GETTING FREIGHT OFF THE CASTLEFIELD CORRIDOR

Phil Smart describes Railfuture's proposal for a new route into Trafford Park and increased terminal capacity

The Castlefield corridor in Manchester has become a byword for delays and cancellations. Described by some as a radioactive transmitter of delay minutes, it has generated many column-inches in *Modern Railways* both from those identifying the failings that created the current situation and those suggesting track and signalling modifications that might make the best of a bad job.

In the meantime, something has to give. At its board meeting last January, Transport for the North agreed that one or more passenger services should be identified for suspension while renewing its call for infrastructure improvements. Besides demanding the early delivery of Package C (additional tracks through the corridor with two additional platforms at Manchester Piccadilly and longer platforms at Oxford Road), TfN also requested a piece of work to assess the options for freight to avoid the Castlefield route. Railfuture has developed a proposal which it believes could do just that.

MILK ROUND

Trafford Park has two container terminals for deep sea intermodal traffic, a market dominated by trade from the Far East. The economics of international shipping dictate the use of Ultra Large Vessels (ULVs) carrying up to 24,000 TEU (twenty-foot equivalent units). These ULVs have reduced the whole of Northern Europe to a mere milk round, dropping off full boxes and picking up the empties from multiple North Sea ports via the English Channel. To minimise sailing time, it is the ports of Felixstowe, Southampton and London Gateway that have become the UK's doorsteps on this shipping rotation.

It is estimated that of the containers moved between these ports and the north of England, only half are sent by rail due to capacity constraints on the network, including at Castlefield. Network investment is essential if we are to both grow and decarbonise the northern economy through a modal shift to rail.

Freight is vitally important and cannot deploy the tricks available to passenger services to recover from late running. It cannot skip stops or turn back short of its destination and ask its cargo to catch the next available service. Neither can it operate solely at night. Freight journeys take up to 12 hours and are bound to hit the peaks somewhere along the route but, as freight doesn't complain on social media when it is late or cancelled, it is a popular target for people seeking easy solutions.

In developing its proposals for Manchester, Railfuture made the following assumptions:

- at least a three-fold increase in rail freight handling capacity in the Manchester area will be needed by 2050;
- Trafford Park will be part of that offering but requires access avoiding Castlefield;
- freight should join the network at junctions that avoid impacting on passenger services;
- current transit times for freight should be maintained or improved; and
- infrastructure interventions should avoid demolition of residential property.

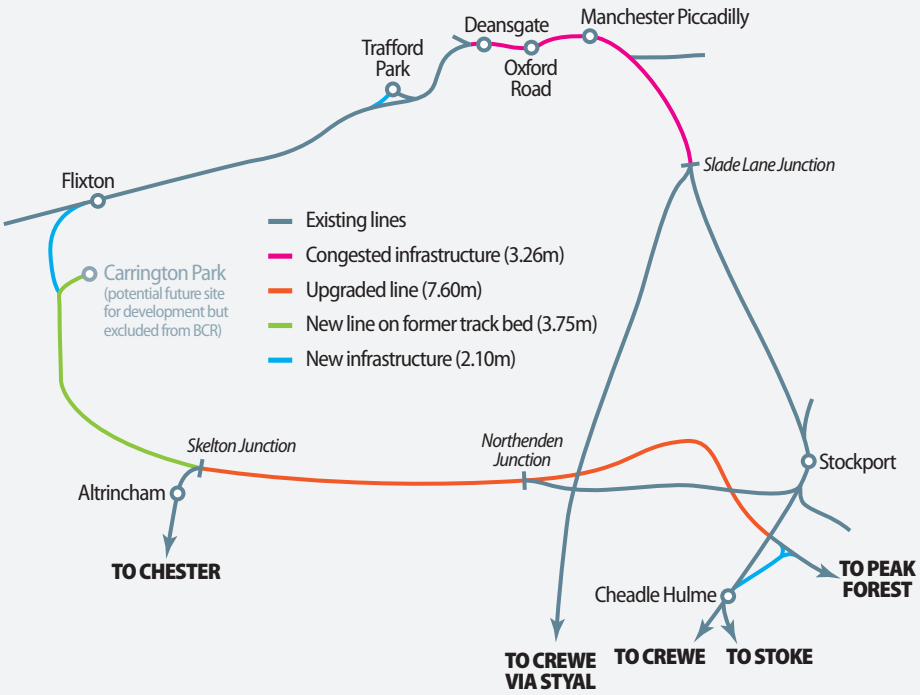
Freight on the Castlefield corridor: No 66101 heads a Trafford Park to Southampton Western Docks working on 13 March 2020, passing the tail end of a London Gateway to Trafford Park train. Phil Smart

Trafford Park, besides being awkwardly located on the network (a legacy of the Manchester Ship Canal) is a constrained site. Access to both the Euroterminal and Freightliner terminals involves splitting trains in reception sidings prior to shunting into the operational area, a problem that becomes more acute as we move to 775-metre trains in future. Longer trains have even greater impact on the Castlefield corridor, occupying two junctions and a station platform or a junction and adjacent stations at any one time. A second terminal site with fewer operational constraints would be desirable.

CARRINGTON

This site to the south west of Manchester is the site of the former chemical works, enjoying good access to the M60 for local distribution. Rail access was achieved on a north to south alignment running for around a kilometre through the site which joined the former Cheshire Lines route between Glazebrook and Skelton Junction, just east of Partington. The north end served the former coal-fired (now gas) power station. There appears to be little in the way of subsequent blocking development at Carrington, which is zoned for employment use in the local plan, and the formation between Carrington and the current network at Skelton Junction is available. Constructing a missing link through the power station site to join the CLC route to the west of Flixton may involve moving some of the switchgear, though various alignments appear possible.

NEW ROUTE TO TRAFFORD PARK AVOIDING THE CASTLEFIELD CORRIDOR



Distance from Crewe to Trafford Park (miles)		Distance from WCML (Rugeley) to Trafford Park (miles)	
Existing via Styal & Castlefield	33.3	Existing via Crewe, Styal & Castlefield	67.0
New route via Cheadle Hulme & Flixton	39.9	New route via Stoke, Cheadle Hulme & Flixton	72.0
Additional mileage	6.6	Additional mileage	5.0

Proposed new route is marginally further but...

- Avoids 3.25 miles of highly congested infrastructure
- Likely to take less time (especially in down direction)

WEST COAST MAIN LINE

Establishing the important link to the West Coast main line (WCML) presented the most interesting challenge. History has not handed us west-to-south formations at Skelton Junction nor with the Styal line at Gatley, so we looked further east of Northenden Junction, where the freight-only left fork continues until it becomes what remains of the old Midland main line at the former Cheadle Junction. After passing beneath the Wilmslow line at Adswood, we found some white space on the map! As luck would have it, this turns out to be a former landfill site, long since disused but as yet undeveloped. The site provides sufficient room to create a double junction with a line south to join the WCML at Cheadle Hulme, the point where it divides into routes via Crewe and Stoke. The line through Stoke carries just five passenger trains per hour and the line to Crewe just four. A junction arrangement is available that avoids conflict with the Crewe line if freight were to be routed via Stoke through our proposed new junction, though it provides a connection with both.

At Adswood the east-to-south connection with the freight line continues via Hazel Grove to join the Hope Valley line and thus opens up access to the WCML for the Peak Forest quarry traffic.

VALIDATION

We are grateful to Jonathan Moser of Railfreight Solutions for studying our proposal. His high level business case demonstrated that access to Trafford Park would no longer be limited to one train per hour and this, combined with a reduction in the number of shunting moves required, doubles the number of trains that can be accommodated within its terminals. The benefit-cost ratio works out around 4.3:1 for the western route alone and does not include the value of a second terminal at Carrington, the new route to the Peak Forest or wider economic benefits of regeneration.

The proposal has been shared with contacts at Network Rail, Transport for the North, Transport for Greater Manchester and the Rail Freight Group as well as one of the freight operators, all of whom have shown interest and support for this proposal.

In summary, the scheme benefits are:

- more efficient use of Trafford Park;
- identification of a second terminal site to meet future demand;
- freight to be diverted from the congested infrastructure between Deansgate and Slade Lane Junctions, thus improving passenger service reliability;
- use of mainly brownfield land and reuse of redundant rail formations;
- the potential to serve other freight facilities, including Peak Forest quarry traffic; and
- access to the main network south of Stockport, where sufficient line capacity is available to avoid impact on passenger services. mr

The full Railfuture report can be found at *https://railfuture.org.uk/article1855-Relieving-Castlefield*

Phil Smart

Since 1983 Cllr Phil Smart has served on Ipswich Borough Council, a founder member of the East West Rail Consortium. In 2000 he designed the route of the Ipswich freight chord, which opened in 2014. Phil is a member of Railfuture.