

FINAL DRAFT – subject to approval

# Investment Programme



# Introduction

Transport for the North's (TfN's) Strategic Transport Plan sets out an ambitious vision for how transport can support transformational, inclusive growth in the North of England through to 2050. This accompanying Investment Programme comprises TfN's advice to the Government on the long-term, multimodal priorities for enhanced pan-Northern connectivity.

It is important to consider future investments and decisions strategically, ensuring that infrastructure not only provides the basics for the economy, but also actively supports the long-term national interests. The Strategic Transport Plan and this Investment Programme do just that, by ensuring that the North's existing and future economic assets and clusters are better connected.

The successful delivery of the Investment Programme will require continuous close working with TfN's Constituent Authority Partners, the national Delivery Partners (Highways England, Network Rail, and High Speed Two (HS2) Ltd) and the Government. It will be dependent on the approval of funding at the appropriate time.

The Investment Programme will be an evolving document, beyond this initial version. Future iterations will outline the progress on the current schemes and projects, and could include additional interventions should future evidence identify they are required.

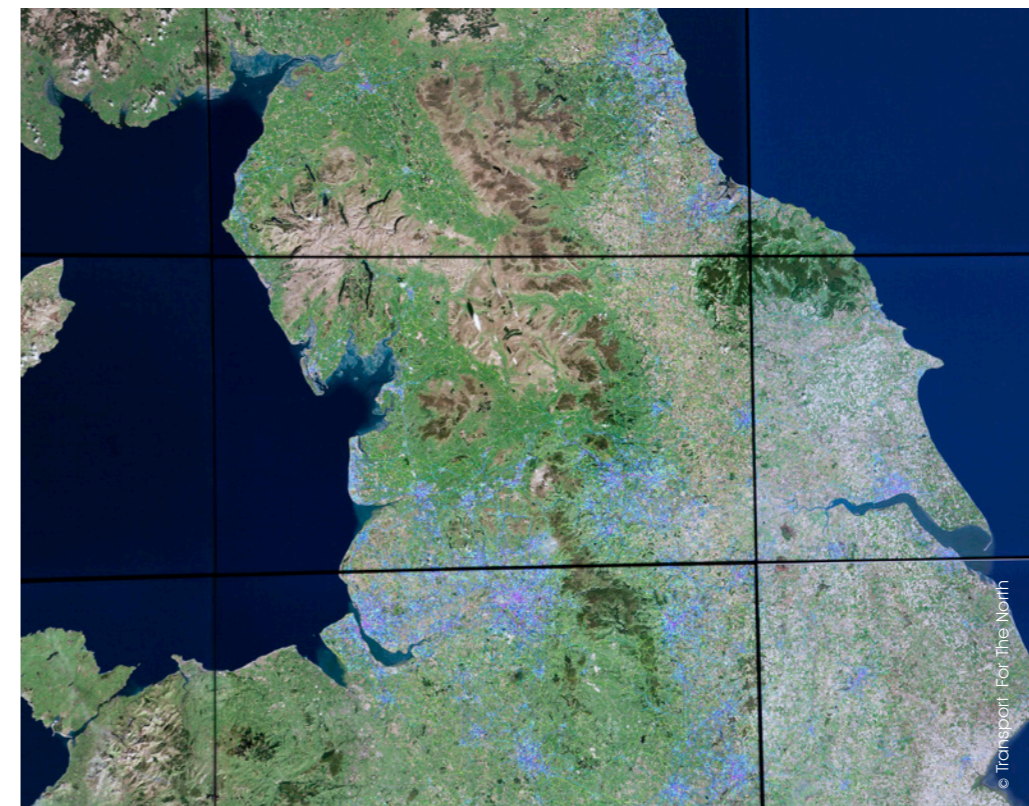
As with the Strategic Transport Plan, the Investment Programme has a horizon year of 2050, to align with the *Northern Powerhouse Independent Economic Review*, and sets out TfN's view of the appropriate pipeline of investment in strategic transport to deliver those plans. This will enable TfN and its Partners to secure funding and delivery of the right schemes at the right time.

The Investment Programme aims to provide greater certainty for Local Transport and Highway Authorities to deliver complementary investment. It aims to give businesses in the supply chain, including SMEs, the confidence to invest and grow, plan interventions, build up their skills base, and collaborate across industries.

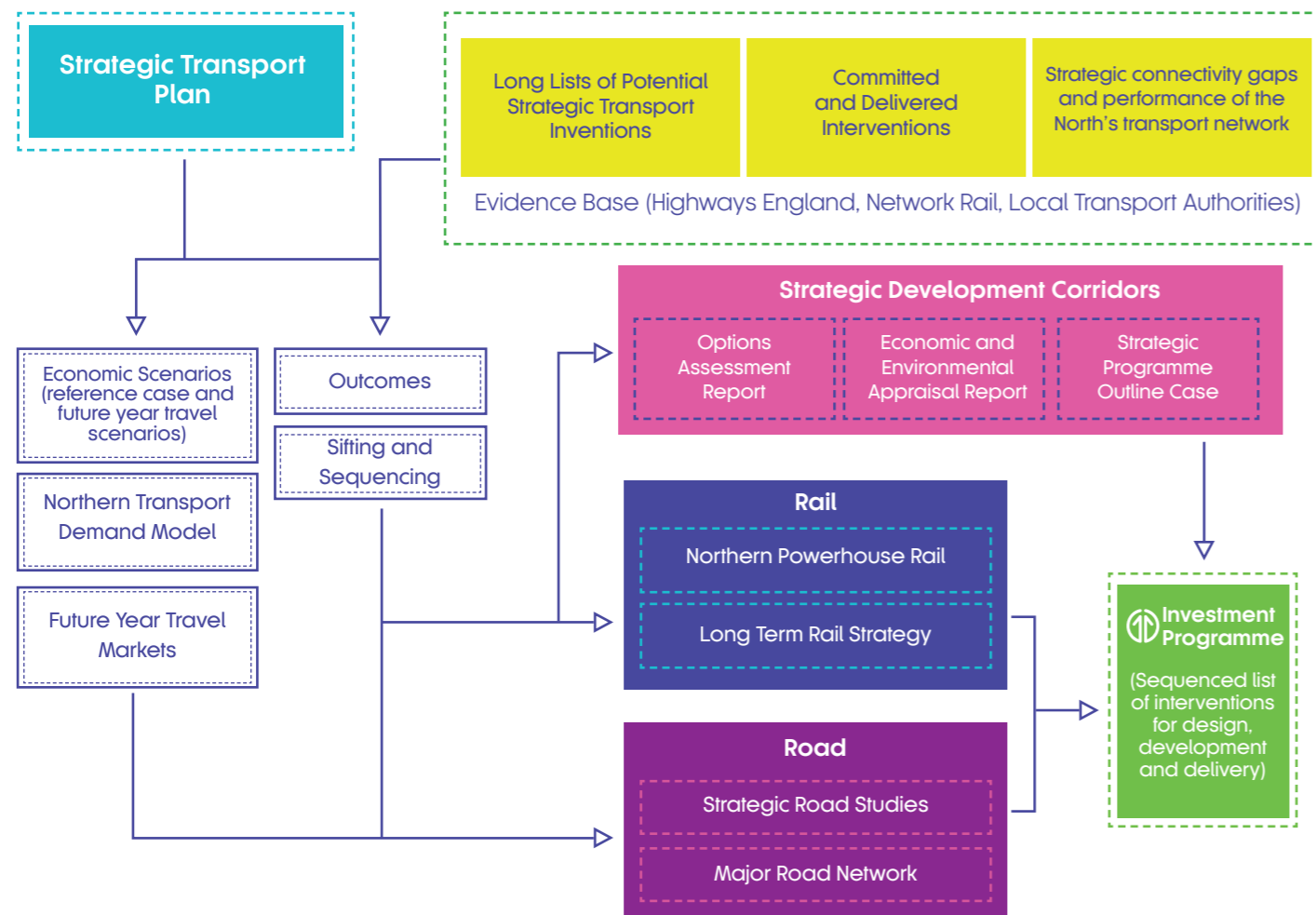


# Developing the Investment Programme

This initial version of the Investment Programme builds on the strategic rail and road schemes previously announced, and draws on the Integrated and Smart Travel programme, the Long Term Rail Strategy, the Strategic Outline Business Case for Northern Powerhouse Rail, the Major Road Network for the North, and the work done to date on the Strategic Development Corridors identified in the Strategic Transport Plan.



The process for developing Transport for the North's Investment Programme is set out in the diagram below.



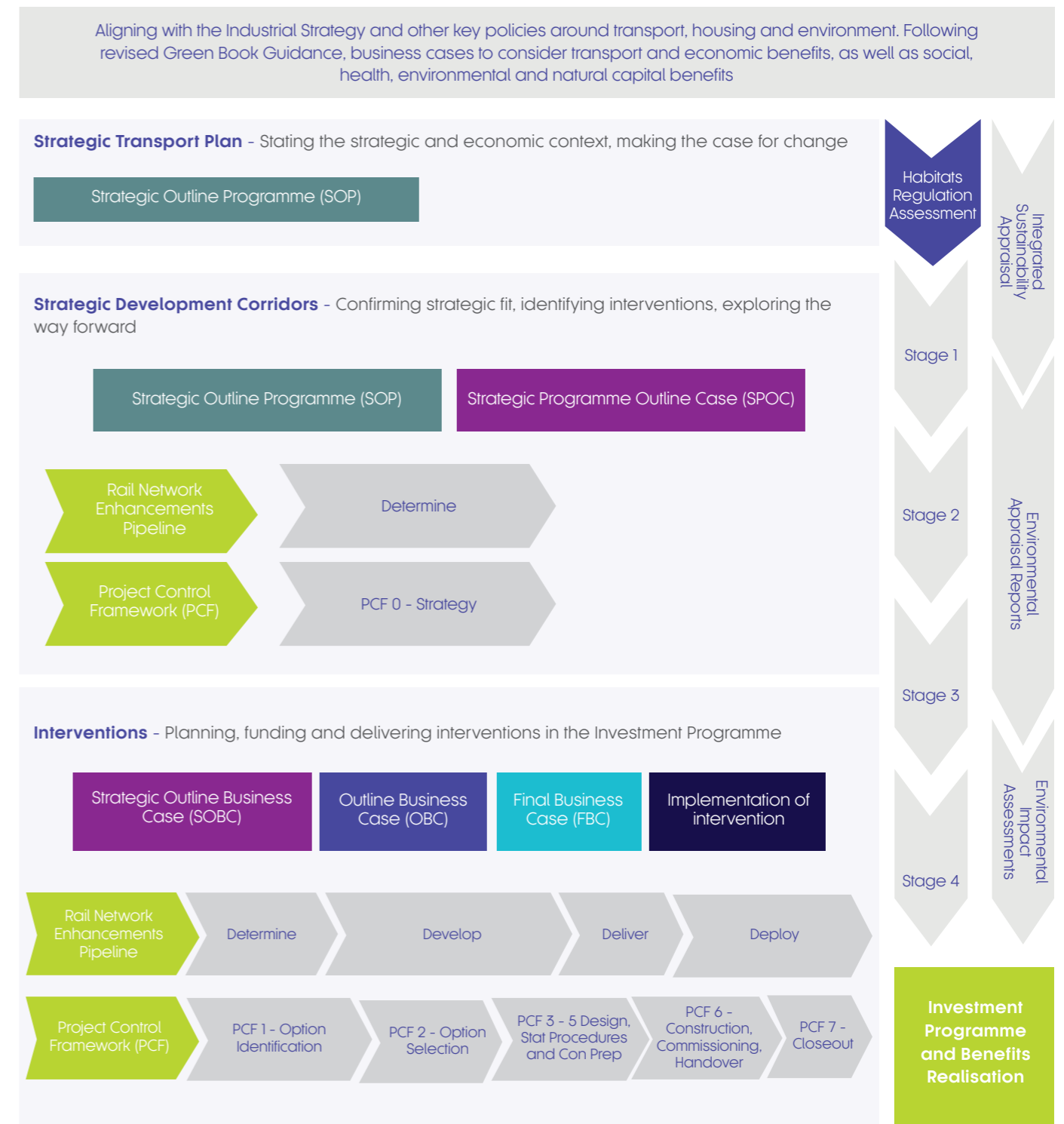
Activity on each of the work programmes listed previously will continue to inform future versions of the Investment Programme. Each work programme will need to develop its own specific strategic programme-level business cases,

context and objectives, which support the pan-Northern transport objectives and evidence base set out in the Strategic Transport Plan.

## Delivering the Investment Programme

The interventions listed in the initial Investment Programme will, in the short term, mainly be delivered by Network Rail, Highways England, HS2 Ltd, Train Operating Companies and Local Transport and Highway Authorities, as well as some other stakeholders in the private sector.

The process map below shows how the Strategic Transport Plan provides the multimodal, strategic outline programme for the interventions that feature in the Investment Programme in line with current industry and regulatory processes:



The work on the Strategic Development Corridors is providing enhanced analysis and strategic programme cases for investment for each of these corridors, as well as an initial value for money assessment for the preferred package of interventions.

The interventions listed will then need to be subject to their own assessment and business case developments, either as individual schemes or, in the case of the rail journey time improvement programme, as a sub-programme, by the relevant Delivery Partner or scheme promoter, following the Rail Network Enhancement Pipeline or Highways England's Project Control Framework processes. These will all then align with the steps required for a HM Treasury compliant business case.

The new evidence, analysis and appraisal tools collated and developed by TfN will be made available for scheme promoters to support the development of interventions, ensuring that TfN is adding value to the process.

TfN will work closely and collaboratively with the Government and all Delivery Partners to ensure that this Investment Programme is delivered.

TfN co-manages the Northern and TransPennine Express rail franchises, ensuring that the provisions of the two franchise

agreements are delivered. TfN is also delivering the Integrated and Smart Travel programme over the coming years.

TfN will actively promote a social value policy in its own procurement activity, and will encourage it among Delivery Partners, to support inclusive growth across the North. This will mean that contracts should support local employment outcomes and achieve a sustainable transport, economic and social legacy. This could include:

- Weighting for social value contribution for tenders.
- Encouraging suppliers to pay the real living wage.
- Increasing SME and local spend to support inclusive growth.
- Implementing clean and green growth within procurement.
- Ensuring all procurement policies and procedures are undertaken in an ethical manner and comply with the principles of the CIPS Ethical Code.
- Where appropriate, ensure that green procurement considerations are included in specifications and tender documents to ensure reduced waste, reduced carbon emissions and minimise the impact on the natural environment.

## The initial Investment Programme

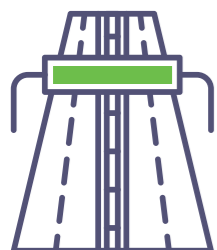


The initial Investment Programme identifies the interventions that TfN believes will address the current challenges on the transport network, future proofing for where transport demand is envisaged, and where the interventions will stimulate inclusive, sustainable, transformational economic growth.

The Investment Programme should be seen as a series of interventions rather than specific schemes as, given its long-term nature, the exact solutions will inevitably change over time.

**TABLE 1**

Table 1 includes interventions or packages of interventions that have been announced prior to the publication of the Strategic Transport Plan, including those which have received approval, have a confirmed funding stream, and are in the process of delivery. It includes schemes on the North's Strategic Road Network progressing through the current Road Investment Strategy 1 programme.



**Table 1:**  
Previously Announced Interventions - 1/3

Why?	What?			How?		
Outcome	Intervention	Description	Mode	Development Stage	Delivery Timeframe	Delivery Partner(s)
Integrated and Smart Travel						
Multimodal, integrated, contactless ticketing across the North	Phase 1	Smart tickets for rail season tickets	Multimodal	Full Business Case	2018-19	TfN
	Phase 2	Enhanced real time customer information	Multimodal	Full Business Case	2019	TfN
	Phase 3	Roll-out of multimodal contactless travel with simpler fare structures	Multimodal	Outline Business Case	2019-21	TfN
HS2						
Provision of high speed rail services across the North to the rest of the UK, radically reducing journey times and providing enhanced connectivity beyond the HS2 network	Phase 2a	High speed rail line extending Phase 1 to Crewe	Rail	Design	2023-27	HS2
	Phase 2b	High speed rail line to Manchester and Leeds, connecting to the West and East Coast Main Lines	Rail	Design	2022-33	HS2
Strategic Rail						
A package of improvements to stimulate economic growth in the North through better connections between towns and cities, enabling 2,000 extra services each week and allowing 40,000 more passengers to travel each day	Northern and Transpennine Express rail franchises	New and refurbished rolling stock, new service patterns (including Newcastle – Edinburgh and Liverpool – Glasgow), frequency and journey time improvements	Rail	Deploy	2018-23	Northern / Transpennine Express / TfN
	Manchester - Preston improvements	Electrification and infrastructure improvements to achieve journey time savings	Rail	Deploy	2017-19	Network Rail
	Liverpool City Region upgrades	Infrastructure improvements to increase capacity on the Chat Moss route and remodelling of Lime Street station to give additional platform capacity	Rail	Deploy	2018-19	Network Rail
	Transpennine Route Upgrade Intermediate Interventions (Calder Valley Line upgrade and Leeds Station capacity enhancements)	Delivery of turnback facility at Rochdale station and infrastructure improvements to achieve journey time savings and increase capacity, including Bradford Mill Lane junction, and capacity enhancements at Leeds station to support delivery of longer trains and additional services	Rail	Deliver	2018-21	Network Rail
	Cross Manchester Capacity and Reliability	Capacity improvements to accommodate longer, more frequent passenger and freight trains to/from and through Manchester, including longer/additional platforms at Manchester Oxford Road and Manchester Piccadilly stations	Rail	Determine	2019-21	Network Rail
Enhancing East-West strategic connections across the North to support UK competitiveness	Transpennine Route Upgrade	Improved journey times, increased capacity and high level reliability for services across the North, with an increased number of freight paths across the Pennines	Rail	Develop	2019-26	Network Rail

**Table 1:**  
Previously Announced Interventions - 2/3

Why?	What?			How?		
Outcome	Intervention	Description	Mode	Development Stage	Delivery Timeframe	Delivery Partner(s)
Supporting the visitor economy of the North	Oxenholme – Windermere enhancements	Rolling stock and service improvements	Rail	Deliver	2019	Network Rail / Northern
Strengthening connectivity on the East Coast to Scotland corridor and preparing the route for new rolling stock that will reduce journey times	East Coast Main Line power supply upgrade	Improvements to substations and overhead equipment to increase the amount of power available, reducing the amount of maintenance required	Rail	Design	2019-21	Network Rail
Supporting improvements to international connectivity	Doncaster – Port of Immingham	Gauge enhancements	Rail	Deliver	2018-19	Network Rail
Facilitating the delivery of housing growth and Enterprise Zone sites	Horden Peterlee	New rail station	Rail	Design	2019-20	Network Rail
	Warrington West	New rail station	Rail	Deliver	2018-19	Network Rail
Major Roads						
A package of improvements to support economic and housing growth in the North through addressing existing points of congestion	Road Investment Strategy 1	15 schemes, including international gateway improvements such as A63 Castle Street and A5036 Princess Way, north – south improvements on the M6, the A1 and the A19 and east – west improvements on the M62	Road	PCF Stage 1 - PCF Stage 7	2019 - 25	Highways England
Supporting improvements to international connectivity	Leeds Bradford Airport Link Road	New road connection between the A65 and the A658	Road	Outline Business Case	2024-25	West Yorkshire
Improving connectivity within the Connecting the Energy Coasts corridor by addressing existing points of congestion and improving access to ports	A69 junction improvements	Grade separation of the A69/A68 and A69/A6079 junctions	Road	PCF Stage 2	2019-21	Highways England
	A595/A66 improvements	Capacity improvements at the Great Clifton and Fitz roundabouts	Road	PCF Stage 2	2019-20	Highways England
	A595 Grizebeck improvements	New road link and other improvements to reduced width sections between Grizebeck and Chapels, including Dove Ford Farm	Road	Outline Business Case	2020-21	Cumbria
Improving connectivity within the West and Wales corridor	Middlewich Eastern Bypass	New single carriageway road from the A54 Salt Cellar Roundabout to A533 Booth Lane to the south of Middlewich	Road	Full Business Case	2020-21	Cheshire East
	Congleton Bypass	New link road connecting the A534 west of Congleton with the A536 to the north of the town	Road	Full Business Case	2018-20	Cheshire East

**Table 1:**  
Previously Announced Interventions - 3/3

Why?	What?			How?		
Outcome	Intervention	Description	Mode	Development Stage	Delivery Timeframe	Delivery Partner(s)
Improving connectivity within the Central Pennines corridor, addressing an existing point of congestion and improving access to the Humber ports	A1(M) Junction 47	Capacity improvements	Road	PCF Stage 2	2019-20	Highways England
	A1237 York Northern Outer Ring Road Phase 1	Upgrade of the section between the A19 and Hopgrove Junction to dual carriageway standard	Road	Outline Business Case	2020-22	City of York
	A1079/A164 Jock's Lodge junction	Improvements to the A164 between Castle Hill Roundabout and Victoria Road Roundabout, including full reconstruction of the interchange with the A1079	Road	Outline Business Case	2020-22	East Riding
	A63 Castle Street	Roger Millward Way roundabout capacity improvements	Road	Full Business Case	2018-19	Highways England
		Footbridge over the A63 to provide better connectivity between the city centre and waterfront area	Road	Full Business Case	2018-20	Highways England
Improving connectivity within the Southern Pennines corridor	Trans-Pennine Upgrade Programme	A package of improvements including: <ul style="list-style-type: none"><li>• Mottram Moor link road</li><li>• A57(T) to A57 link road</li><li>• Safety and technology improvements</li><li>• A616/A61 Westwood roundabout</li></ul>	Road	PCF Stage 1	2020-23	Highways England
Facilitating the delivery of housing growth and Enterprise Zone sites	A582 Preston Western Distributor	New dual carriageway link between the M55 and A583 to the west of Preston, including a new M55 Junction 2	Road	Full Business Case	2019-22	Lancashire
	M62 Junction 6	Capacity improvements	Road	PCF Stage 3	2019-22	Liverpool City Region / Highways England
	A19 improvements	Improved access to the International Advanced Manufacturing Park and improvements to the A19/A690 junction	Road	PCF Stage 3	2019-20	Highways England

TABLE 2 AND TABLE 3

The remainder of the Investment Programme consists of a broad range of multimodal measures, from the relatively small to the very large scale. These interventions will contribute in different ways towards delivery of the pan-Northern objectives of the Strategic Transport Plan, but collectively as packages of interventions they are crucial to its delivery across all parts of the North.

Table 2 includes those interventions which are currently in development by Network Rail and Highways England, which TfN considers are needed and supports a start to be made on their delivery before 2027.

Table 3 sets out the interventions additional to those in Table 2 which TfN's evidence demonstrates could and should have a start made on their delivery before 2027. It includes the early phases of the Northern Powerhouse Rail programme.

TfN will seek for the interventions in Tables 2 and 3 to be included in the Rail Network Enhancements Pipeline and the Road Investment Strategy where appropriate, along with other transport investment programmes.

The year 2027 has been chosen as an initial point within the Investment Programme to reflect when HS2 is due to be completed to Crewe, and when HS2 services will commence running to stations across the North West, marking a

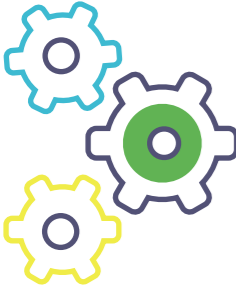
significant change to the North's transport network. As the Investment Programme is refreshed, further milestones will be selected to match similar significant changes to the North's transport network.

Almost all of the interventions in Tables 2 and 3 have a scheme-specific business case prepared, setting out the benefits and costs of each, alongside their anticipated social and environmental benefits.

A broad range for the cost of delivering these interventions, based on today's prices, has been presented:

- Low (<£100 million)
- Medium (£100 - <£500 million)
- High (£500 million +)

Many of the interventions have complementary locally-led schemes that are crucial to support the "whole journey". TfN's Partners will continue to make the case for local transport investment to support the Investment Programme, which is vital to ensure that new areas of housing are linked effectively to jobs, and to ensure that all of the North's people and businesses have access to future economic opportunities.



**Table 2:**  
Specific Interventions before 2027 – Already in Industry Processes - 1/3

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
HS2 and Northern Powerhouse Rail							
Provision of high speed rail services across the North to the rest of the UK, radically reducing journey times and providing enhanced connectivity	Crewe Hub	High speed rail hub at Crewe, including Crewe North Junction, to link to the existing classic network, enabling 5 to 7 high speed services to call at Crewe (the option known as 'Scenario 3')	Rail	Develop	M	West and Wales  North West to Sheffield City Region	Cheshire East  Cheshire West and Chester  Greater Manchester  Lancashire  Cumbria  Wales
Enhancing connectivity between the North's largest economic centres, with faster more frequent services, to build on HS2	Hope Valley Line (Manchester – Sheffield Corridor)	Initial capacity improvements (passing facilities at Bamford and a second track running through Dore & Topley station) to allow a frequency of three fast trains in addition to one stopping train per hour and freight trains, together with further interventions for Northern Powerhouse Rail	Rail	Develop	M	Southern Pennines  West and Wales  North West to Sheffield City Region	Greater Manchester  Sheffield City Region
Strategic Development Corridors							
Enhancing North-South strategic connections across the North to support UK competitiveness	Sheffield – East Coast Main Line	Electrification works in the Sheffield area to support other major rail investment programmes	Rail	Develop	M	Southern Pennines  Yorkshire to Scotland	Sheffield City Region  West Yorkshire
	M1 Junctions 35A to 39	Smart motorway	Road	PCF Stage 0	M	Southern Pennines  Yorkshire to Scotland	Sheffield City Region  West Yorkshire
	A1 Redhouse to Darrington	Upgrade to motorway standard	Road	PCF Stage 0	H	Southern Pennines  Yorkshire to Scotland	Sheffield City Region  West Yorkshire
	A1(M) Doncaster Bypass	Widening to three lane motorway	Road	PCF Stage 0	H	Southern Pennines  Yorkshire to Scotland	Sheffield City Region  Midlands

**Table 2:**  
Specific Interventions before 2027 – Already in Industry Processes - 2/3

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
Enhancing East-West strategic connections across the North to support UK competitiveness	Harrogate – Skelton Junction	Journey time and capacity improvements	Rail	Develop	L	Central Pennines	North Yorkshire City of York
	A66 Brigham/Broughton junctions	Conversion of two priority junctions to a roundabout	Road	PCF Stage 1	L	Connecting the Energy Coasts	Cumbria
	Northern Trans-Pennine	Upgrade to complete dual carriageway standard connection along the A66 between the M6 and the A1(M)	Road	PCF Stage 1	H	Strategic Road Study  Connecting the Energy Coasts	Cumbria  North East  North Yorkshire  Tees Valley
	A64 Hopgrove Junction to Barton Hill	Junction capacity improvements and upgrade to dual carriageway	Road	PCF Stage 1	M	Central Pennines	City of York  North Yorkshire
Facilitating significant private sector investment to support economic growth and UK competitiveness	Cumbrian Coast Line	Journey time and capacity improvements	Rail	Develop	M	Connecting the Energy Coasts	Cumbria
	Northallerton – Teesport	Allowing larger freight trains to access Tees Valley directly to/ from the south through gauge enhancements and journey time improvements	Rail	Develop	L	Connecting the Energy Coasts  East Coast to Scotland	North Yorkshire  Tees Valley
	A595 Whitehaven Relief Road	New road link from the Lillyhall to Parton dual carriageway to the A595 to the south east of Whitehaven	Road	PCF Stage 1	M	Connecting the Energy Coasts	Cumbria
Facilitating the delivery of Enterprise Zone sites to support economic growth	Northumberland Line	Upgrade and passenger service re-instatement	Rail	Determine	M	Connecting the Energy Coasts  East Coast to Scotland	North of Tyne

**Table 2:**  
Specific Interventions before 2027 – Already in Industry Processes - 3/3

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
Enabling the delivery of rail franchise commitments and accommodating forecast passenger growth	Sunderland Station	Improvements to passenger facilities	Rail	Determine	L	Connecting the Energy Coasts East Coast to Scotland	North East
	Middlesbrough Station	Capacity enhancements	Rail	Develop	L	Connecting the Energy Coasts East Coast to Scotland	Tees Valley North Yorkshire North East
	Lostock – Wigan	Electrification between Lostock Junction and Wigan North Western	Rail	Develop	M	West and Wales North West to Sheffield City Region	Greater Manchester Lancashire
Supporting improvements to international connectivity	Leeds Bradford Airport Parkway station	New rail station	Rail	Develop	L	Central Pennines	West Yorkshire North Yorkshire
Addressing significant points of congestion on the North's strategic road network to improve reliability	M53 Junctions 5 to 11	Capacity improvements	Road	PCF Stage 1	M	West and Wales	Liverpool City Region
	M60/M62/M66 Simister Island	Junction capacity improvements	Road	PCF Stage 1	L	Strategic Road Study Central Pennines Southern Pennines West and Wales	Greater Manchester
	M62 Junctions 26 to 27	Capacity improvements, including improvements to the M62/M606 Chain Bar junction	Road	PCF Stage 1	M	Central Pennines	West Yorkshire
	M1/M62 Lofthouse Interchange	Junction capacity improvements	Road	PCF Stage 1	L	Central Pennines	West Yorkshire

**Table 3:**  
Specific Interventions before 2027 – Proposed Early Phases of Northern Powerhouse  
Rail and Additional TfN Priorities - 1/5

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
Northern Powerhouse Rail Services							
Enhancing connectivity between the North's largest economic centres, with faster more frequent services, to build on HS2	Proposed Early Phases of Northern Powerhouse Rail	<ul style="list-style-type: none"><li>• Leeds – Hull Corridor (including improvements at Selby and Hull stations)</li><li>• Sheffield – Hull Corridor (including capacity enhancements and improvements at Doncaster station)</li><li>• Sheffield – Leeds Corridor (including Northern Loop from Sheffield station to HS2, new stations in South Yorkshire, and journey time and reliability improvements via Barnsley)</li></ul>	Rail	Determine	M / H	Central Pennines  Southern Pennines  East Coast to Scotland	West Yorkshire  East Riding  Hull  Sheffield City Region
	Sheffield Supertram Renewals	Renewal of track and vehicle infrastructure on the Sheffield Supertram system that will facilitate released capacity at Sheffield Midland station for HS2 and Northern Powerhouse Rail services	Rail	Outline Business Case	M	Southern Pennines  North West to Sheffield City Region	Sheffield City Region
Strategic Development Corridors							
Ensuring the North is ready for HS2 to maximise the benefits of this nationally significant project	Preston Station	Improvements to accommodate HS2 services, support onward connectivity and enhance interchange facilities for passengers and rail services	Rail	Determine	M	Connecting the Energy Coasts  North West to Sheffield City Region	Lancashire  Blackpool  Blackburn with Darwen
	Carlisle Station	Improvements to accommodate HS2 services and support onward connectivity, including enhanced station access and parking facilities	Rail	Determine	M	Connecting the Energy Coasts  North West to Sheffield City Region	Cumbria  North of Tyne  Scotland
	A500 dualling – Crewe to M6	Upgrade of the section between Junction 16 of the M6 and the Meremoor Moss roundabout to dual carriageway standard	Road	Outline Business Case	L	West and Wales	Cheshire East
	Crewe HS2 Hub – Access package and depot access improvements	Multimodal access improvements to ensure Crewe HS2 Hub and neighbouring developments are well connected, including measures to address existing congestion on the corridor between the A530 and A534 to the north of Crewe	Road	Strategic Outline Business Case	M	West and Wales	Cheshire East  Cheshire West and Chester

**Table 3:**  
Specific Interventions before 2027 – Proposed Early Phases of Northern Powerhouse  
Rail and Additional TfN Priorities - 2/5

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
Enhancing North-South strategic connections across the North to support UK competitiveness	Doncaster – Leeds	Capacity, journey time and reliability enhancements	Rail	Determine	L	Southern Pennines East Coast to Scotland	Sheffield City Region West Yorkshire
	York – Skelton Junction	Capacity and reliability enhancements	Rail	Determine	M	Northern Powerhouse Rail East Coast to Scotland	City of York North Yorkshire
	Darlington Station Growth Hub	New platforms, capacity enhancements and improvements to accommodate HS2 services and support onward connectivity	Rail	Strategic Outline Business Case / Determine	M	Northern Powerhouse Rail Connecting the Energy Coasts East Coast to Scotland	Tees Valley North Yorkshire North East North of Tyne
	Northallerton – Newcastle	Capacity enhancements and timetable resilience	Rail	Determine	M	Northern Powerhouse Rail East Coast to Scotland	North Yorkshire Tees Valley North East North of Tyne
	New Tees Crossing	New strategic crossing of the River Tees	Road	PCF Stage 1	M	Connecting the Energy Coasts Yorkshire to Scotland	Tees Valley North Yorkshire North East
Enhancing East-West strategic connections across the North to support UK competitiveness	Skipton – Colne	Route re-instatement to improve connectivity between East Lancashire and North/West Yorkshire	Rail	Determine	M	Central Pennines	Lancashire North Yorkshire
	South Transpennine Line	Journey time and capacity improvements between Cleethorpes and Doncaster to increase links between Northern Lincolnshire and the Sheffield City Region and the North West	Rail	Determine	L	Southern Pennines	Sheffield City Region North Lincolnshire North East Lincolnshire

**Table 3:**  
Specific Interventions before 2027 – Proposed Early Phases of Northern Powerhouse  
Rail and Additional TfN Priorities - 3/5

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
	A6 to M60 Relief Road	New road link between the M60 and the Manchester Airport Relief Road	Road	Strategic Outline Business Case	M	Southern Pennines West and Wales	Greater Manchester
	Hollingworth – Tintwistle Bypass	New road link from the Mottram Moor Link Road to the A628 east of Tintwistle	Road	PCF Stage 1	M	Southern Pennines West and Wales	Greater Manchester
Enabling the delivery of rail franchise commitments and accommodating forecast passenger growth	Newcastle Station	Platform lengthening	Rail	Determine	L	Northern Powerhouse Rail Connecting the Energy Coasts East Coast to Scotland	North East North of Tyne
	Stockport Station	Short term capacity enhancements allied to a planned bridge replacement	Rail	Determine	L	Southern Pennines West and Wales	Greater Manchester Cheshire East Cheshire West and Chester Midlands
	Liverpool Central Station	Passenger capacity enhancements	Rail	Determine	L	Central Pennines Southern Pennines West and Wales	Liverpool City Region Cheshire West and Chester
Addressing significant points of congestion on the North's strategic road network to improve reliability	A19 Moor Farm Junction	Capacity improvements	Road	PCF Stage 0	L	Connecting the Energy Coasts Yorkshire to Scotland	North of Tyne
	A1/A19 Seaton Burn Junction	Capacity improvements	Road	PCF Stage 0	L	Connecting the Energy Coasts Yorkshire to Scotland	North of Tyne
Supporting improvements to international connectivity	M56 Junctions 1 to 6	Capacity improvements, including at Junction 5 for Manchester Airport and the M60 Interchange	Road	PCF Stage 0	M	West and Wales Southern Pennines	Greater Manchester Cheshire East
	Extension of Metrolink to link Airport Station to Terminal 2	Extension of existing light rapid transit network	Rail	Develop	M	Central Pennines Southern Pennines	Greater Manchester

**Table 3:**  
Specific Interventions before 2027 – Proposed Early Phases of Northern Powerhouse  
Rail and Additional TfN Priorities - 4/5

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
Facilitating the delivery of Enterprise Zone sites to support economic growth	Blyth Relief Road	New road link between the A192 Horse Shoes Roundabout and Princess Louise Road	Road	Outline Business Case	L	Connecting the Energy Coasts  Yorkshire to Scotland	North of Tyne
	Sunderland Strategic Transport Corridor	Improvements to the A1231 between the northern end of the new bridge over the River Wear and the junction with the A19	Road	Strategic Outline Business Case	L	Connecting the Energy Coasts  Yorkshire to Scotland	North East
	Darlington Northern Link Road	New road link between the A66 and Junction 59 of the A1(M) to the north of Darlington	Road	Outline Business Case	M	Connecting the Energy Coasts  Yorkshire to Scotland	Tees Valley  North East
	Warrington Waterfront Western Link	New road link between the A56 Chester Road and the A57 in Great Sankey to the south west of Warrington	Road	Outline Business Case	M	Central Pennines  Southern Pennines  West and Wales	Warrington
	Poynton Relief Road	New road link between the A6 to Manchester Airport Relief Road and the A523	Road	Outline Business Case	L	Southern Pennines  West and Wales	Cheshire East  Greater Manchester
	Sheffield City Region Innovation Corridor	Package of measures that will provide an alternative to the section of the M1 between Junctions 33 and 34 for local traffic	Road	Outline Business Case	M	Southern Pennines  Yorkshire to Scotland	Sheffield City Region
Facilitating significant private sector investment to support economic growth and UK competitiveness	A590 Improvements	Capacity improvements at junctions in Ulverston and Swarthmoor and upgrade of the section between Greenodd and Ulverston to dual carriageway standard	Road	PCF Stage 0	M	Connecting the Energy Coasts	Cumbria
	Port Salford Western Gateway Infrastructure Scheme	Improved links between Western Gateway Canal Crossing, Port Salford and M60 between Junctions 10 and 11 and improvements to the M60 between Junctions 9 and 10 and 11 and 12	Road	Strategic Outline Business Case	L	Southern Pennines  West and Wales	Greater Manchester  Warrington

**Table 3:**  
Specific Interventions before 2027 – Proposed Early Phases of Northern Powerhouse  
Rail and Additional TfN Priorities – 5/5

Why?	What?			How?		Where?	
Outcome	Intervention	Description	Mode	Development Stage	Cost	Strategic Development Corridor Coverage	Sphere of Influence
Facilitating the delivery of housing growth	Skelmersdale Rail Link	New rail link and town centre station connecting Skelmersdale to Liverpool and Manchester, as well as the national rail network	Rail	Determine	M	Central Pennines Southern Pennines	Lancashire Liverpool City Region Greater Manchester
	A582 South Ribble Western Distributor	Upgrade of the A582 between Stanifield Lane and Broad Oak Roundabout to dual carriageway standard	Road	Strategic Outline Business Case	L	Connecting the Energy Coasts Central Pennines	Lancashire
	M6 Junction 33 Link Roads	Reconfiguration of existing junction to accommodate the proposed Bailrigg garden village development	Road	Strategic Outline Business Case	M	Connecting the Energy Coasts Central Pennines	Lancashire
	Carlisle Southern Link Road	New road link connecting Junction 42 of the M6 with the A595 to the west, including connections to St Cuthbert's Garden Village	Road	Outline Business Case	M	Connecting the Energy Coasts	Cumbria
Enhancing cross border movements into North Wales and the Midlands to support economic growth and UK competitiveness	Wrexham – Bidston / Liverpool	Journey time improvements	Rail	Determine	L	West and Wales	Liverpool City Region Cheshire West and Chester Wales
	Chester Station	Passenger and rail capacity enhancements, including Chester East junction and Hoole Bridge	Rail	Determine	M	Southern Pennines West and Wales	Cheshire West and Chester Wales
	M56 Junctions 11 to 15	Capacity improvements	Road	PCF Stage 0	M	Southern Pennines West and Wales	Liverpool City Region Cheshire West and Chester Wales

TABLE 4

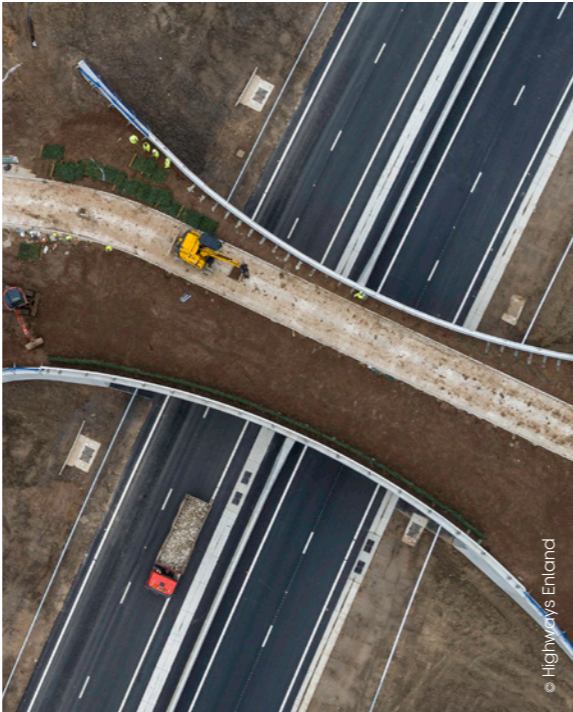
Table 4 sets out the later phases of the Northern Powerhouse Rail programme and also includes further interventions where TfN’s evidence suggests there may be a case for delivery during the lifetime of the Strategic Transport Plan. Considerable technical work has taken place to understand the levels of benefits associated with the interventions in Table 4. Work on this is continuing and will help to prioritise these interventions further.

TfN will seek funding to continue to develop its evidence base and Analytical Framework to examine the case for these interventions and to help develop the robust business case each intervention will need for it to be added to the pipeline.

In addition to the interventions set out in Table 4, TfN recognises the need for ongoing investment in smaller schemes throughout the life of the Strategic Transport Plan, including for rail and local transport, and road maintenance.

For the rail network to achieve the minimum standards and the ambition in the Long Term Rail Strategy, future versions of this Investment Programme will also promote the delivery of smaller schemes that collectively have substantial benefits and are critical for the delivery and operation of a safe, reliable rail network. Working with Network Rail, discretionary funding for the ongoing rail improvements across the North should be provided for packages such as:

- Journey time improvements.
- Incremental enhancements related to renewals.
- Freight schemes.
- Station schemes, to improve passenger flows.
- Performance and resilience schemes.



There will also be a need to invest in existing and new stations to ensure that the North moves towards a fully accessible rail network as quickly as possible. How local rail stations are managed can also aid integration and will be a key part of future Northern rail franchises.

For the Major Road Network, to support the objective for a resilient and reliable transport system, funding will be sought to provide for critical maintenance on the network, working with Highways England and Local Transport and Highway Authorities.

Delivering the Investment Programme will need to work alongside investment in the local transport network required to support growth and the “whole journey” as set out in the

Strategic Transport Plan. The case for local transport investment in the North is compelling and will be further stimulated and supported by the pan-Northern infrastructure that TfN is promoting. This will require a level of co-operation between numerous partners in a new way of collaborative working to achieve joint goals and ambitions.

The interventions within the Investment Programme will be reviewed regularly to ensure alignment with the Strategic Transport Plan, returns on investment, value for money, deliverability and to take account of opportunities for funding, both public and private, that may become available.

**Table 4:**  
Later Phases of Northern Powerhouse Rail and Further Potential Interventions - 1/6

Why?	What?	How?
Outcome	Potential Interventions	Next Steps
Northern Powerhouse Rail		
Enhancing connectivity between the North's largest economic centres, with faster more frequent services, to build on HS2	<ul style="list-style-type: none"><li>• Leeds – Newcastle Corridor (major upgrade via East Coast Main Line to include provision for HS2 services running north to Scotland)</li><li>• Sheffield – Leeds Corridor (connection to HS2)</li><li>• Manchester Airport – Manchester Corridor (via HS2)</li><li>• Liverpool – Manchester Airport Corridor (new line)</li><li>• Manchester – Leeds Corridor (new line via Bradford)</li><li>• Manchester – Sheffield Corridor (further interventions)</li><li>• Interventions at the major hubs necessary to realise the benefits of improved connectivity along the corridors identified above, including Newcastle, York, Sheffield, Manchester Piccadilly, Liverpool Lime Street and Leeds</li></ul>	Continued funding from Government to develop an Outline Business Case and next stage design work
Accommodate HS2 and Northern Powerhouse Rail services running north to Scotland	<ul style="list-style-type: none"><li>• West Coast Main Line – Wigan and Preston to Scotland (journey time and capacity improvements)</li><li>• Borders railway (supporting cross-border working with Transport Scotland and Borderlands Partnership)</li></ul>	Further funding from Government through HS2 and Network Rail programmes
Ensure that the West Coast Main Line stations are ready for HS2 and Northern Powerhouse Rail	<ul style="list-style-type: none"><li>• Stockport station (later phases)</li><li>• Warrington Bank Quay station (or integrated station at Warrington)</li><li>• Wigan North Western station (or integrated station at Wigan)</li><li>• Lancaster station</li><li>• Oxenholme station</li><li>• Penrith station</li></ul>	
Ensure that the East Coast Main Line stations are ready for HS2 and Northern Powerhouse Rail	<ul style="list-style-type: none"><li>• Northallerton station</li><li>• Durham station</li></ul>	

**Table 4:**  
Later Phases of Northern Powerhouse Rail and Further Potential Interventions - 2/6

Why?	What?	How?
Outcome	Potential Interventions	Next Steps
Strategic Development Corridors		
Enhance North-South strategic connections across the North to support UK competitiveness	<ul style="list-style-type: none"><li>• M6 improvements (Junctions 16 and 17, Junctions 19 to 21A and Junctions 26 to 32)</li><li>• M6/M65 interchange</li><li>• A1 dualling and capacity improvements in the North East</li><li>• New strategic river crossing capacity of the River Tyne</li><li>• A184/A194 Whitemare Pool Roundabout</li><li>• A19 improvements (online and junction improvements and gap closures)</li></ul>	Further funding to be secured from Government for business case development work, as well as exploring local authority contributions and market-led proposals where appropriate
Enhance East-West strategic connections across the North to support UK competitiveness	<ul style="list-style-type: none"><li>• Tyne Valley Line (route upgrade and journey time improvements)</li><li>• Roses Line (journey time and capacity improvements)</li><li>• Preston to York and Sheffield (journey time improvements)</li><li>• York to East Coast (journey time improvements)</li><li>• York to Hull (service improvements)</li><li>• A69 climbing lanes and junction improvements</li><li>• A66 to A1(M) link road</li><li>• M62 Junctions 5 to 10</li><li>• M65 Junctions 2 to 6</li><li>• Central Pennines M6 to A1(M) capacity and journey time improvements (potential options include M65 improvements, a new/upgraded route between the M65 and Skipton/A629/A650, A59 improvements, A671 improvements (M65 to A59), a new/upgraded route between Skipton/Harrogate and the A1, Shipley Eastern pinch point improvements and Leeds North West Quadrant improvements)</li><li>• A59 Harrogate to York improvements</li><li>• A1237 York Northern Outer Ring Road Phase 2</li><li>• A64 Crambeck to Scarborough improvements</li><li>• A1079 York to Hull improvements</li><li>• M62 Junctions 30 to 33</li><li>• Southern Pennines East – West highway connectivity to potential new HS2 station (potentially including new/upgraded route around the North of Barnsley and Doncaster Districts or along the A6195/A635 corridor, A1 to A19 and A19 to M18 links and A1 to M1 link in South Wakefield, comprising A1 to HS2 link from Redhouse and M1 to HS2 link)</li><li>• Trans Pennine Tunnel and wider connectivity improvements, including M1 to M18 link</li><li>• M18 Junctions 2 to 5 (and online improvements to M18 Junction 2)</li></ul>	

**Table 4:**  
Later Phases of Northern Powerhouse Rail and Further Potential Interventions - 3/6

Why?	What?	How?
Outcome	Potential Interventions	Next Steps
Enhance access to the North's international gateways	<ul style="list-style-type: none"><li>• Rapid transit link between Liverpool South Parkway station and Liverpool John Lennon Airport</li><li>• Improved rail access to Liverpool John Lennon Airport from Chester and North Wales</li><li>• Knutsford to Manchester Airport (Western Link)</li><li>• Crewe to Manchester Airport (Southern Link)</li><li>• Completion of missing link connecting Classic Rail, HS2 and Manchester Airport Terminals</li><li>• Rail connection and station for Doncaster Sheffield Airport</li><li>• New station between Barnetby and Habrough</li><li>• Port of Workington to A66 connectivity improvements</li><li>• North East port and Newcastle International Airport highway and rail access improvements</li><li>• A689 M6 to Carlisle Lake District Airport capacity improvements and improved M6 access</li><li>• A690 corridor improvements (at targeted pinch points)</li><li>• A66/Tees Dock Road junction</li><li>• M57 Junctions 4 and 5 and Switch Island (M57/M58/A5036)</li><li>• Eastern route access package to Liverpool John Lennon Airport and associated developments</li><li>• Improved highway access to Manchester Airport from south and west</li><li>• Humber Ports access improvements (A63 relief route, A63/A1033 junction, A63 technology improvements, A180, Grimsby Western Relief Road)</li><li>• M18 Junction 4 connection to Doncaster Sheffield Airport</li></ul>	
Ensure that the needs of freight operators can be met	<ul style="list-style-type: none"><li>• North East rail freight enhancements (passing loops and port connections)</li><li>• Gauge enhancements and journey time improvements between Selby and Port of Hull</li><li>• Port of Liverpool to West Coast Main Line enhancements</li><li>• Parkside enhanced connectivity</li><li>• West Coast Main Line freight capacity enhancements</li><li>• Port Salford rail freight access</li><li>• Freight prioritised gauge cleared route across the Pennines</li></ul>	
Improve connectivity and resilience to the Fylde Coast economic cluster	<ul style="list-style-type: none"><li>• South Fylde Line (journey time and capacity improvements)</li><li>• Enhanced public transport links to Fleetwood</li><li>• A585 corridor improvements (M55 to Fleetwood)</li><li>• New Ribble road crossing</li></ul>	

**Table 4:**  
Later Phases of Northern Powerhouse Rail and Further Potential Interventions - 4/6

Why?	What?	How?
Outcome	Potential Interventions	Next Steps
Improve capacity and resilience across Cumbria to connect with national energy infrastructure and economic clusters	<ul style="list-style-type: none"><li>• Furness Line (journey time and reliability improvements)</li><li>• Barrow to Whitehaven (frequency and journey time improvements)</li><li>• Whitehaven to Newcastle (frequency and journey time improvements)</li><li>• Windermere and Barrow to Manchester Airport (frequency and journey time improvements)</li><li>• Windermere to West Yorkshire (service improvements)</li><li>• A595 Carlisle to West Cumbria, Whitehaven and Sellafield capacity and reliability improvements</li><li>• A590 South Cumbria (dualling and wider capacity, journey time and resilience improvements)</li><li>• A590 Ulverston bypass</li><li>• New link between A6 and A591 to the north of Kendal</li><li>• A66 East of Penrith to M6 Junction 41 improvements</li><li>• A66 Scales/Troutbeck climbing lanes</li></ul>	
Improve connectivity and resilience to the North of Tyne and North East economic clusters	<ul style="list-style-type: none"><li>• Sunderland station track layout improvements</li><li>• Durham Coast Line (route upgrade and service improvements)</li><li>• A1068 improvements</li><li>• Durham Relief Road</li></ul>	
Improve connectivity and resilience to the Tees Valley City Region economic clusters, particularly the South Tees Development Corporation site	<ul style="list-style-type: none"><li>• Bishop and Saltburn Lines (journey time improvements)</li><li>• Middlesbrough to York (journey time and service improvements)</li><li>• A66 Darlington to Teesport capacity improvements</li><li>• A174/A1053 Greystones Roundabout</li></ul>	
Improve connectivity and resilience around the Humber economic clusters	<ul style="list-style-type: none"><li>• Hull to Scarborough (journey time and frequency improvements)</li><li>• A164 dualling (A63 to B1232)</li><li>• M62 new junctions for Selby and Goole</li><li>• A15 junctions (A63 to M180), including A1077 improvements</li><li>• Lincolnshire Lakes Road Infrastructure</li></ul>	
Improve connectivity and resilience to the Liverpool City Region economic clusters	<ul style="list-style-type: none"><li>• Southport to Wigan (journey time improvements)</li><li>• Wapping Tunnel re-opening</li><li>• A56/A558 improvements</li><li>• A580 dual carriageway with some grade separated junctions</li><li>• M57 smart motorway</li><li>• Liverpool to Wigan strategic route</li><li>• Chat Moss park and ride</li></ul>	

**Table 4:**  
Later Phases of Northern Powerhouse Rail and Further Potential Interventions - 5/6

Why?	What?	How?
Outcome	Potential Interventions	Next Steps
Improve connectivity and resilience to the Cheshire, Warrington and the Potteries economic clusters	<ul style="list-style-type: none"><li>• Crewe – Stoke – Derby (journey time improvements)</li><li>• Stoke park and ride</li><li>• Northwich to Sandbach rail re-opening and new stations</li><li>• Mid-Cheshire Line (journey time and capacity improvements)</li><li>• CLC line (capacity and service improvements)</li><li>• Birchwood park and ride</li><li>• Cheshire and Warrington West and Wales Strategic Rail Prospectus and Growth Track 360</li><li>• A500 dual carriageway with grade separated junctions</li><li>• A34 (potential expressway)</li><li>• Chester Box improvements (A550, A494/A548 to M53 link, Chester – Broughton growth corridor)</li><li>• Middlewich southern and western link (including access to the M6 from Winsford)</li><li>• Northwich and Winsford transport improvements package</li><li>• Nantwich Southern Relief Road</li><li>• A55 Northop to A494 Shotwick improvements</li><li>• M62 Junctions 7 and 8 improvements</li><li>• Warrington New City transport improvements package</li></ul>	
Improve connectivity and resilience around the Greater Manchester City Region economic clusters	<ul style="list-style-type: none"><li>• Development of the Metrolink network on heavy rail lines within and surrounding Greater Manchester (including use of tram-train technology, giving significant frequency and capacity increases and better access to the Regional Centre)</li><li>• Heavy rail capacity and journey time improvements in the South Manchester area and on the Wilmslow and Buxton lines</li><li>• Highway interventions to unlock employment and housing growth potential and improve strategic and local connectivity across the north and west of Greater Manchester (including Wigan to Bolton strategic route, Manchester North West Quadrant SRN multimodal enhancements, Northern Gateway access and capacity enhancements (rapid transit enhancements, M60 Junction 19 park and ride, M66 Junction 3 to M62 Junction 19 link road, and M62 Junction 18a improvement))</li><li>• M66 smart motorway and junction improvements</li><li>• Highway and public transport interventions to support the future growth of Manchester Airport and its enterprise zone and facilitate access to a future Airport HS2 Station (including M60/M56 interchange improvements and enhanced rapid transit connections)</li><li>• Highway interventions to support Atlantic Gateway employment and housing growth, reduce the severance impact of the Manchester Ship Canal and improve connectivity to the Strategic Road Network (including M62-Carrington-M60 link and M62 to A57 junction and link)</li><li>• Highway interventions to support growth and improve reliability and resilience in the east of Greater Manchester and to facilitate access to, and maximise the benefits accruing from, an improved Southern Pennines corridor (including M60 Junctions 21 to 24 and 25 to 27 improvements, M60/M67 Denton Island improvements and A6 Disley and High Lane bypass)</li></ul>	

**Table 4:**  
Later Phases of Northern Powerhouse Rail and Further Potential Interventions - 6/6

Why?	What?	How?
Outcome	Potential Interventions	Next Steps
Improve connectivity and resilience around the Lancashire economic clusters	<ul style="list-style-type: none"><li>• Liverpool to Preston (journey time and service improvements)</li><li>• Burnley to Manchester (journey time and service improvements)</li><li>• Rossendale to Manchester public transport connectivity</li><li>• East Lancashire Line (journey time and capacity improvements)</li><li>• Colne to Accrington (journey time and service improvements)</li><li>• Blackburn to Manchester Victoria (journey time improvements)</li><li>• A59 corridor improvements (Liverpool to Preston)</li><li>• M58/M6 interchange</li><li>• A56 corridor improvements (M65 to M66)</li><li>• M6 Junction 25 slip roads</li></ul>	
Improve connectivity and resilience to the Leeds City Region economic clusters	<ul style="list-style-type: none"><li>• Bradford to Leeds (journey time improvements)</li><li>• Harrogate Line (journey time improvements)</li><li>• Continued programme of work to develop the capacity and capability of the rail network in the City Region</li><li>• M1 corridor improvements (including Junctions 46 and 47, online improvements between Junction 43 and Hook Moor and A63 to the east of Leeds)</li><li>• Highway improvements within Bradford District (including South East Bradford Access Route, Shipley Eastern pinch point improvements and improved or new routes connecting A650 and Keighley)</li><li>• Highway improvements within Calderdale, Kirklees and Wakefield Districts (including M62 Junction 24a, North Kirklees Orbital Route and A638 improvements – Dewsbury to the A1(M) and Wakefield to the A1(M))</li></ul>	
Improve connectivity and resilience to the Sheffield City Region economic clusters	<ul style="list-style-type: none"><li>• Sheffield to Lincoln (journey time, frequency and capacity improvements)</li><li>• Penistone Line (journey time, frequency and capacity improvements)</li><li>• Hallam Line (journey time and frequency improvements)</li><li>• Dearne Valley Line (journey time and frequency improvements)</li><li>• M1 Junction 37a</li><li>• A61 junction improvements and links to Penistone Road, Shalesmoor and Clay Wheels Lane</li><li>• A57 South Anston bypass</li></ul>	
Enhance cross border movements into North Wales and the Midlands to support economic growth and UK competitiveness	<ul style="list-style-type: none"><li>• Crewe to Chester and Holyhead (service improvements)</li><li>• Extension of North Staffordshire services to Nottingham</li><li>• Sheffield – Nottingham (journey time improvements)</li><li>• A534 route upgrade</li><li>• A51 improvements (Nantwich to Chester – potential expressway)</li><li>• A54 improvements (A556 to A55 – potential expressway)</li><li>• A15 improvements (M180 to A46 Lincoln Bypass)</li><li>• A1 improvements (south of Blyth)</li></ul>	

# Ensuring a sustainable outcome

All interventions will be expected to contribute towards inclusive, sustainable, transformational economic growth, whilst aligning with the other pan-Northern transport objectives, which all carry equal weighting, to improve opportunities, and protect and enhance the environment in which they are located. TfN's ambition and expectations of its Constituent Authority and Delivery Partners, the Government and the private sector is to consider environmental impacts and opportunities is explicitly set out in the Strategic Transport Plan.

To ensure sustainable outcomes result from the Investment Programme, and the principles set out in the Strategic Transport Plan, it is crucial that business cases align with the

Industrial Strategy and other key policies around transport, housing and environment at a national level, the Strategic Transport Plan at a pan-Northern level, and local transport plans.

Following the HM Treasury Green Book, business cases will consider transport and economic benefits, as well as social, health, environmental and natural capital benefits, as part of a wider sustainable return on investment. This is in addition to ensuring that the highest level of sustainability assessment is undertaken, including environment appraisal reports, equality and environmental impact assessments, and habitat regulation assessments where applicable.

# Benefits, realisation and monitoring

The Strategic Transport Plan sets out an ambition of how transport investment can contribute towards achieving the growth forecasts set out in a transformational scenario in the *Northern Powerhouse Independent Economic Review* by 2050. TfN and its Constituent Authority and Delivery Partners will need to measure how outcomes and ambitions are being achieved in the short, medium, and long term.

Monitoring, appraisal and evaluation are essential to ensuring the Strategic Transport Plan and Investment Programme achieve their objectives and inform future revisions of the Strategic Transport Plan in achieving sustainable inclusive growth. This is crucial at a pan-Northern and a local level.

Over the coming years, TfN will be developing a multimodal evaluation framework, which will be used to ensure the Delivery Partners and the Government are delivering on the Strategic Transport Plan. Further work will ensure that they embed the pan-Northern objectives in their programme deliveries, with reporting on performance, expected benefits, and how they contribute towards the Strategic Transport Plan.

The approach to monitoring will not just focus on transport outcomes but be placed in the wider social, economic and environmental context, recognising achieving the *Northern Powerhouse Independent Economic Review* ambition is not solely reliant on transport investment.



# Funding the Investment Programme

In order to meet the North's strategic transport needs and successfully deliver the Strategic Transport Plan, significant capital investment will be required between now and 2050.

Recognising that further work is being undertaken on each of the TfN work programmes, delivering the interventions set out in the initial Investment Programme at current estimates will require a funding envelope of £60-70 billion. This figure is based on today's prices and, at this point, comprises different cost base assumptions used in the rail and road industries, and varying levels of development of the interventions. The value of the Northern Powerhouse Rail network within this range is estimated to be up to £39 billion.

Transformational growth in the North can only be delivered by a step-change in city-to-city and town-to-city connectivity. All modes have a role to play here, but it is expected that a key role will be played by rail, which is best suited to moving large numbers of people quickly and reliably between key centres. The major investments of HS2 and Northern Powerhouse Rail will deliver a step-change in the quality of links between the North's major cities, however, even with these in place, the majority of rail journeys will still be on the 'classic' network, where there are substantial opportunities to significantly improve journey times, frequency, capacity and reliability. Thus, a significant focus of TfN's investment over the lifetime of the Strategic Transport Plan will be in putting in place the rail infrastructure needed to bring about these changes.

TfN seeks an increase in strategic transport investment over and above the level currently being delivered by Highways England and Network Rail between 2015 and 2020. TfN's current estimate of the level of additional capital expenditure required to support transformational economic growth, over and above the existing level of investment, is £21-27 billion over 30 years. This represents an average level of additional strategic transport investment in the North of between £700 million and £900 million per year. In total this would be an investment of around £150 per Northern citizen per year (or 43p per day) through to 2050 on strategic transport investment.

This scale of the investment is in line with the fiscal remit for the National Infrastructure Commission set by HM Treasury, which is itself benchmarked against other countries' commitment to strategic infrastructure, as set out in the National Infrastructure Assessment.

The current estimate of the value of the Investment Programme represents around 0.8% of the North's GDP each year for strategic transport projects alone, with additional proportions of GDP spending required for other critical infrastructure investments in the North such as energy and digital technology, to sit within the overall 1.2% of GDP spending on strategic infrastructure used by the National Infrastructure Commission.

The estimated scale of investment in strategic transport infrastructure needs to be matched with an increase in spend for transport within towns and cities, in line with the Commission's proposals for devolved cities and non-urban local transport to receive a significant uplift in funding from 2025 onwards. This will be in addition to the level of strategic transport investment identified previously, bringing the total requirement in transport to £100-120 billion between 2020 and 2050.

There will be opportunities for private sector investment within the Investment Programme, such as market-led rail proposals and a number of combined transport and energy proposals. TfN will examine each of these proposals closely as and when the necessary information is available when preparing further versions of the Investment Programme.

Overall, TfN and its Partners consider this to be an ambitious, but realistic, scale of programme. The Funding Framework developed alongside the Strategic Transport Plan sets out how TfN will look to work with Government to design, develop, and deliver the Investment Programme over the coming decades.



# Reviewing the Investment Programme

A review of this initial Investment Programme will start in Summer 2019 as part of the Government's Spending Review. This review will pick up the outcome of the Road Investment Strategy 2 determination, meaning that the first update of the programme is likely to be in early 2020. The Investment Programme will then be reviewed periodically after that, no more than annually. This will take account of further developments and may result in the amendment of Tables 1 to 4 in the Investment Programme. Additionally, new interventions that support transformational economic growth may emerge that will require TfN to develop the case for investment further.



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