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Appendices B

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A New Net Carbon Zero Public Transport-Led Community and Employment Hub

Appendices B

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How to accommodate forecast growth on the Cheshire Line Committee (CLC) corridor?

Railway investment choices

October 2019

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Part A Executive Summary

We are pleased to present an assessment of some possible investment choices for the Cheshire Lines Committee (CLC) corridor between Liverpool and Manchester via Warrington Central. These choices are presented to understand which interventions may be required to meet future growth forecasts on the CLC corridor by 2026, 2033 and 2043. This work has been completed as part of the Continuous Modular Strategic Planning (CMSP) approach adopted under the Long-Term Planning Process (LTPP). Industry partners have participated in the study. This collaborative approach has helped to identify some possible investment choices to accommodate forecast growth.

The CLC corridor supports several functions, including commuting flows into and out of Liverpool and Manchester city centres and Warrington. It also provides connectivity beyond the North West to South Yorkshire, the East Midlands and beyond. Over the last seven years, there has been an increase of 55% in passenger numbers using the route throughout the day which compares with 25% growth across the UK[1]. Peak services east of Warrington to and from Manchester are overcrowded, whilst service reliability is poor. There are only four trains per hour (tph) east of Hunts Cross towards Manchester, but the timetable structure is very rigidly defined. This structure is determined by:

- The number of intermediate stations which stopping trains serve given the journey time differences compared with the semi-fast services;
- Long signalling headways covering specific parts of the route,
- Lack of intermediate overtaking opportunities;
- Significant scope for importing delays from and into the Castlefield corridor at Manchester, Hope Valley and elsewhere.

The rail industry faces a major challenge in the future to support the forecast demand growth, whilst the capacity constraints arising from the current timetable structure would make the introduction of extra trains challenging. Part of that challenge is to optimise current network assets, whilst accommodating the franchise commitments using both the CLC route and elsewhere. Network Rail has worked collaboratively with rail industry colleagues to consider the investment choices that may be required to support this forecast growth between 2024 and 2043.

Since the development of the original report, the economic appraisal results have been updated to reflect some alternative assumptions on capital and operating costs. Whilst these revisions have improved the results, the updated value for money assessment is still not sufficient to demonstrate a 'good' case (with a benefit cost ratio above 2.0). This outcome demonstrates the challenges associated with developing a robust business case for train lengthening, particularly when the extra rolling stock capacity is only required for a short period each day.

In the short term, forthcoming franchise changes (when the East Midland Railway service gets transitioned to either the Northern or TransPennine Express franchises) could deliver further capacity improvements. The existing Class 158s are expected to be replaced with alternative rolling stock with higher capacities, whilst the ongoing rolling stock cascade could increase capacity for local services.

In preparing this resport , feedback from stakeholders has subsequently highlighted that challenges affecting the CLC route are wider than simply developing solutions to alleviate overcrowding. Whilst additional rolling stock may deliver some modest supplementary benefits including slightly shorter dwell times at stations during the peak periods, a more comprehensive package of interventions is required.

Whilst Network Rail investigated the interventions required to cater for future growth along the CLC line, a similar report was prepared by AECOM on behalf of Merseytravel, Warrington Borough Council and Transport for Greater Manchester. This package of suggested interventions offered a stronger economic business case as a result of its broader remit. Feedback from the Industry Planning Advisory Group has recommended that the latter concept be further developed.

The proposed package of interventions from AECOM

1 Passenger journeys by sector Table 12.6 2017-18, ORR, MOIRA 2018 for Northern stopping services

comprises a revised local service with separate portions from Liverpool to Birchwood and from the new station at Warrington West to Manchester Oxford Road. Splitting the local services into two portions could enable the following:

- Introduction of a more reliable semi-fast service between Liverpool and Manchester with more flexible timings;
- Better service frequencies to the intermediate stations, providing an opportunity to grow the market;
- In the medium term, the opportunities to introduce rolling stock capable of achieving faster journey times should be considered, especially for local services;
- Furthermore, the internal configuration of this rolling stock could be designed to suit the characteristics of short distance journeys.

Additional infrastructure would need to be provided in the Warrington West and Birchwood areas to support the proposed service patterns. These changes could also help to grow the passenger market in the interim, potentially strengthening the case for further investment.

Whilst the options described above provide a short to medium term opportunity for the CLC route, it is recognised that further capacity interventions are still required in the longer term. The interface with the Merseyrail network in the Hunts Cross area and approaching Liverpool Lime Street provides a more complex issue, for example. Adding in the interaction with other services east of Castlefield Junction, and the differences between the service frequencies creates a significant limit on the number of services in operation along the corridor.

There are similar issues at the Manchester end of the corridor too, since the frequencies are lower compared with the Metrolink services. Connectivity issues approaching Manchester may need to be addressed more urgently (compared with the Liverpool end of the route) given the higher current passenger usage and greater forecast growth. Any interventions will be limited by platform lengths at Manchester Oxford Road and use of the Castlefield corridor.

Determining whether there would be sufficient capacity until the introduction of Nothern Powerhouse Rail (NPR) is key, since NPR could offer the option for passengers travelling between Liverpool, Warrington and Manchester toswitch onto the new services. This diversion of these longer distance passengers onto other trains could release capacity for users joining services at other CLC stations.

This study recommends therefore the progression of the report prepared by AECOM, and the pursuit of their recommended interventions required to drive connectivity along the CLC Corridor. A Strategic Outline Business Case (SOBC) should be developed. It is also recommended that further investigation into potential interventions that seek to address future capacity issues along the rail corridor takes place.

Part B The Long Term Planning Process and Continuous Modular Strategic Planning

What is the Long Term Planning Process?

The Long Term Planning Process is designed to facilitate the strategic planning of the rail network. It is a Network Rail Licence Condition to effectively plan the future of the network. This process takes into account the views of all industry stakeholders and incorporates these when identifying how rail can support the forecast growth over the next 25 years. Additionally, it enables passenger and freight operators to have the confidence they need to take their own strategic decisions in planning for their future services. The findings from the Study that answers the CMSP question also help to inform potential funders (Government, Transport for the North, and third parties), and franchising authorities of the potential choices that they may wish to make in terms of investment in the network and the services running.

What is Continuous Modular Strategic Planning?

Continuous Modular Strategic Planning (CMSP) is a workstream initiated in response to the outputs of the Shaw report. This recommended that the industry should create route-based enhancement plans that:

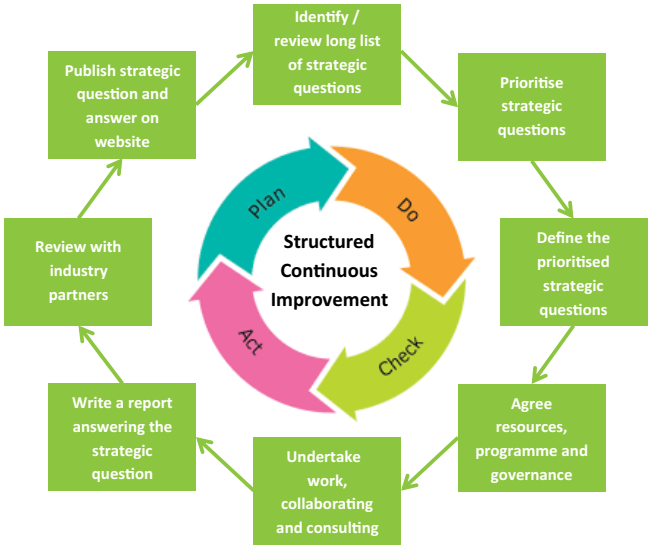
- Support the needs of devolved route businesses;
- Focus explicitly on the needs of passengers and freight end-users;
- Engage operators to represent the voice of those customers.

CMSP puts passenger and freight end users at the heart of the process. It also better addresses the Route's business needs, and feeds into refranchising, capacity allocation, development and delivery, and the Sale of Access rights processes. It employs a more effective and focussed means of consultation and provides more granular, targeted market insight.

Figure 1 illustrates this process.

- **Identify/Review** the list of strategic questions – The rail industry identifies the strategic questions they would like to answer within a geographical boundary;
- **Prioritise** – The governance group review and prioritise the questions to be answered using a scoring matrix which provides transparency and fairness across the industry;
- **Define** – The strategic question is defined to ensure that it captures the issues to be addressed;
- **Agree resources/programme and governance** – The strategic question lead is allocated and resource across the industry is identified to ensure fair representation opportunity at all planned working groups;
- **Undertake work** – The strategic question is answered in collaboration with all stakeholders;
- **Write report** – The strategic question lead drafts the report, following the outputs from the work;
- **Review** – All industry partners review the draft report and provide commentary or proposed amendments;
- **Publish** – The document is amended accordingly and, once approved, is published. Findings are integrated with other workstreams including other CMSP questions, plus HS2 and NPR outputs.

Figure 1: Summary of the CMSP process



Study Aims and Objectives

Context for the Strategic Question

In early 2017 key industry stakeholders were invited by Network Rail to attend a series of workshops to generate a list of strategic questions to be considered as part of the North of England Route Study (NoERS). The four rail corridors around Greater Manchester identified in tranche 1 of the strategic question prioritisation were Bolton, Stockport, Cheshire Lines Committee (CLC) and Hadfield / Glossop.

The strategic questions to be answered were:

- **SQ-GMC-C-003:** What interventions are required to meet future growth on the Bolton corridor by 2026, 2033 and 2043?
- **SQ-GMC-C-006:** What interventions are required to meet future growth on the Stockport corridor by 2026, 2033 and 2043?
- **SQ-GMC-C-004:** What interventions are required to meet future growth on the CLC corridor by 2026, 2033 and 2043?
- **SQ-GMC-C-005:** What interventions are required to meet future growth on the Hadfield / Glossop corridor by 2026, 2033 and 2043?

These four key corridors into Manchester have been selected for the following reasons:

- Interventions will be required to meet passenger and freight growth by 2026, 2033 and 2043;
- Some of the corridors are being considered as part of NPR/HS2 and this provides integration with existing work streams;
- Existing reports/evidence have already been undertaken and show that some interventions may be required by the end of the franchise periods;
- They have been identified as priorities by potential funders and have a key interest from stakeholders;
- Outputs from this corridor analysis is needed to inform wider transport strategies and plans for the North of England.

It should be noted that the Study question was modified at the beginning of the CMSP process in order to better reflect current franchise lifecycles. The question being answered instead became: "What interventions are required to meet future growth on the CLC corridor by 2024, 2033 and 2043?"

Study Governance

Figure 2 illustrates the governance arrangements that provides oversight to the technical staff responsible for completing the work. In addition to Network Rail, there is also representation on this governance group from:

- Transport authorities: Department for Transport and Transport for the North, Liverpool City Region Combined Authority, Transport for Greater Manchester and Warrington Borough Council;
- Operators: East Midlands Trains, Northern Railway;

The purpose of this group is to offer oversight and direction to the project team undertaking the technical work.

Figure 2: Governance arrangements for CMSP

Part C Today's Railway

Rail in the North West

The extensive rail network serving the North West of England supports passenger journeys between the main economic centres. Manchester and Liverpool are two of the largest and most influential cities in the North West, and the movement of passengers into and out of these hubs is crucial to the economic performance of area. There are over 200,000 passenger journeys to / from Manchester city centre every day[1]. This has grown dramatically in the last 20 years, with the number of passengers more than doubling between 2001 and 2011, and continuing to grow since. Of those passengers travelling into the centre on a typical weekday in 2016, about one third were travelling in the peak period between 07.00 and 09.59, this highlights the strain that the network is put under for a relatively short period each day.

Crowding issues in peak periods continue to be a major issue across rail corridors into Manchester. For journeys into Manchester city centre in 2017, 4.3% of train passengers were required to stand for more than 20 minutes with a 2.2% affected during the PM peak. This was the third highest percentage of any city in the country (after London, 5.4%, and Cambridge, 4.8%). In total, 15% of passengers were required to stand, which represents a 4% increase versus 2010. Since 2010, AM peak overcrowding issues affecting Manchester have deteriorated as the number of extra passengers using the network vastly outstrips the additional supply of seats available (10,400 passengers vs 6,700 seats)[2].

Manchester Piccadilly, Manchester Oxford Road and Manchester Victoria are the main Manchester city centre stations (note though that Manchester Victoria can't be accessed from the CLC line). Manchester Piccadilly represents an all-important hub for the North, with passengers travelling to, from and through Manchester from cities that include Liverpool, Leeds and Sheffield. CLC services to / from Liverpool start and terminate at the high level platforms at Lime Street. About 55% of journeys between the North West and other regions start / end in Greater Manchester.

In Liverpool, there were 124,000 trips per day into the city centre in 2016. This total includes Merseyrail as well as the high level platforms at Lime Street. Of this, 20,000 trips were made in the AM peak plus a further 22,000 journeys during the PM peak. According to the Department for Transport measure PiXC, there were no crowding issues affecting services in 2016. This is explained by the introduction of a greater number of seats versus the change in passenger numbers using rail to Liverpool during the AM peak.

Geographical boundaries for the CLC study

The geographic boundaries defined for the CLC corridor are shown in Figure 3. The boundaries agreed for the purposes of the capacity modelling analysis were Edge Hill East Junction in Liverpool to Trafford Park West Junction in Manchester. The following feeder corridors were identified to inform the analysis (note that a "feeder corridor" can be identified as being a heavy rail line that has direct connections with the main route under investigation and whose performance will therefore directly impact that of the main corridor):

- Liverpool Lime St to Edge Hill;
- Manchester Oxford Road to Trafford Park;
- Southport to Hunts Cross.

Merseyrail services between Southport and Hunts Cross are represented as a feeder corridor. Several other operators operate via the feeder routes including Virgin Trains, TransPennine Express, London North Western, Transport for Wales and Cross Country. Examples of other services using these routes include trains from Sheffield or Manchester Airport via the CLC, Transport for Wales (TfW) from Chester, Llandudno or South Wales, Cross Country (the southern approach to Manchester Piccadilly), London North Western (Birmingham trains on the approach to Liverpool Lime Street), Virgin Trains (approaches to Liverpool and Manchester) and TransPennine Express (trains from Manchester Airport via the Ordsall Chord).

1 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633285/rail-passenger-crowding-2016.pdf

2 Rail passenger numbers and crowding on weekdays in major cities in England and Wales 2017, Department for Transport, July 2018

The boundaries described above took account of the interface with several workstreams comprising current studies, reports covering the network at Liverpool Lime Street and Manchester Oxford Road, Manchester Piccadilly, plus analysis of the Castlefield corridor by other stakeholders such as Transport for the North, HS2 Ltd and Network Rail. Liverpool Lime Street station is excluded from this analysis since it already forms part of the scope of work being completed as part of Northern Powerhouse Rail.

Station usage

There are 21 intermediate stations shown in Figure 3 between Liverpool Lime Street and Manchester Oxford Road. The busiest five stations are Liverpool South Parkway (2,247,382 annual passengers), Warrington Central (1,764,022), Birchwood (687,758), Widnes (493,902) and Urmston (375,410). The five least busy stations are Humphrey Park (34,886), Glazebrook (45,432), Chassen Road (49,210), Trafford Park (54,870) and West Allerton (101,296). Liverpool Lime Street, Manchester Oxford Road and Manchester Piccadilly stations are outside the core corridor, but are used by 16.0m, 8.56m and 27.7m passengers per year respectively.

Figure 3: CLC corridor

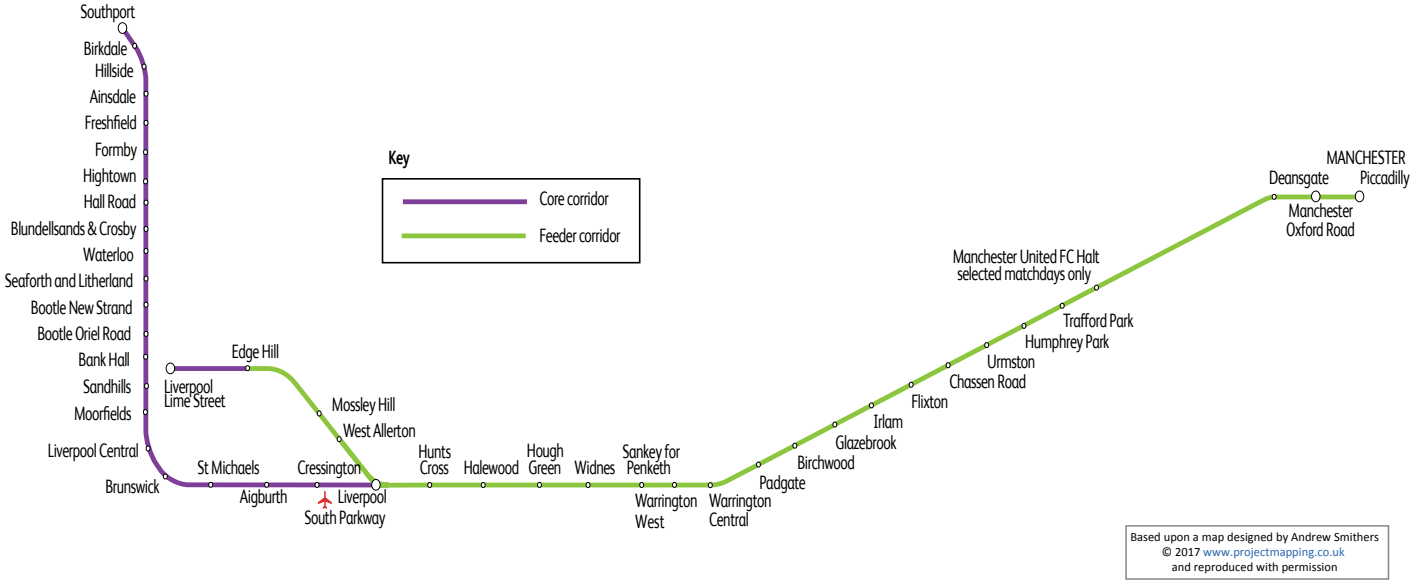


Table 1: Estimated annual station usage 2017/18

Station	Usage	Station	Annual Usage
Edge Hill	195,726	Padgate	155,582
Mossley Hill	262,736	Birchwood	687,758
West Allerton	101,296	Glazebrook	45,432
Liverpool South Parkway	2,247,382	Irlam	243,886
Hunt's Cross	1,446,142	Flixton	132,528
Halewood	135,832	Chassen Road	49,210
Hough Green	297,406	Urmston	375,140
Widnes	493,902	Humphrey Park	34,866
Sankey	171,648	Trafford Park	54,870
Warrington Central	1,764,022	**Source:** Office of Rail and Road (2018)	

Demand during the high peak

The Study investigates demand during the high peak hour (between 08.00 and 08.59), because the worst overcrowding issues generally occur within this period. At other times of the day, for example, shoulder peak periods (07.00-07.59 or 09.00-09.59) or the PM peak (16.00-16.59), passenger numbers are typically lower. During the AM peak hour, nearly 3,500 passengers arrived at Manchester Oxford Road, although there were less than 650 arrivals at Liverpool Lime Street in the opposite direction in the same period. Analysis of journey patterns to Manchester for other time periods indicates that the number of arrivals between 07.00 and 08.00 is about 40% lower versus the total for 08.00-09.00, whilst the total between 09.00 and 10.00 was 50% lower than the high peak hour[3].

CLC service patterns

There are currently two passenger operators who run on the core CLC corridor during the high peak hour. These are as follows:

- Northern: 3tph comprising one semi-fast and two stopping trains;
- East Midlands: one semi-fast train per hour.

The service pattern for these services, including stops at intermediate stations, is shown in Figure 4. The Northern semi-fast train isn't extended to Manchester Airport in the high peak hour, as the extra peak TfW service means there is insufficient capacity. Instead of Manchester Oxford Road, the stopping trains were expected to be extended to Manchester Piccadilly and beyond as part of the Northern franchise agreement, but capacity constraints elsewhere have prevented this outcome. Outside the high peak hour, Trafford Park, Humphrey Park and Glazebrook are only served by trains every two hours, whilst Sankey, Padgate, Halewood and Hunts Cross only get an hourly service.

Freight also operates over parts of the corridor, particularly at the eastern end of the route from the Trafford Park area eastwards. Most of these freight trains then extend towards Crewe and to the south.

Wider connectivity

The central Manchester stations perform several roles, they connect commuters to employment and allow passengers to interchange and travel between key cities in the North and across the UK for business and leisure. Liverpool Lime Street station and Liverpool South Parkway offer access to the Merseyrail network, with interchange onto the Wirral and Northern Lines.

3 Passenger station counts for 2016, Department for Transport

Figure 4: Summary of existing CLC service patterns – high peak hour

Northern and TransPennine Express franchise changes

In May 2018, as part of the franchise commitments affecting TransPennine Express and Northern, a number of services were changed. The hourly TPE service was transferred from the CLC route onto the Chat Moss Line between Liverpool and Manchester Victoria. A new hourly Northern train between Liverpool Lime Street and Manchester Airport via Manchester Piccadilly then replaced the TPE service.

The service changes affecting the CLC route described above mean the number of journeys using this route between 2011 and 2018 are not directly comparable (the 2018 timetable changes resulted in no trains travelling east of Manchester). However, the number of passengers using the mix of semi-fast and stopping trains west of Manchester increased by 30% according to the Department for Transport's Annual Rail Statistics.

Rolling stock

Northern currently operates Class 150 or 156 units on the CLC route, whilst some Class 14X units are deployed on stopping services. However, the latter are due to be replaced by the end of 2019 or early 2020. East Midlands Trains operates Class 158s.

The rolling stock formations, along with the seated and standing capacities are shown in Table 2. This information has been used to inform the crowding analysis for each station, in conjunction with the demand analysis for individual services discussed above.

For the purposes of the Study, a 4-car Class 195 is assumed for the Liverpool to Manchester Airport service. This rolling stock is expected to be operating prior to the December 2019 timetable change and these services will be branded as 'Northern Connect'. The capacity offered by these units still represents a reduction of 50 seats compared with the 6-car Class 185s operated by TransPennine Express prior to May 2018.

Table 2: Baseline services to central Manchester (08.00-08.59)

Origin	Destination	Rolling stock	Seats	Standing	Total
Liverpool Lime Street[1]	Manchester Oxford Road (semi-fast)	4-car Class 195	248	194	442
Liverpool Lime Street	Norwich (semi-fast)	4-car Class 158	314	142	456
Warrington Central	Manchester Oxford Road	4-car Class 150	248	160	408
Liverpool Lime Street	Manchester Oxford Road	4-car Class 150	248	160	408

Source: Office of Rail and Road (2018), Estimated passenger journeys 2017/18. www.nationalrail.co.uk, observed / proposed rolling stock formations

4 Currently, the Liverpool to Manchester Airport service is operated by a Class 156 unit

Infrastructure Capability

The CLC route is an important two track railway, but there are a number of factors which contribute to the inflexible current timetable structure:

- Numerous intermediate stations which leads to journey time differences between the stopping and semi-fast services rather than consistent journey times between stations for all trains;
- Lengthy signalling headways, particularly the absolute block section between Warrington and Glazebrook;
- Lack of intermediate passing opportunities. Trains terminate at Warrington Central and Hunts Cross but the only passing loop is in the westbound direction at Glazebrook. This is infrequently used since the signalling capability means the train being passed would need to spend 10 minutes in the loop;
- Interface with the currently capacity constrained Castlefield corridor which limits the number of terminating and through trains from the CLC route. In contrast with many other routes serving Manchester, there are no alternative routes that could be used to divert the CLC services;
- Scope for importing delays from the Hope Valley and beyond;
- Relatively short turnrounds, for example, the East Midlands Trains service has a turnround time at Liverpool Lime Street of just 21 minutes, despite a journey time of over five hours.

This infrastructure capability leads to a requirement for one stopping service to depart Liverpool or Manchester immediately behind a semi-fast train. This allows the former train to reach its terminus before the next semi-fast train (which departed about 30 minutes later) catches up. These constraints prevent some of the smaller stations being better served.

Analysis by Network Rail shows that the Warrington to Manchester and Warrington to Liverpool sections are responsible for some of the largest delays affecting routes in northern England. The section between Warrington and Manchester was the second most delayed route overall, with average delays of 4.2 minutes per service. The Warrington to Liverpool section incurs delays of nearly 3 minutes per service, significantly above other regional routes across the North of England. Westbound trains are more affected by these delays, largely owing to the potential for delays on the inbound journey to Liverpool from the East Midlands or East Anglia.

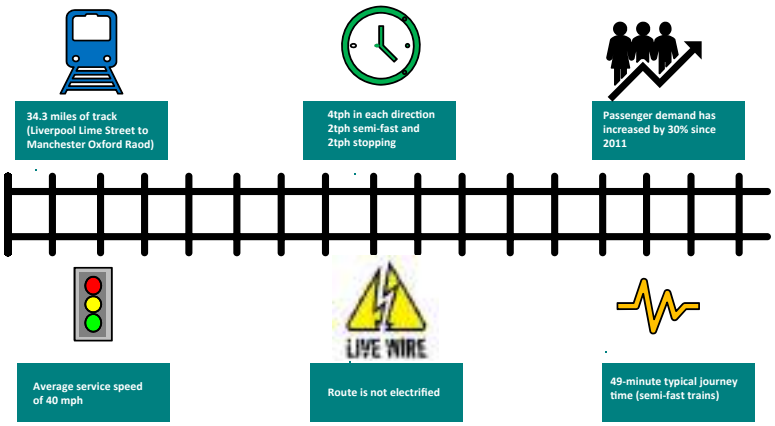
The core section of the CLC route is not electrified and currently relies on diesel trains. Only the feeder sections between Trafford Park and Manchester Oxford Road, Liverpool Lime Street and Liverpool South Parkway are electrified (both 25kV AC overhead), whilst the Merseyrail corridor to Hunts Cross is electrified to 750V DC third rail.

Many stations on this route remain in their original form as first constructed, and analysis by AECOM indicates that the facilities at several intermediate stations are 'poor' or 'very poor' [5]. Stations listed in this category include West Allerton, Widnes, Sankey, Padgate, Chassen Road, Humphrey Park and Trafford Park.

Infrastructure renewals have been completed in the Liverpool South Parkway area, whilst Trafford Park re-signalling is scheduled to be completed by 2024 (the end of Control Period 6). Further information regarding the infrastructure characteristics and capabilities can be found in Network Rail's LNW Route Specification document. Figure 5 illustrates some of the main characteristics of the existing CLC route.

5 Developing a strategic plan for the CLC Route, June 2017, A report by AECOM on behalf of Merseytravel, Transport for Greater Manchester and Warrington Borough Council

Figure 5: Summary of the key infrastructure characteristics – CLC route



Load factor analysis

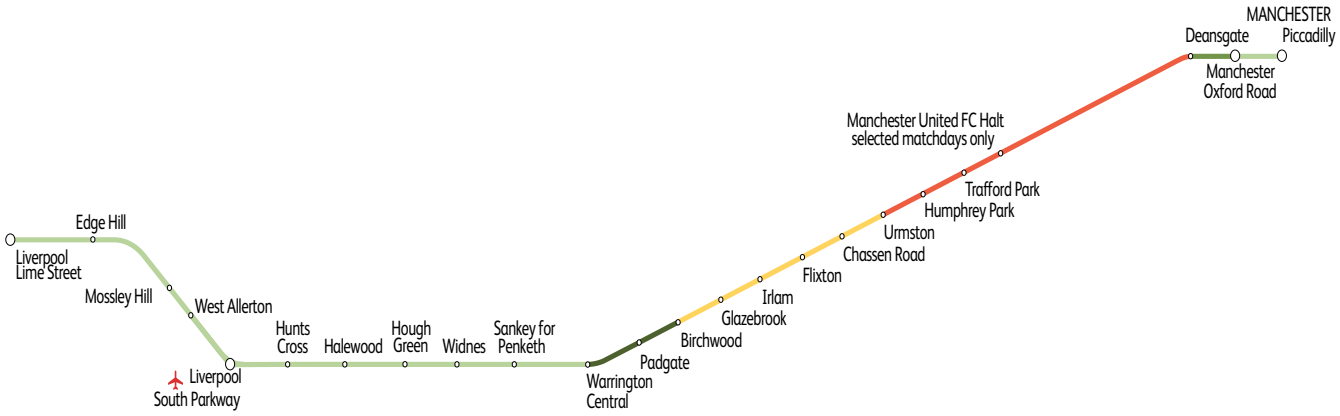
Critical load and city count data collected in autumn 2016 on behalf of the Department for Transport (DfT) was examined for the high peak period 08.00-08.59). This dataset was calibrated against MOIRA[6] demand profiles for trips crossing a cordon into Manchester city centre. Initial data analysis confirmed that the arrivals into, or departures from, Manchester were significantly higher than the totals to / from the next biggest cities, Liverpool or Warrington Central. The remainder of this analysis therefore focuses on the load factor analysis to Manchester, since this forms the busiest part of the journey.

These passenger counts were compared to current capacity on each station arc given current rolling stock on a service-by-service basis, in order to show the quantum of seated and standing passengers on each corridor into central Manchester (and therefore how "busy" the corridor is at each station along it). Passenger capacity is aggregated and averaged over all services on the corridor, therefore the relative load factors of individual services is not represented. This information is presented in an aggregate format to maintain the commercial confidentiality of the data.

The route sections in Figure 6 with lines shown as light green to dark green have sufficient seating capacity for the actual number of passengers, whilst the route sections shown as amber, red, purple or black have standing passengers. Route sections shown in black have more than three standing passengers per square metre. The Department for Transport (DfT) peak crowding standards specify that passengers travelling more than 20 minutes should have an expectation of a seat and standing densities should not routinely exceed more than 2.2 passengers per square metre, or 4 passengers per square metre when the train interior is specifically configured for short distance 'Metro' commuting . Figure 6 illustrates that there is up to one passenger / m2 standing on average from Birchwood towards Manchester, which increases to 1-2 passengers / m2 east of Urmston in the high peak.

Figure 6 indicates that increased passenger capacity is needed into central Manchester during the high peak hour. This accounts for the varying service types in operation along the line (semi-fast and stopping). Any passengers boarding at Birchwood in the high peak hour is likely to fall outside the 20-minute standing journey time threshold.

Figure 6: Load factor analysis to Manchester (08.00-08.59, 2016)



GREY	No direct service to central Manchester during the high peak hour
LIGHT GREEN	Up to 70% of seats occupied on average
GREEN	Between 70% and 85% of seats occupied on average
DARK GREEN	Between 85% and 100% of seats occupied on average
AMBER	Passengers standing, up to 1 passenger per square metre on average
RED	Passengers standing, between 1 and 2 passengers per square metre on average
PURPLE	Passengers standing, between 2 and 3 passengers per square metre on average
BLACK	Passengers standing, over 3 passengers per square metre on average
< >	Indicates the most heavily loaded direction of travel shown for orbital services

6 MOIRA is a forecasting tool used by the Department for Transport, train operators and others to assess the impact of service changes on journeys and revenue. The software includes an estimate of the arrival profile for each station to enable revenue to be allocated to different operators. Recent versions of the software (MOIRA 2) incorporate a number of updates, including the capability to model crowding

Part D Factors influencing change

There are clear stakeholder ambitions across the study area to accelerate forecast economic growth through targeted investment in transformational transport projects. These stakeholders include Local Transport Authorities, Local Enterprise Partnerships and sub-national transport bodies.

Warrington West New Station

Bespoke analysis has been completed for the CLC corridor which includes the generative impacts on demand of the new Warrington West station, plus abstraction from adjacent stations. Data provided by AECOM as shown in Table 3 based on all three Northern services per hour calling at the station was used to adjust the forecasts. Since then, timetable planning work for a December 2019 timetable change has indicated that only 2tph could be served, and that total demand (in this analysis) would be reduced by 23%.

Sankey is located to the west of the proposed Warrington West station and it is envisaged that service levels to the former station would be reduced to a very small number of trains per day to accommodate the services stopping at the new station.

The inclusion of the above demand forecasts would supplement the current usage of the CLC route, with exogenous growth overlaid to represent the additional traffic expected to be generated by the new station. Forecasts have also been revised to reflect the abstraction of some passengers from the CLC to the Chat Moss route in response to service improvements on the latter corridor.

Table 3: Passenger forecasts for Warrington West

Year	Warrington West Station Demand ('000s)				Other impacts ('000's)		Net total ('000's)
	Local catchment	P&R	Inbound	Total	Reduction at existing stations	Journey time impact	
2024	247	397	146	791	-319	-45	426
2030	286	419	162	866	-343	-49	474

Source: AECOM

East Midlands Trains Franchise Replacement

In April 2019, the Department for Transport announced the decision to split the Liverpool to Norwich services at Nottingham from December 2021. The services covering the western part of the route between Liverpool and Nottingham will be subject to a separate tendering competition, possibly involving the current operators of Northern and TransPennine Express. Details of the revised service proposals, including rolling stock assumptions, are yet to be confirmed. The new franchise proposals could alter the rolling stock capacities assumed in the "Do Minimum" scenario of this Study, possibly introducing some rolling stock with higher seating capacities which would help to address the overcrowding issues.

Freight

The main freight traffic generator served by this corridor is the container terminal at Trafford Park. There is a significant increase in rail-freight traffic forecast on the routes to and from Trafford Park, rising from 13tpd to 26tpd by 2043. It is assumed that hourly path would be sufficient to accommodate the future level of demand, with the balance of any paths operating overnight.

Transport for the North (TfN) has yet to publish their aspirational strategy for freight. This strategy may lead to an increased level of traffic to / from Trafford Park. Capacity on the CLC route and the adjacent Castlefield corridor therefore needs to be reviewed to determine future infrastructure scope.

Economic drivers

The economy generated by the Greater Manchester City Region is amongst the largest in England, accounting for £59.5 billion of gross value added (GVA) in 2015[1] . This accounts for nearly 40% of GVA in the North West. The GVA for Liverpool City Region for the same year was £29.5bn[2], whilst the total for the Cheshire and Warrington area accounted for a further £28bn. Between 2005 and 2015, GVA increased by about 30%, with the total for Cheshire and Warrington increasing by nearly 40% over the same period. Such periods of economic growth have significant impacts on the demand for the railway.

1 Office for National Statistics, GVA release 2016

2 Office for National Statistics, GVA release 2016

Northern Powerhouse Independent Economic Review (NPIER)[3] data has also been examined to illustrate the forecast change in population, employment and GVA per capita for Liverpool, Manchester and Warrington Districts for the 'business as usual' (BAU) and 'transformational' growth scenarios. Data for Warrington has been included as it represents a possible Other Significant Economic Centre (OSEC).

A 25% increase is forecast for Warrington and Manchester in the NPIER business as usual (BAU) scenario, along with a 35% change in the 'transformational' scenario between 2015 and 2050. It should be noted though that there is insufficient detail within these forecasts to determine whether an express, semi-fast or local service pattern would be better supported by these forecasts.

The percentage change for Liverpool is smaller when compared with Warrington and Manchester, particularly for the BAU scenario. Liverpool has the most ambitious employment forecasts to 2050 specified in the NPIER, with a 35% increase in the transformational scenario versus 2015. The percentage of jobs located in both Manchester and Warrington is forecast to rise by 29% over the same period in the most ambitious scenario. These forecasts demonstrate the potential for huge economic growth that it's believed the North could achieve during the next 10 to 20 years.

The Study will account for these economic drivers by revising employment forecasts that form a part of the input assumptions used in the Economic Analysis. This will be especially relevant in the more transformational economic scenarios and will help to define the potential intervention options proposed.

High Speed 2 (HS2)

In 2009 the government commenced an assessment of the case for a second high speed line in the UK. A Y-shaped route from London to Birmingham with branches to Manchester and Leeds was proposed. Phase 1 will deliver a new route between London and the West Midlands, whilst Phase 2a would extend the route north to Crewe. Phase 2b is planned to continue the route from Crewe to Manchester, and also includes the construction of the eastern leg from the West Midlands to Leeds. As part of this strategic question, the impact of the proposed HS2 network has been included.

The intention of HS2 is to improve journey times and connectivity between the North and South of the country in order to support economic growth. Whilst the direct impact on the CLC corridor of HS2 may be limited, the corridor's role in connecting passengers between the two hubs at Liverpool Lime Street and Manchester Piccadilly is expected to grow as the scheme advances.

A public consultation commenced in June 2019 for a 12 week period to review possible modifications to Phase 2b, notably the passive provision for two future grade-separated junctions. The first junction (Figure 7) would allow the future use of the HS2 line into Manchester as part of Northern Powerhouse Rail (NPR), for services between Manchester, Warrington and Liverpool; whilst the second would also allow HS2 services between London and Liverpool to use future NPR infrastructure[4].

Nothern Powerhouse Rail (NPR)

Major investment is proposed for the railway in the North of England. This includes the following schemes:

- Northern Hub;
- Trans-Pennine Route Upgrade programmes;
- improvements to the East and West Coast Main Lines;
- proposed new HS2 Ltd infrastructure.

This programme is part of the Northern Transport Strategy: a multi-modal strategy aimed at enabling the Northern Powerhouse vision. The Northern Powerhouse Rail (NPR) Programme aims to enable the transformation of rail journeys between the city centres of the six main Northern Powerhouse cities – Liverpool, Manchester, Sheffield, Leeds, Hull and Newcastle – and Manchester Airport, by 2043.

This transformational change is defined as significant reductions in journey time, coupled with increases in frequency and capacity for passenger services. The NPR network could also offer potential to provide much improved connectivity for Other Significant Economic Centres (OSECs), which includes Warrington. Warrington could be served by a town centre or a parkway station. NPR could also enable released capacity on the existing network for freight or other local services.

The NPR programme is currently at the Strategic Outline Business Case (SOBC) stage. Network Rail (NR) is working in partnership with Transport for the North and the Department for Transport to develop the costs and test operational feasibility which builds on previous work to provide input to the SOBC. As part of this work, concepts and options are being developed and tested for the route between Liverpool and Manchester (including Manchester Airport), with a number of options potentially involving service changes affecting the CLC corridor. This could include extensions to the

3 Revised NPIER District and Regional Analysis _ NPR, Cambridge Econometrics

4 See https://www.gov.uk/government/consultations/hs2-phase-2b-design-refinement-consultation

Merseyrail network. Furthermore, a new NPR / HS2 station serving Liverpool or Merseyrail could also be introduced. The emerging vision for the NPR network is shown in Figure 7.

Figure 7: Emerging vision for the NPR network

The introduction of a high-speed rail link in 2033 and the ambitions for Northern Powerhouse Rail (NPR) will be transformational for passengers and the economy. HS2 is estimated to create 40,000 new jobs, 13,000 new homes and commercial developments in the Greater Manchester area[5]. Similarly, NPR will reshape travel across the North and act as a catalyst for change in towns and cities across the regions. This presents an opportunity to consider options for delivering future capacity and connectivity across the area, in a way that maximises the benefits of this major investment on the classic rail network.

From a Liverpool City Region perspective, HS2 is expected to generate a further £15bn in economic growth, support the construction of 11,000 new homes and the creation of 24,000 new jobs. In addition, up to 3.6m new visitors could be attracted to the city region[6].

The potential impacts of High Speed 2 (HS2) and Northern Powerhouse Rail (NPR) have not been considered in detail in this study at this stage. As both schemes are developed, further work would need to be considered to assess the impact on future demand and the use of the corridor. It's possible that the introduction of NPR services between Liverpool and Manchester, via a potential Other Significant Economic Centre (OSEC) at Warrington (either with a town centre or a parkway station) could abstract further trips from the CLC as a result of the faster journey times on offer.

Digital Railway

The Digital Railway Programme is a benefits-driven, cross-industry change programme enabled by technology which will facilitate the delivery of systems, technology, business and people change in an integrated way. The rail industry is developing business cases across the network to see what benefits Digital Railway can bring. The industry has not built a business case for Digital Railway on the CLC corridor and the options that have been developed are future proofed for Digital Rail but do not provide the answer for future growth up to 2043.

Example of evolving technology

Further details are available at:

https://www.networkrail.co.uk/our-railway-upgrade-plan/ digital-railway/digital-railway-strategy/

5 https://assets.contentful.com/nv7y93idf4jq/DJHDlSLIzec4a8AQoCqws/206c82c74734877dff7c0493c5ee9ab0/17-1687_HS2_Growth_Strategy_Summary.pdf pg6

6 Liverpool City Region Combined Authority, June 2019, Combined Authority Transport Plan – Facilitating inclusive economy

Part E Impact of future year growth

Forecasts

In order to assess the need for potential future interventions on the railway, forecast growth scenarios have been produced for 2024, 2033 and 2043. These used inputs from the Passenger Demand Forecasting Handbook (PDFH) v6.0 assumptions for all specified future years in accordance with agreed Network Rail and DfT guidance.

Two sensitivity tests were applied to capture the more localised forecasted growth:

- Inclusion of an overlay onto the Network Rail/ DfT methodology which reflects more ambitious employment assumptions;
- Growth forecasts prepared by Transport for Greater Manchester.

Growth rates used to calculate future year demand are shown below.

The differences in the growth forecasts are driven by a difference in employment and population forecasts used by the 3 Specifiers.

As previously noted, only services via Manchester Oxford Road are included in the load factor and crowding analysis, as this was identified as the principal constraint along the CLC corridor. Trains into Liverpool Lime Street or the Merseyrail network are not analysed. However, the interaction with the Merseyrail services between Hunts Cross and Liverpool South Parkway, plus other trains using the high level platforms at Liverpool Lime Street and Liverpool South Parkway are considered as part of the supplementary capacity analysis.

Please note that a journey time of 20 minutes is currently assumed by the Department of Transport as being the acceptable duration for standing passengers.

2024 forecasts

Figure 8 below illustrates the impacts to demand along the CLC corridor of applying the forecast growth for 2024 to the base year of 2016. Note that there is expected to be some passenger abstraction to the Chat Moss route from the CLC. This abstraction would result from introducing a third fast hourly service on the Chat Moss route, assuming suitable train paths can be identified to support an hourly service from the Calder Valley Line to Liverpool.

The crowding issues are forecast to worsen by 2024 when compared to 2016. Even in the lowest growth scenario (DfT WebTAG), there continues to be a passenger capacity issue which will need to be addressed. In this scenario, three of the four services arriving in Manchester would be affected by this forecast overcrowding, with the number of passengers exceeding the theoretical total capacity of each unit. Typically, passengers would stand from stations as far west as Warrington Central towards Manchester in the high peak hour. The forecasted overcrowding is exaggerated further in the Transport for Greater Manchester (TfGM) growth scenario.

2033 and 2043 forecasts

There are no committed timetable changes between 2024 and 2043, but exogenous growth still occurs, and no additional rolling stock is assumed. Consequently, the level of crowding deteriorates further by 2033 and 2043, as shown in Figures 9 and 10 below.

By 2033, there are over two passengers standing per metre square from Irlam, with 1-2 passengers standing per square metre upon arrival at Irlam. The diagrams show insufficient seats for all passengers boarding east of Warrington Central. The likely journey times from Warrington Central (even on the semi-fast trains) would fall outside of the 20-minute journey time boundary and therefore exceeds the

Table 4: Current passenger demand forecasts (April 2019, base year 2016).

Specifier	2024	2033	2043
DfT WebTAG	12%	26%	43%
System Operator (NR)	25%	42%	63%
TfGM - CLC	31%	65%	

current Department for Transport standard. With 2-3 passengers per square metre standing by 2033, this level of crowding may prevent some passengers being able to board their preferred service. These issues could be further exacerbated in the event of service disruption.

The forecast crowding issues deteriorate further by 2043 as shown in Figure 10. East of Humphrey Park, more than three passengers per square metre are expected to be standing, with crowding level of 2-3 passengers per metre square extending beyond Irlam to Birchwood by 2043. There would be insufficient seats for passengers boarding at stations east of Sankey towards Manchester.

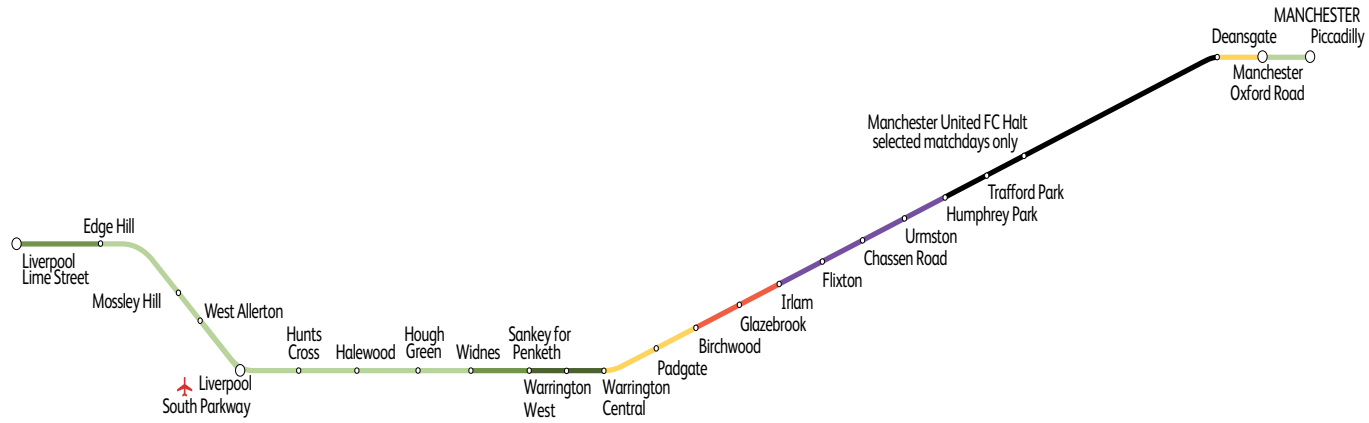
Summary of demand forecasting

The CLC corridor is already affected by overcrowding, with passengers on some high peak trains having to stand for more than 20 minutes when travelling to central Manchester. The forecast exogenous growth is expected to exacerbate the crowding, even if the most cautious growth scenario is assumed. By 2043 if the System Operator (Network Rail) growth rate is achieved, some passengers would by standing from Sankey. With journey times taking over 40 minutes to Manchester, this would contravene crowding guidance.

Figure 8: Forecast high peak arrivals to Manchester (2024), SO growth

GREY	No direct service to central Manchester during the high peak hour
LIGHT GREEN	Up to 70% of seats occupied on average
GREEN	Between 70% and 85% of seats occupied on average
DARK GREEN	Between 85% and 100% of seats occupied on average
AMBER	Passengers standing, up to 1 passenger per square metre on average
RED	Passengers standing, between 1 and 2 passengers per square metre on average
PURPLE	Passengers standing, between 2 and 3 passengers per square metre on average
BLACK	Passengers standing, over 3 passengers per square metre on average
< >	Indicates the most heavily loaded direction of travel shown for orbital services

Figure 9: Forecast high peak arrivals to Manchester (2033), SO growth



GREY	No direct service to central Manchester during the high peak hour
LIGHT GREEN	Up to 70% of seats occupied on average
GREEN	Between 70% and 85% of seats occupied on average
DARK GREEN	Between 85% and 100% of seats occupied on average
AMBER	Passengers standing, up to 1 passenger per square metre on average
RED	Passengers standing, between 1 and 2 passengers per square metre on average
PURPLE	Passengers standing, between 2 and 3 passengers per square metre on average
BLACK	Passengers standing, over 3 passengers per square metre on average
< >	Indicates the most heavily loaded direction of travel shown for orbital services

Figure 10: Forecast high peak arrivals to Manchester (2043), SO growth

GREY	No direct service to central Manchester during the high peak hour
LIGHT GREEN	Up to 70% of seats occupied on average
GREEN	Between 70% and 85% of seats occupied on average
DARK GREEN	Between 85% and 100% of seats occupied on average
AMBER	Passengers standing, up to 1 passenger per square metre on average
RED	Passengers standing, between 1 and 2 passengers per square metre on average
PURPLE	Passengers standing, between 2 and 3 passengers per square metre on average
BLACK	Passengers standing, over 3 passengers per square metre on average
< >	Indicates the most heavily loaded direction of travel shown for orbital services

Part F Approach to option development

Identifying Interventions

The analysis presented in Figures 8-10 indicates interventions will be required to address the worsening overcrowding between 2024 and 2043. A 'Do Nothing' scenario was discounted, since it would not tackle the problem.

The Study has confined its proposed potential interventions exclusively to those that address the CMSP question posed, that is, the accommodation of forecast growth along the corridor. Interventions that deliver faster journey times and / or more resilient performance are achieved as a secondary impact only.

Three themes have been proposed to tackle the forecast overcrowding:

- train lengthening to extend some or all of the 4-car formations to 6-car sets;
- introduction of new services, for example, peak shuttles between Warrington and Manchester. However, the analysis does not consider the wider network capacity implications arising from this proposals, since the number of trains via the Castlefield corridor is subject to review as part of a separate study;
- introduction of units that have alternative seating layouts to increase total capacity even though the number of carriages is unchanged.

An Alternative Study

In addition to these Network Rail developed options, the outputs from a separate consultancy (AECOM) study that was completed on behalf of Merseytravel, Transport for Greater Manchester and Warrington Borough Council, have also been reviewed. This study also produced a detailed understanding of the rail market to inform the development of a rail strategy through to 2026. Several options were developed and then sifted to identify the optimal option.

The preferred option emerging from the AECOM report assumed the stopping services would be split into two, with trains from Liverpool terminating at Birchwood. Similarly, the Manchester portions would terminate at Warrington West. The existing semi-fast trains in this specification would be unchanged. The characteristics of this option were then modelled by Network Rail.

Assumptions

For the proposals that demonstrate the strongest economic appraisal, detailed timetabling and performance modelling was then required to further verify the emerging conclusions. For strategic interventions to be developed as part of this study, a number of assumptions and risks were identified and recorded in the Risk and Assumptions log.

Part G Options and advice for funders

Service options and initial appraisal results

The Study used the growth forecasts detailed previously, and for each scenario a high level value for money assessment was produced for a series of potential interventions proposed. The results of these assessments were Benefit/Cost Ratios (BCR) that enable comparisons to be drawn between the proposed interventions.

The BCR places a value against the expected benefits and costs being delivered by a proposed intervention. Note that all benefits and costs are discounted to a 2010 price base. Incremental revenue and standard transport benefits were calculated, with journey time savings arising from the improved frequencies and / or crowding relief. The change in operating costs and the indicative capital costs with the appropriate level of optimism bias were also included. A suggested delivery timeframe for these interventions was also considered.

It should be noted that these assessments are based on System Operator (Network Rail) demand forecasts which are generally higher than DfT's WebTAG forecasts that form the basis of the central case in any DfT investment decision.

The following section will detail the various potential intervention options explored by the Study and their relative BCRs.

Option 2 assumed that all trains along the corridor are lengthened to 6-cars. This will require platform lengthening at selected intermediate stations. With the agreement of the relevant train operators, trains calling at stations with a low footfall would adopt selective door opening (SDO)[1], instead of assuming platform lengthening is required at all stations. Table 5 summarises the underlying assumptions for Option 2, whilst Table 6 presents the results of the value for money assessment.

1 Selective Door Opening (or SDO) is a mechanism employed primarily on trains that allows the driver or conductor/guard to open the doors of a train separately and is usually utilised where the platform is shorter than the train.

Table 5: Option 2 interventions

Theme	Description
Summary of interventions	Platform extension to 6-car at the following stations: West Allerton, Flixton, Padgate, Edge Hill, Hough Green, Irlam, Urmston, Widnes, Birchwood, Hunts Cross, Warrington Central, Liverpool South Parkway
Output assessment	Provides platform lengths which would support train lengthening to 6-car services
Indicative capital costs	£20m – £50m
Operating costs	Included
Prioritisation assessment	Should be considered for delivery by 2024 to meet forecast demand
Note: Warrington West station is assumed to be constructed with platforms to accommodate 6-car trains	

Table 6: Initial appraisal: Option 2a – Train Lengthening

Option	Option description	BCR	VfM Category
2a	All high peak services on CLC lengthened to 6-car, one way	0.75	Poor
2a S1	All high peak services on CLC lengthened to 6-car, return (except EMT service to Norwich)	0.73	Poor
2a S2	All high peak services on CLC lengthened to 6-car, one way Reduced CAPEX due to reduction in platform lengthening scope	0.93	Poor
2a S3	All high peak services on CLC lengthened to 6-car, one way Reduced CAPEX due to reduction in platform lengthening scope OPEX leasing costs reduced by 25%	1.21	Low
2a S4	3-hour peak services lengthened (return) (except EMT service to Norwich)	1.63	Medium
2a S5	3-hour peak services lengthened (return). Reduced CAPEX due to reduction in platform lengthening	2.06	Good

The incremental operating costs have been calculated using relatively conservative assumptions. It is anticipated that train operators affected by these changes would work closely with the DfT and funders during the next re-franchising process to understand and identify the operational requirement, and costs of lengthening services to accommodate demand. It is possible that a more efficient use of rolling stock would be in place as part of the franchise plans. It has been assumed that services that operate between 07.00 and 09.00 will already be operating as 4 or 6-car formations in the baseline.

The primary aim of Option 2 is to increase passenger capacity to address overcrowding, but this will be sensitive to the incremental operating costs. It is unusual for these types of scheme to achieve a high value for money benefit cost ratio, particularly at this stage of development. The capacity benefit from these extra units would only be needed for a limited number of services each day, whilst the levels of optimism bias [2] applied to operating costs at this early stage development increase total costs.

The value for money of the scheme ranges from 'poor' to 'good'. A number of economic appraisals were completed to assess the impact of different assumptions regarding platform lengthening, plus the calculation of benefits. The latter was calculated for an one hour or three hour period, with the revenue and benefits considering trips towards Manchester or journeys in both directions. This variance indicates there are opportunities to strengthen the business case above 'poor', but this only achieved by adopting the most favourable set of assumptions.

Initial appraisal results: Option 3 – Additional peak service from Warrington to Manchester Oxford Road

An additional four-car service between Warrington Central and Manchester Oxford Road has also been tested as an alternative to train lengthening on this corridor. The additional service would provide more seats for passengers travelling to central Manchester, whilst the extra journey opportunities will reduce Generalised Journey Times from stations east of Warrington Central.

As network utilisation is high on this corridor however, this extra service would require some supplementary infrastructure in order to run including reduced signalling headways between Hunt's Cross and Hough Green, plus Birchwood to Glazebrook, whilst a new turnback at Warrington Central would be required, as shown in Table 7. Possible interventions beyond Castlefield corridor have not been considered.

Whilst this intervention may be more effective than Option 2 at targeting the busiest route section on the CLC between Warrington and Manchester, the value for money case for the sub-options considered within option 3 is weaker, generating either 'poor' or 'low' value for money assessments.

Table 7: Option 3 interventions

Theme	Description
Summary of interventions	Block sections converted to 4 min headways (Hunts Cross-Hough Green & Glazebrook-Birchwood); turnback at Warrington Central
Output assessment	Allows for an additional 1tph between Warrington Central and (note that interventions at Manchester Oxford Road are outside the scope of this study and require further testing)
Indicative capital costs	£20m – £50m
Operating costs	Included
Prioritisation assessment	Considered for delivery by 2024 to meet forecast demand, but 2033 is more realistic due to nature of interventions required
Note: Warrington West station is assumed to be constructed with platforms to accommodate 6-car trains	

Table 8: Initial appraisal: Option 3 – Extra services

Option	Option description	BCR	VfM Category
3	Additional 1 tph WAC-MCO via the CLC, morning 3 hour peak only, return	0.25	Poor
3 S1	Additional 1 tph WAC-MCO via the CLC, morning & evening peak, return	0.61	Poor
3 S4	Additional 1 tph WAC-MCO via the CLC, return all day services	0.83	Poor
3 S5	Additional 1 tph WAC-MCO via the CLC, return all day services, OPEX leasing costs reduced by 25%	1.00	Low
3 S6	Additional 1 tph WAC-MCO via the CLC, return all day services, OPEX leasing costs reduced by 25%, CAPEX reduced by 25%	1.18	Low

2 Adjustments applied to a project's costs to reflect the risk of over-optimism in appraisals.

Initial appraisal results: Option 4a – Option 2 + Option 3

Options 2 or 3 in isolation would not provide sufficient capacity to cater for the forecast demand post 2033. Option 4 combines both of these options and has therefore been tested as a possible longer-term strategy.

Table 9 describes the interventions required. The scheme costs are higher compared to Options 2 and 3, which reflects the more comprehensive scope of interventions required.

With the exception of Option 4a S6 which generates a 'medium' value for money case, the appraisal results for the other options is either 'poor' or 'low'. This result has been driven by the higher capital costs assumed.

Assessment of strategic alternatives

To supplement options 2-4 which tested the impact of train lengthening and/or the introduction of a new hourly shuttle between Warrington Central and Manchester Oxford Road, a strategic alternative has been considered.

Table 9: Option 4 interventions

Theme	Description
Summary of interventions	Platform extension to 6-car at: West Allerton, Flixton, Padgate, Edge Hill, Hough Green, Irlam, Urmston, Widnes, Birchwood, Hunts Cross, Warrington Central, Liverpool South Parkway. Block sections converted to 4 minute headways (Hunts Cross-Hough Green & Glazebrook -Birchwood). Turnback at Warrington Central
Output assessment	Provides platform lengths which would support train lengthening to 6-car services and allows for an additional 1tph between Warrington Central. Interventions at Manchester Oxford Road are outside the scope of this study and require further testing in the future
Indicative capital costs	£50m – £100m
Operating costs	Included
Prioritisation assessment	Considered for delivery by 2033 to meet forecast demand, but some interventions will be required by 2024
Note: Warrington West station is assumed to be constructed with platforms to accommodate 6-car trains	

Table 10: Initial appraisal: Option 4a – Train Lengthening and Extra Services

Option	Option description	BCR	VfM Category
4a 2+3	Additional 1 tph WAC-MCO via the CLC, morning 3 hour peak only, return. All high peak services lengthened, one way	0.54	Poor
4a S1 (2a+3S1)	Additional 1 tph WAC-MCO via the CLC, morning & evening peak, return. All high peak services lengthened, one way	0.75	Poor
Option 4a S4 (2aS4+3S4)	Additional 1 tph WAC-MCO, all day, all 3-hour peak trains lengthened, return	1.32	Low
Option 4a S5 (2aS5+3S4)	Additional 1 tph WAC-MCO, all day, all 3-hour peak services lengthened, return. Lower CAPEX due to reduction in platform lengthening scope	1.43	Low
Option 4a S6 2aS5+3S5)	Additional 1 tph WAC-MCO, all day, all 3-hour peak services lengthened, return, lower CAPEX due to reduction in platform lengthening scope, 25% reduction in OPEX leasing costs	1.65	Medium

Option 5 looks at the case for improving connectivity for passengers along the CLC corridor by splitting the Liverpool Lime Street to Manchester Oxford Road services in the baseline into separate services. This proposal would be consistent with stakeholder aspirations, with the stopping trains split into two portions comprising Warrington West to Manchester Oxford Road and Birchwood to Liverpool Lime Street.

There is a service overlap between Birchwood and Warrington West which would provide higher frequencies for passengers between these stations. However, this option does not provide any additional capacity into central Manchester stations.

The incremental operating costs have been included in the appraisal resulting from the increased rolling stock mileage, but the initial analysis completed indicates the revised train service pattern could be operated without requiring extra units.

Table 11: Option 5 interventions	
Theme	**Description**
Summary of interventions	Block sections converted to 4 min headways (Hunts Cross-Hough Green & Glazebrook -Birchwood). New crossover at Warrington West. Additional loop and turnback at Warrington West. New crossover at Birchwood
Output assessment	Improved reliability from increased timetable flexibility. Higher frequencies for passengers between Warrington West and Birchwood
Indicative capital costs	£50m – £100m
Operating costs	Included
Prioritisation assessment	2033
Note: Warrington West station is assumed to be constructed with platforms to accommodate 6-car trains	

Table 10: Initial appraisal: Option 4a – Train Lengthening and Extra Services			
Option	**Option description**	**BCR**	**VfM Category**
4a 2+3	Additional 1 tph WAC-MCO via the CLC, morning 3 hour peak only, return. All high peak services lengthened, one way	0.54	Poor
4a S1 (2a+3S1)	Additional 1 tph WAC-MCO via the CLC, morning & evening peak, return. All high peak services lengthened, one way	0.75	Poor
Option 4a S4 (2aS4+3S4)	Additional 1 tph WAC-MCO, all day, all 3-hour peak trains lengthened, return	1.32	Low
Option 4a S5 (2aS5+3S4)	Additional 1 tph WAC-MCO, all day, all 3-hour peak services lengthened, return. Lower CAPEX due to reduction in platform lengthening scope	1.43	Low
Option 4a S6 2aS5+3S5)	Additional 1 tph WAC-MCO, all day, all 3-hour peak services lengthened, return, lower CAPEX due to reduction in platform lengthening scope, 25% reduction in OPEX leasing costs	1.65	Medium

The AECOM report commissioned by Merseytravel, Warrington BC and TfGM has produced a business case[3]. The business case demonstrates that the alternative proposition described could generate a benefit cost ratio above 2.0. However, to do so, this assumes the following:

- a new station at Warrington West;
- faster journey times achieved by different types of rolling stock;
- alternative growth forecasting scenarios;
- calculation of benefits across the day, rather than just a peak hour or peak period.

The initial analysis produced by the consultants demonstrated that the economic appraisal could generate significantly better results compared with the majority of the scenarios tested by Network Rail.

3 "Developing a Medium Term Strategic Plan for Cheshire Lines Committee 'CLC' Rail Line (Liverpool-Warrington-Manchester), Option 4b Further Assessment" (November 2018),

Part H Emerging Strategic Advice

Summary and conclusions

The Study has demonstrated that there is a strategic case for addressing the current overcrowding issues affecting the CLC corridor given the buoyant economic characteristics of the catchments served between Liverpool and Manchester via Warrington. In addition to the current loadings during the peak periods, substantial growth is also forecast which will further exacerbate these issues.

It should be noted that the scope of the CMSP question, confirmed with stakeholders for this corridor, was confined to addressing the overcrowding issues, rather than addressing a more holistic set of pre-existing constraints which include (but are not limited to) connectivity gaps and unreliable performance.

In response to these overcrowding issues, a number of options were developed, comprising a mixture of train lengthening and the introduction of additional shuttles between Warrington and Manchester which would address the busiest sections of the CLC corridor. However, in spite of applying optimistic growth scenarios and reducing the scope of platform lengthening works needed to support the longer trains, the economic appraisal results produced for these service proposals was weak.

Analysis indicated that the weak economic performance was primarily driven by the relatively short daily requirement for extra capacity, more specifically for the high peak hour trains towards Manchester in the morning and the return direction in the evening.

This analysis took account of the current baseline services operated by Northern and East Midlands Railway and their relative rolling stock capacities. However, there may be scope to deliver some further capacity improvements in the short terms when the semi-fast trains towards Nottingham transition from EMR to either the Northern or TransPennine Express franchise in 2021. Furthermore, the replacement of Class 14X units with other diesel trains could also boost capacity but further improvements will still be required to fully accommodate forecast growth.

An alternative outcome

The proposal drawn up by AECOM on behalf of Merseytravel, Warrington Borough Council and Transport for Greater Manchester, that was developed in parallel with this CMSP work, has suggested that in order to accommodate growth along the line and simultaneously improve connectivity, the following interventions could be introduced: the local trains could be split into two portions, one from Liverpool to Birchwood and the other from Warrington West to Manchester Oxford Road. It also suggests that the retention of the existing semi-fast trains could generate a stronger economic case with better value for money.

This proposal could potentially deliver a number of benefits:

- Facilitate the operation of more reliable services by introducing a service pattern which offers greater flexibility;
- Improve connectivity to and from all intermediate stations which would avoid the operation of skip/stop services;
- Introduce alternative rolling stock with the capability of delivering faster journey times, with the incremental revenue and economic benefits making a substantial contribution to the stronger economic appraisal.

Next steps

Consultation with the North West Industry Planning Advisory Group led to a recommendation to consider this alternative option in more detail. Further feasibility work will enable these proposals to be refined and the potential benefits assessed in more detail.

This more detailed analysis will also need to be informed by considering the following:

- capacity issues at Liverpool Lime Street and the overlap with the Merseyrail services in the Hunts Cross area;
- possible service changes affecting the Castlefield corridor that will affect the approach to Manchester Oxford Road.

Whilst this Merseytravel / Warrington / TfGM study could deliver a package of short to medium term interventions that would help aliviate some current issues along the line, other interventions will still be required to support longer term forecast growth and address connectivity shortfalls. The alternative proposal wouldn't deliver any additional capacity into Liverpool or Manchester, and continued passenger growth will reinforce the requirement for additional interventions, even if rolling stock is introduced with

higher capacities. Furthermore, the frequency at each end of the CLC corridor falls below the frequencies on the Merseyrail or Manchester Metrolink networks.

In response to these shortfalls, the feasibility of other interventions should be considered. For example, the longer term interventions could comprise extensions of the Merseyrail network beyond Hunts Cross towards Warrington at the western end, or the introduction of Metrolink style services at the eastern end approaching Manchester. Further work is required to assess the technical feasibility of these proposals, and to determine the affordability and value for money case of the proposals.

Final commentary

In short, this Study recommends therefore the progression of the report prepared by AECOM, and the pursuit of their recommended interventions required to drive connectivity along the CLC Corridor, by producing a Strategic Outline Business Case (SOBC) . There is also a recommendation to include further investigation into potential interventions that seek to address future capacity issues along the rail corridor

Network Rail
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London NW1 2DN

13. Great British Railways The Williams-Shapps Plan for Rail

Department for Transport

Williams Rail Review

Great British Railways

The Williams-Shapps Plan for Rail

CP 423

Cover image: Chester station.

This publication is the first to use the new typeface, Rail Alphabet 2. This is a continuation and evolution of Margaret Calvert and Jock Kinneir's original Rail Alphabet typeface, which was employed across the rail network from the mid-1960s.

Margaret Calvert has collaborated with designer Henrik Kubel to develop Rail Alphabet 2. It retains the overall proportions of the original but the letters are sharper and slightly more compact for maximum legibility.

Great British Railways will introduce Rail Alphabet 2 across the rail network, replacing the many different fonts used on railway signage.

Rail Alphabet 2 is used for the headings throughout this document.

Photo acknowledgment

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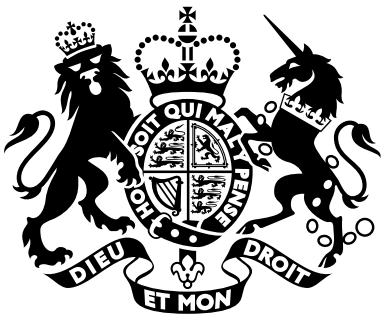

Great British Railways
The Williams-Shapps Plan for Rail

Presented to Parliament
by the Secretary of State for Transport
by Command of Her Majesty

May 2021

CP 423

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Foreword

The Rt Hon Grant Shapps MP
Secretary of State for Transport

Keith Williams
Chair, Williams Rail Review

We want our trains to run on time. This is our plan to do that, and to deliver a wider change on our railways that has never been needed more. The chaotic timetable changes three years ago showed all too clearly that the old ways were not working. Then in March 2020, this Review conceived after those problems and the failure of the East Coast franchise, found itself dealing with something far bigger: the almost total collapse of passenger demand initially, and a profound challenge to the sector's operating model as a consequence of the COVID-19 pandemic.[1]

Before the pandemic, commuters made up 47% of all rail passengers, a further 10% were travelling for business meetings and 5% were shopping.[2] In other words, around two thirds of passengers were using the railways for purposes that now face potentially permanent change.

Much of the old demand will return. Millions of us, imprisoned in front of flickering screens, yearn for human contact. Employers and businesses know that creativity, collaboration, and deal-making are best done in person. Rail freight was heavily impacted at first but has recovered rapidly, demonstrating its agility.[3] But commuting and business travel may never be quite the same again.

This government profoundly believes in the future of the railways. Without them, our cities could not function, critical freight connections would be cut off, carbon emissions and pollution would rise, and mobility would fall – not just for the millions of people without cars, but for drivers too, as the roads became clogged. We have proved our commitment: the amount we have paid to keep services going during the pandemic is now around £12 billion.[4] We have proved it by pressing ahead with High Speed 2 (HS2), improvements across the north of England, the new Oxford-Cambridge line and our programme of reversing the Beeching closures. This white paper makes further commitments, including a modern, improved experience for

both freight customers and passengers and zero carbon trains. We are growing the network, not shrinking it.

But the current sums being paid to operate and maintain the railways are not sustainable. To truly secure rail's future, there must be radical change. The railways lack a guiding focus on customers, coherent leadership and strategic direction. They are too fragmented, too complicated, and too expensive to run. Innovation is difficult. Incentives are often perverse. Some working practices have not changed in decades. There must be single-minded efforts to get passengers back. In short, we need somebody in charge.

That is why we now propose the biggest change to the railways in 25 years, ending the fragmentation of the past and bringing the network under single national leadership. A new public body, Great British Railways, will own the infrastructure, receive the fare revenue, run and plan the network and set most fares and timetables. Network Rail, the current infrastructure owner, will be absorbed into this new organisation, as will many functions from the Rail Delivery Group and Department for Transport.

There will be a new brand and identity for the whole system, built upon the double arrow, with national and regional sub-identities. Great British Railways will simplify the current confusing mass of tickets, standardising mobile and online ticketing, and bringing an end to the need to queue for paper tickets. Affordable 'turn up and go' fares and capped season tickets will continue to be protected. New products, such as flexible season tickets aimed at those commuting for two or three days a week, will be introduced to reflect new working and travel patterns. Trains will be better co-ordinated with other forms of transport, such as buses and bikes.

Private sector innovation has helped deliver the spectacular growth the railways have seen in the last quarter-century; it is essential that we keep the best of this and encourage more, particularly in IT, data and modern payments. In most cases Great British Railways will contract with private companies to operate trains to the timetable and fares it specifies, in a way similar to that used by Transport for London (TfL) on its successful Overground and bus networks. Operators will compete for the contracts, and we expect competition to be far greater than for the old franchises, with simpler procurement, lower costs and no one-size-fits-all approach. Freight and open access operators will be supported by national co-ordination and new safeguards.

Franchising will be replaced by Passenger Service Contracts, a new approach that will include strong incentives for operators to run safe, high-quality, punctual services, manage costs, attract more passengers and innovate. Where and when it represents value for money and is financially sustainable, operators will have more commercial freedom, particularly on long-distance routes.

Great British Railways, too, must be a new organisation, with a new culture and customer focus, definitely not just a bigger version of Network Rail. Just as with operators, it will be incentivised to improve customer service, maintain a safe network and attract new passengers. It will have a completely new role, with specific responsibilities to its passenger and freight customers and a clear remit to reform the can't-do culture and inflated costs that exist across the sector. The new body will recruit more broadly than before – including people with experience in sectors with a strong focus on customers. Great British Railways will be accountable to Ministers in a similar way that TfL is to the Mayor of London.

Great British Railways will secure significant efficiencies. Today's railways are a maze of agreements between hundreds of different parties, drawn up and policed by battalions of lawyers and consultants, including an entire staff dedicated to arguing about who is at fault for each delayed train. Change is slow and comes by painstaking negotiation. In the new world, that cannot work. Under single national leadership, our railways will be more agile: able to react quicker, spot opportunities, make common-sense choices, and use the kind of operational flexibilities normal in most organisations, but difficult or impossible in the current contractual spider's web.

A simpler, more integrated structure will cut duplication, increase Great British Railways' purchasing power and economies of scale, and make it easier and cheaper to plan maintenance, renewals and upgrades. These and other efficiencies will take time to bear fruit, but after five years it is expected that they could be saving around £1.5 billion a year, equivalent to 15% of the network's pre-pandemic fares income.[5]

Great British Railways will be better able to respond quickly to changing demand and lead the railways through the challenges of the post-pandemic world. It seems likely, for instance, that the old pre-9am peaks in demand around our biggest cities will flatten or spread more through the day; and that leisure travel will increase as a share of the whole. Less frequent but longer commutes may become more common. That may mean different service patterns, and changing train interiors to focus on comfort rather than capacity.

It will definitely mean a new focus on the escalations in cost, gold-plating and over-specification that have occurred since privatisation. And it will definitely need a change of mindset from everybody at all levels, from Ministers, unions and regulators to traincrew and managers. Under this model, the sector will provide fulfilling, high-skilled, flexible and modern career opportunities that attract and support the brightest and the best to flourish, so that the railways' people also benefit from this new golden era for the railways.

As the Review has been undertaken collaboratively, it has been possible to move quickly to change policy even whilst its work progressed. We have started some of the structural changes already. In September 2020, we called time on franchising. Our Emergency Recovery Measures Agreements, made to support the network in the pandemic, include new obligations to co-operate. Everyone across the whole sector will need to work together to help our railways win back passengers, attract new freight customers and maintain their custom going forward.

In 1825, this country invented something that spread its iron web across the earth and transformed everywhere it touched. It was, of course, the railway. By the time we celebrate the bicentenary, four years from now, we want this plan to have secured our magnificent network for decades more.

The Rt Hon Grant Shapps MP
Secretary of State for Transport

Keith Williams
Chair, Williams Rail Review

Personal postscript from Keith Williams

I have been ably supported by a panel of six independent experts who have brought invaluable challenge and critical support across a range of topics. Dick Fearn, Tom Harris, Margaret Llewelyn, Roger Marsh, Dr Alice Maynard and Tony Poulter have given freely of their time, advice and wisdom. Our work has also benefited from extensive support and advice from leaders and experts across the sector and beyond, including Declan Collier, Chair of the Office of Rail and Road; Sir Peter Hendy, Chair of Network Rail; and Steve Montgomery, Chair of the Rail Delivery Group.

My thanks are also due to the team at the Department for Transport who have supported me, not least Bernadette Kelly who has let my work run its course and been open to its findings.

Our promise to passengers and freight customers

We will bring the railways back together, delivering more punctual and reliable services

A new public body, Great British Railways, will run and plan the rail network, own the infrastructure, and receive the fare revenue. It will procure passenger services and set most fares and timetables. This will bring the whole system under single, national leadership with a new brand and identity, built upon the famous double arrow. This will mark the end of a quarter century of fragmentation.

We will make the railways easier to use

We will simplify the confusing mass of tickets, introducing far more convenient ways to pay using a contactless bank card, mobile or online. We will end the uncertainty about whether you are travelling with the right train company. Trains will be better planned with each other and with other transport services, such as buses and bikes. Affordable 'turn up and go' fares and capped season tickets will continue to be protected.

We will rebuild public transport use after the pandemic

In line with the COVID-19 roadmap, we will continue to work closely with the sector on measures to enable people to have confidence to travel again and to support their new working patterns. New flexible season tickets will be introduced to begin this journey.

We will maintain safe, secure railways for all

The safety and security of passengers, staff, partners and members of the public is critical. Great Britain has one of the safest networks in Europe and that must continue. Current safety and security roles will remain in place across the rail network.

We will keep the best elements of the private sector that have helped to drive growth

Great British Railways will contract with private partners to operate trains to the timetable and fares it sets, in a similar way to London's successful Overground service. The contracts will include strong incentives for operators to run high-quality services and increase passenger demand. Contracts will not be one size fits all, so as demand recovers, operators on long-distance routes will have more commercial freedom to help attract new passengers in partnership with Great British Railways. Freight is already a nimble, largely private sector market and will remain so. It will benefit from national co-ordination, new safeguards and a rules-based access system that will help it to grow and thrive.

We will make the railways more efficient

Simpler structures and clear leadership will make decision making easier and more transparent, reduce costs and make it cheaper to invest in modern ways to pay, upgrade the network and deliver new lines. The adversarial blame culture will end, and everyone across the sector, including train operators, will be incentivised to work towards common goals, not least managing costs. The value generated will be shared with the customers of the railways and the taxpayers who invest billions each year.

We want to grow, not shrink, the network

We are investing tens of billions of pounds in new lines, trains, services and electrification. At a time of deep challenge for public transport, increasing flexibility and productivity will secure the future of the railways and the jobs of those who work on it right across Great Britain.

Chapter One
The railways since privatisation

In many ways, Britain's railways improved dramatically under privatisation. On the eve of the pandemic, the railways ran over 21,000 services on an average day – a third more than before privatisation.[6] Government investment has quadrupled since privatisation and recent years have seen around £1 billion a year invested by the private sector.[7] Public funding, with five-year capital settlements, is more certain and predictable than the stop-start regime imposed on British Rail.

The assumption of a network in inevitable decline has ended: instead there are thousands of new, cleaner train carriages, improvements to stations and the opening of dozens of new ones, and increasing electrification to make services greener and quieter. In 2019, rail travel achieved its highest share of all miles travelled in Great Britain since 1967.[8]

On the eve of the pandemic, passenger numbers had more than doubled since privatisation, a greater rise than road use in Britain and a far greater rise than in most comparable countries over the same period.[9] Great Britain had one of the most intensively used networks in Europe: on average, a mile of track in Britain carried twice as much traffic as in France.[10] Crucially, our railways are also among the safest in Europe.[11]

Rail freight has also been transformed, with diversification from coal and steel enabling the private freight market to flourish as the UK's energy mix began to change. Rail freight has shown the value of having a dynamic, innovative and customer-driven business model and now acts as a key supply line to national priorities such as construction and supply of food and medicines.

These are significant successes, for which the privatised railways do not get enough credit. The government is committed to maintaining a major role for private business and capital in supporting Britain's railways in the future. We should not romanticise the nationalised era.

But unlike most privatisations, that of the railways has never become publicly accepted, because its failings have remained all too obvious. Breaking British Rail into dozens of pieces was meant to foster competition between them and, together with the involvement of the private sector, was supposed to bring greater efficiency and innovation. Little of this has happened. Instead, the fragmentation of the network has made it more confusing for passengers, and more difficult and expensive to perform the essentially collaborative task of running trains on time.

While successive governments have sought to balance the cost of the railways between taxpayers and farepayers, government funding still made up nearly a third of the industry's income in 2019/20 and fares have risen by 48% since 1997 in real terms.[12] The model put in place at privatisation has not done enough to deliver a more cost-efficient sector and many costs have consistently risen faster than inflation, with taxpayers and customers having to foot the bill.[13]

A lack of innovation and incentive to modernise is partly responsible for this. Whilst London's Oyster and contactless schemes demonstrated many years ago how a better passenger experience and cost efficiency can come together, more than half of all national rail journeys in Britain still used paper tickets before the pandemic.[14] Working practices have remained largely unchanged for decades. Efforts to modernise them while protecting staff and passenger safety, such as the introduction of driver-controlled trains, have led to major strikes in recent years that have crippled services for passengers across the network.

Before the pandemic, performance was disappointing and passengers' biggest priority for improvement was punctuality.[15] Around half of trains in northern England and a third of trains nationally were late in 2019/20.[16] This has barely improved in the past five years.[17]

Private bad, public good?

Yet to see nationalisation as a cure-all is to overlook the major role the public sector has already played in the railways for years – without, so far, solving many of the problems. Even before the pandemic, local services across northern England and long-distance services on the East Coast were in public ownership. Many aspects of the whole network were minutely specified and controlled by the Department for Transport. And under Network Rail, all infrastructure including stations, tracks and signals has effectively been in public hands since 2002 and formally so since 2014.[18] Most passenger and some freight services were subsidised by taxpayers to make them viable even before the pandemic.[19]

Failings at Network Rail were central to the collapse of the timetable in 2018 which originally triggered this Review.[20] Despite reform, its costs also remain too high. Evidence of the consequences can be seen every day on the network and experienced by passengers and communities: Oxford, Sheffield and Swansea are still waiting for the electric train service promised over a decade ago and after electrification projects were delayed and scaled back in part due to costs spiralling from £800 million to £2.8 billion on Great Western's electrification programme.[21] Overspecification, gold-plating and disconnected decision making and funding inhibited improvements for passengers and pushed up costs across the sector, which were ultimately reflected in rising fares and taxpayer subsidy.

The system that worked to re-energise the railways in the 1990s now struggles to ensure that the railways deliver for the public. The sector's structures do not work: people working in the rail industry are disempowered, and central government should not be so closely involved in operational decisions. Complex and adversarial relationships between operators, suppliers, Network Rail and government do not meet the needs of passengers, freight customers or taxpayers. Past attempts at change led by both successive governments and the rail industry have been numerous but piecemeal. All share responsibility for the impact this has had on passengers over recent years.

Simplification is more important than nationalisation

What needs to change, in short, is not the ownership of the railways, but their complexity. The sector today is too complicated, too confusing for passengers, too expensive to run and improve, too difficult to lead, and too hard to reform.

The rail sector consists of dozens of organisations, each with silos and individual priorities that do not always work together. A plethora of passenger, freight and open access operators, rolling-stock leasing companies, regulators, passenger watchdogs, a police force, a co-ordination and trade body, the Department for Transport and devolved counterparts and the infrastructure owner, Network Rail, all have to work together. That is before adding in the extensive supply chain, and companies contracted by those above who in turn subcontract.

Overcomplication appears built into many aspects of the rail network. There are around 75 different types of train in passenger service on today's network, imposing greater costs in maintenance, regulation and crew training.[22] No commercial airline would have that many types of aircraft; no bus, coach or lorry company that many types of vehicle.

Yet the mere number of different players in the sector is not, in itself, the greatest problem but a symptom and a cause.

There will remain a variety of bodies under any reform, including this one. The problem is that, at present, these organisations have different motives, interests and incentives that do not always align with each other or with the interests of the passengers, freight customers and communities whom the railways are supposed to serve, and there is no 'guiding mind' to bring it all together and provide direction.

The blame culture

No leader or organisation at local, regional or national levels has responsibility and accountability for making the whole system work. Today's system does not always encourage the different parts of the sector to work together, nor reward them for doing the right thing or incentivise them to act in the overall interest, rather than a narrow agenda. Instead, co-ordination is governed by a costly, inflexible spider's web of often adversarial relationships, penalties and disconnected incentives.

Network Rail and the train companies employ, for instance, almost 400 full-time staff, known as "train delay attributors", to argue with each other about whose fault a delay is.[23] Whilst this plays an important role in measuring performance across track and train, it is symptomatic of a misaligned focus on blame, rather than solutions. Around 40% of delays are disputed, representing significant sums of money, and as a result are debated over through an extensive escalation process, 199-page principles and rules document and an adjudication process overseen by an independently-chaired panel.[24] Previous adjudications include, among other things, who was responsible for a train being so crowded that a passenger fainted, causing delays while they were taken off; and whether a pheasant is a small bird (in which case, according to the principles at the time, the train operator was to blame for a delay caused by hitting one) or a large bird (Network Rail's problem).

Delay attribution is one small part of a panoply of rules, procedures, codes, and dispute resolution mechanisms which have proved poor substitutes for the co-operation, trust and common sense found in other sectors working to a shared purpose. Franchise agreements typically covered around 1000 pages; the Key Train Requirements document runs to 185 pages, yet some new seats are seen by passengers as uncomfortable and unsuited to long journeys. The Ticketing and Settlement Agreement comes in at 922 pages, so it is no wonder that passengers find ticket pricing so confusing.[25] There need to be robust, proportionate systems that deliver for passengers and freight customers. As noted by the recent Delay Attribution Review, understanding the causes of late running is necessary and useful, but it would also 'be much better if resources were focused on solutions to reduce delays'.[26] The railways have been successful despite this complex system and culture, not because of it.

Figure 1[27] (page 16) — The railways in Great Britain need fundamental change.

The railways in Great Britain

Economy

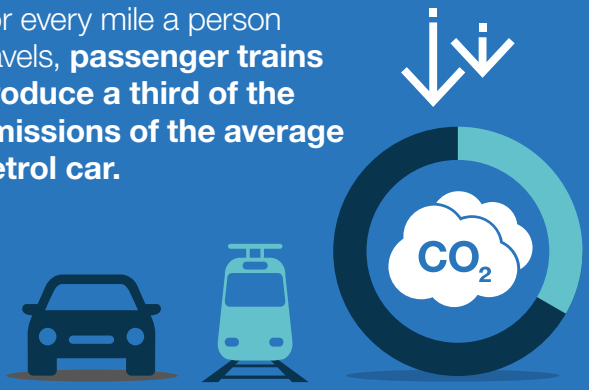
Rail helps to boost **productivity and growth**, opens up **job opportunities** and directly **employs over 240,000 people**.

Society

Rail **connects communities** across the country, **fosters placemaking** and acts as **a catalyst for regeneration** across our towns and cities.

Environment

For every mile a person travels, **passenger trains produce a third of the emissions of the average petrol car.**



Safety

Rail is the **safest mode of transport**, and the UK has **one of the safest railway networks** in Europe.

Funding

The government has **invested over**

+£150bn

in the railways **since the mid-1990s.**

Rail makes up **more than**

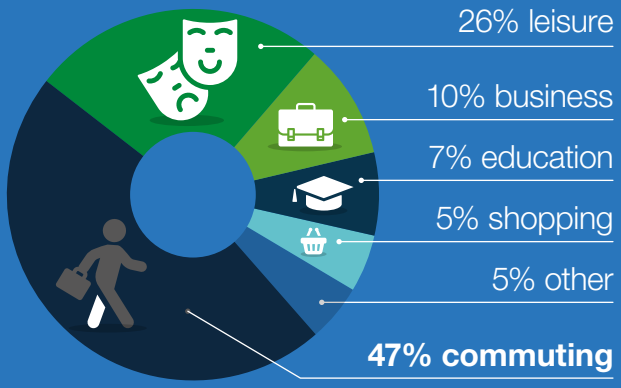
50% of all

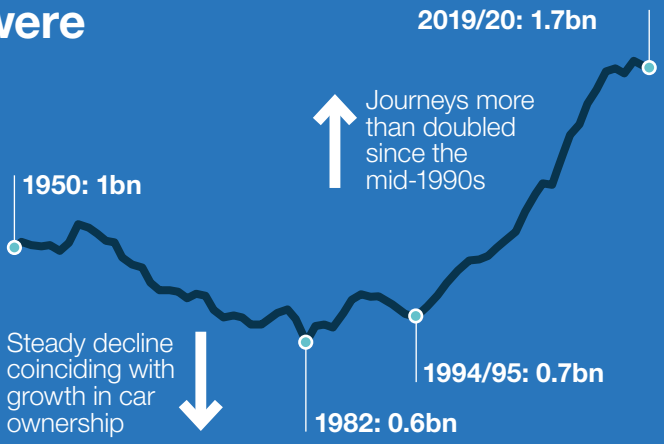
public **spending on transport**.

The railways need fundamental change

Before COVID-19, the railways were the busiest they have ever been

They must adapt to new journey patterns as we build back better.





Nearly **60% of adults travelled by train** in 2019.

Passenger experience

The customer experience can be **stressful, inconvenient and unsatisfactory** at various points throughout a journey.

Passengers find **pricing confusing** and **fewer than half of journeys offer value for money**.

At stations, some passengers find it **difficult to get around** or a **lack of comfortable waiting spaces**. Two thirds of **disabled passengers report at least one problem** when travelling by rail.

Service **punctuality and reliability is the number one priority** for improvement amongst passengers.
1 in 3 trains were late in 2019–20.

Experience on board trains is inconsistent, from toilets and disabled access, to wifi and sockets.

Communication to passengers before, during and after journeys is **often unclear and can cause anxiety**.

Stations

The **100 busiest stations catered for half of all passenger journeys** in 2019–20.

Great Britain has **over 2500 stations**.

Workforce

87% of the workforce is **male**. Around **30%** of the workforce are **over the age of 51**.

Freight

The **rail freight market has transformed** from carrying coal to carrying construction and container goods. However, almost **9 times as much** freight is **moved by road**.

It is clear that the railways have not been run in the interest of passengers, nor set up in a way that brings the sector and its people together to serve society, deliver a public good and generate social, economic and environmental benefits for the nation.

A structure that has had its day

Even before the pandemic, it was clear that this system was no longer viable. Such competition as there was had diminished, and UK companies were increasingly reluctant to even bid for franchises. Two franchises failed and were taken over by the government's operator of last resort, whilst others were heading the same way. Other franchise competitions were delayed or never progressed, and direct awards made instead. Since 2012, around two-thirds of contracts have been awarded without competition.[28]

The government originally appointed Keith Williams to conduct a root-and-branch review of the railways after a chaotic timetable change in May 2018 which exposed the system's lack of leadership and co-ordination. Services across the north and south east of England were disrupted for many weeks after the late delivery of infrastructure improvements by Network Rail, miscalculations by both it and operators in preparing timetable changes, and a failure of accountability and oversight throughout the process, led to a collapse in the national timetable. The Office of Rail and Road's (ORR) independent inquiry that followed this found that the crisis was foreseeable but that complex accountabilities and weak oversight meant decisions by different parts of the system lacked due regard for the effects on the network as a whole; and that no-one took charge, either to prevent the timetable collapse or to mitigate its effects on passengers once it happened.[29] As with the Great Western electrification, multi-billion-pound, taxpayer-funded investments and upgrades that should have been, and will in the long term be, a boon turned into a fiasco, with lasting impacts on passenger confidence and public trust in the areas affected.

The Williams Rail Review found that too often, the railways are not getting the basics right, starting with running the trains on time, making it easy to buy a ticket and making rail more accessible and inclusive for all who want to travel. Passengers and freight customers told Keith Williams loud and clear: enough is enough. They felt that day in, day out, trains were late, overcrowded and journeys were stressful.[30] A revolution was clearly needed.

The Williams Rail Review identified **six key problems**:

- The rail sector too often loses sight of its customers, both passengers and freight;
- It is missing opportunities to meet the needs of the communities it serves;
- It is fragmented, and accountabilities are not always clear;
- The sector lacks clear strategic direction;
- It needs to become more productive and tackle long-term costs;
- It struggles to innovate and adapt.

An existential challenge

The Review was largely completed by early 2020 and was then extended in close partnership with the Secretary of State for Transport, the Rt Hon Grant Shapps MP, to ensure that its conclusions were still appropriate in the light of the ongoing pandemic. The COVID-19 pandemic presented an existential challenge to the railways. Almost overnight, passenger numbers fell to levels last seen in the 1850s, reaching just 4% of previous demand in April 2020.[31]

Demand estimates published at the time of writing, in May 2021, averaged around 65% below pre-pandemic levels.[32] In future, many passengers will return. But the sector faces deep structural challenges in its key passenger markets. Before the pandemic, commuters comprised nearly half of journeys: these patterns will inevitably change.[33]

The government acted quickly to provide unprecedented support under Emergency Measures Agreements at a cost to date of more than £12 billion, to keep services running for key workers, and took the significant step of assuming greater direct control of services.[34] Support was also provided to help keep critical goods flowing across the country. Investment in upgrades and new lines has been maintained and will continue, in addition to the revenue support provided.

The government will not cut off emergency funding overnight. But it is not possible to continue paying revenue support indefinitely on the present scale, around four times the amount provided before the pandemic.[35] What that means for the railways is that change, leadership, better passenger service and greater efficiency have now become not merely desirable, but essential. Indeed, existential. Unless there is major change, the risk is that the last quarter-century of growth and optimism will end, and rail will return to the days of a thousand cuts and decline.

The pandemic has forced everyone in the sector to confront the reality of the railways' problems and made it impossible to delay or shrink from reform. It has given the government the opportunity to accelerate the changes that Keith Williams identified. Emergency Recovery Measures Agreements, now in place across most of the government's franchises and the National Rail Contracts that will follow, are significant steps towards the new contracts that the government intends to adopt.

During the pandemic, the rail sector:

- Introduced new, express freight services bringing essential food and medical supplies from Spain for UK supermarkets.
- Overhauled the timetable in **just 3 weeks** to prioritise services for key workers and freight. It usually takes 9 months.
- **Intensified cleaning** and improved standards on trains and at stations.
- Introduced **immediate supplier payment** and **rent relief** to help UK businesses during lockdown.
- Adopted graffiti-cleaning kit that is **6 times faster** to make the railway cleaner for local communities.

Through its emergency response to the pandemic, the rail sector has shown it can innovate and collaborate when contractual barriers are swept away and opportunities to work together more effectively can be grasped. Rail staff have worked hard to support other key workers, keep essential supplies moving and support British businesses. This demonstrates what the sector can achieve when there is a clear common purpose; this is the mindset that now needs to become the norm.

The pages that follow set out 62 commitments that will bring the sector together to deliver 10 key outcomes (see Figure 2). These form a common goal: to secure the future of the network and everyone who uses it or works on it.

Urgent and radical change is needed to help the railways become more customer focused and financially sustainable, working in the national interest as a public service

Image (page 21) – Passengers at London Waterloo during the coronavirus pandemic.

Figure 2 (page 22) — How the railways will change for the better


Please keep your distance
Please keep your distance

How the railways will change for the better

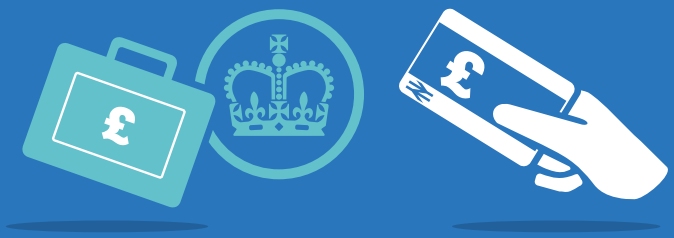
Keith Williams and the government have a shared vision for Great Britain's railways that can be summarised in 10 outcomes.

1. Modern passenger experience

Passengers must receive high-quality, consistent services day in, day out. This means accessible, reliable journeys that are well connected with other transport services and include new customer offers at stations and on trains.

2. Retail revolution

A new customer offer will be driven by clearer, easy-to-understand information, simpler travel with contactless and cashless payment and clearer prices. Compensation will be simpler to claim and journeys will become easier across transport services.



3. New way of working with the private sector

Passenger Service Contracts will replace franchising, bringing a new focus on reliability, performance and efficiency. New opportunities for innovators, suppliers (including small and local partners) and funders will be created through streamlined contracts and more contestability.

4. Economic recovery and financially sustainable railways

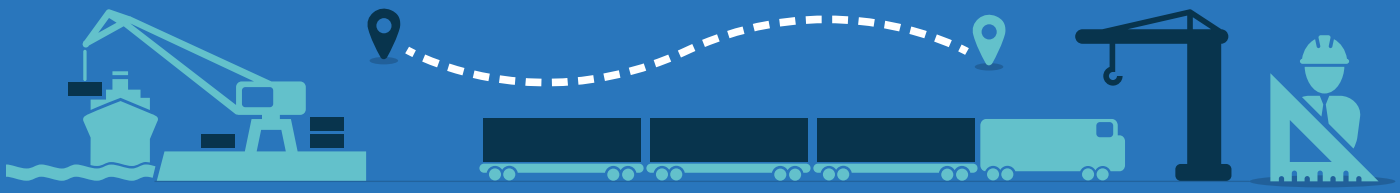
The railways are a public service, paid for by taxpayers and passengers to connect places and foster economic growth through levelling up across our towns, cities and regions. Bringing together responsibility for cost and revenue across the system will ensure the railways become more financially sustainable.

5. Greater control for local people and places

Railways will be more responsive to the needs of local communities and customers, whether from Woking, Wrexham or Wick. Empowered, locally-led teams will support levelling up and be accountable to the people and places they serve.

6. Cleaner, greener railways

Britain's railways can and will spearhead the nation's ambition to become a world leader in clean, green transport. Decarbonisation, greater biodiversity and improvements in air quality in towns and cities will ensure rail is the backbone of a cleaner, greener public transport network.



7. New offer for freight

The pandemic has highlighted the importance of freight to our country and economy. National co-ordination, greater opportunities for growth and strong safeguards will put rail freight on the front foot.

8. Increased speed of delivery and efficient enhancements

Restoring lost rail links and accelerating the delivery of critical upgrades to the network will help level up places across the country, spark new economic growth and improve public transport connectivity and prosperity across our nations and regions.

9. Skilled, innovative workforce

Enhancing skills, leadership and diversity across the sector will create new opportunities for the hundreds of thousands of people working on our railways. High-value jobs for the future will be created and make the most of data and technology to better support customers.

10. Simpler industry structure

Track and train will come together in a 'guiding mind' for the system, Great British Railways. It will be made up of regional railways that are locally rooted and accountable, with new culture and incentives focused on serving customers. A 30-year strategy will enable the sector to modernise efficiently.

Chapter Two
Our commitment to rail

Why railways matter

The pandemic has caused a significant shift away from public transport, from commuting to home working. Road traffic is almost back to pre-pandemic levels.[36] Some might say that means our railways matter less. In fact, it means the opposite.

The road network in many places already operated at or close to capacity before the pandemic. When full economic life returns, there is a risk that any permanent shift towards the car will cause greater congestion, holding back the economic recovery. This applies especially to cities, the engines of the British economy, and most of all to London, the most productive city in the country. It and many other places cannot function without effective rail services. And across the country, the capacity the railways provide is important to the transport system as a whole.

Our railways will play a crucial role as we build back better. They are already a clean, green transport system for the country. They can support more flexible ways of working, not inhibit them. They will continue to be a catalyst for job creation, investment and prosperity by connecting our towns and cities into regional powerhouses, as well as supporting tourism and links to rural communities. The stages on the government's roadmap to Net Zero carbon emissions, and its commitments on air pollution, cannot be met without transport playing its part.

To fulfil their potential, the railways must become much better at meeting the needs of passengers and freight customers, and they must do so now. The renaissance of rail in this country has only just begun.

Our investment in the future of rail

Some have argued future major transport investment programmes should be paused. The Government agrees with the National Infrastructure Commission that this would be short sighted.[37] The government's £12 billion emergency revenue support to date is a clear sign of our belief in the future of rail.[38] A major investment in its future was also confirmed during the pandemic: in April 2020, contracts were signed to build the first stages of HS2. Construction started in September.

In January 2021, we announced £800 million of funding for two schemes to reopen lines closed to passengers under the Beeching Report: the second phase of the Oxford-Cambridge route, between Bicester and Milton Keynes, and the Northumberland Line, between Newcastle, Blyth and Ashington.[39] In March 2021, we announced that the first Beeching reopening scheme, funded through our Restoring Your Railway initiative: the £40 million project to restore links to Okehampton in Devon, will reopen to passengers in autumn 2021.[40] In the Midlands, too, major change is coming: new lines and stations are being opened in Birmingham, £200 million has been invested in upgrades around Derby and seed funding has been provided for the Midlands Rail Hub project to transform services in the wider region. In northern England, Manchester's railways are being unblocked, hundreds of new, greener and more accessible trains are being introduced and major upgrades across the Pennines have begun.[41]

The government is committed to supporting public transport and connectivity across the whole of the UK. Its ongoing Union Connectivity Review, led by Sir Peter Hendy, is continuing to assess transport connections and networks in and between the four nations.[42] Investment in rail is improving the capacity and capability of the network for rail freight, including through improved connections to key ports and interchanges. The UK government is also supporting extensive rail improvements across Great Britain now, with new direct services from Motherwell and Middlesbrough to London, millions of pounds of funding to improve accessibility at stations including at Cardiff Central, and funding to advance plans to upgrade the current signalling to state-of-the-art digital signalling from Shrewsbury to Aberystwyth and Pwllheli.[43]

This is just the beginning: the government will shortly be announcing further major projects in the Midlands and North, including in our Integrated Rail Plan, electrification schemes and further Beeching reopening projects.

Geographic scope of this white paper

This white paper and the Williams Rail Review have focused on railways within Great Britain, as transport is a devolved area in Northern Ireland. The devolved authorities in Scotland and Wales have a range of devolved powers in relation to rail which they will continue to exercise, as will TfL and other metropolitan authorities, in relation to rail and light rail in their areas. As now, they and Great British Railways will need to work together to deliver a co-ordinated network across Great Britain.

£40 billion to renew and upgrade the railways

Even as the pandemic deepened, the Spending Review in November 2020 committed over £40 billion for rail capital projects over the next four years, including £22.8 billion for HS2 to 2025 and a further £17.5 billion in capital funding for renewals, upgrades and enhancements of the existing network up to 2024.[44] These sums will be maintained, and the government will continue to provide five-year funding settlements for rail infrastructure during and following the implementation of the reforms set out in this white paper.

The next five-year infrastructure settlement will form part of ORR's Periodic Review 2023 process, which will be an important opportunity to support and enable reform and investment in the railways over the period 2024-2029. In the future, Great British Railways will develop five-year business plans across both services and infrastructure to inform government funding decisions.

Investment will be prioritised in areas that have seen less spending in the past, to level up the whole country

Historically, the largest share of rail investment has gone to South East England, a reflection largely of the geography of rail usage. London and the South East will benefit significantly in the next few years as the fruits of government investments in Crossrail, new train fleets and Thameslink upgrades come on stream. Often quoted regional figures for rail investment per capita look markedly different when given as investment per rail journey in each region, as investment has traditionally been focused in areas with higher numbers of passengers, while operational subsidies have tended to be significantly higher elsewhere.[45] This has, in part, created a virtuous cycle of growth and investment in the South East that the government now intends to share across the whole country.

The government's priority for the future is to level up rail services and other public transport services in rest of the country to the high standards already set in the capital. Capital investment is already being focused on other regions across the country, with all but one of the major rail projects in the coming years outside the South East.

Revenue support for the railways will continue, but additional emergency support will not remain indefinitely

In recognition of the railways' role as a public service, the government also provided between £3 billion and £7 billion per year in revenue support across the sector before the pandemic, supporting loss-making routes and encouraging freight off the roads and on to the railways.[46] The level of government subsidy has significantly increased as a result of the government's emergency support for rail during the pandemic. Emergency support for rail will not be cut off overnight, but the long-term future of the railways will, of course, require them to recover, further grow passenger numbers and become more efficient.

Great British Railways' regular five-year business plans will inform government decisions about rail's five-year infrastructure funding settlement and the level of operational subsidy. These business plans will develop 'in-life' to reflect multi-year operational budgets set through the government's Spending Reviews, whilst preserving the five-year infrastructure settlement. The clear planning horizon provided by these regular five-year business plans, and any changes to them, will give more certainty and stability than ever before.

Short-term action to help passengers back

As the pandemic eases and the country continues to move through the roadmap, the government is determined to work with the sector to help passengers back on to public transport. This includes a major effort to develop rail's leisure market further and help to attract new passengers to the railways. In doing so, we can revive our high streets and city centres, reinforce growth in the leisure and tourism sectors, support people to work more flexibly and make journeys more affordable and environmentally sustainable.

In line with the Covid-19 roadmap, we will continue to work closely with the sector on measures to enable people to have confidence to travel by train again and to support their new working patterns. This includes requiring operators to introduce flexible season tickets across the rail network to make it easier for people to commute two or three days of the week.

Chapter Three
Integrating the railways

Passengers do not know who is in charge of the railways.[47] As the network has become increasingly busy and interdependent, fragmentation and a lack of accountability have held back the sector.

Opportunities to run the railways more efficiently and collaboratively have been missed. Short-term fixes by successive governments and the industry have failed to overcome the underlying challenges of misaligned incentives, siloed working and the absence of strategic planning that have over time served to increase the burden on taxpayers and farepayers.

Almost a decade ago the McNulty Review highlighted the lack of whole-system thinking and adversarial relationships as key reasons for high costs, poor value and inefficiency in the rail sector.[48] As the rail sector looks to rebuild after the pandemic, the need to get costs back under control across the system and to respond more effectively to the changing needs of local communities, passengers and freight customers is even more urgent than before.

The way in which the sector operates needs to be fundamentally overhauled because it is no longer working in the interests of passengers, taxpayers and freight customers. The government is determined to confront the sector's inability to resolve cross-cutting issues by setting it up to more effectively make and deliver long-term, strategic decisions that take a view across the whole system. During the pandemic the sector came together, ultimately with central government stepping in to try to direct the system. But central government was never intended, nor best placed, to oversee the railways in this way.

Integrating the railways will bring together the 62 commitments set out across this white paper while also creating a leadership team that is fully accountable for delivering them. This requires far more than just a new name: it means joining up the system, improving accountability and fully capitalising upon the skills and capability of both the public and private sectors. Integration will be driven locally, not from the top: rooting the railways in the places they serve rather than pushing decisions up to Whitehall will empower people, create locally responsive railways and help to level up. Work has begun in earnest to make progress now and to unleash the full potential of the railways to become a modern, efficient public service.[49]

Image (page 29) — Network Rail and Southeastern colleagues together on a service to Kent.

Over £2bn
a year moves between
Network Rail and operators

9000
people volunteer
with community rail groups

Decisions on
tracks, trains, power and planning are all
disconnected

The railways will be integrated under the leadership of a new organisation, Great British Railways

1. A new public body, Great British Railways, will run the network in the public interest.

Great British Railways will bring together the whole system and perform a role for rail services similar to the one Transport for London has in the capital. It will own the railways across Great Britain and run them as an integrated system to common goals, set out in this white paper and in the future by Ministers.

Great British Railways will take over roles, responsibilities and people from organisations across the sector, including critical cross-industry functions currently exercised by the Rail Delivery Group (RDG) and, most rail functions delivered today by the Department for Transport, including procurement of passenger services. Network Rail, the current infrastructure owner, will be absorbed into Great British Railways. The new organisation will work closely with partners across the sector, including freight operators and suppliers, to help deliver a customer-focused rail system.

Existing devolved administrations and authorities across Great Britain will continue to exercise their current powers and to be democratically accountable for them.

Great British Railways will draw up timetables and set most fares. It will not operate most trains directly but will contract with private companies to operate them on its behalf under Passenger Service Contracts. Great British Railways will specify service levels and on most of the network will set fares and take the revenue risk. For more details about the new contracts, see Chapter Four.

Work to deliver improvements for passengers and bring in interim arrangements will start immediately. Alongside this, the government intends to introduce legislation to formally establish Great British Railways so that it can lead the sector in the public interest and work openly and transparently with local, devolved and commercial partners.

Great British Railways will:

- Deliver the government's priorities for rail
- Develop a 30-year strategy and 5-year business plans
- Manage the railway budget
- Be responsible for safe and efficient operations
- Be accountable for the passenger offer
- Own stations and infrastructure
- Plan access in the public interest
- Support the rail freight market and cross-regional services
- Empower its regional divisions and their local operational teams to make decisions

2. Great British Railways will be the single guiding mind and leader that the railways currently lack.

Great British Railways will be responsible, and held accountable, for meeting the punctuality, quality, efficiency, safety and other goals set out in this white paper and by Ministers. The whole-system, planning and operating functions needed to deliver a joined-up network will be directed by Great British Railways, working in partnership with devolved transport authorities where appropriate. There will be no excuse-making and blame-shifting. The cottage industry of costly commercial disputes over delay attribution will end.

Great British Railways will bring the railways' finances together in a single organisation across track, train and the rail estate. It will manage cost and revenue decisions for the network, with budgets pushed down to regional and even local levels, though as described below there will be more commercial freedom and autonomy for operators of long-distance services as passenger numbers recover.

These are significant changes. Uniting costs and revenue will enable Great British Railways to take a whole-system view, allowing it to make choices and decisions more effectively. It will enable the railways to be run as a public service with the financial discipline of a modern business. Great British Railways will be able to adapt more quickly, better equipping it to meet the challenges of the post-pandemic era and react to the changing needs of its passenger and freight customers. The costs of the railways will become more transparent and visible for government, taxpayers and investors.

3. Great British Railways will be given the means to think and plan for the longer term.

A key weakness of the nationalised railways – and another reason why we should not simply replicate the model – was its stop-start funding. British Rail was dependent on public funding, for which there were many competing claims. It was often denied medium and long-term financial certainty, meaning that it had to operate year-to-year and could not plan properly or deliver efficiently.

Short-term pressures to save relatively small sums forced British Rail into damaging decisions that were not in its or the country's long-term interest, and that later had to be reversed at far greater cost. In some ways this has continued, with fragmentation inhibiting the ability to set out long-term priorities and invest in affordable, necessary schemes without gold-plating or missing simpler, more efficient solutions.

Privatisation has given the railways much more certain and stable medium-term public funding, with successive five-year 'control period' settlements from the government for Network Rail. The government will at least maintain the current infrastructure settlement, which runs until 2024, and will provide subsequent five-year infrastructure funding deals from 2024 onwards — including for Great British Railways, once it is established. As set out in Chapter Two, the government will require Great British Railways to set out business plans over a five-year planning horizon in the future too, covering services and infrastructure, to inform its funding decisions. This will ensure that infrastructure and operational funding decisions are taken in a joined-up way and help to provide a stable planning framework. These business plans will develop 'in-life' to reflect multi-year operational budgets set through the government's Spending Reviews, whilst preserving the five-year infrastructure settlement.

The government is also determined to maintain and increase private involvement and private finance to supplement the money paid by the state – just as many other state-led organisations have, including national railways in other countries. For more on the role of the private sector in the new system, see Chapter Six.

4. There will be a national brand and identity to emphasise that the railways are one connected network.

The rail network should feel like a network, a coherent, consistent, clearly-branded operation that gives passengers confidence in using it. Most successful consumer businesses, including retailers and airlines, aim to create similar levels of consistency and brand identity.

Great British Railways will use updated versions of the classic 'double arrow' logo as well as the Rail Alphabet typeface, used in this document. Even after 25 years of privatisation, the logo remains the most widely-used and best-recognised symbol of the railways. It is the standard marker on road signs. It appears on most tickets, online, and at the vast majority of stations. It will stay in those places and increasingly appear on trains, uniforms and publicity material too as and when these are upgraded or replaced as a single, unifying brand for the railways. Keeping it also avoids spending money on yet another new railway logo.

People are understandably sceptical about the frequent rebranding of trains and stations carried out under the privatised system, so the branding will be introduced alongside other improvements. Variants to the national brand will be developed to reflect the English regions, Scotland and Wales, while emphasising that the railway is one network serving the whole of Great Britain.

5. Great British Railways will be a new organisation, not just a larger version of Network Rail.

Given Network Rail's status as the existing owner of the infrastructure, and as easily the largest single actor on the railway, its people will inevitably make up a substantial part of Great British Railways.

Network Rail has undergone significant leadership and structural change since the failures of the Great Western electrification programme and the 2018 timetable upgrade. It is making successful efforts to reform, to be more efficient, including to save £3.5 billion in the current five-year control period, and to focus on outcomes for passengers and taxpayers.[50] A major restructuring of Network Rail has been underway since 2018 to help it become more responsive to its passenger and freight customers.

Not all of the challenges facing Network Rail have been solved, and though it has greatly strengthened its operations function, the role it has historically been asked to undertake has led it to being an engineering-driven organisation with relatively little direct contact with passengers and freight customers. This culture grew directly out of the incentives set by the rail system and successive governments for the organisation. Network Rail has successfully started this journey of change, helping to deliver the government's vision for a rail network that always puts passengers and freight customers first. The major institutional changes in this white paper will create the opportunity for an entirely new culture in the sector, with the creation of Great British Railways at its heart.

The government will require that Great British Railways be a new organisation, not bound by the cultures or approaches of Network Rail or any other existing organisation in the sector. This is a real opportunity to bring greater diversity into the sector to enable it to better represent the communities it serves: further details on this are set out in Chapter Eight. Great British Railways will need to include meaningful numbers of people in middle and senior management roles with substantial experience outside Network Rail, including in some cases from outside the rail and transport industry altogether; and more people with retail and customer relationship experience.

Increasing numbers of Network Rail's managers do have this experience and many other staff across it and other organisations, such as RDG, have indispensable skills that will be vital to the future success of the railways. There is an array of rail-specific skills that must be retained in the new organisation – such as the signallers whose skills ensure that the network can operate safely and efficiently day in, day out.

Great British Railways will also be given a demanding new set of obligations and accountabilities, described below, to ensure that it operates in the interests of customers and taxpayers.

Great British Railways will be held to account by government and passengers for delivering an efficient, effective public service

6. Great British Railways will be given a binding mandate to have as its primary focus serving the interests of passengers, freight customers and taxpayers and growing rail usage.

Great British Railways will be a powerful body. That is necessary to bring about change, but there is, of course, a risk that it may become in some ways too powerful, or at least empowered to make decisions that are not in the public interest. It would, for instance, be easy to improve punctuality on a given line by halving the train service; or to create more time for maintenance by permanently ending evening trains. It may be easier to save money by cutting services or facilities than by cutting inefficient or wasteful practices.

A series of strong measures and structures will be put in place to prevent this, make Great British Railways accountable, transparent and reflective of its need to serve passengers, freight customers and taxpayers. Funding streams will be conditional on meeting Great British Railways' mandate for delivering customer needs and making efficiency improvements.

In line with the government's commitment to growing the network, Great British Railways will be subject to a series of mandates, including to:

- Operate in the interests of passengers, freight customers and local communities;
- Grow passenger numbers and open up new markets; and,
- Pursue financial sustainability through the reduction of waste and inefficiency and developing revenue streams that benefit customers.

These will be priorities for the wider sector now and for Great British Railways to lead on as it develops, not only after structural change is completed.

7. Great British Railways will be mandated to increase efficiency and co-operation.

One of the major benefits of bringing the railways together is in providing clear line of sight over costs, benefits and opportunities for efficiency and growth. Great British Railways will be able to make substantial net savings without detriment to service or fare levels by reducing duplication, interface costs and complexity. This will include better planning of track and infrastructure works and many other operations currently subject to negotiation between Network Rail and train operating companies. Other efficiencies will include economies of scale; common systems; reductions in bidding costs; ensuring subcontracting is used in a cost-effective manner; workforce productivity improvements; and reductions in overlapping planning, support and administrative functions.

In doing so, Great British Railways will be able to continue and build upon Network Rail's existing programme of efficiencies, which aims to deliver £3.5 billion of savings over the five-year period to 2024 (around £700 million per year) and the SPEED reforms begun last year.[51] Further details on Project SPEED are set out in Chapter Seven.

As a single organisation, Great British Railways will be able to benchmark internally, monitor costs transparently and roll out best practice more widely and quickly. Taking a whole-system approach to planning and delivery will enable further cost reduction, while also reducing disruption to services, in turn generating more cost savings. This will be further strengthened by pushing cost and revenue control down to regional and local levels to bring a clear financial focus across the whole organisation.

Savings from reform will take several years to realise, but industry experts suggest that after an initial five-year implementation period, substantial annual cost savings could be achieved, equivalent to a further £1.5 billion a year, or 15% of revenue from fares before the pandemic, on top of existing efficiency programmes.[52]

Longer-term targets to bring down costs across the sector are also needed. As an early step, once it is established and empowered, Great British Railways will agree a clear target with government to bring down its overall costs, benchmarking them against global standards, and will clearly set out how it will deliver this whilst meeting the needs of passengers and freight customers. It will be held to account for achieving this within its overall financial settlement.

Reform should deliver additional savings of up to £1.5 billion a year after five years.[53]

8. The government will hold the railways' leaders accountable for meeting the needs of the customers and communities the network serves.

The Secretary of State for Transport will be accountable to Parliament for how the railways deliver for passengers, communities, the economy, the environment and taxpayers. The current system frustrates the government's ability to exercise democratic control and support effective delivery within the sector.

Under these reforms, Ministers will hold Great British Railways to account through a structured framework underpinned by legislation. Ministers will take key funding decisions and have strong levers to set direction and pursue government policy. The Secretary of State will be responsible for the appointment of the Chair and agreeing the framework for pay, including any performance-related pay. They will also be given statutory powers to set long-term strategy and have powers to issue guidance and mandatory directions to Great British Railways on any matter at any time, creating a relationship between Ministers and Great British Railways akin to the one shared by the Mayor of London and Transport for London.

These strong statutory and administrative controls for Ministers are vital to ensuring that government can secure benefits for the country. They will play a critical role in focusing Great British Railways on value for taxpayers, passengers and freight customers, for instance by ensuring that incentives exist to look beyond engineering outcomes or short term financial targets. However, Ministers recognise that these wide-ranging framework powers need to be used flexibly, so that rail leaders are given room to plan, make delivery choices and solve problems in the round.

Parliament will continue to hold Ministers to account for these key strategic functions. However, unlike in today's fragmented system, Parliament will also be able to hold a single leadership team responsible for rail planning and operations.

9. A 30-year strategy will provide clear, long-term plans for transforming the railways to strengthen collaboration, unlock efficiencies and incentivise innovation.

Within today's structure, no organisation has the financial, technical and operational authority to oversee the design, investment and management of the major changes to track infrastructure and on-train systems required for programmes such as digital signalling. A long-term strategy will set out, for the first time, key strategic priorities for the whole rail network for the next 30 years.

The strategy will create a stable foundation for innovation and problem-solving, allowing, for example, electrification to be delivered efficiently. Priorities will only be achievable and affordable if the whole system of suppliers, operators and funders work together to plan, innovate and achieve long-term ambitions. Combined with rolling programmes of transformation, the plans set out by the strategy will save time, reduce costs and enable innovators to develop new ideas and solutions.

The 30-year strategy will be a key mechanism that Ministers will use to ensure that the railways respond to public priorities such as levelling up, the environment, housing and regeneration. It ill incorporate the comprehensive environment plan set out in Chapter Seven. The strategy will be produced for Ministers by Great British Railways, enabling government to set clear direction for the railways in support of national priorities. Great British Railways will be responsible for achieving the outcomes set out within the 30-year strategy, providing regular updates to Ministers on progress and adapting it to changing needs, just as TfL regularly updates the Mayor of London on its long-term strategy, to reflect changes in the economy, society and technology.

The Secretary of State has begun this work by commissioning a 'Whole Industry Strategic Plan' that will become the first 30-year strategy. By starting now, the first strategy can be ready in 2022, with partners across the sector and beyond consulted as it develops.

Image (page 39) – Passengers at Manchester Piccadilly.


Tickets and Travel Centre
Tickets and Travel Centre
Wigan
Preston
Lancaster
Scotland

Railways will become more responsive to local needs and expand local control to help level up our towns, cities and regions.

10. Great British Railways will be made up of powerful regional divisions, with budgets and delivery held at the local level, not just nationally.

Great British Railways will be structured to create a balance between the need to take a whole-system view nationally, particularly for freight and cross-country services, and to meet the needs of local communities and regions. Key strategic decisions will be taken centrally, with operational matters led by five regional divisions. These will initially be organised in line with the regions established in Network Rail's recent Putting Passengers First programme, which reflects how passengers and freight move across the network today.[54]

The five regional divisions will be responsive and accountable for the whole system in their areas, including budgets. Each division will need to be led by a customer-focused leadership team, able and empowered to secure change in its part of the network and work closely with operators and suppliers to do this. They will need to decide priorities for investment and collaborate to operate an integrated national network.

Within each division, integrated local teams will bring decision-making closer to the people and places that the railways serve. They will be responsible for day-to-day delivery on routes of the network and will be integrated across track and train, bringing together infrastructure, customer service, station management and train operations into one team, in partnership with operators.

Local teams will be well placed to improve co-operation with local communities and local leaders. A pilot of integrated local teams will be undertaken as a priority.

These changes are designed to be adaptable and flexible. Regional boundaries and their integrated local teams will be able to evolve over time as the rail network changes. For example, a new regional railway across northern England may be beneficial once Northern Powerhouse Rail transforms travel between major towns and cities across the Pennines.

Regional divisions within Great British Railways will:

- Be accountable to customers for their journeys
- Manage Passenger Service Contracts, stations and infrastructure
- Procure private partners, including operators and contractors
- Manage budgets locally and regionally
- Integrate track and train at a local level
- Work with and be responsive to the needs of local and regional partners
- Integrate rail with other transport services

11. In England, new partnerships with Great British Railways' regional divisions will give towns, cities and regions greater control over local ticketing, services and stations.

Great British Railways will enable much closer collaboration and joint working with local leaders. There will be one, single point of accountability for rail services in a town, city or region.

New partnerships between Great British Railways and local and regional government will be established to give local leaders a greater say in how the railways are run in their area. For the first time, these agreements will encompass the whole passenger offer and long-term strategy for railways in a local area. Partnerships will mean that railways are more responsive to local priorities from Hampshire to Humberside.

Depending on the needs and capacities of different places, partnerships will include the ability for local leaders to integrate ticketing and fares with other local transport services, control stations and buy additional services or infrastructure to achieve local transport and housing priorities more effectively than today, using funds raised locally. Local railway managers will be scrutinised by local politicians through joint governance arrangements to provide clear accountability locally in areas where such arrangements are appropriate.

Further detail on the involvement of local leaders in rail and other transport services and the levers available to them will be set out in the levelling up white paper in due course.

It took the rail sector two years to approve a half-hourly Harrogate to York service following North Yorkshire County Council's offer to fund the £12 million scheme.

12. Devolved railways will be strengthened, with closer collaboration with Great British Railways improving services, consistency and co-ordination across the country.

Existing devolved authorities in Scotland, Wales, London, Merseyside, and Tyne and Wear will continue to exercise their current powers and to be democratically accountable for them. They will continue to award contracts and set fares on their services, for instance. As now, devolved rail authorities will need to work together in partnership with Great British Railways. This includes supporting a single national network, including one website and app and delivering consistent branding and passenger standards, such as on accessibility and compensation.

Co-operation with a single national organisation will strengthen devolved railways by helping improve consistency in the passenger experience across the network, maintain common principles and standards and improve joint working on issues such as managing specialist or scarce technology and skills. Existing leases of stations to devolved transport authorities will continue and there will be opportunities to develop these relationships in the future.

Great British Railways will continue to own the infrastructure in Scotland and Wales (other than some of the South Wales Valley Lines), as Network Rail does now. The government will explore options with Transport Scotland to enable the railway in Scotland to benefit from the reforms on the wider network of Great Britain. A joint working agreement between Transport for Wales and Great British Railways will be explored to improve the rail offer for passengers and freight customers in the connected network between Wales, the West Midlands and the West of England. This agreement would need to be negotiated between the UK and Welsh governments, building on existing Wales and Borders agreements for rail services.

In London and the South East, a new strategic partnership will be established to support housing, economic growth and the environment across the highly interconnected transport network in that part of the country. This will bring together Great British Railways, TfL and local authorities and businesses to co-ordinate timetabling and investments and to provide a consistent passenger experience in areas such as accessibility, ticketing and communications.

Liverpool Lime Street station

13. Community rail partnerships will be empowered to strengthen rail's social and economic impact.

Community rail groups already play an important role in supporting a thriving rail network across the country, including through strengthening initiatives with local understanding, improving rail's social impact and engaging partners such as schools and local businesses. Together, the regional divisions and community rail groups will be able to work more closely with each other, helping to maximise recovery from the pandemic by reinvigorating rail travel for leisure and tourism, particularly in our protected landscapes. They can also advise on how to improve active travel connections to stations, supporting connectivity in rural areas and working together to improve facilities at stations and on trains.

14. Station management will be integrated within Great British Railways to improve accountability for long-term investment in stations.

Today, almost all stations on the network are owned by Network Rail, but all bar 20 of the biggest are managed by the train operators.[55] This has created a fragmented system in which many stations are not managed effectively for the long term. Their potential as assets to the community are not fully realised, and commercial opportunities are missed.

Dedicated station management teams will be created locally within regional divisions of Great British Railways to manage stations, land and assets. These teams will improve accountability and long-term decision-making over how stations and the estate are maintained and improved for passengers and local communities. Initially, station teams will focus on building an understanding of the condition and potential of stations, before developing masterplans for renewal where needed. This will include identifying ways to improve accessibility, create new commercial space and improve connections with walking, cycling and other transport services as well as supporting sustainable travel in rural areas with electric vehicle charging points in car parks.

The masterplan at Watford Junction includes better walking routes and a new bus station, easier navigation, new offices and 3,000 new homes.

15. Opportunities to better unlock housing, local economic growth and social value will be explored.

There are real opportunities for the railways to do more to support local economic growth, such as encouraging and supporting small independent retailers on the rail estate. This could extend more widely, with greater emphasis on place and social value. Priorities will differ across the network: in rural areas, community rail partnerships can provide social connections to tackle loneliness, whilst easy connections to our national landscapes can improve health and wellbeing. Reusing existing rail buildings for services such as training, community hubs and education, as Network Rail has already done in Bolton, could reduce costs for the voluntary sector and improve services for local residents.

Our railways also provide connections that are fundamental to good placemaking and rail links can be a catalyst for regeneration and development. Great British Railways will work with partners to support better development near stations and share best practice, using the essential understanding of how to develop sites alongside operational railways that it will take on from Network Rail.

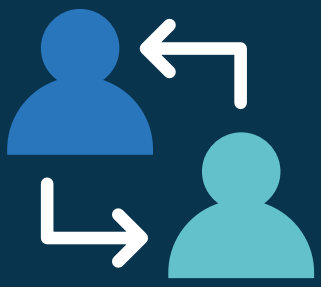
LCR Property is the government's experienced transport property body, having been instrumental in the regeneration of London King's Cross and Stratford. It is well positioned to bring its skills to help unlock complex sites and integrate station developments in towns and cities in the future. LCR will continue to support developments at and around stations and has already begun expanding in the North West of England.

Homes England also has a track record of working in partnership with a range of public and private sector partners to deliver new housing supply across England. Where appropriate, it will work with LCR and Great British Railways to explore and develop suitable housing schemes near the railways.

Recognising that delivering the best possible outcomes from development around stations and railway assets requires collaboration between different public bodies and agencies, the government will consult on how to incentivise and align interests between Great British Railways to enable collaboration with other public bodies essential to fostering development.

Figure 3 (page 45) —
New offer for towns, cities, regions and nations

New offer for towns, cities, regions and nations

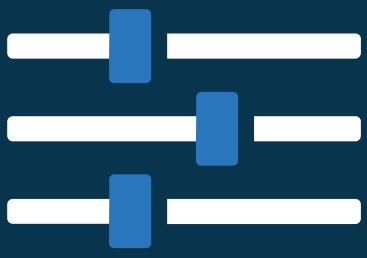


Better engagement

Simple, accountable leadership at local levels across track and train.

Devolved railways

Improved consistency in passenger experience across the network



Partnerships

Greater control for city and regional partners.

Tailored agreements for greater control of stations, services, fares and local infrastructure.

Community rail partnerships

Local businesses and communities encouraged to invest in and manage stations.

Greater joint working on local lines.

Best practice, such as that demonstrated by the work of the Leeds-Morecambe Community Rail Partnership with Northern Trains to improve facilities for those with invisible disabilities and training staff and volunteers as Dementia Friends, will be supported more widely across the network and incentivised within Passenger Service Contracts.

The sector will be overhauled to simplify and modernise how it works, and how Great British Railways is held to account.

16. Transport Focus will be reformed to become a passenger champion, advising the Secretary of State on passenger priorities.

The interests of passengers must be represented strongly, so Transport Focus' remit in rail will be reformed to make it the passenger champion. It will conduct research and engage passengers on their experience of rail travel and take on new responsibilities to champion improvements for passengers, share best practice from across different transport services and work with Great British Railways and government to focus funding on improving the passenger experience.

The government will review legislation to ensure it reflects Transport Focus' remit, including to investigate and escalate concerns to government and devolved administrations where it identifies that passengers are being failed. It will work in partnership with its devolved counterpart in London, London TravelWatch, and at an increasingly regional level across the country to hold the regional divisions to account effectively. It will also take over responsibility from ORR for monitoring passenger complaint volumes and themes to support its work as passenger champion.

17. Performance and efficiency will be independently scrutinised by the statutory regulator, the Office of Rail and Road.

The role of ORR will significantly change to help improve accountability, transparency and efficiency across the network. Legislation will revise its role to focus on monitoring, reporting and improvement across the sector, making it a core part of the system that will hold Great British Railways to account.

ORR will scrutinise Great British Railways' delivery of its objectives across the business and in doing so, will give confidence to government that these objectives are being met. It will provide expert advice to the Secretary of State and devolved administrations, and will have powers to require improvement plans, encourage best practice and support problem solving across the sector. It will have a key focus on efficiency, independently scrutinising long-term asset conditions and efficiency to inform Ministers' funding decisions during each rail budget process. ORR will continue to assure changes made to business plans during the five-year infrastructure budget period.

ORR will support Great British Railways in developing an open and transparent self-assurance process, to ensure that performance is assessed fairly and data and reporting are accurate, transparent and shared regularly. It will report on a more integrated basis, including on whole system efficiency and workforce pay to maximise its effectiveness.

Following legislation, ORR will also act as an appeals body for operators, including open access and freight, or suppliers to ensure Great British Railways applies its policies fairly, including on track access and charging. ORR will be able to direct Great British Railways to change decisions that are not in line with policy or the rules-based access system underpinned by legislation.

ORR's existing role as safety regulator will continue across Great Britain and it will further strengthen how it joins up across its safety and efficiency oversight functions. It will retain its other functions relating to other infrastructure bodies and consumer law and will take over responsibility from RDG for sponsoring the Rail Ombudsman.

18. Current safety and security roles will remain in place across the rail network. A consultation will be undertaken to ensure safety roles, rules and standards are appropriate for the future.

Great British Railways will be obliged to ensure that safety, security and system interoperability are maintained across the network by its regional divisions and all their operators and contractors. Safety and industry standards will continue to be set independently and applied across Great Britain.

There will be no immediate changes to safety and standards roles across the sector, including those of ORR, the Rail Safety and Standards Board (RSSB), the Rail Accident Investigations Branch (RAIB) and British Transport Police. The Department for Transport will continue to lead rail security policy, regulation and compliance and provide appropriate funding for safety and security organisations. Operational responsibility for the delivery of security measures will sit with Great British Railways, its regional divisions and operators. British Transport Police will continue as the operationally independent police force for the rail network across Great Britain, and the RAIB will continue to independently investigate accidents on the network.

A consultation will be undertaken with the sector in due course on opportunities to optimise the approach to safety under the new system. The output of this consultation may result in future changes to roles and accountabilities and the government will work closely with partners as part of this consultation.

19. Cross-sector organisations will be consolidated and integrated to enable the railways to operate more effectively and efficiently.

Simplification and unification of the sector are key to improving efficiency and restoring a focus on serving passengers, communities and taxpayers. RDG currently provides a range of critical cross-industry functions, such as National Rail Enquiries, systems for ticketing and retail, and cross-sector co-ordination. The expertise and systems to deliver these functions will remain essential in the new structure. Great British Railways will take responsibility from RDG for the functions it needs in order to act as an integrated guiding mind across the rail network. This will not affect the ability of train operators and other members of RDG to maintain their own independent trade association.

HS2 Ltd and East West Rail Ltd will retain their current roles in the sector and will work closely with Great British Railways as it takes over responsibilities for integration from the Department for Transport and Network Rail. Regulated infrastructure managers that are separate from Network Rail will continue to manage their sections of the network. Great British Railways will work closely with them to ensure integration is managed safely and effectively.

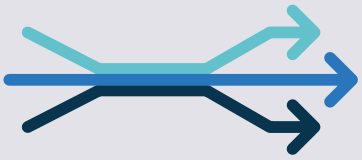
Collaboration across the sector during the pandemic, including with trade unions, has shown the benefit of having a cross-sector forum for discussing the big challenges and opportunities facing the railways. The government will work with leaders from across the sector to develop an ongoing independent advisory body to consider issues such as skills, training, leadership and technology. Membership is likely to comprise senior leaders from Great British Railways' regional divisions, trade unions, passenger and freight operators and representatives of the supply chain.

20. Track access will be overhauled to make the best use of the rail network in the overall public interest.

The railways are an expensive national asset, funded by taxpayers and farepayers, so it is important that they are operated efficiently and to their full potential in the public interest. The creation of Great British Railways means the law on track access needs to be changed, enabling it to deliver a simpler, more accountable system. This will bring an end to the fragmented system that can cause inefficient use of the network, for example hindering strategic planning to deliver high-quality freight access where it is most needed.

New legislation will give Great British Railways powers and duties to plan the use of the network, balancing priorities and always seeking to maximise the overall public benefit. Great British Railways will be accountable for how the whole of the network is used in line with the Secretary of State's requirements and its own duties. The government will consult and work with partners, including passengers and freight and open access operators, on the development and implementation of a new rules-based access system, underpinned by legislation, and other rail processes for which it will be responsible.

Existing access contracts will be honoured, and private operators will continue to have clear legal rights that allow them to respond to their customers as part of a rules-based regime. To provide a smooth transition, the government anticipates that key contracts and functions will initially transfer from Network Rail to Great British Railways. Following detailed consultation by government, a new generation of contracts and processes will be developed for freight and other private operators to provide clear legal rights in the future. ORR will take on an appeals role to ensure that policies are applied fairly and transparently by Great British Railways.



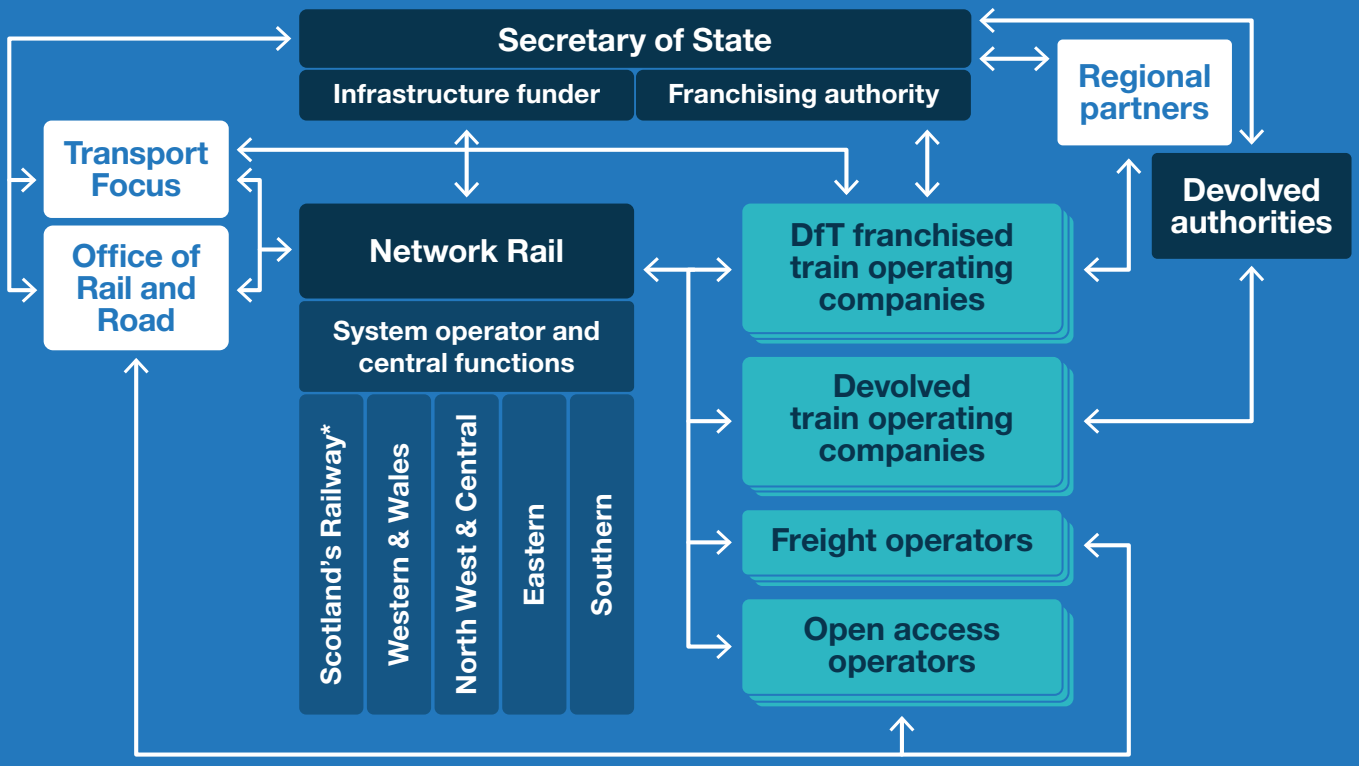
Multiple train operators bid to operate more services between York and Newcastle in 2015 than the infrastructure can manage.

This led to congestion, delays and poor customer service that impacted trains as far as Manchester.

Figure 4 (page 50) —
Current Industry Structure

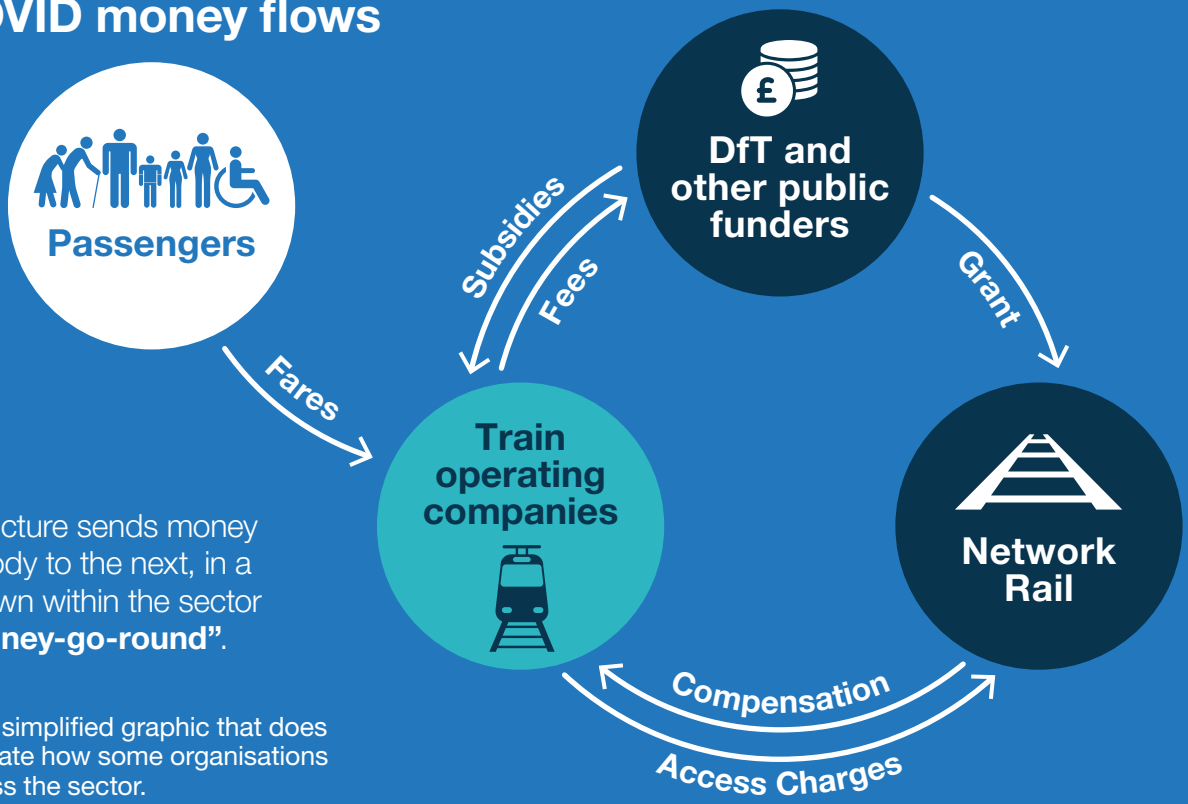
Figure 5 (page 51) —
Future Industry Structure

Current Industry Structure



*Funded by the Scottish Government

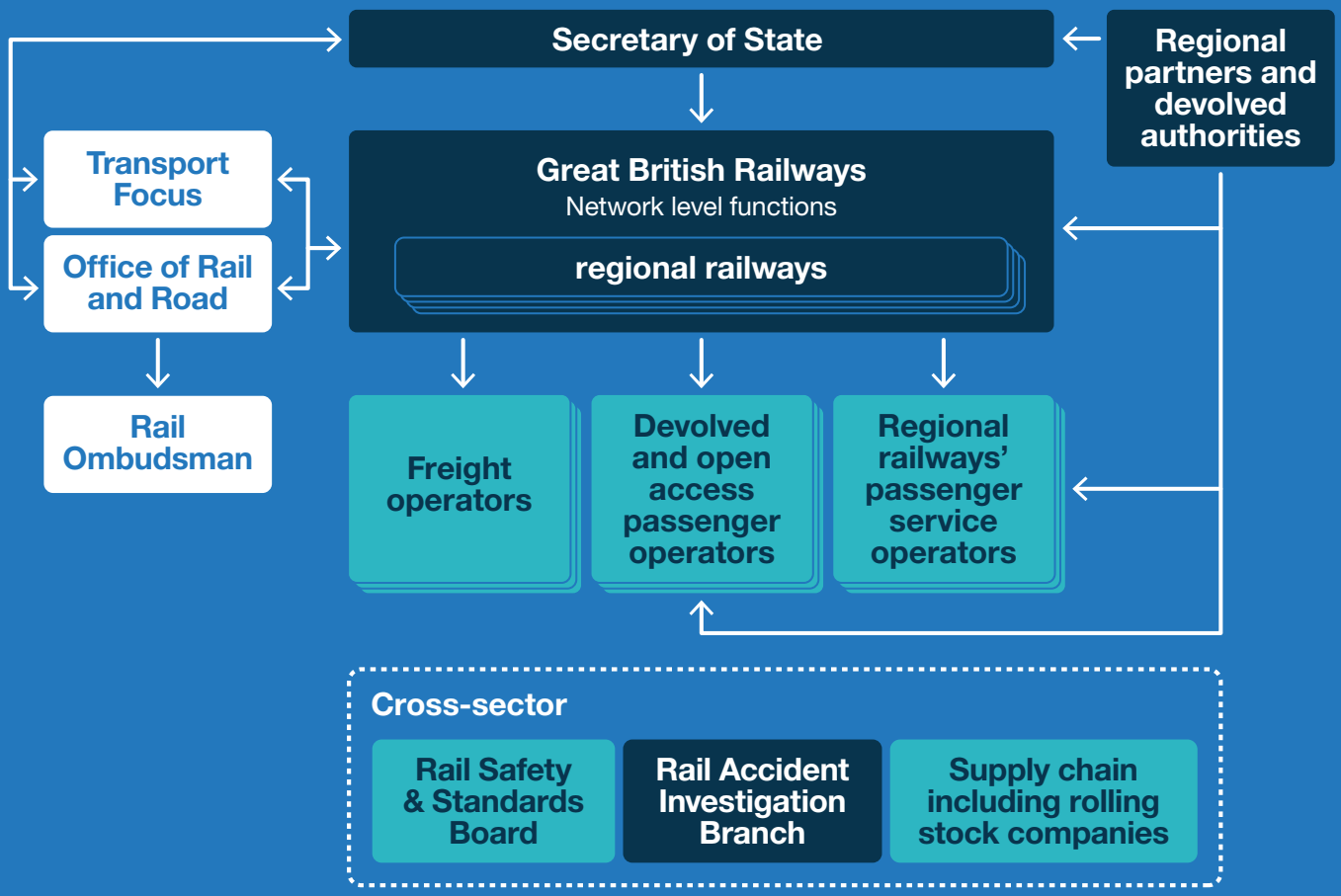
Pre-COVID money flows



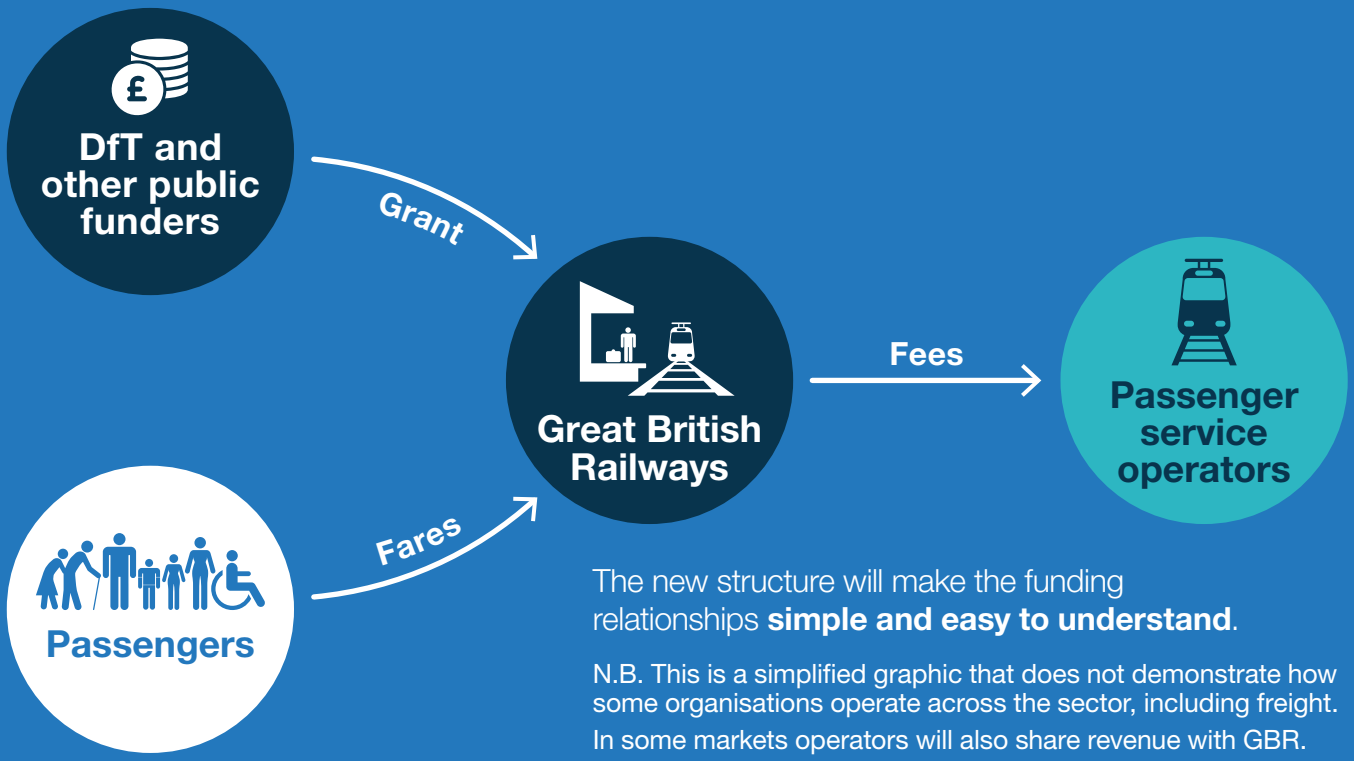
Today's structure sends money from one body to the next, in a system known within the sector as **"the money-go-round"**.

N.B. This is a simplified graphic that does not demonstrate how some organisations operate across the sector.

Future Industry Structure



Future money flows



The new structure will make the funding relationships **simple and easy to understand**.

N.B. This is a simplified graphic that does not demonstrate how some organisations operate across the sector, including freight. In some markets operators will also share revenue with GBR.

Chapter Four
Replacing franchising

For the past 25 years, most passenger services on the railways have been run by franchised operators.

This model saw private companies compete for the right to operate services for typically around seven years, and to manage stations and set fares in an area to a specification set out by the Department for Transport or devolved authorities, to whom they paid a fee or received a subsidy. Most operators bore the financial risks of changes in revenue and operating costs.

Franchising secured substantial benefits for passengers, taxpayers and the wider economy, with operators providing more frequent services and new trains, and working to attract more people to travel by rail. But in recent years it has proved unable to meet changing passenger demands, particularly in enabling network-wide changes such as modernising fares and ticketing. Franchising focused operators only on short-term priorities, discouraging them from investing for long-term savings or passenger benefits. It also cemented barriers to more efficient ways of working. Misaligned incentives meant operators, who run the trains, and Network Rail, which owns the tracks, could be rewarded for blaming each other or other parties for delays instead of working together to prevent them. This has in recent years resulted in spiralling costs, inefficient services and commercially unsustainable franchises tied to ambitious plans that have proved difficult to achieve.

Faced with the almost complete drop-off in demand in March 2020, franchised train operators would not have been able to keep going. The government has a legal responsibility to keep franchised services in operation and introduced emergency measures that kept the trains running for key workers, assuming full responsibility for cost and revenue across all 14 national franchises.

A new role for operators is needed to restore a focus on providing high-quality services for passengers, encouraging people to travel by train and running services more efficiently. The government has already started this journey, and a new era of public and private co-operation on the railways will begin with the launch of a new commercial model: Passenger Service Contracts. These reforms will get trains running on time, and deliver more of the competitive private sector involvement that the railways need.[56]

Image (page 53) – Northern service at Knaresborough, North Yorkshire.

Around 50%

of passenger trains
in the North of England
were late in 2019/20

+⅓

Over 21,000

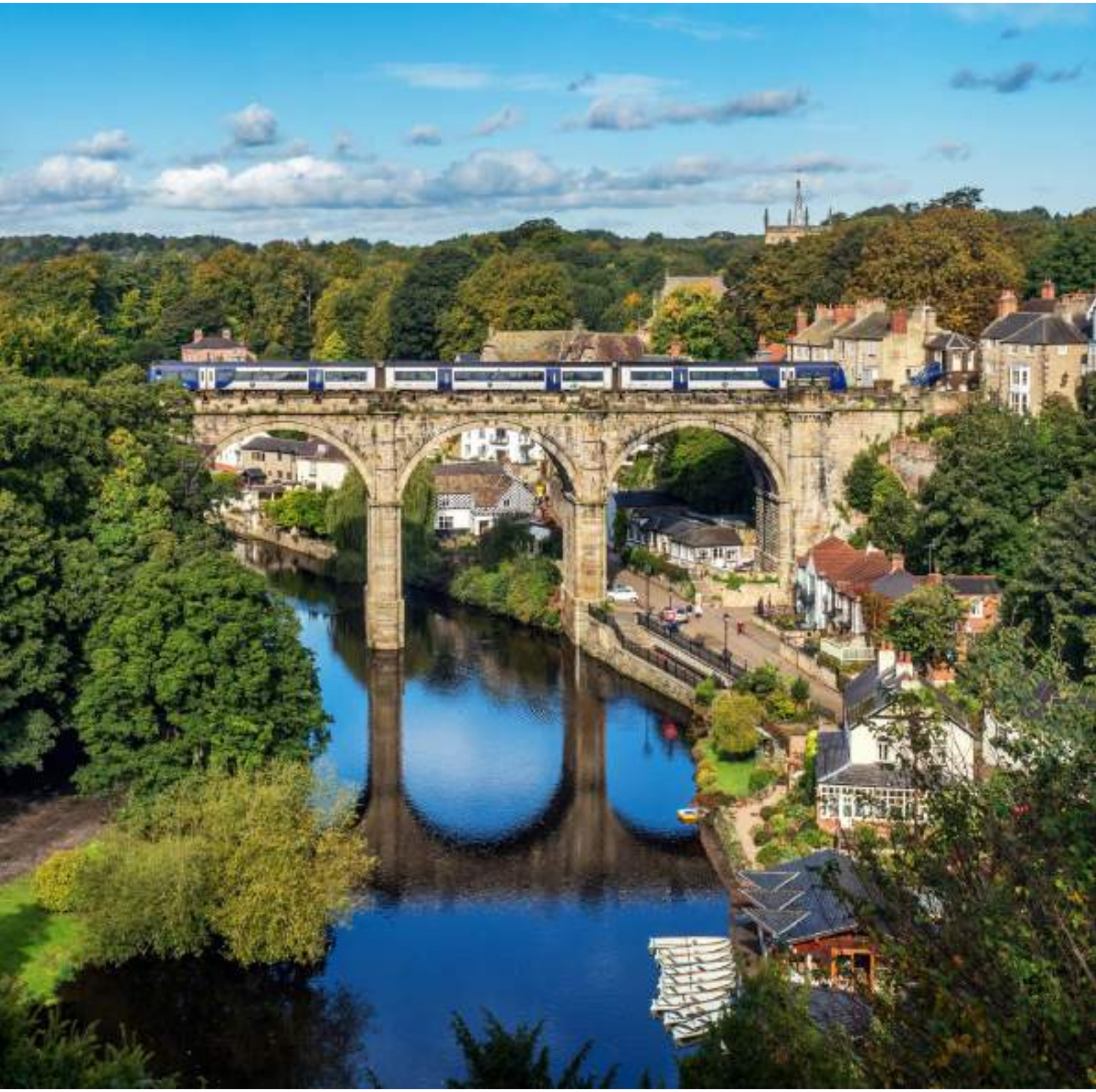
services ran per day in 2019/20,
up almost one third
on 20 years ago

£

The four biggest franchises each had annual revenue of

over £1bn

before the pandemic



21. Franchising will be replaced by new Passenger Service Contracts.

TfL Overground services and many railways across Europe, including local and regional services in Germany and Sweden, use a concession model to contract with private partners to operate trains. These contracts have been more successful than franchising in enabling operators to be held to account for running trains on time, delivering passenger satisfaction and controlling costs.

Our new system of Passenger Service Contracts will build on this approach. Great British Railways will specify the timetables, branding, most fares and other aspects of the service and agree a fee with the competitively-procured passenger service operator to provide the service to this specification. In most contracts, fare revenue will go to Great British Railways, with operators delivering to the specification and managing their costs in doing so. Operators will take cost risk but will need to balance that with service quality, in order to be efficient while also meeting the needs of passengers.

This is a major change from franchising, where each private operator designed their own timetable, set many fares and took revenue on their part of the network. Competitions were based on complex and uncertain revenue forecasts as most operators took both revenue and cost risk: this will end under most Passenger Service Contracts.

As set out in Chapter One, the franchising system was in trouble even before the pandemic. The government's initial recovery agreements, Emergency Recovery Measures Agreements, have reset the system by focusing operators on running the trains on time and keeping costs under control.

National Rail Contracts will succeed the emergency agreements and act as stepping stones towards the new Passenger Service Contracts. They will include incentives to drive revenue growth and the flexibility to 'switch on' further revenue growth measures when conditions allow has also been built into National Rail Contracts.

22. Passenger Service Contracts will focus operators on meeting passengers' priorities and will incentivise them to grow rail usage.

Contracts will require operators to meet demanding standards for key passenger priorities such as punctuality, reliability, passenger satisfaction, capacity, staff availability and helpfulness, customer information, vandalism repair, passenger satisfaction, revenue protection and cleanliness. A new toolkit of measures will underpin Passenger Service Contracts (see Figure 6), so that in future passenger service operators will benefit when trains are clean and comfortable and passenger satisfaction increases, but they will not be rewarded when trains are in poor condition, are too frequently late or cancelled, skip stops or run with fewer carriages than planned.

Tough measures and targets will be built into each contract. Operators will be incentivised to co-operate to improve performance across the network as a whole. Great British Railways will enforce and assess performance through customer perception, mystery shopper and inspection regimes. Separately, the passenger champion, Transport Focus, will also monitor operators' performance to help hold them to account.

Some targets will be adaptable during a contract, so that operators can respond to changing passenger needs, government priorities and economic conditions. For example, punctuality and performance requirements could become stricter over time, requiring operators to invest in the right technology and ways of working to hit medium-term targets and deliver ambitious improvements for passengers in an efficient manner.

Great British Railways' regional divisions and their commercial partners will also push each other to help people back onto rail, working together on areas such as marketing. Revenue incentives will be built into contracts to grow passenger numbers, foster a culture of innovation and introduce efficiencies that deliver real benefits for passengers.

Figure 6 (page 56) —
Toolkit of measures for Passenger Service Contracts.

Passenger Service Contracts toolkit

Performance incentives

Quality of service

Running the trains on time

Passenger experience

Revenue protection

Train capacity

Scorecard linked incentives

Collaboration

Innovation

Revenue incentives and risk sharing

Incentivising growth in passenger numbers and revenue

Incentives will be scalable and used in different ways across different contracts.

Not all incentives will be relevant to all contracts.

23. Each Passenger Service Contract will be designed to support the needs of passengers and the whole network, as part of an integrated system.

Great British Railways will draw up contracts and the service plans that underpin them in line with its mandates to grow the railways and improve efficiency. It will closely consult the market on them, but it will have the final say, bearing in mind the interests of the whole network and in line with the new rules-based access system. Great British Railways will not design services that the infrastructure cannot support, or that are based on unworkable timetables, as happened repeatedly under franchising. This will bring an end to the failures of competing specifications that promise more and more trains but only lead to delays for passengers, as seen, for example, in the West Midlands in 2019.

Where choices are required about how to allocate scarce capacity between operators, Great British Railways will make decisions in accordance with the rules-based access system, underpinned by legislation. These will be transparent and subject to scrutiny by ORR and Ministers. In some areas, including city regions, local leaders will become directly involved in shaping and drawing up contracts, as in Germany, through partnerships with Great British Railways' regional divisions. More details on partnerships are set out in Chapter Three.

Each contract will require and incentivise operators to co-operate and work collaboratively with Great British Railways and its other partners, including other transport services, to enable more convenient connections between long-distance and local services and joint working during disruption or emergencies. It will also require the operator to support the integration objectives for bus travel and cycling set out in the government's recent bus and cycling strategies.[57]

24. Passenger Service Contracts will be different across the network and will not take a one-size-fits-all approach, including on contract length.

Passenger Service Contracts will be tailored by Great British Railways' regional divisions to the needs of different places and markets and changing passenger needs. All will incentivise operators to run reliable, high-quality services that can compete with the car and work to grow passenger numbers.

Some contracts will be a mix of both commuter and long-distance services and will need to include mixed incentives to reflect the different risks and commercial opportunities available within that geography.

The length of contracts will also vary. On some parts of the network, longer contracts than those used under franchising may be adopted to support major investment programmes or the delivery of significant changes for passengers more effectively. Long-term contracts will be supported by tough targets and enforcement provisions to require high performance throughout.

25. Operators will have greater commercial freedom on some parts of the network, with revenue sharing arrangements where appropriate. New open access services will also be explored where spare capacity exists.

As passenger numbers recover, contracts will be flexible and include the possibility for operators to act more commercially on some services, when this is the most value for money option and it is financially sustainable for the operator to take on these responsibilities. As that happens, operators on those routes, predominantly the long-distance ones, will be able to make more decisions including setting more of their own fares and taking more revenue risk – though affordable 'turn up and go' fares and seasons will be protected, as now. For more about fares, see Chapter Five.

There will also be the potential for new open access services to be explored in the future where spare capacity exists to make best use of the network and grow new markets for rail.

These options are intended to get the most from the private sector's involvement in the railways, by driving efficiency and providing a high-quality service at the right price to attract passengers.

26. The geographic and financial size of Passenger Service Contracts will reflect local markets and needs.

It will be easier to design the geographic and financial size of contracts to reflect local markets and needs, and to reduce barriers to entry for new and innovative bidders where this is value for money. These could include, for example, operators with innovative ideas for improving connectivity with other transport services, community rail partnerships for individual lines, and operators with proposals for reducing train fleet costs or increasing leisure use of under-used scenic routes. Integration could also enable multiple, smaller operators to co-exist efficiently in a way that has not previously been possible.

27. Competition for Passenger Service Contracts will be greater than for franchises and Great British Railways will aim to compete all contracts.

The new contracts will reduce barriers to entry for bidders and reinvigorate the competitive market for rail. Franchises were awarded on the basis of complex and uncertain revenue forecasts, creating risk that meant that billion-pound franchises attracted ever fewer bidders. Over time the Department for Transport has struggled to maintain a truly competitive market for rail: Great British Railways will aim to compete all contracts, foster more competitive bids, and attract and then retain new partners.

Since 2012, around two-thirds of contracts have been awarded without a competition.[58]

28. If operators fail, the government will be ready to step in and take control where needed.

Operators will be held accountable and risk termination of their contracts if they are not delivering punctual, efficient and high-quality services. The government will retain its operator of last resort function to enable services to continue seamlessly for passengers in such cases, just as it did with Northern Rail in early 2020. Learning from the experience of the pandemic, it will adapt this function as the sector is reformed so that operators can be held to account more effectively to targets in their contracts and so that interventions can be made in the interests of passengers and taxpayers if this is required.

Passenger Service Contracts should broaden interest and open up the market to new commercial partners, including those who can help to modernise and improve the railways by bringing expertise in technology and innovation. This diversity should increase competition between bidders and therefore create better outcomes for taxpayers and passengers alike.

29. The government will work with the sector and potential new market entrants to develop and implement these changes.

In the short term, Emergency Recovery Measures Agreements and National Rail Contracts will act as stepping stones towards the new system. There will continue to be limits on how much risk is shared between taxpayers and the private sector, particularly as demand adapts after the pandemic.

As the economy recovers and passenger numbers stabilise, more responsibility for costs and revenue can be returned to operators on those routes where it represents value for money for the taxpayer and is commercially and financially sustainable to do so.

The government will work with potential commercial partners and investors to design Passenger Service Contracts in a way that will create a healthy, sustainable commercial market, and will launch initial competitions by the time the emergency recovery agreements end in 2022.

Image (page 61) – Northern services at Manchester Oxford Road station.


PRINCIPAL

Chapter Five
A new deal for passengers

The railways may no longer be able to rely so much on the commuter market. As the country emerges from the pandemic the railways must become much better at meeting passenger needs to avoid a society dependent on the car.

The railways will have to fight harder for customers who have a choice about when and how to travel, requiring a serious rethink of the facilities they provide, and the fares offered. Getting trains to run on time is a start, but passengers rightly expect, and must receive, a lot more.

Passengers have been let down in recent years: satisfaction reached a 10-year low in 2018 as delays, cancellations and poor customer service took their toll.[59] The rail sector is not trusted to deliver services in the public interest: public trust reached a low in 2019, when only 20% of people trusted train travel, fewer than those who trust banks and energy suppliers.[60]

The public want reliable, punctual services that represent good value for money.[61] They expect clear and proactive information and simple, fair, transparent pricing. Customers with both visible and invisible disabilities and other additional needs must feel welcomed, comfortable and valued when using the rail network, as our nine passenger needs on page 64 set out.

The government's aim is to make travelling by rail a modern, convenient and accessible experience for passengers. This means bringing the sector together to concentrate on the customer now, and setting out a long term vision of 'turn up and go' railways. Railways should be seamlessly connected with other transport services, with more fully accessible trains and stations, straightforward compensation and an end to queues to pay for travel.

The changes set out in this chapter begin the journey to achieving this vision by building on pockets of best practice in Great Britain and learning from other transport services and customer-focused sectors. They are concentrated on improvements that the sector can deliver in the near term to begin the critical task of rebuilding public trust in rail and will set the sector on the path towards a customer-focused future.[62]

Image (page 63) – Passenger working on a long distance train

Around 20%

of stations **have step-free access to all platforms**

47%

Fewer than half of all passengers **feel their journey is value for money**

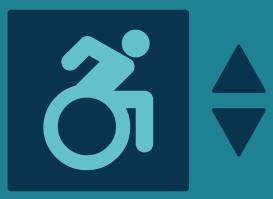
Only 37%

of eligible passengers **claim compensation**

Safe

I need to **be safe**, and **feel safe.**

Accessible



I need to be able to **access the network as easily as possible** and find rail an inclusive service for my needs.

Seamless

I need a **consistent experience** across the rail network, and to easily understand the different products on offer.

Connected

I need to **be able to get to and from rail easily**, using a range of transport services from my front door to my destination.

Reliable

I need my rail service to be **reliable, punctual and frequent** so that I can have confidence and trust in the service.

Comfortable

I need my journey to be **pleasant and comfortable**, with products and services that meet my needs.

Informed

I need to have **easy access to relevant, accurate and personalised information** before, during and after my journey, especially during disruption.

Affordable

I need to **feel that my ticket offers value for money**. I judge this based on journey experience, transparent purchasing and cost.

Trusted

I need to **trust that my needs will be met** and know who is in charge of making sure they are. If things go wrong, I need to know whom to turn to and that they will treat me fairly.

30. Easy, frictionless payment options for every journey will be introduced across the network.

An obvious way to make rail more attractive to passengers is to make it easier for people to pay. The unnecessary cost and complexity of today's railways are epitomised in the complicated, paper-based ticket-selling process which inconveniences passengers but also costs more than half a billion pounds a year to administer.[63] Everyone loses.

Remarkably, half of all rail tickets before the pandemic were still bought by queuing up at a window or machine and being handed a physical ticket, or receiving the ticket in the post.[64] Many passengers will be familiar with the long queue for season tickets on a Monday morning, the snaking line at the city centre terminus, having to pay a penalty fare because you did not have time to buy a ticket, or having to queue up at the end of your journey at the excess fares counter because the station where you started does not have a ticket office. The government is committed to ending all of this.

Even buying or collecting a physical ticket at a machine is, as is so often the case with the railways, unnecessarily complicated. In 2018, ORR found that almost one in ten passengers failed to select the most appropriate ticket for their journeys.[65] Collecting pre-booked tickets typically requires you to type in a complicated code that has been sent to your mobile, as well as inserting your payment card. A system based on paper tickets is also less adaptable, particularly to the new, more flexible ways in which people want to travel.

To make payments easy, simple and flexible for passengers, the government will begin a retail revolution on the rail network. This includes new ways to pay through contactless Pay As You Go for commuters and in cities, as well as digital tickets for regional, long-distance and frequent journeys.

Customer service at stations and on trains will be modernised too, including through better integration with other transport services. Staff will be able to provide a more personal touch in future, which can be crucial for those who need additional support at stations and those who cannot or do not want to use contactless or mobile tickets.

Replacing franchising and integrating the railways also provides an opportunity to make it clear who is accountable to customers for the service they receive. In future, Great British Railways will be accountable for the ticketing and retail offer across the country, working with its partners to modernise the customer experience, adapt to changing passenger needs and help rail bounce back and attract new passengers.

Figure 7 (page 64) —
The nine passenger needs identified by the Williams Rail Review.

31. Pay As You Go journeys will be expanded outside London to make millions more trips straightforward.

The roll-out of Pay As You Go, where passengers just tap in and out in a few seconds with a card or mobile, has supported significant passenger growth in London.[66] It has shown that upfront investment can be more than repaid by cost savings elsewhere and by making travel quicker and more attractive for passengers.

Great British Railways will invest substantially in growing London-style Pay As You Go contactless ticketing on urban and commuter networks beyond the capital. It will learn lessons from the failure of previous regional contactless initiatives, including one by Transport for the North, and will adopt global best practice to deliver future contactless ticketing schemes.

32. Digital tickets will be introduced across the network.

For season tickets and regional and long-distance journeys, Great British Railways will invest in online and mobile ticketing, where you print out the ticket at home or hold it on your phone. This will make it far easier for passengers to travel by train and end the search for reams of tickets when travelling as a family, for instance.

The government will work with current operators to continue the roll-out of digital ticketing on smartphones across the network.

The new LNER app and seat reservation feature.

33. A new Great British Railways website and app will create a personalised travel experience.

A single website and app will end the current confusing array of train company sites and different standards of service that passengers receive across the network. Great British Railways' website and app will learn from the best-in-class providers today, including international partners to build a great offer for passengers.

This will bring together the best features of the existing services, including real-time updates on delays and services and simple payment options on the go. In time, this could expand to include integrated compensation claims, the ability to book services such as Passenger Assist, wheelchair or bike space, catering, parking, taxi or bus travel to or from the station, and external services such as hotels and car or bike hire.

The government's vision, as set out in the National Bus Strategy for England, is for there to be far closer integration between all forms of public transport. This means that the Great British Railways website and app will increasingly become a portal for all public transport services, showing bus and light rail information and selling integrated tickets across different services to support easy journeys.

The new service will allow Great British Railways to understand passengers' travel needs better and let passengers know about special offers and promotions tailored to them; the railways have been backward in collecting and using customer data.

Independent retailers will be able to sell rail tickets, including online and in shops, and will work with Great British Railways to introduce innovations in the future.

Currently, 63% of Passenger Assist travellers buy tickets and book assistance in separate transactions.[67]

Independent retailers will be able to combine rail travel with other services such as:

hiring bikes, booking hotel rooms or experiences like sports and concert tickets.

34. Customer service at stations will be modernised, with one-team working expanded across the network.

Improving customer service at stations large and small across the network is vital to modernising the passenger experience and integrating rail travel better with wider transport services. This will also make it easier for tourists to navigate the network and boost economic growth in towns and cities outside London.

As modern payment methods roll out more widely, operators will enable more station staff to serve customers directly, rather than routinely behind a counter or window. They will welcome passengers who cannot or do not want to use contactless or mobile tickets, advise on journeys and timetables and help them buy tickets or access other services.

Staff are, and will remain, key to achieving high-quality customer service. To help them work well together, single operational teams will be introduced by Great British Railways and its operators, bringing together passenger assistance, train dispatch and station management. This has proven successful at some major stations where it has already been introduced. Operators will be measured closely on customer service under their contracts, and incentive and reward structures for staff will be developed based on performance and passenger satisfaction.

Stations can also play a bigger role in their local communities by providing opportunities for new, innovative services for passengers and residents alike. This could include on-demand shopping collection, small-scale freight, and public services such as education, training and health and wellbeing services to modernise the role of stations in local places.

This can be adapted to local needs: communities in Dartmoor and along the East Coast that rely on tourism and heritage will have different customer service needs to commuter towns, for example. Better integration with other transport services and consistent customer service will help to increase use of rail services, make journeys easier and support local regeneration right across the country. Further plans to improve stations are set out in Chapter Three.

Customer satisfaction rose by around 13% at London Victoria after one-team working was introduced.[68]

Image (page 69) – Team Victoria colleagues from Network Rail, Southeastern and Southern Rail at London Victoria.


CURRENCY

35. Fares will be simplified.

Confusing fares undermine trust and damage passengers' confidence that they are getting the right fare.[69] Great British Railways will use its leadership role to simplify the current mass of complicated fares and tickets, ending the uncertainty and confusion about whether passengers are using the right train company. It will set most fares under a clear framework agreed with Ministers.

On long-distance services, where operators will have more commercial freedom, including more control over fare setting, a greater range of book-ahead tickets will be offered. These will help to end the sudden cliffs in prices that passengers can encounter at different times of day. Advance purchase tickets have been a great innovation of privatisation and will continue to help to reduce fares at peak and near-peak times.

36. Affordable fares and season ticket caps will continue to be protected.

As achieved today through regulated fares, the government will protect the 'turn up and go' railway and the interests of commuters by ensuring affordable walk-up fares, including for off-peak journeys, remain available as now and season ticket fares are capped. The government will also ensure that tickets are available, as now, between any two stations on the national network. For longer-distance travel, the cheapest fares will continue to be available only by advance booking and committing to a particular train – but passengers will, as was the case before the pandemic, be able to turn up and go.

37. Off-peak services will be protected.

Until the pandemic, rail resources were heavily concentrated on pre-9am peaks into the biggest cities and back out of them in the evenings. Premium fares were charged for peak services, often to the dissatisfaction of passengers who felt they did not get good value. If commuter demand permanently and significantly reduces, some of the assumptions around the peak timetable and charging structure may change. Great British Railways will want to provide frequent services for commuters and maximise use of those services. Decisions on how best to deliver this will be taken when demand patterns become clearer.

Regular off-peak services are one of the great strengths of our railways. They provide a universal offer for passengers, with all but the smallest stations having frequent services all day, including late into the evening and on Sundays. This helps passengers to trust they can get home if they travel by train and, crucially, supports our weekend and late-night economy in major towns and cities. As the economy and society rebound from the pandemic, regular off-peak services across the network continue to be important to protect public trust in the service and support the arts, culture and late-night economy across the country.

Weekend and evening services were often targeted for engineering works because they affected fewer passengers and therefore cost less. Great British Railways will need to consider the optimum time for such works since leisure journeys will likely become a bigger part of the market.

38. New flexible season tickets will be introduced to reflect changing working patterns.

Even before the pandemic, the traditional five-day commute was changing with a shift away from traditional season tickets, a trend that is likely to accelerate.[70] A new flexible season ticket will be introduced for the growing number of people who do not commute every day.

Passengers will get a discount without having to pay for full-time season tickets that cover days on which they do not need to travel. Tickets will be sold allowing travel on any eight days in a 28-day period. Passengers will not have to choose the days in advance of travel and they will not have to be spaced out in any particular way over the ticket's validity period. Flexible season tickets will launch this summer and will be available on all major commuter routes. Traditional season tickets will continue to be available as now.

39. Journeys across rail, bus, tram and bike will become seamless in the future.

The government has committed £3 billion of new money to bring about a bus revolution in England outside London.[71] Railway stations will increasingly be hubs for local bus services, with full information displayed about connecting buses and greater availability of integrated ticketing between rail, light rail and bus services.

The government's ambition is for passengers to be able to buy a through ticket from any bus stop to any station with a single tap on their phone or contactless bank card. The government will work with operators to promote and improve the PlusBus scheme, which already allows rail-bus through ticketing, including by making PlusBus tickets available as digital tickets so that passengers can start their journey on a bus.

New transport services, such as automated vehicles and rented e-scooters, are emerging, with trials currently underway. As these mature, Great British Railways will need to aim for seamless integration and learn from the errors that have held up integration with other mobility services in the past.

40. Getting to the station on a bike and taking it on a train will be made easier.

The government is investing £2 billion of new money to dramatically improve cycling.[72] A bike can make clean and sustainable transport journeys door-to-door when combined with a train, bus or light rail, matching the convenience of the car. The government will invest substantial sums on safe cycle routes to stations, particularly in commuter towns such as Guildford and Harrogate, and increase cycle storage at stations, including at city-centre termini, where it is currently limited.

Bringing a bike on board makes a train journey even more convenient, yet even as cycling has grown in popularity, the railways have reduced space available for bikes on trains. Great British Railways will reverse that, increasing space on existing trains wherever practically possible, including on popular leisure routes. It will also make it easier to reserve bike spaces online and without reservation on quieter trains. All future train fleets will need to include more bike spaces relevant to the markets served. Operators will continue to restrict bikes on peak-hour commuter trains, where the space is needed for passengers.

41. Trains will be made more pleasant to travel on and easier to work aboard.

Because the emphasis was on carrying more passengers, recent designs of new trains have compromised on passenger comfort, with hard seats in close configuration and features such as tables no longer commonplace. In this new era, where more travel is likely to be discretionary, the railways will have to do more to satisfy their passengers.

Great British Railways will introduce new design and ride standards that will make sure all new trains are more comfortable than their predecessors. Subject to negotiations with suppliers and business case approval, Great British Railways will bring forward the normal replacement cycles on existing trains equipped with "ironing-board"-like seats, beginning with long-distance trains, in order to make the seats significantly more comfortable, or to replace and eventually remove them altogether.

42. Compensation will be simpler and easier to claim, with a consistent, modern process right across the network.

When passengers are delayed, they should be properly compensated. Although the introduction of two-tier Delay Repay for delays of 15–29 minutes (a 25% refund) and over 30 minutes (a 50–100% refund) has created a clearer system in most areas, only 37% of eligible passengers claim for their delays and almost a third of Delay Repay 15 passengers are not aware of their right to claim compensation.[73] As a first step, a simpler, straightforward claims process will be introduced to help make the experience easier for passengers.

Delay Repay 15 is one of the most generous rail compensation offers in Europe and the government will complete its roll-out to form a single, national compensation approach in the coming years. This will mean that wherever on the network passengers are delayed, they will receive the same, straightforward claims experience. This will make it simple to claim online and improve efficiency. Automated notifications of entitlement to claim compensation will be expanded to make it even easier for passengers. This will also enable the aim of straightforward, automated compensation for those who use smart ticketing options to be realised in the future.

43. Passengers will receive clear, consistent information before, during and after their journeys. Their experiences will be monitored more effectively.

Useful, timely information is needed to make travelling by rail easier and simpler and can help rebuild confidence in using public transport. Today's sometimes mixed messages – from different operators, Network Rail and the Department for Transport – will be replaced by a 'single source of the truth' across Great British Railways services. New standards for communications will underpin this. There will be fewer annoying and repetitious recorded announcements.

By working with innovative partners, new information such as average punctuality data, expected service crowding and real-time updates on station accessibility and service times will be rolled out at stations, on trains and directly to passengers as well as through third-party providers so they can also provide consistent information. This will help people know whether lifts are working, how busy a service may be and where the most accessible point of a platform is. During the pandemic, such innovation has proved invaluable to those travelling on the network and it will be expanded so that passengers are better informed.

To monitor progress in improving customer service and the overall passenger experience, more granular and relevant customer insights will be collected and shared openly, whilst maintaining information security. This will help to improve understanding of passenger needs, strengthen monitoring of operators and improve public trust in rail.

44. The first robust national accessibility strategy and long-term investment programme will improve inclusion and access for all.

Great British Railways will be given a statutory duty to improve accessibility, building upon the existing work of ORR in this space. Transport Focus will champion the interests of passengers in accessing the network, identifying failures and concerns, and escalating issues to the Secretary of State to ensure action is taken. ORR will hold Great British Railways to account for all its obligations and duties in the round, including matters that affect accessibility. Transport Focus and ORR will work closely together to align their work and secure improvements, as they do on the national road network.

A comprehensive audit of network accessibility will be conducted to provide robust, consistent and detailed information across the full range of facilities and standards. Data generated will be made publicly available and will be regularly updated so that passengers can plan their journeys with greater confidence.

A national accessibility strategy will provide the first robust, joined-up, system-wide approach to accessibility, including getting to, from and around stations and on and off trains. The strategy will introduce new, consistent standards to enable passengers to know the level of service to expect wherever and whenever they travel. This will be underpinned by improvements in training and information for staff, leading to a more inclusive culture that puts the needs of passengers first.

Over 370 stations now have open source, real-time data on lift and escalator accessibility.

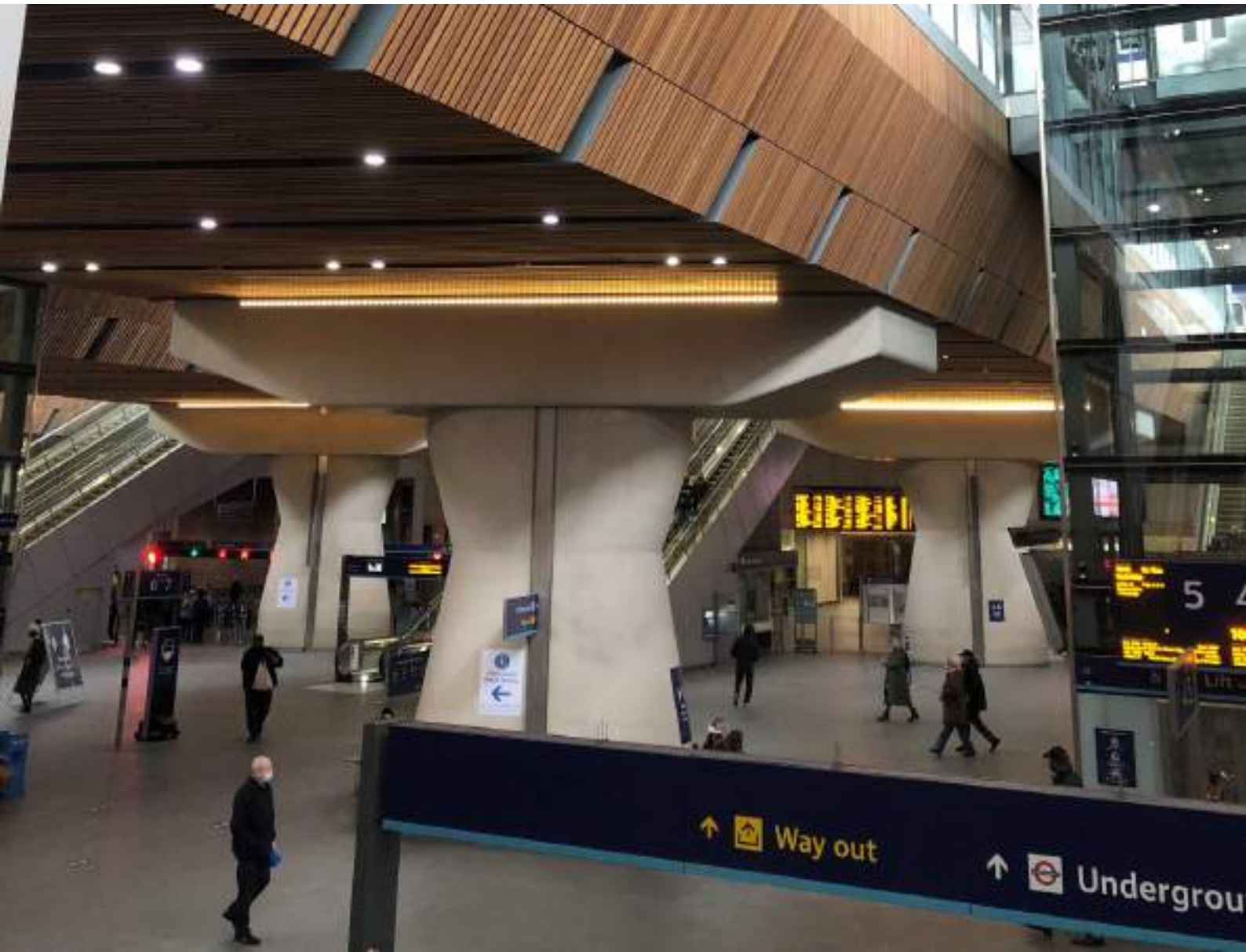
This can be integrated into apps and websites to better inform passengers about how they can get around stations.[74]

Image (page 75) – London Bridge station, which was modernised to include fully accessible platforms.

Today there are numerous different funding pots for accessibility improvements, including Access for All, Stations Improvement Fund and the Customer and Communities Improvement Fund. The government will consolidate these into a single accessibility fund, agreed as part of Great British Railways' funding settlement. This fund will serve a new long-term investment programme that will allow investment to be prioritised where it is most needed, using data from the accessibility audit to enable the national accessibility strategy's goals to be delivered. Improvements will also be delivered in a more efficient and timely manner alongside other schemes such as track renewal or station modernisation.

Design standards for stations will be updated by an expert working group, including community rail partners, to bring new ideas and make best practice standard. This will include setting out how to make stations more accessible and inclusive, and integrate them more effectively with wider developments and transport services so people can access rail and other services more easily.

Navigating stations will be made easier with new, consistent and inclusive signage using graphic designer Margaret Calvert's new Rail Alphabet 2.



Chapter Six

Unleashing the private sector's potential

Great British Railways will be expected to learn from the best elements of the public and private models, and to be entrepreneurial and actively promote the railways and the many businesses that serve it and support it.

Hundreds of innovative, competitive private businesses filled the gap of British Rail's research and development arm in the 1990s, not least the dynamic rail freight operators who have transformed that market as coal and steel traffic declined. The government wants to ensure that rail combines the best of the public and the private sectors in future.

The railways have huge potential to deliver innovation, attract investment and help lead the digital transport revolution that has already begun, rather than becoming a victim of it. This requires a culture change and a willingness to challenge old ways of working and to empower people within the industry and outside it to solve problems, modernise and adapt.

Our country succeeds when its public and private sectors work in tandem. Just as the partnership that created the Oxford-AstraZeneca vaccine procured hundreds of millions of vaccine doses and rolled out jabs faster than any other country in Europe, our new model for the railways will take the very best of the private sector – innovation, an unrelenting focus on quality, outstanding customer service – and harness it under the single guiding mind of the public sector.[75]

The railways will be next to unshackle innovators and create opportunities for the forerunners in rail innovation by setting up its people with the right tools and embracing start-ups and global players alike. This includes creating an open, innovative system with shared data, new forms of competition, and opportunities for new ideas to flourish and scale-up to benefit passengers, freight customers, the economy and taxpayers.[76]

Image (page 77) – Drone inspection of tracks and overhead wires.

Over £4bn
of private investment in rail
since 2016/17

Rail freight trains
emit 25%
of the CO2e of lorries

37%
of passengers are **happy** with the reliability of their **internet connection**

45. The economic and environmental benefits of rail freight will be supported by a new, customer-focused approach, modern track access rights and new safeguards.

Freight use of the railways has recovered quickly after an initial shock in 2020 and seems likely to take a bigger share of traffic and revenues in the future. The rail freight market has been transformed over the past quarter century, from largely moving coal and steel to now moving construction materials, containers and food supplies between ports and businesses across the country.[77] Freight trains reduce road congestion, connect markets over long distances and are much less carbon intensive than road freight.[78] They have played a crucial role in keeping food and medical supplies moving during the pandemic and the freight sector will be key to building back better as we look to support economic recovery across the country.

Critical safeguards will be introduced to ensure freight operators receive fair access to the network. A new, rules-based track access regime underpinned by legislation will be established that, though not set in stone, cannot be changed at Great British Railways' sole initiative. It will be designed in partnership with the market as part of a wider track access framework consultation. ORR will act as an appeals body for operators or applicants to ensure that Great British Railways applies policies, including track access and charging, fairly.

Great British Railways will also have a statutory duty to promote rail freight to secure economic, environmental and social benefits for the nation. Alongside this, the government will issue guidance on its priorities for rail freight in each funding settlement. These safeguards will not only create the security that private partners need, they will also help to improve and sustain a focus on the benefits that rail freight can deliver.

Future access agreements could support the growth of the rail freight market by including more flexible use of train paths and simpler ways of charging or building upon the offer of longer contract terms to support investment by operators. A methodology to better assess the value of rail freight will help to support decision making and will be reinforced by more open data. The government will work with the market to consider vital network enhancements that increase capacity for freight or help to grow the rail freight market. This could include the long-delayed remodelling of the Ely North junction to improve freight journeys across East Anglia and from the Port of Felixstowe to the Midlands and northern England. It will also explore ways to enable future Strategic Rail Freight Interchanges to be located more appropriately around the country.

The Port of Felixstowe reports that half of its freight traffic to the North and Midlands is moved by rail.[79]

Image (page 79) – A freight train being loaded at a port.

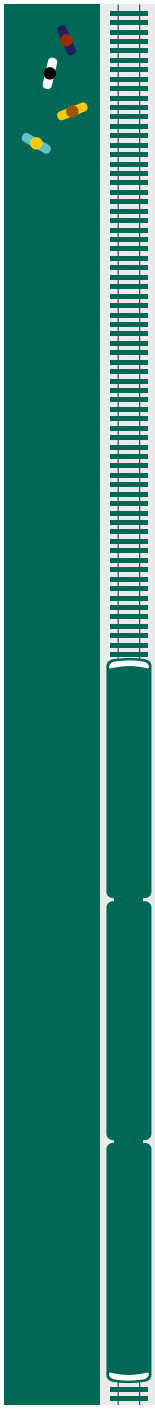
To improve the freight customer experience, a national freight co-ordination team will be created within Great British Railways to act as a single point of contact for freight operators and customers across the network. It will help to embed freight firmly into strategic decision making, including by incorporating freight into the new 30-year strategy. The government will also set a growth target for rail freight, as has been done in Scotland, but this should not become a ceiling. Together these changes will strengthen the place of rail freight on the national network and create new opportunities for growth and investment, giving confidence to the sector's customers and investors.

46. Operators will take a lead role in improving services and performance by innovating with private partners, including train-leasing companies.

Commercial operators are well placed to use their knowledge, experience and skills to identify new opportunities to improve passenger satisfaction, achieve cost efficiencies and offer new services and features that people want. They will work as close partners of Great British Railways' regional divisions, bringing best practice from international markets and adding value through challenging suppliers and other partners to work together to improve customer service, performance and efficiency.

Passenger Service Contracts will include incentives on collaboration and innovation. These will encourage operators to work closely with partners, including other operators, local teams and suppliers such as train-leasing companies to improve services and performance. For example, improvements in reliability can be unlocked by creating a focus on reducing delays that, although they may not be an operator's fault, still have a negative impact on their passengers.

These reforms will create a culture in the sector where every organisation, public or private, is aligned and incentivised to achieve high levels of performance, from train build and maintenance to service dispatch, that will get trains running on time across the network. This includes adopting new technology to improve customer information to reduce delays and prioritising investment or collaboration focused on resolving issues more quickly and efficiently.



Longer platforms were built in Essex to cater for 12-carriage trains.

But the new operator then opted for more frequent but shorter trains. Decisions on timetabling, service plans and infrastructure need to be joined up.

Integration of fleet planning with infrastructure improvements will be important to improve passenger experience, financial efficiency and environmental sustainability. The reforms set out in this white paper do not assume any direct change to the current industry model for procurement of train fleets and maintenance by independent train-leasing companies. The government will however take forward work to assess options to ensure reliable delivery and value for money for the taxpayer and passengers. This work will also consider supply chain sustainability and how to sustain and generate high-value jobs and economic activity.

47. Modern contracts will be introduced to increase competition, reduce costs and help to attract private investment for new technologies.

The rail system needs to be more open to engaging commercial partners, to maximise value and stimulate more dynamic, competitive supply chains. Contracts will be modernised, with complex approval processes and supplier frameworks overhauled, and new ways of working explored to improve pace and value for money. This includes adopting international standards that will enable integration with global services and engaging earlier and more effectively with small and medium sized businesses.

These steps will enable the modernisation of ticketing and retail to be accelerated and made more affordable, by reducing reliance on bespoke systems and opening up the market to local and global suppliers and investors.

Simpler procurement, open data sharing and the use of testing environments such as sandboxes, will also help to remove barriers to investment and innovation and enable more effective testing of emerging technology. This could have real benefits: for instance, artificial intelligence and remotely piloted drones could be used to monitor track conditions more effectively and safely, spotting emerging problems and requiring fewer workers to access tracks.

48. Partnerships with other key infrastructure providers, such as broadband innovators, will help to boost the country's drive towards a revolution in connectivity.

The railways have huge potential to push forward the government's ambitions for 5G and gigabit speed connectivity. Harnessing the opportunity to partner with technology businesses could enable our railways to become the backbone for connecting people digitally as well as physically, while also improving the on-board experience for passengers. This would help to level up businesses and communities across the country.

Private sector funding will be used to modernise the railways' digital infrastructure through the recently-announced Project Reach initiative. This will not only upgrade the fibre network used on the railways and improve passenger connectivity, it will also turbocharge the government's efforts to provide high-quality broadband in harder-to-reach rural communities, so that businesses and people across Great Britain can benefit from fast online connections and the digital economy. This is a clear demonstration of modernisation that improves the railways, provides a public good and is delivered through private investment.

As a first step, a public-private partnership between Network Rail, Govia Thameslink Railway and Cellnex will introduce full and fast mobile connectivity from Brighton to London in partnership with mobile network operators. This will enable passengers travelling on around 1700 trains a day to experience completely connected journeys by 2023 including in stations, tunnels and cuttings, and will also boost connections for local communities along the route.[80]

Open data, clearer accountabilities and better lines of sight over investment pipelines and strategic needs will foster easier delivery of other projects, such as new rail freight infrastructure that, under today's system, can be missed and stymie the ambitions of private investors to boost the economy. This will enable rail to fulfil its potential as a technology-driven transport service and help to foster a stronger, more globally competitive supply chain in the UK.

49. New, locally-led innovation schemes will unlock smarter working and support growth.

To achieve real change, there needs to be renewed emphasis on locally-led innovation and new ways of working. Those who work on the railways should be able to suggest and lead innovation in their workplaces or local network. Great British Railways will support this, through greater adoption of design sprints and competitions to identify and solve challenges at pace locally and regionally. Targeted partnerships between Great British Railways, its partners and other transport authorities, investors and start-ups will enable collaboration between the public and private sectors to push innovative solutions forward. Best practice will be shared across the sector.

Tailored programmes to support entrepreneurs and local operational teams in developing solutions will help to reshape the culture of the sector to achieve smarter working, more affordable results and quicker adaptability. These will include better training, research and data functions and easier collaboration with innovators to help face future challenges, reduce costs in the near- and long-term and learn lessons from the effects of the pandemic.

50. Local engagement will better support small- and medium-sized enterprises and start-ups.

Bringing together the whole sector to improve services, innovate and deliver more efficient outcomes will require more modern procurement, but will also need to be underpinned by a change in culture. Teams will be empowered locally to work collaboratively with private partners to do the right thing for passengers and freight customers. They will also improve engagement with local businesses and communities, including through creating new opportunities for local partners and businesses to play a greater role in shaping investments in their area.

Integrated local teams within Great British Railways' regional divisions will push forward design and delivery with their partners, supported by new incentives that encourage innovation, partnership and collaboration. These teams will develop, harness and grow local supply chains across Great Britain and foster new, innovative businesses and commercial partnerships to better support regional economies and help the railways to support levelling up through job and skill creation and locally-led solutions.

Through engaging innovators, third-party funders and investors, regional divisions will be able to use their new procurement and research, development and innovation (RD&I) capabilities to unlock additional private investment and support promising new start-ups. This will open up opportunities for innovative suppliers to secure funding, improve competition and speed up delivery. The government will continue to support exporters to take advantage of the emerging global trade opportunities from Britain's departure from the European Union.

51. Contestability across operations will be increased, but sub-contracting will need to deliver real value for money.

This chapter has made it clear that the railways will not become more efficient, modern and innovative without the involvement of the private sector, including the extensive supply chain, freight market, funders and passenger operators and rolling stock companies.

Where private partners are best placed to carry out work they will be able to compete to do so and will be contracted in a way that encourages innovation, collaboration and efficiency. Greater contestability will create new opportunities for a more dynamic, competitive supply chain. This includes opportunities for technology providers, banks, payment partners and investors to enable a transformation in customer experience.

The government and, in future, Great British Railways will continue to work in partnership with the supply chain to achieve the aims of the Rail Sector Deal, including boosting supply chain productivity and line of sight over the future pipelines of work.

Sub-contracting can bring valuable specialists in to support complex works, but can lead to multiple layers of costs and duplication. As such, contracts will need to be closely monitored and where sub-contracting takes place, Great British Railways' regional divisions will need to demonstrate that it is done in a cost effective way.

Over 3,000 small and medium-sized enterprises are already delivering £2.5 billion of contracts on the railways: the government is committed to expanding this further.[81]

Image (page 85) — South Western Railway service alongside a freight train in Hampshire.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444023
Freightliner

Chapter Seven

Accelerating innovation and modernisation

Britain's railways need to modernise if they are to become the backbone of a cleaner, greener public transport network, meet passenger demands for better connectivity and serve the needs of businesses and manufacturers more effectively and affordably.

For too long, rising taxpayer subsidy and growing passenger numbers have masked inefficiencies, outdated working practices and underinvestment in modern technology and services. While other industries have had to modernise and innovate to survive, rail has not. Investment in skills and technology has been insufficient or fragmented, major projects to electrify and modernise mainlines to Wales and the Midlands have been late and over budget, and real opportunities to improve services for passengers and freight customers through new technology have been consistently missed.

Having spent 20 years catching up on long-standing problems from the previous century, rail needs to innovate and accelerate change if it is to remain relevant throughout this one. The pandemic has only made this more apparent and more pressing.

Disconnected, outdated systems and analogue ways of working delay services, increase costs and mean that train operators often have little information about how people are using their services or even whether a freight train has been delayed. Underinvestment in digital skills combines with fragmented data to limit understanding of customers and makes it harder to achieve more efficient working practices.

A modern rail network requires an ambitious approach to decarbonisation, climate change adaptation and data-driven transformation. This can only be achieved by becoming more outcome focused and forward thinking and by balancing competing priorities carefully. The railways need to better understand their customers, speed up delivery of projects, and set out clear long-term plans to unlock success and innovation.[82]

Image (page 87) – A Northern service on the Wharfedale Line in Yorkshire.

Rail is the cleanest public transport service, producing around **1%** of transport emissions

Government is investing **£245m** **in rail research and development from 2019 to 2024**

Transport for London's **open data is now used by over 600 apps**

52. Electrification of the network will be expanded, and alternative technologies such as hydrogen and battery power will help to achieve zero emissions from trains and reduce air pollution.

Transport generates over a quarter of the UK's greenhouse gas emissions, making it the largest emitting sector of the economy.[83] But rail produces around 1% of Great Britain's transport emissions, despite carrying almost 10% of all passenger miles and nearly 9% of freight moved before the pandemic.[84] It is the only form of transport currently capable of moving both people and heavy goods in a zero-carbon way. There are huge opportunities for rail to contribute further to cutting transport emissions, including through further electrification.

Electrification is likely to be the main way of decarbonising the majority of the network.[85] Electrification does not merely decarbonise existing rail journeys: it has a clear record of attracting new passengers and freight customers to rail, the so-called 'sparks effect', thereby decarbonising journeys that would otherwise have been by road. The government has announced almost £600 million to start work on electrifying the Trans-Pennine route between Leeds and Manchester, design work to extend electrification to Market Harborough is underway and the government will announce further electrification projects in England will be announced shortly.[86]

Great British Railways will bring forward costed options to decarbonise the whole network to meet the government's commitment to a net-zero society as part of the 30-year strategy. These plans will help to kickstart innovation and change across the sector, support long-term funding commitments and build on the forthcoming Transport Decarbonisation Plan and Network Rail's recent Traction Decarbonisation Network Strategy.

Battery and hydrogen-powered trains will be trialled for passenger routes where conventional electrification is an uneconomic solution, in order to support the government's ambition to remove diesel-only trains from the network by 2040. Advances in technology, deployment and more appropriate regulation will be instrumental to achieving this in an affordable way, while also minimising disruption to passengers and freight customers.

In the near term, trials of existing technology, such as on-train batteries to cut pollution around stations, will be used to help tackle the immediate challenge of poor air quality on some parts of the network. The industry is currently considering options for the extension of third-rail electrification to pockets that depend on diesel operation, so that electric trains can be used on more journeys. Short infill electrification projects that benefit freight, between places such as Felixstowe and Ipswich and west London, will also be accelerated where possible to help improve freight connectivity through interchanges and create better links with freeports for cleaner, greener rail freight journeys.

53. The contribution of the railways to the nation's green recovery will be strengthened, including through a comprehensive environment plan by 2022 that will establish rail as the backbone of a cleaner future transport system.

Rail can and will do more to spearhead the country's ambition to become a world leader in clean, green transport by taking more polluting cars and lorries off the road, improving rail's own environmental impacts and helping to restore our natural environment.

To support a green recovery, railways need to encourage a shift away from planes, cars and lorries, become the best option for long-distance travel and improve the whole journey experience. This includes making it easier to get to and from stations by walking, cycling or other public transport, supporting green infrastructure outside cities, such as charging points at rural stations, modernising fares to compete with air travel and improving freight connectivity through interchanges and creating links with freeports. This will help rail fulfil its role as a public service that supports achieving net zero across the whole economy and transport system.

To set firm foundations for achieving this, a comprehensive environment plan for the rail network will be published in 2022 and will form a key part of Great British Railways' 30-year strategy. More details on the strategy are set out in Chapter Three. The environment plan will set out clear commitments on carbon emissions, air pollution, biodiversity, waste, water usage, noise and vibration. It will also require close working with local and devolved administrations, and a specific duty will be placed on Great British Railways to consider environmental principles in all its operations. It will be accountable for and will lead the sector's delivery of a more environmentally sustainable rail network.

The rail environment plan will be a major part of transport's contribution towards the government's ambitions to make this the first generation to leave the environment in a better state than we inherited. The plan will include the first end-to-end approach to achieving a more sustainable rail system, from the supply chain and construction through to biodiversity across the network and cleaner, quieter passenger and freight journeys. A single measurement methodology for carbon across railway operations will be adopted alongside other new methodologies to support this, including for construction, maintenance and energy. Data on progress will be published regularly and transparently, and regions will be benchmarked against each other to unlock improvements, incentivise change and enable targeted action on local issues such as air quality at stations and noise.

54. Energy efficiency, renewable power production, tree-planting and other green initiatives across the rail estate will be accelerated.

Rail's extensive estate can be used more effectively to reduce the UK's net greenhouse gas emissions and improve biodiversity. A sustainable, long-term approach to land management on the network will support biodiversity, while also improving reliability and reducing the risk of landslips and flooding. To protect and enhance the natural environment, major initiatives will begin across the rail estate as part of the new duty to conserve and enhance biodiversity set out in the government's Environment Bill. The environment plan will also detail how the rail estate could support carbon offsetting and sequestration for the wider economy, including through extensive tree planting. Green barriers such as these will also be effective at reducing the effects of noise on properties bordering the railways.

New, aligned incentives across the sector will help to make stations and trains more sustainable by reducing energy consumption, saving water and improving efficiency. Initiatives such as the roll-out of LED lighting and water fountains at more stations and machine-learning systems on trains to improve braking are just a few examples of improvements that will help make rail not only more environmentally sustainable, but also cost efficient.

Renewable power generation on the rail estate will be increased to provide more clean energy to stations and local communities Initiatives such as the world's first solar farm that directly powers the railways, currently operating in Hampshire and supported by the government, show the potential of the rail estate to generate clean power and reduce greenhouse gas emissions.

55. Long-term investment in climate resilience will be prioritised, supported by smarter forecasting, planning and technology.

Climate predictions will be incorporated within the 30-year strategy to better prepare the railways for the future. Vital rail connections, such as the coastal route through Dawlish, will be protected and Great British Railways will work closely with local partners to protect these for the long term.

Innovation will be key to achieving safe, resilient railways in the future: this includes the use of predictive technology led by AI, smarter monitoring of land conditions and adoption of better forecasting. Such technology and new ways of working will enable services to be adapted at pace and make the rail system more responsive to change.

56. An 'open by default' approach to data sharing will better inform journeys, improve transparency and unlock new technology.

Data will power the services of the future. Already we can see it improving journey planning tools for passengers and enabling real-time personalised messaging on LNER. However, data is fragmented across the sector, sharing information is expensive and contracts inhibit collaboration and mutual benefits. Overcoming these barriers would enable the use of technology such as 'digital twins', which use sensors and data analysis to model complex systems, such as passenger flows in stations or train performance, in greater detail. Limited use at London St Pancras during the pandemic showed how such technology can be used to help manage crowding. As set out in the government's recent Geospatial Strategy, digital twins could allow better planning of services and as a result, unlock more efficient use of train fleets, enable pre-emptive maintenance and simultaneously reduce delays and costs.[87]

Open data compiled by Great British Railways and its partners will improve transparency, trust and innovation, building on the commitments in the Rail Sector Deal. An 'open by default' approach to data will be introduced, with common frameworks and standards across the sector created and led by a new Rail Data Service within Great British Railways. The data service will be tasked with removing barriers to data sharing and will set performance targets to open up data. This will unleash new opportunities for partners to work with the railways to integrate rail data into passenger-facing apps, connect data across systems, and strengthen understanding of operations and services.

Open data will make it easier for partners to provide new services such as:

- End-to-end **journey planning**
- **'Find my seat'** features
- **Personalised travel offers,** like free coffee when a service is delayed

Improving digital and data skills within the sector will be essential to achieving this vision. Working with further education partners, suppliers and institutions such as Innovate UK, the Alan Turing Institute and the Open Data Institute, the rail sector will be able to better co-ordinate skills development, recruit talent and create a modern, innovative workforce. This will create high-skilled jobs for people from all backgrounds, build rail's diversity and help the sector to better respond to new opportunities.

57. Research, development and innovation funding will be simplified to make it more outcome focused and to improve collaboration.

Today, as in the rest of the rail system, there are too many taxpayer-funded organisations with split responsibilities and different priorities funding rail research, development and innovation (RD&I), and the benefits of investment for taxpayers and farepayers are often unclear. Great British Railways will become the primary public funder of RD&I initiatives across the sector, delivering priorities set by Ministers. Stronger links with centres of industry and private sector innovators will be a core part of the new RD&I system.

Great British Railways' regional divisions will lead delivery of RD&I projects to focus them on the needs of passengers and freight customers. They will work more closely with partners such as the UK Rail Research and Innovation Network (UKRRIN) to improve collaboration across the sector and beyond. This includes using the emerging network of regional innovation centres at universities and technical institutions, such as the National College for Advanced Transport and Infrastructure, to act as incubators, support networks and more active partners in modernising and expanding the supply chain across the rail sector.

RD&I schemes and funding pipelines will seek to break open the rail supply market, encouraging and supporting innovative new partners and incumbents to deliver new customer-focused benefits. Using open competitions for new initiatives, such as gateless ticket lines at stations and digital in-cab signalling for freight, will incentivise innovation and efficiency in the supply chain. Benchmarking across regions and more transparent data will help to measure effectiveness, promote efficient spending and strengthen accountability.

The government has committed to increasing research and development spending to 2.4% of GDP by 2027.[88]

Image (page 93) – Innovators working on a train during a HackTrain hackathon in Basingstoke, Hampshire.

Change will be implemented in close consultation with existing bodies such as the Rail Safety and Standards Board (RSSB) and Innovate UK to develop the most effective arrangements, whilst ensuring that critical functions are preserved, such as in relation to independent safety risk analysis and interoperability standards. RSSB will continue to be funded to perform research related to its core role in ensuring a safe and efficient rail network.

Project Speed

58. SPEED will accelerate the delivery of improvements, making more efficient results the new normal.

The government's Project Speed is already driving improvements in the planning and delivery of infrastructure projects across the economy. The Department for Transport and Network Rail are applying this work on the railways to ensure rail infrastructure projects are delivered **better, greener, faster and cheaper**.

SPEED (**Swift, Pragmatic, Efficient Enhancement Delivery**), a rail-specific initiative, has been established to identify opportunities to reduce the timescales and cost of delivering rail infrastructure, in collaboration with the wider rail industry. This work is accelerating the application of SPEED principles to all projects in the rail sector. It is looking at ways to streamline the decision-making process, and strip out unnecessary complexity from planning processes through system-wide reform in conjunction with other government departments.

The government will ensure **more intelligent approaches** are adopted in applying technical and other standards, incentivise good practice, improve efficiency and reduce the impacts on passengers arising from track closures for infrastructure enhancements.

These benefits will be realised by **changing ways of working** across the whole rail sector. There are 11 cross-cutting themes that have been identified from a set of pilot projects. These focus on identifying opportunities for simplification and efficiency.

A key enabler is to **work as One Team** across the rail industry – towards a shared objective of delivering value for taxpayers and passengers. The government will simplify the review process to secure funding, and the rail industry will reduce the time it takes to agree blockade timetables with train operators during construction. The internal governance process that Network Rail uses to deliver railway infrastructure has already been replaced by a **more flexible approach**, called "PACE" (Project Acceleration in a Controlled Environment). Network Rail is building on approaches outlined in the Construction Playbook to deliver more efficient procurement approaches.

SPEED demonstrates that the industry is **already building the capability** and mindset across organisations to deliver on the ambition of a more efficient rail sector. The creation of Great British Railways to join up decision making and integrate track and train will help this further and protect the wider environment and climate whilst speeding up delivery.

The Project Speed approach will be used to deliver all rail infrastructure projects going forward. To make further progress and underline the commitment, the Department for Transport has set up an Acceleration Unit to unblock issues that affect infrastructure projects and to reinforce the Project Speed approach to drive forward progress for passengers.

Image (page 95) — The Dartmoor Line is being upgraded as part of Restoring Your Railway links to Okehampton, which reopens to passenger services later this year


OKEHAMPTON
Danger
Danger
OKEHAMPTON

Chapter Eight
Empowering rail's people

The government has paid around £12 billion over the past 15 months to keep the railways running and keep 240,000 people in the sector in work.[89]

The collapse in passenger numbers during the pandemic, and the likelihood of permanent changes in many of the key markets for rail, is the biggest challenge to the network in peacetime. The future of the sector hangs in the balance. Employees and employers all have a stake in that future and must be involved in shaping it.

The government wants the railways to provide high quality jobs across Great Britain with staff in the sector and across the supply chain able to learn, progress and, crucially, adapt to a changing transport sector. There is now a unique opportunity to build on progress made since the pandemic started, for all parties, including employers and trade unions, to forge a new approach to working that recognises that the best interests of passengers and staff are shared.

This will mean working across the sector to promote cooperation and collaboration between different parts of the system, developing an inclusive and diverse culture where people feel job satisfaction and rewarding people appropriately for helping to improve productivity and customer service.

A flexible and sustainable workforce is key to this. This cannot mean that everyone can do the same job in the same way as they always have but, instead, that people will have opportunities and investment in training to improve their skills and potential so they can develop their careers more effectively.

This chapter sets out plans to address the challenges of the past and grasp the opportunities of the future, including new technologies that will radically change the way passengers travel and freight is moved across the network. These plans will put the workforce front and centre in the transformed railways, at the heart of Great British Railways.[90]

Image (page 97) — Rail apprentices at Westwood training centre

Over 30%
of total rail costs in 2019–20
were staff costs

Rail industry
wage growth
has increased on average
above the rate of inflation
over the past decade

>250 days
of strike action
have occurred since 2016

59. A new joined-up, cross-sector training and skills offer will support people at every career stage to develop skills and bring in experience from outside the rail sector.

Reform of the railways must begin with ensuring that everyone working in the sector has a fulfilling, challenging, flexible and modern role and that together they have the skills and capabilities to deliver for passengers. The rail sector in Great Britain should become a world-class magnet for talent. Today, the fragmented structure of the railways impedes effective leadership at both organisational and individual levels. Staff are too often in a position to consider only their part of the sector, which limits the opportunity for whole-system, efficient solutions to emerge and for them to develop new experiences and broaden their horizons.

To tackle this, a sustained programme to invest in skills, training and leadership across the rail sector will foster greater collaboration and openness to innovation and new technology and so support vital long-term productivity improvements. This new approach will support people at every career stage to contribute to improving the service offered to customers and to make rail more attractive to new and experienced talent from outside the sector – including apprenticeships.

The new Connected Leaders Scheme, launched in 2020, is now beginning to equip future leaders across the sector with a deeper understanding of customer needs and a genuinely cross-sector perspective. Building on this, a virtual leadership academy will be established, drawing on the good example of the existing Roads Academy, which has supported a step change in the leadership capabilities of the roads sector.

The academy will professionalise and standardise the skills offer across the entire sector, bringing together commercial, technology and passenger service experience. It will draw on existing best practice and bring in external perspectives and opportunities for wider learning. The academy will be designed in close collaboration with leaders from across the railways, including those currently involved in the Connected Leaders Scheme. Action will also be taken to develop the key, system-wide skills and accreditation programmes in advance of the academy being established.

60. A sector-wide workforce plan will be developed to assist employers and build system-wide resilience.

Constant rounds of industrial relations disputes on the railways have diverted the sector from developing a co-ordinated, strategic approach to planning its workforce. A reset is needed to allow the sector to dedicate time and attention to fostering the skills and talent needed to be fit for the future.

Great British Railways will work with the sector to develop a system-wide workforce plan that brings together the demands of the railways and the supply of skills in one place to enable a strategic assessment of current and future needs. This will help grow service resilience in the short term and build in lead times to plan effectively for future needs. The plan will build on examples of good practice across the sector, such as the Train Drivers Academy, launched in 2019 by the RDG to increase the supply and diversity of qualified drivers.

As part of this work, Great British Railways will support industry-wide co-ordination of driver training and take steps to ensure that operators can recruit and retain talent in a way that is sustainable for the whole sector.

61. Diversity across the sector will be improved through the inclusion of stretching measures in contracts to actively promote and increase recruitment and retention of a diverse workforce.

The rail sector should work to reflect the people and communities it serves by drawing on the talents of those who are under-represented in the sector and would be attracted to a rail career with the right information.

This is why the sector needs to build on the progress already made, with Great British Railways leading industry-wide recruitment campaigns, including school-to-university engagement and shared apprenticeship schemes across the sector, that will demonstrate that the railways provide modern and inclusive career opportunities that are open to all.

Great British Railways will develop a sector-wide people strategy to attract diverse talent by following the evidence of what actually works to recruit and retain people from under-represented groups. The strategy should mean that everyone, irrespective of their background, feels working in the sector is an attractive, inclusive career choice.

Using evidence-based recruitment and retention practices will allow the railways to attract and nurture the rich variety of skills it needs to deliver the rail services the country relies on, support new career paths and empower its people to develop their skills working across the industry.

Network Rail's STEM Lab in Milton Keynes.

62. Comprehensive data on productivity and pay will be collected and published by ORR, which will report on the data and compare it with that of other sectors and labour markets.

The pandemic has further widened the gap between the railways' revenues and costs. Action is required now to close that gap. Modernisation can help to grow revenues, but action is also required to reduce costs and bring the railways into line with other sectors.

As a first step, in collaboration with ORR, the government will introduce new transparency requirements and reporting and analysis on productivity and pay. ORR will collect and publish comprehensive data on salaries and provide comparisons with other sectors and labour markets. It will also oversee, report and benchmark the sector's productivity.

A standardised approach for reporting staff costs will be introduced for passenger operators and Great British Railways to enable analysis on a consistent, comparable and robust basis. Regular reviews will be undertaken to determine how effectively resources and technology are being employed to deliver improved performance, reliability and customer service.

Staff costs on the railways exceeded £6 billion in 2019–20.[91]

Conclusion
Delivering the rail revolution

This white paper sets out the most ambitious changes to the rail sector in a generation. The government is determined to use this revolution on the railways to deliver meaningful change for passengers, freight customers and taxpayers during the course of this Parliament. Rail must play a major part in helping the country to build back better and unleash the potential of our society and economy in the years ahead.

The ten outcomes at the start of this white paper will guide our efforts to deliver the vision set out by Keith Williams and the government. Designing and implementing a sector-wide transformation of this ambition requires the whole sector to work together. The government will work in close partnership with the rail industry, innovators and other private partners and civil society to achieve the outcomes we all seek as we build a modern, customer-focused rail system.

Transformation does not happen overnight. The government is setting up a Rail Transformation Programme within the Department for Transport and the rail industry to establish a common understanding of the vision, set out the phases of delivery and work collectively with the sector to design and implement this major project. As the programme of reform is delivered, appropriate government approval processes, including in relation to arm's-length bodies, will be followed and the programme will follow assurance and approval processes appropriate for a Government Major Project (GMP).

Alongside this, the government intends to establish an advisory group to support the Secretary of State in ensuring that these proposals are implemented across the sector. Keith Williams will chair this group. As a respected leader in the sector, Andrew Haines has been asked to develop plans for establishing interim arrangements drawing from across the industry and beyond, including RDG, government and Network Rail. He will undertake this alongside his existing role as Chief Executive of Network Rail. The permanent leadership team of Great British Railways, including its chair and chief executive, will be recruited by fair and open competition.

Swift delivery is essential to unlocking the important benefits, including customer benefits and cost efficiencies. The programme will accelerate change wherever possible, while ensuring the sector can respond flexibly as new challenges and opportunities emerge. Whilst we work through longer term changes, the government and sector will also bring forward benefits for passengers and freight customers quickly. These include:

- Contactless journeys and the continued roll-out of digital ticketing;
- Introduction of flexible season tickets;
- Close engagement with the freight sector on fair access in the future and on development of a growth target;
- Consideration of short electrification infill schemes to support freeports;
- Delivering our commitment to Pay As You Go travel;
- Renewed focus on punctuality through recovery contracts and National Rail Contracts; and,
- Clearer communications on trains, at stations and on smart devices.

Pilot schemes of further initiatives and commitments set out in this white paper will also be introduced in the coming years. Alongside consultations and legislation this will create opportunities to develop understanding of how to implement these commitments most effectively and efficiently across the network.

This is an exciting moment for the future of the railways: replacing franchising, achieving a modern passenger experience, accelerating delivery of enhancements through SPEED, delivering decarbonisation and new pay, leadership and training schemes, while integrating the sector through the creation of a guiding mind and greater local and national accountability.

This is a fresh start for the railways. It is time to grasp the opportunities, overcome the challenges of recent years and rebuild public trust in rail.

Our commitments

Chapter Three — **Integrating the railways**

1. **A new public body, Great British Railways, will run the network in the public interest.**

2. **Great British Railways will be the single guiding mind and leader that the railways currently lack.**

3. **Great British Railways will be given the means to think and plan for the longer term.**

4. **There will be a national brand and identity to emphasise that the railways are one connected network.**

5. **Great British Railways will be a new organisation, not just a larger version of Network Rail.**

6. **Great British Railways will be given a binding mandate to have as its primary focus serving the interests of passengers, freight customers and taxpayers and growing rail usage.**

7. **Great British Railways will be mandated to increase efficiency and co-operation.**

8. **The government will hold the railways' leaders accountable for meeting the needs of the customers and communities the network serves.**

9. **A 30-year strategy will provide clear, long-term plans for transforming the railways to strengthen collaboration, unlock efficiencies and incentivise innovation.**

10. **Great British Railways will be made up of powerful regional divisions, with budgets and delivery held at the local level, not just nationally.**

11. **In England, new partnerships with Great British Railways' regional divisions will give towns, cities and regions greater control over local ticketing, services and stations.**

12. **Devolved railways will be strengthened, with closer collaboration with Great British Railways improving services, consistency and co-ordination across the country.**

13. **Community rail partnerships will be empowered to strengthen rail's social and economic impact.**

14. **Station management will be integrated within Great British Railways to improve accountability for long-term investment in stations.**

15. **Opportunities to better unlock housing, local economic growth and social value will be explored.**

16. **Transport Focus will be reformed to become a passenger champion, advising the Secretary of State on passenger priorities.**

17. **Performance and efficiency will be independently scrutinised by the statutory regulator, the Office of Rail and Road.**

18. **Current safety and security rules will remain in place across the rail network. A consultation will be undertaken to ensure safety roles, rules and standards are appropriate for the future.**

19. **Cross-sector organisations will be consolidated and integrated to enable the railways to operate more effectively and efficiently.**

20. **Track access will be overhauled to make the best use of the rail network in the overall public interest.**

Chapter Four — **Replacing franchising**

21. **Franchising will be replaced by new Passenger Service Contracts.**

22. **Passenger Service Contracts will focus operators on meeting passengers' priorities and will incentivise them to grow rail usage.**

23. **Each Passenger Service Contract will be designed to support the needs of passengers and the whole network, as part of an integrated system.**

24. **Passenger Service Contracts will be different across the network and will not take a one-size-fits-all approach, including on contract length.**

25. **Operators will have greater commercial freedom on some parts of the network, with revenue sharing arrangements where appropriate. New open access services will also be explored where spare capacity exists.**

26. **The geographic and financial size of Passenger Service Contracts will reflect local markets and needs.**

27. **Competition for Passenger Service Contracts will be greater than for franchises and Great British Railways will aim to compete all contracts.**

28. **If operators fail, the government will be ready to step in and take control where needed.**

29. **The government will work with the sector and potential new market entrants to develop and implement these changes.**

Chapter Five — **A new deal for passengers**

30. **Easy, frictionless payment options for every journey will be introduced across the network.**

31. **Pay As You Go journeys will be expanded outside London to make millions more trips straightforward.**

32. **Digital tickets will be introduced across the network.**

33. **A new Great British Railways website and app will create a personalised travel experience.**

34. **Customer service at stations will be modernised, with one-team working expanded across the network.**

35. **Fares will be simplified.**

36. **Affordable fares and season ticket caps will continue to be protected.**

37. **Off-peak services will be protected.**

38. **New flexible season tickets will be introduced to reflect changing working patterns.**

39. **Journeys across rail, bus, tram and bike will become seamless in the future.**

40. **Getting to the station on a bike and taking it on a train will be made easier.**

41. **Trains will be made more pleasant to travel on and easier to work aboard.**

42. **Compensation will be simpler and easier to claim, with a consistent, modern process right across the network.**

43. **Passengers will receive clear, consistent information before, during and after their journeys. Their experiences will be monitored more effectively.**

44. **The first robust national accessibility strategy and long-term investment programme will improve inclusion and access for all.**

Chapter Six — **Unleashing the private sector's potential**

45. **The economic and environmental benefits of rail freight will be supported by a new, customer-focused approach, modern track access rights and new safeguards.**

46. **Operators will take a lead role in improving services and performance by innovating with private partners, including train-leasing companies.**

47. **Modern contracts will be introduced to increase competition, reduce costs and help to attract private investment for new technologies.**

48. **Partnerships with other key infrastructure providers, such as broadband innovators, will help to boost the country's drive towards a revolution in connectivity.**

49. **New, locally-led innovation schemes will unlock smarter working and support growth.**

50. **Local engagement will better support small- and medium-sized enterprises and start-ups.**

51. **Contestability across operations will be increased, but sub-contracting will need to deliver real value for money.**

Chapter Seven — **Accelerating innovation and modernisation**

52. **Electrification of the network will be expanded, and alternative technologies such as hydrogen and battery power will help to achieve zero emissions from trains and reduce air pollution.**

53. **The contribution of the railways to the nation's green recovery will be strengthened, including through a comprehensive environment plan by 2022 that will establish rail as the backbone of a cleaner future transport system.**

54. **Energy efficiency, renewable power production, tree-planting and other green initiatives across the rail estate will be accelerated.**

55. **Long-term investment in climate resilience will be prioritised, supported by smarter forecasting, planning and technology.**

56. **An 'open by default' approach to data sharing will better inform journeys, improve transparency and unlock new technology.**

57. **Research, development and innovation funding will be simplified to make it more outcome focused and to improve collaboration.**

58. **SPEED will accelerate the delivery of improvements, making more efficient results the new normal.**

Chapter Eight — **Empowering rail's people**

59. **A new joined-up, cross-sector training and skills offer will support people at every career stage to develop skills and bring in experience from outside the rail sector.**

60. **A sector-wide workforce plan will be developed to assist employers and build system-wide resilience.**

61. **Diversity across the sector will be improved through the inclusion of stretching measures in contracts to actively promote and increase recruitment and retention of a diverse workforce.**

62. **Comprehensive data on productivity and pay will be collected and published by ORR, which will report on the data and compare it with that of other sectors and labour markets.**

Image (page 111) — Dawn on the railways at Clapham High Street, South London.

Endnotes

The full URL for each link is available in clickable form on https://www.gov.uk/government/publications/great-british-railways-williams-shapps-plan-for-rail

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14. Infrastructure Delivery Plan 2021

Infrastructure Delivery Plan

2021

WARRINGTON
Borough Council

Contents

1. Introduction and Purpose

1.1 This Infrastructure Delivery Plan (IDP) is one of a series of evidence base documents that support and underpin Warrington's updated Proposed Submission Version Local Plan.

1.2 The IDP aims to aid all parties in identifying and prioritising infrastructure provision as part of an integrated approach to planning and infrastructure development. In simple terms its purpose is to ensure that infrastructure delivery keeps pace with growth. The Local Plan aims to set out Warrington's infrastructure requirements within the Borough up to 2038 and the IDP remains an essential mechanism for helping to identify funding priorities and any potential gaps. This will ensure that services can match demand and growth is sustainable for local communities. The IDP will give a clear steer on who is responsible for implementing policies and proposals, by when and the resources that will be required.

1.3 The National Planning Policy Framework (NPPF, 2021) clearly sets out at Paragraph 8 that the delivery of infrastructure is key to the creation of sustainable communities. Paragraph 20 requires that strategic policies within a local plan make sufficient provision for infrastructure and community facilities. Linked to this is the effective collaboration with infrastructure providers from early in the plan making process as identified within Paragraph 25.

1.4 The IDP has been informed by a range of programmes which impact on spatial planning. It is a 'live' document and will be reviewed and monitored regularly to ensure that it includes the most up to date information. Any identified costs are based on the best available information at the time of publication, and will be subject to change during the plan period.

2. Draft Local Plan Context

Overall Strategy

2.1 Warrington's emerging Local Plan is the overarching strategic policy document which sets out the planning framework to guide the location and level of development in the Borough up to 2038.

2.2 The Council has worked with its partners, including service and infrastructure providers, throughout the process of preparing its draft Local Plan and will continue to engage partners to achieve the agreed outcomes. As such the updated Proposed Submission Version Local Plan (2021) sets out a number of guiding principles in the form of strategic objectives which will guide and influence future development in the Borough. Between 2021 and 2038, the Local Plan seeks to deliver a minimum of 14,688 homes and support growth in the local and sub-regional economy by ensuring provision is made for 316 hectares of employment land.

2.3 The Plan's main priority remains to optimise the development potential of the existing urban area. As such a number of key elements of the Adopted Local Plan Core Strategy's spatial strategy remain. This includes intensifying development in the town centre, the inner area of Warrington and opening up the Waterfront as a new urban quarter facilitated by the proposed Western Link.

2.4 It is not possible however to meet all of Warrington's development needs within the existing urban area. The Plan's spatial strategy has therefore been developed to meet the full need for new homes, employment land and retail supported by wide-ranging infrastructure improvements over the plan period.

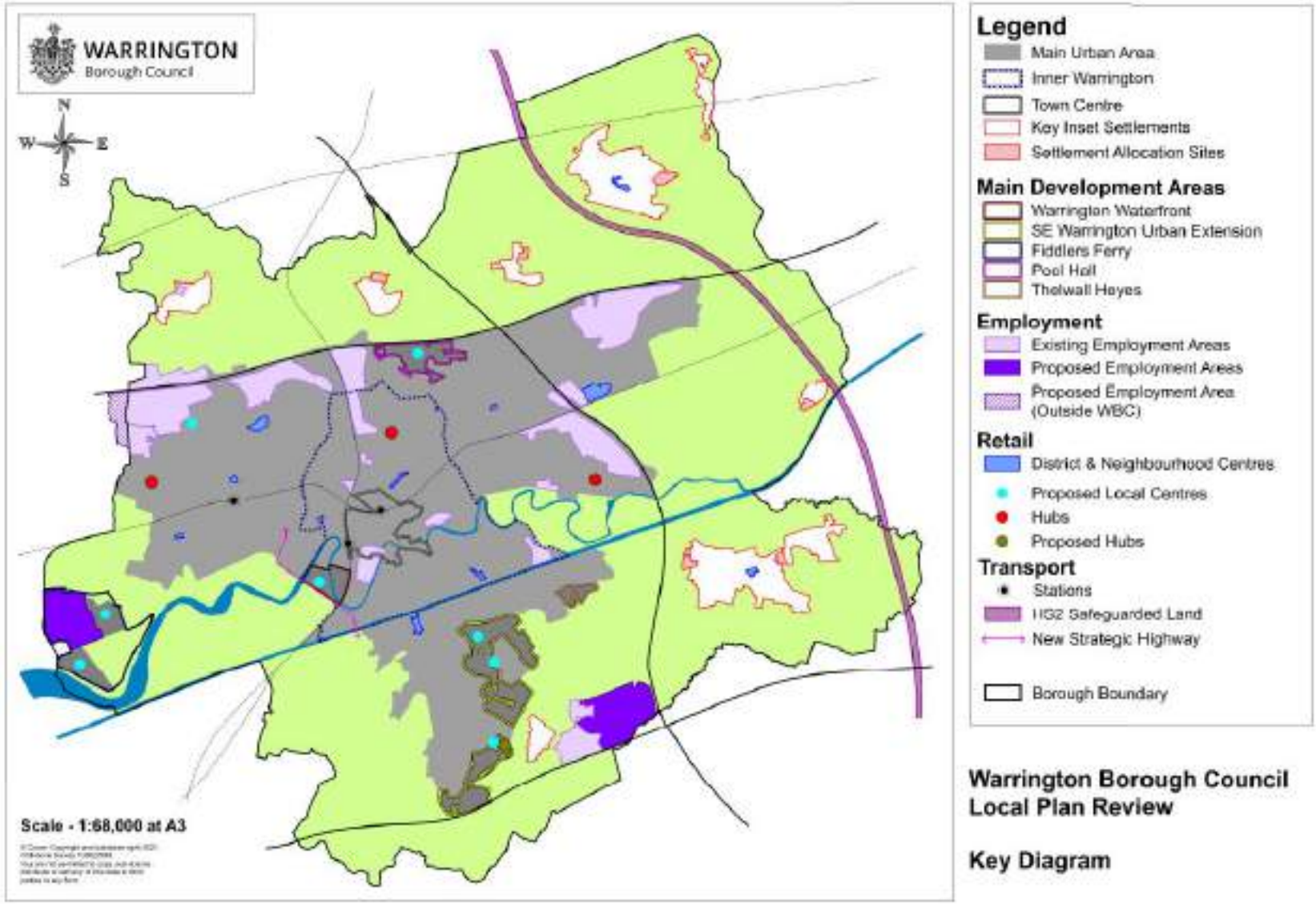
Strategic Locations

2.5 A number of main development areas have been identified within the Proposed Submission Version Local Plan (2021). These are locations that are of importance to the overall spatial strategy of the plan and will be a focus for development over the plan period. These are:

- Town Centre
- Waterfront
- Peel Hall
- South East Warrington Urban Extension
- Fiddlers Ferry

2.6 As part of the spatial strategy, some incremental development will also be directed to the outlying settlements of Croft, Culcheth, Hollins Green, Lymm, and Winwick. A further site allocation has been made adjacent to the main urban area at Thelwall Heys.

Figure 2.1: Proposed Submission Version Local Plan – Key Diagram



2.7 The IDP Schedule which is included at Appendix 1 details the projects required to support the delivery of the emerging Local Plan. It also demonstrates the extensive list of internal and external infrastructure providers that have been consulted in relation to the delivery of proposals within the updated Proposed Submission Version Local Plan (2021). It is important to note that at a broad Borough-wide level Warrington can accommodate the levels of development proposed by the Proposed Submission Version Local Plan (2021) as long as a comprehensive approach is taken to the provision of infrastructure, particularly on the larger development sites.

2.8 A plan-wide Viability Assessment has also been undertaken and this demonstrates that the delivery of necessary infrastructure to support the levels of development proposed is viable and deliverable over the plan period. As part of this work, the Council engaged with developers on infrastructure requirements and costs for sites proposed for development in the draft plan.

2.9 All of the main development areas require extensive infrastructure to support their development. Details of the anticipated development costs are provided at Appendix 2. The Council has identified the strategic infrastructure requirements of these allocations - over and above standard on-site infrastructure and S106 planning obligations - and included these in the Viability Assessment as a per dwelling cost.

2.10 It is anticipated that the strategic infrastructure figures will vary as the current data it is based upon are refined are worked up in more detail. It is also anticipated that the costs will rise in line with inflation related to cost of development.

Next Steps

2.11 The Council and its partners recognise that the requisite levels of infrastructure can be delivered and all partners aim to adopt a proactive approach towards ensuring the timely and co-ordinated provision of appropriate high quality infrastructure to support Warrington's communities.

2.12 In order to co-ordinate this approach the Council aims:

- To encourage investment in and improvement of existing infrastructure.
- To work in partnership with internal and external stakeholders to ensure the timely and co-ordinated provision of high quality infrastructure that supports future growth.
- To continue to assess the infrastructure needs and requirements which will support growth in the Borough through the IDP.
- To monitor and review the IDP on a regular basis to ensure that future infrastructure needs are considered and updated.

Appendix 1 – Infrastructure Delivery Schedule

CATEGORY	TOPIC	PROJECT	WHERE [PLACE MAKING AREA]	POLICY	INDICATIVE COST	FUNDING CONFIRMED	FUNDING GAP	FUNDING SOURCE	WHO [LEAD]	PARTNERS	DELIVERY NOTES	Short Term (2021-2025)	Medium Term (2026-2030)	Long Term (2031 +)	COMMITTED UNCERTAIN LONG TERM / ASPIRATIONAL	ADDED / UPDATED	AMENDED BY	INFORMATION SOURCE
Environmental	Flood Prevention	**Sankey Brook Flood Risk Management Scheme. Mitigation of tidal, fluvial and surface water flood risk in local area**	West Warrington	ENV2	£20,200,000	£960,000	£19,240,000	Environment Agency, United Utilities, DEFRA FDGiA, RFCC, DOE, WBC Contribution (possibly from CCF Fund)	EA	United Utilities, WBC	Barrage and pumping station owned and operated by United Utilities. In development		>		Identified in Council/Partner Strategy	Aug-21	CF	Environment Agency
Environmental	Flood Prevention	**Penketh Brook & Whittle Brook. Provision of tidal gates on Whittle Brook, flood wall to mitigate against fluvial flooding of properties.**	West Warrington	ENV2	£4,900,000	£4,900,000	£0	Environment Agency, DERFA FCERMGiA, WBC Contribution (possibly from CCF Fund)	EA	WBC	In development	>			Identified in Council/Partner Strategy	Aug-21	CF	Environment Agency
Environmental	Open Spaces	**Hillock Lane, Woolston** Park creation and drainage improvement	East Warrington	DC5	TBC			WBC capital investment, External funding sources, Developer contributions	WBC	Developers	Restoration of surplus educational land for park and sports use. Awaiting external funding.	>	>		Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Hollinfare Park, Rixton** Enhancement of village green to park	East Warrington	DC5	TBC			WBC capital investment, External funding sources, Developer contributions	WBC	Friends of Hollinfare Cemetery, Developers	Awaiting external funding.	>	>		Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Larkfield Park, Woolston** Access improvements and park enhancements	East Warrington	DC5	£200,000	£33,667	£166,333	WBC capital investment, External funding sources, Developer contributions	WBC	Developers	£22000 from Bruche S106, £11,667 (33% of Lilford S106). This work completed Spring 2019.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Open Spaces	**Parkfields Park, Fearnhead** Park enhancements	East Warrington	DC5	£200,000	£0	£200,000	WBC capital investment, External funding sources, Developer contributions	WBC	Developers		>			Uncertain	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Risley Moss** Phase 1 - habitat restoration and enhancement	East Warrington	DC4, DC5	£300,000	£11,667	£288,333	WBC capital investment, External funding sources, Developer contributions	WBC	Mersey Forest, Developers	£11,667 (33% of Lilford S106). Completed phase of works	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Open Spaces	**Rixton Clay Pits** Habitat restoration and enhancement	East Warrington	DC4, DC5	£200,000	£11,667	£188,333	WBC capital investment, External funding sources, Developer contributions	WBC	Developers	£11,667 (33% of Lilford S106). Completed phase of works	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Open Spaces	**Causeway Park** Site improvements	Inner Warrington	DC5	£80,000	£2,000	£78,000	Developer contributions	WBC	Developers	£2000 from Greenalls S106. Completed phase of works	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Open Spaces	**Victoria Park** Skate park improvements	Inner Warrington, North Warrington	DC5, INF4	TBC			WBC capital investment, External funding sources, Developer contributions	WBC	Developers		>	>		Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Appleton** New equipped play facility to address local deficit of provision	South Warrington	DC5	TBC			Developer contributions	WBC	Developers	To be provided on site as part of major development	>			Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Trans Pennine Trail** Access improvements and surface upgrades for walking and cycling	South Warrington	DC3, DC5	TBC			WBC capital investment, External funding sources, Developer contributions	WBC	Developers		>	>		Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Gatewarth, Sankey Bridges** Habitat creation and access improvements	West Warrington	DC4, DC5	£800,000	£404,104	£395,896	WBC capital investment, External funding sources, Developer contributions	WBC	Developers	£404,104k funding secured (including £104,104 from Omega South S106 and Omega Z7 S106 - £300K).Phase of works complete	>			Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Westbrook** New equipped play facilities to address deficit of provision	West Warrington	DC5	TBC			WBC capital investment, External funding sources, Developer contributions	WBC	Developers		>			Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Omega** New equipped play facilities to address deficit of provision	West Warrington	DC5	£120,000	£120,000	£0	Developer contributions	WBC	Developers	To be provided on site as part of major development. Currently underway.	>			Committed	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Sankey Valley Park** Access improvements and canal restoration	West Warrington	DC3, DC5	TBC			WBC capital investment, External funding sources, Developer contributions	WBC	Halton Borough Council, St. Helens Council & United Utilities,		>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	Parks and Woodlands Manager
Environmental	Open Spaces	**Warrington Play and Playing Areas** Improvements to Play Areas, LAPS, LEAP, NEAP	Borough wide	DC5	TBC	£0	TBC	WBC capital investment, External funding sources, Developer contributions	WBC	WBC, Deevlopers, External Funders		>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Open Spaces	**South East Warrington Urban Extension** Provision of open space	South Warrington	MD2, DC5	TBC			Private sector, developers	WBC		Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>	>	Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Open Spaces	**Fiddlers Ferry** Provision of open space	South Warrington	MD3, DC5	TBC			Private sector, developers	WBC		Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>	>	Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Open Spaces	**Waterfront** Provision of open space	Inner Warrington	MD1, DC5	TBC			Private sector, developers	WBC		Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>	>	Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Open Spaces	**Peel Hall** Provision of open space	North Warrington	MD4, DC5	TBC			Private sector, developers	WBC		Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>		Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Sport and Leisure	**Birchwood Forest Park** New 3G pitch provision to provide sports participation capacity	East Warrington	INF4	£900,000	£0	£900,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Birchwood Forest Park** Pitch drainage improvements and upgrading of changing facilities.	East Warrington	INF4	£340,000	£340,000	£0	WBC capital investment, Developer contributions, FA funding	WBC	Birchwood Junior AFC, FA, Developers	As individual projects - Sports pitch drainage / construction (£240k), upgrading of changing facilities (£100k). Phase 1 to commence 2019.	>			Committed	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Crab Lane Playing Fields, Fearnhead** Replacement of changing facilities and development of 3G sports training facilities	East Warrington	INF4	£1,200,000	£0	£1,200,000	WBC capital investment, Developer contributions, FA funding	WBC	Fife Rangers FC, FA, Developers	As individual projects - Replacement of changing facilities (£200k), development of 3G sports training facilities (£500k). Delivery Programme TBC as part of Council's Playing Pitch Strategy.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager

CATEGORY	TOPIC	PROJECT	WHERE [PLACE MAKING AREA]	POLICY	INDICATIVE COST	FUNDING CONFIRMED	FUNDING GAP	FUNDING SOURCE	WHO [LEAD]	PARTNERS	DELIVERY NOTES	Short Term (2021-2025)	Medium Term (2026-2030)	Long Term (2031 +)	COMMITTED UNCERTAIN LONG TERM / ASPIRATIONAL	ADDED / UPDATED	AMENDED BY	INFORMATION SOURCE
Environmental	Sport and Leisure	**Shaw Street Recreation Ground, Culcheth** New 3G pitch provision to provide sports participation capacity	East Warrington	INF4	£600,000	£0	£600,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Shaw Street Recreation Ground, Culcheth** Pitch improvements	East Warrington	INF4	£200,000	£0	£200,000	WBC capital investment, FA funding, Developer contributions	WBC	FA, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** 1 New RFL 3G pitch senior 11v11 Floodlit 3G AGP	East Warrington	INF4	£1,235,000	£0	£1,235,000	WBC capital investment, Developer contributions, External funding	WBC	External Funders, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** 1 new 11v11 Floodlit 3G FTP	East Warrington	INF4	£1,010,000	£0	£1,010,000	WBC capital investment, Developer contributions, FA, External funding	WBC	FA, Developers, External Funders	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Grass pitch improvements(3 xFA Adults)	East Warrington	INF4	£300,000	£0	£300,000	WBC capital investment, Developer contributions, FA, External funding	WBC	FA, Developers, External Funding	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Grass pitch improvements(3x FA mini 5v5)	East Warrington	INF4	£75,000	£0	£75,000	WBC capital investment, Developer contributions, FA, External funding	WBC	FA, Developers, External Funding	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Grass pitch improvements(3x FA Youth 9v9)	East Warrington	INF4	£150,000	£0	£150,000	WBC capital investment, Developer contributions, FA, External funding	WBC	FA, Developers, External Funders	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Grass pitch improvements(3 xRFL Senior)	East Warrington	INF4	£330,000	£0	£330,000	WBC capital investment, Developer contributions, RFL, External funding	WBC	RFL, Developers, External Funders	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Grass pitch improvements(1 xRFL Junior)	East Warrington	INF4	£50,000	£0	£50,000	WBC capital investment, Developer contributions, RFL, External funding	WBC	RFL, Developers, External Funders	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Grass pitch improvements(1 xRFL Primary)	East Warrington	INF4	£35,000	£0	£35,000	WBC capital investment, Developer contributions, RFL, External funding	WBC	RFL, Developers, External Funders	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Woolston, Hillock Lane** Refurbish changing rooms	East Warrington	INF4	£680,000	£0	£680,000	WBC capital investment, Developer contributions,FA, RFL, External funding	WBC	RFL, Developers, External Funders	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Dallam & Bewsey** New 3G pitch provision to provide sports participation capacity	Inner Warrington, North Warrington	INF4	£600,000	£0	£600,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Loushers Lane Playing Fields, Latchford** Sports pitch drainage / construction, changing facilities and car park upgrade / extension	Inner Warrington, North Warrington	INF4	£680,000	£0	£680,000	WBC capital investment, Developer contributions, FA funding	WBC	Warrington Town JFC, FA, Developers	As individual projects - sports pitch drainage / construction (£280k), Changing facilities (£250k), car park upgrade / extension (£150k). Delivery Programme TBC as part of Council's Playing Pitch Strategy.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Morley Common** New pitch provision (including 3G) to provide sports participation capacity	Inner Warrington, North Warrington	INF4	£600,000	£100,000	£500,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	£90,000 from Greenalls S106, £10000 from Ship Inn S106. Delivery Programme TBC as part of Council's Playing Pitch Strategy	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Radley Common, Houghton Green** Pitch drainage improvements and replacement changing facilities	Inner Warrington, North Warrington	INF4	£600,000	£0	£600,000	WBC capital investment, FA funding, Developer contributions	WBC	Winwick FC, FA, Developers	Relates to Peel Hall Allocation in Draft Local Plan.	>	>		Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Victoria Park Bowling Green** Extend bowling pavilion, installation of shelters.	Inner Warrington, North Warrington	INF4	£2,000,000	£2,000,000	£0	WBC, Developer contributions	WBC	Developers	Currently underway.	>			Committed	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Victoria Park** Improvements to athletics spectator infrastructure	Inner Warrington, North Warrington	INF4	£300,000	£300,000	£0	WBC, Developer contributions	WBC	Developers	Due to commence 2019/2020.	>			Committed	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Appleton Thorn Field, New Lane** Development of site as community parkland: sports pitches, changing facilities, car park upgrade / extension, access improvements, equipped play facilities	South Warrington	INF4	£970,000	£0	£970,000	FA / RU funding, Developer contributions	Appleton Boys & Warrington RU Club	HCA, Grappenhall AFC, Warrington Town Juniors, RFU, Developers	Land in HCA ownership. Individual project breakdown - sports pitches (£200k), Changing facilities (£250k), car park upgrade / extension (£100k), access improvements (£100k), equipped play facilities (£120k).	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Appleton** New 3G pitch provision to provide sports participation capacity	South Warrington	INF4	£600,000	£0	£600,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	Precise location TBC. Delivery Programme TBC as part of Counil's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Lymm** New 3G pitch provision to provide sports participation capacity	South Warrington	INF4	£600,000	£0	£600,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	Precise location TBC. Delivery Programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Ridgway Grundy, Lymm** Sports pitch drainage / construction & upgrading of changing facilities	South Warrington	INF4	£300,000	£0	£300,000	WBC capital investment, FA funding, Developer contributions	WBC	FA, Developers	As individual projects - sports pitch drainage / construction (£100k), upgrading of changing facilities (£200k). Delivery Programme TBC as part of Council's Playing Pitch Strategy	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Sandy Lane, Lymm** Changing facilities	South Warrington	INF4	£300,000	£0	£300,000	WBC capital investment, FA funding, Developer contributions	WBC	FA, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Sow Brook Playing Field, Lymm** Development of underutilised sports facilities to include sports pitch drainage / construction, changing facilities and car park upgrade / extension	South Warrington	INF4	£980,000	£0	£980,000	WBC capital investment, FA funding, Developer contributions	WBC	Lymm Piranhas JFC, FA, Developers	As individual projects - development of underutilised sports facilities to include sports pitch drainage / construction (£280k), Changing facilities (£250k), car park upgrade / extension (£150k). Delivery programme TBC as part of Council's Playing Pitch Strategy.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Crosfields / Hood Lane Recreation Ground** Car park upgrade / extension and development of 3G sports training facilities	West Warrington	INF4	£950,000	£0	£950,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	As individual projects - car park upgrade / extension (£250k) and development of 3G sports training facilities (£500k). Delivery programme TBC as part of Council's Playing Pitch Strategy.	>	>	>	Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Doe Green Playing Fields, Penketh** Pitch drainage improvements	West Warrington	INF4	£120,000	£0	£120,000	WBC capital investment, Developer contributions, FA funding	WBC	Penketh United JFC, FA, Developers	Delivery programme TBC as part of Council's Playing Pitch Strategy.	>			Identified in Council/Partner Strategy	Aug-21	Cf	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Mary Ann Meadows, Westbrook** Pitch drainage improvements	West Warrington	INF4	£185,000	£35,630	£149,370	WBC capital investment, Environment Agency investment, FA funding	WBC	Cromwell Athletic AFC, FA, Developers	Works commenced on phase 1 of drainage improvements funded by FA (£35,000). £630 from Whittle Hall 16 S106.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Omega** Changing facilities, development of 3G sports training facilities and sports turf playing facilities	West Warrington	INF4	£1,100,000	£0	£1,100,000	WBC capital investment, Developer contributions, FA funding, External funding	WBC	FA, Developers	Currently subject to development proposals.	>	>	>	Committed	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport and Leisure	**Thornton Road Recreation Ground, Great Sankey** Pitch improvements and upgrade of changing facilities	West Warrington	INF4	£500,000	£73,586	£426,414	WBC capital investment, FA funding, Developer contributions	WBC	Eagles Football Club, FA, Developers	Phase 1 pitch improvements commenced (£20k capital investment). Further £53,586 from Saxon Park East S106.	>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager

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Environmental	Sport and Leisure	**Closed Road Cycle Circuit** Location to be determined.	Borough wide	INF4	£650,000	£0	£650,000	WBC capital investment, Sport England, developer contributions, External funding	WBC	Sport England, Developers		>			Identified in Council/Partner Strategy	Aug-21	CF	Parks and Woodlands Manager
Environmental	Sport & Leisure	**Cardinal Newman Catholic HS** extension and redevelopment of AGP to 3G surface and improvement of grass pitches to develop a strategic football hub	Central Warrington		£900,000	£0	£900,00	WBC	WBC	FA, Town Deal	Project going to feasability ahead of Football Foundation grant application	>			Identified in Council/Partner Strategy	Aug-21	CF	sports Infrastructure development Manager
Environmental	Sport and Leisure	**Waterfront** Provision of playing pitches	Inner Warrington	MD1, DC5	£1,042,969	£0	£1,042,969	Developers, private sector	WBC	Livewire, developers	Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>		Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Sport and Leisure	**South East Warrington Urban Extension** Provision of playing pitches	South Warrington	MD2, DC5	£4,093,558	£0	£4,093,558	Developers, private sector	WBC	Livewire, developers	Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>		Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Sport and Leisure	**South East Warrington Urban Extension** Provision of new leisure facilities/hub	South Warrington	MD2, DC5, INF4	£20,000,000	£0	£20,000,000	Developers, private sector, WBC	WBC	Livewire, developers	Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>		Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Sport and Leisure	**Fiddlers Ferry** Provision of playing pitches or contribution towards off-site provision.	West Warrington	MD3, DC5	£623,806	£0	£623,806	Developers, private sector	WBC	Livewire, developers	Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>		Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Environmental	Sport and Leisure	**Peel Hall** Provision of new sports pitches and ancillary changing facilities (including relocation of pitches at Mill Lane)	North Warrington	MD4, DC5	£1,169,589	£0	£1,169,589	Developers, private sector	WBC	Livewire, developers	Proposed allocation in Draft Local Plan. Accounted for as part of wider strategic infrastructure costs for site allocations.		>		Identified in Council/Partner Strategy	Aug-21	EG	Draft Local Plan
Social	Affordable Housing	**Social Affordable Housing** S106 Contributions	Borough wide	DEV2	TBC	TBC	£0	Developer contributions	WBC	Registered providers	In instances where WBC accept a commuted sum in lieu of on-site provision. This money is pooled and will be used to assist registered providers in delivering schemes of affordable homes in various locations around the borough.	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	Section 106 Monitor
Social	Community Facilities	**Dallam Regeneration Programme** New Community Hub on Longshaw Street; replacement changing rooms on Longshaw Street Playing Fields and regeneration of Harrison Square	Inner Warrington, North Warrington	INF4	TBC	TBC	TBC	WBC	WBC		Due to complete autumn 2021	>			Identified in Council/Partner Strategy	Aug-21	EG	Leisure Community Services
Social	Community Facilities	**Heritage Hub** Create a new community heritage and learning hub in the current Central Library and Museum building to be a key visitor destination. The hub will provide accessible spaces for learning and improved digital access. The town centre attraction will be a central hub and be linked to LiveWire's network of libraries and community hubs to create an inclusive offer across the neighbourhoods.	Town Centre and borough wide	INF4	£12,000,000	£1,000,000	£11,000,000	Heritage Lottery Fund; ACE; other grant making bodies; WBC as owner of the building and collections; Developer contributions	WBC	Heritage Lottery Fund, Developers	Ongoing as funding becomes available. Roof refurbishment currently underway.	>	>		Identified in Council/Partner Strategy	Aug-21	CF	Culture Warrington/WBC
Social	Community Facilities	**Walton Hall & Estate Upgrading (Phase 2)** Project to reinstate the listed glasshouses into a learning centre and college.	South Warrington	DC1	£3,500,000	£3,500,000	£0	WBC, HLF Grant	WBC	Myerscough College / Walton Lea Partnership / Community	Nearing completion.	>			Commited	Aug-21	EG	WBC estates/ infrastructure
Social	Community Facilities	**Walton Hall & Estate Upgrading (Phase 3)** Project to enhance the financial viabilty of the estate, including repair of riding school, repair of heritage units and strategic investments in energy, water and drainage across the estate.	South Warrington	DC1	£4,000,000	£0	£4,000,000	WBC, Developer contributions	WBC	Various	Riding School Roof completed together with heritage yard and stables. The drainage is being reviewed and a proposal for the drainage to be repaired will be implemented. Investments in electricity and water are still to be addressed.	>	>		Longer term / aspirational	Aug-21	EG	WBC estates/ infrastructure
Social	Community Facilities	**Upgrade of existing library in Culcheth**	Culcheth	INF4	TBC			Developer contributions, WBC	WBC	Livewire		>	>		Identified in Council/Partner Strategy	Aug-21	EG	Leisure/Community services
Social	Community Facilities	**South East Warrington Urban Extension Community Hub** New community facility comprising leisure and health services (see above in Sport and Leisure)	South Warrington	MD2, INF4	See above in Sport and Leisure	£0	TBC	Developer contributions, WBC	WBC	Livewire			>	>	Identified in Council/Partner Strategy	Aug-21	EG	Leisure/Community services, Livewire, Draft Local Plan

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Social	Community Facilities	New Community Recycling Centre within South East Warrington Urban Extension	South Warrington	INF4, ENV1	TBC				WBC				>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Waste Services
Social	Education (Primary)	Grappenhall Heys primary expansion to 2 forms of entry	South Warrington	INF4	£3,000,000	£3,000,000	£0	Developer contributions	WBC	Developers	S106 contribution secured as part of Homes England planning consent. In progress - scheduled for completion 2022	>			Committed	Aug-21	EG	S106 monitor
Social	Education (Primary)	South East Warrington Urban Extension Provision of two new primary schools comprising 2 forms of entry capable of expansion to 3 forms of entry.	South Warrington	MD2, INF4	£15,500,000	£0	£15,500,000	Developer contributions and additional funding	WBC	Developers	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Education Service
Social	Education (Primary)	Fiddlers Ferry New primary school providing a minimum of 2 forms of entry.	West Warrington	MD3, INF4	£5,000,000	£0	£5,000,000	Developer contributions and additional funding	WBC	Developers	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Education Service
Social	Education (Primary)	Waterfront New primary school providing a minimum of 2 forms of entry.	Inner Warrington	MD1, INF4	£5,000,000	£0	£5,000,000	Developer contributions and additional funding	WBC	Developers	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Education Service/ Warrington & Co
Social	Education (Primary)	Peel Hall New primary school of 1 form entry with capacity to expand to 2 form entry. Also provision of additional half form entry off-site.	North Warrington	MD4, INF4	£5,000,000	£0	£5,000,000	Developer contributions and additional funding	WBC	Developers	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Education Service/ Warrington & Co
Social	Education (Secondary)	Bridgewater High School increase capacity by 300 places	South Warrington	INF4	£4,500,000	£4,500,000	£0	Developer contributions	WBC	Developers	S106 contributios secured as part of Homes England planning consent. Work in progress.	>			Committed	Aug-21	EG	S106 monitor/ Education Service
Social	Education (Secondary)	St Gregorys High School Replacement of existing buildings and expansion by 240 places	West Warrington	INF4	£4,500,000	£4,500,000	£0	DFE/ WBC, Developer contributions	WBC	Developers	Work underway.	>			Committed	Aug-21	EG	Education Service
Social	Education (Secondary)	Sir Thomas Boteler High School Increased capacity to accommodate nearby development	Inner Warrington	INF4	TBC	TBC		Developer contributions	WBC	Developers	Increased provision from 825 to 900 places agrred with TCAT to accommodate increased demand from development at Chester Road.	>			Committed	Aug-21	EG	Education Service
Social	Education (Secondary)	South East Warrington Urban Extension Provision of new secondary school providing a minimum of 4 forms of entry.	South Warrington	MD2, INF4	£9,000,000	£0	£9,000,000	Developer contributions	WBC	Developers	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Education Service/ Warrington & Co
Social	Transit Site for Travellers	Transit Site Accommodation for Travellers To identify a site and bring forward a managed transit site for travellers.	Borough wide	DEV3	£2,000,000	£2,000,000	£0	WBC	WBC			>			Committed	Aug-21	EG	Warrington & Co
Transport	Strategic Road Network	Junction 20 M6 - improvements	South Warrington	INF1	£18,000,000	£0	£18,000,000	Developers / private sector	WBC/ Highways England	Developers / private sector	Business case developent subject of a study led by WBC in partnership with Highways England	>	>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Strategic Road Network	Junction 10 M56 - improvements	South Warrington	INF1	£5,000,000	£0	£5,000,000	Developers / private sector	Highways England	Developers / private sector	Subject of a HE study		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Strategic Road Network	M6 Junctions 21A-26 Smart Motorway	South Warrington	INF1	TBC			Highways England (RIS)	Highways England		On site. Completion expected by 2022/23.	>			Committed	Aug-21	EG	WBC Transport for Warrington
Transport	Strategic Road Network	M62 capacity & junction improvements	North/West/ East Warrington	INF1	TBC				Highways England			>	>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Strategic Road Network	M6 Capacity Improvements		INF1	TBC				Highways England			>	>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Western Link - plus complementary junctions, eg Canons Rd/ Cromwell Ave, Stag Inn etc	West Warrington / South Warrington	INF2	£220,000,000	£142,500,000	£77,500,000	DfT and WBC	WBC	Other	Planning application to be submitted summer 2021. Start on site 2023, complete by 2025/26.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Omega Local Highways Ph 1 (Omega Boulevard)	West Warrington	INF1	£4,500,000	£4,500,000	£0	WBC, developers and Local Growth Fund (LGF)	WBC	Developers / private sector	On site. Completion Autumn 2021.	>			Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Omega Local Highways Ph 2B (A57/ Lingley Green Av junction)	West Warrington	INF1	£2,350,000	£2,350,000	£0	WBC, DfT and Local Growth Fund	WBC	Developers / private sector	On site. Completion Autumn 2021.	>			Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Omega Local Highways Ph 3C (Zones 3-6 junction improvements)	West Warrington	INF1	£4,000,000	£4,000,000	£0	WBC and developers	WBC	Developers / private sector	Planned 2022.	>			Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Warrington East ph 4	East Warrington	INF1, INF2	TBC				WBC	Developers / private sector	Concept only.		>		Identified in Council/Partner	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Future Bridgewater Canal Crossing	South Warrington	INF1, MD2	TBC			Developers / private sector / public sector	WBC	Developers / private sector			>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - On site strategic highways - Interim Cat & Lion Relief scheme	South Warrington	MD2	£11,979,183	£0	£11,979,183	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - On site strategic highways - Stretton East Link Road / Distributor	South Warrington	MD2	£7,343,530	£0	£7,343,530	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - On site strategic highways - Completion of the main spine route	South Warrington	MD2	£13,442,760	£0	£13,442,760	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - On site strategic highways - A50 link and Barleycastle Lane	South Warrington	MD2	£15,085,936	£0	£15,085,936	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington

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Transport	Local Road Network	South East Warrington Urban Extension - On site strategic highways - Blackcap Road Upgrade	South Warrington	MD2	£4,258,685	£0	£4,258,685	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - On site strategic highways - Transit Enabled Route from spine road to Stockton Lane	South Warrington	MD2	£16,964,545	£0	£16,964,545	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - Off site strategic highways - Lyon's Lane Junction improvement	South Warrington	MD2	£2,631,250	£0	£2,631,250	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Urban Extension - Off site strategic highways - Longwood Road Junction Improvement	South Warrington	MD2	£1,052,500	£0	£1,052,500	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Employment site - Offsite Strategic Highways - A50 / Cliff Lane	South Warrington	MD6	£4,400,000	£0	£4,400,000	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	South East Warrington Employment site - Off site junction works (other)	South Warrington	MD6	£74,413	£0	£74,413	Developer	Developer	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Peel Hall - On site strategic highways - Bus gate on Poplars Avenue	North Warrington	MD4	£628,316	£0	£628,316	Developer	Developer	Developers/ private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Peel Hall - On site strategic highways - Peel Hall Spine Road	North Warrington	MD4	£955,731	£0	£955,731	Developer	Developer	Developers/ private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Peel Hall - On site strategic highways - Bus gate on Internal Spine Road	North Warrington	MD4	£385,275	£0	£385,275	Developer	Developer	Developers/ private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Peel Hall - On site strategic highways - Bus gate onto Poplars Avenue	North Warrington	MD4	£2,176,879	£0	£2,176,879	Developer	Developer	Developers/ private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Peel Hall - On site strategic highways - New junction onto Mill Lane	North Warrington	MD4	£8,444,900	£0	£8,444,900	Developer	Developer	Developers/ private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Peel Hall - Off site strategic highways - Traffic calming scheme on Poplars Ave	North Warrington	MD4	£2,720,000	£0	£2,720,000	Developer	Developer	Developers/ private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - A562 / A5080 Roundabout	West Warrington	MD3	£3,210,000	£0	£3,210,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - A562 / Liverpool Road Junction (Lane End junction)	West Warrington	MD3	£321,000	£0	£321,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - A562 / A57 Roundabout	West Warrington	MD3	£1,872,500	£0	£1,872,500	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - A57(W) and other local improvements (including Widnes Road along site frontage)	West Warrington	MD3	£1,605,000	£0	£1,605,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - A562 / A557 Junction	West Warrington	MD3	£2,140,000	£0	£2,140,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - Local junctions and mitigation measures - Halton	West Warrington	MD3	£2,675,000	£0	£2,675,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Strategic Road Network	Fiddlers Ferry - Off site strategic highways - M62 Junction 7	West Warrington	MD3	£2,675,000	£0	£2,675,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Strategic Road Network	Fiddlers Ferry - Off site strategic highways - M62 J8	West Warrington	MD3	£267,500	£0	£267,500	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Fiddlers Ferry - Off site strategic highways - Sustainable travel works and bus service upgrade measures	West Warrington	MD3	£4,280,000	£0	£4,280,000	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Waterfront - On site strategic highways - Major junction with Western Link	Inner Warrington	MD1	£1,271,721	£0	£1,271,721	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Waterfront - Internal roads	Inner Warrington	MD1	£829,722	£0	£829,722	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Waterfront - New all purpose bridges across Mersey x 2	Inner Warrington	MD1	£11,330,200	£0	£11,330,200	Developer	WBC	Developers / private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Bridgfoot link and Brian Bevan island	Central/ Inner Warrington	INF2	£7,200,000	£0	£7,200,000	DfT and WBC	WBC	Developers / private sector	Concept only. LTP4 recommends study work required.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington

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Transport	Local Road Network	High Level cantilever bridge crossing replacement	Inner Warrington/ South Warrington	INF2	£55,000,000	£0	£55,000,000		WBC	Developers / private sector	Concept only. LTP4 recommends study work required.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Southern Gateway Development Access Framework	Inner Warrington	INF1	TBC				WBC		Concept only. LTP4		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Warrington North Pinchpoints (A49 corridor)	Inner Warrington/ North Warrington	INF1	TBC				WBC		Concept only. LTP4		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Stadium Quarter Highway Improvement Package (Warrington Transport Improvements Package)	Town Centre	TC1	TBC				WBC		Concept only. LTP4		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Local Road Network	Town Centre Vision Access Package (Last Mile)	Various	INF1	TBC				WBC		First and Last Mile Masterplan complete. Scheme and projects to be developed for future funding bids	>	>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	Warrington Bank Quay station	Town Centre	INF1	£50,000,000	£0	£50,000,000	DfT and WBC	WBC	Network Rail	Depends on HS2 and Northern Powerhouse Rail. LTP4		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	HS2/NPR interchange	Town Centre	INF1	TBC		TBC	DfT and WBC	WBC	Network Rail			>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	CLC station and service enhancement	Various	INF1	TBC		TBC	DfT	Network Rail	Network Rail			>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	Mass Transit Network	Various	LTP4	TBC		TBC	DfT and WBC	WBC	Developers / private sector	Several routes identified in LTP4, detailed study work to follow.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	Bus Priority / corridor improvements	Various	INF1	£25,000,000	£0	£25,000,000	DfT and WBC	WBC	Developers, private sector	Work ongoing on short term (5 years) Bus priority measures and development of Bus Services Improvement Plan	>			Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	Birchwood station access strategy including P&R	East Warrington	INF1	£37,000,000	£0	£37,000,000	DfT and WBC	WBC	Developers, private sector				>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	South East Warrington Urban Extension - bus service pump priming	South Warrington	INF1, MD2	£2,200,000	£0	£2,200,000	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	Peel Hall - bus service pump priming	North Warrington	MD4	£1,000,000	£0	£1,000,000	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	Waterfront - bus service pump priming	Inner Warrington	MD1	£750,000	£0	£750,000	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Public Transport	South East Warrington Employment site - bus service pump priming	South Warrington	MD6	£1,339,435	£0	£1,339,435	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Primary Route A57 Liverpool Road/Sankey Way to Town Centre	Various	INF1	£5,000,000	£0	£5,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Primary Route A5061/A50 Knutsford Road to Town Centre	Various	INF1	£3,500,000	£0	£3,500,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Neighbourhood Route Bewsey Road to Town Centre	Various	INF1	£1,000,000	£0	£1,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)	>			Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Primary Route A49 Winwick Road to Town Centre	Various	INF1	£3,000,000	£0	£3,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Primary Route A57 Manchester Road to Town Centre	Various	INF1	£4,000,000	£0	£4,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Primary Route A49 Wilderspool Causeway to Town Centre	Various	INF1	£3,000,000	£0	£3,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)			>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Neighbourhood Route A49 Newton Road to Winwick/ Parkside	Various	INF1	£1,500,000	£0	£1,500,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Neighbourhood Route A574 Warrington Road to Culcheth	Various	INF1	£2,500,000	£0	£2,500,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Strategic Greenways Sankey Valley	West Warrington	INF1	£2,000,000	£0	£2,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	LCWIP Strategic Greenways Trans Pennine Trail (NCN62)	West Warrington	INF1	£5,000,000	£0	£5,000,000	DfT	WBC		Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	Strategic greenways within South East Warrington Urban Extension	South Warrington	MD2	£15,180,723	£0	£15,180,723	Developer	Private Sector	Developers, private sector	Included in the Local Cycling and Walking Infrastructure Plans within LTP4 (LCWIP)		>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	Warrington Waterfront Riverside Walkway	Inner Warrington	MD1	£870,167	£0	£870,167	Developer	Private Sector	Developers, private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington

CATEGORY	TOPIC	PROJECT	WHERE [PLACE MAKING AREA]	POLICY	INDICATIVE COST	FUNDING CONFIRMED	FUNDING GAP	FUNDING SOURCE	WHO [LEAD]	PARTNERS	DELIVERY NOTES	Short Term (2021-2025)	Medium Term (2026-2030)	Long Term (2031 +)	COMMITTED UNCERTAIN LONG TERM / ASPIRATIONAL	ADDED / UPDATED	AMENDED BY	INFORMATION SOURCE
Transport	Cycling and Walking	Waterfront - Riverside path on both sides of Mersey	Inner Warrington	MD1	£538,381	£0	£538,381	Developer	Private Sector	Developers, private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	Waterfront - Link to Town centre via Slutchers Lane	Inner Warrington	MD1	£3,013,750	£0	£3,013,750	Developer	Private Sector	Developers, private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	Mini Holland neighbourhood treatment	Various	INF1	£20,000,000	£0	£20,000,000	DfT	WBC	Developers, private sector	LTP4	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	Strategic greenways/ neighbourhoods extensions/upgrades	Various	INF1, DC3,	£10,000,000	£0	£10,000,000	DfT	WBC	Developers, private sector	LTP4	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	South East Warrington Employment site - Footway/cycle way along Grappenhall Lane (Broad Lane to Cliffe Lane)	South Warrington	MD6	£892,957	£0	£892,957	Developer	Private Sector	Developers, private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	South East Warrington Employment site - Footway/cycle way Grappenhall Lane/Barleycastle Lane (south of Broad Lane)	South Warrington	MD6	£386,948	£0	£386,948	Developer	Private Sector	Developers, private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	South East Warrington Employment site - Public Right of Way	South Warrington	MD6	£223,239	£0	£223,239	Developer	WBC	Developers, private sector	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	River Mersey Footbridge (Waterfront) New footbridge to improve access for cycling and pedestrians	Town Centre	TC1	£2,000,000	£0	£2,000,000	DfT	WBC	Developers, private sector	Included in the Local Cycling and Walking Infrastructure Plan (LCWIP)		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Cycling and Walking	Riverside (North of Mersey) Access improvements for cycling and pedestrians, including new walkways	Town Centre/ Inner Warrington	TC1	£2,500,000	£0	£2,500,000	DfT	WBC	Developers, private sector	LTP4		>		Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Asset Management	Asset Management of Structures Essential investment to tackle deterioration of structures (bridges, retaining walls, etc.)	Borough wide	INF1	TBC	TBC	TBC	WBC and DfT	WBC	Highways England, Network Rail, private sector.	In addition to providing for current needs, investment will need to be prioritised where changes in traffic type and volume will impact on levels of deterioration - for example increased freight movements will have implications for the load bearing capacity of weak bridges.	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Asset Management	Highways Structural Improvement and Asset Management Schemes (0-15yrs) Essential investment to tackle deterioration of the highway network. Priorities identified in network condition survey drawings.	Borough wide	INF1	TBC	TBC	TBC	WBC and DfT	WBC		Various individual schemes between £50-£350k currently progressed each year. Current LTP budget allocations insufficient to prevent on-going network deterioration. [Source of figures: Depreciation Values taken from MARCH pms Report March 2018 - Annual Depreciation - Carriageways, Yotta DCL]	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Transport	Asset Management	Street Lighting Programme of investment to ensure appropriate levels and environmental efficiency of street lighting.	Borough wide	INF1	£16,000,000	£0	£16,000,000	WBC	WBC		The Completion of the Street Lighting Capital Replacement Project of approximately 18,000 Units over a core investment period will be completed by 2020/21. It is planned to refesh the lantern technology in future years following the completion of the project.	>	>	>	Identified in Council/Partner Strategy	Aug-21	EG	WBC Transport for Warrington
Utilities	General	South East Warrington Urban Extension - network reinformcement	South Warrington	INF3, MD2	£39,159,808	£0	£39,159,808	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Warrington & Co
Utilities	General	Fiddlers Ferry - network reinformcement	West Warrington	INF3. MD3	£2,580,000	£0	£2,580,000	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Warrington & Co
Utilities	General	South East Warrington Urban Extension - Employment site - network reinforcement	South Warrington	INF3, MD6	£22,525,000	£0	£22,525,000	Developer	WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Warrington & Co
Utilities	General	Waterfront - network reinforcement	Inner Warrington	MD1	TBC				WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Warrington & Co

CATEGORY	TOPIC	PROJECT	WHERE [PLACE MAKING AREA]	POLICY	INDICATIVE COST	FUNDING CONFIRMED	FUNDING GAP	FUNDING SOURCE	WHO [LEAD]	PARTNERS	DELIVERY NOTES	Short Term (2021-2025)	Medium Term (2026-2030)	Long Term (2031 +)	COMMITTED UNCERTAIN LONG TERM / ASPIRATIONAL	ADDED / UPDATED	AMENDED BY	INFORMATION SOURCE
Utilities	General	**Peel Hall - network reinforcement**	North Warrington	MD4	TBC				WBC	Developer	Proposed allocation in Draft Local Plan.		>		Identified in Council/Partner Strategy	Aug-21	EG	Warrington & Co
Utilities	Electricity	**Network Re-inforcement** Provision of new substation at Antrim Road to reinforce network in Winwick Road corridor.	Town Centre, Inner Warrington, North Warrington	INF3	TBC	TBC	TBC	Private investment	Scottish Power Energy Networks		Lawful development certificate granted and land tenant given notice to quit.	>			Committed	Mar-19	EG	Scottish Power
Utilities	Electricity	**Town Centre Network Re-inforcement** Provision of new infrastructure/capacity in the Town Centre.	Town Centre	INF3, TC1	£26,000,000	£0	£26,000,000	Subject of HIF Bid	WBC	Scottish Power Energy Networks	Early stage feasibility costs.		>		Identified in Council/Partner Strategy	Mar-19	EG	Scotish Power/ WBC Infrasturcture
Utilities	Electricity	**North Warrington network upgrades** Removal of existing substation and provision of a new upgraded substation at Waterworks Lane, Winwick to reinforce network in North Warrington.	North Warrington	INF3	TBC	TBC	TBC	Private investment	Scottish Power Energy Networks		Planning permission granted.	>			Committed	Mar-19	EG	Scottish Power
Utilities	Electricity	**Omega Upgrades** New substation to support the development of Omega.	West Warrington	INF3	TBC	TBC	TBC	Private investment	Developer	Scottish Power Energy Networks	Planning permission granted.	>			Committed	Mar-19	EG	Scottish Power
Utilities	Electricity	**Warrington Bus Depot**	North Warrington	INf3	£780,000	TBC	TBC	Subject to Zero emissions Bus Regional reas Scheme	WBC	Scottish Power Energy Networks	Early stage feasibility costs.	>			Identified in Council/Partner Strategy	Aug-21	CF	Scottish Power
Utilities	Electricity	**Relocation of Thames Board Mill primary sub-station**	Central/ Inner Warrington	INF3	£600,000	Yes	N/A	Scottish Powe Energy Networks	Scottish Power Energy		Early stages in design, planning permission required	>			Committed	Aug-21	CF	Scotish Power
Utilities	Renewable Energy	**Large scale renewable technology and district heating schemes** To be developed across the borough initiated in the Strategic Locations and Opportunity Areas	Borough wide	ENV7	Not yet identified	£0	Not yet identified	Not yet identified	WBC	Private Sector	The long term ambition is to deliver a strategic district heating network across the borough. The Council recognises that the opportunities for installing such a network across existing communities is, for the most part, beyond the scope of planning. Therefore, Policy QE1 requires development to be able to connect to a scheme once such a network is in place and to be designed to be compatible with future networks, in terms of site layout, heating and site-wide infrastructure design. The policy requires larger more strategic new developments to install their own network, which can later be connected up to a larger network. In order to minimise costs the Council will undertake further, more detailed work to assess the feasibility of opportunities for decentralised energy networks in the strategic locations and opportunity areas identified in the strategic policies and on the key diagram.			>	Longer term / aspirational	Aug-21	EG	WBC
Utilities	Telecommunications	**Connecting Cheshire Project (Contract 1)** Provide superfast broadband to areas of Warrington in which there is no provision or future plans for this by the private sector	Borough wide	INF3	£28,500,000	£28,500,000	£0	BDUK Programme, EDRF grant funding, Openreach, Connecting Cheshire Partnership	WBC, Cheshire Authorities, Halton BC	Openreach	Contrcat 1 complete deploymnet in November 2016 with over 68,400 premsies accessing superfast broadband speeds (>24 Mbps) across the project area with 10,255 in Warrington.	>			Committed	Aug-21	EG	Connecting Cheshire
Utilities	Telecommunications	**Connecting Cheshire Project (Contract 2)** Provide superfast broadband to areas of Warrington in which there is no provision or future plans for this by the private sector	Borough wide	INF3	£9,340,000	£9,340,000	£0	BDUK Programme, Openreach, Connecting Cheshire Partnership	WBC, Cheshire Authorities, Halton BC	Openreach	Contrcat 2 complete deploymnet in June 2019 with over 17,600 premsies accessing superfast broadband speeds (>24 Mbps) with 2939 in Warrington.		>		Committed	Aug-21	EG	Connecting Cheshire
Utilities	Water Supply	**Improvements to Trunk Main** Further improvements to the trunk main which supplies west and east Warrington	Inner Warrington, West Warrington, East Warrington	INF3	TBC	TBC	TBC	AMP6	United Utilities		On-going project, due for delivery in AMP6 (by 31 March 2020). This is being re-modelled currently, due to lots of changes to Warrington's water network configuration as part of the work during the dry weather contingency plans (Summer/Autumn 2018). So the solution needs re-modelling. Anticipated completion still by 31 March 2020.	>			Identified in Council/Partner Strategy	Aug-21	EG	United Utilities
Utilities	Water Supply	**Network Reinforcement** Reinforce network into central Warrington with focus on the Manchester Ship Canal	Town Centre, Inner Warrington, South Warrington	INF3	TBC	TBC	TBC	AMP6	United Utilities			>	>		Identified in Council/Partner Strategy	Aug-21	EG	United Utilities
Social	Health	**Expansion of Fearnhead and Padgate GP Practices**	Inner and North Warrington	INF4	£1M	No	TBC	ETTF (NHSE) NHSE premises improvement	CCG/NHSE	NHS England NHSPS	Both schemes being developed by the practices. Exact requirements to be determined based on the outcome of the Peel Hall planning application. Strategic Outline Case completed.	>	>		Identified in Council/Partner Strategy	Aug-21	EG	Via the Warrington Strategic Estates Group
Social	Health	**New Primary Health Facility at Omega Local Centre**	West Warrington	INF4	£2M	No	TBC	NHSPS Customer Capital route, or other NHSE funding	CCG/NHSE	NHS England CHP/Renova Developments NHSPS	Strategic Outline Case completed. CCG and GP practice working with Omega on delivery model and timescales.	>			Identified in Council/Partner Strategy	Aug-21	EG	Via the Warrington Strategic Estates Group
Social	Health	**New Primary Health Facility at Appleton Cross**	South Warrington	INF4	£2M	£789,504	£210,496	ETTF (NHSE) NHSPS Customer Capital or NHSE funding source	CCG/NHSE	NHS England CHP/Renova Developments NHSPS	Development part of wider neighbourhood plan and to meet the increased demand in the area resulting from housing developments	>	>		Identified in Council/Partner Strategy	Aug-21	EG	Via the Warrington Strategic Estates Group
Social	Health	**Waterfront - New Health Facility**	Inner Warrington	MD1, INF4	TBC				CCG/NHSE		Health facility to be provided on site as part of development.		>		Identified in Council/Partner Strategy	Aug-21	EG	CCG/NHSE, Draft Local Plan
Social	Health	**Fiddlers Ferry - New Health Facility**	South Warrington	MD3, INF4	£1,049,177	£0	£1,049,177		CCG/NHSE		Space to be provided within the development for a potential branch GP surgery.		>		Identified in Council/Partner Strategy	Aug-21	EG	CCG/NHSE, Draft Local Plan
Social	Health	**South East Warrington Urban Extension - New Health Facility**	South Warrington	MD2, INF4	TBC		TBC	Developer	CCG/NHSE	Developer	New health provision to be made as part of a central 'hub' facility. See line 65 of schedule.		>		Identified in Council/Partner Strategy	Aug-21	EG	CCG/NHSE, Draft Local Plan

CATEGORY	TOPIC	PROJECT	WHERE [PLACE MAKING AREA]	POLICY	INDICATIVE COST	FUNDING CONFIRMED	FUNDING GAP	FUNDING SOURCE	WHO [LEAD]	PARTNERS	DELIVERY NOTES	Short Term (2021-2025)	Medium Term (2026-2030)	Long Term (2031 +)	COMMITTED UNCERTAIN LONG TERM / ASPIRATIONAL	ADDED / UPDATED	AMENDED BY	INFORMATION SOURCE
Social	Health	New Primary Health Care Facility - Lymm (Rushgreen Road / Tanyard Farm)	South Warrington	OS5, INF4	£5.3m	TBC	TBC		CCG/NHSE		New primary health care facility to be provided on site. Strategic Outline Case completed and approved by CCG.		>		Identified in Council/Partner Strategy	Aug-21	EG	CCG/NHSE, Draft Local Plan
Social	Health	Cockhedge Medical Centre	Town Centre	INF4	TBC				CCG/NHSE		Expansion needed to accommodate projected growth.	>	>		Identified in Council/Partner Strategy	Aug-21	EG	CCG/NHSE
Social	Health	Causeway Medical Practice	Inner Warrington	INF4	TBC				CCG/NHSE		Practice exploring options for relocation to a new or existing facility due to expansion pressures.	>			Identified in Council/Partner Strategy	Aug-21	EG	CCG/NHSE
Social	Health	Health and Wellbeing Hub	Town Centre	INF4	£6,510,000	£0	£6,510,000	Towns Fund - MHCLG, WHH, WBC, Bridgewater, Warrington CCG	WBC / Warrington and Halton NHS Trust	WHH WBC Bridgewater WCCG	£3.09m provsional Town Deal funding tbc on acceptance of business case - rest from partners mainly as service relocation	>			Identified in Council/Partner Strategy	Aug-21	EG	CCG/WBC
Social	Health	New Warrington Hospital	TBC	INF4	TBC	TBC	TBC	TBC	WHHFT	TBC	Development of new hospital campus to replace existing Warrington Hospital build.	>	>	>	Longer term / aspirational	Aug-21	EG	NHS

Appendix 2 – Development Costs for Main Development Areas

Fiddler's Ferry - Developer Infrastructure Costs and Contributions

PROVISIONAL AND FOR INFORMATION ONLY

CONFIDENTIAL AND WITHOUT PREJUDICE

Housing Split

860	Phase 1 (North)
900	Phase 2 (South)
1,760	Total
1,310	Within Plan Period

Item	Construction Phase	Category	Type	Description	Required by	Total Cost	£/unit	Who will deliver this?	Method of provision	Source of information	Notes
Developer Delivery items											
	Whole site	Highways & Transport	Off-Site Highways	A562 / A5080 Roundabout	2026	3,210,000	1,823.86	Developer Group	TBC	SSE / WBC	Capacity works and bus priority measures. Key junction adjacent to site. Widening for capacity works likely to have utilities costs, also requires pedestrian facilities, based on works carried out recently in NW Warrington
	Whole site	Highways & Transport	Off-Site Highways	A562 / Liverpool Road Junction (Lane End junction)	2026	321,000	182.39	Developer Group	TBC	SSE / WBC	Review and potential upgrade to signal operating system if no scheme identified
	Whole site	Highways & Transport	Off-Site Highways	A562 / A57 Roundabout	2026	1,872,500	1,063.92	Developer Group	TBC	SSE / WBC	Capacity works and priority bus measures
	Whole site	Highways & Transport	Off-Site Highways	A57(W) and other local improvements (including Widnes Road along site frontage)	2028	1,605,000	911.93	Developer Group	TBC	SSE / WBC	Non-car accessibility works and bus measures. Junction improvements may be needed on connections to A57 and a number of residential roads may require mitigation measures, predominantly non car accessibility or traffic management measures.
	Whole site	Highways & Transport	Off-Site Highways	A562 / A557 Junction	2031	2,140,000	1,215.91	Developer Group	TBC	SSE / WBC	Review and potential upgrade to signal operating system if no scheme identified. Local widening may need to be considered
	Whole site	Highways & Transport	Off-Site Highways	Local junctions and mitigation measures - Halton	2031	2,675,000	1,519.89	Developer Group	TBC	SSE / WBC	Roundabout capacity works and traffic management measures. Scope to be agreed and to include bus priority measures. Initial modelling suggested impact west of A557 also. Finer grain model may introduce vehicle movement through residential routes between A562 and A5080 which need mitigation.
	Whole site	Highways & Transport	Off-Site Highways	M62 Junction 7	2038	2,675,000	1,519.89	Developer Group	TBC	SSE / WBC	Junction improvement works
	Whole site	Highways & Transport	Off-Site Highways	M62 J8	2038	267,500	151.99	Developer Group	TBC	SSE / WBC	Based on other contributions made by other development in Warrington to motorway junctions
	Whole site	Utilities & Drainage	Utilities & drainage - off-site costs	Network reinforcement and connections		2,760,600	1,568.52	Developer Group	Developer cost	To be provided with site developments	Figure provided by Aspinall Verdi
	Phase 1	Demolition	Demolition	Demolition & remediation of existing power station		37,513,699	43,620.58	Developer Group	Developer cost	SSE	
	Phase 1	Construction Abnormals	Residential Abnormals	Abnormal costs associated with construction, inc remediation		-	-	Developer Group	Developer cost	N/A	Already covered in C&W viability analysis
	Phase 1	Construction Abnormals	Commercial abnormals	Abnormal costs associated with construction, inc remediation		32,100,000	37,325.58	Developer Group	Developer cost	SSE	
	Phase 2	Utilities & Drainage	Utilities & drainage - off-site costs	Utilities & drainage - off-site costs	To be provided with site developments	9,148,500	10,165.00	Developer Group	Developer cost	SSE	
	Phase 2	Construction Abnormals	Residential Abnormals	Abnormals	To be provided with site developments	-	-	Developer Group	Developer cost	SSE	
	Phase 2	Construction Abnormals		Bridge over railway	To be provided with site developments	16,050,000	17,833.33	Developer Group	Developer cost	SSE	
	Phase 2	Legal & agreements		Network Rail Ransom	To be provided with site developments	5,350,000	5,944.44	Developer Group	Developer cost		Estimate only, would be dependent upon the overall profit position for the development
	Phase 2	Construction Abnormals		Country Park	To be provided with site developments	5,350,000	5,944.44	Developer Group	Developer cost	SSE	
					Total	**123,038,799**					

s106 items											
	Phase 1	Education	Primary School & Early Years	Primary school	TBC	3,639,303	4,231.75	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Phase 1	Education	Education - Secondary School	Seconday school	TBC	2,838,709	3,300.82	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Phase 1	Health	GP and Dental Surgery		TBC	751,910	874.31	WBC	S106	CCG forecasts; Planning Obligations SPD	
	Phase 1	Leisure	Sports Pitches	TBC	TBC	623,806	725.36	WBC	S106	WBC Leisure estimate; Planning Obligations SPD	
	Phase 1	Leisure	Built sport facilities	TBC	TBC	500,167	581.59	WBC	S106	WBC Leisure estimate; Sport England calculator	
	Phase 2	Education	Primary School & Early Years	Primary school	TBC	3,808,573	4,231.75	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Phase 2	Education	Education - Secondary School	Seconday school	TBC	2,970,742	3,300.82	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Phase 2	Health	GP and Dental Surgery		TBC	786,883	874.31	WBC	S106	CCG forecasts; Planning Obligations SPD	
	Phase 2	Leisure	Sports Pitches	TBC	TBC	652,820	725.36	WBC	S106	WBC Leisure estimate; Planning Obligations SPD	
	Phase 2	Leisure	Built sport facilities	TBC	TBC	523,430	581.59	WBC	S106	WBC Leisure estimate; Sport England calculator	
	Whole Site	Highways & Transport	Sustainable travel works and bus service upgrade measures	Pump priming bus services - 5yrs	TBC	4,000,000	2,272.73	WBC	S106	WBC Highways estimate	Off-site and on-site non-car accessibility works, upgrade to off-site cycleway works, bus services pump priming
					Total	**21,096,343**					

Peel Hall - Developer Infrastructure Costs and Contributions

PROVISIONAL AND FOR INFORMATION ONLY

CONFIDENTIAL AND WITHOUT PREJUDICE

1,200 Residential Units

1,200 of which to be delivered within plan period

Item	Category	Type	Description	Required by	Total Cost	£/unit	Who will deliver this?	Method of provision	Source of information	Notes
Developer Delivery items										
D	Highways & Transport	On-Site Strategic Highways	Peel Hall Spine Road	TBC	955,731	796	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	30 m boulevard style corridor: 10m carriageway, 3 m cycle lane x2, 2m pavement x2 + 5m verge x2. Main bus corridor. No frontages - all vehicular access to rear
C	Highways & Transport	Off-Site Highways	Bus gate on Poplars Avenue	TBC	628,316	524	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	Bus gate on Poplars Avenue allowing existing services to continue No vehicular access to A49 from Poplars road east of this point except for buses/cycle/pedestrians
E	Highways & Transport	Off-Site Highways	Bus gate on Internal Spine Road	TBC	385,275	321	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	No through route from Mill Lane to A49 except for buses/cycles/pedestrians
F	Highways & Transport	Off-Site Highways	Bus gate onto Poplars Avenue	TBC	2,176,879	1,814	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	No through route from Peel Hall site onto Poplars Avenue except for buses/cycles/pedestrians
G	Highways & Transport	Off-Site Highways	New junction onto Mill Lane	TBC	8,444,900	3,614	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	New signalised junction onto Mill Lane from new section of Poplars' Avenue
	Highways & Transport	Off-Site Highways	Traffic calming scheme on Poplars Ave	TBC	2,720,000	2,267	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	Added following PI proceedings. Estimate of elements agreed
	Utilities & Drainage	General	Network Reinforcement	TBC	4,800,000	4,000	Developer	Developer delivery		Site is an infill between existing development to the South, East and West. In the absence of information to the contrary we have allowed a provisional allowance of £4,000/dwelling.
				Total	**20,111,101**	**13,336**				

s106 items										
	Highways & Transport	Sustainable transport	Pump priming bus services - 5yrs	TBC	1,000,000	833	WBC	S106	WBC Highways estimate	
	Education	Primary School & Early Years	Primary school	TBC	5,078,097	4,232	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Education	Education - Secondary School	Seconday school	TBC	3,960,989	3,301	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Health	GP and Dental Surgery		TBC	1,049,177	874	WBC	S106	CCG forecasts; Planning Obligations SPD	
	Highways & Transport	Residential travel plan	£10.6k per 150 homes	TBC	84,800	71	WBC	S106	WBC Highways estimate	
	Leisure	Sports Pitches	TBC	TBC	1,169,589	975	WBC	S106	WBC Leisure estimate; Planning Obligations SPD	
	Leisure	Built sport facilities	TBC	TBC	937,775	781	WBC	S106	WBC Leisure estimate; Sport England calculator	
				Total	**13,280,428**	**11,067**				

South East Urban Extension - Developer Infrastructure Costs and Contributions

PROVISIONAL AND FOR INFORMATION ONLY

CONFIDENTIAL AND WITHOUT PREJUDICE

4,200 Residential Units

2,400 of which to be delivered within plan period

Item	Category	Type	Description	Required by	Total Cost	£/unit	Who will deliver this?	Method of provision	Timing of cost incurred	Source of information	Notes
Developer Delivery items											
A1	Highways & Transport	On-Site Strategic Highways	Interim C&L Relief scheme	2026	11,979,183	2,852	Developer	Developer delivery	2025-2026	Sweco drawings; WSP costings	Revised costs being prepared by WSP for agreement with WBC
A2	Highways & Transport	On-Site Strategic Highways	Stretton East Link Road / Miller Distributor (24m corridor)	2038	7,343,530	1,748	Developer	Developer delivery	2025-2026	Sweco drawings; WSP costings	Revised costs being prepared by WSP for agreement with WBC
A3	Highways & Transport	On-Site Strategic Highways	Completion of the D (33m corridor)	2028	13,442,760	3,201	Developer	Developer delivery	2025-2028	WSP POC; WSP costings	Revised costs being prepared by WSP for agreement with WBC
A4	Highways & Transport	On-Site Strategic Highways	A50 link and Barleycastle Lane (33m corridor)	2031	15,085,936	3,592	Developer	Developer delivery	2028-2031	WSP POC; WSP costings	Revised costs being prepared by WSP for agreement with WBC
A5	Highways & Transport	Off-Site Highways - Enabling Works	Lyon's Lane Junction improvement	2026	2,631,250	626	Developer	Developer delivery	2025-2026	WSP POC; WSP costings	Revised costs being prepared by WSP for agreement with WBC
A6	Highways & Transport	Off-Site Highways - Enabling Works	Longwood Road Junction Improvement	2026	1,052,500	251	Developer	Developer delivery	2026-2026	WSP POC; WSP costings	Revised costs being prepared by WSP for agreement with WBC
A7	Highways & Transport	On-Site Greenways	Off road walking and cycling facilities within the development	TBC	15,180,723	3,614	Developer	Developer delivery	TBC	WBC Highways estimate	WBC to provide further clarification on what is included
A8	Highways & Transport	On-Site Strategic Highways	Blackcap Road Upgrade	TBC	4,258,685	1,014	Developer	Developer delivery	TBC	WSP POC; WSP costings	Still to be established whether this is required within the plan period
A9	Highways & Transport	On-Site Strategic Highways	Transit Enabled Route from D to Stockton Lane	TBC	16,964,545	4,039	Developer	Developer delivery	TBC	WSP Costings	through Homes England site to Stockton Lane
A10	Utilities & Drainage	Electricity	TBC - high level assessment only at this stage.	TBC	24,859,425	5,919	Developer	Developer delivery	TBC	WSP high level assessment only (grossed up HE Scenario 3	WSP cost assumptions could be used - will be high level
A11	Utilities & Drainage	Gas	TBC - high level assessment only at this stage.	TBC	4,785,439	1,139	Developer	Developer delivery	TBC	WSP high level assessment only (grossed up HE Scenario 3	WSP cost assumptions could be used - will be high level
A12	Utilities & Drainage	Potable Water	TBC - high level assessment only at this stage.	TBC	2,019,828	481	Developer	Developer delivery	TBC	WSP high level assessment only (grossed up HE Scenario 3	WSP cost assumptions could be used - will be high level
A13	Utilities & Drainage	Foul Water	TBC - high level assessment only at this stage.	TBC	3,635,691	866	Developer	Developer delivery	TBC	WSP high level assessment only (grossed up HE Scenario 3	WSP cost assumptions could be used - will be high level
A14	Utilities & Drainage	Surface Water	TBC - high level assessment only at this stage.	TBC	3,859,425	919	Developer	Developer delivery	TBC	WSP high level assessment only (grossed up HE Scenario 3	WSP cost assumptions could be used - will be high level
A15	Utilities & Drainage	Telecoms	TBC	TBC	TBC	TBC	Developer	Developer delivery	TBC		WSP cost assumptions could be used - will be high level
A16	Retail and commercial	Convenience retail	Up to 4,500sqm (Lumb Brook Green - 500sqm, Grappenhall Heys - 1,000sqm, Appleton Cross -2,500sqm + 500sqm)	TBC	TBC	TBC	Developer	Developer delivery	TBC	OPEN Masterplan	Could be cost or benefit depending on land values
				Total	**127,098,920**	**30,262**					
s106 items											
B1	Highways & Transport	Sustainable transport	Pump priming bus services - 5yrs	TBC	2,200,000	524	WBC	S106	TBC	WBC Highways estimate	
B2	Education	Primary School & Early Years	2FE Primary school, capable of expanding to 3FE - North	TBC	8,887,200	2,116	WBC	S106	TBC	WBC Education forecasts; Planning Obligations SPD	Requires review of evidence linked to trajectory
B3	Education	Primary School & Early Years	2FE Primary school, capable of expanding to 3FE - South	TBC	8,887,200	2,116	WBC	S106	TBC	WBC Education forecasts; Planning Obligations SPD	Requires review of evidence linked to trajectory
B4	Education	Education - Secondary School	4FE Seconday school	TBC	13,864,200	3,301	WBC	S106	TBC	WBC Education forecasts; Planning Obligations SPD	Requires review of evidence linked to trajectory
B5	Health	GP and Dental Surgery	Appleton Cross OR new location on site	TBC	3,670,800	874	WBC	S106	TBC	CCG forecasts; Planning Obligations SPD	HE reviewing delivery of Appleton Cross scheme; liaison with CCG required
B6	Highways & Transport	Residential travel plan	£10.6k per 150 homes	TBC	296,800	71	WBC	S106	TBC	WBC Highways estimate	
B7	Leisure	Sports Pitches	TBC	TBC	4,093,558	850	WBC	S106	TBC	WBC Leisure estimate; Planning Obligations SPD	Requires review of evidence linked to trajectory
B8	Leisure	Built sport facilities	TBC	TBC	3,282,209	883	WBC	S106	TBC	WBC Leisure estimate; Sport England calculator	Requires review of evidence linked to trajectory
B9	Highways & Transport	Off-Site Highways - Local Road Network	Schemes TBC - off site highways improvements	TBC	1,000,000	238	WBC	S106	TBC	WBC Highways estimate	
B10	Highways & Transport	Off-Site Highways - Highways England	Scheme TBC - M6 J20 and surroundings	TBC	4,000,000	952	Highways England	S106	TBC	WBC Highways estimate	
B11	Highways & Transport	Off-Site Highways - Highways England	Scheme TBC - M56 J10 and surroundings	TBC	4,000,000	952	WBC	S106	TBC	WBC Highways estimate	
B12	Highways & Transport	Off-Site Highways - Canal Crossing	Scheme TBC crossing Bridgewater Canal	TBC	10,000,000	2,381	WBC	S106	TBC	WBC Highways estimate	
				Total	**64,181,967**	**15,258**					

Waterfront - Developer Infrastructure Costs and Contributions

PROVISIONAL AND FOR INFORMATION ONLY

CONFIDENTIAL AND WITHOUT PREJUDICE

1,335 Residential Units

1,070 of which to be delivered within plan period

Item	Category	Type	Description	Required by	Total Cost	£/unit	Who will deliver this?	Method of provision	Source of information	Notes
Developer Delivery items										
D	Highways & Transport	On-Site Strategic Highways	Site highways infrastrucure	TBC	829,722	622	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	30 m boulevard style corridor - circa 2155m: 10m carriageway, 3 m cycle lane x2, 2m pavement x2 + 5m verge x2. Main bus corridor. No frontages - all vehicular access to rear
E	Highways & Transport	On-Site Strategic Highways	New all purpose bridges across Mersey x 2	TBC	11,330,200	8,487	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	Required to unlock Eastern land parcel. Wide bridges to accommodate veicle/bus and segregated cycle/ped routes. Or consider two vehicular bridges and two smaller ped/cycle bridges which could link directly into the ped/cycle network.
C	Highways & Transport	Off-Site Highways	Major junction W link giving access to residential and employment areas.	TBC	1,271,721	953	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	4 arm signalised. Part of WWL, limited access needed for PQ Silicas access and to maintain access for methane chimneys. Provisional allowance made for upgrade to roundabout to accommodate 1,300 resi units
A	Highways & Transport	Off-Site Highways - Walking and Cycling	Riverside walkway	TBC	870,167	652	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	4m wide ped/cycle tarmac path alongside R Mersey - 1925 lin.m. Exclude area S of WWL - outside of development area
F	Highways & Transport	Off-Site Highways - Walking and Cycling	Riverside path on both sides of Mersey.	TBC	538,381	3,614	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	To west of WCML to edge of river and northern extent of proposed development. Upgrade to full 3.5m shared use surfaced path - 950 lin.m. Exclude path outside development area
J	Highways & Transport	Off-Site Highways - Walking and Cycling	Link to Town centre via Slutchers Lane	TBC	3,013,750	2,257	Developer	Developer delivery	Balfour Beatty costings in conjunction with WBC Highways	Required for connectivity to town centre. Upgrade of existing PROW utilising rail subways to a bus route and segreated ped/cycleway - circa 680lin.m. Re-use existing height restricted underbridge, with allowance for NwR maintenance works
	Utilities & Drainage	General	Network Reinforcement	TBC	8,010,000	6,000	Developer	Developer delivery		Site is an infill between existing development to the South, East and West. In the absence of information to the contrary we have allowed a provisional allowance of £6,000/dwelling.
				Total	**25,863,941**	**22,585**				
s106 items										
	Highways & Transport	Sustainable transport	Pump priming bus services - 5yrs	TBC	750,000	562	WBC	S106	WBC Highways estimate	£150k for 5 years to introduce a new service
	Education	Primary School & Early Years	Primary school	TBC	5,649,383	4,232	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Education	Education - Secondary School	Seconday school	TBC	4,406,601	3,301	WBC	S106	WBC Education forecasts; Planning Obligations SPD	
	Health	GP and Dental Surgery		TBC	1,076,376	806	WBC	S106	CCG forecasts; Planning Obligations SPD	
	Highways & Transport	Residential travel plan	£10.6k per 150 homes	TBC	94,340	71	WBC	S106	WBC Highways estimate	
	Leisure	Sports Pitches	TBC	TBC	1,301,274	975	WBC	S106	WBC Leisure estimate; Planning Obligations SPD	
	Leisure	Built sport facilities	TBC	TBC	1,043,361	782	WBC	S106	WBC Leisure estimate; Sport England calculator	
				Total	**14,321,335**	**10,728**				

South East Employment Area - Developer Infrastructure Costs and Contributions

PROVISIONAL AND FOR INFORMATION ONLY

Gross site areas (ha)

Langtree (Six56)	92
Liberty (Stobart & 5 smaller sites)	44.92
Total	136.92

Costs attributable to the employment land: Total sq. ft. = 4,349,086

Item	Category	Type	Description	Required by	Total Cost	£/psf	Who will deliver this?	Method of provision	Timing of cost incurred	Source of information	Notes
Developer Delivery items											
	Highways & Transport	Off-Site Strategic Highways	M6 J20	TBC	4,000,000	0.92	Developer	Developer delivery	TBC	WBC Highways	To be charged to first consented scheme
	Highways & Transport	Off-Site Strategic Highways	A50 / Cliff Lane	TBC	4,400,000	1.01	Developer	Developer delivery	TBC	Pro-rata of the payment previously agreed with Six56 developer	
	Highways & Transport	Off-Site Strategic Highways	Mova junction improvement	TBC	74,413	0.02	Developer	Developer delivery	TBC	Pro-rata of the payment previously agreed with Six56 developer	
	Highways & Transport	Off-Site Highways - Walking and Cycling	Footway/cycle way along Grappenhall Lane (Broad Lane to Cliffe Lane) by condition	TBC	892,957	0.21	Developer	Developer delivery	TBC	Pro-rata of the payment previously agreed with Six56 developer	
	Highways & Transport	Off-Site Highways - Walking and Cycling	Footway/cycle way Grappenhall Lane/Barleycastle Lane (south of Broad Lane)	TBC	386,948	0.09	Developer	Developer delivery	TBC	Pro-rata of the payment previously agreed with Six56 developer	
	Highways & Transport	Off-Site Highways - Walking and Cycling	PROW agreed by condition – value to be agreed	TBC	223,239	0.05	Developer	Developer delivery	TBC	Pro-rata of the payment previously agreed with Six56 developer	
	Utilities & Drainage	Electricity	New grid supply point (potentially at Thelwall)	To be provided with site developments	2,500,000	0.57	Developer	Developer delivery	To be provided with site developments	Values calculated from quotations to the residential developers for the wider Garden Suburb (as per original intent 2019 / 2020 iteration) and costs allocated between the residential and the employment development	
	Utilities & Drainage	Electricity	New 33KV cable route (approx. 15km)	To be provided with site developments	7,500,000	1.72	Developer	Developer delivery	To be provided with site developments		
	Utilities & Drainage	Electricity	7 no. primary (33/11kV) substations with WGS	To be provided with site developments	8,750,000	2.01	Developer	Developer delivery	To be provided with site developments		
	Utilities & Drainage	Gas	7.5km extension to medium pressure network and 5 no. gas governors	To be provided with site developments	3,230,000	0.74	Developer	Developer delivery	To be provided with site developments		
	Utilities & Drainage	Potable Water	Provisional allowance for 7.5km of new water main.	To be provided with site developments	170,000	0.04	Developer	Developer delivery	To be provided with site developments		
	Utilities & Drainage	Foul Water	Provisional allowance for 6 new pumping stations, 22.5km of rising mains & 7.5km of new gravity sewers	To be provided with site developments	375,000	0.09	Developer	Developer delivery	To be provided with site developments		
				Total	**32,502,557**	**7.47**					
s106 items											
	Highways & Transport	Sustainable transport	Pump priming bus services	TBC	1,339,435	0.31	WBC	S106	TBC	Pro-rata of the payment previously agreed with Six56 developer	
	Highways & Transport	Travel plan		TBC	74,413	0.02	WBC	S106	TBC	Pro-rata of the payment previously agreed with Six56 developer	
				Total	**1,413,848**	**0.33**					

15. The place to be, how transit oriented development can support good growth in the City Regions

THE PLACE TO BE

HOW TRANSIT ORIENTED DEVELOPMENT CAN SUPPORT GOOD GROWTH IN THE CITY REGIONS

URBAN TRANSPORT GROUP

URBAN TRANSPORT GROUP

The Urban Transport Group represents the seven strategic transport bodies which between them serve more than twenty million people in Greater Manchester (Transport for Greater Manchester), Liverpool City Region (Merseytravel), London (Transport for London), Sheffield City Region (South Yorkshire Passenger Transport Executive), Tyne and Wear (Nexus), West Midlands (Transport for West Midlands) and West Yorkshire (West Yorkshire Combined Authority). The Urban Transport Group is also a wider professional network with associate members in Strathclyde, Bristol and the West of England, Tees Valley and Nottingham.

Report authors: Clare Linton and Jonathan Bray

January 2019

CONTENTS

EXECUTIVE SUMMARY 1

Around the world, transit oriented developments are transforming cities for the better. They put good public transport access at the heart of dense, high quality residential and commercial developments, with attractive urban realm that supports walking and cycling.

Transit oriented developments are an idea whose time has come because they contribute to a host of wider public policy goals for city regions. These include:

- Improved physical and mental health and wellbeing through the promotion of active travel and the creation of attractive and sociable spaces;
- Facilitating agglomeration economies by creating environments that attract talent and at densities which help to promote and sustain clusters of high value businesses;
- Reducing road traffic congestion through making access by means other than the car much easier and, in doing so, helping to tackle poor air quality and reduce carbon emissions; and
- Helping to meet housing demand without leading to sprawl or loss of green space.

As city region governance in the UK and the wider world becomes more focussed and integrated, transit oriented development is a concept that is gaining considerable momentum – particularly in the US and Latin America where the car has previously dominated. It is also well established in Europe and there are plenty of examples in the UK too (although the term transit oriented development is less commonly used). As well as every scheme having practical benefits in their own right, transit oriented development also establishes a different way of thinking about how cities in the future could be healthier, more prosperous, sustainable and happier places to be.

However, if we are to embark on a new era of transit oriented development, where this type of development becomes common place across the UK, then there are a series of obstacles and barriers which need to be addressed.

In particular, we need to empower city region authorities to make more transit oriented developments happen. This is because it is city region authorities that are accountable to the people and places they serve, and because they understand the local issues, opportunities, businesses and funding opportunities and can make the right connections between them.

To do this, city region authorities require:

- A national planning framework that favours transit oriented developments rather than car-based low density sprawl.
- A national funding framework with more options for ensuring that value uplift from new developments can be used to improve transport connectivity. In particular, we need a joint programme of work between city region and national Government to examine the issues, and develop the options, on land value capture mechanisms.
- More influence over land held by agencies of national Government which would be prime sites for transit oriented developments. In particular, city region authorities in England need the same veto powers over Network Rail land sales that the Scottish Government currently enjoys.
- More devolution of powers over stations where a city region transport authority has the ambition and capacity to take on those responsibilities.
- Measures to improve the planning capacity of local authorities in order to respond effectively, rapidly and imaginatively to opportunities for high quality transit oriented development.

INTRODUCING TRANSIT ORIENTED DEVELOPMENT

2

Transit, or public transport, oriented development (TOD) puts public transport front and centre, with the aim to maximise access by public transport, encourage walking and cycling, and minimise the need to own and use private cars. C40 Cities describe TOD as *"an urban planning principle that promotes high-density, mixed use development integrated with a robust public transport system[1]".*

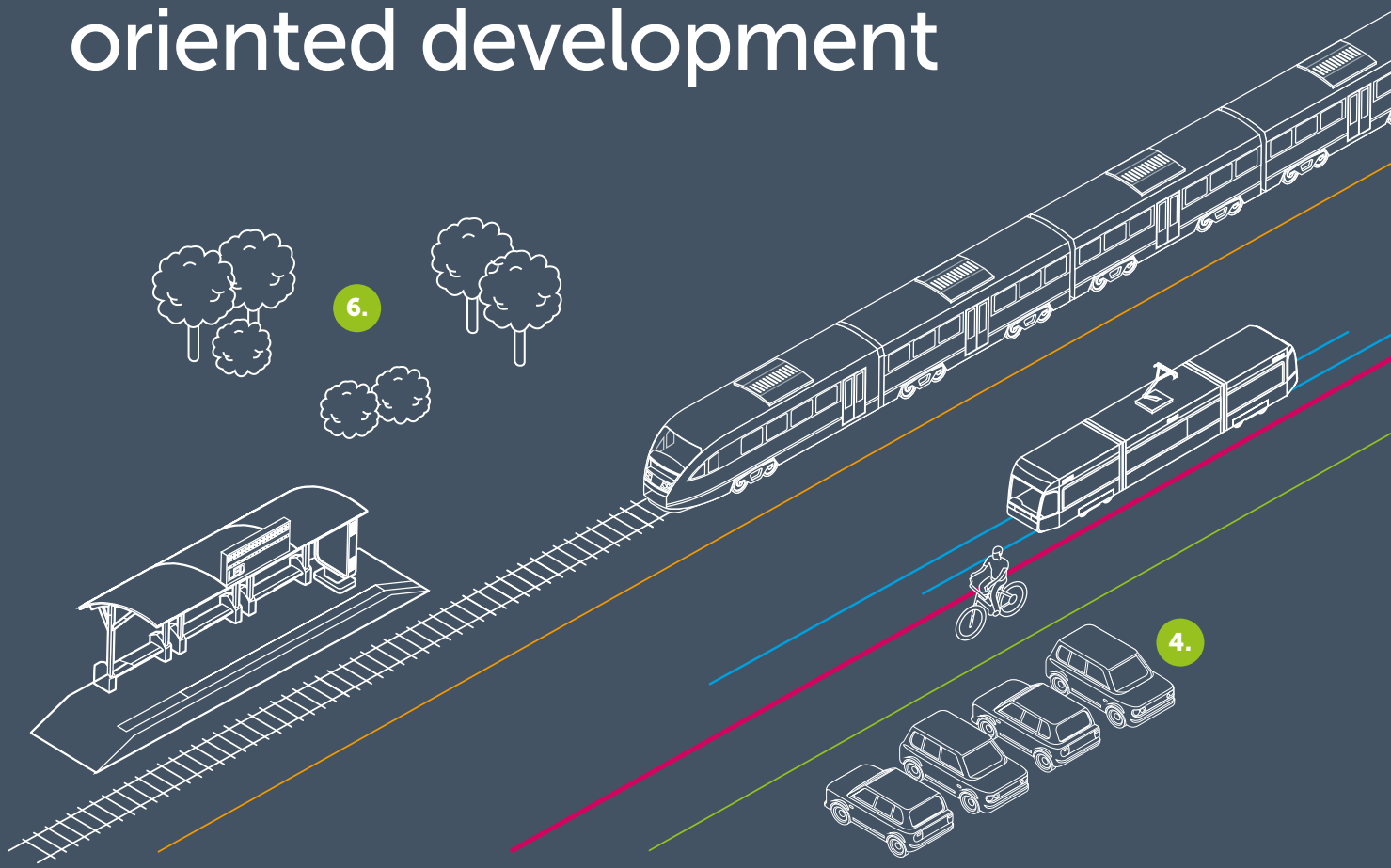
Transport infrastructure can be used to unlock new development sites for homes or commercial use, as well as providing wider benefits.

TOD can also be part of, and symbolise, wider moves to integrate land use with economic and transport planning – promoting happier, healthier and more prosperous cities with less traffic congestion. This creates neighbourhoods and communities which are more attractive places for living, working, investing in and visiting. This report looks at TOD schemes within this wider context.

TOD has become an increasingly popular concept in the US, parts of Northern Europe and Central and South America. While TOD as a term has not been widely adopted in the UK, there is a strong history of planning transport and land use together in a way that maximises public transport use – from the development of Metroland and other suburbs off the back of extensions to London's rail network in the 1920s and 1930s, through to the development of London's Docklands in the 1990s in tandem with the Docklands Light Railway.

We have adapted the Institute for Transportation and Development Policy (ITDP) TOD design and land use policy standards[2] to outline seven key factors for successful TOD, set out on pages 6 and 7.

The seven key factors for successful transit oriented development



1. **Transit should be at the heart of the development**, whether that's heavy rail, light rail or bus. This should be provided by high quality, high frequency services, making public transport a viable, and desirable, alternative to private car use.

2. **Developments need high density of housing and commercial properties** in order to provide critical mass for transit use. Density is also necessary to ensure that residents can walk or cycle to the nearest public transport station or stops. In the US, passengers will typically walk twice as far to access rail than bus stops, around half a mile and a quarter of a mile respectively[3].

3. **TOD neighbourhoods should support walking and cycling** as the first choices for accessing public transport and other services. This encourages healthy lifestyles and mode choices which have lower environmental impacts.

4. **Driving and ownership of private vehicles should be discouraged**. Alternatives, like car clubs, can be included. This can maximise the benefits of TOD and support walking and cycling. Public realm could include traffic calming measures and filtered permeability to disincentivise driving and parking restrictions can also be implemented.

5. **Services should be integrated into the development,** such as shops, healthcare and schools, in order to encourage more localised trips. Evidence shows that residents of TODs in the USA make a greater number of shorter trips, conducive to sustainable mode choices.

6. **Use of brownfield sites** (generally recognised as previously developed land) for TOD programmes should be first choice locations[4]. The Campaign to Protect Rural England (CPRE) suggest that brownfield sites, made up of redundant urban land, offer valuable opportunities for redevelopment[5].

7. **Public sector involvement** is a key enabler of TOD schemes and helps to ensure that new developments are high quality and deliver across multiple urban policy objectives including social inclusion and meeting housing need. Public sector involvement also provides the leadership and strategic vision needed to deliver successful TOD schemes[6].

In order to enable transport infrastructure to unlock new TOD schemes, appropriate funding and powers are needed at the city region level. Long term funding certainty is also needed to deliver strategic transport policies within city regions[7]. And this should be coupled with the freedoms and flexibilities that authorities need in order to utilise innovative funding mechanisms for TOD schemes (this is discussed further in section 5).

HOW DENSE IS DENSE ENOUGH?

As outlined above, density is one of the underlying principles for successful TOD schemes. There are no commonly accepted density thresholds for TODs but existing good practice provides a useful guide. For example:

- Minimum density for a bus service is suggested as 25 dwellings per hectare and for a tram service this is 60 dwellings per hectare[8].
- The average density in London is 42 dwellings per hectare[9] with high density flats in Kensington having a density of 80-120 dwellings per hectare[10].
- Vauban, in Freiburg, Germany, has an average density of 90-100 dwellings per hectare and is well served by frequent trams[11].
- Hammarby Sjöstad, Stockholm, has an average density of 145 dwellings per hectare[12], and is well served by trams, buses and ferries[13].

These places provide an indication of the levels of density that can support high frequency public transport infrastructure and demonstrate the level of density that some neighbourhoods have achieved. However, areas with lower population density can still support public transport services, such as services to towns and rural areas, and these services offer vital connections for communities.

Figure 1 plots population density in numbers of persons per hectare[14] against the percentage of people who travel to work by car (in grey) and sustainable modes, which includes public transport and active travel (in green)[15]. This demonstrates that as population density increases, the share of travel by public transport or active travel also increases. Many of the most densely populated areas (greater than 50 persons per hectare) are within London and have high shares of sustainable travel to work.

Figure 1 – Mode choice for travel to work against population density

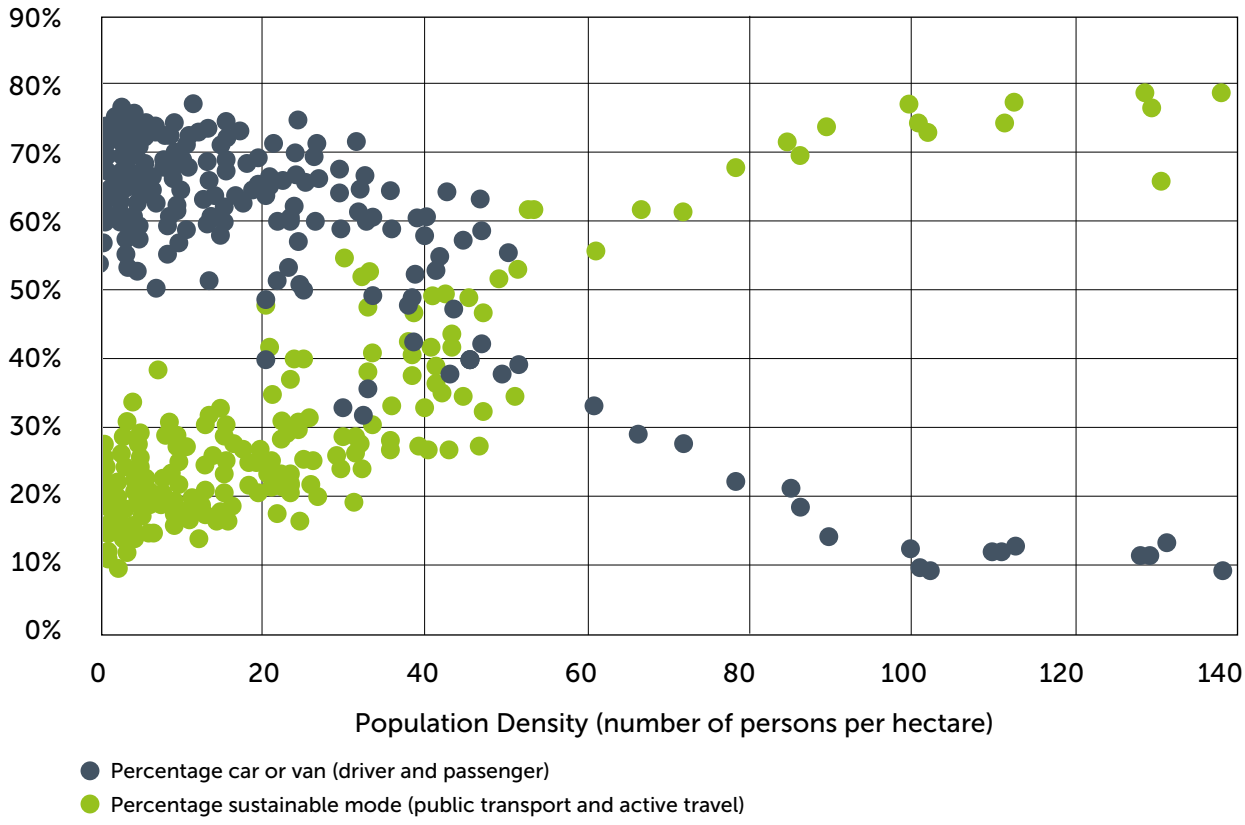
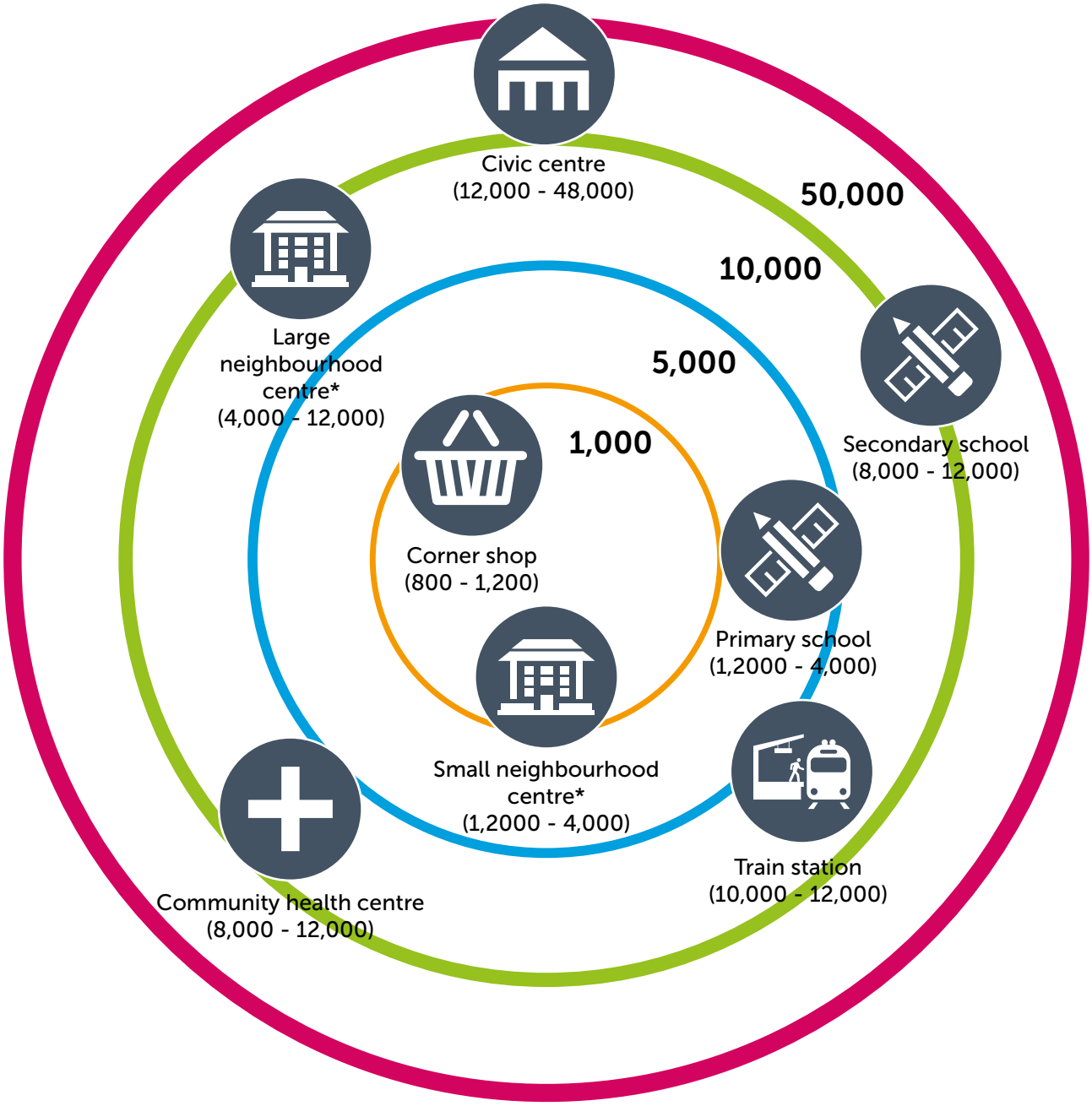


Figure 2 shows the population thresholds necessary for various commercial and community facilities to become viable, which must be considered alongside the density of development. Ideally, homes should be within a 5-10 minute walk of facilities to encourage walking and cycling, rather than car use[16].

Figure 2 – Community facilities population thresholds (number of dwellings) data taken from McPherson and Haddow (2011)[17]



*Shops, community centre, etc

THE CASE FOR TRANSIT ORIENTED DEVELOPMENT

Transit oriented development can play a key role in supporting agglomeration economies and meeting housing demand without making traffic congestion and air quality worse. They can also improve public health, reduce carbon emissions and support a better quality of life for city residents. TOD principles are increasingly being reflected in the better integrated decision making on transport, planning, housing and land use at the city region level. This is in part a result of governance changes at the city region level, through the creation of Combined Authorities and in some areas Mayoral Combined Authorities[18].

For example, the Draft Greater Manchester Spatial Framework highlights the need to deliver 227,200 new homes by 2040 of various types and tenure[19]. The Framework states that *'the density of residential development should reflect the relative accessibility of the site by walking, cycling and public transport, enabling more people to live in the most accessible locations. Opportunities should be taken to increase densities close to local centres and public transport stops with high frequency services, where this is consistent with the design context and the delivery of a broad mix of dwellings'*[20].

In London, where there has been a longer period of devolution, the Mayor's Transport Strategy (MTS)[21] sets out how transport policy will be reshaped over the next two decades to support a wider vision for 'good growth' and a more sustainable and inclusive economy where transport and land use planning is more fully integrated. The MTS outlines transport principles of 'Good Growth' to ensure that London grows in a way that works for its population.

These principles include good access to public transport; high density, mixed use developments; people choose to walk and cycle; car-free and car-lite places; inclusive, accessible design; carbon-free travel; and efficient freight[22].

These principles for Good Growth reflect many of the principles of TOD and, along with the Healthy Streets approach outlined below, will ensure that new developments make public transport access and active travel a priority.

EMBEDDING 'HEALTHY STREETS' IN TRANSIT ORIENTED DEVELOPMENT

'Healthy Streets' is an approach developed by Lucy Saunders for Transport for London (TfL) in order to address inactivity, encourage modal shift and improve the health of Londoners[23]. The approach prioritises walking and cycling, accessibility to public transport and good urban realm which makes people feel safe and relaxed, thus they can enjoy being in the space.

Healthy Streets principles are highly compatible with TOD, which aims to move away from the dominance of cars and deliver neighbourhoods and communities with good access to public transport and through which people can easily walk and cycle.

The indicators of Healthy Streets, shown opposite, could be embedded in the development of TOD schemes, in order to ensure that developments meet the goals of improving health of residents through the street scape.

3

Figure 3 – Ten Healthy Streets Indicators[24] (Image source: Transport for London)

Key strategic policy areas where TOD can help to deliver improved outcomes include:

- Agglomeration economies and the 'flat white' economy;
- Housing;
- Air quality and carbon emissions;
- Congestion;
- Social inclusion, employment and skills;
- Public health; and
- Public transport patronage.

Each of these policy areas is explored in turn below.

AGGLOMERATION ECONOMIES AND 'THE FLAT WHITE ECONOMY'

It is now generally accepted that the concentration of economic resources in cities is, in large measure, due to agglomeration economies[25]. This is the notion that firms benefit from proximity to other firms, as well as between their own employees. Put simply, proximity lowers the cost of exchanging goods and ideas, and increases the pool of shared resources available – which all lead to higher productivity[26].

In turn, households are attracted to areas which benefit from agglomeration economies because more productive firms will offer higher pay and larger job markets increase workers' chances of finding suitable work. Authors such as Richard Florida have argued that it is the ability to draw in larger numbers of highly qualified workers that gives cities their competitive edge[27].

Cities have long been places where high value sectors of the economy like finance and business services have concentrated. However, these sectors are now also being joined by what has been termed the 'new economy' or the 'flat white economy'. In his 2015 book of the same name, Douglas McWilliams shows how the expansion of these sectors can help explain London's sustained population and jobs growth after the 2007 recession, even as pay and employment in financial services began to fall[28].

McWilliams singles out digital marketing as a key source of competitive advantage for the UK but defines the flat white economy more broadly as encompassing the media, information and communication sectors. He suggests that by 2013, this group of activities had overtaken retail, financial services and wholesale to become the second largest sector of the UK economy outside the public sector, and only behind construction. By 2015, the sector was growing at 8% per year and was predicted to drive a third of the UK economy by 2025[29].

McWilliams makes a link between the growth of the flat white economy, easy access to large pools of skilled young workers and lifestyle changes which have drawn young people back into cities. *"The bicycle has replaced the Porsche, skinny jeans have replaced suits and, of course, flat white coffee has replaced champagne*[i]*"*. This is linked to the wider rise of 'hipster' culture, which places great emphasis on originality and unique, authentic experiences. This is in contrast with the pret-a-porter utilitarian culture of the 1950s and 60s; or the conspicuous consumption culture of the 1980s and 90s.

PwC's Millennials at Work survey (2011) found that working location was the deciding factor in accepting their current job for 20% of respondents. It also found that twice as many respondents thought they would end up working in a centralised hub in a major city than in a similar type of building outside a major city[30].

UK Census data from 1991, 2001 and 2011 shows that there has been a noticeable recent population increase in the inner cities and city centres of many large urban areas, in contrast with the trend of previous decades. This has gone hand in hand with a swelling of city centre jobs, which was temporarily halted in the immediate aftermath of the 2007 financial crisis, but has now resumed.

TOD is a good fit with the tendency in cities towards agglomeration economies and the flat white economy as it enables both the density that agglomeration economies require and the creation of the attractive and dynamic spaces and working environments that are a priority for the new economy.

i. McWilliams notes that champagne sales in the UK dropped a quarter since the 2007 recession, while the number of coffees sold increased by 50%

HOUSING

The UK has a target of building one million new homes by 2020, although it has been suggested by some that there is likely to be a significant shortfall in practice[31]. In particular, there is a shortage of affordable homes, with house prices now almost seven times people's incomes on average, and more people than ever are renting from private landlords[32].

Research by Transport for New Homes found that new developments are being built without considering public and active transport options, prioritising car-based travel and are failing to provide community services[33]. This leads to car-based sprawl and an embedding of unsustainable transport behaviours with few public transport alternatives and poor facilities for walking and cycling[34].

If we are to avoid car-based urban sprawl and traffic congestion, then housing needs to be built close to quality public transport links. However, between 2015 and 2017, more than half of the planning permissions for the 220,000 new homes within twelve of England's city regions were more than two kilometres from a railway station and only 20% were within 800m[35].

There is a debate around how to deliver housing in the UK and whether or not to build on the 'Green Belt', the protected areas of land around our towns and cities. The Green Belt amounts to 1,634,700 hectares and much of this falls within the boundaries of England's city regions[36].

TOD offers the potential to meet housing need without undermining the green belt or creating more traffic congestion and sprawl. TOD schemes can be located:

- In close proximity to, or as part of, existing stations or transit hubs.
- On brownfield former industrial sites, which are often located on rail corridors or are indeed former rail industry sites. This makes them easy to serve through new stations.
- At suburban locations with good access to rail stations where services have been improved through additional capacity or faster journey times.

Another option for development sites near to public transport infrastructure, and avoiding the Green Belt, can be over station development. A Centre for London report suggested that high density development over stations could increase housing supply and employment opportunities in a sustainable way[36]. However over station development can present complicated challenges in terms of engineering and operations, alongside planning and institutional barriers[38].

TOD schemes could contribute to meeting housing need, opening up new economic opportunities and deliver across multiple other public policy objectives, including those set out below.

AIR QUALITY AND CARBON EMISSIONS

City regions face the dual challenge of reducing both air pollution and carbon emissions from transport. Increasing public transport use, as well as walking and cycling, through TOD schemes could help to improve air quality and reduce carbon emissions by reducing private car use. C40 Cities argue that concentrating land use in walking distance of transit stops reduces private vehicle traffic, thus reducing emissions and improving air quality[39].

Evidence from Chicago shows that households within half a mile of public transport have lower transport related CO_2 emissions, 43% lower than the average household in the Chicago Metropolitan Area[40]. Households in the downtown Chicago area, with the highest density of jobs and housing and the best public transport connections, have 78% lower transport related CO_2 emissions than the wider area[41].

The high density required for successful TOD schemes also offers opportunities to reduce domestic energy use through district heating and the use of sustainable energy generation. In Vauban, in Freiburg, Germany, public energy and heat are generated through combined heat and power generation, fuelled by woodchip, and households are connected to a district heating grid[42].

The buildings in Vauban have low energy consumption, around half the German average[43]. Homes in the new development around King's Cross, London, highlighted as a case study in Section 4, are also connected to a low carbon district heat network[44]. This shows how there can be additional sustainability benefits to TOD schemes, beyond transport emissions.

CONGESTION

Congestion cost the UK economy £20.5bn in lost productivity in 2013[45]. Congestion is worst on urban A roads and has negative effects on air quality, and consequently impacts on public health.

Congestion has detrimental impacts on the quality and experience of the public realm and the ability of cities to create places that people want to spend time in[46]. It undermines bus services by slowing journey times thus reducing the attractiveness of bus services as an alternative mode choice[47].

Congestion also acts as a drag on the economic benefits of new developments, with a 10% reduction in economic growth impacts associated with transport congestion when compared to a new development without congestion[48]. Where investment in public transport is implemented alongside new developments, it can lead to a 50% uplift in the economic growth impacts of a new development near to the regional centre[49].

TOD neighbourhoods encourage public transport use along with walking and cycling, which represent sustainable transport choices with positive impacts on levels of congestion in urban areas.

Evidence from existing TOD schemes suggest that residents make more sustainable transport choices. For example, in Vauban, in Freiburg, Germany, car only accounts for 16% of trips (significantly lower than the comparable Freiburg district of Rieselfeld where car makes up a 30% mode share), public transport accounts for 19% of trips and 64% of trips are made by walking or cycling[50].

The public realm design within a TOD should discourage car use, leading to neighbourhoods free of congestion and creating pleasant environments to live and work in.

Dealing with congestion is a key goal of the UK's National Infrastructure Commission (NIC), amongst other priorities such as decarbonising the energy supply and boosting housing growth[51]. Championing TOD could offer a way for multiple priorities of the NIC to be delivered.

PUBLIC HEALTH AND WELLBEING

Well-designed urban realm, delivered through TOD schemes, can have a number of public health benefits.

Reducing traffic within developments can deliver health benefits through improved air quality, encouraging active travel and reducing the number of accidents for vulnerable road users. In New York City, improvements to the public realm which encourage walking and cycling have reduced pedestrian injuries by 35% and led to lower volumes of traffic[52].

Physical inactivity is thought to be responsible for one in six deaths in the UK[53]. Encouraging walking and cycling, whether for a whole journey or as part of a public transport trip, is one way of increasing activity levels and improving health outcomes[55 56]. Two Swedish studies found that neighbourhood walkability increases walking levels[57]. Increased walking and cycling can improve cardiovascular fitness, reduce risk of cancer and improve mental health[57]. Ensuring that TOD neighbourhoods have suitable public realm to enable walking and cycling can encourage more active lifestyles and improve public health.

Most cities now have stated goals around becoming healthy and liveable places which include green spaces and environments that encourage leisure and social activities. Areas with accessible green space are associated with better mental and physical health[58], so integrating these into TOD schemes can have multiple benefits for improving quality of life.

The NHS has developed a 'Healthy New Towns' programme, working with ten new developments in England to embed health and wellbeing in the development of the sites and explore how to deliver effective health care for residents[59]. This includes encouraging active travel in these new towns, and one of the case studies, Northstowe in Cambridgeshire, presented in Section 4, demonstrates how this is being implemented in practice.

SOCIAL INCLUSION, EMPLOYMENT AND SKILLS

TOD can help to promote social inclusion as well as improving access to employment and education opportunities.

The creation of high quality urban realm through TOD programmes offers opportunities for people to meet and socialise in the neighbourhood. This will have benefits for social inclusion, by reducing isolation and associated negative impacts.

Affordable housing can be delivered as part of a TOD scheme, offering benefits for social inclusion. Indeed, targets can be set for the proportion of affordable housing delivered through TOD. In the San Francisco Bay Area in the US, Bay Area Rapid Transit (BART) set a target of delivering 35% affordable housing through their TOD schemes[60]. BART also have targets of job creation in the vicinity of their stations, in order to create employment opportunities that are accessible via public transport[61].

Expanding and extending public transport services, as well as accessibility to them, can improve access to jobs and services, especially where developments integrate the planning of housing and commercial developments with transport provision[62].

Recent research by KPMG suggests that a 10% improvement in transport connectivity by bus, can lead to a 3.6% improvement in economic, social and environmental deprivation, through improvements in income, skills and wellbeing[63].

One of the key factors in the success of a TOD scheme is the integration of services within the residential development, including schools, and commercial properties. This improves access to education, skills and employment opportunities within the neighbourhoods, having positive impacts for residents.

PUBLIC TRANSPORT PATRONAGE

While the bus remains the most used form of public transport, with 70% of public transport journeys being made by bus in England in 2016/17, patronage is in long term decline[64]. Investing in high-quality, high-frequency bus networks to serve TOD schemes, could be one way of reinvigorating the bus market.

The case study of Northstowe, in Cambridgeshire, in section 4 of the report, shows how the Cambridgeshire Guided Busway is connecting people to the city of Cambridge through high-frequency services which are not subject to delays from congestion due to their segregated infrastructure.

Both regional rail services and light rail and expanded tram systems have seen strong patronage growth in recent years[65].

The case study of Salford Quays, Manchester, in Section 4, demonstrates the key role played by the extension of Manchester Metrolink in facilitating TOD. Additional bus services (which were subsidised at first but now run commercially) also played a role.

Public transport services for new TOD schemes often perform better than expected. At Kirkstall Forge, in West Yorkshire, the new station was forecast to have 20,200 journeys in its first year of operation, but surpassed these numbers within five months of opening, catalysing an increase in service frequency to meet demand[66]. Kirkstall Forge is explored further in Section 4.

Evidence from the San Francisco Bay Area suggests that BART TOD schemes have resulted in increased ridership[67]. This is expanded in Section 4.

TRANSIT ORIENTED DEVELOPMENT – IN PRACTICE

The following section highlights case studies of interesting and successful transit oriented development schemes both in the UK and overseas. These case studies cover both light and heavy rail systems and bus services, showing the breadth of approaches to TOD delivery. Additional case studies of integrated approaches to transport and land use can be found in the Campaign for Better Transport report 'Getting there: How sustainable transport can support new development'[68].

KING'S CROSS, LONDON, UK

The development of land around King's Cross station in London represents a flagship scheme in the UK, transforming a 67 acre unused industrial site into a vibrant mixed-use development[69].

The proximity to London underground, bus and national and international rail services, along with the integration of other factors for successful TOD schemes, make this an exemplary UK based TOD programme.

It is anticipated that on completion of the scheme in 2020 there will be 2,000 homes, 3.4 million square feet of office space and 50,000 square feet of retail and leisure space[70]. The homes include a range of types and tenures, from family homes to student housing and retirement communities, with a significant proportion of homes at King's Cross being affordable housing[71]. Apartments are connected to a low carbon district heat network and the homes achieve Level 4 of the Code for Sustainable Homes[72].

Figure 4 – Regents Canal Waterfront and Granary Square beyond (Image source: RPM[78])

4

Figure 5 – King's Cross station concourse (Image source: Chris Beckett[82])

Nearly half (40%) of the 67 acre development is open space, creating a network of streets and footpaths through parks, gardens and squares[73]. These green spaces contribute to quality urban realm, with benefits for residents and visitors, but also delivering environmental benefits for biodiversity and air quality[74].

The success of the scheme is also demonstrated by Google's decision to locate its new headquarters in the area[75]. Construction began in 2017 and when finished it will house Google's 7,000 London based employees[76]. The building has been termed a 'landscraper', as opposed to a skyscraper, as it will be an 11 storey, 200 metre long building, running parallel to the platforms at King's Cross station[77].

King's Cross station has also undergone extensive refurbishment, with a new passenger concourse, creating an enjoyable experience for travellers passing through the station and improved retail opportunities within the station.

The scheme is being delivered by the King's Cross Central Limited Partnership, which consists of UK property developer Argent, state owned London and Continental Railways Limited (LCR) and DHL Supply Chain[79]. LCR acted as the guardian of the public land around King's Cross, supporting the Government drive for homes, jobs and economic growth. The original value of the land at Kings Cross provided to LCR in 1996 was £32m, LCR sold its stake in the development for £371m in 2016[80].

Public ownership of the land is important as it allows control over the pace and quality of regeneration and capturing of the land value uplift in order to fund infrastructure, and has contributed to the success of the King's Cross regeneration[81].

NORTHSTOWE, CAMBRIDGESHIRE, UK

Northstowe is a new town being developed by Gallagher Estates and Homes England, with close partnerships with the local authorities in the area. The area is a brownfield site, using a former RAF base. The area is served by the Cambridgeshire Guided Busway. This provides frequent, rapid connections to the city of Cambridge and to the new Cambridge North Railway Station, which opened in 2017 and is 10 minutes away from Northstowe[83].

At completion, it will provide 10,000 new homes as well as community facilities such as schools, leisure facilities and healthcare. Of the first 5,000 homes, 2,000 will be designated as affordable. The development also prioritises walking and cycling facilities within the neighbourhood and the guided busway offers a cycle route into Cambridge.

The developers at Northstowe are promoting public transport, walking and cycling to new residents by offering subsidised bus taster tickets, walking and cycling equipment vouchers up to £50 and cycle taster sessions[84], and have produced a Travel Options Map (see opposite).

In the map, the Cambridgeshire guided busway can be seen running to the north of Northstowe Phase 1 and cycle routes are also shown. The map demonstrates how services, including schools, health and leisure facilities are being integrated into the development. This will help to facilitate use of local services, within walking and cycling distance, as well as the public transport infrastructure facilitating journeys further afield.

Northstowe is part of NHS England's Healthy New Towns' programme, which aims to improve health through integrating health and social care services into the new development and by encouraging active lifestyles[86].

The average density of housing in Northstowe will be around 45 dwellings per hectare, which is comparable to the average housing density in London[87]. This level of density should be conducive to encouraging active travel and public transport use. Parking provision in the town centre and residential areas is lower than the district council maximum standards[88].

Figure 6 – Cambridgeshire Guided Busway (Image source: Ed Webster[85])

Figure 7 – Travel Options Map for Northstowe[89] (Image source: Gallagher Estates)

MEDIACITYUK / SALFORD QUAY, GREATER MANCHESTER, UK

Figure 8 – The Imperial War Museum North at Salford Quays

Salford Quays is a former dockyard area, lying 5km west of Manchester City Centre[90]. The dockyard closed in 1982 and the present redevelopment includes the flagship 'MediaCityUK' site, which is a joint venture between Peel Land and Property Group and Legal and General Capital[91].

MediaCityUK is an 81 hectare mixed use development at Salford Quays, which includes the BBC and ITV as well as other commercial, residential, retail and cultural organisations[92]. There are around 250 businesses in Media City, employing around 7,000 people and a further 1,000 business in the wider Salford Quays area, employing 27,500 people[93]. One in seven BBC employees are now based at Media City[94] and this is set to grow over the coming decade with further expansion of Salford Quays creating greater TV studio capacity[95].

While the Manchester Metrolink Tram has served the Salford Quays area since 1999, this would have been insufficient to cope with increased demand due to the development[96]. Additional transport capacity was planned during the development stage through discussions with various stakeholders, including the strategic transport body, Transport for Greater Manchester (TfGM)[97]. The tram line was extended with new stops and trams added to the system[98]. The developer and regional development agency invested £25 million in the improvements[99].

Additional bus services have been introduced to provide public transport access to Salford Quays for residents of North and West Salford[100]. The location of Salford Quays means that access by active travel modes is available via canal towpaths and the urban realm has been improved to provide an attract environment for walking and cycling[101].

As of 2015, there were around 3,500 residents at Salford Quays[102]. House prices have risen faster in Salford over 2016/17 than most other areas in Greater Manchester, at 8.4%[103]. The only area with higher price rises is Bury, with an increase of 13%, and the average across Greater Manchester is 6.4%. According to property site Zoopla, house prices in Salford have increased 48% over the last 5 years[104], compared to 23% for the wider North West of England[105]. The improved employment opportunities and increased transport connectivity have contributed to this uplift in property prices following the investment at Salford Quays.

The integration of housing and commercial properties at Salford Quays creates retail, cultural and employment opportunities within the area. This, along with the improvements in access by public and active travel modes, demonstrate the principles of TOD and the successes that can be delivered by integrating the planning process.

Figure 9 – Manchester Metrolink Tram

KIRKSTALL FORGE, WEST YORKSHIRE, UK

Kirkstall Forge is a development in Leeds, transforming a brownfield site adjacent to an existing railway line. A new station has been opened at the site, and, on completion, the development will provide 1,050 new homes, 300,000 square feet of office space and 100,000 square feet of retail, leisure and community facilities, including a school[106]. The public realm will support walking and cycling within the development and access to the nearby canal path for longer active travel trips[107].

The development is being led by CEG, working with Leeds City Council and West Yorkshire Combined Authority, and secured £10.3 million from DfT to support the new stations at Kirkstall Forge and nearby Apperley Bridge, with additional funding from the LEP[108]. CEG has been active in engaging with the local community, including holding a stall at the local annual festival and working with resident associations and community groups[109].

Figure 9 – Kirkstall Forge Rail Station (Image source: West Yorkshire Combined Authority)

Kirkstall Forge railway station connects the site with Leeds (a six minute journey) and Bradford (15 minutes), as well as other local stops[110]. The station exceeded projected demand of 20,200 passengers in the first year, achieving those numbers in the first five months of operation, prompting service frequencies to be increased[111].

VAUBAN, FREIBURG, GERMANY

Vauban is a new development 3km from the centre of Frieburg which was planned from the outset to be a sustainable neighbourhood. It was built on a brownfield site, which was a former barracks. The area prioritises walking and cycling, with low speed limits and 'home zone' rules meaning cars should give way to pedestrians[112]. The area is served by a tram, which operates a peak service every five minutes and all households are within 400 metres of a tram stop[113]. There are many local facilities and housing density is around 90-100 dwellings per hectare[114].

Vauban is a great example of an ambitious TOD scheme, using a brownfield site and delivering 2,000 houses and 600 jobs at completion in 2010[116].

The use of measures to discourage car use and encourage public transport use and active travel mean that 40% of households do not own a car and 57% of residents of non-car owning households gave up the car when they moved to Vauban[117].

Figure 11 – Vauban Urban Realm (Image source: Tom Brehm[115])

Car ownership is lower than the wider Freiburg area, at 150 cars per thousand residents, compared to 270, however residents have access to the local car club for when they need to use a vehicle[118].

Domestic energy use is also lower in Vauban than the average German household, due to sustainable housing design and combined heat and power generation connected to a district heat network[119].

BAY AREA RAPID TRANSIT (BART), CALIFORNIA, USA

BART provides rapid transit connections across the San Francisco Bay Area and has been involved in a number of TOD schemes[120]. The network area map below has TOD schemes highlighted in red. Since 2000, there has been growth in ridership of BART, and public transit made up 34% of travel to work and 24% of all trips. Walking and cycling have also increased over this time period[121].

The Contra Costa Centre is one development on the BART network, centred on the BART stop Pleasant Hill / Contra Costa Centre, which can be seen on the top right of the network map.

The scheme is a mixed-use, multi-phase programme. There are currently around 600 rental properties at the site, with 20% of these designated affordable homes and 35,000 square feet of retail properties. There are a range of commuter offers available to residents of Contra Costa to incentivise sustainable transport choices, including savings on public transport tickets and food vouchers for cycling or walking to work.

Figure 12 – Bay Area Rapid Transit network map[122] with TOD schemes shown by the red houses (those which are commercial development only have been omitted) (Image source: BART)

BART has a number of targets for expanding TOD in the future including:

- 20,000 new residential units on BART property by 2040;
- 84% increase in housing units within half a mile of BART stations from 2010 to 2040, which equates to 155,800 new units;
- 53% increase in jobs within half a mile of BART stations between 2010 and 2040 (277,500 new jobs); and
- To ensure all station areas (surrounding half a mile) have a grocery store by 2040[123].

BART is exploring how to implement successful value capture mechanisms to finance transit improvements. Properties within half a mile of BART stations have a 15-18% value premium attributed to their proximity to the station[124]. At present, the BART TOD programme negotiates lease revenue and benefit fees from developments to capture value over time, and this is reinvested to BART for maintenance and service improvements[125].

Evidence suggests that BART TOD schemes result in increased ridership. As of 2017, completed and under construction projects generated a million extra trips a year, with an additional farebox revenue of $3.9 billion, supporting the long term sustainability of BART[126].

RATP, FRANCE

RATP is a French state owned, public transport operator, and it has engaged in operations beyond buses, trams and trains, including TOD schemes.

Its subsidiary company, SEDP, manage real estate, including redevelopment of bus stations[127]. It expects to deliver over 3,200 housing units in Paris by 2024, including 2,100 social housing units[128].

One scheme is the redevelopment of the Montrouge bus station, in the south of Paris. Here it will be delivering an underground vehicle maintenance facility for 195 vehicles. Above ground there will be retail units, office space, 650 new flats, a primary school, crèche and a social club for elderly people. The development will have green roofs, creating a 1.2ha rooftop garden[129].

A further subsidiary of RATP is Logis-Transports, which acts as a social landlord and seeks to improve housing conditions for RATP employees. It manages 10,000 rental flats across greater Paris, and are building more flats at a rate of 350 per year[130].

TACKLING THE BARRIERS AND OBSTACLES TO TRANSIT ORIENTED DEVELOPMENTS

The preceding sections of this report have demonstrated how transit oriented development can help support good growth and change cities for the better. However, to make more high quality TOD happen, there are a number of barriers and obstacles that must be overcome. The barriers relate to the planning framework, funding, land and resourcing of local planning services. These are explored below.

THE PLANNING FRAMEWORK

The National Planning Policy Framework (NPPF) sets out National Government approaches to planning for residential and commercial developments. In order to promote the principles of TOD we need a NPPF (and wider planning policies) which are in line with those principles.

Close involvement of transport authorities and providers

The Chartered Institute for Highways and Transportation (CIHT) suggests that transport authorities and operators need to be involved at every stage of the planning process to ensure that sustainable transport is integrated into new developments and not an obstacle to overcome in the process. Without this, present patterns of development which deliver areas which are dependent on private car travel will continue, with implications for a range of policy objectives from congestion to air quality and carbon emissions.

The Homes England strategic plan 2018 to 2023 highlights the need for collaboration and indicates its intention to align housing delivery with strategic infrastructure projects such as High Speed 2 and Northern Powerhouse Rail[131].

Densities

The NPPF suggests that minimum densities should be in place for town and city centres and areas well served by public transport[132].

However, it does not define what these densities should be. Whilst this allows for local decisions to take into account specific circumstances, there could be missed opportunities to make the best use of land near to transport infrastructure. For example, Centre for Cities has called on the Government to "stipulate that all land within a 1km radius of a train station should have a minimum density for new housing"[133].

Work by Transport for New Homes suggests that transport is often an afterthought in the planning process, which results in improvements to road access being the easiest add-on solution. This is further exacerbated by the fact that strategic transport authorities and the transport industry are not statutory consultees in the planning process.

Housing

Local plans[134] are developed by local authorities, using the 'Housing and economic land availability assessment'[135] and 'Housing need assessment'[136], to establish five year land supply for housing. These plans should lead to a strategic approach to site selection for new housing. However, it can lead to a focus on deliverability, rather than sites which can offer opportunities to meet multiple public policy goals, as TOD schemes can.

When sites for development are selected for deliverability it can lead to large greenfield sites being allocated for housing that are difficult to access by public transport and can result in neighbourhoods designed for car-based lifestyles[137].

5

In order to support the principles of TOD, selection of multiple smaller brownfield sites could be more appropriate and could deliver on wider goals around dense neighbourhoods, public transport use and active lifestyles[138]. Site selection for new developments is also linked to other barriers around land, which are explored further in this section.

The Local Government Association (LGA) has also raised concerns around the potential prioritisation of housing over other kinds of development (e.g. retail, commercial) in the NPPF. A focus solely on housing could disrupt the principles of TOD, which emphasises the need to integrate services (e.g. healthcare, leisure, education) and commercial development with new housing, in order to deliver localised services and job opportunities, reducing the need to travel and ensuring that services are within walking or cycling distance.

Regional spatial strategies

Planning of new developments needs to be integrated into a wider regional spatial strategy, taking into account local geographies, in order to meet TOD principles. There is some evidence of this happening where devolution of powers is most established, for example, the MTS in London and the Greater Manchester Spatial Framework. However, other areas need greater powers to also be able to move towards this integrated approach to spatial planning and transport.

Appraisal

In order to support TOD schemes, appropriate appraisal mechanisms are needed to assess the transport impacts of new developments, potential solutions and also to explore where new transport schemes can unlock developments.

Transport assessments are required as part of the planning application process, which examine the potential transport impacts of new developments and how these can be mitigated[139]. However, these tend to look at a 'business as usual' type approach, assuming continuation of historic trends around private car use, which result in prioritisation of car based travel[140]. Integrating transport planning throughout scheme development could help to move away from the prioritisation of car based travel and expand public, and active, transport choices in new schemes.

WebTAG forms the basis for transport appraisal in the UK and the Department for Transport has developed guidance for capturing housing impacts in transport appraisal[141]. The aim of this is to demonstrate how transport schemes which facilitate or unlock new housing or commercial developments have a greater value for money. They highlight the case study of Kirkstall Forge, West Yorkshire, where the value for money of the new railway station opening increased from low to high when the housing benefits, calculated on the basis of land value uplift, were included[142].

In London, Public Transport Access Level (PTAL)[ii] is used to assess whether new developments are accessible by public transport[143]. Sites are given a score from 6b, for the highest level of connectivity through to 0 for the lowest. PTAL supports the London Plan by ensuring that new developments are better connected, reducing the need to travel by car and encouraging developments which are high density[144].

ii. PTAL is also known to refer to Public Transport Accessibility Level, but to avoid confusion with other meanings of accessibility they are now using Public Transport Access Level. They remain the same indicator.

FUNDING

Alongside a supportive planning policy framework, we also need a supportive funding framework which gives the city regions the funding flexibilities they need to pursue whichever mechanisms are appropriate and viable within different local contexts. Among the range of mechanisms that are currently available, issues and opportunities around the main options are discussed below.

Planning Obligations and Community Infrastructure Levy

Section 106 (S106) planning obligations can be used to make development proposals acceptable.

S106 contributions must only be sought when they meet the following conditions:

- Necessary to make the development acceptable in planning terms;
- Directly related to the development; and
- Fairly and reasonably related in scale and kind to the development[145].

The Community Infrastructure Levy (CIL) was introduced as a new planning obligation in 2010 and can be charged by local authorities in order to fund new infrastructure or support refurbishment of existing infrastructure. Facilities that can be funded under CIL includes transport, flood defences, schools, hospitals and other health and social care facilities[146].

CIL, unlike S106 contributions, can be levied on all new developments within a defined geography and used for strategic projects. In London, since 2012, most new developments granted planning permission were charged a Mayoral CIL to raise funds for Crossrail[147].

An example of the positive use of CIL powers is Bristol City Council which imposed a CIL on new developments since 2013, using 80% of this for new infrastructure including transport[148]. One of the major beneficiaries is Metrobus, a new bus rapid transit system using segregated busways and bus lanes[149]. At present, there is one route operating, connecting the Emersons Green area to the city centre, via a park and ride site, Bristol and Bath Science Park and the University of the West of England[150].

Two further routes are to be added to the Metrobus network, which has state of the art buses which will be powered by biogas within two years and are fitted with free WiFi and USB charging[151]. The scheme also includes improvements for walking and cycling infrastructure within the city[152].

Viability tests are used at the plan stage to assess the financial viability of a development and should take into account the cost implications of CIL and S106[153]. There are reports that developers use viability tests to negotiate reductions in S106 contributions and proportions of affordable housing in new schemes[154].

In the Autumn 2018 budget, the Government indicated that it would simplify developer contributions, making it easier to pool developer contributions for a single piece of infrastructure[155]. It also suggested that it will introduce a Strategic Infrastructure Tariff for Combined Authorities[156]. These measures could support TOD schemes in the future and allow new developments to be better integrated with transport infrastructure, funded, in part, by developers.

Tax increment financing (TIF)

Tax increment financing (TIF) is a method of using additional tax revenues from an area, for example increased council tax and business rates, to repay loans taken out to pay for new infrastructure serving that area[157]. In this way it can be used to help fund the transport improvements that will unlock the developments that will generate higher business rates and council tax rates in the future. This method was used to fund the Northern Line extension to Battersea, along with CIL and other developer contributions[158].

TIF has also been promoted in the USA as a method for funding TOD schemes[159]. It was used in Atlanta to deliver the 'BeltLine' project, a 22 mile transit and greenway corridor, which also delivered affordable homes, created jobs and improved quality of life[160].

Figure 13 – Birmingham New Street station concourse[164]

Land value capture

Investing in improved transport can increase the value of both residential and commercial property through increases in land values. For example, there has been a 33% increase in passengers at Birmingham New Street since 2015 and this has contributed to property price increases of 44% within 2km of the station, a 14% premium compared to elsewhere in the city[161]. The affects have also been felt across the region with increases in rail passengers and house prices seen in Rugby, Coventry and Long Buckby[162].

In London, evidence suggests that the property price premium of being located within 500 metres of a Tube or National Rail station is 10.5%, falling to 7.6% at 750 metres and 4.9% at 1km[163].

Clearly, capturing some or all of these increases in land value that transport schemes can bring could help pay in part, or in total, for those transport schemes in the first place. Conversely, not having a mechanism to capture that value can lead to transport schemes not happening because of lack of funding, or if schemes are built, it can lead to windfall gains for owners of commercial and residential property as well as landowners. This in turn can have knock on effects for local property markets and the wider economy.

At the same time, mechanisms that seek to capture increases in land value can be politically contentious depending in part on how far reaching they are. Schemes which capture only the value uplift for new or comprehensively repurposed developments, or for larger businesses, are likely to be less contentious.

There are a number of mechanisms that can be used to capture land value uplift including, but not limited to:

- Business rate revaluation, retention and supplements;
- Development rights auction model (DRAM);
- Stamp Duty and Land Tax (SDLT) retention; and
- A new land value capture charge, e.g. transport premium charge[165].

Each of these mechanisms is explained further below. Both CIL and TIF, explained above, can be used as part of the suite of measures for capturing value and funding infrastructure, along with those defined specifically as land value capture mechanisms.

Business rates retention and supplements offer a way of leveraging funding. Revaluation of business rates can be used to capture the uplift in the value of commercial properties associated with infrastructure improvements[166]. Supplements can also be levied on business rates to capture land value uplift with additional receipts being used for strategic projects[167]. In order for this revenue stream to support transport infrastructure improvements, business rates (or the supplement) would need to be retained locally.

The **DRAM** approach involves auctioning off the development rights for an area which will benefit from a new transport intervention (such as the zone around a new station). This is similar to the approach by MTR in Hong Kong to fund transport infrastructure improvements[168]. However, the DRAM approach is best suited to a site where there is little or no existing development or where existing land holdings and property has been acquired for the auction.

Under the **SDLT approach**, the higher value of residential and commercial property resulting from a new transport intervention is captured through a premium on SDLT at the point of sale [169]. This would require local retention of SDLT, otherwise the revenue would be accrued by central government. This is a politically challenging approach to land value capture, as charges would fall on existing properties.

There is also the potential for specific **new land value capture charges**, such as a transport premium charge, which could be used to capture a portion of the uplift premium paid to landowners by new purchasers or tenants of residential property for access to new or improved transport infrastructure[170]. This would be challenging to implement because, as for SDLT, charges would fall on existing properties. But, as the numbers below show, could deliver the highest value capture.

Modelling undertaken for Transport for London shows that land value capture mechanisms applied to eight sample transport projects, including Crossrail 2 and the Bakerloo line extension, could raise between £29bn and £44bn, with the eight sample projects having a capital cost of £36bn[171].

The mechanisms identified and funds generated include:

- £13bn – £28bn through a transport premium charge;
- £6bn through zonal retention of SDLT;
- £7bn through retention and revaluation of business rates; and
- £3bn from implementation of DRAM[172].

In Singapore, land value capture has been used to fund infrastructure improvements through taxation of development and the sale of public land to developers on a leasehold basis, which allows the Government to define the parameters of development[173].

In Montreal, Canada, the regional authority has captured uplift in land value from transit stations through developer charges, which are levied on new constructions, major alterations and redevelopment[174]. This has been seen as more politically acceptable as it only charges new developments or changes in use, and doesn't penalise existing property owners.

In Germany and the Netherlands land values are lower than in the UK, enabling faster development and greater availability of suitable land for development. Freezing of land prices on 'under used or poorly used land' designated for development is used in Germany to bring forward land[175]. The public sector role in this process allows land value uplift of new developments to be captured and re-invested[176].

In the Netherlands, housing supply was increased by 7.6% in just over a decade, largely through urban extensions which were strategically planned[177] . The Government supported these housing developments with funding for infrastructure, which was matched by local authorities[178].

Land value capture mechanisms are being used on the BART network to fund infrastructure improvements[179], as discussed in Section 4. Other examples of cities that have used land value capture mechanisms to fund transport infrastructure include Chicago, Paris, Melbourne and Copenhagen[180].

The Housing, Communities and Local Government Committee suggested in its report about Land Value Capture, that local and national governments could benefit from mechanisms that allow a greater proportion of land value increases to be captured[181].

At present, some of the mechanisms that could be used, such as the transport premium charge, are unavailable and could be politically difficult to implement.

TfL recommended that the Government, along with themselves and the Mayor of London, should look at developing a paper for wider consultation on land value capture mechanisms. We would support this recommendation (enhanced to take in the country's other major urban areas) and their suggestion that the paper should set out the objective of land value capture, the need for and principles of a charge, and the advantages and disadvantages of design options for a charge.

LAND

For high quality TOD to take place, land is needed for them to be built on and public authorities need to be able to either control or influence the nature of those developments.

Issues around the ownership of use of land surrounding transport infrastructure, in particular around railway stations, can be a significant obstacle. This is especially true when rail land, stations and land in close proximity to stations is owned by Network Rail or other national entities.

The issues here include:

- Land that could be used for high quality TOD is sold off for alternative use for the highest return developments;
- Revenue raised from land sales is recycled into the Treasury or the rail sector rather than reinvested in part or in whole in ensuring high quality TOD;
- Land that could be used for TOD is retained for operational convenience or land banked;
- Schemes can be developed without local influence, input or oversight leading to missed opportunities for ensuring integration with wider local housing, transport and economic planning and opportunities;
- Difficulties in accumulating land of sufficient scale;
- While brownfield sites should be prioritised for TOD schemes, there are issues around land preparation and remediation which can create additional challenges in bringing these sites forward for development, though there are benefits to developers in being located close to urban amenities[182].

In the case of Network Rail, the company is seeking to address its funding shortfall through the sale of £1.8bn worth of assets in England and Wales including retail units in stations and commercial estate[183].

As of 2018, land already released created capacity for 3,250 homes[184], and by March 2020 there should be land for 12,000 homes released across 200 sites[185].

Network Rail's strategy around land released for housing seeks to support the growth of rail use and the company aims to work closely with local authorities, developers and Homes England to bring sites forward for housing[186]. It is critical that strategic transport bodies are included in this process to ensure that wider regional objectives are considered and that schemes can deliver across multiple policy objectives.

As the case studies in section 4 show, local and regional authorities can play a key role in ensuring high quality TOD but at present they have too little leverage or influence over rail land. The situation is very different in Scotland, where Transport Scotland has the powers to ensure that no railway assets on the Scottish network should be sold or disposed of without Scottish Ministerial approval[187]. Scottish Ministers also require Network Rail to optimise the availability of redundant or underused assets, including land, for the benefit of the local community[188]. Similar powers are required in England too, ideally at the Combined Authority level for the city regions and the London Mayoral level in London.

Such powers over land disposal could complement greater powers for devolved authorities over stations themselves. In Greater Manchester, the Mayor has made the case for devolved control of stations in order that decisions could be made at a local level and improvements around accessibility, quality of stations and redevelopment opportunities could be delivered[189].

In the West Midlands, a Stations Alliance (WMSA) has been established to bring together the stakeholders working on stations, including West Midlands Rail, Network Rail and the Station Facility Owner[190]. The key aims of the WMSA is to provide quality gateways and support the wellbeing and development of the areas they serve[191]. This could help to align stakeholders involved in station assets and enable local decision making and prioritisation of policy areas.

There are challenges around accumulating land at sufficient scale to deliver strategic new developments and this is highlighted in a report by Urbed to the Greater London Assembly[192]. These challenges relate to a number of factors including unifying multiple interests, providing infrastructure to land which would not otherwise be developed and land remediation[193].

The report also suggests a number of measures that could improve how land for development can be assembled with greater powers around land assembly and purchase, and supporting boroughs to overcome some of the challenges in bringing strategic sites to development[194]. In 2017, the Government commissioned Oliver Letwin MP to undertake an Independent Review of Build Out Rates in order to understand the gap between housing completions and the amount of land allocated[195].

Findings of the Letwin review included the following recommendations to Government:

- Adopting new planning rules to apply to large sites (more than 1,500 units) to diversify these sites;
- Establish a National Expert Committee to advise local authorities on interpreting diversity requirements for large sites;
- Provide incentives to diversify sites of over 1,500 units in areas of high housing demand;
- Consider allocating funding to prevent interruption of development on existing large sites;
- Introduce a power for local planning authorities to designate areas within local plans as land that can only be developed as single large sites and to create master plans for these; and
- Give local authorities statutory powers to purchase land designated for such large sites compulsorily at prices which reflect the value of those sites once they have planning permission and a master plan[196].

As highlighted above, building on brownfield sites can offer additional challenges around land remediation, but also brings significant locational benefits, where these are located in dense urban areas with good existing or potential transport connectivity.

Local authorities are required to produce registers of brownfield sites available for housing to aid developers in identifying sites for new homes[197].

The Government allocated £4.5 billion to the Home Building Fund in 2017, which included funding to unlock homes on brownfield sites[198]. The Home Builders Federation indicated in 2015 that there could be potential to explore further incentives for development of brownfield land for development[199].

RESOURCING LOCAL PLANNING

Beyond the wider points regarding planning and funding for TOD schemes, it is also important to note the impacts of local government cuts on neighbourhood services, including planning. It is often suggested that planning services are a barrier to housebuilding but councils approve nine out of ten applications[200].

However, in 2017, the LGA estimated that planning departments were missing out on £70 million a year due to funding cuts and that this hampers their ability to process applications[201]. This constraint on planning services is also likely reducing the ability for authorities to focus on strategic developments, master-planning and ensuring that sustainable transport is considered throughout the process. The LGA argues that local authorities should be able to set planning fees locally[202], in order to cover costs and adequately resource planning services – a call that we support.

The Housing Communities and Local Government Committee highlighted that local authorities need to be able to negotiate robustly with developers[203]. It recommended that the Government should work with the LGA to provide additional resources and training to this end, and this could help to ensure that new developments are integrated with transport infrastructure and that appropriate developer contributions can be collected[204]. The Home Builders Federation also called for planning authorities to be adequately resourced in order to boost housing supply[205].

This section has drawn together some of the key barriers and obstacles to TOD schemes related to the planning and funding framework and issues around land.

CONCLUSION 6

Transit oriented development has the potential to help cites become happier and healthier places to live and work, contributing to reduced congestion and air pollution. It can also help support urban agglomeration economies by opening up new housing and employment opportunities, accessible by public transport.

This report has sought to make the case for high quality transit oriented development in the UK and demonstrate the benefits of such schemes for achieving multiple public policy goals.

In doing so the report has set out seven key factors for successful transit oriented development:

1. Transit / public transport should be at the heart of the development, whether that's heavy rail, light rail or bus.
2. Developments need to have high density of housing and commercial properties in order to provide critical mass for transit use.
3. TOD neighbourhoods should support walking and cycling as the first choice for accessing public transport and other services.
4. Driving, and ownership, of private vehicles, should be discouraged through parking restrictions and traffic calming.
5. Services should be integrated into the development, such as shops, healthcare and schools, in order to encourage more localised trips.
6. Use of brownfield sites (generally recognised as previously developed land[206]) should be first choice locations for TOD.
7. Public sector involvement is a key enabler of TOD schemes and helps to ensure that new developments deliver across multiple urban policy objectives.

The report has also set out the barriers and obstacles to accelerating the take up of transit oriented development.

The report's summary recommendations on how to address those barriers and obstacles are:

- A national planning framework that favours transit oriented development rather than car-based low density sprawl.
- A national funding framework with more options for ensuring that value uplift from new developments can be used to improve transport connectivity. In particular we need a joint programme of work between city region and national Government to examine the issues, and develop the options, on land value capture mechanisms.
- More influence over land held by agencies of national Government which would be prime sites for transit oriented development schemes. In particular city region authorities in England need the same veto powers over Network Rail land sales that the Scottish Government currently enjoys.
- More devolution of powers over stations where a city region transport authority has the ambition and capacity to take on those responsibilities.
- Measures to improve the planning capacity of local authorities in order to respond effectively, rapidly and imaginatively to opportunities for high quality transit oriented development.

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