railfuture

The Freight Solution to the Castlefield Problem

Including

The Business Case for a new route and western access to Trafford Park

RAILFREIGHT SOLUTIONS

April 2020 (Revised August 2020)

Contents

Part 1. The Castlefield Problem – Freight's Great Opportunity

Introduction

Railfuture believes that railways should be the transport mode of choice if we are to balance the needs of the economy with those of tackling the *Climate Emergency* and campaigns for a bigger and better railway capable of carrying more freight as well as providing for ever increasing passenger demand.

Manchester's Castlefield corridor is a bottleneck and has become a byword for unreliability. It is expected to carry 12 passenger services and one freight train in each direction every hour.

This report recommends some medium to long term interventions aimed in particular at expanding the freight offering, since movement of goods by road is the most difficult to decarbonise and future demand is likely to exceed that available at Trafford Park.

The Problem

The Castlefield corridor is the mile of two track railway linking Castlefield Junction to the West with Manchester Piccadilly's platforms 13 & 14 to the East. It has 2 intermediate stations at Deansgate and Oxford Road.

The western end has junctions with the line to Liverpool via Widnes (off which branches the Trafford Park freight terminal), the Chat Moss line to Liverpool via Newton-Le-Willows, the line to Southport via Wigan, the line to Preston (for the West Coast Main Line) via Bolton and the line round to Manchester Victoria and on to Rochdale, Huddersfield and Leeds.

The eastern end has a junction with the main lines leading south east from Manchester Piccadilly. These divide into separate routes for services to Hadfield via Guide Bridge and New Mills via Marple which branch off at Ardwick Junction, services to Manchester Airport and Alderley Edge which leave the main line at Slade Lane Junction, and services via Stockport to Buxton, Chester via Altrincham, the Hope Valley line to Sheffield via Hazel Grove and the main lines to London. The latter divide at Cheadle Hulme to permit London bound trains to run via Crewe or via Stoke-on-Trent.

In total there are 12 off peak services an hour running in both directions.

In addition to the passenger services there are two freight trains every hour, one westbound and one eastbound into and out of Trafford Park freight terminal. During the day, these services nearly all head south for Crewe, Felixstowe, London Gateway and Southampton and are mostly routed via the *Styal Line*. This is the route to Crewe (via the Airport branch) that avoids running through Stockport. Because of their 500m length, freight trains take up more capacity on the Castlefield corridor occupying twice the number of track sections as a passenger train. The combined effect of this is that the line is running at 93% of its quoted capacity with only four minutes per hour available for timetable recovery in the event of a late running train. To maintain reliability, the line should only operate at 85% capacity to avoid a breakdown of the timetable. Delays and cancellations are therefore a regular occurrence.

Fig. 1 *Map of rail routes around Manchester showing the Castlefield Corridor (Ellie King)*

How did we get into this mess?

Historically rail services into Manchester used either Piccadilly or Victoria stations but not both. Trains using the Castlefield line were limited to those between Manchester and Liverpool via either the *Cheshire Lines Committee* (CLC) route through Warrington or the Chat Moss route via Eccles. The construction of the *Windsor Link* broadened this range of services to include Southport and Bolton. Later the addition of the *Ordsall Chord* extended services from the Rochdale and Leeds direction through to Manchester Airport.
As franchise bids have been approved, so more services to the airport have been promised putting more strain on the network.
Meanwhile, the increase in intermodal freight traffic between Trafford Park and the southern ports has seen all the available freight capacity (known as *signalling paths*) taken up, with each freight train using the equivalent of two passenger paths.
As *System Operator*, Network Rail admit that they should never have agreed to all the timetables proposed in these franchise awards and is now in the unenviable position of deciding which services should be withdrawn amid protests from train operators and passengers alike, as all trains are full!

What about freight trains?

Currently freight has no choice but to use the Castlefield route. The only access to Trafford Park is from the east with no route available to join the West Coast Main Line (WCML) other than via Castlefield. Freight cannot deploy some of the tricks available to passenger services in order to recover from late running. It cannot turn back short of its final destination and ask its cargo to catch the next available service not can it leave out stops to save time if it's journey is delayed. Neither can it operate solely at night, trains from the southern ports have journeys of up to twelve hours and thus impact on the morning or evening peaks somewhere along its route. But, as freight doesn't complain on social media when it is late or cancelled, it is a popular target for politicians looking for an easy solution.

The impact of freight trains using the Castlefield route can be seen at Fig. 2

	Table of distances in metres	
	Between Stations and Junctions	From Piccadilly Station
Piccadilly Station	**0**	**0**
Piccadilly West Junction	*60*	*60*
Oxford Road crossover	*442*	*502*
Oxford Road Station	**301**	**803**
Deansgate Crossover	*282*	*1085*
Deansgate Station	**282**	**1367**
Castlefield Junction	*201*	*1568*

Fig. 2 *Freight trains are typically 525m long including the locomotive with 775m desired as a future standard. On the Castlefield corridor, trains either occupy a station and two junctions or two stations and one junction, taking up the line capacity of two or three passenger trains.*

Have any alternatives been proposed?

The ideal solution would be to access Trafford Park from the western end. Network Rail's *Northern Hub Study* (2010) looked at this possibility to link Trafford Park with the West Coast Main Line. Two options were examined, one via Padgate and Dallam, the other via Glazebrook and Kenyon, but both were ruled out as the re-use of former lines has been frustrated by blocking development, including road construction, making these solutions prohibitively expensive. See Fig. 3.

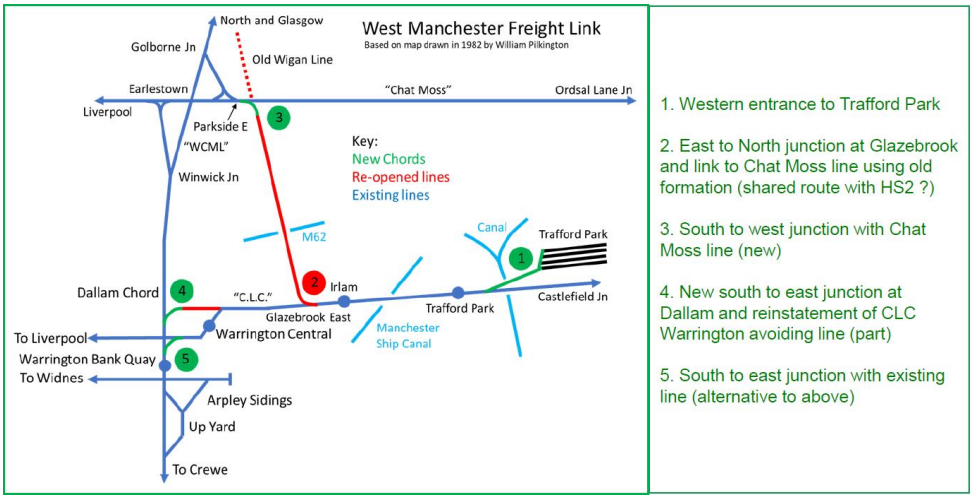


Fig. 3 *Routes west of Trafford Park (Paul Hollinghurst, based on an earlier 1982 map)*

Railfuture has recently revisited these options and come to the same conclusion. We have even looked at the possibility of joining the WCML via Parkside and Earlestown (2 & 3) but this has several disadvantages. Firstly, it takes freight on a northern detour when most of the traffic is for the south, secondly it requires a connection onto the busy Chat Moss route, thirdly, it still routes everything via Crewe over 28m (44Km) of congested WCML and lastly it has been severed by the M62 making this an expensive option.

Constrained

Whether freight enters the Trafford Park complex from the east or the west it first has to be shunted into one of two *reception sidings*. There are two freight terminals at Trafford Park, one to the north of the site opperated by *Freightliner* and a second to the south, known as the *Euroterminal*, used by *GbRF* and *DB Cargo*. In both cases the unloading gantries are on separate sidings, of limited length, and trains have to be divided into portions. Each has to be carried into the head shunt and then propelled into the unloading areas. When the unloading and loading operation is complete, trains have to be re-assembled prior to dispatch. The *Euroterminal* terminal can accommodate a 775m train in two portions but trains of this length would require splitting into three sections to access the *Freightliner* terminal where limited number of gantry sidings also means that only one 700m+ train could be accommodated at any one time.

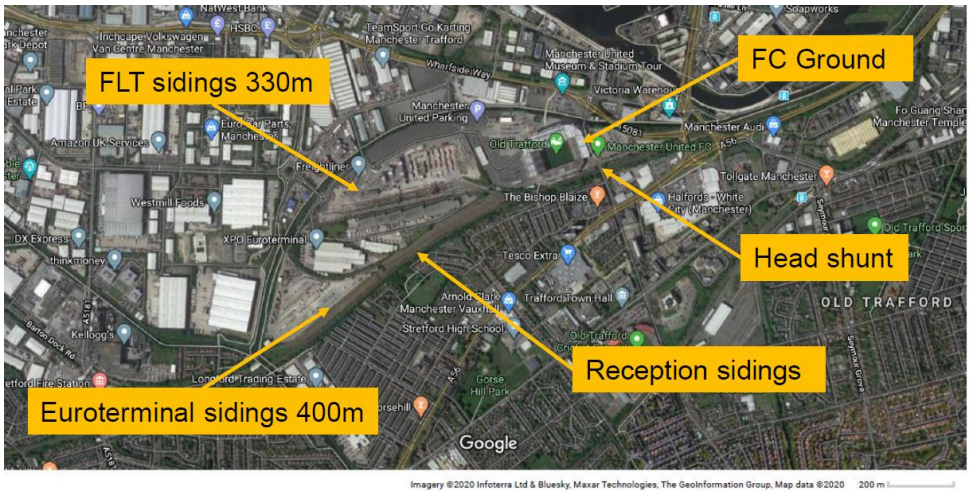


Fig.4 *Trafford Park – a convenient but constrained site*

A more fundamental question

All the proposals discussed so far have been based on tackling the problem as it appears today but, before advancing a potential solution, we need to consider how we want freight to develop in future. Making greater use of rail for freight is the most urgent priority facing any nation keen to wean itself off fossil fuel. As technology improves, electric cars may be suitable for passenger journeys, but many experts acknowledge that a move to electric powered lorries breaches the laws of physics, as batteries can never match the *energy density* of road fuel. Even with diesel traction, freight consumes only a third of the carbon per tonne Km if carried by rail rather than by road and, with electrification, uses just 10% of the energy with no CO2 emissions, assuming renewable generation.

We must therefore expect that future demand for freight movement by rail will far exceed that of today and likely to exceed available capacity at Trafford Park. In seeking to maximise the role of rail in meeting the future freight requirements of the Greater Manchester area, is it now time to look for an additional site? If so, where?

Could such a site be accessed from all parts of the network? At what cost? What consents will it require? What political support can it expect?

Carrington Park

This brownfield site, once the Shell chemical works, lies to the south west of Manchester but still within Trafford Borough. Until its closure it enjoyed rail access via the former line between Stockport and the Warrington Central (CLC) line at Glazebrook. It is currently a Business Park, although the lorry parking facility in the area we are interested in could easily be relocated to another part of this vast and mostly empty site. Figs. 5 and 6 indicate its location and size.

Fig.5 *Location of Carrington Park showing access to the M60 and Trafford Park*

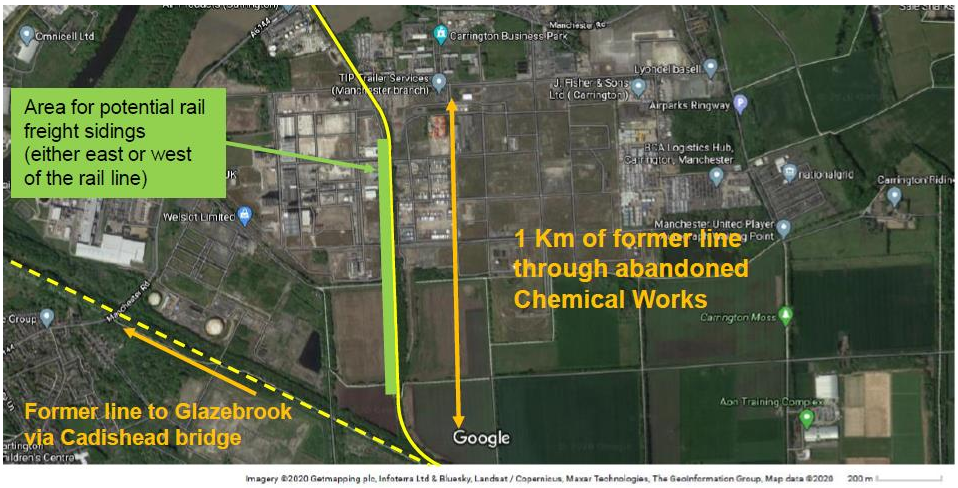


Fig.6 *Indicative sketch of the area that would accommodate a large freight depot*

A new depot at this location would be ideal in all important respects. It has plenty of room to service 775m freight trains without using separate reception sidings and enjoys convenient access for local distribution by short haul road transport being only 5Km from the M60. It is just 7Km from Trafford Park industrial estate and 10 Km from the current rail terminal with ample room to expand and accommodate rail related businesses. The rail line to this site would link to the rest of the network at Skelton Junction along formations unobstructed by blocking development and in use until the 1990s.

Fig.7 & 8

Skelton Junction looking west. The line to Glazebrook is on the left. To the right a service to Chester takes the line towards Altrincham

Looking east towards Northenden Junction. A service from Chester passes an overgrown goods loop, complete with signalling, on the right.

The search for a route to the south

Originally, five lines converged at Skelton Junction. To the east and west ran the CLC route from Glazebrook East Junction to Northenden Junction. To the north the *Manchester South Junction and Altrincham* line ran into Manchester via Old Trafford, now converted to tram operation as part of the Manchester *Metrolink*. To the South is the CLC line to Chester and to the south west the former line to Warrington via Lymm and Arpley, now part of the *Trans Pennine Trail*. Although the Chester line joins the WCML at Sandbach via Northwich, linking this route to the line to Carrington would be impossible as there was never a west-to-south junction formation at this location and creating one today would involve demolition of residential property. See Fig. 9.

To find a route southward we must continue beyond Northenden Junction where the railway divides. The right fork takes us back into Manchester via Stockport but passes under the first of the WCML routes just north of Gatley. This branch of the WCML runs from Manchester to Crewe via Wilmslow and Styal, known as the *Styal Line*. This is the line to Manchester Airport as well as the route of choice for freight traffic avoiding Stockport. Here again there has never been a west to south junction and residential property runs up to the railway boundary.

The left fork at Northenden is a freight only line which also passes beneath the Styal line but here the elaborate sprawl of a grade separated junction between the M56 and M60 motorways present an impenetrable obstacle to the creating a junction. Beyond this point the line continues towards the former Cheadle Junction with the Midland Railway. Although the lines to the north and west have long since closed, the junction itself survives sweeping the line south eastwards to pass beneath the line we left at Northenden. Shortly after it does so it also passes beneath the second of the two WCML routes, that between Stockport and Cheadle Hulme, where a further junction divides the WCML between the line to London via Crewe and that via Stoke-on-Trent. Although residential development prevents any prospect of south facing junction from the western approach, immediately to the east of the WCML there is an undeveloped former landfill site, owned by the Greater Manchester Waste Disposal Agency (GMWDA) where a junction could be the created. A possible arrangement is shown at Fig. 10

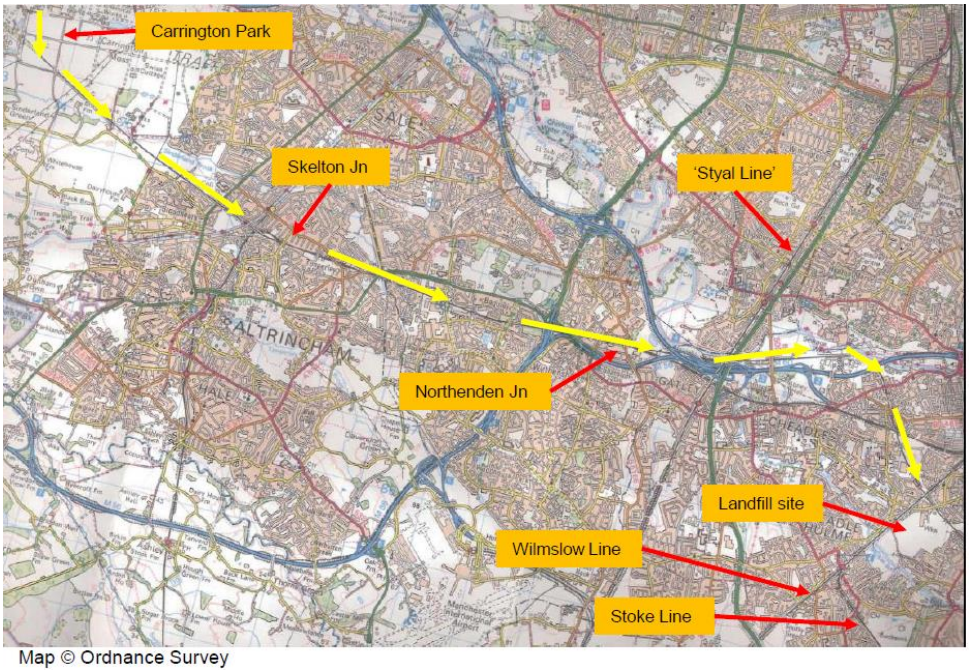


Fig. 9 *Route from Carrington Park to the potential WCML junction at Cheadle Hulme*

Fig.10 *Area at Cheadle Hulme showing potential for a junction between the freight only line and the West Coast Main Line*

Landfill site The landfill is the green area to the east. Initial research suggests that it was last used in 1985 and that there has been no methane flared off since 2011, though monitoring continues. Although re-use of such land is not unknown, there is no immediate prospect of housing development. The grey portion in the middle is used for storing aggregate and road grit and to the west, the local household waste recycling facility. The freight only line forms the site's northern boundary for 500m east of the Adswood Road bridge, enough for both west and east facing junctions to be formed. Clearly there will be some geo-technical issues associated with building a railway here but this will be reflected in the value of the land.

Connecting to the West Coast Main Line

There are two options for a main line connection. One is to join just north of Ladybrook Viaduct, avoiding the construction cost of a second viaduct over the valley. However, this is where the four lines south of Stockport merge into two and, as there are nine trains per hour along this section, would be nearly as congested here as at Castlefield. It would also mean that the vertical separation between the freight line and the WCML would have to be closed within about 1Km requiring a gradient of about 1/200. Since we also need to negotiate a curve at the foot of this incline it would be better to connect further south.
The second option therefore crosses the valley by means of a new bridge, easing the gradient to a more freight-friendly 1/300. It also makes possible a junction arrangement at Cheadle Hulme North Junction that avoids many of the conflicting moves with other services, as this is where the nine trains per hour divide; four towards Wilmslow and five to Stoke-on-Trent. Though some of these may later transfer to HS2, we will assume there will be no net reduction in future demand. The diagrams at Figs. 11-13 help to show possible options for a new junction.

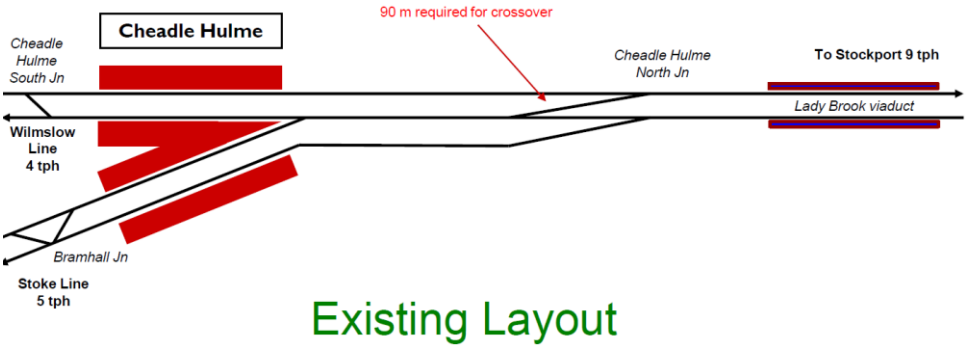


Fig.11 *The current layout shows the Down Stoke sharing track with the up Wilmslow*

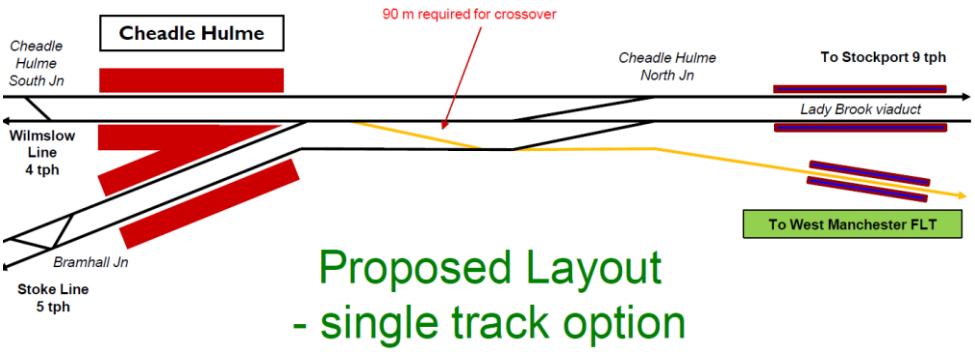


Fig.12 *This is the simplest arrangement to establish the new junction*

Although the intention is to avoid Crewe by using the Stoke line whenever possible, access to the Wilmslow line must be maintained. Freight from Manchester however will conflict with 14 tph (nine *with flow* and 5 *contraflow*) and from Crewe conflicts with all 18. Freight from Manchester via Stoke will only have a *with flow* conflict with 5tph but in reverse, conflicts both with the up Wilmslow line and with the up and down Stoke lines unless gaining the up Stoke at Bramhall junction 800m further south.

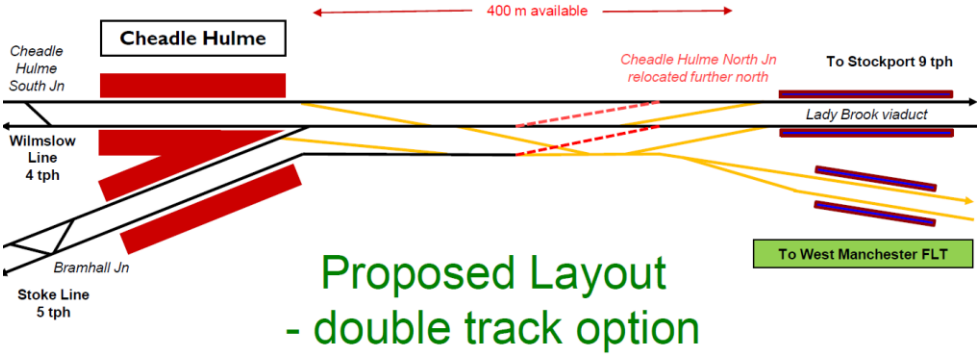


Fig.13 *A double junction avoiding conflict with the Wilmslow line*

This preferred arrangement permits access to the Stoke line avoiding all conflict with the Wilmslow line. It also avoids freight conflicting with itself by making the new bridge double track which also helps with regulation (we only build it once!). Both options avoid widening the embankment south of Cheadle Hulme North Junction though this junction may need to be moved a little closer to Ladybrook Viaduct if we wish to avoid contraflow movement between here and Cheadle Hulme South Junction, 1,200m further south on the Wilmslow line. *The junction arrangements at Cheadle Hulme are discussed in part 2 of this paper.*

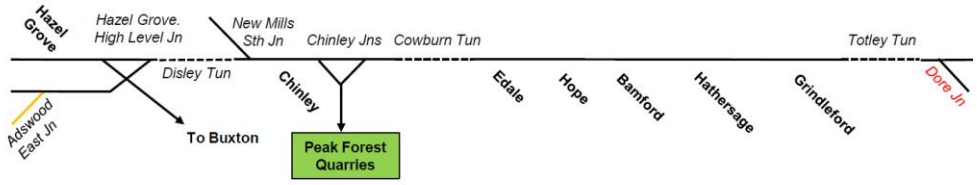
Fig.14 *Looking north from Platform 3 at Cheadle Hulme. Wilmslow lines to the left. Stoke lines in the foreground. An new crossover is required between the up and down Stoke lines roughly in the position of the scrap rail in the picture.*

The line to Stoke

Freight traffic using this line can exploit two legacy refuge facilities between Cheadle Hulme and Stoke-on-Trent. At Longport, the former Esso sidings include a 680m loop on the up line and a 945m siding on the down line which could be converted to a refuge loop. At Grange junction 3Km further south, the up goods loop is 2.5Km long and a down goods loop 1.9Km, easily able to refuge two 775m trains. Longport is 41Km south of Cheadle Hulme, broadly comparable to the 30Km between Trafford Park and the Chelford loops via Styal.

East facing junction at Adswood

Fig. 10 showed that we had sufficient room to provide an east facing junction. This would permit the movement of aggregate traffic from the Great Rock quarries to access the WCML at Cheadle Hulme without the need to run via Altrincham.



West of Chinley Junctions	
Chinley Nth Jn - New Mills Jn (m:c)	3:68
New Mills Jn – Hazel Grove H.L. (m:c)	5:19
Total (m:c)	9:07
Number of Stations	1

East of Chinley Junctions	
Chinley East Jn – Dore Jn (m:c)	19:46
Number of Stations	5

Fig. 15 *The position of the Great Rock Quarries relative to Adswood.*

The new junction at Adswood therefore provides additional route capacity for southbound aggregate traffic avoiding both Crewe and Dore junctions. There are two daily trains, to Northampton and to Acton Yard, that use the Trent Valley line and undertake a northward detour of 19 miles from New Mills junction via Romiley, Hyde, Guide Bridge then back south via Heaton Norris Junction and Stockport taking an hour and 15 minutes to cover less than eight miles to Adswood. Besides aggregate traffic, the new route also offers diversionary options for container traffic to/from the freight terminals at Garston (Liverpool) and O'Connors at Ditton (near Widnes) also avoiding Crewe.

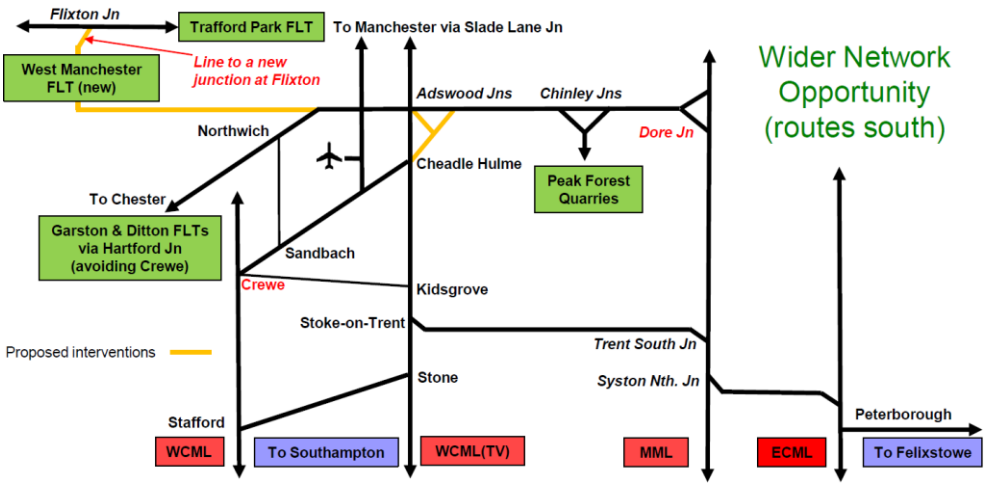


Fig.16 *The potential benefits of the new route and junctions at Adswood*

Eastwards from Carrington

Diverting aggregate trains away from Stockport also releases capacity for traffic from the new terminal at Carrington to access the North East via the Northenden, Edgeley and Heaton Norris Junctions, provided regulation of these trains through Stockport can be achieved. Currently, access from Trafford Park to the east and north via Diggle or Rochdale is only possible by crossing the busy station throat at Piccadilly to reach Ardwick Junction.

Western access to Trafford Park

Until there is sufficient demand to establish the Carrington Park terminal, there is an immediate need to improve access to Trafford Park which serves many rail dependant businesses in the locality but being limited to one train per hour through Castlefield means it has plenty of underused capacity. Access from the west can now be achieved by extending the Carrington line northwards to link with the CLC line west of Flixton. Besides the construction of a western access to Trafford Park itself, the line would need to cross the river Mersey at Flixton to join the line through Carrington Park with the main line. Here there is an option to follow a westerly alignment along the former route into the old coal fired Carrington power station, which has since been replaced on the same site by a modern gas fired plant occupying a smaller footprint. This has however inherited the old switch gear to link with the national grid where the cables may be too low to pass over the railway. A more easterly alignment might therefore be required. Fig.17 shows these options.

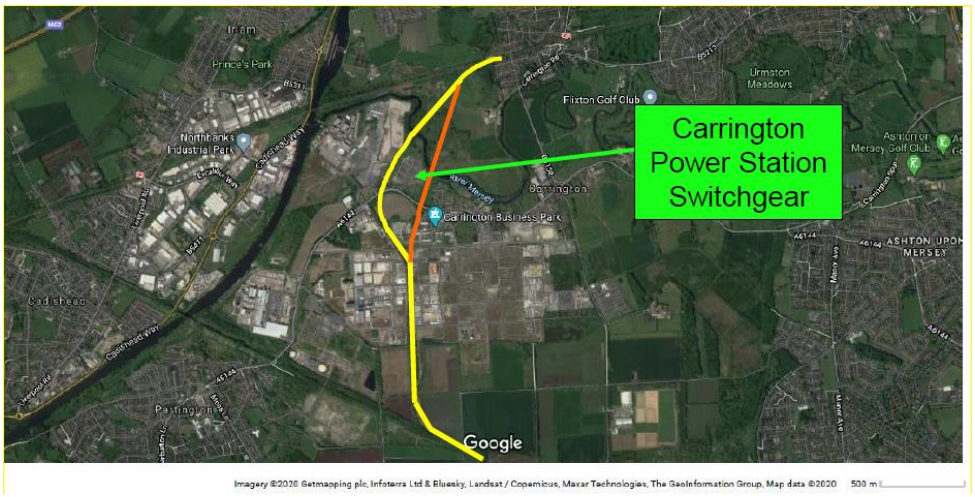


Fig.17 *Options for access to the CLC line at Flixton through Carrington Park*

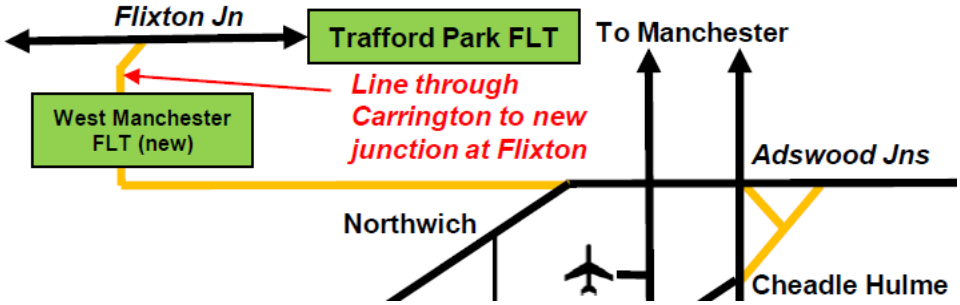


Fig.18 *Section of Fig.16 diagram showing western access to Trafford Park*

Another connection to the north?

Various proposals have been put forward for the reopening of the line Between Skelton and Glazebrook East Junctions via the Cadishead Bridge over the Manchester Ship Canal. The latest is a *Restoring Your Railway* bid from the three Members of Parliament who represent *Worsley & Eccles South*, *Stretford & Urmston* and *Atltincham & Sale* with support from both TfGM and Salford Council. They are all anxious to restore passenger services to Cadishead and Partington that were lost in 1969. This is a challenging project but adding freight to the business case might make it more attractive.

Although 80% of the Trafford park's freight traffic is between Manchester and the southern ports, a north to west curve to the south of the new Carrington Park terminal could develop traffic to the north of Manchester, including currently suppressed demand between here and Tees Port to the north east.

Shortly after joining the CLC line at Glazebrook East, trains would leave this line at the former Glazebrook West junction and follow the formation of the former *Wigan Junction Railway*, later part of the *Great Central* (GCR). This section is planned to be part of HS2 Phase 2B which joins the WCML at Bamfurlong and currently under review as part of the plan to integrate HS2 with Northern Powerhouse Rail (NPR). If this is built, the freight line could share the HS2 formation and access the WCML as shown in Fig. 19. As this route has been severed by the M62 (Fig.3), its cost would probably be prohibitive if built only for freight.

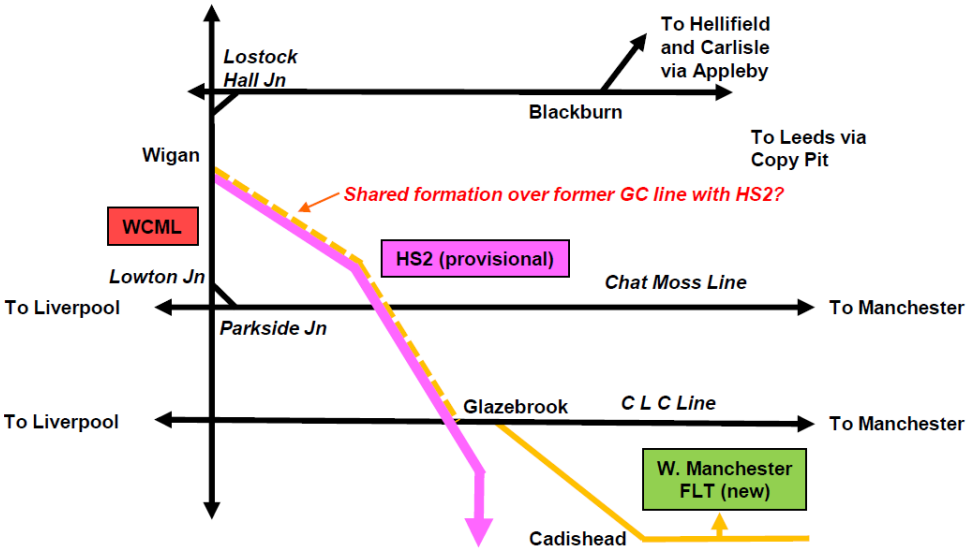


Fig.19 *How the new terminal might be connected northwards via Cadishead*

Benefits of the proposed interventions

- A new fit for purpose freight terminal for Manchester which is:
    a. more efficient to operate with fewer shunting moves
    b. capable of taking longer trains
    c. offering a major economic regeneration opportunity on brownfield land
    d. making a significant addition to freight handling capacity in the Greater Manchester area
    e. conveniently located for rail access from many parts of the UK rail network

- A new strategic freight route serving up to five key sites, including Trafford Park, while avoiding busy junctions at both Crewe and Dore to access each of the four principal lines to the south as well as improving access between Manchester and the north east

- Relieves pressure on passenger services
    a. On the Castlefield Corridor
    b. Between Stockport and Manchester
    c. Between Manchester Airport and Slade Lane Junction

We understand that Network Rail place a value on achieving two train paths per hour per direction (four paths in total) on the Castlefield Corridor at between £700 and £800m over a 60-year appraisal period. The proposed works would include:

- The double junctions at Adswood
- The 1.5Km link line to the WCML at Cheadle and associated connection
- Relaying the line to Carrington and laying out the new freight yard
- Connecting to the CLC west of Flixton
- Establishing a western access from the CLC into Trafford Park
- Electrification of the route to Trafford Park via Carrington

This is all achieved without the need to acquire or demolish residential property. It mainly uses existing or redundant rail routes with new construction confined to mostly brownfield land.

Benchmarking against the outturn prices of similar projects undertaken elsewhere and allowing for inflation, we expect the costs to come well within the scheme value and therefore achieve a positive benefit to cost ratio (BCR). We examine the costs and benefits in more detail in the following section.

Part 2. The Business Case for a Western Route to Trafford Park

Towards a High Level Business Case

In part 1, we have established a proof of concept for a new route. To obtain the support of investors this proposal required further professional analysis and financial appraisal. We therefore shared the original version of this report with Jonathan Moser of the *Railfreight Solutions* Consultancy who was sufficiently interested in our approach to have given his time in preparing a High Level Business Case (HLBC). This has greatly improved our understanding of freight operation at Trafford Park and has revealed the extent to which the limitations the hourly path through the Castlefield Corridor impacts on its operational efficiency.

This work has therefore concentrated solely on the advantages to be obtained from a western access. It has not included the benefits of a second terminal at Carrington nor has it attributed any value to opening another access to the Peak Forest quarries.

The business case is illustrated in the following diagrams supplied by *Railfreight Solutions*

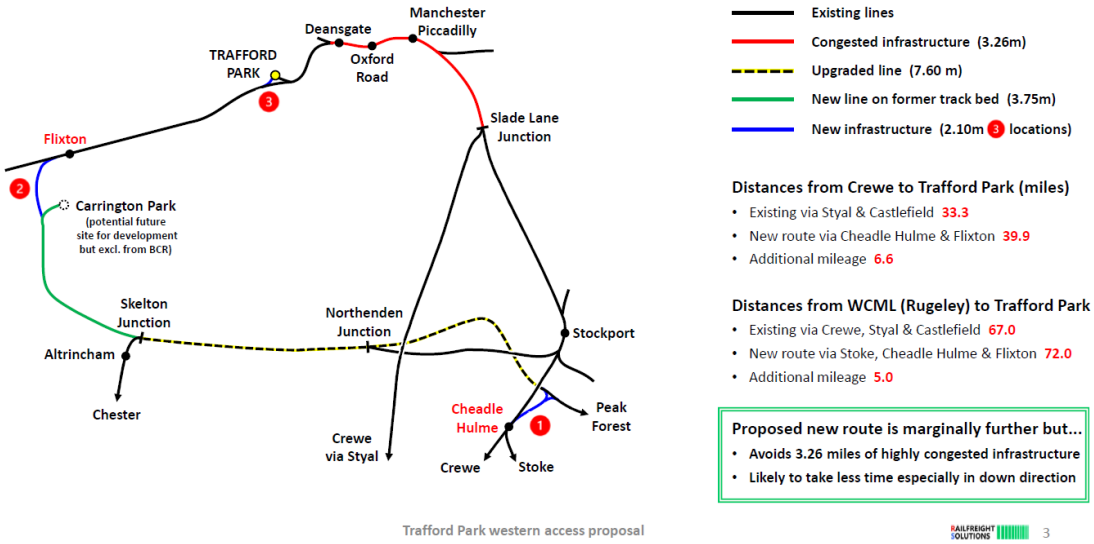


Fig.19 *Diagram showing minimal interventions required to avoid congested infrastructure*

Assumptions

Business cases are sensitive to the assumptions made. In arriving at the BCR for the western access the following have been applied:

- 30 intermodal trains per day (70% of available new paths) Monday-Friday
- 50% electrically hauled
- 36 x 60' platforms per train
- 70% load factor (both directions), 90% HGV load factor (for comparison)
- Traffic flows from ports; 40% Felixstowe, 40% Southampton, 20% London Gateway
- Diesel fuel cost £0,50 per litre
- Transit speed through terminals 5mph
- Train speeds along new route between 40-95% theoretical maximum (average 60%)
- CO2 emissions (grams per tonne-km) Rail 18 :: Road 112
- Environmental cost: £50 per tonne carbon (UK govt. recommends £70 average)
- £7.4bn UK road congestion cost based on 2018/9 ave. (source RAC and INRIX)
- Ave. no. loads per day per HGV 1.5 (2TEU per load)
- I train equivalent to 54 HGVs

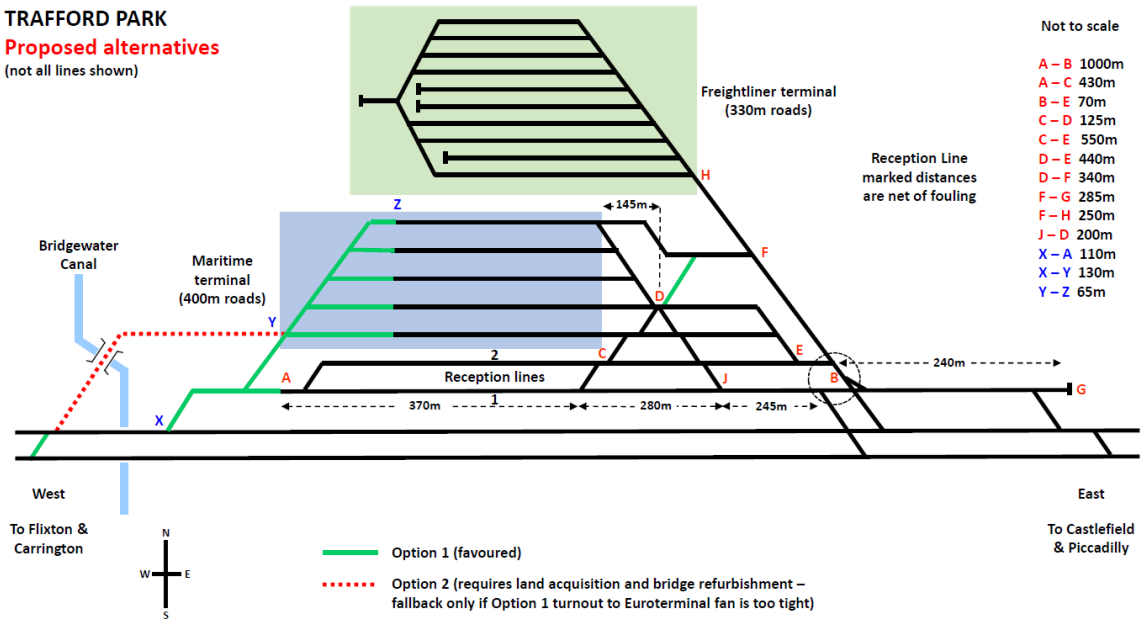


Fig. 20 *Suggested alteration to Trafford Park terminal showing western access options*

Increasing Terminal Capacity

The above diagram shows (in green) the interventions required at Trafford Park. Notice the use made of an additional connection at (D-F) to effectively lengthen the head shunt available to the *Freightliner* terminal by 45m. Currently the *Euroterminal* requires trains to be split in the reception sidings and each section to be separately shunted into the operational area. The new layout offers direct access to the loading gantries where the train can be split and shunted into an adjacent 'road'. Both terminals benefit by avoiding a locomotive 'run round' prior to splitting a train.

	Freightliner terminal	Maritime Terminal	TOTAL
Current			
Simultaneous train handling capacity[1]	3	2.5	5.5
Terminal time per train, mins	300	200	-
Theoretical capacity, trains per day	14	17	29
Actual timetabled trains per day (M-F)	**13**	**4**	**17**
Future			
Simultaneous train handling capacity[1]	3	2.5	5.5
Reduction in shunting time per train, mins	52	42	-
Terminal time per train, mins	248	158	-
Unconstrained terminal capacity, trains per day	**17**	**19**	**35**
INCREASE IN NUMBER OF TRAINS PER DAY	***4***	***15***	***19***

[1] Number of maximum length trains that can be handled within the terminal simultaneously

Trafford Park western access proposal

Fig. 21 *Table showing net benefits to both terminals resulting from the western access interventions*

Connection at Cheadle Hulme

In Part 1 we looked at options for connecting to the West Coast Main Line at Cheadle Hulme. Two options were presented that could avoid conflict with the Stockport-Wilmslow line for trains accessing the Stoke line. Only one of these (option 2) achieved this without single line working for freight between the new Adswood junctions (A) and the emergency Bramhall crosovers. This would have involved additional pointwork in what is an awkward location and would require switches to be installed on a curved section and a possible relocation of Cheadle Hulme north junction. For cost reasons it has been agreed to go forward with a version of option 1.
This requires bi-directional working through platform 4. As traffic develops there may be a business case to further revisit this layout.

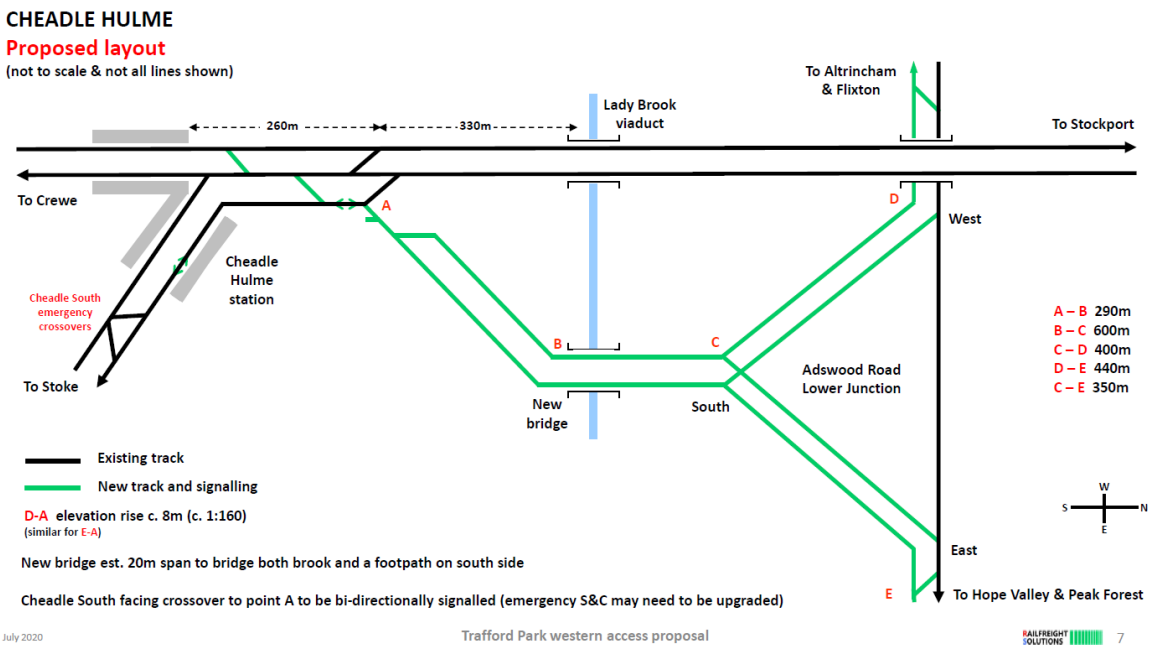


Fig. 22 *Consultants preferred option for connections at Cheadle Hulme*

Overall BCR

Benefits, £m (over 60 yrs)		*Costs, £m*	
Castlefield Corridor capacity release[1]	750	Pre-feasibility	4
Environmental		Land	70
- Modal shift (carbon reduction)	906	Detailed design	18
- Road network reduced congestion	340	Civils	107
Network Rail increased Track Access		Permanent way	103
- New route vs existing	11	Signalling systems	43
- Increased no. trains through modal shift	166	OHLE	60
		Other (incl. 20% contingency)	95
TOTAL BENEFIT	**2,173**	**TOTAL COST**	**500**

BENEFIT : COST RATIO 4.35

[1]Network Rail estimate £800m

Trafford Park western access proposal

Fig. 23 *High level estimate of overall project benefit : cost ratio (BCR) of 4.35*

Next Steps

Safeguarding future growth

As freight traffic increases the measures outlined in this report demonstrate the practicality of relocating one of the terminals to Carrington Park. This dispenses with the need for reception sidings and a head shunt at Trafford Park and reconstructing a terminal on the site of the current *Euroterminal* extending further westward to accommodate 775m trains. Ant relocated terminal would enjoy the same capacity at the new Carrington facility. With longer trains, more frequent services and increased efficiency obtained by avoiding the need to split and shunt trains, a three to four-fold increase in capacity could be achieved. It is therefore recommended that the Carrington site be allocated for rail freight use within the local planning system. *Railfuture* is agnostic as to which operator runs a particular terminal.

Summary and recommen-dation

Freight is not the Castlefield Corridor's biggest problem, though an alternative route would improve the reliability of existing passenger services. Castlefield is however a significant constraint on its ability to develop in future.
Castlefield is not Manchester's only problem. An alternative freight route also releases capacity on the lines south of Manchester via both Stockport and Styal.

Expansion of Manchester's freight capacity, by improving the utility value of Trafford Park and identifying a site for an additional terminal, is nationally significant. By volume, it is the most important of the inland destinations for container trains from both Felixstowe and Southampton ports and rail must be given greater capacity to capture future growth. Birmingham boasts three terminals (at Birch Coppice, Hams Hall and Lawley Street), but there is only one terminal site at Manchester.

It is recommended that the proposals outlined in this paper be taken forward for further development by stakeholders through the Rail Network Enhancements Pipeline (RNEP) and that a full business case prepared to support the eventual Development Consent Orders (DCO) required to bring them to fruition.

Potential stakeholders include:-

The Mayor of Greater Manchester	*Spatial strategy. Political support*
*Transport for Greater Manchester**	*Potential development partner*
*Transport for the North**	*Potential development partner*
*Department for Transport**	*Potential development partner*
*Network Rail**	*Scheme Sponsor. RNEP/DCO application*
Trafford Borough Council	*Local Plan Authority (Carrington site)*
Stockport Borough Council	*Local Plan Authority (Adswood site)*

* To date we have been encouraged by responses received from stakeholders and the support shown by the Rail Freight Group. We are grateful to *Railfreight Solutions* consultancy for their help in producing this paper.

The freight solution to the Castlefield problem

Halfway to Northampton. The Briggs sidings to Northampton Castle Yard aggregate working crossing Ladybrook Viaduct near Cheadle Hulme North Junction

Front Cover Photo: A Trafford Park to Southampton Western Docks freight train approaches Platform 13 at Manchester Piccadilly. To the left, the rear of a train to Trafford Park from London Gateway.

Proposal and report prepared on behalf of *Railfuture* by:
Phil Smart 67, Severn Rd, Ipswich, IP3 0PU (01473)728617

Incorporating material from Martin Cooper, Roger Blake, Peter Wakefield and Phil Bisatt of Railfuture's *Infrastructure and Networks* and *Freight* Groups and from Trevor Bishop and George Boyle of *North West Branch*
Other acknowledgements appear in the text.

Enquiries about this report may be made to Phil Smart or to Peter Wakefield
peter.wakefield@railfuture.org.uk

Business Case for the Western Route prepared by:
Jonathan Moser of *Railfreight Solutions*, Warrington Road, Ipswich
44 (0) 7825 259 546
jonathan.moser@railfreightsolutions.com

April 2020 (Revised August 2020)

railfuture working with RAILFREIGHT SOLUTIONS