

## ◆ Rail Freight

**INTRODUCTION**

1. Intermodal Logistics Park North Ltd. ('the Applicant') is promoting proposals for a new strategic rail freight interchange (SRFI) and associated development on land to the east of Newton-le-Willows, in the jurisdictions of St Helens, Wigan and Warrington Councils. An SRFI is a large multi-purpose freight interchange and distribution centre linked into both the rail and trunk road systems. SRFIs reduce the cost of moving freight by rail and encourage the transfer of freight from road to rail, thereby reducing carbon emissions and contributing to the UK's target to achieve net zero by 2050.
2. Under the Planning Act 2008, the proposals qualify as a Nationally Significant Infrastructure Project (NSIP). Accordingly, an application for a Development Consent Order (DCO) is to be made to the Planning Inspectorate (PINS), which will examine the DCO application on behalf of the Secretary of State (SoS) for Transport.
3. Before making a DCO application, an Environmental Impact Assessment (EIA) of the Proposed Development will be undertaken in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations'). EIA is a process that provides the decision maker with sufficient information about the likely environmental effects of a project and is used to improve the environmental design of a development proposal. The first stage of this process was the submission of a request for a formal scoping opinion under Regulation 10 of the EIA Regulations.
4. The Applicant submitted an EIA Scoping Report to the Planning Inspectorate in October 2024. This outlined the work undertaken to date and sought advice from the Inspectorate on the likely significant effects of the Proposed Development and the topics that needed to be assessed as part of the Environmental Impact Assessment (EIA). A Scoping Opinion was received in December 2024, and this will be used to inform the EIA process for the Proposed Development.
5. This topic paper describes the function, design, and operation of the proposed rail freight facilities within the DCO Site. It begins by setting out the main functions of the rail freight facilities; it then outlines the interfaces with the main line railway, describes the rail facilities and phasing, and finally describes typical activities at the terminal.
6. The Rail Freight paper has been prepared by Baker Rose Consulting LLP, a specialist development consultancy concentrating on the complex relationship between property / real estate, the environment, transport, logistics and major infrastructure. The work and advice to the Applicant has been led by David Baker FRICS FCILT MCI Arb, Partner at Baker Rose who has over 30 years' experience advising on some of the country's most important rail-based

logistics schemes, including Daventry Rail Freight Terminal, London Gateway and Hinckley Rail Freight Interchange.

7. This paper should be read in conjunction with the topic paper on Policy and Need, which explains the national need for SRFI facilities.

## STRATEGIC RAIL FREIGHT INTERCHANGES

8. According to paragraph 2.15 of the government's National Policy Statement for National Networks (NPSNN):

*For many freight movements, rail is unable to undertake a full end-to-end journey for the goods concerned. The aim of a strategic rail freight interchange (SRFI) is to optimise the use of rail in the freight journey by maximising the long-haul primary trunk journey by rail and minimising some elements of the secondary distribution (final delivery) leg by road, through co-location of other distribution and freight activities. SRFIs need to be supported at both ends by connections to rail infrastructure and logistics terminals. SRFIs are also typically associated with intermodal traffic. A fully effective network of SRFIs, supported by smaller-scale rail freight interchanges, will help to enable the sector to reach its full potential.*

9. Paragraph 4.87 of the NPSNN describes the key rail functions of an SRFI:

*Applications for a proposed SRFI should provide for a number of rail-connected or rail-accessible buildings, plus rail infrastructure to allow more extensive rail functionality within the site in the longer term. Applicants should deliver rail terminal infrastructure and / or buildings capable of rail-connection in conjunction with the wider development.*

10. Thus an SRFI can provide the following types of defined facilities:

- An intermodal area where containers are lifted to and from rail freight wagons, referred to as a 'Railport'.
- The reception sidings and train stabling facilities to the Railport and Rail Connected Buildings, all together referred to as the 'Rail Terminal'.
- Rail Accessible Buildings: Having the potential either for a direct rail connection (rail connected) or to be rail-served.
- Rail Connected Buildings: A warehouse or other building either with its own dedicated rail siding or which is sufficiently close to the rail terminal to allow containers to be moved from the rail wagons into the warehouse by overhead cranes or reach stackers, without the need for them to be loaded onto a HGV or Tugmaster vehicle.
- Rail Served Buildings: A warehouse forming part of the Strategic Rail Freight Interchange development, but which would require containers to be moved from or to the rail terminal by means of an HGV or Tugmaster vehicle.

11. These facilities and their functions are described in more detail in the following sections of this topic paper.

12. For the North-West Region, the movement of freight is critical for exports and imports. Many global shipping lines only make one UK call, mostly to ports in the South-East (Felixstowe, London Gateway and Southampton). Liverpool is attracting some new shipping lines for certain flows. European trade is also re-routing through other Northern ports, such as Teesport and Immingham, away from the Dover Straits. Ports operate more efficiently with rail than individual lorry movements and the growing volumes able to maximise the use of rail freight, as an alternative to long distance HGV moves, need the lifting capacity and efficiencies of SRFI's to provide an end-to-end distribution service.
13. As the network and capacity of regional SRFI's grow, so do the opportunities for inter-regional movement of freight by rail. This has been successfully developed by Tesco and Coca-Cola, as examples in retailing and manufacturing logistics. The Proposed Development is exceptionally well placed to simply serve the Scottish market and all other regions of England and South Wales, being situated effectively at the crossroads of the North-South routes- via the West Coast Main Line; and East-West via Chat Moss and Trans Pennine Lines.
14. The Proposed Development will be an SRFI that is optimally located on the rail and road network, that can serve as a key logistics platform for immediate occupiers and the wider region, primarily within a circa 20 mile radius (32km). The benefit of this is the most efficient use of battery powered goods vehicles and long-haul use of the rail network, all of which locally is electrified.

## TYPES OF FREIGHT TRAIN

15. Intermodal trains carry containers or other similar units. The containers are transferred to and from the train at each end of the journey using large cranes or reach stackers. Once transferred, the containers may be stored at the terminal or loaded onto articulated lorries using flat bed or skeleton trailers for delivery to the final customer's premises.
16. A major benefit of an SRFI is that the distance for the final delivery can be very short – simply from the Railport to an adjoining and or nearby warehouse, or even direct to Rail Connected warehouses for specialist flows. This eliminates traffic from the wider road network, allows late cut off times (prompt deliveries to meet customer requirements) and keeps costs low.
17. An SRFI has to be well connected to the strategic rail freight network and the highway network for local and regional distribution to and from manufacturers, retailers and distributors generally. The Proposed Development is well connected to the strategic highway, as it adjoins Jn 22 of the M6 and wider connections across the region.
18. Whilst all the buildings at an SRFI will be Rail Served, and occupiers in the surrounding area can utilise the intermodal rail services of the Railport, some specialist users can benefit from rail directly into or alongside their buildings; these are referred to as Rail Connected Buildings.
19. The photographs overleaf illustrate some key features of likely operations at an SRFI.

**Figure 1** Examples of likely operations at an SRFI. Top left - intermodal wagons and containers. Top right - intermodal handling using reach stackers. Bottom left - intermodal handling using rail mounted gantry cranes. Bottom right - a train of conventional wagons



## MAIN LINE ACCESS

### Responsibilities

20. Network Rail owns the national rail network. It maintains the railway, operates the signals, and writes and manages the train timetable. We have been working closely with Network Rail in developing the design and capabilities of the Proposed Development.
21. Freight Operating Companies (FOC), otherwise known as freight train operators, operate trains over the network. They provide locomotives and drivers and have a licence to operate trains. They book timetable paths from Network Rail on a long term or short-term basis. They often provide wagons, either directly, leased or owned by their customers.
22. Intermodal freight customers can, and some do, buy exclusive services for a full train, but most will utilise the capacity of the FOC's services to move container flows between origin and destination. Essentially sharing capacity with other customers on each train. This increases the size of the market that can benefit from rail considerably. Typical customers will be shippers, shipping lines, manufacturers and retailers.

23. A terminal operator transfers containers to and from trains and provides additional services such as short-term and longer-term storage, loading and unloading of containers from truck to train and vice versa; as well as providing onward delivery and collection services within the SRFI and across the region.
24. The terminal operator could be a FOC, a shipping line or an independent business, but every SRFI terminal has to be operated as an Open Access Terminal so that rail services are not restricted to the operator's business and all users should be treated equally. For the Proposed Development, this means that all occupiers of the warehouse units will be able to access and utilise the rail freight terminal.

### Connecting to the main line

25. The Rail Terminal for the Proposed Development will be located to the south of the Chat Moss Line, which runs from Liverpool to Manchester, and to the east of the West Coast Mainline. All the lines in this area are electrified using Overhead Line Equipment (OLE). All types of freight trains will be able to access the terminal, including electric, trimodal (electric, battery and diesel) and diesel, including diesel trains run on HVO (hydrotreated vegetable oil).
26. The connection to the reception sidings and Rail Terminal will be from the Chat Moss Line, providing access to the west (Port of Liverpool) and the east (Trans Pennine to East Coast ports), with connections off the Chat Moss Line connecting to the West Coast Mainline for the north (Scotland) and the south (the Midland terminals, Felixstowe, London Gateway and Southampton ports).
27. Trains to and from Scotland and via eastern routes will utilise the reception sidings located to the east of the West Coast Mainline; land is allocated within the adopted St Helens Local Plan for this within the current Parkside West allocation. The area of land identified in the draft Order Limits has been refined from that identified in the safeguarded land (for the rail chord) in the St Helens Adopted Local Plan. This is to accommodate trains up to 775m<sup>1</sup> sufficiently away from the West Coast Main Line and connected to the new location of the points on the Chat Moss Line. It therefore differs from the original policy allocation; this area is termed the Western Rail Chord of the DCO Site.
28. Connections to the Chat Moss Line are being designed so that trains can enter the terminal at a reasonably high speed, which will minimise the time that each train blocks the main line.
29. The location of the western connection starts just to the east of the recently extended Newton-le-Willows station. This revised location improves the capacity of the local rail network and to help maximise capacity for passenger and freight services.
30. The location of the mainline connections are critical for Network Rail and is a key design driver for the Railport and its resulting location within the wider SRFI scheme, including also for the reception sidings. The location of the mainline connections are critical for Network Rail and are a key design driver for the overall Rail Terminal, including the ultimate positioning of the

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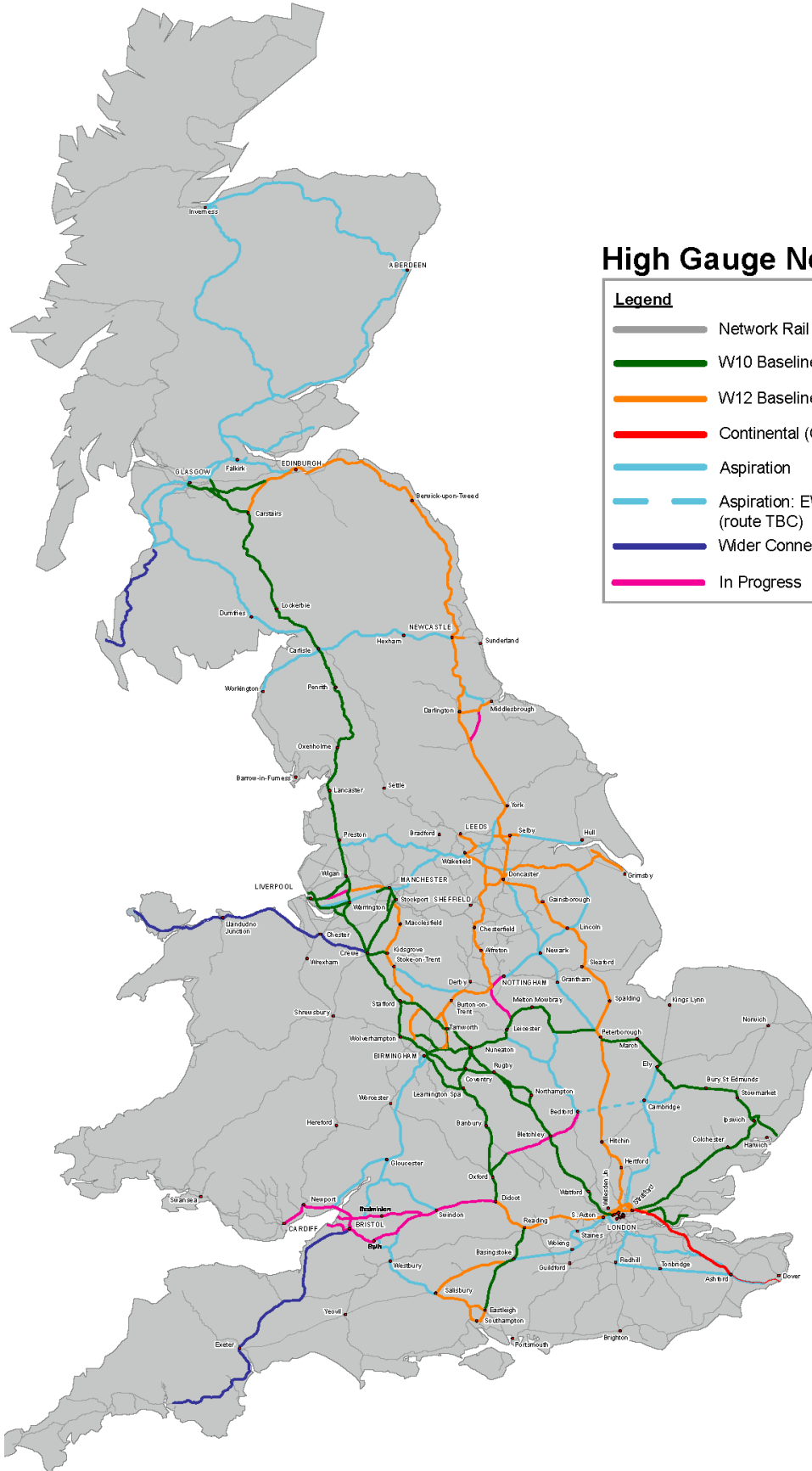
<sup>1</sup> To meet the requirements of the National Policy Statement for National Networks (para 4.89).

Railport within the wider SRFI scheme.

### Loading gauge and train length

31. The 'loading gauge' is the profile of bridges and tunnels. A larger loading gauge will allow bigger freight wagons to pass. The key loading gauges for rail freight trains are:
- W10 Gauge: 9ft 6in height International Organization for Standardization (ISO) containers are now the dominant size in the deep sea maritime sector. In order for rail freight companies to transport this size of container on a standard height wagon, the W10 gauge is required.
  - Although the use of low deck wagons can act as a solution to overcome infrastructure gauge constraints for some routes, these are relatively inefficient and therefore more expensive but can be utilised if required.
  - W12 Gauge: The W12 gauge maintains the height of W10 (9ft 6in on a standard platform) but has an increased width of 2600mm (from 2500mm at W10), which accommodates wider intermodal unit sizes, typically required for some pallet-wide swap bodies and refrigerated traffic employed in domestic and continental intermodal traffic.
32. The WCML is cleared to W12 (with special running through some sections) between Bletchley in the south and the Central Belt of Scotland to the north. The Chat Moss line is cleared to W12 to the east of Earlestown, past the Proposed Development and to the west, there is a scheme to deal with one structure which is being developed by Network Rail, which will then provide W12 through to Liverpool. The TransPennine Route Upgrade is designed to W12 connecting through to the Chat Moss Line.

### High Gauge Network Map



### High Gauge Network Map

**Legend**

- Network Rail
- W10 Baseline Loading Gauge
- W12 Baseline Loading Gauge
- Continental (GB1/2) Gauge
- Aspiration
- Aspiration: EWR Central Section (route TBC)
- Wider Connectivity Aspirations
- In Progress

33. Intermodal trains, carrying containers or swap bodies, are among the longest trains on the UK rail network. Most ports and terminals can currently accommodate 600m long trains, with some capable of operating at the new Network Rail maximum length of 775m. Network Rail is undertaking a programme to increase the rail network's capability to accommodate the maximum train lengths on key routes to 775m. The longer trains provide more capacity and reduced costs per container.
34. The Proposed Development is being designed to operate with up to 775m intermodal trains, without the need to spilt and shunt them, making for a very efficient terminal and fast turnrounds, where required.

### RAIL FREIGHT FACILITIES TO BE PROVIDED

35. The completed Railport will be able to handle up to 16 trains per day each way (total 32 rail movements), but it will take some years for traffic to build up to this volume. The Railport is being designed so that capacity can be added when required, while ensuring that a viable and efficient in intermodal terminal operation is provided from the start.
36. The phasing of the terminal will be driven by the market. The scheme is designed so that the first phase could comprise a reach stacker only operation, moving to utilising a growing number of rail mounted electric gantry cranes and reach stackers, to cope with the increasing volume of freight.

### Typical operations

37. When a train arrives from either direction it will pull into the reception sidings as quickly as possible to avoid blocking the main line.
38. Trains coming from the west can be hauled straight through the eastern reception sidings in to the terminal, with the engine released using a traverser, in lieu of a headshunt, to return. They may be hauled in part by a shunter if they are not capable of moving under their own power, i.e. without using the Overhead Line Equipment (OLE).
39. Trains coming from the east will go straight into the western reception siding chord, with the engine run-a-round to pull the train through to the terminal, as described above.
40. Departures could operate with a straight exit from the terminal through to the mainline, for west bound (Liverpool) and south bound trains. East and North (Scotland) bound trains would need to be shunted into the western rail chord and would depart onto the mainline from there.
41. Once in the intermodal terminal, also referred to as the Railport, cranes or reach stackers can be used to remove containers from the train and reload containers back onto the train.
42. A reach stacker is a large mobile lift truck which can pick up laden and empty containers and move around flexibly and add or remove them from container stacks or the flat bed or skeleton trailer of an articulated HGV.
43. The overhead cranes would be gantry cranes which run on their own dedicated rails and move



up and down the terminal. Initially reach stackers may be used alone, combining with gantry crane operations when more capacity is needed. The main benefit of gantry cranes is to allow a faster operation with more space to stack containers.

44. Containers unloaded from a train, if not delivered to or taken direct from a truck, can be transferred by the crane to temporary hot lanes, running parallel to rails, ready for reloading. For longer term storage, laden containers will be added to container stacks, stacked up to 5 high; and empty containers would be more densely stacked in blocks, up to 7 high.
45. The departing lorry can then undertake one of three operations:
  - Make a direct delivery by road within the surrounding development – making them all Rail Accessible
  - Make a delivery to business further away, generally likely to be within circa 20 mile radius (32km); or
  - Transfer the container to the container stack area, where it can be held until needed.
46. Reach stackers and rail mounted gantry cranes have been illustrated in Figure 1. Figure 2 below shows a rubber tyred gantry crane.

**Figure 2 Rail Mounted Gantry Crane (RTG)**



## NEXT STEPS

47. Network Rail have been extensively involved in the evolution and design development of the rail aspects of this SRFI given it affects its' infrastructure, including on the capacity to accommodate the train movements proposed for the terminal along with passenger needs.
48. This has involved cross-discipline workshops and subject-specific workshops; such as rail, OLE and pathing specialists.

49. This has been an iterative process and has helped identify significant issues with the original scheme considered for the allocation of the SRFI site within St Helens Local Plan. This had originally assumed a connection closer to Newton-le-Willows in order to fit the mainline connections for the reception sidings and chord to the terminal within St Helens' administrative boundary; which required trains coming from the west (Liverpool and the South) to cross over and run the wrong way through Newton-le-Willows station, past Platform 2, into a reinstalled line over the West Cost Main Line (WCML) bridge and into the reception sidings.
50. It is of course to be acknowledged that during the Local Plan preparation stages, technical considerations of a proposed allocation that are then available to the Local Planning Authority will be based on limited knowledge. In consequence a refinement of the proposal, particularly for a complex development proposal such as an SRFI, is not to be unexpected.
51. The planning policy considerations arising from the refinement of the scheme for an SRFI will be addressed in the Planning Statement, which will accompany the application for DCO consent.
52. Newton-le Willows station has since been extended to allow for longer passenger trains; and the route of the old colliery siding over the WCML bridge is now used for major power cables serving the WCML and the wider rail network; hence they cannot be moved.
53. The solution, which is also better for passenger services, is for the trains from the west to crossover after Newton-le-Willows station, at a point further east along the Chat Moss Line. This then means the original outline scheme reception sidings would be too short and the curves too tight to operate the originally anticipated location for the Railport.
54. This has been resolved by bringing the scheme in part onto land within Wigan Council's administrative boundary, past another constraint of a National Grid pylon and in the process create a much more efficient Rail Terminal able to serve more trains and better serve the economic region of the North West.
55. Network Rail are in the process of further reviewing the resultant collaborative work which effectively takes the design through its PACE programme (Project Acceleration in a Controlled Environment) beyond stage ES2 (project development and selection) towards ES3 (project detailed design), within Network Rail's develop, design and deliver management system. This is beyond the level normally required for a DCO.
56. Network Rail is tasked by Government to assist in developing rail freight to achieve 75% increase in rail freight net tones moved (actual goods, not just trains). Growing the number and capacity of SRFI's is a critical part of the justification in government adopting this policy.
57. The Next Steps will be to further develop key details and long-term maintenance strategies that will be required to ensure that the needs of the railway are fully accommodated and met in the DCO application, when submitted. The close working engagement with Network Rail will be continued throughout. There will also be ongoing engagement and consultation with all other rail stakeholders, including the passenger train operators, during the PEIR stage of the DCO process.

58. This topic paper forms part of the material available for the informal consultation that is taking place between 27 January 2025 and 21 March 2025. Should you wish to comment on this paper or any other matters related to the Proposed Development you can respond to the informal consultation via:

- ILP North website – [www.tritaxbigbox.co.uk/our-spaces/intermodal-logistics-park-north](http://www.tritaxbigbox.co.uk/our-spaces/intermodal-logistics-park-north)
- Email [ilpnorth@consultationonline.co.uk](mailto:ilpnorth@consultationonline.co.uk)
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