

## 8. Rail

- 8.0 This chapter of the Preliminary Environmental Information Report (PEIR) supports the information provided on the rail aspects of the Proposed Development in **Chapter 5: The Proposed Development**. It has been informed by the 'Rail Central Rail Operations Report' (February 2018) (**Ref.8.1**) (**Appendix 8.1**).
- 8.1 This chapter does not contain an assessment of impacts on the rail network, given the policy background summarised below and the established need for road and rail infrastructure. However, it summarises how the rail network will be used within the Proposed Development and confirms capacity on the existing rail network for rail freight proposed to be serviced by the Proposed Development.
- 8.2 The development of the Rail Central proposals has been undertaken in close co-operation with Network Rail (NR) as system operator over the last 6 years. The proposals have been subject to a pre-screening due diligence process by the NR Route Strategy Planning Group (RSPG) and Route Investment Panels (RIP). The Route Directors of the London North Western Route (LNW) and the Freight & National Passenger Operators Route (FNPO) have been engaged throughout this process, via a NR-appointed Commercial Scheme Sponsor and Project Manager. The proposed main line access arrangements have been subject to three successive peer reviews by Network Rail and its technical advisers, the feedback being used to inform the development of the proposals.

### Summary of Policy Background

- 8.3 The National Networks National Policy Statement (NN NPS) (**Ref. 8.2**) establishes that there is a 'compelling need' to improve the road and rail networks in England to support economic growth and regeneration. It makes clear that the Examining Authority should assess applications for Development Consent on the basis that the Government considers that there is an established need for road and rail infrastructure.
- 8.4 With specific reference to Strategic Rail Freight Interchanges (SRFI), the NN NPS makes clear that there is a need for an expanded network of SRFI. The NN NPS promotes an increase in SRFI capacity at a wide range of locations to ensure flexibility and to meet with the changing demands of the market, whilst noting that the locational requirements of SRFI will limit the number of suitable locations for developing viable sites.
- 8.5 Given the compelling need for the road and rail infrastructure covered by the NN NPS, there is a presumption in favour of granting Development Consent for national networks Nationally Significant Infrastructure Projects (NSIPs). That presumption applies unless specific detailed policies and protections set out in the NN NPS (and legal constraints set out in the Planning Act 2008) indicate that consent should be refused.
- 8.6 The national policy context is set out in more detail at **Chapter 6** and is not therefore repeated here.

## End-Users

- 8.7 Within the non-bulk sector of the rail freight market most relevant to SRFI (i.e. excluding bulk commodities such as aggregates, steel and petrochemicals), the key users involved may include various combinations of the following groups:
- End users, including manufacturers, suppliers, wholesalers and retailers, who need to move goods to and from factories, ports and distribution centres;
  - Third-party logistics service providers (3PLs), shipping lines, ports, freight forwarders and distributors, who move goods on behalf of end users; and
  - Rail freight service and interchange operators, who focus on transporting goods by rail on behalf of logistics service providers and end users.
- 8.8 Three main types of rail-based distribution services are used in this sector:
- Movement between rail-served production and/or distribution sites (for example, the flow of traffic for Danone from a rail-served factory in France direct to a rail-served warehouse at Daventry International Rail Freight Terminal for storage, value-added processing and onward distribution);
  - Movement of containers between ports and inland interchanges - rail moves around one-quarter of the containers passing through the main ports of entry to Great Britain;
  - Movement of goods between non rail-served premises, using rail transport for the primary 'trunk' haul: examples include deliveries for Tesco and other supermarkets, and mail and parcels traffic for the Royal Mail and other carriers, moved between national, regional and urban distribution centres by rail.
- 8.9 The rail report (**Appendix 8.1**) describes the various companies involved in the operation and use of the rail facilities on site. These would be operated by independent service providers (logistics companies and/or specialist terminal operators) on a fully open-access basis to all users and train operators. The rail services would be provided by a number of licensed rail freight operating companies (FOCs). The users of the rail services would be occupiers and other businesses (and/or their own end customers). The timing and routing of the rail services on the main line would ultimately be determined by Network Rail and the train operators.
- 8.10 Whilst the various service providers have yet to be selected, in order to provide an indication of the potential scale and diversity of rail freight activities on site, reference is made in this report to the experience of existing operational SRFI and other SRFI and other RFI proposals.

## Proposed Rail Operations

8.11 This section provides further information regarding the rail-related aspects of the Proposed Development, including:

- The role of Rail Freight Interchanges (RFI) and the particular role played by SRFI;
- Main line railway access from the site;
- Proposed on-site railway infrastructure and associated interchange facilities;
- Method of working for trains to, from and on site;
- The capability of site to handle rail freight services of varying configurations as required.

#### **Role of Rail Freight Interchanges (RFI)**

8.12 RFI are integral to achieving mode shift of goods to rail for part of the journey, by providing the necessary interfaces with road haulage. RFI will either provide a straight transfer of goods between rail and road (e.g. lifting of containers between trains and trucks), or will enable goods to be moved by rail to an adjacent warehouse, from where the goods will then be held prior to onward sortation and delivery by road.

8.13 In recent years, the unprecedented growth in intermodal traffic moved by rail has been facilitated in part by expansion of interchange facilities at ports and inland distribution points. In order to maintain growth in rail freight traffic, further inland interchange capacity will be required. The majority of SRFI and RFI developments to date have been in the Midlands, sites such as Daventry (DIRFT), Hams Hall and BIFT located close to the “Golden Triangle” concentration of national distribution activity.

8.14 In 2007 the Government White Paper on the Railways set out a long-term ambition for a railway capable of handling double the level of passenger and freight traffic. To cater for this growth, the Government committed to create a Strategic Freight Network (SFN), a core network of routes to be enhanced to cater for 775m length trains operating within W10 loading gauge (see next section), linking together a network of inland interchanges, ports and the Channel Tunnel.

#### **Main line railway access**

8.15 The Rail Central site is located on the SFN, being bounded to the west by the West Coast Main Line (WCML) “fast lines” and to the east by the WCML “slow lines” (and Northampton Loop Line (NLL). All four lines are electrified with overhead 25kV AC catenary and cleared to W10 loading gauge. The four WCML running lines split into two separate routes south of Rail Central at Roade Cutting, and rejoin as a single route at Hillmorton Junction south of Rugby.

8.16 The WCML links London and the South East with the Midlands, North West and Scotland, and is the principal route for movement of north-south rail traffic related to the small

network of existing SRFI. The WCML forms a core part of the Trans-European Network (TEN-T), and south of Crewe to London is one of the few sections of the national network already cleared for 775m length trains.

- 8.17 At present around 580 train paths per day are scheduled to pass the site along the fast and slow lines, with around 90% of these used in practice. 20% of paths are used for freight services. The proportion of freight trains routed via the fast or slow lines can vary overnight according to engineering works, with services diverted onto each side accordingly. Rail Central's unique ability to directly connect into both fast lines and slow lines enables the site to retain access to the main line throughout such maintenance periods.
- 8.18 Network Rail maintains a rolling programme of timetable development, seeking to accommodate a variety of requests from passenger and train operators which may vary from very short term (with only a few hours' notice) through to the longer-term (up to 18 months into the future). As part of this programme, Network Rail monitors usage of booked timetable paths in order to allocate capacity as required. A recent example of this work led to some 4,700 timetable paths per week being made available, with 1,000 of the paths safeguarded for future strategic freight growth.
- 8.19 Network Rail's investment programme (in parallel with developments such as HS1, HS2 and HS3) then focuses on seeking to respond to forecast growth in passenger and freight traffic through capacity enhancement. This includes new digital signalling systems for the rail network and freight locomotives.
- 8.20 Network Rail has developed long-range forecasts of passenger and freight demand out to 2043, which form the basis for a separate route studies being undertaken by Network Rail to consider options for further enhancement of network capacity, alongside the proposed HS2 development. The forecasting process undertaken by Network Rail, as endorsed by the NN NPS, has taken account of the Rail Central proposals as part of the quantum of additional SRFI capacity expected to be developed over the next 30 years.
- 8.21 The Rail Central scheme is being developed with capacity to cater for a significant level of traffic at maturity, noting that such levels of traffic would be expected to evolve over a number of years. For example, DIRFT now generates around 9 trains per day each way after more than twenty years of operations. In the short term, the immediate requirements of Rail Central would be to cater for the initial start-up phase, achieving up to 4 trains per day each way.
- 8.22 Analysis of the network capability for additional freight traffic has been undertaken on both the slow lines and fast lines by Network Rail and specialist timetable planners PRA. On the slow lines south of Northampton, between 28 and 38 daytime paths for intermodal freight trains were identified in each direction, with additional capacity being available overnight. On the fast lines, between 14 and 19 paths were identified in each direction per day for express freight trains, with up to 50 paths for intermodal freight trains being available overnight. Whilst in combination the total number of paths available on fast and slow lines

would be considerably less than this in practice, the joint analysis confirms the overall capability of the main line to cater for the initial requirements of the site, at 4 trains per day in and 4 trains per day out.

- 8.23 In the longer term, the development of the wider network, including phase 1 of HS2, will release capacity on the existing network to support further growth in freight services.
- 8.24 Rail Central has been designed to connect into both the WCML Fast and Slow Lines (NLL) in both directions of travel, using diesel or electric traction, for trains of up to 775m train length, with internal links between these connections to allow maximum flexibility of routing trains to and from the site. Rail Central would have onward access at W10 gauge to the principal deepsea ports of Felixstowe, Southampton and London Gateway, mainland Europe and China via the Channel Tunnel, as well as other ports and (S)RFI in the regions. All conventional wagon and express freight services operate within the smallest W6A loading gauge, and could therefore operate between Rail Central and virtually the entire national rail network, where axle load and train length restrictions permit.
- 8.25 Network Rail has informed the design of the rail infrastructure and main line connections, the technical assessment to GRIP2 validating the technical and operational feasibility of the main line connections, the local signalling and power supply systems having the capacity to cater for the development.

#### **Proposed on-site railway infrastructure**

- 8.26 In addition to the core interchange facilities on site (intermodal terminal, express freight terminal and directly rail-linked warehousing), the site makes unique provision for a maintenance depot to allow trains to be stabled, maintained and fuelled on site rather than at off-site locations. This would reduce the need for empty positioning movements to and from site, maximising use of available main line capacity and the efficiency of rail freight services. This unique facility for a SRFI would also provide a location where train crew could sign on and sign off from work each day as required, further reinforcing the role of the site as a strategic hub location for rail freight activities.
- 8.27 The rail freight interchange facilities at Rail Central would be operated as an 'inland port' facility, the primary purpose being the fast and efficient processing of containers, swap bodies and other intermodal units between trains, road vehicles and intermediate storage areas. Trains would arrive from either direction of travel, depending on the ultimate origin / destination of the trains and the routes used by the train operators to reach the site.
- 8.28 Network Rail's long-range forecasts of market potential for intermodal services in the 2013 Freight Market Study have been produced using the GB Freight Model (GBFM). The model has been used to determine the quantum of rail freight traffic to and from Rail Central on a similar the basis, indicating the site floorspace could create the equivalent of 13 intermodal trainloads per day. In practice, this quantum of freight traffic would be distributed between intermodal services and other emerging service types (i.e. conventional wagon and express).

## Method of working

- 8.29 For a new SRFI development in the Midlands such as Rail Central, the initial growth and pattern of rail freight services would be anticipated to follow those of more established SRFI in the surrounding area. Beyond these working assumptions, the ultimate capacity of the site in terms of rail freight traffic generation will depend on a range of factors, including:
- The requirements of occupiers and other end users;
  - The physical extent of the interchange and associated sidings and handling areas;
  - The manner in which the interchange operator chooses to equip and operate the facility;
  - The capacity of road and rail networks / operators to accommodate traffic flows;
  - The capacity of connecting SRFI and RFI at the other end of the rail transit;
  - The length of trains and type of wagons employed.
- 8.30 The Rail Central proposals will share the same rail (and highway) networks with other users and developments. In this regard it is apparent that the site is situated some 20 miles south of the established SRFI at DIRFT I and II (now being expanded into a third phase), with an additional SRFI scheme (Northampton Gateway) proposed east of the NLL, east of the Main SRFI Site. The three SRFI schemes would draw on the same main line capability of the Slow Lines, Rail Central being distinguished by having direct access into the WCML Fast Lines.
- 8.31 The close or co-location of SRFI is not unique to this area, and elsewhere SRFI and RFI already operate alongside each other, and in some cases collaborate operationally despite being run by separate otherwise competing commercial undertakings. The Rail Operations Report (section 6) documents numerous instances of SRFI and RFI successfully co-existing on the same sections of main line alongside other rail users. The NN NPS confirms the compelling need to create an expanded network of SRFI facilities, but does not set out requirements for the proximity or dispersal of these SRFI. The NN NPS notes that, in some cases, the development of SRFI may result in traffic moving from existing RFI as a consequence (para 2.58). The overall objective is to significantly expand the level of rail-served distribution floorspace as a share of total distribution floorspace.
- 8.32 Given that rail-served floorspace in the Midlands is relatively small compared to other non-rail-served floorspace, more SRFI capacity will be required - whether dispersed or co-located - on major urban centres, or groups of centres, linked to key supply chain routes, to match the changing demands of the market. In this regard, the research and forecasting which underpinned Network Rail's Freight Market Study 2013 (as referenced in the NN NPS and considered to be robust) made provision for some 2.5 million sq m of rail-served floorspace

being provided in the area between Northamptonshire and Milton Keynes by 2043 (**Ref 8.3**). The three SRFI schemes combined would provide this level of floorspace.

#### **Site capability**

- 8.33 In terms of operational compatibility, the combined results of the work undertaken with Network Rail on main line access and network capability on Rail Central have not identified any design issues which would otherwise prevent all three sites from being able to operate as SRFI in line with the Planning Act 2008 and the NN NPS.
- 8.34 This point equally applies to other proposed passenger rail services such as East-West. The work with Network Rail on rail access and operations demonstrates that the current working timetable (which takes no account of HS2 capacity coming on stream) retains sufficient capacity to enable the site to operate as a SRFI alongside other service aspirations such as East-West. Note in this regard that all freight trains to and from Rail Central would operate outside of morning and evening peak periods during the intra-peak daytime and overnight periods. As with all other SRFI located on the West Coast Main Line and other main line routes, future growth will relate to the requirements of end users, as negotiated by train operators with the system operator (Network Rail) through the normal rolling timetable development cycles, taking account of available capacity within the timetable at that time.

## References

- Ref. 8.1. Intermodality, February 2018, '*Rail Operations Report*'
- Ref. 8.2. Department for Transport, 2014, 'National Policy Statement for National Networks'
- Ref 8.3 MDS-Transmodal, April 2013, Rail Freight forecasts to 2023/4, 2033/4 and 2043/4, page 24