected areas will continue to be offered protection through other designations. However, the maps show that major trunk roads can have significant effects for tranquillity in rural areas and therefore the affect which this transport plan has on tranquillity of rural areas should be considered further as part of the SEA process.

[54] The countryside charity (2020) CPRE interactive tranquillity map [online] available at: https://www.cpre.org.uk/resources/tranquility-map-england/ [accessed 27/02/20]

National Character Areas

National Character Areas (NCAs) are landscape areas which share similar characteristics, following natural lines in the landscape rather than administrative boundaries. Developed by Natural England, NCA profiles describe the natural and cultural features that shape each of these landscapes, providing a broad context to their character[55]. There is a total of 159 NCAs in England, 14 of which are in the North East. These are described below and outlined in **Figure 7.2**.

North Northumberland Coastal Plain

The North Northumberland Coastal Plain is a narrow, windswept strip that runs from the Anglo-Scottish border south to the mouth of the River Coquet, bounded by the sea to the east and the Northumberland Sandstone Hills to the west.

The gently undulating inland plain is dominated by arable farming, with large, regular fields bounded by gappy hedgerows and in some places grey sandstone walls, with some pasture for beef cattle and sheep. Woodland cover is sparse and predominantly confined to the river valleys that meander across the coastal plain and the estate woodlands around Howick.

The dramatic coastline is exceptionally varied, with rocky headlands and cliffs contrasting with long, sweeping sandy beaches backed by dunes, and extensive intertidal mudflats and salt marsh around Lindisfarne. The nationally important Whin Sill outcrops both inland and at the coast, supporting rare Whin grassland, and forming the distinctive rocky Farne Islands offshore.

Northumberland Sandstones Hills

The Northumberland Sandstone Hills curve across central Northumberland in a series of distinctive flat-topped ridges which provide panoramic views of the Cheviots and the coast.

The ridgetops and upper slopes are covered with heather and grass moorland broken by large geometric blocks of conifer. Below this is pasture with some arable cultivation on the lower and dip slopes, broadleaved woodland on scarp slopes and along watercourses and a few notable parklands.

There are relatively few major roads but two of the three principal crossborder routes pass through this NCA with the A1 skirting around the eastern edge and the A68 cutting through to the south. Other key transport routes include the A696 and A697 linking the rural border communities to Tyneside and the A1. These transport links play an important role in the haulage of timber from this and adjacent NCAs to processing destinations and provide access for military vehicle convoys to the Otterburn Military Training Area.

Cheviot Fringe

The Cheviot Fringe NCA is a tranquil, undulating, lowland landscape, framed by the Cheviots NCA to the west and the Northumberland Sandstone Hills NCA to the east. The western edge falls within the Northumberland National Park and encompasses the edge of the Cheviot Hills. The importance of glacial processes in shaping this landscape is shown by the extensive array of glacial lake and fan deposits, sinuous ridges, eskers, kames and kettle holes. Weathering of the underlying bedrock combined with the widespread blanket of glacial and alluvial deposits have resulted in fertile soils that support the agriculture which dominates this area, and the river valleys provide much of the North East region's sand and gravel resources.

The vales to the south are a patchwork of arable farmland, pasture and meadows with the regular field pattern still strong, delineated by hedgerows punctuated with trees. To the north, arable cultivation dominates and the fields are flatter and larger with fewer hedgerows. Conifer blocks and shelterbelts are prominent in the landscape with broadleaved woodland predominantly along watercourses.

Cheviots

The distinctive, smooth, rounded hills of the Cheviots NCA are part of the remote upland chain of the Northumberland moors which form the northern end of the Northumberland National Park. They rise

[55] Natural England (2020) National Character Areas [online] available at: http://publications.naturalengland.org.uk/category/587130 [accessed 27/02/20]

steeply above the lowland belt of the Cheviot Fringe NCA to the north and east and the Border Moors and Forests NCA to the south. To the west, the rounded hills cascade into southern Scotland but the NCA is bounded by the Scottish border that follows a high natural ridgeline.

The distinct igneous geology has formed a sinuous cluster of rounded hills with tors on some hill tops, rocky outcrops and scree slopes on the northern flanks, and many other glacial and post-glacial features.

The wild, open upland landscape is dominated by rolling moorlands; there are extensive mosaics of heath, blanket bog and grassland, managed for sheep and cattle rearing and, grouse moors. Areas in the southern end of the NCA are also in use for military training. Large conifer plantations occur on some of the upper slopes, interrupting the smooth lines of the landscape.

Border Moors and Forests

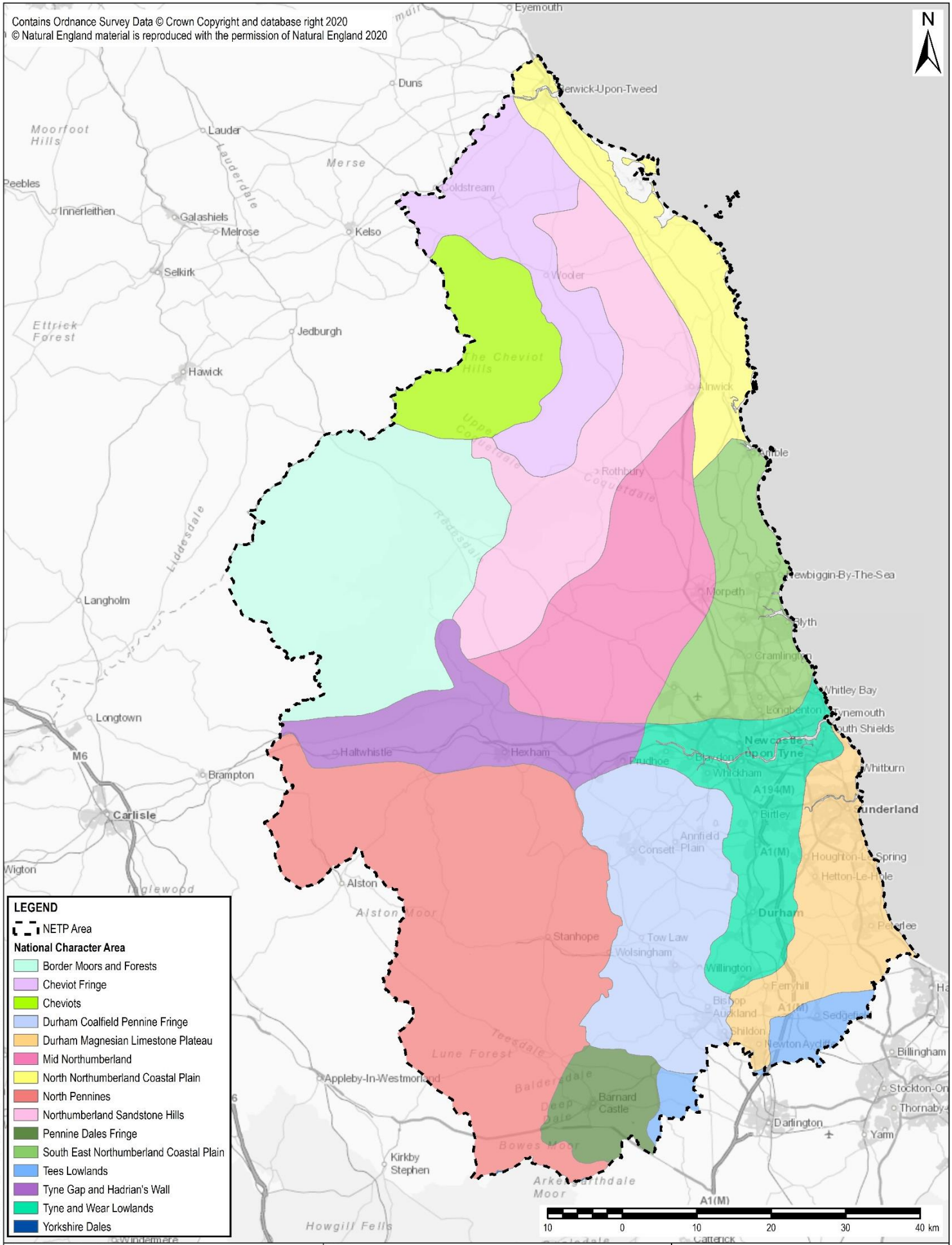
The Border Moors and Forests NCA consists of an extensive, sparsely populated upland plateau, with long-distance views and a strong sense of remoteness and tranquillity. The rivers North Tyne and Rede form wide valleys through the uplands, while the rivers Lyne and Irthing flow south-west to the Solway Firth. The underlying geology consists of Carboniferous deposits which have weathered differentially to form craggy outcrops, with subsequent glacial and fluvial deposition. The high altitude and climatic conditions led to the build-up of peat deposits and the formation of a large expanse of upland mire habitats, much of which is internationally designated as Border Mires, Kielder–Butterburn Special Area of Conservation. Kielder Water, a large, winding reservoir at the head of the North Tyne Valley which also forms a prominent feature in the landscape. The uplands are drained by small rivers in enclosed valleys, with the larger valleys sheltering upland hay meadows, scattered farmsteads and copses of broadleaved woodland. Much of the south-eastern area lies within Northumberland National Park. Military training areas also occupy large tracts of land.

Owing to the remote upland nature of the area, there are very few major transport links. The A68, which follows the Rede Valley, is the only principal route passing through the area, linking the Tyne Valley to the south with the Scottish Borders to the north.

North Pennines

The North Pennines NCA, at the northern end of the Pennine ridge, has a distinct identity, with its remote upland moorlands divided by quiet dales. It is characterised by a sense of remoteness, with few settlements, slow change and cultural continuity. It comprises some of the highest and most exposed moorland summits in England, with several major rivers, including the South Tyne, Wear and Tees, draining out to the north,east and south-east. There are dramatic and panoramic views both across the moorlands and outwards, especially towards the west. The area's natural beauty is reflected in the fact that 88% of it has been designated as the North Pennines Area of Outstanding Natural Beauty (AONB).

Transport routes are limited, due the topography, with the main roads following the valley floors. However, much of the area (61%) is open access land, and there are over 2,000 km of public rights of way, including three national trails (the Pennine Way, the Pennine Bridleway and a small stretch of the Hadrian's Wall Path). These, and the quiet roads, make the area a popular destination for walkers and, increasingly, for cyclists, with the popular Coast 2 Coast cycle route crossing the area.



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Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

NATIONAL CHARACTER AREAS IN THE NORTH EAST

Client: TRANSPORT NORTH EAST STRATEGY UNIT

Drawn	Checked	Approved
CN	TD	NCB
Date	Scale @ A4	Purpose of Issue
13/03/2020	1:650,000	DRAFT
Drawing Number		Rev
FIGURE 7.2		01

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Tyne Gap and Hadrian's Wall

This narrow, distinctive corridor centred on the River Tyne separates the uplands of the North Pennines NCA from the Border Moors and Forests NCA. Westwards are views of pastoral landscapes of the Solway Basin and Eden Valley NCAs and eastwards a more urban character prevails with views of the conurbation of Newcastle in the Tyne and Wear Lowlands NCA.

The Tyne valley is underlain by sedimentary Carboniferous rocks comprising a repetitive succession of limestones, sandstones, shales and intrusion of horizontal, igneous rock dolerite. Also, the prominent, intruded igneous Whin Sill formation forms a dramatic escarpment on which Hadrian's Wall is built. A mosaic of arable and pasture land, conifer plantations and well-wooded valley sides occur, along with the fertile lowland corridor of the river flood plain. Here, flat, arable fields contrast with the larger-scale upper slopes of valleys. In the west, cattle and sheep graze large areas of rough pasture, divided by walls and fences, merging to mixed and arable land in the east. A well-wooded mosaic of deciduous, mixed and coniferous woodland provides habitat for priority species – red squirrel and woodland birds. Broadleaved woodland on steeper slopes lines the rivers.

Mid Northumberland

Mid Northumberland is an intermediate plateau of gently undulating farmland which forms a transitional area between the Northumberland Sandstone Hills to the west and the low-lying coastal plain to the east. A series of ridges and enclosed river valleys in the northern part of the area open out into a broader, flatter landscape in the south. Hadrian's Wall World Heritage Site forms the southern border to the NCA.

The area is dissected by several small rivers which flow eastwards to the sea. The River Coquet flows down from the Cheviots, while the rivers Font, Wansbeck and Blyth and their tributaries wind down from the sandstone hills and upland pastures through wooded valleys and lowland arable areas. Within this predominantly farmed landscape there are many small woodlands and shelterbelts, and a few areas of open water, relatively infrequent within Northumberland.

The A68 and A696 transport corridors reflect the general west-to-east connectivity and the A1 and A697 create a strong north–south link.

South East Northumberland Coastal Plain

The South East Northumberland Coastal Plain is a flat, low-lying strip along the coast of the North Sea, extending from north Tyneside in the south to Amble and the Coquet Estuary in the north. It is largely urbanised in the south and more rural to the north, with large fields, restored and active open cast coal mines and a coast of rocky headlands and wide, sandy bays. Rural areas support mixed farming, with fields divided by low, often gappy hedgerows and few trees. The underlying geology has had a significant effect on the character of the area.

The coast supports a wide diversity of habitats including sand dunes, maritime cliffs and slopes, coastal and flood plain grazing marsh and mudflats. The area supports a diverse range of marine species and ecosystems as a consequence of its geological diversity and the natural variation in the sediment loading of the water. The rivers Blyth, Wansbeck, Coquet, Pont and Seaton Burn drain through the coastal plain from the uplands to the west into the North Sea to the east, often passing through incised valleys with fragments of ancient woodland. They support rich wildlife, including white-clawed crayfish, otter, water vole and salmonids, and are important for recreation (walking, fishing and wildlife watching), water abstraction and sense of place.

Tyne and Wear Lowlands

Tyne and Wear Lowlands NCA is an area of gently undulating or rolling land, incised by the valleys of the major rivers and their tributaries. It is densely populated and heavily influenced by urban settlement, industry and infrastructure. Between settlements there are wide stretches of agricultural land. The undulating land and broad valleys of the Tyne and Wear Lowlands are underlain almost entirely by Coal Measures rocks of Upper Carboniferous age. Mineral extraction has played a considerable role in the area and the legacy of coal mining remains evident in the landscape, although much restoration has occurred in recent years. Spoil heaps have been restored to pastures, mixed/coniferous plantations, amenity ponds and lakes (former open cast mines) and accessible

green spaces such as country parks, and new networks of footpaths and cycle routes have been created along former wagonways.

Newcastle upon Tyne and the surrounding settlements cover a large area in the north of the NCA. Newcastle lies on the site of the Pons Aelius, a Roman fort on Hadrian's Wall, at a strategic crossing point of the River Tyne. Hadrian's Wall, which extends north-west from this NCA, is a World Heritage Site and the Hadrian's Wall Path National Trail provides recreational opportunities for visitors and local people.

Durham Magnesian Limestone Plateau

The Durham Magnesian Limestone Plateau is an open, agricultural landscape with sharply defined boundaries in the form of a steep limestone escarpment to the west and a dramatic coast of limestone cliffs, headlands and bays to the east. The River Wear cuts across the north of the area, flowing into the sea at Sunderland, and the River Skerne drains into the Tees Lowlands to the south. Rural land cover consists of arable land and grazing pasture, with small, isolated areas of wildlife-rich habitat such as Magnesian Limestone grassland and ancient woodland in the narrow valleys (or denes) running down to the coast. The area has been strongly shaped by its industry, with coal mining and quarrying in particular leaving a very clear mark on local landscapes and identity. Settlements range from larger urban areas such as Sunderland to the north and ex-mining towns with their distinctive terraces to the south and east, to scattered traditional stone villages built around village greens on the plateau and 'New Towns' such as Peterlee and Newton Aycliffe.

Transport routes such as the A19 and the coastal railway form prominent features in the landscape and provide links to the north and south, but also detract from tranquillity and create physical and psychological barriers to public access.

Durham Coalfield Pennine Fringe

The Durham Coalfield Pennine Fringe NCA is a transitional landscape between the North Pennines NCA to the west and the Tyne and Wear Lowlands NCA to the east. It is formed by a series of broad ridges, separated by river valleys, with a strong west–east grain. Some 3 per cent (2,252 ha) of the NCA lies within the North Pennines Area of Outstanding Natural Beauty, and 204 ha falls within the North Pennine Moors Special Area of Conservation and Special Protection Area, designated for its habitats (including dry heath, blanket bog and old sessile oak woodland) and upland breeding birds (including golden plover, curlew, dunlin, hen harrier and merlin). The west is more upland in character, with large, open, regular fields bounded by drystone walls or fences, and is primarily used for sheep and cattle grazing. In the east the farmed landscape becomes more mixed, with arable crops grown on the richer land, and more irregular fields divided by hedges rather than walls. Networks of hedges and strips of woodland in river valleys and alongside streams, combined with shelterbelts and large conifer plantations, give parts of the area a well-wooded appearance.

Pennine Dales Fringe

The Pennine Dales Fringe NCA lies between the uplands of the Pennines to the west, and the Magnesian Limestone ridge and arable lowlands to the east. The land has a varied topography of exposed upland moorland fringes and plateaux dropping to lower foothills, separated by major river valleys and incised by numerous minor tributary valleys. It is underlain by Yoredale rocks in the north (limestone, sandstone and mudstone) and Millstone Grit in the south. It is a transitional landscape between upland and lowland. Drystone walls are common in the west while hedges, often thick and tall with frequent hedgerow trees, are more prevalent at lower elevations in the east. Broad valleys, widening to the east, with their more fertile soils support arable crops, while steeper, higher land in the west supports predominantly livestock farming.

Broadleaved woodlands (many of them of ancient origin), coniferous and mixed plantations, and numerous small woods and hedgerow trees all contribute to the well-wooded character of the area. Hamlets, villages and small market towns are particularly distinctive, with strong visual unity, being built in local Millstone Grit Group and Yoredale Group stone in the west and Magnesian Limestone in the east.

Transport links include a number of major roads including the A66, A684 and A59, connecting major settlements to the east and west of the Pennine uplands. Several long-distance walking routes pass through the area, including the Coast to Coast path, Ebor Way, Nidderdale Way and Teesdale Way.

Tees Lowlands

The Tees Lowlands NCA forms a broad, open plain dominated by the meandering lower reaches of the River Tees and its tributaries, with wide views to distant hills. The large conurbation around the Lower Tees and Teesmouth contrasts with the rural area to the south and west, which is largely agricultural in character. These areas are in close proximity to heavy industry, which has developed due to the estuary's strategic location close to; mineral reserves, a network of main roads, railways and Teesport. Industrial installations form a dramatic skyline when viewed from the surrounding hills. Early successional grasslands and scrub have also emerged on previously developed land; these brownfield sites have significant biodiversity value.

There are a number of major transport corridors through the NCA. The East Coast Main Line railway, the A1(M) motorway and A19 trunk road provide links to the south, and northwards to the Tyne and Wear conurbations and beyond.

Local landscape character areas

Detailed local landscape studies have been carried out in Northumberland and Durham.

Northumberland Landscape Character Assessment

The Northumberland Landscape Character Assessment[56] presents a consolidated landscape character assessment for the whole County. This breaks Northumberland down into landscape character types and landscape character areas. Detailed descriptions of each landscape character type and character area are given. These are arranged by the refined NCA into which they fall. **Figure 7.3** outlines the landscape character areas within the NCAs.

The Landscape Character Assessment also defines key principles and guidelines relating to landscape and land uses. The assessment recognises that all landscapes are dynamic, undergoing changes both natural and human-influenced.

Each landscape character type within Northumberland has been divided into three broad categories based on three guiding principles: protect, manage and plan.

The landscapes which have been identified for protection are the most valued landscapes in the county. They include the coastal landscapes and seascapes which comprise the Northumberland Coast AONB, the foothills which form the setting to the Cheviots, and the dales of the North Pennines AONB, as well as other sensitive river valley landscapes. Protection does not imply preservation, but rather conservation of key landscape qualities. It is recognised that these landscapes are not static, but evolving. They will undergo change in future, but change within these landscapes requires more careful management.

[56] Land use consultants (2010) Northumberland Landscape Character Assessment [online] available at: < https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/planning%20policy/Studies%20and%20Evidence%20Reports/Landscape%20Green%20Spaces%20Studies/1.%20Landscape%20Character/Landscape-Character-Part-A.pdf> [accessed 27/02/20]

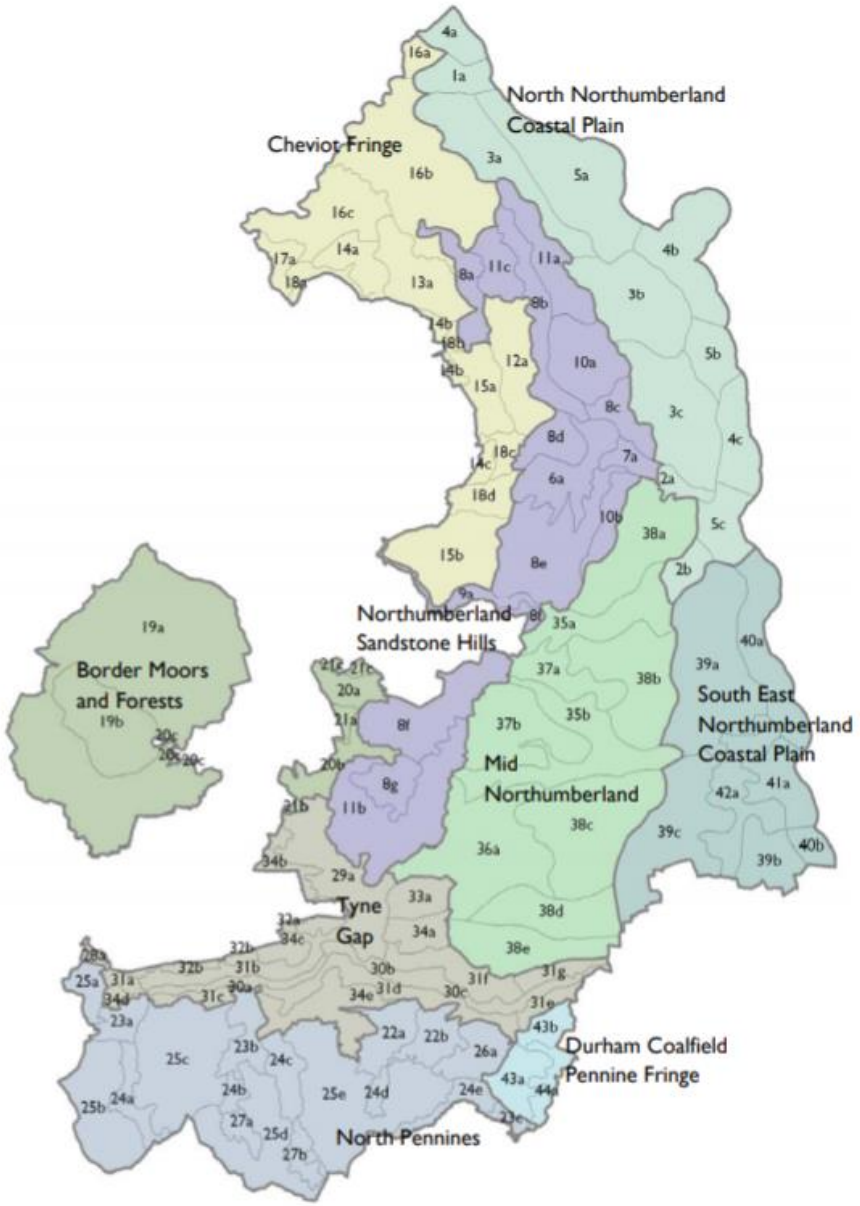


Figure 7.3: Landscape character areas within Northumberland

The landscapes which have been identified for management are agricultural and upland areas, and reflect the working rural landscapes of Northumberland. While they are often highly valued at a local level, these landscapes generally have a greater ability to absorb change, without significant detriment to their innate character. However, there remains a need to ensure that the character of these landscapes is maintained, and that changes are sympathetic and sustainable. The key qualities of these landscapes may still require a degree of protection, although there is greater scope for planning some change.

Planning has been identified as the guiding principle for landscapes in the south-east of the county, the forested uplands, and areas of intensive arable farming or former mineral extraction. These landscapes have already been heavily modified by the actions of people, and positive action is required to restore or enhance these areas. Again, there needs to be recognition of the underlying key qualities of the landscape, albeit that these may have been compromised in the past. Not all change will be beneficial, and management is required to ensure that change is sustainable, and results in a strengthening of landscape character.

Further information on the landscape character areas within Northumberland can be found in the Northumberland Landscape Character Assessment.[57]

Landscape Character Assessment for Northumberland National Park

An update of the Northumberland National Park Landscape Character Assessment was completed in Jun 2019.[58]

The assessment adopts a holistic approach that considers the landscapes of Northumberland National Park as a mosaic of different landscapes character types and landscape character areas, each with particular characteristics and subject to particular forces for change. It is intended to provide an understanding of the area's landscape, through characterisation, together with advice on landscape change, through the preparation of strategy and guidelines material.

The landscape character areas in the National Park are a unique, geographically specific, units of a particular landscape character type, which share the same elements as the landscape character type, but at the same time have their own individual character and identity.

Figure 7.4 below highlights the Landscape Character Areas in the National Park. The Landscape Character Assessment presents detailed overviews of these areas.

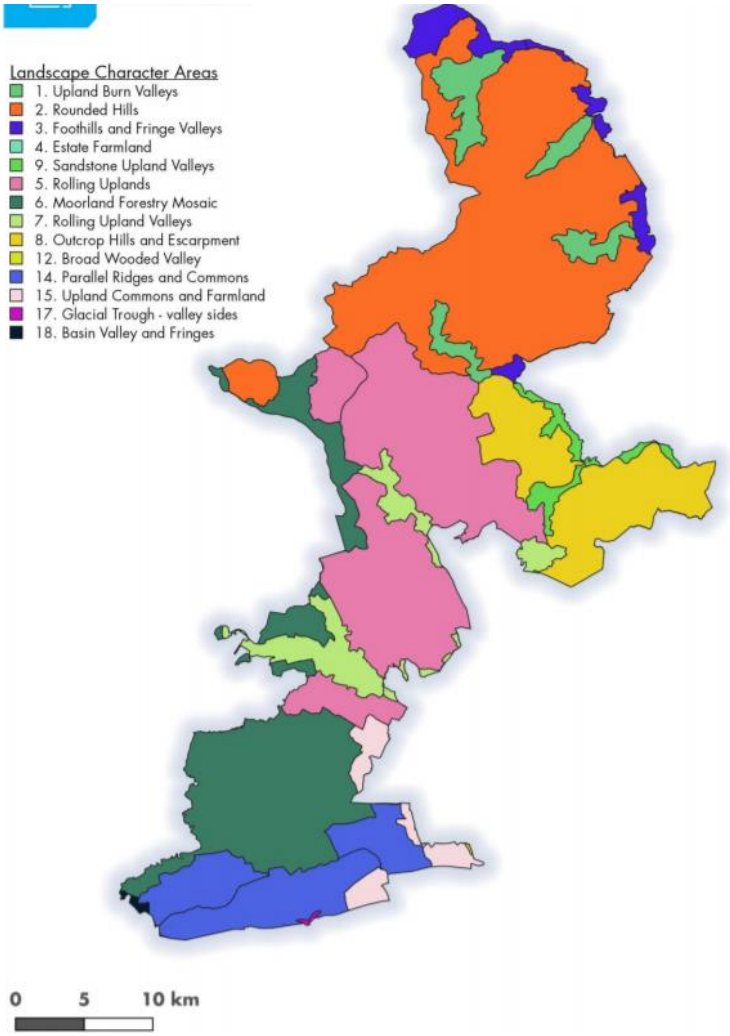


Figure 7.4: Landscape character types in the Northumberland National Park (from *Landscape Character Assessment for the Northumberland National Park*)

[57] Land use consultants (2010) Northumberland Landscape Character Assessment [online] available at: < https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/planning%20policy/Studies%20and%20Evidence%20Reports/Landscape%20Green%20Spaces%20Studies/1.%20Landscape%20Character/Landscape-Character-Part-A.pdf> [accessed 05/03/20]

[58] Alison Farmer Associates (June 2019) Update of Landscape Character Assessment for Northumberland National Park [online] available at: <https://nnp-tacdesign.netdna-ssl.com/wp-content/uploads/2019/09/NNPA-022-Landscape-Character-Assessment.pdf> [accessed 03/10/20]

Durham Landscape Character Assessment

The County Durham Landscape Character Assessment[59] identifies landscape types and character areas at three different levels - the regional, the sub-regional and the local.

County Character Areas are based on Natural England's Countryside Character Areas. There are 6 Countryside Character Areas in County Durham, all of which extend beyond its administrative boundaries. These are outlined in **Figure 7.5** below.

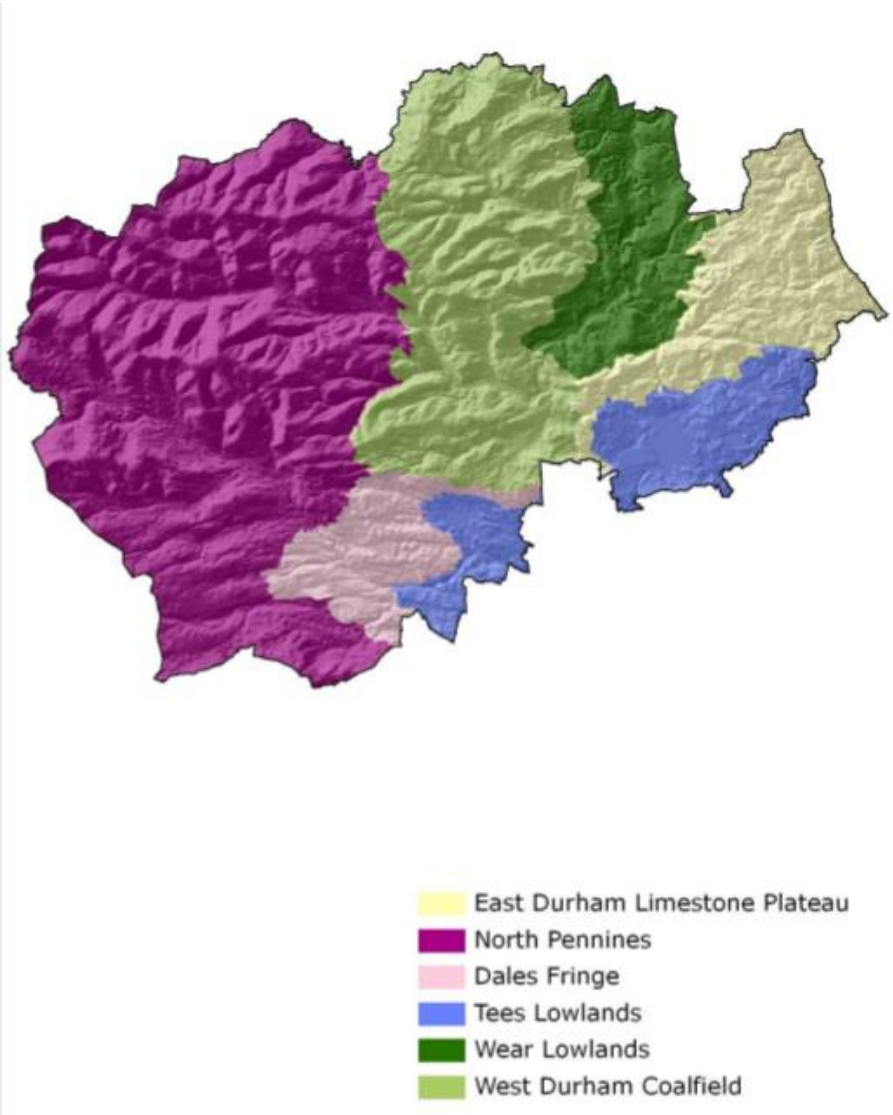


Figure 7.5: County Character Areas in Durham

Broad Landscape Types are landscapes with similar patterns of geology, soils, vegetation, land use, settlement and field patterns identified at a broad sub-regional level. As with County Character Areas, the boundaries between Broad Landscape Types are not always precise, as the change between one landscape and another can be gradual and progressive. The Broad Landscape Types are outlined in **Figure 7.6** below.

Further information on Landscape Character Areas and Landscape Types can be found in the County Durham Landscape Character Assessment.[60]

[59] Durham County Council (no date) The Landscape Classification [online] available at: < http://www.durhamlandscape.info/media/13393/County-Durham-Landscape-Character-Assessment-Classification/pdf/CDLCAClassification.pdf> [accessed 28/02/2020]
[60] Durham County Council (no date) The Landscape Classification [online] available at: < http://www.durhamlandscape.info/media/13393/County-Durham-Landscape-Character-Assessment-Classification/pdf/CDLCAClassification.pdf> [accessed 05/03/2020]

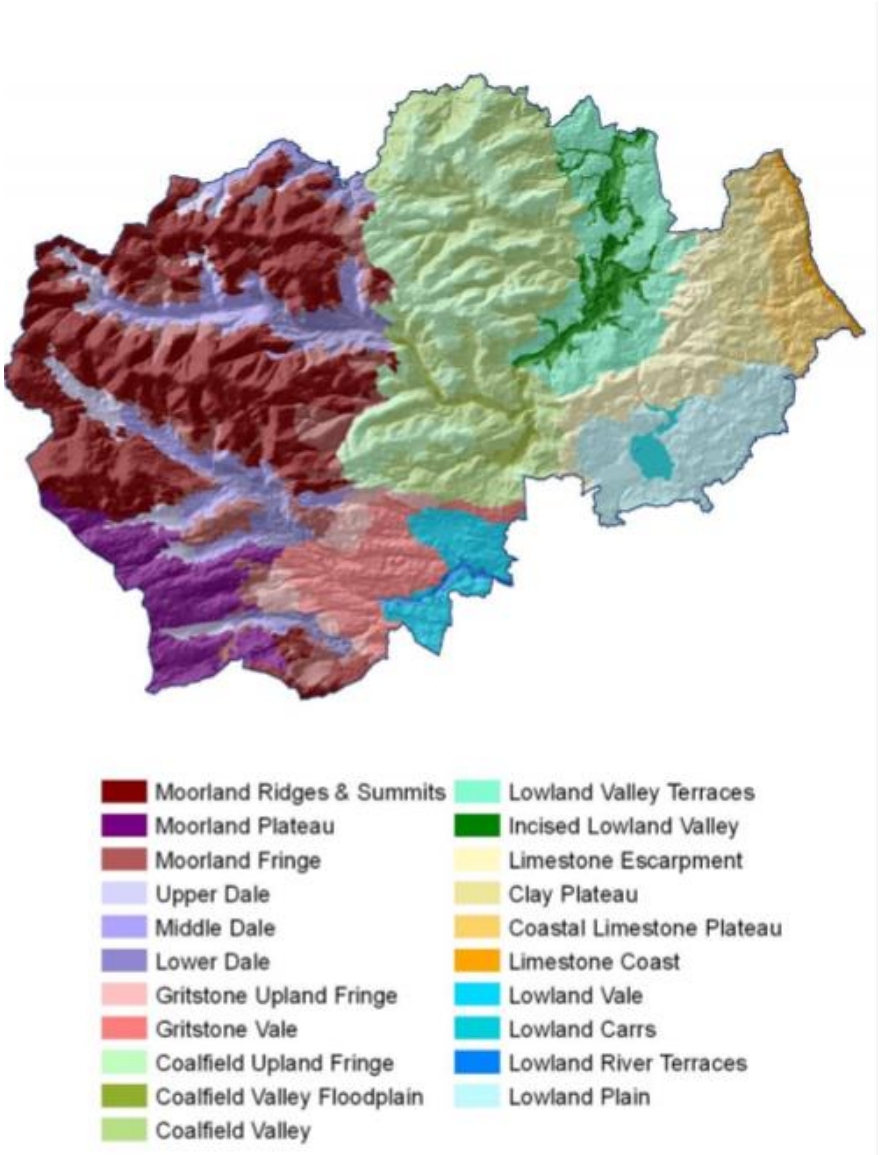


Figure 7.6: Broad Landscape Types in Durham

The County Durham Landscape Strategy[61] sets out an agenda for managing change in the future to help conserve and enhance what is valued most about the landscape while allowing it to evolve to meet new challenges.

Within the strategy, key issues on Durham landscape are discussed. Climate Change is a key issue that is discussed. Climate has a fundamental influence on landscape character. Much of the variety in the Durham landscape comes from the differences in climate between the colder wetter uplands of the west and the warmer, drier lowlands of the east. These differences affect both the natural vegetation and the way the land is managed and farmed. There is increasing evidence that the climate is changing due to a combination of natural forces and human activities, and particularly the production of 'greenhouse' gasses like carbon dioxide. Even with concerted action at a global scale it is likely that the climate will continue to change and this will bring new challenges to the landscape.

Other issues relating to the landscape character relate to biodiversity decline, conserving and restoring biodiversity, conserving geodiversity, conserving the historic environment and providing green infrastructure to access the countryside.

Within the strategy, objectives that relate to green infrastructure include:

[61] Durham County Council (2008) The County Durham Landscape Strategy [online] available at: < http://www.durhamlandscape.info/media/16093/County-Durham-Landscape-Strategy-Introduction/pdf/DURHAMLANDSCAPESTRATEGY2008Introduction.pdf> [accessed 28/02/20]

- To promote the development of integrated Green Space and Green Infrastructure Strategies, and particularly for the semi-rural landscapes of the former coalfield areas;
- To ensure that development in the rural urban fringe is sustainable and where appropriate delivers wider environmental and social benefits;
- To promote the development of a coherent network of footpaths, green spaces, quiet lanes and greenways in the countryside around towns;
- To support and encourage the creation of natural green-space and community woodlands close to settlements;
- To support and encourage environmental improvement works in and around the county's towns and villages; and
- To support sustainable land management initiatives in the rural urban fringe.

Landscape: Summary of Future Baseline

New housing, employment and infrastructure provision has the potential to lead to incremental but small changes in landscape and townscape character and quality in the region. This includes from the loss of landscape features and areas with an important visual amenity value.

Increasing traffic levels associated with an increase in population has the potential to negatively impact landscape character.

Air Quality and Noise: Summary of Current Baseline

Air Quality

Petrol and diesel-engine motor vehicles emit a wide variety of pollutants, principally carbon monoxide (CO), nitrogen oxide (NO), nitrogen dioxide ($N0_2$), volatile organic compounds (VOCs) and particulate matter (PM_{10} and $PM_{2.5}$), which have an increasing impact on urban air quality.

Emissions of PM_{10} and $PM_{2.5}$ in the UK have been generally falling since the 1990s. This decline has been attributable to a move away from coal to gas in both electricity generation and domestic and commercial combustion, and the introduction of emission standards for road vehicles. In England, 83% of AQMA designations are now associated with road transport.

There are a total of seven AQMAs found within the North East. Two of these are in Newcastle, one around the B1318 and the A189 between Gosforth and West Jesmond; and a second in central Newcastle stretching to the River Tyne. There is one AQMA in central Gateshead stretching north to the River Tyne. There are also two in South Tyneside; one at Lean Lane around the junction with the B1516 and the A19, and a second in West Harton along Boldon Lane.

Within County Durham there are two AQMAs: along Pelton Fell Road in Chester-Le-Street; and in central Durham along Sunderland Road (A181) from Framwellgate in the west to Gilesgate Moor in the east.

The location of AQMAs in the North East are illustrated in **Figure 8.1**.

These AQMAs are all subject to ongoing monitoring. In Newcastle the most recent Air Quality Annual Status Report[62] produced in 2018 showed that the concentration of pollutants within the AQMA still exceed the annual mean concentration objective for NO_2 at both the City Centre AQMA and Gosforth AQMA.

Air quality in the Gosforth AQMA has overall improved slightly, with two of the six monitoring locations below the NO_2 annual mean objective in 2017 compared to 2016. However, two monitoring locations continue to record NO_2 concentrations in exceedance of the annual mean objective.

[62] Newcastle City Council (2018) 2018 Air Quality Annual Status Report [online] available at: < https://www.newcastle.gov.uk/sites/default/files/Air%20Quality%20Annual%20Status%20Report%202018.pdf> [accessed 28/02/20]

The trends recorded at City Centre AQMA show improvement at some locations and deterioration at others in terms of air quality. Outside, but close to, the City Centre AQMA, one monitoring location (DT32, City Road) continues to exceed the annual mean objective for NO_2. The exceedance outside the City Centre AQMA is an indication that the AQMA boundary may need to be amended.

In Gateshead, monitoring of NO_2 concentrations within and near the Town Centre AQMA indicated that most locations achieved objectives during 2005, but that there were some isolated exceedances, both inside and outside of the AQMA. In 2011 & 2012 the levels of NO_2 in Gateshead Town Centre fell slightly below the annual mean air quality objective, but not significantly.[63] Since 2011, the levels of NO_2 have fallen below the air quality annual mean objective and the monitoring data for 2017 shows that NO_2 levels continue to remain below the annual mean objective level within the AQMA. The monitoring data also indicates that there are no exceedances of the annual mean objective outside of the AQMA[64].

An AQMA was also declared in Portobello, Birtley in 2008, again this was due to measured levels of NO_2 exceeding the annual mean objective level of 40µg/m^3. As air quality showed a sustained improvement and fell below the annual mean objective, the Portobello AQMA was revoked in 2012 following a Detailed Assessment[65].

There has been continued compliance with national air quality objective levels for nitrogen dioxide at Lindisfarne Roundabout/ Leam Lane and at the Boldon Lane/Stanhope Road AQMAs in South Tyneside.[66]

The Chester-le-Street AQMA in Durham saw no exceedances in NO_2 in 2017 and it is proposed that the AQMA is now revoked. Whereas eight sites within the Durham City AQMA have recorded exceedances of the annual mean objective in 2017[67].

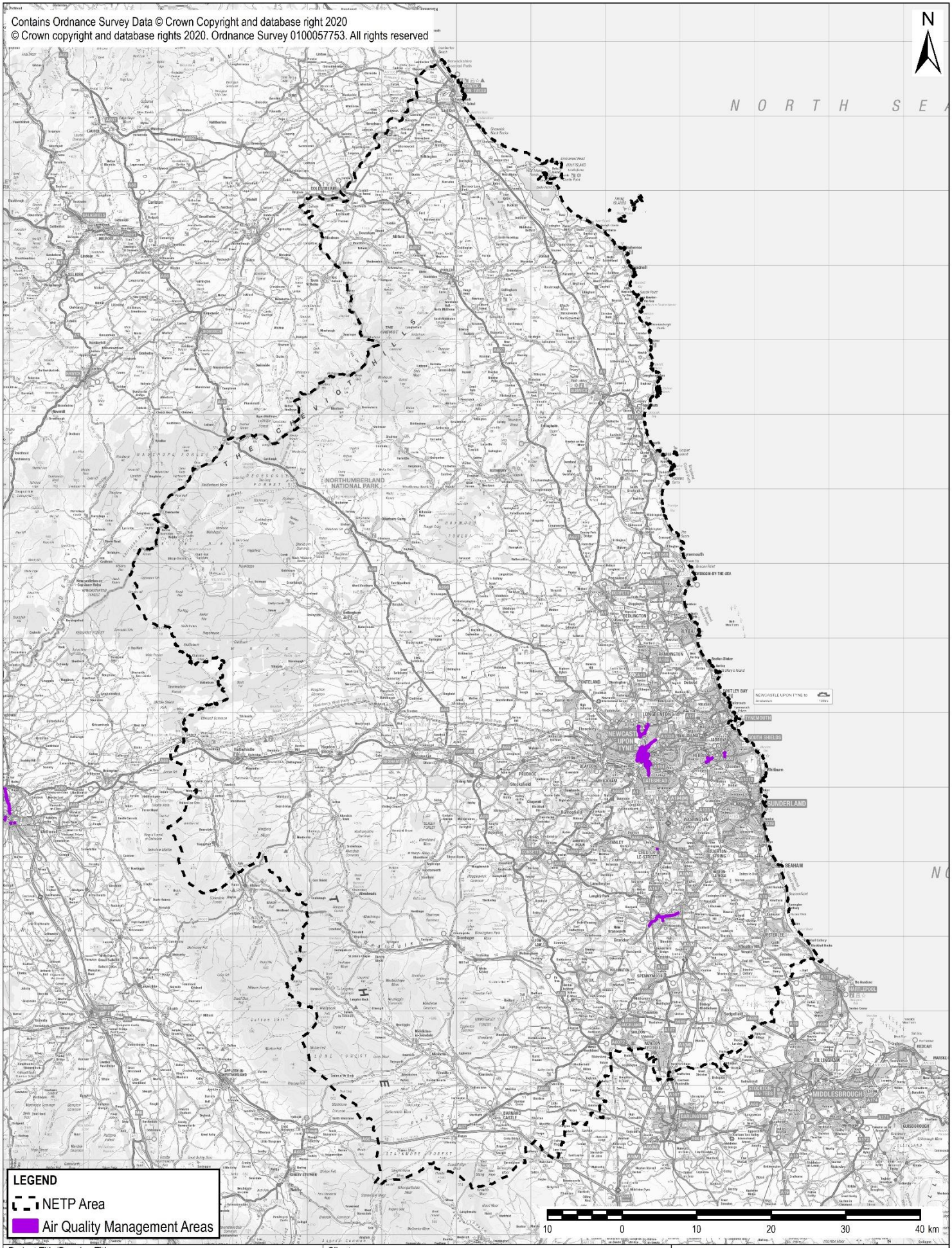
Monitoring data obtained from each of the North East's local authorities has shown that there are still significant air quality problems related to NO_2.

In addition to impacts on human health, air pollution from both local and diffuse sources can impact on ecological receptors through acid and nitrogen deposition. Ecological receptors include any living organisms other than humans, the habitat which supports such organisms or natural resources which could be adversely affected by environmental contaminations. For the purposes of this SEA and the Transport Plan, those of most significance are those which have national and European statutory designation.

Noise

Noise Action Plans have been identified for a number of major routes within Newcastle upon Tyne and Durham. Noise Action Plans are designed to assist in the management of environmental noise providing the direction of travel for managing noise; however, they do not propose any specific noise mitigation measures. Noise Action plans have been identified at specific locations along the A69, A1, A167, A191, A1058, A194, A184, A1018, A19, A690, A690 and the A1(M). Noise also has potential to impact on designated sites of European and national importance such as SSSIs, SACs and SPAs both directly and indirectly.

[63] Gateshead Council (2020) Air quality and pollution [online] available at: http://www.gateshead.gov.uk/Environment%20and%20Waste/protection/AirQuality/home.aspx [accessed 28/02/20]
[64] Gateshead Council (2018) Air Quality Annual Status Report (ASR) [online] available at: < https://www.gateshead.gov.uk/media/9230/2018-Air-Quality-Annual-Status-Report-ASR-/pdf/ASR_2018_Final.pdf?m=636681311264630000> [accessed 28/02/20]
[65] Gateshead Council (2018) Air Quality Annual Status Report (ASR) [online] available at: < https://www.gateshead.gov.uk/media/9230/2018-Air-Quality-Annual-Status-Report-ASR-/pdf/ASR_2018_Final.pdf?m=636681311264630000> [accessed 28/02/20]
[66] South Tyneside Council (2018) 2018 Air Quality Annual Status Report (ASR) [online] available at: <https://www.southtyneside.gov.uk/article/36142/Air-quality> [accessed 28/02/20]
[67] Durham County Council (2018) 2018 Air Quality Annual Status Report (ASR) [online] available at: https://www.durham.gov.uk/media/24209/2017-Air-Quality-Annual-Status-Report-ASR-/pdf/2017AirQualityStatusReport.pdf [accessed 29/02/20]



Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

AIR QUALITY MANAGEMENT AREAS

Client	TRANSPORT NORTH EAST STRATEGY UNIT	
Drawn: CN	Checked: JW	Approved: NCB
Date: 13/03/2020	Scale @ A4: 1:650,000	Purpose of Issue: DRAFT
Drawing Number: FIGURE 8.1		Rev: 01

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Air Quality and Noise: Summary of Future Baseline

There are a number of areas, particularly within the major conurbations of Newcastle upon Tyne, South Tyneside, and Durham City where the concentrations of pollutants are higher than mean annual government set objectives, and consequently there are AQMAs in place. Due to the presence of AQMAs these areas are likely to see a management of the concentrations of air pollutants in the future.

Nationally there has been a downward trend in NO_2 pollution although this decline has not been as much as previously expected. The reasons for this are complex and being investigated by Defra. One contributing factor is that although newer vehicles have higher European emissions standards, the proportion of diesel vehicles in use in the UK has increased significantly (in 2000 only 14% of new cars sold in the UK were diesel but by 2010 this proportion had risen to 46%). Diesel vehicles have higher NO_2 emissions than petrol vehicles.

Final proposals were consulted on in October 2019 for the delivery of measures to improve air quality in Newcastle, Gateshead and North Tyneside in response to the air quality direction received from the Secretary of State (discussed above in section 0). This resulted in the intention to introduce a charging Clean Air Zone covering Newcastle city centre affecting non-compliant buses, coaches, taxis (both Hackney Carriages and private hire vehicles), heavy goods vehicles and vans, to be enforced from 2021. This has the potential to lead to changes in concentrations of air quality pollutants in Newcastle city centre and the surrounding areas.

An ongoing increase in the use of electric and plug-in hybrid vehicles has the potential to reduce emissions from transport. More stringent emission standards on manufacturers and the bringing forward of the ban on the sale of new petrol, diesel and hybrid cars to 2035 (and potentially to 2032) by the UK Government will help accelerate this trend.

Durham and Newcastle upon Tyne have a number of Noise Action Plans in place along A roads. This means that currently objective limits on ambient noise set by government are being exceeded; however these are likely to be managed with action plans in place.

Climate Change and Flood Risk: Summary of Current Baseline

The main source of greenhouse gas emissions from the transport sector is the use of petrol and diesel in road transport. The Department of Energy and Climate Change 2013 'UK Greenhouse Gas Emissions, Final Figures, February 2013' report[68] identifies that between 1990 and 2013 there was relatively little overall change in the level of greenhouse gas emissions from the transport sector. It identifies that there was a slight increase up to 2007 and a slight decrease from 2008 onwards.

Source data from the Department of Energy and Climate Change suggests that the North East has higher per capita emissions in comparison to England as a whole since 2005. The North East has also seen a 54.3% reduction in the percentage of total emissions per capita between 2005 and 2016, greater than the reductions for England (37.6%).

The table below sets out the carbon dioxide emissions for industry, domestic, and transport sources, for each year from 2005 to 2013 in the North East. It also sets out the total per capita emissions per year and per capita emissions for road transport. As can be seen, there has been a steady decline in CO_2 emissions across all sectors. The area of largest decline has been in the industrial and commercial sectors (49.2% decrease) while the smallest decline has been in the transport sector (13.2% decrease). Of the local authorities in the North East, South Tyneside has the lowest carbon dioxide emissions from transport and Country Durham the highest.

[68] The Department of Energy and Climate Change (2013) UK Greenhouse Gas Emissions, Final Figures, [online] available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/407432/20150203_2013_Final_Emissions_statistics.pdf [accessed 28/02/20]

Table: CO_2 emissions from the North East by source and year

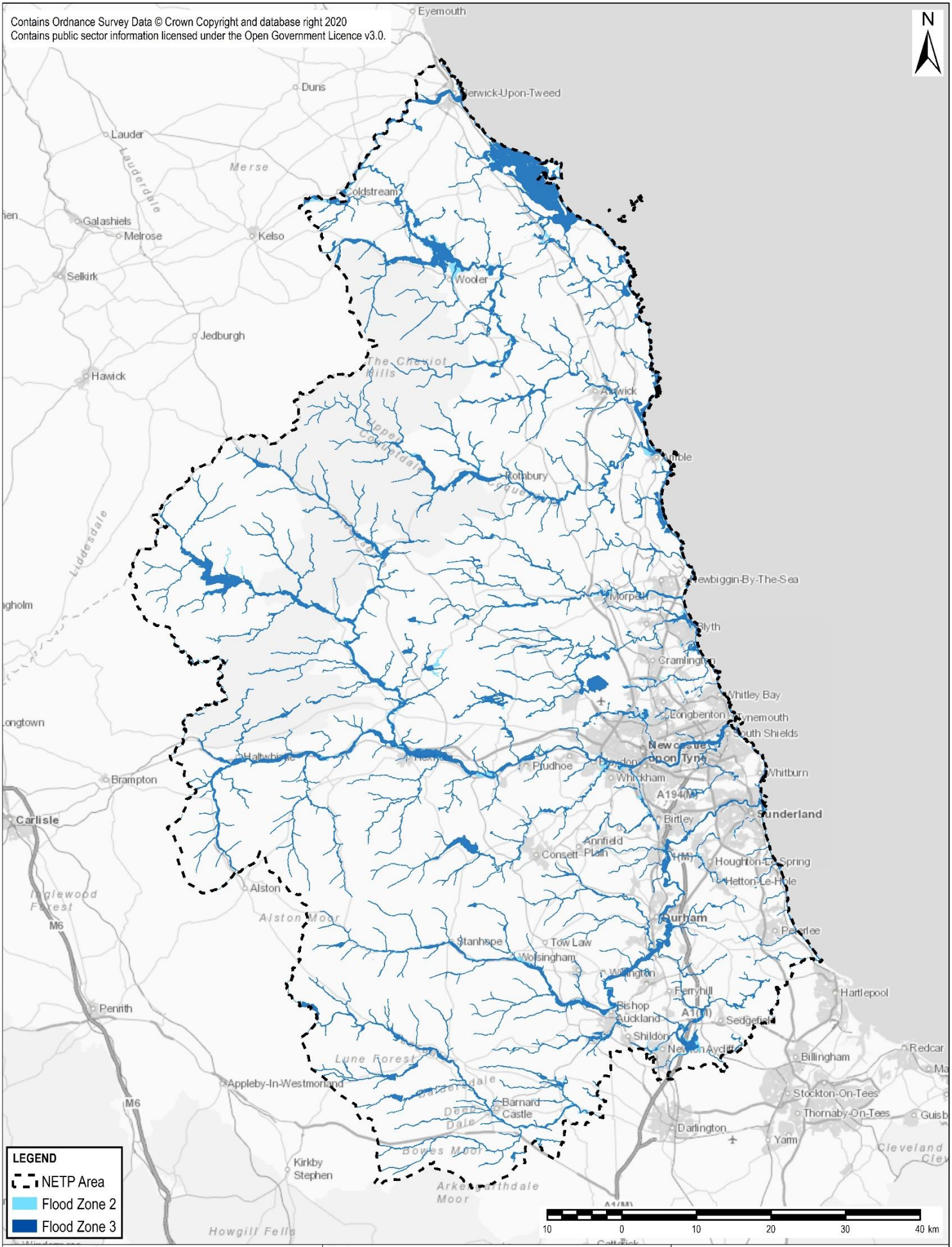
Year	Industrial and commercial	Domestic	Transport	Of which roads	Total	Transport per capita	Road Trans-port per capita	Total per capita
	Total carbon dioxide emissions (Kilotonnes CO_2)					Per capita emissions (tonnes CO_2)		
2005	8,846	4,993	3,636	3,530	17,475	1.921	1.864	9.230
2006	8,774	4,930	3,582	3,474	17,285	1.888	1.831	9.111
2007	8,490	4,734	3,606	3,500	16,830	1.893	1.837	8.833
2008	8,411	4,748	3,429	3,323	16,588	1.795	1.739	8.681
2009	7,365	4,254	3,319	3,215	14,937	1.732	1.678	7.795
2010	7,825	4,540	3,275	3,170	15,640	1.701	1.646	8.120
2011	7,474	3,946	3,230	3,127	14,650	1.671	1.618	7.577
2012	6,789	4,258	3,207	3,103	14,255	1.654	1.601	7.353
2013	4,494	4,203	3,159	3,058	11,855	1.624	1.572	6.094
Total Percentage Change	-49.2%	-15.9%	-13.2%	-13.4%	-32.2%	-15.8%	-15.7%	-33.9%

Carbon dioxide from different sources of transport emissions varies between the councils within the North East and is dependent on the infrastructure present within the area, for example there are no carbon dioxide emissions from motorways within Northumberland or North Tyneside as there are no motorways within either of these areas. The table below sets out the carbon dioxide emissions from the transport sources in each of the council areas.

Table: CO_2 emissions by transport type within each local authority area

	Transport sources kt CO_2 per year					
	Road Transport (A roads)	Road Transport (Motorways)	Road Transport (Minor Roads)	Diesel Railways	Transport Other	Transport Total
County Durham	433.9	217.5	248.4	34.5	4.3	938.6
Gateshead	196.4	24.4	184.5	3.8	1.3	410.4
Newcastle	185.4	10.8	191.9	3.8	11.7	438
North Tyneside	148.5	-	132.1	4.6	1.3	286.4
Northumberland	431.4	-	123.0	34.4	2.8	591.6
South Tyneside	94.1	3.1	76.2	2.3	0.6	176.2
Sunderland	202.1	9.9	182.9	0.9	1.5	397.2

Figure 9.1 sets out the risk of flooding from rivers and sea in each of the seven council areas which make up the North East.



Project Title/Drawing Title

ISA FOR THE NE TRANSPORT PLAN

FLOOD RISK ZONES

Client	TRANSPORT NORTH EAST STRATEGY UNIT	
Drawn: CN	Checked: TD	Approved: NCB
Date: 13/03/2020	Scale @ A4: 1:650,000	Purpose of Issue: DRAFT
Drawing Number: FIGURE 9.1		Rev: 01

AECOM
Midpoint
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

File Name:i:\5004 - Information Systems\6XX_NECA_Transport_Plan\02_Maps\Figure 9-1 - Flood Risk Zones.mxd

Climate Change and Flood Risk: Summary of Future Baseline

Climate change has the potential to increase the occurrence of extreme weather events in the North East with increases in mean summer and winter temperatures, increases in mean precipitation in winter and decreases in mean precipitation in summer. At a regional level the UK Climate Projections (UKCP18) team have estimated that the average temperature may increase by 1.5°C and 2.5°C in summer and winter, respectively; and that by the 2050's, under a medium emissions scenario – mean winter precipitation may increase by 30%[69].

This is likely to increase the risks associated with climate change such surface water flooding. Additionally, climate change is predicted to cause rises in sea levels which will increase the risk of flooding from the sea in coastal areas. As such there will be an increased need for resilience and adaptation. It is likely that the risk of flooding to areas set out in **Figure 9.1** will increase in severity and periodicity.

Climate change also has the potential for significant impacts on various habitats located within the North East. The Inter Agency Climate Change Forum produced a report on the summary of impacts to biodiversity[70] within the UK as a result of climate change. The report notes that assessing the impacts of climate change on terrestrial and freshwater biodiversity is not easy, as plants and animals are influenced by other pressures, such as atmospheric pollution and land use, and different factors can work in combination to bring about change. However, changes are beginning to be observed across a range of species and habitats in the UK that have been related to climate change. It notes that one of the primary observed impacts of climate change upon species within the UK has been a northward movement of many warmth-loving species, and some retreat of northerly distributed species. There have also been concomitant changes in abundance observed in some cases.

In terms of climate change mitigation, per capita emissions are likely to decrease as energy efficiency measures, renewable energy production and new technologies become more widely adopted. However, road transport and domestic sources are likely to be increasing contributors proportionally.

An ongoing increase in the use of electric and plug-in hybrid vehicles has the potential to reduce emissions from transport. More stringent emission standards on manufacturers and the bringing forward of the ban on the sale of new petrol, diesel and hybrid cars to 2035 (and potentially to 2032) by the UK Government will help accelerate this trend.

Population: Summary of Current Baseline

Population change

According to the most recent census data available, between the 2001 and 2011 census, the population growth seen in each of the administrative areas covering the North East is lower than that of the England average. Newcastle upon Tyne has shown the largest increase in population at 7.37%, this is 0.53% lower than that of the national average. In comparison Northumberland, County Durham, and Gateshead have shown a much slower population growth of 2.80%, 3.86%, and 4.53% respectively. The population in South Tyneside and Sunderland decreased by 3.05% and 1.89% respectively since the 2001 census. This is shown in the table below.

[69] Data released 26th November 2018 [online] available at: https://www.metoffice.gov.uk/research/collaboration/ukcp [accessed 28/02/20]
[70] Natural England have produced a national biodiversity climate change vulnerability model which provides more information on a spatially explicit assessment of the relative vulnerability of priority habitats. Available [online] at: http://publications.naturalengland.org.uk/publication/5069081749225472 [accessed 28/02/20]

Table: Population change 2001 – 2011

Date	England	County Dur-ham	Gates-head	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland
2001	49,138,831	493,470	191,151	259,536	191,659	307,190	152,785	280,807
2011	53,012,456	513,242	200,214	280,177	200,801	316,028	148,127	275,506
Population Change 2001-2011	+7.9%	+3.85%	+4.53%	+7.37%	+4.56%	+2.80%	-3.05%	-1.89%

The table below outlines the population gender structure, and density of the population for the North East. With the exception of Newcastle upon Tyne, all areas have a slightly higher proportion of females compared to males. Northumberland has the lowest population density (0.6 people per ha) while Newcastle upon Tyne has the highest (25.2 people per ha). The average for the North East is 2.5 people per ha.

Table: Population gender structure / population density

	Male	Female	Total	Area (ha)	Density (people per ha)
North East	957,800	994,700	1,952,500	786,221	2.5
County Durham	254,200	263,600	517,800	223,270	2.3
Northumberland	154,300	161,700	316,000	507,835	0.6
Tyne and Wear	549,200	569,500	1,118,700	55,116	20.3
Gateshead	98,400	102,100	200,500	14,408	13.9
Newcastle upon Tyne	146,100	143,700	289,800	11,512	25.2
North Tyneside	98,000	104,800	202,700	8,518	23.8
South Tyneside	71,800	76,900	148,700	6,715	22.1
Sunderland	134,900	142,000	276,900	13,964	19.8

Age structure

The population age structure varies across the North East. All seven local authorities have a slightly lower proportion of the population within the 0-15 age group than the national average of 19%. North Tyneside, Gateshead, and South Tyneside all have 18% while the remainder have 17%. The majority of councils within the North East are comparable with the national average of residents within the 16-24 age group (12%); however both North Tyneside and Northumberland have a slightly lower proportion of residents within this group (10%). In contrast, Newcastle upon Tyne shows significantly more (20%).

The England average for the proportion of the population within the 25-44 age group is 28% and the North East average is 25%. All North East authorities show a lower proportion than the national average. Gateshead, Newcastle upon Tyne and North Tyneside are broadly comparable to the national average (27%), while South Tyneside, Sunderland, and County Durham all have a lower proportion, which is comparable to the North East average (25%). Northumberland shows the lowest number of residents in this age group (23%).

The national average within the 45-59 age group is 19% and the North East average is 21%. With the exception of Newcastle upon Tyne (17%) all other North East councils have a higher proportion of residents within this age category than the national average; of these Northumberland has the highest at 28%. This same pattern occurs in the 60+ age group; the England average for this group is 22%.

Newcastle has a lower proportion than this (19%), while the rest all have higher percentages. Northumberland again has the highest proportion (28%). This is shown in the table below.

Table: Age structure[71]

	England	North East	County Durham	Gates-head	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland
0-15	19%	18%	17%	18%	17%	18%	17%	18%	17%
16-24	12%	12%	12%	11%	20%	10%	10%	11%	12%
25-44	28%	25%	25%	27%	27%	27%	23%	25%	25%
45-59	19%	21%	21%	20%	17%	21%	23%	22%	21%
60+	22%	24%	25%	24%	19%	24%	28%	25%	24%

Housing

Sunderland, South Tyneside, Newcastle upon Tyne, and Gateshead all have a lower percentage of the population owning properties than the national average. In contrast, all of the North East local authorities have a higher percentage of the population living in socially rented housing than the national average. With the exception of Newcastle upon Tyne, all local authorities also have a lower percentage of residents living in privately rented housing than the national average.

The ratio of median house price to median gross annual workplace-based earnings illustrates the relationship between the average income in the area to average house price in the area; the affordability ratio for the local council areas compared with the national average of 8 in 2018 was as follows[72]:

- County Durham: 4.48
- South Tyneside: 5.78
- Gateshead: 5.32
- Sunderland: 4.86
- Newcastle upon Tyne: 5.75
- Northumberland: 6.61
- North Tyneside: 6.12
- England: 8

The affordability ratios all councils within the North East are less than the average ratio of 8 for England. This suggests that homes are more affordable for local people in these areas than the national average.

It will be important that plan-making anticipates future demand for development and facilitates the delivery of housing and employment sites. A review of the most recent strategic housing market assessments (SHMA) are outlined below.

County Durham

The County Durham SHMA 2018[73] identified a housing need of 1,287 dwellings per annum. The recent average level of completions has been 1,308 dwellings per annum.

71 ONS (2011) Census 2011, Age structure (KS102EW)

72 Office for National Statistics (2018) House price to workplace-based earnings ration [online] available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/ratioofhousepricetoworkplacebasedearningslowerquartileandmedian> [accessed 05/03/2020]

73 Opinion Research Services (2018) County Durham Strategic Housing Market Assessment 2018 [online] [accessed 28/02/20]

Gateshead and Newcastle

The Gateshead & Newcastle upon Tyne SHMA 2017[74] identified an annual need for Gateshead over the period 2015-30 of 535 dwellings per annum and 1,040 dwellings per annum for Newcastle upon Tyne for the same period.

North Tyneside

The SHMA for North Tyneside[75] identifies an OAHN of 792 dwellings per annum. This compares to an average annual completion rate of 425 over the period 2009/2010 – 2012/2013. The scale of delivery required to meet OAHN is a c. 86% increase in the historic average.

Northumberland

The Northumberland SHMA[76] which was partially updated in 2018 identifies a minimum local housing need of 717 dwellings per annum over the 10-year period 2016-2026. However, a need for 885 dwellings each year has been established in order to match the Council's ambitions.

South Tyneside

The SHMA for South Tyneside[77] identifies a housing need of 494 dwellings per annum over the period 2008-2033. This compares to an average annual completion rate of 480 per year between 2007/2008 – 2011/2012. The scale of delivery should be much the same as historic completions.

Sunderland

The SHMA for Sunderland[78] identifies a housing need of 768 dwellings per annum over the period 2015-2033. In 2015/2016 there were 889 net housing completions and in 2014/2015 there were 907 net housing completions.

Northumberland National Park

Northumberland National Park has an identified need of 160 dwellings over their 20-year planning period 2017-2037, an average of 8 per annum.

Education

The table below shows the highest level of qualification achieved by residents in the local authority areas compared with the England average.

Table: Highest level of qualification[79]

Date	County Durham	Gates-head	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland	North East	England
No qualifications	27.5%	28.0%	23.6%	23.7%	23.9%	28.0%	29.1%	26.5%	22.5%
Level 1 qualifications	13.4%	14.3%	11.3%	14.0%	13.7%	14.6%	15.5%	13.7%	13.3%

[74] Opinion Research Services (2017) Gateshead & Newcastle upon Tyne Strategic Housing Market Assessment 2078 [online] available at: < https://www.gateshead.gov.uk/media/7831/Strategic-Housing-Market-Assessment-SHMA-/pdf/SHMA-09-2017-gateshead-newcastle.pdf?m=636619965701470000> [accessed 28/02/20]
[75] North Tyneside Council (2014) *2014 Strategic Housing Market Assessment North Tyneside Council Final Report* [online] available at: https://my.northtyneside.gov.uk/sites/default/files/web-page-related-files/Strategic%20Housing%20assessment.pdf [accessed 03/03/2020]
[76] Northumberland County Council (2018) Partial SHMA Update [online] available at: < https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/planning%20policy/Studies%20and%20Evidence%20Reports/Housing%20Studies/2.%20SHMA/NCC-SHMA-June-2018.pdf> [accessed 02/03/2020]
[77] South Tyneside Council (2013) Strategic Housing Market Assessment [online] available at: < https://www.southtyneside.gov.uk/article/36020/Supporting-Documentation-and-Evidence-Base-Studies> [accessed 02/03/2020]
[78] Sunderland City Council (2017) Strategic Housing Market Assessment [online] available at: < https://www.sunderland.gov.uk/media/20441/Sunderland-Strategic-Housing-Market-Assessment-Update-2017-/pdf/22_Sunderland_Strategic_Housing_Market_Assessment_Update_(2017).pdf?m=636646119703700000> [accessed 02/03/20]
[79] ONS (2011) Census 2011, Highest Level of Qualification (QS501EW)

Date	County Durham	Gates-head	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland	North East	England
Level 2 qualifications	16.0%	15.5%	12.5%	16.1%	16.5%	16.2%	16.2%	15.7%	15.2%
Apprentice-ship	4.2%	5.2%	3.4%	5.3%	4.5%	6.1%	5.0%	4.7%	3.6%
Level 3 qualifications	13.6%	11.3%	17.1%	11.9%	12.1%	12.0%	12.0%	13.1%	12.4%
Level 4 & above	21.5%	21.5%	27.2%	25.3%	25.6%	19.2%	18.2%	22.2%	27.4%
Other qualifications	13.4%	4.1%	4.9%	3.7%	3.8%	3.9%	4.0%	4.1%	5.7%

All council areas have a higher proportion of residents with no qualifications than the national average of 22.5%. South Tyneside has the highest proportion of residents with no qualifications (29.1%) with Newcastle upon Tyne and North Tyneside having an only slightly higher proportion than the national average (23.7%).

The national average for residents with Level 4 or above qualifications is 27.4%. In Newcastle upon Tyne, 27.2% of residents hold level 4 or above qualifications and as such, is broadly comparable with national averages. In contrast, the remainder of North East council areas have a lower proportion of residents holding level 4 qualifications. In particular, South Tyneside and Sunderland show a much lower proportion - 19.2% and 18.2% respectively - of residents with the highest levels of qualifications.

In comparison, with the exception of Newcastle, which is comparable with the national average, all council areas show a higher proportion of residents who have undertaken apprenticeships.

Employment

The table below demonstrates the occupation of working-age residents. The overall occupation profile suggests that there are fewer managers, directors and senior officials in the North East than the national average; and with the exception of Newcastle upon Tyne and North Tyneside, there are also fewer professional occupations.

Table: Employment occupation of residents aged 16-74[80]

	County Durham	Gates-head	Newc-astle upon Tyne	North Tyne-side	Northu-mberland	South Tyne-side	Sunder-land	North East	England
Managers, directors and senior officials	8.9%	8.4%	8.0%	8.5%	10.5%	7.8%	7.6%	8.6%	10.9%
Professional occupations	14.5%	15.2%	20.4%	17.7%	15.5%	13.2%	12.2%	15.2%	17.5%
Associate professional and technical occupations	10.7%	11.4%	10.8%	12.1%	11.5%	11.0%	9.9%	11.0%	12.8%
Administrative and secretarial occupations	11.3%	13.0%	11.3%	14.5%	11.5%	13.1%	12.7%	11.9%	11.5%
Skilled trades occupations	12.6%	11.4%	9.4%	10.5%	13.0%	12.6%	12.1%	11.9%	11.4%
Caring, leisure and other service occupations	10.3%	9.4%	9.0%	9.0%	10.6%	10.4%	10.0%	10.2%	9.3%
Sales and customer	9.2%	11.1%	11.4%	10.7%	8.6%	10.6%	12.3%	10.4%	8.4%

[80] ONS (2011) *Industry 2011* (KS608EW) [online] available at: http://www.nomisweb.co.uk/query/construct/submit.asp?forward=yes&menuopt=201&subcomp

service occupations									
Process plant and machine operatives	10.2%	8.3%	6.3%	6.9%	7.8%	9.5%	9.9%	8.7%	7.2%
Elementary occupations	12.3%	11.8%	13.4%	10.1%	11.0%	11.7%	13.3%	12.2%	11.1%

In contrast, with the exception of Newcastle upon Tyne and North Tyneside, there are higher proportions of people working in sales and customer service occupations, and also process plant and machine operatives than the national average.

Access and modes of transport

The table below illustrates the various methods employed by those commuting to work. The majority of council areas have lower proportions of residents working from home than national averages. In contrast Northumberland has a higher proportion of working residents who are employed from home compared to the North East and national averages. South Tyneside and Newcastle upon Tyne both show lower proportions of residents commuting by car than the national average. This may reflect that these are large conurbations with more comprehensive public transport networks.

In contrast, the remainder of the areas either have a similar proportion of residents commuting by car to the national average (Gateshead, North Tyneside) or higher than national average proportion of residents commuting by car. The majority of North East council areas also have a higher proportion of residents traveling by bus than national average. Regarding active travel all council areas have lower than national average bicycle use. In this respect, Gateshead, Northumberland, and Sunderland show the lowest level of bike use. In contrast travel by foot is broadly comparable to national average.

Table: Method of travel to work[81]

	County Durham	Gateshead	New-castle upon Tyne	North Tyne-side	Northumberland	South Tyne-side	Sunderland	North East	England
Work from home	4.2%	3.1%	3.3%	3.4%	6.3%	2.4%	2.5%	3.7%	5.4%
Underground, metro, light rail, tram	0.1%	4.7%	5.4%	9.0%	0.5%	8.9%	2.3%	2.5%	4.1%
Train	0.9%	0.8%	1.2%	1.5%	1.3%	1.7%	0.8%	1.2%	5.3%
Bus, minibus or coach	6.1%	15.4%	18.6%	9.1%	5.2%	9.7%	12.7%	9.3%	7.5%
Taxi	0.7%	0.5%	0.9%	0.8%	0.4%	0.5%	0.7%	0.8%	0.5%
Motorcycle/ scooter/ moped	0.5%	0.4%	0.3%	0.5%	0.5%	0.5%	0.4%	0.4%	0.8%
Car or van	67.7%	57.4%	47.6%	57.5%	65.4%	56.6%	60.9%	61.7%	57.0%
Bicycle	1.0%	1.5%	2.8%	2.5%	1.5%	2.2%	1.3%	1.8%	3.0%
On foot	10.4%	9.2%	13.4%	8.3%	11.5%	9.4%	9.8%	10.6%	10.7%
Other method	0.6%	0.6%	0.7%	1.0%	1.0%	2.0%	0.8%	0.9%	0.6%

[81] ONS (2011) Census 2011, Method of Travel to Work (QS701EW)

Population: Summary of Future Baseline

The slow rate of population growth in the North East, and in some areas, population decline is likely to continue. This will exacerbate the comparatively older population age structure than national average. As such it is important to support, create, and maintain future employment opportunities in the area to ensure older residents are supported, and the population age structure remains balanced. An effective transport system across the counties has a strong role to play ensuring a strong local economy and encouraging young people to move to, and stay within, the area.

Human Health: Summary of Current Baseline

Deprivation

Deprivation can directly affect people's health, and as such is an important determinant of general health of the population. There are a number of methods for estimating levels of deprivation. The 2011 census statistics measure deprivation across four 'dimensions' of deprivation[82] including: any member of a household not a full-time student is either unemployed or long-term sick; education (no person in the household has at least level 2 education, and no person aged 16-18 is a full-time student); health and disability (any person in the household has general health 'bad or 'very bad' or has a long term health problem); and housing (household's accommodation is either overcrowded, with an occupancy rating -1 or less, or is in a shared dwelling, or has no central heating).

Table: Households by deprivation dimensions

	Not deprived in any dimension	Deprived in 1 dimension	Deprived in 2 dimensions	Deprived in 3 dimensions	Deprived in 4 dimensions
County Durham	39.3%	30.8%	23.2%	6.4%	0.3%
Gateshead	38.8%	31.2%	22.6%	6.9%	0.4%
Newcastle	40.5%	31.2%	20.7%	6.9%	0.6%
North Tyneside	43.4%	31.1%	20.0%	5.2%	0.4%
Northumberland	43.6%	32.4%	19.3%	4.4%	0.3%
South Tyneside	36.5%	32.3%	23.7%	7.0%	0.5%
Sunderland	35.7%	31.9%	24.4%	7.4%	0.5%
North East	39.7%	31.6%	22.0%	6.3%	0.4%
England	42.5%	32.7%	19.1%	5.1%	0.5%

The table above shows household deprivation information across the North East, and England averages. Northumberland and North Tyneside have proportionally fewer households which are deprived in any dimension compared to the national average, while the remainder of the North East council areas have proportionally more. As such, all council areas have more households deprived in 2 and 3 dimensions than the national average. This suggests that overall, residents within the North East are more likely to experience deprivation than in other areas of the country.

Deprivation can also be measured using the English Indices of Deprivation (IMD)[83] which is a relative measure of deprivation mapped at the Lower Super Output (LSOA). LSOAs are statistical geographical areas with an average of approximately 1,500 residents.

[82] ONS (2011) Census 2011, Households by Deprivation Dimensions, 2011 (QS119EW)
[83] DCLG (2015) English indices of deprivation 2015 [online] available at: https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015

There are 32,844 LSOAs in England. These are ranked from most deprived to least deprived whereby the LSOA with a rank of 1 is the most deprived, and the LSOA with a rank of 32,844 is the least deprived.

This information can then be divided into ten equal groups and displayed as deciles. LSOAs in decile 1 fall within the most deprived 10% of LSOAs nationally and LSOAs in decile 10 fall within the least deprived 10% of LSOAs nationally.

Figure 11.1 displays the average LSOA deprivation level across the North East authorities as deciles. County Durham, South Tyneside, and Sunderland all have a score of 4 which shows, on average, that the LSOAs within these authorities are in the 40% most deprived nationally. Newcastle and Gateshead both show slightly lower levels of deprivation as they sit on average within the 5th decile, while North Tyneside and Northumberland show the lowest levels of deprivation as these sit within the 6th decile.

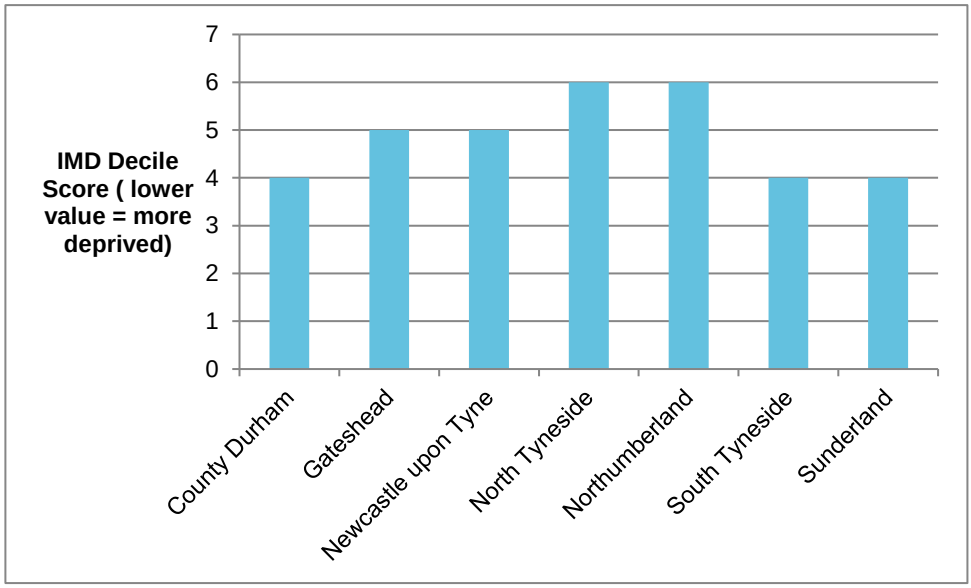


Figure 11.1: Average LSOA deprivation score across the North East authority areas

The values given here are averages across the whole of each council area, and as such, there will be LSOAs within each of these authorities with higher levels or lower levels of deprivation than these averages would suggest.

Figure 13.1 below presents a map of the overall distribution of Indices of Multiple Deprivation in the North East.

Life expectancy

Figure 11.2 shows the life expectancy at birth for males and females across the North East council areas and England averages.

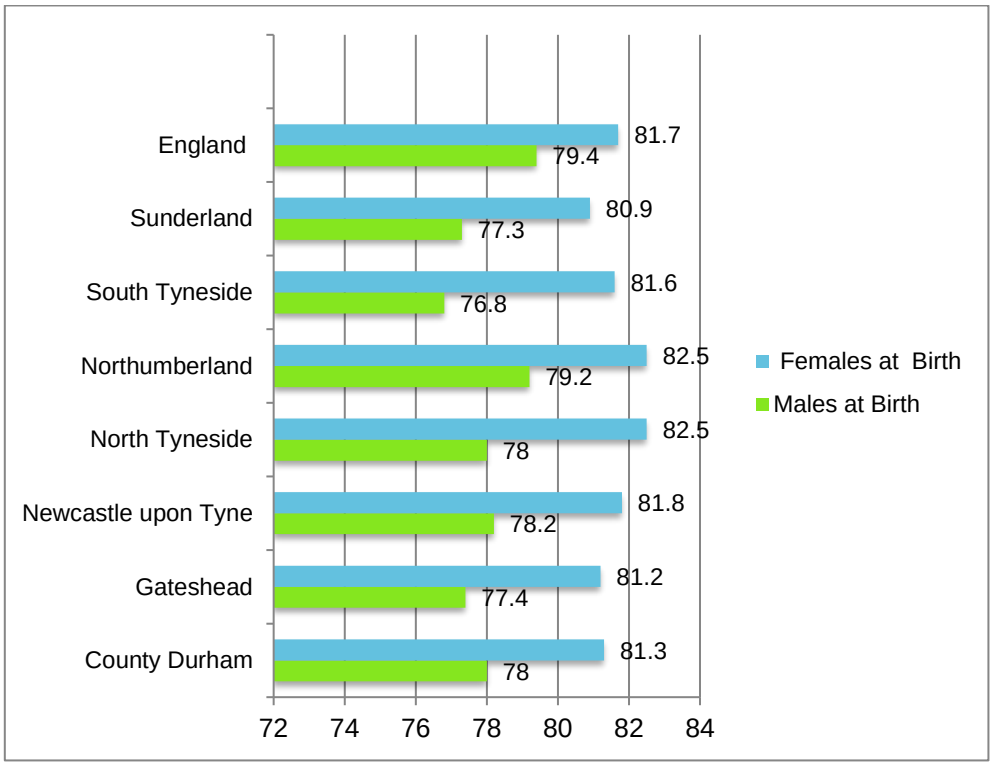


Figure 11.2: Life expectancy at birth for males and females[84]

Northumberland and North Tyneside both have female life expectancy rates which are slightly longer than the national average, with a male life expectancy which is slightly shorter. The remainder of the North East council areas all have female life expectancy rates which are slightly shorter or comparable to the national average whereas male life expectancy is significantly shorter. South Tyneside is the area with the lowest male life expectancy, which is 2.6 years shorter than the national average.

Proportion of the population in good health

Figure 11.3 displays the proportion of the population within each category of health. With the exception of Newcastle, all areas have a lower proportion of residents who consider themselves to be in very good health than the national average. Correspondingly all areas have a higher proportion of people who consider themselves to be in bad health. Sunderland has the highest proportion of residents who consider themselves in bad, or very bad health.

Broadly speaking there is a similar proportion of people in fair health across all areas and this is slightly above the national average.

[84] Public Health England (2013) *Health Profiles* [online] available at: http://fingertips.phe.org.uk/profile/health-profiles/data#page/0/gid/1938132695/pat/6/par/E12000001/ati/101/are/E06000047/iid/90641/age/1/sex/4

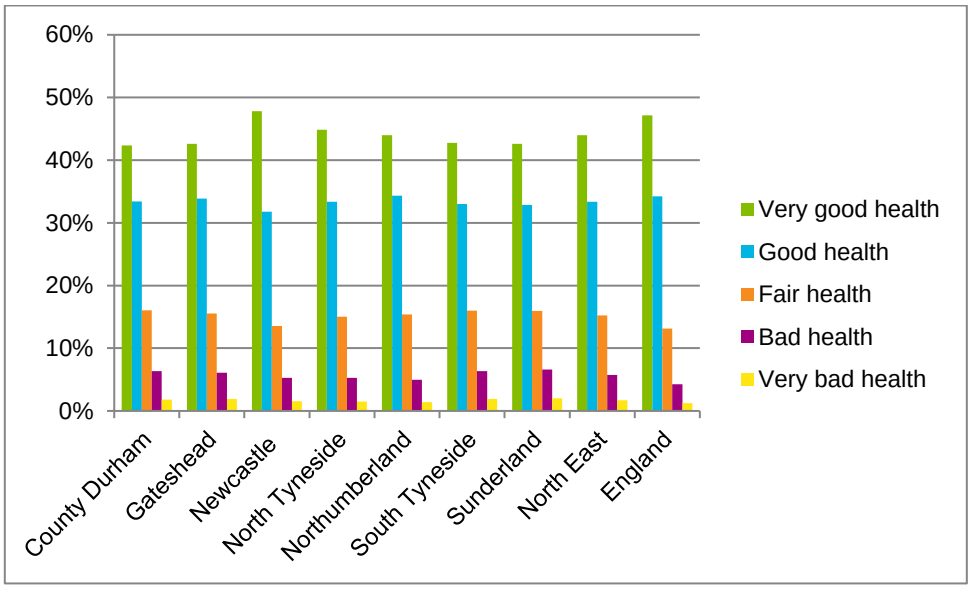


Figure 11.3 Population within each health category

Disability

The table below displays the prevalence of disability across residents in the North East council areas, as well as the North East and England averages. All council areas have a higher proportion of residents than the national average whose day to day activities are limited a lot by disability. Correspondingly all council areas have a lower proportion of residents whose day to day activities are not limited by disability than the national average.

Table: Disability[85]

	Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities not limited
County Durham	12%	11%	76%
Gateshead	11%	11%	78%
Newcastle upon Tyne	10%	9%	81%
North Tyneside	10%	11%	79%
South Tyneside	12%	11%	77%
Sunderland	12%	11%	77%
North East	11%	11%	78%
England	8%	9%	82%

Obesity

The table below shows the proportion of adults classed as obese, and those that smoke in the North East and in England. Newcastle upon Tyne has a significantly lower proportion (20.5%) of obese adults than the national average (26.7%). North Tyneside and Northumberland also have slightly lower proportions of obese adults than national averages. In contrast, the remainder of the council areas all have a higher than national average proportion of obese adults. Sunderland has the highest levels of obesity at 28.6% of residents.

[85] ONS (2011) Census 2011, QS303EW - Long-term health problem or disability

Table: Adult obesity and smoking levels[86]

	County Durham	Gates-head	New-castle upon Tyne	North Tynesid e	Northu mberlan d	South Tynesid e	Sunder-land	North East	England
Adult Obesity	27.3%	27.2%	20.5%	25.4%	26.3%	27.5%	28.6%	26.7%	27.3%
Adult Smokers	20.6%	21.0%	19.6%	18.6%	16.5%	19.5%	22.8%	18.0%	20.6%

In Northumberland 16.5% of residents smoke. This is lower than the national average of 18.0%. However, the other North East council areas have proportionally higher levels of smoking than the national average. Sunderland has the highest proportion with 22.8% of residents smoking.

Human Health: Summary of Future Baseline

Between 2000 and 2013 Life expectancy at birth in the North East increased by 2.4 years for females and 3.5 years for males.[87] This increase in life expectancy is likely to continue (although it should be noted that recently, improvements have stalled). With a proportionally older population ailments associated with age such as cancer and dementia are likely to place an increasing burden on health care[88].

An ageing population may increase the prevalence of disability in the population – which is currently higher than the national average; and the high proportion of smoking and obesity in some parts of the North East may also increase burden on healthcare. Deprivation in the North East council areas is also higher than the national average, and without improved access to socio-economic opportunities in the area, this may continue.

Equalities baseline

The baseline provides a profile of people within the North East with Protected Characteristics and provides an evidence base for particular issues identified that are likely to affect these groups. The baseline data draws on the population and health data discussed above, with additional information also included.

Age: young people and older people

All seven North East council areas have a slightly lower proportion of young people (less than 15 years old) in their population structures than the national average of 19%. The majority of council areas within the North East are comparable with the national average of residents within the 16-24 age group (12%); however both North Tyneside and Northumberland have a slightly lower proportion of residents within this group (10%). In contrast, Newcastle upon Tyne shows a significantly higher proportion (20%).

The national average within the 45-59 age group is 19% and the North East average is 21%. With the exception of Newcastle upon Tyne (17%) all other council areas have a higher proportion of residents within this age category than the national average; of these Northumberland has the highest at 28%.

The same pattern occurs in the proportion of the population over the age of 60; the England average for this age group is 22%, while Newcastle has a lower proportion than this (19%), the remainder of the North East council areas have a higher number of old people within their population structures. Northumberland again has the highest proportion (28%).

In summary, North East council areas generally have a lower proportion of younger people and a higher proportion of older people than the national average. The exception to this is the conurbation of

[86] Public Health England (2014) *Health Profiles* [online] available at: http://fingertips.phe.org.uk/profile/health-profiles/data#page/0/gid/1938132694/pat/6/par/E12000001/ati/101/are/E06000047/iid/90641/age/1/sex/4
[87] Ibid23
[88] Select Committee on Public Service and Demographic Change (2013) Ready for Ageing? [online] available at: http://www.parliament.uk/business/committees/committees-a-z/lords-select/public-services-committee/report-ready-for-ageing/

Newcastle upon Tyne, which has a significantly higher proportion of younger people and a slightly lower proportion of older people than the national average.

BAME

With the exception of Newcastle upon Tyne, the council areas in the North East have a significantly higher proportion of residents who identify as white British than the national average. Subsequently there are a proportionally lower number of residents belonging to a BAME group in the majority of the council areas than the national average; however, Newcastle has comparable, and in some cases higher numbers, of residents identifying as Bangladeshi, 'other' Asian, or Arab than the national average. Additionally, Newcastle also has a significantly higher Chinese population (2.15%) compared to the national average of 0.72%. This is presented in the table below.

Table: Ethnic Groups[89]

	County Durham	Gates-head	New-castle upon Tyne	North Tyne-side	Northu m-berland	South Tyne-side	Sunder-land	North East	England
White: British	96.58%	94.08%	81.92%	95.09%	97.17%	95.07%	94.81%	93.63%	79.75%
White: Irish	0.24%	0.30%	0.65%	0.30%	0.26%	0.21%	0.22%	0.31%	0.98%
White: Gypsy or Irish Traveller	0.09%	0.04%	0.06%	0.01%	0.05%	0.01%	0.03%	0.06%	0.10%
White: Other White	1.25%	1.85%	2.86%	1.23%	0.94%	0.65%	0.87%	1.33%	4.58%
White and Black Caribbea n	0.19%	0.21%	0.30%	0.22%	0.16%	0.22%	0.20%	0.23%	0.78%
White and Black African	0.06%	0.13%	0.31%	0.19%	0.07%	0.15%	0.09%	0.14%	0.30%
White and Asian	0.21%	0.26%	0.57%	0.30%	0.20%	0.30%	0.22%	0.31%	0.63%
Other Mixed	0.14%	0.18%	0.35%	0.19%	0.10%	0.22%	0.14%	0.19%	0.53%
Asian/ Asian British: Indian	0.27%	0.46%	1.81%	0.55%	0.30%	0.43%	0.63%	0.61%	2.63%
Asian/ Asian British: Pakistan i	0.09%	0.31%	2.27%	0.16%	0.11%	0.29%	0.24%	0.76%	2.10%
Asian/ Asian British: Bangla deshi	0.05%	0.12%	1.67%	0.34%	0.09%	1.04%	0.75%	0.42%	0.82%
Asian/As ian British: Chinese	0.31%	0.53%	2.15%	0.43%	0.14%	0.16%	0.56%	0.55%	0.72%

[89] ONS (2011) - KS201EW - Ethnic group [online] available at: http://www.nomisweb.co.uk/home/search.aspx?context=&term=KS201EW

	County Durham	Gates-head	New-castle upon Tyne	North Tyne-side	Northu m-berland	South Tyne-side	Sunder-land	North East	England
Asian/Asian British: Other	0.23%	0.45%	1.76%	0.42%	0.20%	0.31%	0.48%	0.53%	1.55%
Black /Black British: African	0.09%	0.45%	1.66%	0.29%	0.06%	0.21%	0.39%	0.42%	1.84%
Black/ /Black British: Caribbean	0.03%	0.04%	0.08%	0.05%	0.04%	0.04%	0.04%	0.05%	1.11%
Black /Black British: Other Black	0.02%	0.04%	0.10%	0.03%	0.01%	0.03%	0.04%	0.04%	0.52%
Arab	0.09%	0.14%	0.93%	0.09%	0.02%	0.38%	0.11%	0.23%	0.42%
Any other ethnic group	0.07%	0.40%	0.53%	0.12%	0.06%	0.27%	0.20%	0.20%	0.62%

Disabled people

All council areas in the North East have a higher proportion of residents whose day to day activities are limited a lot by disability than the national average. The areas which have particularly high prevalence of disability are Sunderland, South Tyneside, and County Durham. These all have disability rates 4% higher than the national average.

Newcastle upon Tyne has a higher proportion of people whose day to day activities are not limited by disability than the national average; however the remainder of the council areas in the North East have a lower proportion of residents whose day to day activities are not limited by disability than the national average. The table below displays the prevalence of disability across residents in the North East.

Sex/gender

The Equalities Act requires the assessment to investigate different barriers to, and potential for, advancing equality of opportunities for all across genders. The table below shows that the majority of council areas in the North East have a similar proportion of male to females as the national average (49% male, 51% female). However, although Newcastle has an even split between the genders, both North Tyneside and South Tyneside show a slightly lower number of males (48%) and correspondingly higher proportion of females (51%).

Table: Population structure, male to female numbers

Council area	Males	Females
County Durham	49%	51%
Gateshead	49%	51%
Newcastle upon Tyne	50%	50%
North Tyneside	48%	52%
Northumberland	49%	51%
South Tyneside	48%	52%
Sunderland	49%	51%
North East	49%	51%
England	49%	51%

The Equalities Act also requires the public authority to protect the rights of and advance equality of opportunity for those who have undergone gender reassignment. However, there is currently no data on this available for the North East. Regarding the estimation of the proportion of Transgender people within a population; a 2008 report[90] produced for the European Region of the International Lesbian and Gay Association notes:

"There is simply no publicly available statistical data on which to make a firm statement. Estimates range from about 1 in 11,000 to as many as 1 in 20 in the male population"

The report notes that there are many difficulties in getting an accurate population measurement, such as defining the criteria by which the population is measured. On this basis it is likely that a detailed population figure can only be attained through survey work. In the context of the NETP, it is unlikely that people having undergone gender reassignment/ transgender people will experience significant equalities effects.

Sexual orientation

The Plan will also need to consider equalities effects on the lesbian, gay, bisexual population of the North East area. The ONS Integrated Household Survey (IHS) recently introduced questions on sexual orientation. Experimental data from the 2014 survey indicates that across the UK, 1.1% of adults identify as gay or lesbian, 0.5% as bisexual, and 0.3% as 'other'. London as a region has the largest proportion of adults identifying as Lesbian, Gay, or Bisexual (LGB), at 3.2%. However no data specific to the North East is available from this survey.[91] It is unlikely that groups with this protected characteristic will experience significant equality effects from the NETP.

Religion

The table below shows the proportion of residents belonging to different religious groups located in the council areas of the North East, the North East region as a whole, and England. With the exception of Newcastle upon Tyne, councils within the North East have a higher proportion of residents identifying as Christian than the national average of 59.38%. In contrast, Newcastle upon Tyne and North Tyneside both have a higher proportion of residents who identify has having no religion compared to the North East and national averages. Broadly speaking, there are lower proportions of residents belonging to other religions across the North East than the national average; however Newcastle upon Tyne has a higher proportion of Muslim residents (6.27%) than the North East (1.8%) and England (5.02%).

[90]Transgender EuroStudy: Legal Survey and Focus on the Transgender Experience of Health Care (2008) [online] available at: http://www.pfc.org.uk/pdf/eurostudy.pdf

[91] ONS (2014) Integrated Household Survey, January to December 2013: Experimental Statistics, [online] available at: http://www.ons.gov.uk/ons/dcp171778_379565.pdf

Table: Religious Groups[92]

	County Durham	Gateshead	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland	North East	England
Christian	72.04%	66.97%	56.44%	63.84%	68.56%	70.27%	70.29%	67.52%	59.38%
Buddhist	0.20%	0.21%	0.61%	0.22%	0.18%	0.15%	0.20%	0.24%	0.45%
Hindu	0.12%	0.25%	1.12%	0.26%	0.11%	0.17%	0.22%	0.30%	1.52%
Jewish	0.04%	1.50%	0.24%	0.05%	0.05%	0.04%	0.03%	0.17%	0.49%
Muslim	0.38%	1.05%	6.27%	0.74%	0.32%	1.93%	1.32%	1.80%	5.02%
Sikh	0.12%	0.18%	0.44%	0.18%	0.16%	0.29%	0.30%	0.23%	0.79%
Other religion	0.30%	0.26%	0.27%	0.26%	0.31%	0.24%	0.19%	0.26%	0.43%
No religion	20.90%	23.85%	28.32%	28.09%	23.93%	21.09%	21.91%	23.40%	24.74%
Religion not stated	5.92%	5.73%	6.30%	6.37%	6.38%	5.82%	5.55%	6.08%	7.18%

Rurality Baseline

Spatial pattern of rural and urban areas

The following section provides an overview of the rural-urban classification, or the 'rurality'. This term refers to the extent to which an area has been classed as urban or rural. For the purposes of this report the 2011 Rural-Urban Classification for output areas in England has been used.[93]

The 2011 Rural-Urban Classification classed urban areas as those which are connected built up areas identified by Ordnance Survey mapping, and that have resident populations above 10,000 people. Rural areas are those that are not urban, i.e. consisting of settlements below 10,000 people, or are open countryside. **Figure 13.2** displays the 'rurality' of the North East. This is shown at the Lower Super Output Area (LSOA) scale and has been split into urban and rural areas, both sparse and not sparse. The hierarchal structure of this classification is shown in **Figure 13.1**.

[92]ONS (2011) - KS209EW – Religion [online] available at: http://www.nomisweb.co.uk/home/search.aspx?context=&term=religion

[93] Office for National Statistics (2011) Rural Urban Classification [online] available at: https://www.gov.uk/government/collections/rural-urban-classification [accessed 05/03/20]

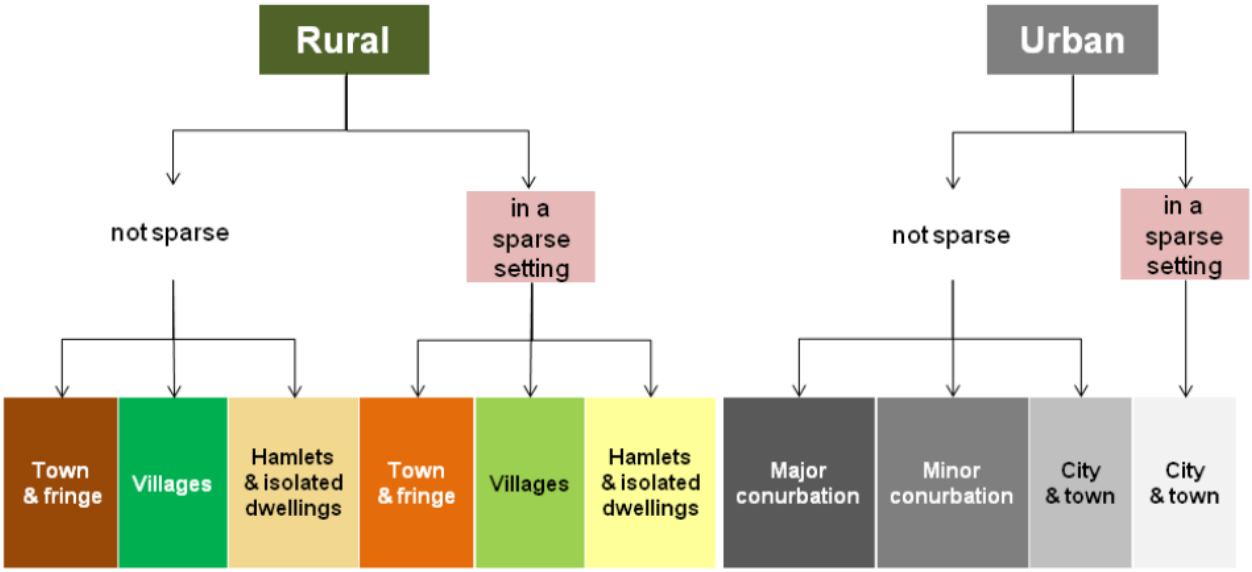


Figure 13.1: Hierarchy of the 2011 Rural-Urban Classification[94]

Northumberland shows the highest proportion of land area which is classified as 'rural', 'sparse' and less sparse village hamlet' and 'isolated dwellings', as well as 'sparse town and fringe' comprising the majority of the county. County Durham shows the next highest proportion of rurality, and with the highest proportion of 'less sparse town and fringe' settlements.

Sunderland, with the exception of a small area of less sparse town and fringe, is entirely covered by land classed as urban. South Tyneside is classed as entirely urban, while the majority of North Tyneside is also urban with small areas of town and fringe. Newcastle upon Tyne and Gateshead are composed predominantly of urban areas with smaller areas classed as less sparse town and fringe, and less sparse village hamlets and isolated dwellings.

[94] Office for National Statistics (2013) The 2011 Rural-Urban Classification For Small Area Geographies: A User Guide and Frequently Asked Questions (v1.0) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239478/RUC11user_guide_28_Aug.pdf [accessed 05/03/20]

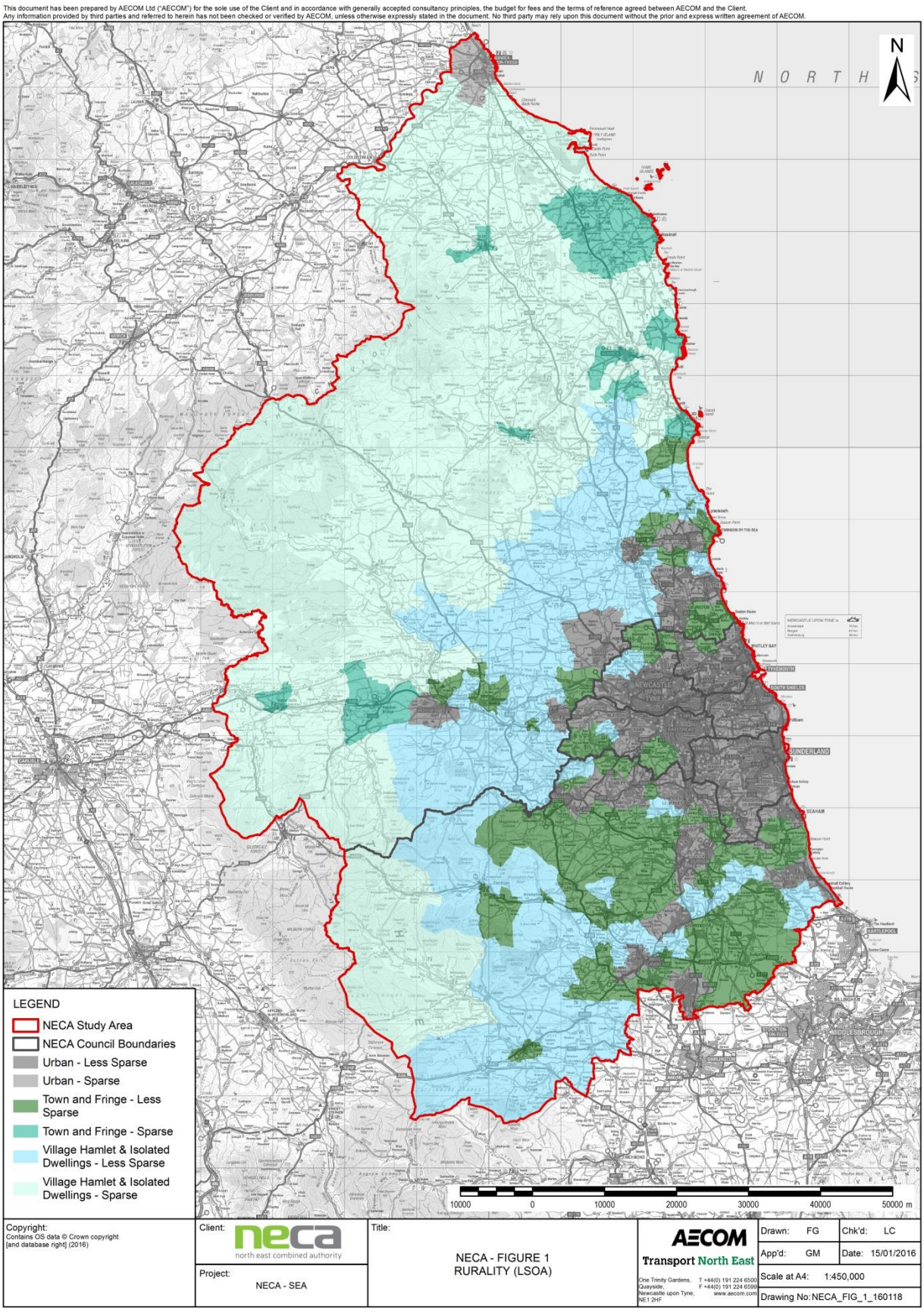


Figure 13.2: Rurality of the North East

Method of travel to work

The table below shows the methods of travel to work within the North East and national averages, split between urban and rural residents. Headline findings show that across the board more residents in rural areas work from home than in urban areas. The largest proportions of these are found in County Durham, Northumberland and Gateshead. Car usage is also higher across rural council areas than those in urban areas. A higher proportion of residents are generally found to travel on foot or by bicycle in urban areas than rural ones – which may be a reflection of shorter travel times and distances. With the exception of North Tyneside, bus travel is also lower in rural areas.

Table: Rural/urban methods of travel to work

Urban methods of travel to work

	County Durham	Gates-head	Newcastle upon Tyne	North Tyne-side	Northum berland	South Tyne-side	Sunder-land	England
Work from home	3.3%	2.9%	3.3%	3.4%	3.8%	2.4%	2.5%	4.5%
Underground/metro/tram	0.2%	5.1%	5.4%	9.3%	0.4%	8.9%	2.3%	4.9%
Train	1.0%	0.8%	1.2%	1.6%	1.2%	1.8%	0.8%	5.8%
Bus, minibus or coach	6.3%	15.6%	18.7%	8.9%	6.3%	9.7%	12.7%	8.6%
Taxi	0.8%	0.5%	0.9%	0.9%	0.5%	0.5%	0.7%	0.6%
Motorcycle/scooter/moped	0.4%	0.4%	0.3%	0.5%	0.5%	0.5%	0.4%	0.8%
Car or van	65.9%	56.6%	47.3%	57.1%	65.2%	56.6%	60.8%	54.5%
Bicycle	1.2%	1.5%	2.8%	2.5%	1.7%	2.2%	1.3%	3.2%
On foot	12.2%	9.5%	13.6%	8.5%	12.4%	9.4%	9.8%	11.3%
Other method	0.7%	0.6%	0.7%	1.1%	0.8%	2.0%	0.8%	0.6%

Rural methods of travel to work

	County Durham	Gates-head	Newcastle upon Tyne	North Tyne-side	Northum berland	South Tyne-side	Sunder-land	England
Work from home	5.3%	5.6%	4.4%	3.2%	9.0%	4.2%	4.9%	9.5%
Underground/metro/tram	0.1%	0.4%	3.3%	2.4%	0.5%	7.4%	0.0%	0.3%
Train	0.7%	0.6%	0.8%	0.5%	1.4%	0.7%	0.6%	3.1%
Bus, minibus or coach	5.9%	12.4%	12.4%	13.1%	4.0%	8.1%	9.6%	2.4%
Taxi	0.5%	0.5%	0.6%	0.4%	0.3%	0.4%	0.4%	0.2%
Motorcycle/scooter/moped	0.5%	0.6%	0.5%	0.8%	0.5%	1.1%	0.1%	0.7%
Car or van	69.7%	66.4%	62.8%	66.3%	65.6%	57.0%	70.5%	68.6%
Bicycle	0.7%	1.2%	1.7%	1.9%	1.2%	2.5%	1.2%	1.7%
On foot	8.4%	5.3%	6.5%	4.4%	10.6%	9.9%	4.3%	8.2%
Other method	0.6%	0.6%	1.3%	0.8%	1.1%	1.4%	0.7%	0.7%

Population age structure

The table below displays the population structure across the North East and in England for both rural and urban areas. Headline findings show that across all council areas within the North East there is a lower proportion of the population in the 0-15 age group in rural areas than urban ones, with the exception of South Tyneside. This difference is most pronounced in Sunderland and Northumberland.

This trend continues through the 16-24 and 25-44 age groups. In contrast there are slightly more residents in the 45-59 age group in rural areas than urban ones, and significantly more over the age of 60. This difference is most pronounced in Newcastle upon Tyne, North Tyneside and Sunderland.

Table: Rural/urban population structure

Urban Population Structure

	County Durham	Gates-head	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland	England
0-15	17.1%	17.8%	17.1%	17.9%	18.0%	17.5%	17.5%	19%
16-24	13.9%	11.0%	20.0%	10.0%	10.5%	11.5%	12.4%	12%
25-44	24.7%	27.6%	26.8%	27.1%	23.9%	24.5%	25.3%	28%
45-59	20.4%	20.0%	17.4%	21.3%	21.6%	21.9%	21.2%	19%
60+	23.8%	23.6%	18.7%	23.7%	26.0%	24.6%	23.5%	22%

Rural Population Structure

	County Durham	Gateshead	Newcastle upon Tyne	North Tyneside	Northumberland	South Tyneside	Sunderland	England
0-15	17.2%	16.8%	17.8%	15.9%	15.9%	18.5%	13.7%	19%
16-24	10.1%	9.7%	9.0%	8.1%	8.9%	13.5%	8.4%	12%
25-44	24.7%	23.6%	25.3%	22.7%	21.6%	26.1%	23.4%	28%
45-59	21.9%	22.4%	21.1%	20.7%	23.6%	20.8%	24.5%	19%
60+	26.2%	27.4%	26.8%	32.6%	29.9%	21.1%	29.9%	22%

Prevalence of disability

The table below displays the extent to which disability limits day to day activities in the North East and in England, for both rural and urban areas. With the exception of South Tyneside, across the board more residents feel that their day to day activities are not limited by disability in urban areas than in rural areas. While conversely, With the exception of South Tyneside, a slightly higher proportion of residents living in rural areas feel that their day to day activities are limited a lot by disability when compared to those living in urban areas. South Tyneside is again the exception to this, as a higher proportion of urban residents feel that their day to day activities are limited a lot by disability than in rural South Tyneside.

Table: Rural/urban disability prevalence

Urban disability prevalence			
	Day-to-day activities limited a lot	**Day-to-day activities limited a little**	**Day-to-day activities not limited**
County Durham	12.1%	11.2%	76.7%
Gateshead	11.4%	10.7%	77.9%
Newcastle upon Tyne	9.5%	9.2%	81.3%
North Tyneside	10.1%	10.4%	79.5%
South Tyneside	12.3%	11.0%	76.7%
Sunderland	12.4%	11.0%	76.6%
England	8.4%	9.2%	82.4%
Rural disability prevalence			
	Day-to-day activities limited a lot	**Day-to-day activities limited a little**	**Day-to-day activities not limited**
County Durham	12.5%	11.6%	75.9%
Gateshead	11.8%	11.2%	77.1%
Newcastle upon Tyne	11.6%	11.4%	77.0%
North Tyneside	10.7%	12.7%	76.5%
South Tyneside	8.7%	8.7%	82.7%
Sunderland	12.6%	11.0%	76.4%
England	7.8%	10.0%	82.2%

Using ONS statistics, deprivation is discussed in the context of household deprivation dimensions which measure deprivation across four 'dimensions' of deprivation[95] including: any member of a household not a full-time student who is either unemployed or long-term sick; education; health and disability; and housing deprivation. The table below sets out these deprivation dimensions in the North East for both rural and urban households.

Headline findings from this data show that Northumberland, South Tyneside, and Sunderland all have slightly higher proportions of rural households which do not experience any dimension of deprivation compared with urban ones. In contrast County Durham, Newcastle, North Tyneside, and Gateshead all have higher proportions of urban households which do not experience any dimension of deprivation compared with rural ones.

[95] ONS (2011) Census 2011, Households by Deprivation Dimensions, 2011 (QS119EW)

Looking at data for households which are deprived in 3 and 4 dimensions, across the board urban areas show higher proportions of deprived households, this difference is most marked in Gateshead and South Tyneside.

Table: Rural/urban household deprivation dimensions

Urban deprivation					
	Not deprived in any dimension	**Deprived in 1 dimension**	**Deprived in 2 dimensions**	**Deprived in 3 dimensions**	**Deprived in 4 dimensions**
County Durham	39.4%	30.7%	23.1%	6.5%	0.3%
Gateshead	38.7%	31.2%	22.6%	7.1%	0.5%
Newcastle	40.6%	31.1%	20.7%	6.9%	0.7%
North Tyneside	43.5%	30.9%	19.9%	5.3%	0.4%
Northumberland	42.3%	32.0%	20.2%	5.2%	0.3%
South Tyneside	36.5%	32.3%	23.7%	7.0%	0.5%
Sunderland	35.7%	31.9%	24.4%	7.5%	0.5%
Rural deprivation					
	Not deprived in any dimension	**Deprived in 1 dimension**	**Deprived in 2 dimensions**	**Deprived in 3 dimensions**	**Deprived in 4 dimensions**
County Durham	39.2%	30.9%	23.3%	6.3%	0.3%
Gateshead	40.3%	31.9%	22.1%	5.3%	0.3%
Newcastle	39.9%	32.1%	22.1%	5.6%	0.4%
North Tyneside	41.0%	34.2%	21.2%	3.5%	0.1%
Northumberland	45.2%	32.8%	18.2%	3.6%	0.2%
South Tyneside	37.9%	35.2%	23.3%	3.6%	0.0%
Sunderland	38.4%	34.2%	21.5%	6.0%	0.0%

Deprivation can also be measured by the Index of Multiple deprivation (IMD). This is an overall relative measure of deprivation created by combining seven domains of deprivation (Income Deprivation; Employment Deprivation; Education, Skills and Training Deprivation; Health Deprivation and Disability; Crime; Barriers to Housing and Services; and Living Environment Deprivation).

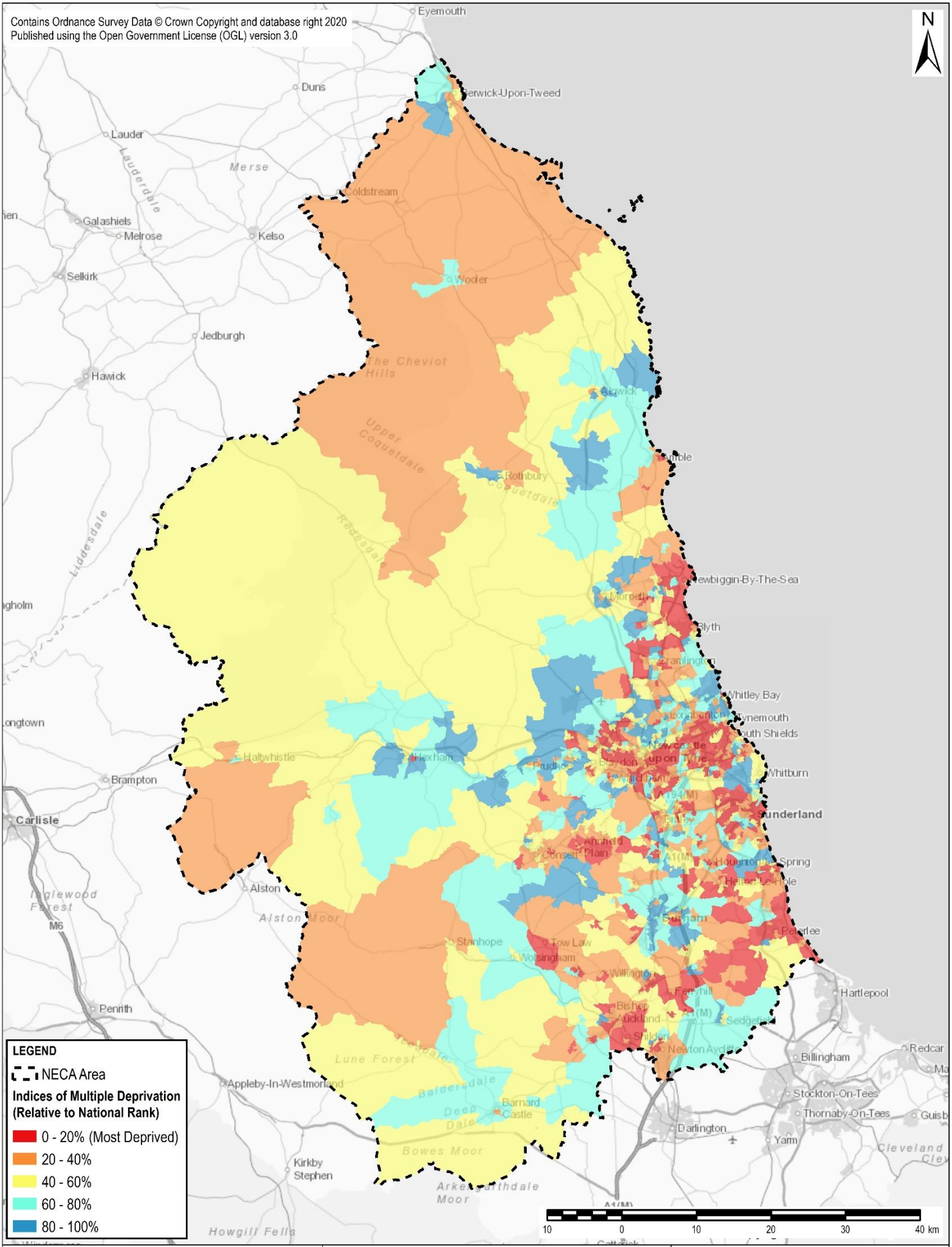
Figure 13.1 displays IMD scores as deciles at the LSOA scale. The deciles are calculated by ranking the 32,844 LSOAs in England from most deprived to least deprived and dividing them into 10 equal

groups. LSOAs in decile 1 fall within the most deprived 10% of LSOAs nationally and LSOAs in decile 10 fall within the least deprived 10% of LSOAs nationally.

As shown in **Figure 13.1** the highest levels of deprivation are concentrated in the south east of the North East, in particular in the 'sparse urban' areas of Sunderland, South Tyneside, and Newcastle upon Tyne, which contain LSOAs that fall within the most 20% deprived nationally.

In Northumberland there are large areas of 'less sparse village hamlet & isolated dwellings', and in County Durham there are larger areas of 'less sparse town and fringes' which both show much lower levels of deprivation. Many of these areas are in the least 30% deprived LSOAs nationally. Conversely, in much of northern Northumberland there are many LSOAs classed as 'sparse village hamlet & isolated dwellings' which are in the 40% most deprived nationally. This particularly relates to the However, this masks significant deprivation issues with regards to access to services and facilities, as reflected by higher IMD scores relating to the 'Barriers to Housing and Services' domain.

From this it can be seen that, generally, areas that are rural but 'less sparse' typically show the lowest levels of deprivation.



File Name:I:\5004 - Information Systems\6XX_NECA_Transport_Plan\02_Maps\Figure 13-1 - Indices of Multiple Deprivation.mxd

Project Title/Drawing Title	Client: TRANSPORT NORTH EAST STRATEGY UNIT		AECOM Midpoint Alençon Link, Basingstoke Hampshire, RG21 7PP Telephone (01256) 310200 Fax (01256) 310201 www.aecom.com
ISA FOR THE NE TRANSPORT PLAN INDICES OF MULTIPLE DEPRIVATION	Drawn: CN	Checked: TD	Approved: NCB
	Date: 13/03/2020	Scale @ A4: 1:650,000	Purpose of Issue: DRAFT
	Drawing Number: FIGURE 13.1		Rev: 01

AECOM Transport North East

North East Joint Transport Committee

Date: **17 November 2020**

Subject: **Transport North East, Regional Transport Update**

Report of: **Managing Director, Transport North East**

Executive Summary

An announcement on the region's £15.678m Emergency Active Travel Fund (EATF) tranche 2 bid for cycling and walking measures is currently awaited. It has been held up while ministers seek assurances from the Department for Transport (DfT) that schemes delivered through it nationally will be of high-quality design and include comprehensive engagement with communities and businesses.

Regional bus usage is around 50 – 55% of pre-pandemic levels. The gap between income and costs is still being filled by concessionary fare and tendered bus service payments by Local Transport Authorities at pre-Covid amounts and continued emergency Covid-19 Bus Service Support Grant (CBSSG) from the Government.

Government funding support for the Tyne and Wear Metro was due to cease at the end of October. A further £8.5m of funding support has now been allocated up to January 18th with a similar amount available from then, if necessary, to keep the network going until the end of the current financial year.

The Department for Education has advised that the North East's allocation for Home to School Transport for the half-term up to Christmas will be nearly £2.86m. This brings the regional allocation for September to December to nearly £4.4m.

JTC has written to the Planning Inspectorate regarding the A1 in Northumberland: Morpeth to Ellingham scheme Development Consent Order consultation to show its support for the proposals.

An East Coast Mainline Authorities (ECMA) Consortium meeting was held on Thursday 8th October, attended by JTC members. At this meeting an 'Invest East Coast Rail' campaign was approved as well as the continuation of a dedicated ECMA secretariat resource, sourced through Transport North East until March 2023.

Network Rail has secured funding to undertake Strategic Outline Business Development Case development work for Newcastle Central (bay platform extensions to accommodate longer trains); Bensham Curve (segregates freight and local service flows from the main line services, improving capacity and performance); and Stillington Line gauge clearance for freight (Northallerton to Ferryhill).

Network Rail has recently completed a strategy looking at the requirements needed to meet net zero carbon targets. An initial top down approach suggests the whole North East network requires electrification due to the presence of long-distance passenger and freight services, but a bottom up local approach is needed to verify this or suggest alternatives.

The preferred network for the Northern Powerhouse Rail project is expected to be agreed at a Transport for the North (TfN) Board meeting on the 18th November. The region has been pressing for the inclusion of the Leeds-Newcastle section intervention of the NPR, including significantly upgrading the East Coast Mainline corridor and the full re-opening of the Leamside Line.

Nexus and Northumberland County Council did not receive any Round 1 funding for their Restoring Your Railway Fund proposals, but both have received feedback on how proposals could be improved. For Round 2 Durham County Council and local MPs submitted proposals and feedback from DfT is still awaited. Transport North East is preparing for a third round of bids due to be launched in November.

Electric Vehicle charging hubs have recently been installed in Blyth, Washington, and Whitley Bay as part of the Go Ultra Low North East Programme and by the end of the programme 11 regional charging hubs will have been delivered.

Recommendations

The Joint Transport Committee is recommended to note the contents of this report.

1. Background Information

1.1 Emergency Active Travel Fund (EATF)

The region is still awaiting an announcement on its £15.678m tranche 2 EATF bid. It is understood that this has been held up while ministers await assurances from the Department for Transport (DfT) that tranche 2 schemes delivered nationally will be of high-quality design and will include comprehensive engagement with communities and businesses. This is as a result of concerns around the design and consultation for a small number of schemes delivered nationally through tranche 1 (we understand none of these concerns relate to schemes implemented in the North East), which to some extent could be expected because of the very short deadlines for completion and because of their temporary nature. On 16th October, Secretary of State for Transport Grant Shapps wrote to the Chair of the JTC outlining these concerns. The Chair replied on 26th October confirming that schemes implemented in this region followed DfT guidance, were the subject of appropriate consultation with the public and businesses and, where necessary, had been modified in response to experience and public feedback.

1.2 Bus Services

Recovery in the region's bus usage had slowed somewhat, having reached around 50%-55% of pre-pandemic levels. Patronage is expected to fall again in light of the second national lockdown which now in place. The gap between income and costs is still being filled by Local Transport Authorities maintaining concessionary fare and tendered bus service payments at pre-Covid amounts and emergency Covid-19 Bus Service Support Grant (CBSSG) paid by the Government to both bus operators and Local Transport Authorities. DfT has advised that the continuation of the CBSSG is subject to 8 weeks' notice if circumstances change (i.e. the Covid-19 situation eases considerably).

Face covering compliance appears mostly to have improved, due at least partly to a successful face coverings awareness week in late September. However, a remaining minority of passengers are determined to challenge any attempt at ensuring compliance. On school transport, indications are that children with exemptions are making more use of the "sunflower lanyard" to identify this. Having regular drivers on consistent duties helps in this regard, as do temperature checks carried out on site by schools.

1.3 Tyne and Wear Metro

The Tyne and Wear Metro has now received £24.7m of funding support from the Government since May. The current funding arrangements from the Government expired at the end of October. The Department for Transport (DfT) has now allocated a further £8.5m to enable the continued operation of the network up to January 18th next year, and a similar such amount up to March 31st , the end of the current financial year, if it is needed.

In order to accommodate the new £363m fleet of Metro trains which are due to arrive on Tyneside from 2023 there is a £2m programme to adjust the height of tracks at 40 of the 60 stations on the Metro system. This will ensure that when the new trains roll into service in 2023 they interface perfectly with station platforms. Works will be carried out at weekends or are being fitted in alongside other modernisation projects over the next two years in order to keep the disruption to a

minimum. The new trains will include a sliding step to make boarding easy, all but eliminating the gap between train and platform edge.

A new Customer Support Team has been deployed across the system to address customer concern about security and to tackle anti-social behaviour and fare evasion.

Nexus will be implementing a winter service plan for the Tyne and Wear Metro, to manage an acute shortage of train crew over the coming months caused by the impact of the national lockdown earlier this year. Although capacity for training new starters has increased significantly this year to ensure there are enough employees to cover all rostered duties on the timetable and to prepare for the introduction of a new train fleet, the recruitment process was interrupted by lockdown restrictions earlier this year, an issue that also affected a number of UK train operators.

Nexus has compensated for the delay by starting a record 30 new recruits at one time through the new Nexus Learning Centre in South Shields, but there will be a shortage of train crew until these staff can enter passenger service in the new year. To ensure that services are not cancelled at short notice a reduced winter timetable will be introduced at the end of November and is expected to be in place until March.

1.4 Home to School Transport

The considerable efforts and effective partnership with bus operators in providing and managing additional capacity has continued to ensure smooth operation of school transport. Revised estimates of expenditure across the region on additional school transport indicate that the actual spend may be more in line with the £1.5m received from the Department for Education (DfE) for this purpose and DfE have now advised that our allocation for the half-term up to Christmas will be nearly £2.86m which should be sufficient to cover our additional costs. This brings the total allocation for our region for September to December to nearly £4.4m.

1.5 A1 in Northumberland: Morpeth to Ellingham

The Planning Inspectorate is accepting representations on a Development Consent Order consultation for the A1 in Northumberland: Morpeth to Ellingham scheme, which must be received by them by 30th October. This proposes to widen the A1 in two sections: A1 Morpeth to Felton and A1 Alnwick to Ellingham. The JTC has written a letter through the consultation supporting the scheme because of its benefits, such as improved accessibility, road safety, journey times, and journey time reliability, as well as road de-congestion. It is also aligned to the objectives of the forthcoming regional Transport Plan and the goals of the TfN Strategic Economic Plan. A copy of this letter can be seen in appendix 1.

1.6 East Coast Mainline Consortium

An East Coast Mainline Authorities Consortium meeting was held on Thursday 8th October which was attended by JTC members. An 'Invest East Coast Rail' campaign was approved by members ahead of the UK government's Comprehensive Spending Review (CSR) in November. ECMA will publish a report into the benefits of investing in the East Coast Main Line (ECML) railway. A user-friendly campaign brochure will also be published.

The campaign is expected to launch the week commencing Monday 16th

November. At the meeting members approved the continuation of a dedicated ECMA secretariat resource, sourced through Transport North East until March 2023. A Transport North East Strategy Unit officer will continue to undertake ECMA secretariat duties 3 days per week and 2 days per week working on North East funded rail-based activities. Continued proactive participation in ECMA will assist the region's ambitions to upgrade the East Coast Main Line north of York. Invited speakers from the Department for Transport, Network Rail, and London North Eastern Railway (LNER) provided updates to members. A copy of the meeting notes is available on request.

1.7 Network Rail Long Term planning process – scheme progression

As part of Network Rail's Long-term planning process, an assessment of the routes from York to the North East was completed in January this year. This report included a number of recommendations to be taken forward for future business case development. Funding has been secured by Network Rail to undertake Strategic Outline Business Case development work for three of the five North East recommendations within the study as follows:

- Newcastle Central – bay platform extensions to accommodate longer trains;
- Bensham Curve – segregates freight and local service flows from the main line services, improving capacity and performance;
- Stillington Line gauge clearance for freight – enables container traffic to use the line and act as part of the segregation of freight traffic from the ECML (Northallerton to Ferryhill).

The Bensham Curve scheme was also the subject of a Restoring Your Railway fund bid (see 1.11 below) and is also relevant to the plans for Northern Powerhouse Rail (see 1.9 below). We will ensure there is necessary alignment between the various proposals to ensure we achieve the maximum benefits for local and national rail services.

The other two outcomes were to explore:

- options to reinstate the Leamside Line in part or in full - this is covered by the NPR work;
- options to support new services on the Durham Coast Line - we are seeking discussions with Network Rail on how to progress this, particularly around Sunderland.

Network Rail are also undertaking a new short study looking at the needs of the railway between Newcastle and Edinburgh in the medium to long term and the scope of this is still being defined.

1.8 Network Rail Traction Decarbonisation Network Strategy

In June 2019 the UK Government set out a legislative target to achieve 'net zero' greenhouse gas emissions by 2050. For rail specifically the Department for Transport (DfT) asked the rail industry to explore whether it would be possible to remove all diesel-only trains from the network by 2040 in England and Wales. The Scottish Government also set a target to decarbonise domestic passenger rail services by 2035.

Network Rail have recently completed a strategy looking at the requirements needed to meet net zero carbon targets. An executive summary of the document can be found in appendix 2.

In the North East, only the East Coast Mainline and the Pelaw to Sunderland section of the Durham Coast line (shared with Metro trains) are currently electrified, with local passenger rail and freight services all using diesel trains. The whole national network has been reviewed recommending three possible traction technologies which are sufficiently mature to replace diesel – battery, electric and hydrogen. Each of these technologies has different technical capabilities which mean that not all are suitable for all types of rail services.

Battery and hydrogen technologies are unsuitable for long-distance high-speed and freight services as these services have higher energy needs than battery and hydrogen can provide. Electric traction is incredibly versatile in that it can successfully provide energy for all types of journeys. But it relies on fixed infrastructure to transmit electricity and this infrastructure has a relatively high capital cost compared with battery and hydrogen technology. These technical and cost implications have been used to develop a 'decision tree' to identify areas of the rail network where one technology is most suitable. The initial top down approach suggests the whole North East network requires electrification due to the presence of long-distance passenger and freight services, but a bottom up local approach is needed to verify this or suggest alternatives. One complicating factor is the presence of the Tyne and Wear Metro which shares Network Rail track but has a different power requirement than the national heavy rail standard.

1.9 Transport for the North - Northern Powerhouse Rail (NPR)

The preferred network for the Northern Powerhouse Rail project is expected to be agreed at a TfN Board meeting on the 18th November. TfN would then submit its Strategic Outline Case to the government in March 2021. There are two aspects of the work of particular importance to the North East:

An option 'sifting' process has taken place which will recommend to the TfN Board that up to four options are included in the Strategic Outline Case, with a recommendation that one of these is the preferred one to be built into the overall preferred NPR network. The Leeds-Newcastle section of NPR interventions consists primarily of significant upgrades to the East Coast Mainline corridor and it is essential to us that the preferred option includes the full re-opening of the Leamside Line. TfN has been made aware of our view at an officer sift workshop and other Combined Authorities and local transport authorities were supportive of this. A verbal update will be given to this committee following the publication of the TfN Board papers.

The Strategic Outline Case will also include a phasing strategy showing the order in which the scheme will be delivered and built. The North East has always maintained that work on upgrading the East Coast Mainline should come first as it is an enabler for HS2 and other services as well as NPR, but also a relatively easy scheme when compared with more intrusive and costly sections of new build line elsewhere. TfN are seeking to make the case to deliver the whole network over a 15-year period (2025-2040), and it is likely that extensive works on the Leeds – Newcastle corridor will span the full 15 years. The whole programme across the

north is likely to involve a mixture of new lines and improvements to existing infrastructure and stations to help speed up services and deliver greater capacity.

1.10 Strategic Connectivity

DfT has announced the commencement of a Union Connectivity Study to establish the capacity and requirements of national infrastructure between all nations in the UK. The study group is being chaired by Sir Peter Hendy and will report in Summer 2021. Officers will be developing representations for the region to make the case for a substantial upgrade to road and rail infrastructure in the region which is clearly linked to proposals advocated by a range of partners. Representations will be shared with members at a forthcoming meeting.

1.11 Restoring Your Railway Fund

The Restoring Your Railway Fund is a competitive Government fund available to English authorities that wish to explore the reopening of closed railway lines and stations. Funding is available for preliminary studies or more detailed work, depending on the status of each project. It is imperative that local Members of Parliament support each submitted proposal.

So far there have been two opportunities to bid for this fund. In Round 1 Nexus and Northumberland County Council submitted seven proposals. No funding was forthcoming but both authorities have received feedback on how the proposals can be improved. In Round 2 two proposals were submitted by local MPs in the County Durham area with input from the County Council and feedback from DfT is still awaited on these bids. These bids are related to the reopening of a station at Ferryhill and providing a train service to Teesside via the Stillington Branch; and the reopening of passenger rail services between the Gateshead/Metrocentre area and Consett.

Transport North East is now working with all North East authorities to co-ordinate our responses to this fund in terms of responding to comments received on previously submitted bids and preparing for a third round of bids due to be launched in November. A common and co-ordinated narrative across all bids is proposed in order to show Government how proposals submitted by our transport authorities and MPs can contribute to an integrated rail network for the region. Transport North East will also lead on engaging with DfT officials so that civil servants have one co-ordinated point of contact with the North East authorities.

1.12 Electric Vehicle (EV) Infrastructure Enabling Study, and Taxi and Private Hire Electric Vehicle Chargers

EV charging hubs have recently been installed in Blyth, Washington, and Whitley Bay as part of the Go Ultra Low North East Programme. A further three charging hubs are being progressed and there will be 11 EV charging hubs in place in the region by the end of the programme in January 2021.

Urban Foresight are making good progress on the regional Enabling Study they have been commissioned to produce through the North East LEP's Local Growth Fund in order to set out the electric vehicle infrastructure the region needs over the next five years. They are currently working in partnership with local stakeholders to recommend key sites for EV charging infrastructure. It is expected that the study will be complete by November 2020. Following the Enabling Study, it is anticipated that £500,000 will be made available to install EV charging infrastructure at the

most strategic sites.

Commissioning for nine of the ten rapid chargers to be installed for the taxi and private hire market at strategic locations in car parks and on street around areas of high taxi demand is due to be completed by the end of 2020. Work on the tenth charger has been delayed as the car park has been reserved for use as a temporary Covid-19 testing station. The project also includes funding for engagement with the taxi trade to encourage the uptake of EV's, which will take place through a series of online webinars, trials and workshops over a two-year period.

2. Proposals

2.1 This report is for information. Members are asked to note the contents of the report.

3. Reasons for the Proposals

3.1 This report is for information purposes.

4. Alternative Options Available

4.1 Not applicable to this report.

5. Next Steps and Timetable for Implementation

5.1 A further Regional Transport update will be taken to the next JTC meeting.

6. Potential Impact on Objectives

6.1 Successful delivery of the various transport schemes and investment proposals outlined in this document will assist the JTC in delivering its objective to maximise the region's opportunities and economic potential.

7. Financial and Other Resources Implications

7.1 None.

8. Legal Implications

8.1 Scheme promoters are required to follow the grant funding conditions for the Emergency Active Travel Fund otherwise funding may be subject to clawback.

9. Key Risks

9.1 The risk of work streams not progressing in a timely manner may impact upon the region's ability to achieve its aspirations for improving transport.

10. Equality and Diversity

10.1 There are no specific equalities and diversity implications arising from this report.

11. Crime and Disorder

11.1 There are no specific crime and disorder implications arising from this report.

12. Consultation/Engagement

12.1 Many of the transport programmes outlined in this report have been the subject of consultation at a regional level.

13. Other Impact of the Proposals

13.1 No specific impacts.

14. Appendices

14.1 Appendix 1: JTC Response to Development Consent Order Consultation for A1 in Northumberland: Morpeth to Ellingham scheme

Appendix 2: Traction Decarbonisation Network Strategy Interim Programme Business Case Executive Summary

15. Background Papers

15.1 None

16. Contact Officers

16.1 Simon Jobe, Specialist Transport Planner, Transport North East Strategy Unit
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Tobyn Hughes, Managing Director, Transport North East
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17. Sign off

- Head of Paid Service:
- Monitoring Officer:
- Chief Finance Officer:

18 Glossary

18.1 All acronyms or technical terms used are explained in the body of the report.

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Transport North East

28 October 2020

A1 in Northumberland: Morpeth to Ellingham, Development Consent Order Accepted Application

I am writing on behalf of Transport North East on the proposed A1 Morpeth to Ellingham scheme through this Development Consent Order consultation. Transport North East covers the North East Local Enterprise Partnership area which includes Durham, Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland as well as Northumberland. Thank you for the opportunity to submit our comments on this consultation.

Roads Investment

We welcome that this scheme proposal for the widening and full dualling of the A1 in Northumberland in two sections between A1 Morpeth to Felton (Part A) and A1 Alnwick to Ellingham (Part B) now has a Development Consent Order and is out for Examination. The A1 is a key part of the North East's road infrastructure serving many of our economic and tourist assets. It acts as the major spine of the North East's road network and is the primary strategic highway route linking Scotland and the North East of England. As the sections of the A1 between Morpeth to Felton and Alnwick to Ellingham are currently single carriageway, this has a significant impact on journey times, road congestion and road safety for the whole of the region because of the road's strategic importance to the North East of England.

This scheme will address the ongoing issues experienced on the A1 between Morpeth to Felton and Alnwick to Ellingham including poor resilience when there are road accidents or roadworks are taking place, as well as safety, congestion and air quality problems. The importance of the scheme has been recognised by the Department for Transport as it is included in its Roads Investment Strategy (RIS2) as a planned investment by Highways England. The dualling of the remainder of the route up to Edinburgh will help meet Transport for the North's vision for a more reliable, less congested strategic road network in the North of England.

The proposals will help Transport North East meet its forthcoming North East Transport Plan objectives, for the period up to 2035. These objectives are set out below and we have explained how this scheme can contribute to these objectives. In doing so, it will clearly be important for Highways England to work with relevant organisations, including Northumberland County Council, to ensure that, when there are road closures as the scheme is progressed, there is the provision of suitable diversions which have considered:

1. the impact of increased traffic on these roads and the surrounding area;
2. the needs of larger vehicles including buses;
3. the need for the communities concerned to continue to access bus services; and

4. how to provide the public with regular and up-to-date information on what to expect before and during the period of the works.

Transport Plan objectives

Carbon-neutral transport

The design of the road and the materials used in construction needs to minimise environmental impact and help drivers to reduce fuel consumption and improve air quality.

Overcome inequality and grow our economy

Whilst the scheme will clearly have benefits for through traffic, it is important that it also enhances local links and delivers improved sustainable access for communities along the route.

It is vital that in progressing this scheme that Highways England give consideration to the location of any rest areas for Heavy Goods Vehicles on this route. Suitable rest areas with appropriate facilities are important for the freight sector but this will need to be balanced against any environmental impact. It is also appropriate for Highways England to provide Variable Messaging Signs and camera infrastructure on these two stretches of the A1 as they will provide wider traffic management benefits.

In addition, in delivering the works, we ask that Highways England consider incorporating digital connectivity to meet the need of future connected and autonomous vehicles. We recommend that this is included within the remit of this scheme now rather than having to be retrofitted at a later date.

Healthier North East

Regarding cycling, we ask that Highways England give consideration to the needs of both long-distance and local cycling journeys. As far as possible, the scheme needs to promote the perception of cycling as a safe and enjoyable means of everyday travel. We would emphasise the need to make full use of relevant guidelines, particularly the Government's Cycle infrastructure design guideline document (LTN 1/20), which shows how to deliver high quality cycle infrastructure and solutions.

While we appreciate that the scheme will deliver a high-speed dual carriageway, we also ask that Highways England give consideration to the needs of pedestrians including those who need to cross the A1, so that community severance is avoided.

Appealing sustainable transport choices

In respect of bus services, we ask that Highways England give consideration to the needs of all the communities along the route. While the scheme will improve the speed and reliability of bus services, we ask that steps are taken to ensure that, as far possible, bus stopping points remain in their present locations and provision is made for bus passengers, including those with disabilities or sensory impairments, to cross the A1 safely before boarding, or after alighting, a bus.

Consideration should also be given to the views of bus operators regarding the design firstly of junctions, so the needs of buses are taken into account, and secondly of bus stop infrastructure, especially whether and how laybys are provided.

Safe, secure network

We welcome the fact that this scheme, and associated plans to dual single-carriageway sections of the route, is expected to improve road safety, including the provision of safe crossing points for pedestrians and cyclists. Bus stop infrastructure, where provided, also needs to be of appropriate quality and well-lit.

Conclusion

In summary, Transport North East strongly support the principles of this scheme which will assist with economic growth and enhance regional connectivity and is consistent with the objectives of the North East LEP's Strategic Economic Plan, the forthcoming North East Transport Plan and Transport for the North's Strategic Transport Plan.

Please do not hesitate to get in touch with me or my colleague Simon Jobe (Simon.Jobe@transportnortheast.gov.uk) should you have any questions.

Yours sincerely

Best regards

Philip Meikle
Transport Strategy Director

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Transport North East

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TRACTION DECARBONISATION NETWORK STRATEGY

INTERIM PROGRAMME BUSINESS CASE

Executive Summary

FOREWORD

Climate change is a real and growing threat. Every year, across the planet, weather records are broken, and we see more frequent extreme weather, from flooding to drought. It is becoming increasingly urgent for countries and businesses across the world, to protect the planet for future generations.

In June 2019 the UK Government set out a legislative target to achieve 'net zero' greenhouse gas emissions by 2050. For rail specifically the Department for Transport (DfT) asked the rail industry to explore whether it would be possible to remove all diesel-only trains from the network by 2040 in England and Wales. The Scottish Government also set a target to decarbonise domestic passenger rail services by 2035.

The railway plays a vital role in supporting the economy and connecting communities across Britain. It is already the most environmentally friendly mode of public transport, contributing less than one per cent of UK annual greenhouse gas emissions. Rail has the potential to move large volumes of people and goods reliably with zero carbon emissions with current technology. We have a huge opportunity to play an important part in a green economic recovery following the Coronavirus pandemic and tackling climate change.

Today, traction energy accounts for the vast majority of rail's carbon emissions. As our power supply comes from nuclear energy, it is logical that we immediately focus on reducing diesel train usage on our network with the ultimate goal of removing them entirely.

Over the last year Network Rail has worked collaboratively with the rail industry to establish how we can best work together to achieve this. The result of this work is the Traction Decarbonisation Network Strategy (TDNS) and I am delighted that we are now able to set out the different ways how we could minimise direct carbon emissions from trains.

This strategy sets out why decarbonising rail traction is so important and considers the three main ways of doing it - overhead electrification, battery and hydrogen fuel cells. It then looks at every section of unelectrified line in the country to see where each solution can be most effectively used. While more work is still needed, in particular the development of regional delivery plans, this strategy will support and inform policy and funding decisions on what needs to be achieved and when.

Carrying out this work in a way that is efficient and represents best possible value for money is essential. This strategy shows that the best way of doing this includes a long-term, stable and efficient programme of electrification which will last for at least thirty years, alongside the introduction of new technology. If we can do this, I am confident that rail will play a vital role in helping build Britain back better and achieve the Government's commitment to achieve net zero by 2050.

Paul McMahon,
Managing director System Operator

THE DECARBONISATION CHALLENGE

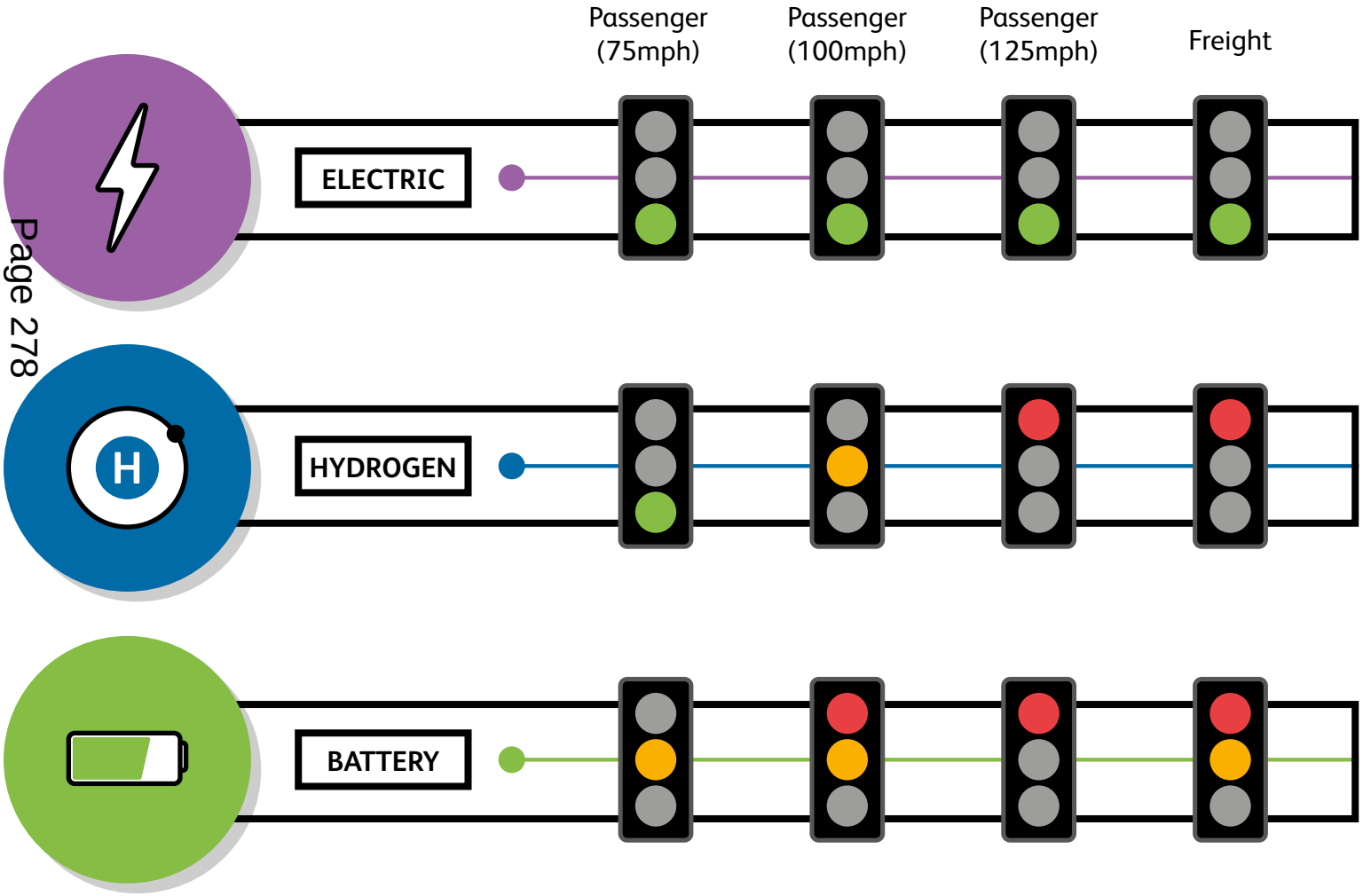
Reducing carbon emissions in rail is critical. It brings benefits directly to the rail industry and, by decarbonising transport overall, important knock-on benefits across the transport sector and wider economy.

These benefits can be organised into six key themes:

Emissions Reduction	Surface Transport Decarbonisation	Passenger and Freight End User	Direct Rail Benefits	Environmental Benefits	Wider Economy Benefits	
Climate Change is a global threat. Paris Agreement has set ambitious targets for global average temperature rise.	Rail is already a green mode of transport. Potential to reduce overall emissions from transport by encouraging more people to choose rail over other forms of transport.	Reliability and resilience need to be improved. Capacity shortfall in some areas of the network.	Rail requires significant investment for ongoing operations, maintenance and renewals. Cost efficiency is critical.	Introduction of ULEZ and CAZ around the UK. Strong focus on air quality from local, regional and national governments.	UK Net-Zero Target. Getting to Net Zero requires significant infrastructure investment.	The case for change
Net Zero GHG by 2050 for UK as a whole. Other national and regional targets and aspirations for pre 2050. NR science-based target of 27.5 % reduction fortraction by 2029.	Modal shift from road and air to rail. Even better if rail itself is decarbonised. Additional investment required to increase capacity.	Improving resilience to allow passengers and freight to rely on rail. Increasing capacity improves customer experience and opportunities.	Achieving cost efficiency provides sustainable pricing for passengers, customers and government.	Provide a longer-term solution to air quality issues. Support decision making from rail industry Air Quality Strategic Framework for short-term solutions required.	Traction decarbonisation programme will require skilled workers around the UK to deliver infrastructure and rolling stock.	Strategic objectives
Ending rail's contribution to emissions by removing diesel trains. Further minimizing carbon emissions through optimised cascade of the cleanest compliant diesel trains.	Safety improvements for users compared with roads. Congestion reduction on roads. Road maintenance cost savings benefits. Cross-modal cost saving with combined refuelling/ recharging infrastructure	Faster journeys. Improved reliability. Greater tonnes hauled in same train paths. Improved resilience through electrifying diversionary routes.	Reduced rolling stock maintenance costs. Reduced track access charges. Reduced fuel costs.	Longer-term air quality solution for stations, depots and freight. Supporting rail industry Air Quality Strategic Framework. Noise reduction.	Increase jobs in design, integration, management, manufacturing and construction. "Level Up" economy through job creation away from London and South East.	Strategic benefits

MAIN RECOMMENDATIONS

The Rail Industry Decarbonisation Taskforce has identified three possible traction technologies which are sufficiently mature to replace diesel – battery, electric and hydrogen. Each of these technologies has different technical capabilities which mean that not all are suitable for all types of rail services.

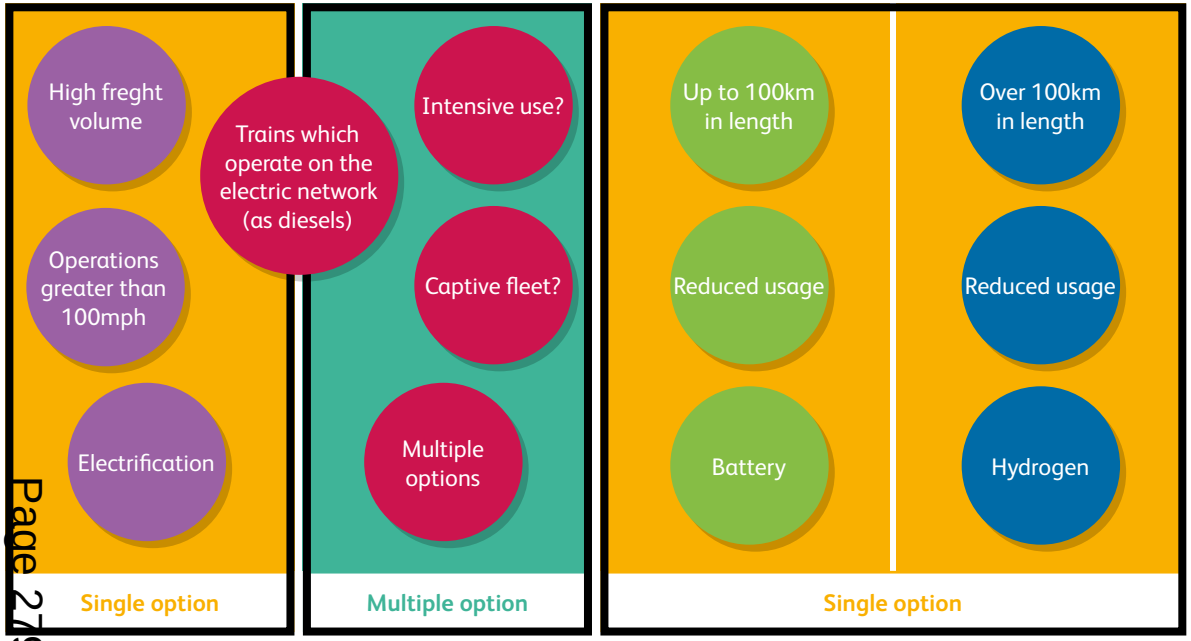


Battery and hydrogen technologies are unsuitable for long-distance high-speed and freight services as these services have higher energy needs than battery and hydrogen can provide.

Electric traction is incredibly versatile in that it can successfully provide energy for all types of journeys. But it relies on fixed infrastructure to transmit electricity and this infrastructure has a relatively high capital cost compared with battery and hydrogen technology.

These technical and cost implications have been used to develop a 'decision tree' to identify areas of the rail network where one technology is most suitable. For example, only electrification is suitable for areas where trains travel at more than 100mph or where there are lots of freight services. Equally the capital costs required to deliver electrification mean that battery and hydrogen may offer a better value for money way of achieving a zero-carbon railway in areas of the network where fewer trains run.

In some areas of the network which are particularly busy electrification may also represent the most sensible option, even though it would be technically possible to use battery and hydrogen. These areas of the network are identified as 'multiple options' where further economic and operational analysis is needed before the best choice of technology can be decided.



By applying this approach to the 15,400 single track kilometres (STK) of unelectrified rail network in Great Britain, we have calculated a need to provide:

11,700 STKs of electrification.

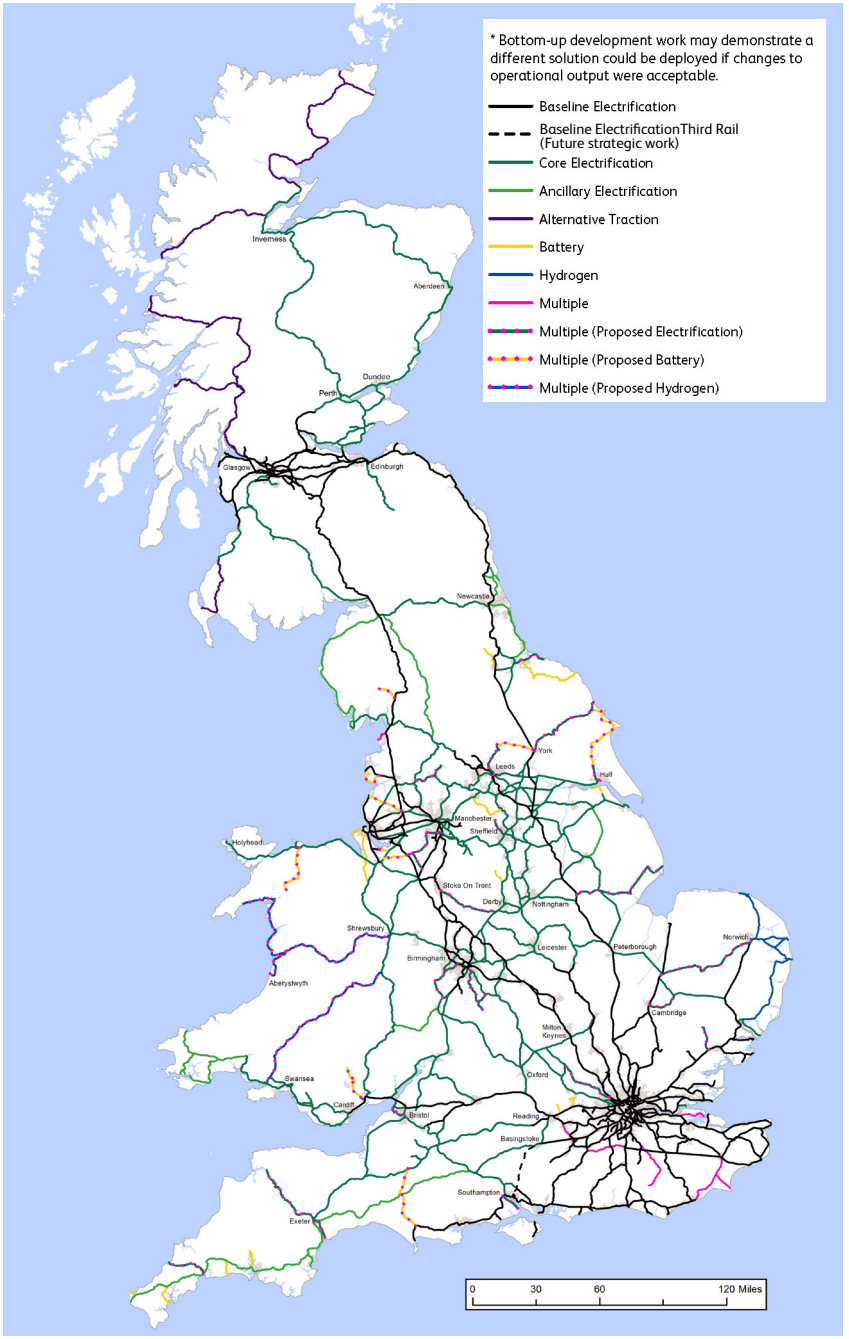
Battery operation over **400** STKs of infrastructure.

Hydrogen operation over **900** STKs of infrastructure.

2,300 STKs where there is no clear technical choice.

Of the 2,300 STKs where "multiple options" could be delivered, operational and economic analysis has identified a further 1,340 STKs of electrification, battery operation over an additional 400 STKs and hydrogen operation over an additional 400 STKs.

That leaves us with 260 STKs of infrastructure where no clear decision has yet been made but a likely technology is identified within the TDNS National Recommendations document. Further work at a local level will be needed to confirm this.



FURTHER RECOMMENDATIONS

Any proposed new railway should consider the need to operate using zero carbon rolling stock (i.e. battery, electric or hydrogen), in conjunction with the wider network to which it is linked.

Battery and hydrogen train operations should now start wherever this is possible to ensure standards are developed, whole-system operational experience is gained, and lessons are learned. That way, best practice can be learned and embedded in good time.

From now on, diesel-only trains should only be bought where there are clear strategic and economic reasons for doing so. Where this is necessary, only trains where the possibility exists in future to replace the diesel engines with a zero-carbon alternative should be chosen. Hybridisation and the use of multi-mode trains offer an excellent opportunity to progressively reduce emissions and realise the benefits of electrification.

Projects and programmes which increase capacity for passengers and/or freight should continue in order to support a modal shift to rail. These projects and programmes could draw on the strategic and economic benefits of decarbonisation and modal shift in their business case. This is especially true for freight projects because of the significant modal shift they deliver.

A stable and efficient programme of traction decarbonisation is the most efficient way for us to deliver this work and will enable us to incorporate all the lessons learned from previous electrification. This programme is also likely to include interim solutions to make the most effective use of resources and keep disruption to passengers and freight to a minimum, while meeting emissions reduction targets. This programme will be considered as part of the TDNS programme business case.

ECONOMICS

The economic case considers the economic impact of minimising traction emissions and provides an indicative assessment of the net economic value from the different ways of doing this. The results establish an initial, nationwide view of the potential costs and benefits from the recommendations. It should be stressed that this analysis provides an initial, limited view of benefits and costs and has been based on a number of assumptions.

Aside from the significant environmental benefits of reducing rail-related carbon emissions, there are also a number of economic benefits that could be realised:

JOURNEY TIME BENEFITS

The value of journey time savings from improvements in the acceleration and deceleration of trains.

PERFORMANCE BENEFITS

The value of more reliable passenger journeys due to improved reliability of trains.

CARBON REDUCTION BENEFITS

The value of reduced CO_2 emissions emitted into the atmosphere.

ROAD DECONGESTION BENEFITS

The value of reduced congestion on the road network as more people and organisations choose rail over road.

INFRASTRUCTURE CAPITAL AND RENEWAL COSTS

A range of capital and renewals costs over time, reflecting the cost of overhead electrification, hydrogen refuelling points, and battery charging points.

INFRASTRUCTURE MAINTENANCE COSTS

The increased maintenance cost of additional overhead electric wires.

DISRUPTION DURING CONSTRUCTION DISBENEFITS

The cost of increased passenger journey times from reduced rail services during the construction period for new or upgraded rail infrastructure.

TRAIN MAINTENANCE COSTS

Changes in maintenance costs according to the mileage covered by each different type of passenger train in operation.

TRAIN FUEL COSTS

Changes in fuel costs according to mileage and consumption rate covered by each type of passenger train in operation.

TRAIN LEASE COSTS

Changes in lease costs due to the different types of passenger trains in operation.

NETWORK RAIL MAINTENANCE COSTS

Changes in track maintenance and electrical asset maintenance costs due to the mileage covered by each different type of passenger train in operation.

The economic analysis undertaken relates specifically to the costs and benefits we would expect to see from traction decarbonisation. It is likely, however, that as traction decarbonisation projects or programmes are brought forward, they will have their scope enlarged to include other railway work that is needed. Working in this way helps to minimise disruption to passengers and maximise overall efficiency. In those cases, we would expect both costs and benefits to be higher because more work is being carried out.

DELIVERY

Most of the railway in London and South East is already electrified which means that most of this programme will be delivered in other parts of the country, drawing on skills and resources in those regions. The Eastern region has the largest volume of electrification required, but there are significant volumes in all regions outside the South.

With a total length of over 13,000 STKs in need of electrification and recent supply chain activity average of 450 STKs per year having fallen to much lower levels, there is a clear challenge to re-build our capability to efficiently deliver electrification.

Analysis undertaken by RIA, shows that delivering 450 STK of electrification per year is within the capability of the supply chain, assuming that activity is gradually built up over several years and a commitment is made to a stable and efficient programme of work. This stability is critical to ensuring that jobs are retained, the need for additional training is reduced and the programme is a cost-effective solution.

A highly skilled and specialised workforce is also needed to deliver this work, and this could be efficiently achieved by employing specialist delivery teams that consistently move from project to project, each delivering 75 to 100 STK/year.

OPTIONS FOR CONSIDERATION

Five different pathways for delivering decarbonisation have been developed. These help funders consider the trade-offs which need to be made around the degree of decarbonisation achieved, the pace of delivery and cost.

For all five pathways costs and benefits are broadly balanced over a ninety-year appraisal period and those pathways which provide higher emissions reductions offer the best value for money when delivered over a longer period.

All except pathway 4 are feasible based on the industry's assessment of delivery capability. Further work is being undertaken with RIA and the supply chain to validate this.

TRACTION DECARBONISATION PATHWAY	AVERAGE ANNUAL STKs OVER PROGRAMME	MAXIMUM STKs IN ANY ONE YEAR
Pathway 1 (-80 %)	259	377
Pathway 2 (-95 %)	303	447
Pathway 3 (Net-Zero by 2050)	355	691
Pathway 4 (Net-Zero by 2040)	658	922
Pathway 5 (Net-Zero by 2061)	303	447

COSTS

Most capital expenditure arises from the cost of overhead electrification and to identify these costs we have assessed the complexity of the work to be undertaken on each part of the network that needs to be electrified. This considers the length of the section, the engineering complexity (for example, tunnels and bridges), the economic cost of disruption while the work is carried out and the likely duration of the project. Capital costs at this stage have been estimated using a wide total cost bracket spanning from £1m/STK to £2.5m/STK (2020 prices).

Capital cost of battery charging points and hydrogen refuelling locations were determined using preliminary estimates from RSSB's T1199 project. These costs were then scaled according to the number of battery and hydrogen trains required in the recommended areas.

Analysis of the recommendations suggests that between 3,600 and 3,800 electric and 150 and 200 battery and hydrogen trains will be required for the traction decarbonisation recommendations but the need for interim solutions will likely increase the number of battery and hydrogen trains needed in the short-term. Around 650-700 freight trains will also be required and are likely to be delivered as a mixture of electric and multi-mode vehicles.

The delivery of this strategy is subject to funding from HM Government, the Scottish Government, and the Welsh Government.

DELIVERING TRACTION DECARBONISATION

Priority decarbonisation projects and programmes will be decided by working with industry stakeholders and will be presented in the TDNS programme business case in October 2020.

The delivery of decarbonisation projects and programmes is devolved to Network Rail regions who are now working with Network Rail System Operator to begin to develop regional traction decarbonisation strategies and identify early schemes to take forward.

Once decisions have been made to develop or deliver schemes, those projects will be governed by the RNEP and GRIP processes.

A further important consideration is that this decarbonisation programme will need careful integration with other major national programmes such as the Long-Term Deployment Plan (Digital Railway), Northern Powerhouse Rail, High Speed Two and projects arising from the rail industry Air Quality Strategic Framework. The programme will be able to highlight areas of potential conflict but further work will be required beyond October 2020 to resolve these issues and ensure all work is smoothly integrated and delivered as efficiently as possible.

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North East Joint Transport Committee

Date: **17 November 2020**

Subject: **Forecast of Capital Outturn 2020-21 – Period to 30 September 2020**

Report of: **Chief Finance Officer**

Executive Summary

This report provides the North East Joint Transport Committee with an update and forecast of outturn for the 2020/21 Transport Capital Budget based on expenditure and commitments as at the period ending 30 September 2020.

The report identifies that total capital expenditure on Transport schemes of £88.235m is forecast for 2020/21 against the revised programme budget of £94.081m. The revised programme takes account of adjustments for slippage in the 2019/20 outturn and new grant approvals made since the original capital programme was set in January 2020, particularly in relation to Transforming Cities Fund Tranche 2.

The revised capital programme forecast is £6.669m higher than the original capital programme. Expenditure to the end of September 2020 totalled £33.664m – 38% of the forecast total capital expenditure forecast for the year.

£2.725m is forecast to be invested on Transforming Cities Fund (TCF) Tranche 1 schemes, representing slippage from 2019/20. Schemes are due to complete (except for the High-Level Bridge – Cycling link to Newcastle City Centre (£0.248m)) during 2020/21, bringing the total Tranche 1 programme expenditure to £10m.

In March 2020, the JTC was notified of the successful award of TCF Tranche 2 funding of £198.484m, made up of £98.685m for Metro Flow project delivered by Nexus and £103.799m as a devolved programme. £9.901m of capital grant was received at the end of March 2020 and work has been undertaken to agree a revised prioritised programme of schemes to be funded from the devolved funding pot. Approximately £0.101m of expenditure is currently forecast for 2020/21, pending a detailed review of likely construction dates for each project, taking into account slippage arising as a result of COVID-19. Reporting on the Metro Flow project is included within the sections on the Metro capital programme.

£0.384m of expenditure is forecast on the Go Ultra Low project, representing slippage from 2019/20 and costs required to bring the remaining rapid charging clusters into operation. The project will fully complete in 2020/21.

£0.497m is forecast on the Ultra-Low Emission Vehicles – Taxi Project and actual expenditure to September is £0.124m. The project will fully complete in 2020/21.

2020/21 is the final year of the Metro Asset Renewal Plan programme which runs from 2010 to 2021. Expenditure in year is forecast to be £23.546m which is within the minimum and maximum levels set for the year by the Department for Transport (DfT).

The Metro Fleet Replacement project is forecast at £44.380m in 2020/21 following the award of final contracts to Stadler.

In terms of the Tyne Pedestrian and Cycle Tunnels there is still outstanding work to complete and the commissioning of the inclined lifts continues to be delayed because of contractors being unable to complete the works because of travel restrictions.

The capital programme includes £13.949m of Local Transport Plan Integrated Transport Block grant that will be received by NECA on behalf of the Joint Transport Committee, most of which will be paid to constituent authorities and Nexus on a quarterly basis to support their capital programmes. Expenditure on the Nexus elements is included in the sections on the Nexus capital programme.

Most of the capital works during the current year will be funded through government grants (£73.978m) with elements of the Nexus capital programme and the Tyne Pedestrian and Cyclist Tunnels works funded by reserves (£14.257m) held specifically for this purpose.

Recommendations

The North East Joint Transport Committee is recommended to note the report and agree to the updated revised capital programme for 2020/21, which has been adjusted to reflect reprofiling of schemes across years and additional grant funding received since the revised programme was agreed in July.

1. Background Information

1.1 In January 2020, the JTC approved the initial 2020/21 capital programme of £81.566m. The capital programme was updated to take account of adjustments for slippage in 2019/20 and any new grant approvals made since the original capital programme was set in January 2020, particularly in relation to Transforming Cities Fund Tranche 2 at the JTC meeting in July.

1.2 The updated position shows a revised capital programme of £94.081m and forecast expenditure of £88.235m. Actual capital expenditure in year is estimated to be £6.669m higher than the original capital programme agreed by the JTC in January.

2. Proposals

Forecast of Capital Outturn 2020/21 – Period to 30 September 2020

2.1 A summary of the Transport capital programme for 2020/21, together with an initial forecast outturn position and details of actual expenditure to 30 September is set out in the table below, with further details provided in the sections that follow.

Table 1: Transport Capital Programme 2020/21

	2020/21 Revised (July JTC)	2020/21 Updated (October JTC)	2020/21 Updated Forecast	Forecast (Under) / Over Spend	Actual Expenditure to 30 September 2020
	£m	£m	£m	£m	£m
Transforming Cities Fund Tranche 1	2.973	2.973	2.725	(0.248)	0.382
Transforming Cities Fund Tranche 2 (Excluding Metro Flow)	20.103	1.517	1.517	0.000	0.044
Go Ultra Low	0.384	0.384	0.384	0.000	0.121
Ultra-Low Emission Vehicles – Taxi Project	0.000	0.504	0.497	(0.007)	0.124
Metro Asset Renewal Plan	19.604	24.635	23.546	(1.089)	8.924
Metro Fleet Replacement	48.604	48.605	44.380	(4.225)	18.354
Nexus non-Metro Programme	1.652	1.652	1.479	(0.173)	0.161
Metro Flow	1.702	1.702	1.598	(0.104)	0.474
Tyne Tunnels	0.000	0.800	0.800	0.000	0.394
Local Transport Plan[1]	11.309	11.309	11.309	0.000	4.686
Total Capital Programme	**106.331**	**94.081**	**88.235**	**(5.846)**	**33.664**

[1] Excluding amounts for local contribution to Metro ARP, shown within Nexus capital programme lines

Transforming Cities Fund

2.2 In July 2020 the JTC approved a revised programme for 2020/21 for Tranche 1, factoring in slippage from 2019/20. All programmes are expected to be completed by 31 March 2021, with the exception of the High-Level Bridge – Cycling link to Newcastle City Centre. This is due to delays in completion of other schemes. The timescale for full delivery will therefore extend into 2021/22.

Table 2: TCF Tranche 1 Capital Forecast of Outturn 2020/21

Theme Name	2020/21 Revised (July JTC)	2020/21 Updated (October JTC)	2020/21 Forecast Outturn	Variance: Over / (Under)	Actual Expenditure to 30 September 2020
	£m	£m	£m	£m	£m
Theme 1: Cycling Links to Key Employment Sites	0.414	0.414	0.414	0.000	0.000
Theme 2: Cycling Links to Newcastle City Centre	0.248	0.248	0	(0.248)	0.000
Theme 3: Cycling Links to Sunderland City Centre	0.516	0.516	0.516	0.000	0.004
Theme 4: Public Transport Reliability Upgrades	0.503	0.503	0.503	0.000	0.188
Theme 5: Transport Improvements at Barras Bridge	1.142	1.142	1.142	0.000	0.115
Additional Theme 1: Bowes Railway Path improvements	0.075	0.075	0.075	0.000	0.000
Additional Theme 2: Horden Rail Station Links (North)	0.075	0.075	0.075	0.000	0.075
Total	**2.973**	**2.973**	**2.725**	**(0.248)**	**0.382**

2.3 A Tranche 2 funding bid was submitted to Government in November 2019 following a draft submission in June 2019. In March 2020 a substantial settlement was received from DfT that funded the Metro Flow scheme (£95m) and a devolved fund to deliver a range of local schemes (£104m). In addition, a commitment was given to fund the reintroduction of passenger trains on the Northumberland Line through a different funding source. Overall, this represents a considerable success for the region, though there remains a significant need for further investment in transport

infrastructure to meet the needs of our region and the ambitions of the JTC.

2.4 A Transport Planner has been appointed to work with local authorities to deliver the programme of schemes funded by the Devolved Pot, which was ratified by JTC members in May 2020.

2.5 The Tranche 2 funding will be allocated across 4 themes and programme management. The table below shows the current estimated spend profile across the financial years of the Devolved Fund programme and Metro Flow, which is reported as part of the Nexus programme:

Table 3: TCF Tranche 2 Capital Forecast of Outturn 2020/21 to 2022/23

TCF Tranche 2	**2020/21 Budget**	**2021/22 Budget**	**2022/23 Budget**	**Total Budget**
	£m	**£m**	**£m**	**£m**
Devolved Programme Level	1.517	34.735	67.647	103.799
Nexus Metro Flow	1.702	7.766	85.217	94.685
All Programme Level	**3.219**	**42.501**	**152.764**	**198.484**

2.6 As the grant award received was lower than the bid submitted, a prioritised list of TCF schemes for delivery from the Devolved Programme has been agreed. Work is now under way with those schemes to refine costs and expenditure profiles and more detail of the Tranche 2 programme will be provided in a future capital programme monitoring report to the JTC. The prioritised list of schemes includes £25.047m of over-programming, detailed discussions with scheme promoters are being conducted to understand how this over-programming will be managed between now and March 2023.

Go Ultra Low

2.7 The Go Ultra Low project is jointly funded through funding from Office for Low Emission Vehicles (OLEV) and European Regional Development Funding (ERDF) and includes the construction of one of the UK's first Electric Vehicle (EV) filling stations at West Wear Street in Sunderland city centre, along with the installation of a number of rapid charging clusters across the region.

2.8 Work in 2020/21 is focussing on bringing the remainder of the rapid charging clusters into operation. The Go Ultra Low North East programme has been extended until January 2021 by the Ministry of Housing, Communities and Local Government. This extension is primarily so that the remaining EV rapid hubs can be installed as this had to be paused due to the furlough of staff as a result of the Covid-19 lockdown. The full allocation will be used in 2020/21.

2.9 Capital expenditure to the end of September 2020 was £0.132m and forecast expenditure to the year end is £0.384m.

Ultra-Low Emission Vehicles - Taxi Project

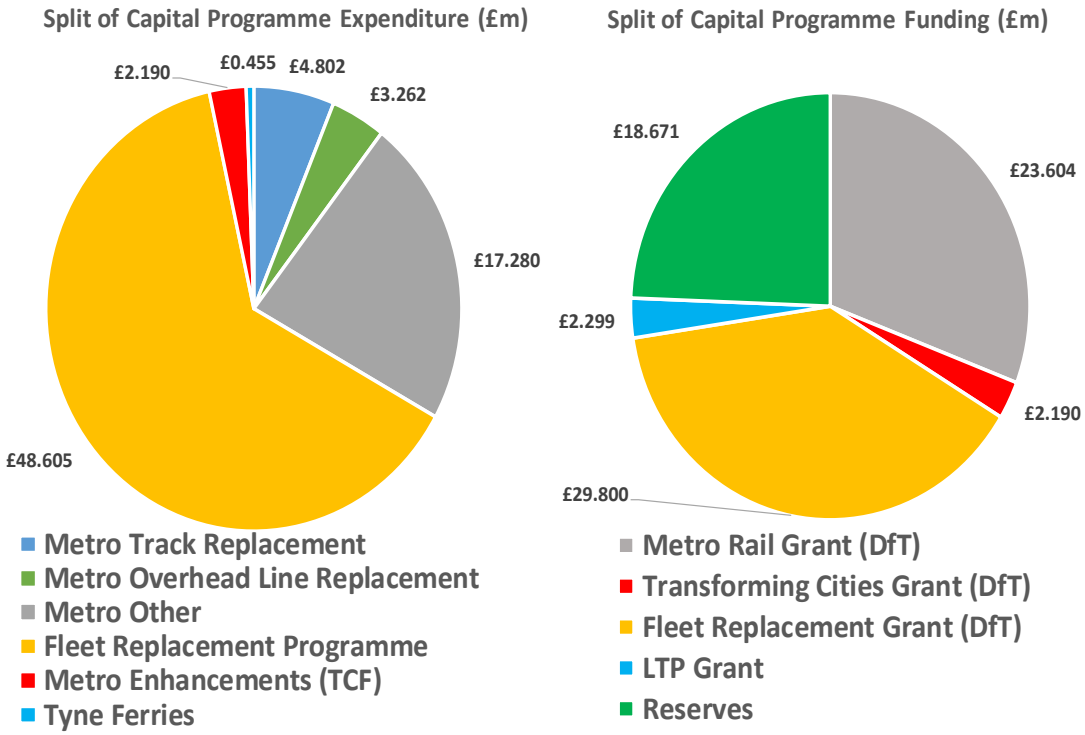
2.10 The North East was awarded a grant of £504,750 from the Office of Low Emission Vehicles, Ultra Low Taxi Infrastructure scheme to deliver 10 chargers dedicated to the Taxi and Private Hire trade across 9 sites. Commissioning for nine of the ten rapid chargers to be installed for the taxi and private hire market at strategic locations in car parks and on street around areas of high taxi demand is due to be completed by the end of 2020. Work on the tenth charger has been delayed as the car park has been reserved for use as a temporary COVID-19 testing station. The project also includes funding for engagement with the taxi trade to encourage the uptake of EV's, which will take place through a series of online webinars, trials and workshops over a two-year period.

2.11 Capital expenditure to the end of September 2020 was £0.124m. Forecast expenditure to the year end is £0.497m.

Nexus Capital Programme

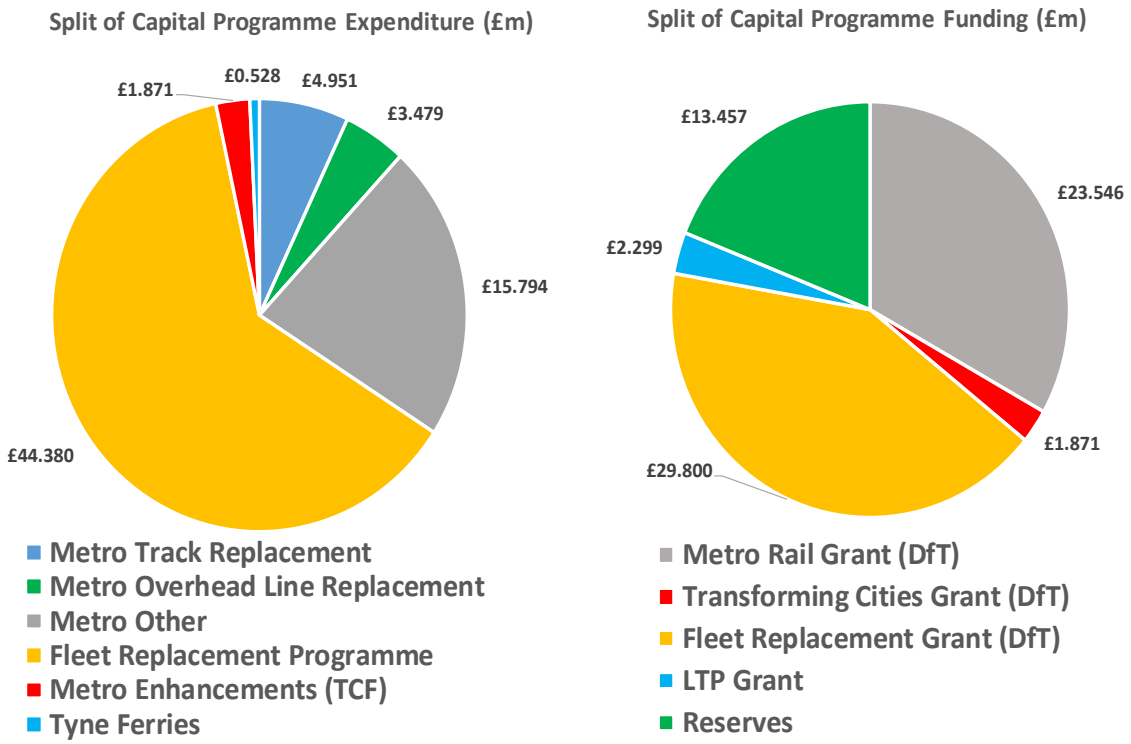
2.12 The Joint Transport Committee approved Nexus' Capital Programme for 2020/21 to 2022/23 in January 2020. The Nexus' approved capital programme for 2020/21 provides for gross expenditure of £76.594m. The programme is sub-divided into the following sections, with details shown in the pie charts below:

i. Metro Asset Renewal Programme (MARP);
ii. Fleet Replacement Programme (FRP);
iii. Other Capital Projects (OCP); and
iv. Metro Flow (MFL)

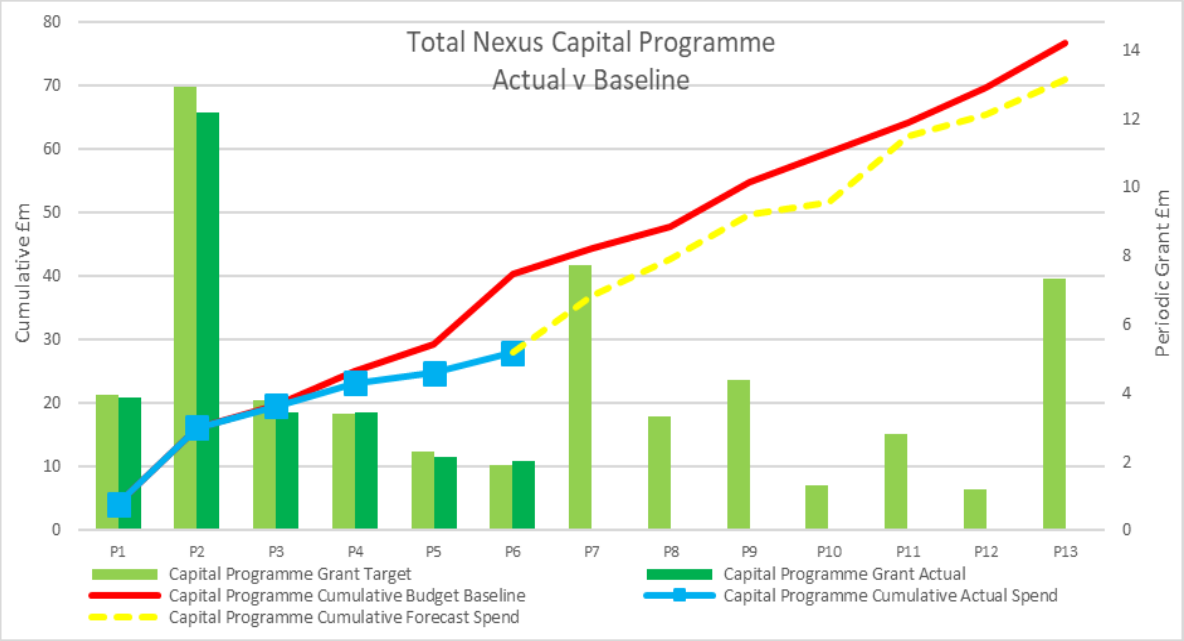


2.13 By comparison the revised 2020/21 programme forecast outturn as at period 6

stands at £71.003m, shown in the pie charts below:



2.14 At the end of period 6 total capital expenditure incurred was £27.913m, against a profiled budgeted spend of £40.325m.



2.15 The 2020/21 forecast outturn is currently estimated at £71.003m against the original budget of £74.883m. However, following the reallocation of funding in response to the impact of COVID-19 and the confirmation of 2021/22 MARP funding, the revised funding available for the capital programme is £76.594m. The variance is detailed below and relates to MARP over programming.

Table 4: Nexus Capital programme 2020/21 – Forecast of outturn

	2020/21 Revised (July JTC)	2020/21 Updated (October JTC)	2020/21 Forecast Outturn	Variance: Over / (Under)	Actual Expenditure to 30 September 2020
	£m	£m	£m	£m	£m
Metro Asset Renewal Programme	22.925	24.635	23.546	(1.089)	8.924
Fleet Replacement Programme	48.604	48.605	44.380	(4.225)	18.354
Other Capital Projects	1.652	1.652	1.479	(0.173)	0.161
Metro Flow	1.702	1.702	1.598	(0.104)	0.474
Total	**74.883**	**76.594**	**71.003**	**(5.591)**	**27.913**

2.16 The Nexus Capital Programme is funded as follows:

Table 5: Nexus Capital programme 2020/21 - Funding

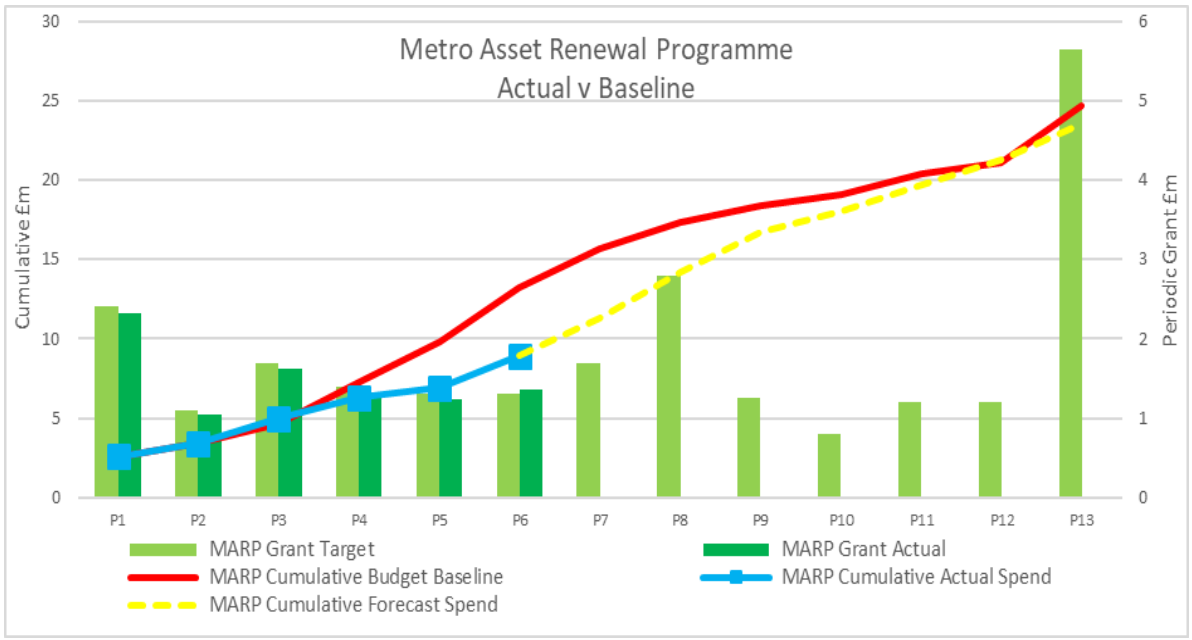
	2020/21 Revised (July JTC)	2020/21 Updated (October JTC)	2020/21 Forecast Outturn	Variance (Forecast of Outturn vs Revised Budget)
	£m	£m	£m	£m
Metro Rail Grant (DfT)	19.604	23.604	23.546	(0.058)
Fleet Replacement Grant (DfT)	29.800	29.800	29.800	0.000
Transforming Cities Grant (DfT)	2.190	2.190	1.871	(0.319)
LTP Grant	2.299	2.299	2.299	0.000
Fleet Reserves	16.582	16.583	12.358	(4.225)
NESTI	0.030	0.030	0.030	0.000
Nexus Reserves	1.057	1.057	1.099	0.042
Over Programming	3.321	1.031	0.000	(1.031)
Total	**74.883**	**76.594**	**71.003**	**(5.591)**

Metro Asset Renewal Programme

2.17 At the end of period 6 £26.996m of capital grant has been recovered from the Department for Transport (DfT). This includes both the MARP and the FRP. The actual amount claimed in total was 96% of the forecast and therefore is within DfT tolerance levels of +/- 5%.

2.18 Cumulative actual spend on the MARP at the end of Period 6 was £8.924m, which

was in line with the profiled expected budget spending.



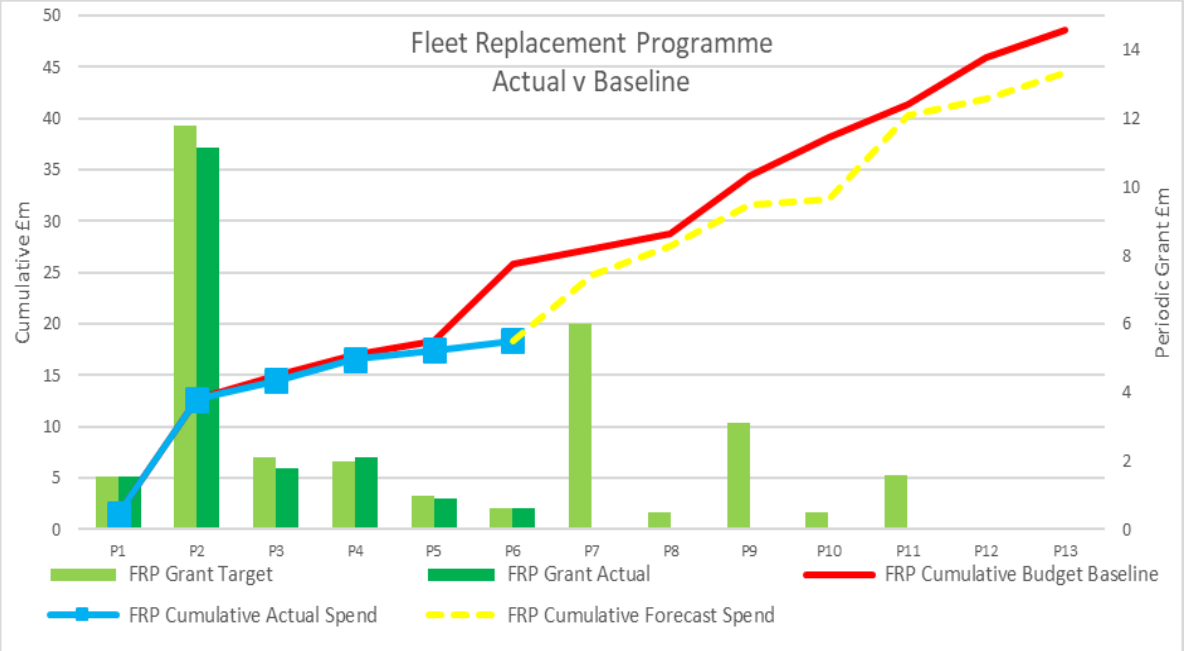
2.19 The forecast outturn for 2020/21 is £23.546m against a baseline budget of £24.635m. The £1.089m variance relates to a reduced forecasted spend on the development projects added to the programme to deliver next year's programme, Nexus Learning Centre, Reed Track Circuits, Radio, Replacement Point Motors (largely due to reduced contingency forecasts).

2.20 The MARP programme forecasted to claim £1.300m from DfT in September. 105% of DfT grant was claimed and MRG capital grant of £23.546m is forecast to be recovered, against maximum and minimum expenditure levels of £15.683m and £23.604m.

2.21 Nexus' Metro Asset Renewal Plan budget has been increased by £1.710m following the confirmation of £20.000m DfT capital grant funding for 2021/22. This award of funding for 2021/22 has allowed Nexus to restructure its 2020/21 programme to aid delivery of the 2021/22 programme, enabled by the virement of capital grant funding from 2021/22.

Metro Fleet Replacement Programme

2.22 Cumulative actual spend at the end of September was £18.354m against the baseline budget of £25.834m. The £7.480m underspend relates to a delay to the Detailed Design Submission MSA milestone from 11 September until 28 September, of £4.600m due to a delay in contract award, and the impact of having now received a revised programme for delivery of the Gosforth depot project from the principal contractor. Reflecting the revised commencement date, 4 October, as a result of the Covid-19 delay to transfer of depot operations. Importantly not impacting on the overall project delivery date.



2.23 Forecast outturn for 2020/21 is £44.380m against a baseline budget of £48.605m. The £4.225m reduction relates to Gosforth depot spend deferred into 2021/22, based on the contractor's latest programme submission.

2.24 The project forecasted to claim £0.600m from DfT in September. £0.630m, 105% of DfT grant was claimed. The total 2020/21 available DfT Fleet Capital Grant of £29.800m is forecast to be recovered.

Other Capital Projects (OCP)

2.25 These include Transforming Cities projects at Callerton Parkway and in respect of Digital Car Parks. The cumulative actual spend on Other Capital Projects in period 6 was £0.161m against an expected cumulative target of £0.716m. The £0.555m underspend are attributed to; the Ferry, relating to a delay in the progression of the Ferry vessels works due to Covid-19; delay in tendering for the Form A design for the North Ferry Landing relocation where Nexus now have an agreement in principle to fund the progression of the relocation to the Western Quay from the Getting Building Fund, however additional time was taken to secure the bid.

Metro Flow (MFL)

2.26 Cumulative actual spend at the end of Period 6 was £0.474m against an expected cumulative spend of £0.574m. Whilst there is a £0.100m underspend to date the project is to programme and delivered the expected output of issuing the ITN opportunity to market in period 6.

The project is 100% TCF capital grant funded in 2020/21 and £1.702m grant is to be made available to Nexus in 2020/21, with any underspend continuing to be available in 2021/22. In addition, DfT have confirmed that in the event the Full Business Case is not accepted, the £1.702m will not be clawed back.

Tyne Tunnels Capital Programme

2.27 It was anticipated at the time of setting the 2020/21 budget that the works would be fully completed, and the Tyne Pedestrian and Cycle Tunnels would be handed over to the operation of TT2 by now. This has not proven to be the case and the refurbishment project is continuing for longer than expected.

2.28 This is due in part to the effect of Covid-19 travel restrictions on the contractors who have been delayed from accessing the site for most of 2020, and therefore have not been able to complete the outstanding works on the inclined lifts. Costs associated with on-site security, maintenance contracts, cleaning and utilities are being incurred whilst the project remains incomplete. The outturn includes circa £350,000 of costs for lift works. The Tyne Tunnels Manager is focussing efforts on resolving this situation and a separate report will be brought to the JTC Tyne and Wear Sub Committee and JTC full meeting at a future meeting to set out proposals to resolve this situation.

Local Transport Plan

2.29 Local Transport Plan (LTP) Integrated Transport Block funding is made available by the DfT to the whole JTC area. This block is allocated between the JTC constituent authorities on a locally agreed basis with an allocation to Nexus (mainly used to provide the match funding needed for the Metro ARP capital programme). The LTP block allocation is also used to contribute to the costs of the Transport Strategy Unit. Expenditure to the end of September 2020 is £4.686m.

Table 6: LTP Integrated Transport Block allocation

	2020/21 Gross Allocation	Topslice for TSU and UTMC	2020/21 Net Allocation	Actual Expenditure to 30 September
	£m	£m	£m	£m
Durham	2.789	(0.063)	2.727	1.332
Gateshead	1.329	(0.130)	1.199	0.534
Newcastle	1.650	(0.161)	1.489	0.664
Northumberland	1.088	(0.063)	0.958	0.785
North Tyneside	1.695	(0.130)	1.633	0.414
South Tyneside	0.843	(0.112)	0.730	0.309
Sunderland	1.606	(0.155)	1.451	0.648
Nexus/Public Transport Allocation	2.950	(0.063)	2.887	0
Total	**13.949**	**(0.876)**	**13.073**	**4.686**

Overall Capital Programme Financing

2.30 Forecast capital expenditure for the year will be financed as follows:

Table 7: Capital Programme Financing 2020/21

	Original Budget 2020/21	2020/21 Updated (October JTC)	Variance – Original to Updated Budget (October JTC)
	£m	£m	£m
Government Grants	63.897	73.978	10.081
Earmarked Reserves	17.669	14.257	(3.412)
Total Funding	**81.566**	**88.235**	**6.669**

3. Reasons for the Proposals

2.1 This report is for information, to enable the JTC to fulfil its role of monitoring transport budgets on behalf of the two combined authorities.

4. Alternative Options Available

4.1 This report is for information with no decision required.

5. Next Steps and Timetable for Implementation

5.1 The capital budget for 2020/21 will continue to be monitored and reported to the JTC at regular intervals during the year. Budget proposals for the capital programme in 2021/22 will be brought to a future meeting of the JTC for consideration and approval.

6. Potential Impact on Objectives

6.1 There are no potential impacts arising from this report which is for information.

7. Financial and Other Resources Implications

7.1 The financial summary is set out in the main body of the report. There are no financial or other resource implications from this report which is for information.

8. Legal Implications

8.1 The Authority has a duty to ensure it can deliver a balanced budget. The Local Government Act 2003 imposes a duty on an Authority to monitor its budgets during the year and consider what action to take if a potential deterioration is identified. There are no legal implications arising from this report, which is for information.

9. Key Risks

9.1 Risks associated with the delivery of transport services by the key delivery bodies are factored into the risk management processes of those organisations. The JTC holds reserves to mitigate against financial risks associated with its transport functions, and the level of these are considered to be adequate at the year end.

10. Equality and Diversity

10.1 There are no equality and diversity implications arising from this report.

11. Crime and Disorder

11.1 There are no crime and disorder implications arising from this report.

12. Consultation/Engagement

12.1 The capital programme budget for 2020/21 and 2021/22 was subject to consultation with key stakeholders including constituent authorities.

13. Other Impact of the Proposals

13.1 There are no other impacts arising from this report which is for information.

14. Appendices

14.1 None

15. Background Papers

15.1 Joint Transport Committee Capital Programme 2020/21 – report to 21 January 2020 meeting.

15.2 Joint Transport Committee Capital Programme 2019/20 Outturn and Forecast of Capital Outturn 2020-21 – Period to 31 May 2020 – report to 14 July 2020 meeting

16. Contact Officers

16.1 Eleanor Goodman, Finance Manager, eleanor.goodman@northeastca.gov.uk, 0191 277 7518

16.2 Patsy O'Reagan, Principal Accountant, patsy.oreagan@northeastca.gov.uk , 03000 263 488

17. Sign off

17.1

- The Proper Officer for Transport:
- Head of Paid Service:
- Monitoring Officer:
- Chief Finance Officer:

18. Glossary

18.1 DfT – Department for Transport

ENCTS – English National Concessionary Travel Scheme

JTC – Joint Transport Committee

NECA – North East Combined Authority

NEMOL – North East Metro Operations Limited

TCF – Transforming Cities Fund

TT2 – Tyne Tunnels 2 Limited

North East Joint Transport Committee

Date: **17 November 2020**

Subject: **Budget Proposals 2021-22**

Report of: **Chief Finance Officer**

Executive Summary

This report provides an update forecast of outturn for the transport revenue budgets for 2020/21 and a summary of the draft Transport budget and levies for 2021/22.

In terms of the current year, the transport levies and grants to Durham, Northumberland and Nexus are fixed for the year, so the outturn will be in line with the original budget allocations.

Durham County Council are currently showing a small overspend, mainly due to additional costs relating to bus shelters which has been largely offset by other minor underspends.

Northumberland County Council are forecasting a small underspend due to savings on Concessionary Travel reimbursement.

For Nexus, the impact of COVID-19 has been profound, with commercial income down by circa 77% against budget to the end of September 2020. Additional grant funding from government to support Metro and secured bus services has however been agreed with the Department for Transport (DfT) in the form of the Light Rail Revenue Restart Grant (LRRRG) and the Coronavirus Bus Services Support Grant (CBSSG).

On 20 October 2020, the Joint Transport Committee considered a report providing an update in relation to Nexus' financial performance, based on the position as at September 2020 together with forecasts to the year end to inform budget planning for 2021/22. At that time the continuation of the LRRRG was uncertain, however, the LRRRG has subsequently been extended to 18 January 2021 and discussions with DfT would indicate that it is probable that this support will be extended again to 31 March 2021 given the expected continuing impacts into the New Year.

It is understood that DfT and HM Treasury will require Nexus (and other light rail operators) to develop a recovery plan by 31 December 2020, aimed at Metro becoming more financially sustainable and less reliant on this additional government grant support. Details of the required content of the recovery plan are awaited.

Given the exceptional circumstances surrounding the Covid-19 pandemic, Nexus proposes that a one off £1.2m levy rebate (the equivalent of a 2% levy reduction), is shared by the five Tyne and Wear Councils to partially offset the cost of the levy in 2021/22.

The forecast for the Transport Strategy Unit indicates that net expenditure will be broadly in line with the original budget in the current year, with a small reduction of £9,000 against budgeted net expenditure in year. Savings arising from vacancies within the team and as a result of the team continuing to work remotely offsetting additional costs associated with developing the Transport Plan and Transport Blueprint documents in year.

In terms of the Tyne Tunnels, the impact of COVID-19 has also been unprecedented, with traffic reducing significantly in the period from mid-March onwards but steadily increasing following the national lockdown ending, though not back to pre-Covid levels. In late September 2020 traffic dropped back down to 74% following the implementation of local lockdown measures. Latest forecasts since the national lockdown was announced suggest that traffic could drop to approximately 60% of normal levels in November, rising in December if restrictions are released. The structure of the project agreement means that the net position on the JTC Tyne Tunnels Account is forecast to be in line with the budget due to reduced toll income being offset by reduced contract payments to TT2 Ltd in year.

The updated for the Tyne Tunnel, factor in the financial framework agreed by the JTC at its meeting on 15 September 2020 in support of the introduction of the Tyne Pass scheme. This framework includes a payment of £6.7m to TT2 to be repaid by TT2 Limited with interest over the life of the Concession, to 2037.

The budget strategy outlined in this report assumes a levy for 2021/22 for Tyne and Wear in line with the current year, representing a cash freeze. On this basis, the proposed levy for 2021/22 would remain at £61.1m.

Durham and Northumberland are currently finalising their transport budget proposals for 2021/22 and future years. The figures reported in this report represent the working draft budgets for 2021/22, which once finalised will determine the total for their levies next year.

It is proposed to continue the contribution of £10,000 per authority for the accountable body costs of the Joint Transport Committee in 2021/22, which is retained from the Durham and Northumberland levies and which funds the work of the Joint Transport Committee, including contributions to the post of the Managing Director, Transport North East and the Transport Strategy Unit.

The contribution from the Tyne and Wear levy to fund central activity next year will be £2.1m (in line with current allocations), which is mainly used to meet costs relating to the operation of the former Tyne and Wear Integrated Transport Authority.

It is proposed that funding for the Transport Strategy Unit from the Local Transport Plan Integrated Transport Block grant is maintained at the current level of £500,000 (£62,500 per council and Nexus).

Recommendations

The North East Joint Transport Committee is recommended to:

i. Receive this report for consideration and comment;

ii. Note the updated projected outturn position for the 2020/21 Transport budget, as set out in the report;

iii. Consider the following budget assumptions / proposals and agree to these forming the basis of consultation on the 2021/22 Transport Budget:

   a. That the 2021/22 Transport Levy for Tyne and Wear is indicatively to be set at £61.1m, which represents a cash freeze compared with the current year;

   b. That the revenue grant to Nexus for 2020/21 is indicatively proposed to be set at £59.0m, which is a cash freeze compared with the current year total;

   c. That the JTC consider the redistribution of £1.2m of earmarked reserves held on behalf of Nexus by NECA to the Tyne and Wear authorities proportionate to their shares of the 2021/22 Transport Levy for Tyne and Wear;

   d. That contributions of £500,000 to the Transport Strategy Unit are top sliced from Local Transport Plan Integrated Transport Block grant received by the JTC in 2021/22;

   e. That the JTC Tyne and Wear Transport Sub-Committee give consideration to increasing the Tyne Tunnels Tolls for Class 2 vehicles next year, in line with the concession contract and the agreed approach to the funding of the Tyne Tunnels. (Note: The final decision to increase the Tyne Tunnel Tolls will be taken by the JTC Tyne and Wear Sub Committee in January 2021)

iv. Note that the budget proposals for Transport will be subject to a consultation process including reports to the Joint Transport Committee Overview and Scrutiny Committee, Joint Transport Committee Audit Committee, relevant officer groups and the Leadership Board of NECA and the NTCA Cabinet;

v. Note the intention to approve the budget and agree the Transport Levies at the meeting of the JTC on 19 January 2021, after considering any comments received on the proposals and decisions reached by the Tyne and Wear Sub Committee in January 2021.

1. Background Information

1.1 The North East Joint Transport Committee receives funding from a variety of sources including the levies on Durham, Northumberland and Tyne and Wear councils, Tyne Tunnels tolls income, grant funding and interest income. This funding is used to deliver the transport objectives of the Committee through the provision of revenue grants to Durham and Northumberland councils and Nexus for the delivery of public transport services, the funding of the Tyne Tunnels and the provision of the Transport Strategy Unit which works on behalf of the Joint Transport Committee to provide it with relevant information and policy choices and deliver its policies at a regional level.

1.2 In line with the Transport Levying Bodies Regulations 1992, the transport levies must be issued by 15 February preceding the commencement of the financial year in respect of which they are to be issued.

1.3 This report summarises the process and timetable for approval of the levies and other budgets relating to the Joint Transport Committee and sets out initial proposals for these budgets in 2021/22. The proposals will be further developed and consulted upon in the coming months, and decisions on the levies and other aspects of the Transport budget 2021/22 will be taken by the JTC on 19 January 2021. Decisions on the Tyne Tunnels tolls will be taken by the TWSC on 14 January 2021.

1.4 Appendix 1 shows the timetable for the agreement of the Joint Transport Committee budget for 2021/22. The timetable is in line with the requirements of the constitution agreed by the North East Combined Authority, who are the accountable body for transport matters.

2. Proposals

Transport Levies 2020/21 & Indicative Levies 2021/22

2.1 As the transport levies and revenue grants are normally fixed for the year there is no change in the levies payable and grants payable between the original budget and the forecast outturn, and minimal change in the retained transport levy budget. Any surplus or deficit against the budgets for the three main delivery agencies (Durham County Council, Northumberland County Council and Nexus) is retained or managed within the reserves of that organisation.

2.2 A proportion of the levies is retained to support the work of the JTC and to meet historic costs relating to the former Tyne and Wear Integrated Transport Authority (TWITA). This area of the budget is expected to underspend slightly in the current year due to lower than anticipated interest costs on historic Tyne and Wear Transport debt and the forecast underspend will be transferred to the JTC retained reserves at year end.

2.3 The updated forecast of outturn for the current year, together with the initial budget proposals for 2021/22 is set out in table 1 below, with a detailed explanation provided in the sections that follow.

Table 1: 2020/21 and 2021/22 Indicative Transport Levies and Grants

	2020/21 Original Budget	Spend to Date (to 30 September 2020)	2020/21 Forecast to Year end	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Transport Levy	(82,800)	(41,400)	(82,800)	0	(82,826)
Grant to Durham	15,456	7,728	15,456	0	15,475
Grant to Northumberland	6,224	3,112	6,224	0	6,231
Grant to Nexus	59,000	29,500	59,000	0	59,000
Retained levy budget	2,120	1,060	2,120	0	2,120
Tyne Tunnels Revenue account	(2)	(691)	6,670	6,672	0
Contribution (to)/from JTC Reserves	**(2)**	**(691)**	**6,670**	**6,672**	**0**

Tyne and Wear Levy

2.4 The majority of the Tyne and Wear levy is paid as a revenue grant to Nexus for the delivery of public transport services and the initial budget proposals recommend a budget and levy for Tyne and Wear of £61.1 million for 2021/22, a year on year cash freeze when compared with 2020/21.

2.5 The levy for Tyne and Wear is made up of a centrally retained budget of £2.1m – retained to fund Tyne and Wear transport costs (primarily relating to the former Tyne and Wear Integrated Transport Authority) and the grant to Nexus for the provision of public transport services of £59m.

2.6 In 2010, the JTC grant (Tyne and Wear levy) to Nexus was £74.2m and in 2020/21 it is £59m, a reduction of £15.2m or 20% over the last 10 years.

2.7 In accordance with the Transport Levying Bodies Regulations, the Tyne and Wear Levy for 2021/22 must be apportioned in line with the 2019 Mid-Year Population. The latest estimates show population increases in each Tyne and Wear council area except Gateshead, with increases in the relative population in Newcastle, North Tyneside and South Tyneside. On a cash freeze basis, this would give the following apportionment for the 2021/22 Levy:

Table 2: Tyne and Wear Levy Apportionment 2021/22

	2019 Population	2020/21 Levy £	2021/22 Draft Levy £	Year on Year Difference in Levy £
Gateshead	202,055	10,888,380	10,815,502	(72,878)
Newcastle	302,820	16,140,834	16,209,202	68,368
North Tyneside	207,913	11,075,330	11,129,066	53,736
South Tyneside	150,976	8,079,396	8,081,370	1,974
Sunderland	277,705	14,916,060	14,864,860	(51,200)
Tyne and Wear	**1,141,469**	**61,100,000**	**61,100,000**	**0**

2.8 The Tyne and Wear levy is Nexus' single grant funding source for all non-Metro services, including concessionary travel reimbursement. The specific grant that Nexus receives from government to support the operation of the Metro can only be used for that purpose and cannot be diverted to support non-Metro activities.

2.9 Up until the Coronavirus impacted earlier this year, over the past decade Metro fare revenue had grown by £8.6m (or 23%) whilst Metro Rail Grant (MRG) from the Department for Transport (DfT) had increased by £1.5m (or 6%).

2.10 Consequently, only £2.8m of Nexus' net funding requirement in 2020/21 relates to Metro, even though Metro's gross budget in 2020/21 is in excess of £100m. The infographic at Appendix 1 provides an overview of the Nexus budget for 2020/21.

2.11 Over the past few years, Nexus has delivered a range of efficiency savings in order to protect frontline services and help facilitate both reductions and more latterly freezes in the Tyne and Wear Levy. Most notably:

- Headcount reduced by 20%;
- A £2m 'rebate' was provided to Tyne and Wear Councils in 2013/14 from Nexus' reserves in lieu of the levy being frozen that particular year;
- The cost of operating Metro has reduced by circa £2m per annum after the concession with DB Regio ended in March 2017; and
- A range of other savings have been achieved e.g. in tendered bus services and concessionary fares reimbursement.

2.12 In addition, since 2014, Nexus has generated surpluses of £12.2m, of which £8.5m has been invested in transport infrastructure, with the balance increasing usable reserves, which are available to support frontline services.

2.13 When the JTC approved Nexus' 2020/21 budget, it also considered the medium-term financial forecast, which assuming expenditure commitments remained in line with those being delivered in the current year and with no further growth or reduction in either Metro Rail Grant or the Tyne and Wear transport levy. Members

will recall that in order to balance the budgets in 2021/22 it was forecast that Nexus would require use of circa £3.7m of reserves next year.

2.14 The current financial year has been dominated by the continuing impacts of the Covid-19 pandemic, with significant and unprecedented losses of fare and commercial revenues being experienced with Nexus. The net impact on the Nexus budgets is detailed later in this report.

2.15 Constituent authorities are also in an unprecedented position, as they deal with the impacts of the Covid-19 pandemic, which is having a profound impact on their finances. They also face significant uncertainties surrounding the local government finance settlement for next year, the impact of further delays in the comprehensive spending review, the as yet unknown impacts of Fair Funding review, plus Brexit, in addition to any ongoing budget pressures arising from the Covid-19 pandemic into next year. Medium Term Financial Planning in this context is extremely difficult.

2.16 In recognition of this it is proposed that a one off £1.2m levy rebate (the equivalent of a 2% levy reduction), is shared by the five Tyne and Wear Councils to partially offset the cost of the levy in 2021/22. It is proposed that this would be shared proportionate to the basis upon which the 2021/22 levy is allocated i.e. using the 2019 population estimate – this would mean that the net cost of the levy would reduce for all councils next year, even where their population share has increased.

2.17 Nexus proposes to redirect part of the reserve held by the NECA on behalf of Nexus for this more general purpose, rather than it continuing to be reserved for capital projects. Should the JTC support this proposal, the approved levy would remain at a cash freeze position but the JTC would resolve to distribute £1.2m of earmarked reserves back to five Tyne and Wear Councils. The net impact would be as follows:

Table 3: Tyne and Wear Levy Apportionment 2021/22

	2019 Population	2021/22 Draft Levy £	Year on Year Difference in Levy £	Share of Levy rebate £	Year on Year Difference in Levy Net of rebate £
Gateshead	202,055	10,815,502	(72,878)	(212,416)	(285,294)
Newcastle	302,820	16,209,202	68,368	(318,348)	(249,980)
North Tyneside	207,913	11,129,066	53,736	(218,574)	(164,838)
South Tyneside	150,976	8,081,370	1,974	(158,718)	(156,744)
Sunderland	277,705	14,864,860	(51,200)	(291,944)	(343,144)
Tyne and Wear	**1,141,469**	**61,100,000**	**0**	**(1,200,000)**	**(1,200,000)**

Durham

2.18 The budget for public transport activity in Durham for 2020/21 is £15.466 million and the forecast, based on the position to the position to the end of September

2020 is a small overspend of £27,000 for the year, which will be retained by Durham County Council.

2.19 The following table provides a detailed breakdown of forecast expenditure in the current year, together with an indicative budget for 2021/22:

Table 4: Durham Transport Forecast of Outturn 2020/21 and Indicative 2021/22 Budget

	2020/21 Original	Spend to Date (to 30 September 2020)	2020/21 Forecast to Year end	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Concessionary Fares	11,932	1,360	11,932	0	11,932
Subsidised Services	2,556	440	2,564	8	2,556
Bus Stations	177	677	159	(18)	177
Bus Shelters	19	93	82	63	19
Passenger Transport Information	88	72	61	(27)	88
Staffing	684	342	685	1	703
Share of JTC Transport Costs	10	0	10	0	10
Net Expenditure	**15,466**	**2,984**	**15,493**	**27**	**15,485**
JTC Grant (Levy)	**(15,466)**	**(7,733)**	**(15,466)**	**0**	**(15,485)**
(Surplus) / Deficit for the year	**0**	**(4,749)**	**27**	**27**	**0**

2.20 Following the Covid-19 outbreak most of the supported bus services within County Durham continue to operate, albeit for the most part at a reduced frequency. The Council has continued to pay all bus operators at full contracted prices throughout the pandemic.

2.21 Durham County Council continues to make payments to operators under the Government's English National Concessionary Travel Scheme (ENCTS) which entitles pass holders to free off-peak travel after 9.30 am on local bus services. Patronage under this scheme has been significantly reduced due to the Covid-19 outbreak, however, the Council is continuing to reimburse operators at pre pandemic levels to ensure the viability of routes and operators are supported, in line with the Cabinet Office Procurement Policy Note 02/20 – Supplier Relief due to Covid-19, for at least the period of the outbreak to enable the resumption of socially necessary services afterwards.

2.22 The main reasons for the projected overspend in 2020/21 are as follows:

i) Subsidised Services - £8,000 over budget – arising from higher than

anticipated costs of local subsidised bus services due to a reduction in income;

ii) Bus Stations - £18,000 under budget – this is due to a reduction in payments to third parties as a result of an in-year closure of Durham Bus Station;

iii) Bus Shelters - £63,000 over budget – this is due to additional costs of providing bus shelters in respect of business rates increases and repairs and maintenance; and

iv) Passenger Transport Information - £27,000 under budget – this is due to a reduction in printing and communication costs in year.

2.23 Durham County Council is in the process of finalising its 2021/22 budget proposals. The initial estimates shown in Table 4 show that net budgets are proposed to be largely in line with the current year, with no adverse impact on services anticipated next year.

Northumberland

2.24 The budget for public transport activity in Northumberland for 2020/21 is £6.234 million and the forecast, based on the position to the end of September 2020 is an underspend of £40,000 when compared with the original budget, which will be retained by Northumberland County Council.

2.25 The following table provides a detailed breakdown of forecast expenditure in the current year together with an indicative budget for 2021/22:

Table 5: Northumberland Transport Forecast of Outturn 2020/21 and Indicative 2021/22 Budget

	2020/21 Original	Spend to Date (to 30 Sept. 2020)	2020/21 Forecast to Year end	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Concessionary Fares	4,811	2,361	4,772	(39)	4,811
Subsidised Services	1,230	801	1,230	0	1,230
Bus Stations	25	16	24	(1)	26
Passenger Trans. Info.	25	0	25	0	25
Staffing	133	67	133	0	139
Share of NECA Transport Costs	10	0	10	0	10
Net Expenditure	**6,234**	**3,245**	**6,194**	**(40)**	**6,241**
JTC Grant (Levy)	**(6,234)**	**(3,117)**	**(6,234)**	**0**	**(6,241)**
(Surplus) / Deficit for the year	**0**	**128**	**(40)**	**(40)**	**0**

2.26 During the Covid-19 pandemic most of the supported services within

Northumberland have continued to operate, albeit for the most part at a reduced frequency. The Council has continued to pay operators at full contracted prices with the exception of some seasonal services, which had been due to commence from 5th April 2020. These supported services included instances of services running commercially at popular/peak times, but where support is given to maintain journeys at other times for example early mornings or late evenings.

2.27 Northumberland County Council continues to make payments to operators under the Government's English National Concessionary Travel Scheme (ENCTS) which entitles pass holders to free off-peak travel after 9.30 am on local bus services. Patronage using the scheme was significantly reduced due to the introduction of the Government's lockdown policy in response to the Covid-19 outbreak. The Council is continuing to reimburse operators at pre pandemic levels to ensure the viability of routes and operators is maintained, in line with the Cabinet Office Procurement Policy Note 02/20 – Supplier Relief due to Covid-19, for at least the period of the outbreak to enable the resumption of socially necessary services afterwards. This will result in an underspend of £40,000 in the current financial year. This is due to the underspend being recurring from previous financial years based on patronage levels and reimbursement rates.

2.28 Northumberland County Council is in the process of finalising the 2021/22 budget proposals. The initial estimates shown above show that net budgets are proposed to be largely in line with the current year, with no adverse impact on services anticipated next year.

Nexus

2.29 The effect of the nationwide lockdown led to patronage on the Metro immediately declining by around 95%. The nature of Metro's operation is such that many of its costs are fixed and cannot be reduced at short notice. Therefore, during the lockdown period, the system was operating at a loss of approximately £0.9m per week, excluding costs associated with making the system Covid secure e.g. deep cleaning of trains and stations. A more recent partial recovery has seen this reduce to a loss of approximately £0.5m per week, although the recovery has since stalled because of the imposition of local restrictions in late September 2020. The national lockdown announced by the Prime Minister on 31 October 2020, coming into effect on 5 November 2020 is expected to have a further, detrimental impact.

2.30 In-depth discussions were held with the government over several months alongside transport authorities who were in a similar predicament caused by severe losses on their light rail systems. As a result, the government introduced a new short-term emergency grant called "Light Rail Revenue Restart Grant (LRRRG)". This grant covers all of Metro's Covid-related net losses.

2.31 On 20 October 2020, the Joint Transport Committee considered a report providing an update in relation to Nexus financial performance, based on the position as at September 2020 together with forecasts to the year end to inform budget planning for 2021/22. At that time the continuation of the LRRRG was uncertain, however, the LRRRG has subsequently been extended to 18 January 2021 and discussions with DfT would indicate that it is probable that this support will be extended again to 31 March 2021 given the expected continuing impacts into the New Year. The

confirmed grant provided to Nexus has been allocated in four tranches, covering the period 16 March to 18 January 2021. In total, £33.2m has been provided in LRRRG across these four tranches and this is subject to an audit process. Based on the first four tranches, Nexus could reasonably expect a fifth tranche to the end of March 2021 amounting to a further £7.9m. The audit process established by DfT will help determine whether any grant needs to be clawed back.

2.32 Bus services were similarly impacted by the national lockdown, and a government grant called "Coronavirus Bus Services Support Grant (CBSSG)" has been provided to commercial bus operators on a broadly similar basis to the light rail funding. Unlike LRRRG, CBSSG is now open-ended with a 10-week notice period and an explicit link to social distancing measures, meaning bus funding for commercial operators will continue.

2.33 CBSSG was predicated on an assumption made by government that local transport authorities (in this case Nexus) would continue to make payments for Concessionary Travel and Secured Bus Services at pre-Covid levels, even though those services were not being provided (as demand for them had evaporated). The JTC and TWSC have been briefed on this matter on several occasions over the last six months and for as long as LRRRG is being paid to Nexus, were broadly satisfied that such payments were necessary and could be justified, given the extraordinary circumstances this year.

2.34 A separate bus grant aimed at local authorities to cover lost fare income on secured bus services was implemented at the same time, called "LACBSSG". To date, Nexus has attracted £1.2m in LACBSSG to assist with fare revenue losses. Nexus is also considering whether there is potential to redirect Better Bus Funding, announced prior to the Covid-19 pandemic in order to accommodate fare revenue losses and increased costs associated with its secured bus services.

2.35 Nexus has however also had to contend with increased costs arising when various secured bus service contracts were renewed earlier in the year, together with the need to introduce additional buses for schools returning in the Autumn. The pressure that has arisen is around £0.6m in the current year, although part of this is being funded from grant allocated to the region by the Department for Education and from an earlier, pre-Covid grant support known as the 'Better Bus Fund'. In terms of other revenue losses e.g. in relation to the cross Tyne Ferry service, Nexus has made an application to MCHLG via the NECA where a proportion of the loss is expected to be recovered.

2.36 In terms of the Metro Futures studies, a series of studies looking at the feasibility of various local rail expansion proposals was commenced by Nexus in early 2020. The lead responsibility for these studies has now transferred to Transport North East (TNE), contracts are being novated to facilitate this and the budget established by Nexus will be transferred to TNE to fund completion of this work.

2.37 As part of its medium-term financial planning, Nexus have factored in a levy freeze into its planning assumptions for 2021/22 and over the medium term. These planning assumptions will need to be updated as necessary for the report to the next meeting of the Joint Transport Committee on 19 January 2021 to reflect the views from this meeting and other consultations. A summary of the updated

forecast outturn and initial budget proposals for Nexus is summarised below:

Table 6: Nexus Transport Grant Forecast of Outturn 2020/21 and Indicative 2021/22 Budget

	2020/21 Original	Spend to Date (September 2020)	2020/21 Forecast to Year end	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Metro	2,840	1,284	2,840	0	Tbc
Bus Services	14,885	7,077	15,833	948	Tbc
Other	41,275	18,807	41,575	300	Tbc
Total	**59,000**	**27,168**	**60,248**	**1,248**	**Tbc**
JTC Grant (Levy)	**(59,000)**	**(26,672)**	**(59,000)**	**0**	**(59,000)**
(Surplus) / Deficit for the year	**0**	**496**	**1,248**	**1,248**	**Tbc**
(Use) of / Contribution to Reserves in Year	**0**	**(496)**	**(1,248)**	**(1,248)**	**Tbc**

2.38 The forecast as at September shows a deficit of £1.248m to the end of the year. The forecast assumes that LRRRG will be available until 31 March 2021 but that non-Metro Covid emergency funding will not. However, Nexus continues to lobby for the continuation of non-Metro Covid emergency funding and this, together with the potential redirection of Better Bus Funding, curtailing all non-essential expenditure and as a back stop, use of reserves in-year means Nexus is confident that it will be able to balance its budget in 2020/21.

2.39 When the JTC approved Nexus' 2020/21 budget in January 2021, it also considered the medium-term financial forecast, which assuming expenditure commitments remained in line with those being delivered in the current year and with no further growth or reduction in either Metro Rail Grant or the Tyne and Wear transport levy, showed the following:

Table 7: Nexus' MTFS Forecasts – JTC January 2020

	2020/21 £000	2021/22 £000	2022/23 £000
Forecast (Surplus)/Deficit	0	3,700	6,500
Planned use of reserves	0	(3,700)	(3,300)
Estimated Savings Required	**0**	**0**	**3,200**

2.40 Nexus' reserves as at 31 March 2020 amounted to £51.5m, with the majority of this earmarked for capital investment e.g. the local contribution towards the new fleet. As Table 7 shows, some reserve funding had been previously earmarked to cushion the impact on services of the (pre-Covid) planned deficit, therefore Nexus

has only a limited ability to use its reserves to accommodate losses caused by the Covid pandemic.

2.41 At the JTC meeting on 20 October 2020 a potential worst and best-case scenario for 2021/22 was reported. In the best case scenario, it was assumed that all government emergency support continues to be paid throughout the coming year, the Tyne and Wear levy and other central government grants are cash flat next year and the recovery in terms of patronage is at the higher end of current modelling. Under this scenario the previously reported budget deficit of £3.7m will broadly remain in 2021/22, although work is ongoing in order to validate this assumption.

2.42 In a worst-case scenario, LRRRG and LACBSSG does not continue in its current guise, the recovery in terms of patronage is at the lower end of current modelling and there is a cut in local / central grants to Nexus. In such a scenario the budget deficit would be circa £30.1m, necessitating consideration of very difficult savings options to ensure the budget could be balanced. Given the scale of savings required, it is likely that they would impact significantly on service provision.

Table 8: Nexus Forecast Deficit 2021/22

	Worst Case £000	**Best Case £000**
Nexus MTFS Underlying deficit 2021/22	**3,700**	**3,700**
Fare/Commercial losses	22,000	16,500
Local and central grants change (-5% or flat)	4,400	0
Covid emergency funding	0	(16,500)
Nexus Revised deficit	**30,100**	**3,700**

2.43 Although Covid emergency funding is at this stage only guaranteed until 18 January 2021, Nexus is preparing its initial budget proposals for 2021/22 from the best case scenario in which Covid support from government continues and both the Tyne and Wear levy and (non-Covid) central government grants are assumed to be frozen at 2020/21 levels. This would make the projected deficit for 2021/22 broadly similar to the level previously forecast.

2.44 The latest tranche of LRRRG does however, require the production of a recovery plan for Metro, in line with an expectation from government that Nexus will begin planning for the end of LRRRG and reduced medium-term demand for Metro, in order to ensure the transition away from government emergency support can happen as soon as possible with minimal disruption. The expectation from government is that the recovery plan will be developed over the next two months and will cover aspects relating to fares and service levels, workforce modernisation and reprioritising capital renewals and investment.

2.45 This (best case) budget planning assumption for 2021/22 is at this stage considered realistic because of the continuation of the Covid pandemic and the

need for ongoing government support for the Metro to remain a going concern. This planning assumption was endorsed by the Joint Transport Committee at its meeting on 20 October 2020 and is therefore being used as the basis for developing the Nexus budget for 2021/22. The updated medium-term financial strategy will, however, need to be cognisant of the likelihood that government emergency support will be gradually withdrawn.

2.46 Savings proposals, likely to include service reductions will need to be developed although these will only be implemented in 2021/22 if the best-case planning scenario does not transpire. Options will most likely include a review of concessionary fares reimbursement and secured bus services, together with a review of the Metro and ferry timetables and the provision of public transport information and key facilities.

Retained Levy

2.47 Most of this budget relates to financing charges on historic supported borrowing debt. However, there is also budget provision to pay for support services, other supplies and services, and a repayment to the Tyne Tunnels account for the use of reserves in 2013/14 to pay off the Tyne and Wear Pension deficit.

2.48 Expenditure for the year is forecast to be £2.120m, which is in line with the original 2020/21 budget. The updated forecasts and the indicative budgets for 2021/22, are set out in the table below:

Table 9: Retained Levy Budget Forecast of Outturn 2020/21 and Indicative 2021/22 Budget

	2020/21 Original	Spend to Date (to 30 September 2020)	2020/21 Forecast to Year end	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Support Services/ Staffing	215	53	215	0	227
Administration and Governance	173	76	173	0	173
Financing Charges	1,732	0	1,732	0	1,720
Total Expenditure	**2,120**	**129**	**2,120**	**0**	**2,120**
Contribution from Levies	**(2,120)**	**(1,060)**	**(2,120)**	**0**	**(2,120)**
(Surplus) / Deficit for the year	**0**	**(931)**	**0**	**0**	**0**

Tyne Tunnels Tolls

2.49 The Tyne Tunnels are accounted for as a ring-fenced account within the

JTC/NECA budgets, meaning that all costs relating to the tunnels are wholly funded from the toll's income received and Tyne Tunnels reserves, with no call on the levy or other external government funding.

2.50 The JTC receives all the toll income from the vehicle tunnels, and a payment under the contract with TT2 is determined based on traffic levels. The balance retained by the JTC is to meet other costs associated with the Tyne Tunnels namely interest and principal repayments on borrowing taken out to fund the New Tyne Crossing project and client costs associated with the management of the contract with the concessionaire.

2.51 The 2020/21 tolls income budget included an increase in tolls charges to £3.70 for Class 3 vehicles in line with inflation as measured by the Retail Price Index (RPI) – a year on year increase of £0.10 (2.6%). The tolls for Class 2 vehicles were not increased in 2020/21. These are also triggered by the increase in RPI and they were not anticipated to increase until 2021/22, as increases can only be applied in 10p increments. These charges therefore remained at £1.80 in 2020/21.

2.52 The tolls increase for Class 3 vehicles was not implemented until August 2020 due to the Covid-19 pandemic. The delayed implementation of these increases has been factored into the updated forecasts.

2.53 Until mid-March 2020, traffic levels and corresponding tolls income were strong and had seen a marked improvement since the completion of Highways England works at Silverlink. From March 2020 however the impact of the Covid-19 lockdown took effect.

2.54 TT2 and Transport North East constantly review the traffic flows through the Tyne Tunnels. Normal levels of traffic are approx. 55,000 vehicles per day. As a result of Covid-19 lockdown measures, traffic levels dropped drastically during March and April 2020 to approx.17,000 vehicles per day which is 30% of normal levels. This is the lowest level of traffic seen during the life of the TT2 contract.

2.55 During May, June, July and August traffic was gradually increasing and by mid-September was up to 85% of normal levels. However, this has since dropped back down to 74% when local lockdown measures were put in place. Latest forecasts since the national lockdown was announced suggest that traffic could drop to approximately 60% of normal levels in November, rising in December if restrictions are released. Overall it is likely that traffic will not return to expected levels for many more months, as further restrictions are likely to be in place at some level for the winter months and the continued impact of many employees working from home resulting in fewer vehicle journeys taking place around the region.

2.56 The structure of the project agreement with TT2 means that the JTC retains the first proportion of traffic income per month, with the traffic risk overwhelmingly borne by TT2. This 'Band 0' income represents approximately 30% of journeys, so the JTC is expected to retain the full budgeted income for the year which will enable all costs to be met.

2.57 The financial framework agreed by the JTC at its meeting on 15 September 2020 in support of the introduction of the Tyne Pass scheme has been factored into the

updated forecasts in this report. This framework includes the offer of an advance of £6.67million to TT2 from Tyne Tunnel reserves in year which will be repaid with interest by TT2 Limited over the life of the Concession, to 2037.

2.58 The forecast outturn position for the Tyne Tunnels includes updated forecasts in terms of reduced toll income as a result of the reduced traffic and delay in implementing toll increases, offset by reduced payments to TT2 under the contract. An overspend against the supplies and services budget is reflected in the projections to reflect the need for additional engineering advice in relation to the vehicle tunnels and professional advice in relation to the Tyne Pass project during the year.

2.59 The first 'Concession Toll' was implemented on 1 January 2014, at a level of £1.60 for cars and £3.20 for HGVs with a 10% discount for permit holders. After that date, the Concession Toll could be adjusted by an amount to reflect actual Retail Price Index (RPI) inflation over time.

2.60 Payments to the concessionaire, TT2 Ltd., also increase with RPI inflation with increases also applied in 10p increments for the "shadow tolls" that drive the contract payments to TT2 Ltd. Increases in the shadow toll are triggered from January each year. The financial model for the Tyne Tunnels assumes that tolls will be maintained in real terms to match the rise in contract payments to TT2 Ltd. Inflationary increase in tolls is also necessary to service the debt financing on the tunnels. The shadow tolls on which payments to TT2 Ltd are based are as follows:

Table 10: Shadow Toll Charges – Payments to TT2 Ltd. 2020, 2021 and 2022

Vehicle Class	Shadow Toll 2020	Shadow Toll 2021	Shadow Toll 2022
2	£1.90 (£0.00 Increase on previous year)	£1.90 (£0.00 Increase on previous year)	£2.00 (£0.10 Increase on previous year - effective from 1 Jan 2022)
3	£3.80 (£0.00 Increase on previous year)	£3.80 (£0.00 Increase on previous year)	£4.00 (£0.20 Increase on previous year – effective from 1 Jan 2022)

2.61 Levels of inflation (measured by RPI in accordance with the 2011 Order) were such that an increase for Class 3 vehicles actual tolls was implemented in 2020/21, but no changes were triggered for Class 2 vehicles. Increases are only applied in 10p increments.

2.62 Taking into account the latest published data (September 2020) an increase in the tolls for Class 2 vehicles could be triggered in 2021/22, but no changes will be necessary for Class 3 vehicles. Using provisions of the 2011 Order, a year on year increase of £0.10 (5.6%) could be implemented for Class 2 vehicles next year. The toll for Class 2 vehicles was last increased in May 2019.

2.63 In terms of the formal process for the increase in the actual Tolls, if the level of RPI has reached the point at which an increase is possible, a decision to increase tolls needs to be taken by the Tyne and Wear Sub Committee.

2.64 If a decision to increase the tolls is taken, officers from NECA as the Accountable Body for the JTC will follow the process set out in the Tyne Tunnels Order 2005 to implement the decision of the committee.

2.65 This will involve advertising the proposed increase in at least one local newspaper and notifying the Department for Transport. Once notified, the Department has 21 days to determine whether to take the order and, if so, the order will be made 28 days before it comes into effect

2.66 A decision on the specific date for implementation will need to be taken in conjunction with TT2, taking into account operational considerations. If an increase in the Class 2 toll was approved by the Tyne and Wear Sub Committee in January 2021, this would likely come into effect in May 2021.

2.67 An increase the actual tolls from £1.80 to £1.90 for Class 2 vehicles, from a proposed implementation date in May 2021 would result in the Toll structure being as follows next year:

Table 11: Proposed Tyne Tunnel Toll Charges 2021/22

Vehicle Class	Actual Toll [Non-Permit Holders]	Description
2	£1.90 (£0.10 Increase – bringing this in line with the Shadow Toll from May 2021 to December 2021)	Motor vehicles (Cars), 2 axles and height 2m or less; Motor vehicles (Cars/Vans) 2 axles and height less than 3m; Articulated motor vehicles with tractor 2m or less and trailer less than 3m
3	£3.70 (no change – remains 10p below the shadow toll)	Motor vehicle 2 or more axles and height 3m or more

2.68 Permits are available for all classifications and subject to 10% discount (no change is proposed to the percentage discount next year). Charges for permits would therefore be as follows should the increase in Class 2 toll be applied:

Table 12: Proposed Tyne Tunnel Toll Charges: Permit Holders 2021/22

Vehicle Class	Toll [Permit Holders]	Description
2	£1.71 (£0.05 increase)	Motor vehicles (Cars), 2 axles and height 2m or less; Motor vehicles (Cars/Vans) 2 axles and height less than 3m; Articulated motor vehicles with tractor 2m or less and trailer less than 3m
3	£3.33 (no change)	Motor vehicle 2 or more axles and height 3m or more

2.69 For 2020/21 all SLAs were documented and formalised however the values attached to existing and new providers of services were maintained at 2019/20 levels and which had remained unchanged for many years. It was agreed that an

exercise would be undertaken to review the SLAs to more accurately reflect the support to NECA and the JTC.

2.70 An exercise has now been concluded with all local authorities providing services to NECA and the JTC to reflect the cost of these services for 2021/22. Costings have been based on officer time engaged in providing support with no provision for additional on-costs such as premises related costs. The updated costings reflect the resources currently committed by the local authorities providing the support to NECA and the JTC which includes oversight and support to the Tyne Tunnels.

2.71 The updated forecast outturn and indicative budget for 2021/22 assuming the increase in the class 2 vehicles tolls is applied from May 2021 and the additional revenue generated is used to make debt charge repayments in 2021/22 is set out below:

Table 13: Tyne Tunnels Account Forecast of Outturn 2020/21 and Indicative 2021/22 Budget

	2020/21 Original	Spend to Date (to 30 September 2020)	2020/21 Forecast Outturn	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Tolls Income	(28,441)	(9,611)	(18,714)	9,727	(30,004)
TT2 Contract	21,653	6,378	11,900	(9,753)	21,707
TT2 Advance (Tyne Pass)	0	0	6,670	6,670	0
Employees	62	34	69	7	70
Pensions	53	26	53	0	53
Premises	0	0	1	1	1
Support Services	100	3	100	0	129
Supplies & Services	45	8	65	20	65
Financing Charges	6,816	2,471	6,816	0	8,255
Interest /Other Income	(50)	0	(50)	0	(50)
Repayment from TWITA for temporary use of reserves	(240)	0	(240)	0	(240)
(Surplus) / Deficit on Tyne Tunnels revenue account	**(2)**	**(691)**	**6,670**	**6,672**	**0**

Tyne Tunnel Reserves

2.72 The Tyne Tunnel reserves are held to help cushion the impact of any uneven cash flows and avoid unnecessary temporary borrowing, as a contingency to cushion the

impact of any unexpected events or emergencies, deal with any changes which may arise from changes in accounting treatments. and as a means of building up funds to meet known or predicted future liabilities. The Tyne Tunnels reserves have been used to meet the majority of the costs relating to the Tyne Pedestrian and Cycle Tunnels refurbishment in recent years.

2.73 In setting the 2020/21 budget provision was made for the use of £100,000 of the reserve to fund capital expenditure and £305,000 to fund North East Smart Ticketing Initiative (NESTI) expenditure.

2.74 The forecast of outturn indicates that capital expenditure on the tunnels, principally the Pedestrian and Cycle Tunnels, is expected to be £800,000 as a result of the refurbishment project continuing for longer than expected. This is due to the effect of Covid-19 travel restrictions on the contractors who have been delayed from accessing the site for most of 2020, and therefore have not been able to complete the outstanding works on the inclined lifts. Costs including on-site security, maintenance contracts, cleaning and utilities are being incurred whilst the project remains incomplete. The outturn includes circa £350,000 of costs for lift works. The Tyne Tunnels Manager is focussing efforts on resolving this situation and a separate report will be brought to the Tyne and Wear Sub Committee at a future meeting to set out proposals to resolve this situation. Expenditure on NESTI will be lower at £152,000 as this represents the balance outstanding to be funded from the Tyne Tunnels Reserve to complete this initiative.

2.75 The table below summarises the forecast position against the Tunnels reserves:

Table 14: Tyne Tunnels Reserves:

	2020/21 Original Budget	2020/21 Actual / Forecast	Variance	2021/22 Initial Draft Budget
	£000	£000	£000	£000
Tyne Tunnels Reserves b/f 1 April 2020	**(16,763)**	**(17,163)**	**(400)**	**(9,541)**
Deficit (Surplus) on Tyne Tunnels revenue account met from reserves	(2)	6,670	6,672	0
Capital Expenditure funded from Reserves	100	800	700	0
NESTI Expenditure funded from Reserves	305	152	(153)	0
Tyne Tunnels Reserves c/f 31 March 2021	**(16,360)**	**(9,541)**	**6,819**	**(9,541)**

The North East Transport Strategy Unit

2.76 The Transport Strategy Unit (TSU) supports the JTC, providing relevant information to support policy choices and to deliver policies at a regional level. The TSU's

activities include developing and maintaining:

- The Transport vision and plan;
- The funding plan and bids for external funding'
- Input into the LEP's strategies and plans on transport, and local business organisations;
- A project pipeline and assurance framework;
- Responses to transport consultations and policy-making opportunities by government and other external agencies;
- Input into Transport for the North (TfN)'s pan-Northern policies and plans; and
- Relationships with other authorities (whether local, combined, national or sub-national) with whom the JTC may share a common interest.

2.77 The TSU is funded through contributions from the Transport Levies which are retained to support JTC activity and a top-slice of the Local Transport Plan Integrated Transport Block grant which is awarded to the JTC plus external contributions to fund some specific posts and activities of the TSU. A series of studies looking at the feasibility of various local rail expansion proposals was commenced by Nexus in early 2020. The lead responsibility for these studies has now transferred to Transport North East (TNE), contracts are being novated to facilitate this and the budget established by Nexus is being transferred to TNE to fund completion of this work.

2.78 The original budget made no assumptions about funding to be received from the Transforming Cities Fund Tranche 2. Costs of programme management were built into the successful bid to be met from the grant award, and the forecast for 2020/21 has therefore been updated accordingly.

2.79 In addition to the significant current activity of developing the Transport Plan and related delivery programmes, some other major upcoming policy developments for 2021/22 could potentially include the development of a new bus strategy, the expansion of the Metro and local rail network, developing a model for rail devolution, and growing the programme to increase the uptake of walking and cycling. Further work is required in considering the scope of these developments, with funding packages to be agreed once requirements are clearer. There are also significant funding opportunities for well-developed bids along with a need for strong delivery programme management

2.80 Forecast expenditure for the Transport Strategy Unit in 2020/21 is estimated to be £8.412m compared with the original budget of £0.927m, primarily as a result of the forecast expenditure in respect of COVID-19 Grants amounting to £7.166m, relating to Supported Bus Service Funding £1.454m, Bus Service Support Grant £1.044m, Travel Demand Management Funding £0.300m and additional Dedicated Home to School and College Transport Grant £4.368m. These COVID-19 related grants will be passed onto the seven local authorities and Nexus and have been offset by additional Government Grant Income. The forecast expenditure also takes into account the inclusion of TCF Tranche 2 programme management that were not factored into the original budget as we were awaiting the outcome of the bid.

2.81 Expenditure on the Transport Plan particularly around public consultation and launch events has been delayed due to the COVID-19 pandemic and will now take place during the coming months but before the end of the financial year. Funding from 2019/20 which was not used has been carried forward to the current year.

2.82 There is a reduction in the forecast for LGF funding to support programme management of Transport schemes which reflects the stage of the programme, where most Transport schemes are now complete or nearing completion as it is in its final year.

2.83 In terms of 2021/22 initial budget estimates these include the following assumptions for the TSU:

- Staffing levels are anticipated to remain at the current level;
- Due to the uncertainties around the implications of Covid-19 on the Transforming Cities projects, estimates have been used at this point in time on the levels of programme management costs and will be updated as soon as possible;
- Work is anticipated to begin on the Rail, Bus and Electric Vehicle strategies due to take place in 2021/22 (£70k budget);
- The Research and Development budget is anticipated to reduce by £20k as a result of streamlining websites;

2.84 Details of the updated forecasts for 2020/21 and indicative budgets for 2021/22 are set out in the table below:

Table 15: TSU Budget Forecast of Outturn 2020/21 and Indicative 2021/22 Budget

	2020/21 Original	Spend to Date (to 30 September 2020)	2020/21 Forecast to Year end	Variance (Budget vs Forecast)	2021/22 Initial Draft Budget
	£000	£000	£000	£000	£000
Expenditure					
Employee costs - Managing Director Transport North East and TSU	721	342	691	(30)	730
TCF Tranche 2 Programme Management	0	0	337	337	337
Transport Plan and Strategy Work	50	64	108	58	70
TSU Research and Development	120	0	91	(29)	100
TSU Travel and Miscellaneous	16	0	0	(16)	10
TSU IT / Equipment / Accommodation	10	0	19	9	4
DfT COVID-19 Grants	0	2,673	7,166	7,166	0
TSU Contingency	10	0	0	(10)	10
Total Expenditure	**927**	**3,079**	**8,412**	**7,485**	**1,261**
Income					
LTP funding - TSU	(500)	(297)	(500)	0	(500)
LGF funding - TSU	(95)	(6)	(56)	39	0
DfT Grants	0	(2,673)	(7,166)	(7,166)	0
Retained Transport Levy	(129)	(10)	(148)	(19)	(208)
External funding for specific posts	(148)	(77)	(150)	(2)	(171)
TCF Tranche 2	0	0	(337)	(337)	(337)
Total Income	**(872)**	**(3,063)**	**(8,357)**	**(7,485)**	**(1,216)**

JTC Reserves

2.85 The JTC holds reserves to fund future activity and to manage financial risk associated with its activities.

2.86 A summary of the reserves at 31 March 2020, forecast to 31 March 2021 and the estimated position to 31 March 2022 is shown in the table below. Reserves are forecast to reduce as a result of the application of funding held in reserves to make a payment of £6.67million to TT2 and to finance capital investment (for example in 2020/21 on the Tyne Pedestrian and Cycle Tunnels refurbishment) and to meet

other earmarked expenditure. In 2021/22 £1.2m of the Metro Fleet Renewal Reserve will be applies to fund the proposed rebate to the Tyne and Wear councils next year.

2.87 The level of reserves forecast at 31 March 2021 and to 31 March 2022 is considered to be prudent to manage risk associated with the activities of the JTC, taking into account that separate reserves are held by Nexus.

Table 16: Summary of JTC Reserves to 31 March 2021 and 31 March 2022

	Actual 1 April 2020	Forecast 31 March 2021	Movement in Year	Forecast 31 March 2022	Movement in Year
	£000	£000	£000	£000	
Tyne and Wear Transport	757	757	0	757	0
Tyne Tunnels	17,163	9,541	(7,622)	9,541	0
Metro Reinvigoration	9,243	9,243	0	9,243	0
Metro Fleet Renewal	10,097	10,097	0	8,897	(1,200)
Go Smarter Legacy (within Grants Unapplied)	162	112	(50)	74	(38)
Transport Strategy Unit (within Grants Unapplied)	125	120	(5)	113	(7)
Total JTC Reserves	**37,547**	**29,870**	**7,677**	**28,625**	**(1,245)**

3. Reasons for the Proposals

3.1 The NECA Constitution requires that consultation on budget proposals be undertaken at least two months prior to the budget being agreed. The information included in this report is presented to update the JTC on the preparation of the 2021/22 Transport Budgets. The report also provides updated forecasts for the current year based on the latest information available.

3.2 In terms of the formal process for the increase in Tolls, if the level of RPI has reached the point at which an increase is possible, a decision to increase tolls needs to be taken by the JTC Tyne and Wear Sub Committee. Based on the RPI rates at September 2020 an increase in the Class 2 vehicle toll could be triggered in 2021/22 and proposals will be taken to JTC Tyne and Wear Sub Committee in January to formally consider this.

4. Alternative Options Available

4.1 The updated forecasts and indicative budget proposals presented in this report are intended to inform the JTC of work on the preparation of the 2021/22 Transport Budget and to begin the budget consultation process in line with the process set

out in the NECA constitution in its role as Accountable Body for Transport.

4.2 Option 1 – The North East Joint Transport Committee may note and accept the recommendations set out in the report.

Option 2 – The North East Joint Transport Committee may suggest amendments or alternative proposals be considered.

Option 1 is the recommended option.

5. Next Steps and Timetable for Implementation

5.1 The NECA Constitution requires that consultation on budget proposals be undertaken at least two months prior to the budget being agreed. The draft proposals will be subject to consultation with the Overview and Scrutiny Committees, Audit and Standards Committees and relevant officer groups, alongside the JTC Tyne and Wear Sub Committee and constituent councils. Comments raised as part of the consultation process will be considered in the preparation of the final reports. Feedback from the JTC Overview and Scrutiny Committee that took place on 26 October 2020 is included in paragraphs 12.3 to 12.7 below.

5.2 Proposals are at an initial stage and work will be ongoing in developing these further over the coming weeks. Decisions on the levies and other aspects of the Transport budget will be taken by the JTC on 19 January 2021. Decisions on the Tyne Tunnels tolls will be taken by the TWSC on 14 January 2021

6. Potential Impact on Objectives

6.1 The budget presented in this report is designed to support the achievement of the Transport policy objectives of the Authority.

7. Financial and Other Resources Implications

7.1 The financial and other resource implications are summarised in detail in the body of the report where they are known. Further details which are developed as part of the budget development and consultation process will be identified in the January 2021 report to the Committee.

7.2 The budget strategy outlined in this report is based on a levy for 2021/22 for Tyne and Wear in line with the current year, representing a cash freeze. On this basis the total levy for 2021/22 would be £61.1m. This position would provide a significant challenge for Nexus, who have seen the levy reduced by £15.2m (20%) over the last 10 years and who are expected to face significant financial pressures in the current and coming years. The sustainability of retaining existing service provision and / or the levy for Tyne and Wear authorities at the current level will need to be carefully considered over the medium term.

7.3 Constituent authorities are also under unprecedented pressures and in recognition of this it is proposed that a one off £1.2m levy rebate (the equivalent of a 2% levy reduction), is shared by the five Tyne and Wear Councils to partially offset the cost of the levy in 2021/22. This £1.2m levy rebate can be accommodated through the

release of a reserve specifically held by the NECA on behalf of Nexus which was previously earmarked to fund the local contribution to the 2020/21 Metro Asset Renewal Programme (MARP).

8. Legal Implications

8.1 The JTC must ultimately approve the transport budget and levies unanimously.

9. Key Risks

9.1 Appropriate risk management arrangements are put in place in each budget area by the delivery agencies responsible. Reserves are maintained to help manage financial risk to the authority.

10. Equality and Diversity

10.1 There are no equality and diversity implications arising from this report.

11. Crime and Disorder

11.1 There are no crime and disorder implications arising from this report.

12. Consultation/Engagement

12.1 The NECA Constitution (in its role as accountable body for the JTC) requires that consultation on its budget proposals be undertaken at least two months prior to the budget being agreed.

12.2 The extent of public consultation will be proportionate to the impact that the proposals would have on services to the public. At this stage no significant service reductions or implications are expected in 2021/22, however, if the Tyne and Wear levies remain frozen this will provide a significant challenge to Nexus requiring the utilisation of £3.7m of reserves to balance the budget next year. Proposals will be published on the website for comment and included in any budget consultation undertaken by constituent authorities.

12.3 The JTC Overview and Scrutiny Committee met on 26 October 2020 to consider the report presented to the JTC on 20 October 2020 with regards to the Nexus budget and the impact of the Covid-19 pandemic on both the 2020/21 outturn and the Medium Term Financial Plans that had been agreed by JTC in January 2020. Prior to this meeting confirmation of the continuation of Light Rail Revenue Restart Grant funding to 18 January 2021 had been received and this news was welcomed by members of the committee. It was noted that DfT required Nexus to prepare a recovery and that this was to form the basis of discussions between the DfT and HM Treasury with regards to funding for 2021/22 and beyond. Members of the committee welcomed this news also and recognised the importance of continued and enhanced funding from central government as Nexus recovers from the impacts of the pandemic.

12.4 JTC Overview and Scrutiny members recognised that notwithstanding Covid-19 impacts there was structural funding issues within Nexus that needed to be

addressed across the medium term and were concerned that the report to the JTC on 20 October had stated that there would be need for further efficiencies and potentially service cuts to close that gap and seemed to preclude any increase in the levy.

12.5 Members of the committee accepted that the use of reserves to balance the budget could only be considered to be a short term measure, to buy some time whilst a longer term more sustainable solution was found but requested that the JTC and its constituent authorities give consideration to the level of the Tyne and Wear levy as part of these considerations rather than severe reductions in services. It was noted that this required hard choices to be made but JTC Overview and Scrutiny members were concerned about the potential impacts should cuts of the magnitude modelled be required to the existing service offer.

12.6 Members recognised that current government advice on social distancing and use of public transport was impacting on passenger behaviours and patronage. The advice is counter to the JTC Transport Plan objectives of increasing use of public transport as a more sustainable method of transport. The current government advice and Covid-19 restrictions was having a profound impact on Nexus and there was concern over how long it would take and whether patronage would ever return to pre-Covid levels given the change in working patterns and increased working from home. The Committee were concerned what this might mean for future years, particularly if there is not further government support forthcoming and called on the JTC to better understand what is driving passenger behaviours and to consider what strategies could be adopted to improve engagement with public transport and return to / exceed pre-Covid levels of patronage in the future.

12.7 Finally, members of the JTC Overview and Scrutiny welcomed the lobbying that had been undertaken to date with regards to securing additional government grant support, the continuation of this support and a rebalancing of the funding arrangements for Metro in particular if patronage is lower than pre-Covid levels going forward was seen as essential to secure these services.

13. Other Impact of the Proposals

13.1 There are no other impacts arising from this report.

14. Appendices

14.1 Appendix 1 – Nexus 2020-21 Budget Infographic

15. Background Papers

15.1 JTC Budget 2020/21 - Report to JTC 21 January 2020

https://northeastca.gov.uk/wp-content/uploads/2020/01/TWSC-Public-Agenda-16.1.20.pdf

15.2 Tyne Tunnels Update – Report to Tyne and Wear Sub Committee 16 January 2020

https://northeastca.gov.uk/wp-content/uploads/2020/01/TWSC-Public-Agenda-16.1.20.pdf

15.3 Tyne and Wear Levy and Nexus MTFS – Report to JTC 20 October 2020

https://northeastca.gov.uk/wp-content/uploads/2020/10/2020.10.20-JTC-Public-Agenda-Pack.pdf

15.4 Budget Update 2020/21 and Initial Budget Proposals 2021/22 – Report to JTC Tyne and Wear Sub Committee

https://northeastca.gov.uk/wp-content/uploads/2020/10/2020.101.05-TWSC-Agenda-Pack.pdf

16. Contact Officers

16.1 Paul Darby, NECA Deputy Chief Financial Officer/s73 Officer, NECA.pauldarby@durham.gov.uk

16.2 Eleanor Goodman, NECA Finance Manager, eleanor.goodman@northeastca.gov.uk

16.3 Patsy O'Reagan, NECA Principal Accountant

Patsy.oreagan@northeastca.gov.uk

17. Sign off

- The Proper Officer for Transport:
- Head of Paid Service:
- Monitoring Officer:
- Chief Finance Officer:

18. Glossary

DfT – Department for Transport

NECA – North East Combined Authority

NTCA – North of Tyne Combined Authority

TfN – Transport for the North

TSU – Transport Strategy Unit

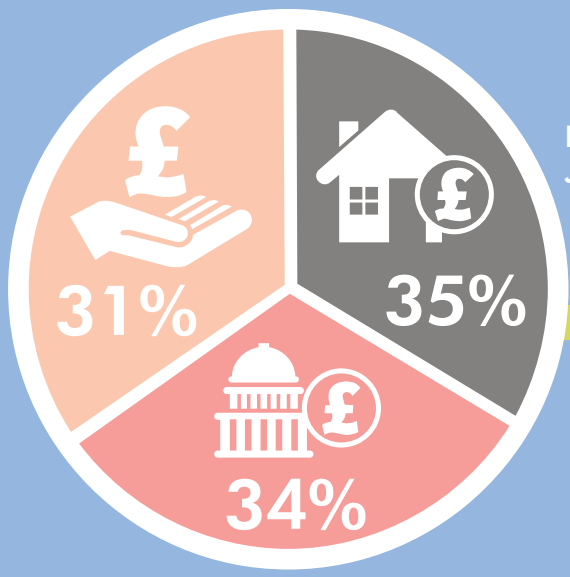
TT2 – TT2 Ltd, Tyne Tunnels Concessionaire

CBSSG - Coronavirus Bus Services Support Grant

LRRRG - Light Rail Revenue Restart Grant

Nexus' Revenue Budget 2020/21

Gross budget
in the current year
is £167m

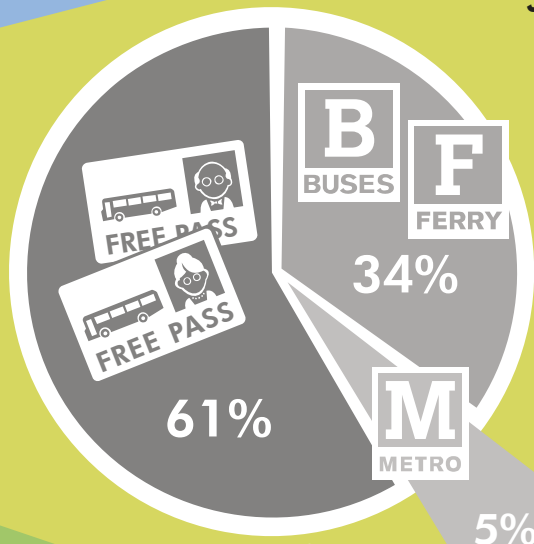


Commercial Income

Levy/ JTC Grant

Government grant

Levy/ JTC Grant



Statutory Concessionary fares
Nexus has no control over price or demand

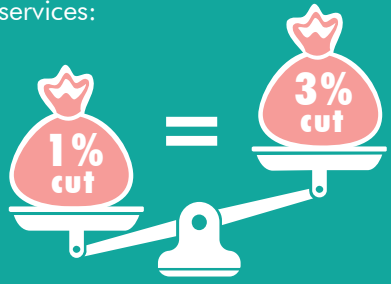
Nexus
Secured buses, discretionary concessions, ferry, information, infrastructure etc.

Metro discretionary concessions

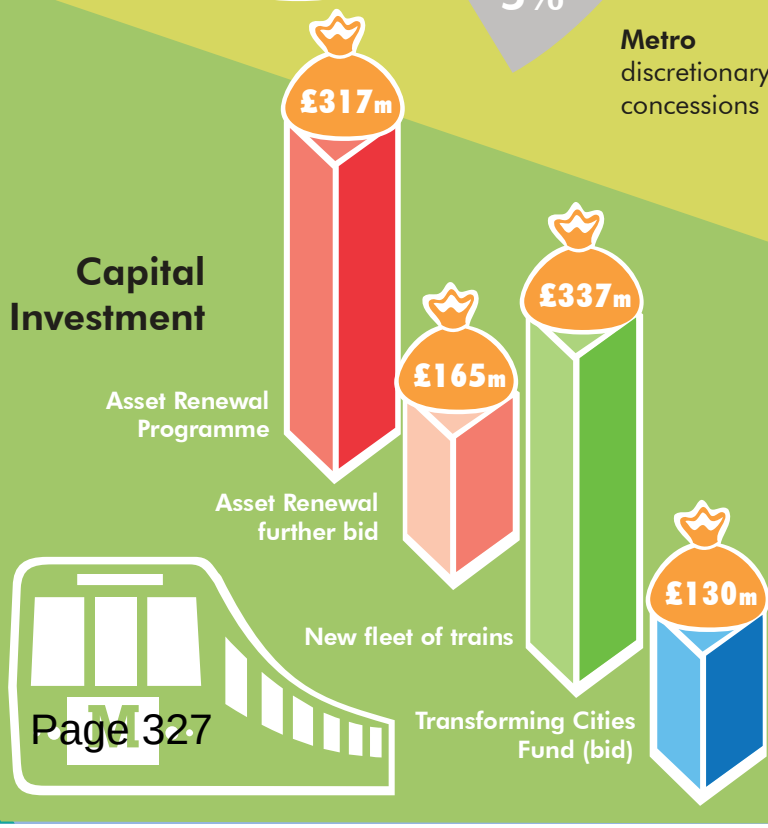
Metro

Operational Revenues have grown by 12% over the past 5 years

Levy cuts
Excluding Metro and statutory concessionary fares, every 1% cut in the levy represents a 3% cut in 'other levy funded' services:



Capital Investment



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