High Speed Rail: HS2 Phase 2b Preferred Route

Sustainability Statement including Post Consultation Update

Appendix C8 – Access

A report by Temple-RSK for HS2 Ltd

TEMPLE

LEADERS IN ENVIRONMENT, PLANNING & SUSTAINABILITY.

RSK

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CONTENTS

1. INTRODUCTION

1.1.1. This report has been prepared to support the HS2 Phase 2b Sustainability Statement including Post Consultation Update report, which describes the extent to which the Government's preferred route for HS2 Phase 2b supports objectives for sustainable development. This document is a technical appendix which summarises the methodology for appraising access, and the key findings and conclusions that inform the Sustainability Statement main report. The Sustainability Statement places emphasis on the known key impacts only at this stage in the design, prior to commencing the Environmental Impact Assessment.

2. SCOPE AND METHOD

2.1. Scope

2.1.1. The scope of the access appraisal considered interchange opportunities at proposed stations to inform the Appraisal of Sustainability (AoS)[1]. The aim was to provide a broader contextual picture of how the preferred route interacts with the wider transport network and, at a preliminary stage, investigates how this can be optimised.

2.1.2 Accessibility will be revisited at the Environmental Impact Assessment (EIA) stage, when more detail on the scheme and more up-to-date information on public transport services would be available.

2.1.3 The way the preferred route potentially impacts with existing Public Rights of Way (PRoWs) was also appraised, including a review of the strategy being used by Phase One and Phase 2a for crossing Rights of Way, with a view to setting out the definitive position of how such impacts will be mitigated in Phase 2b both during construction and permanently.

2.2. Methodology

2.2.1. A baseline review was undertaken to understand the policy environment for accessibility. A 1km catchment area around the Phase 2b stations was then studied. These stations are Manchester Piccadilly station, Manchester Airport station, East Midlands Hub station and Leeds station. Within these catchments, existing potential connections with trains, buses, coaches, planes, trams and road access were appraised.

2.2.2. Finally, for PRoWs, comprising promoted routes (including strategic footpaths/bridleways, National Trails) and National cycle routes which would potentially be severed and/or require potential diversion, assessment of impact has been undertaken using available OS base layers and other relevant mapping. The appraisal is limited to those PRoWs directly impacted by the preferred route.

[1] Appendix B (AoS Method and Alternatives) provides an explanation of the methodology used for the AoS and the rationale behind it.

3. STATION ACCESS

3.1. Overview

3.1.1. At earlier stages in the AoS and route refinement process, the engineering and socio-economics studies investigated the accessibility of the possible station sites, which contributed to station selection. Current knowledge of access to the proposed stations on the preferred route is set out below.

3.2. Western leg

Manchester Airport station

3.2.1. A new HS2 station would provide direct links to Manchester Airport, which would be less than 1km away. This station would also give the wider Cheshire area easy access to the high speed rail network, both by public transport and by car. Given the city centre location, access via walking and cycling from the surrounding area would be limited to the nearest residential properties.

3.2.2. It is currently expected that passengers transferring to Manchester Airport would use some form of People Mover. The journey time to Manchester Airport Terminal 1 could be approximately five minutes. Manchester Airport is the third busiest airport in the UK, and handles over 20 million passengers a year to around 215 destinations. The Airport is planning to expand to 50 million passengers per year by 2030[2].

3.2.3. The station would connect with the existing airport surface transport interchange, with its large network of bus and coach services. From the airport, buses serve many other locations throughout Greater Manchester area, and a network of National Express coach services operate to destinations further afield. There are bus routes currently along the A538 Hale Road/ Wilmslow Road (routes 18 and 88); a slight modification to these routes would enable them to serve the interchange station directly.

3.2.4. The existing airport railway station is located between Terminals 1 and 2 of the airport, and linked to both with a moving walkway. Frequent direct rail services run to and from the airport with TransPennine Express and Northern Rail. These run 24 hours a day, seven days a week, to destinations such as Sheffield, York, Newcastle and some trains to Edinburgh. Trains run every 10 minutes to and from Manchester Piccadilly Station in the city centre, taking around 20 minutes. The Manchester Metrolink light rail system has recently been extended in order to serve the airport.

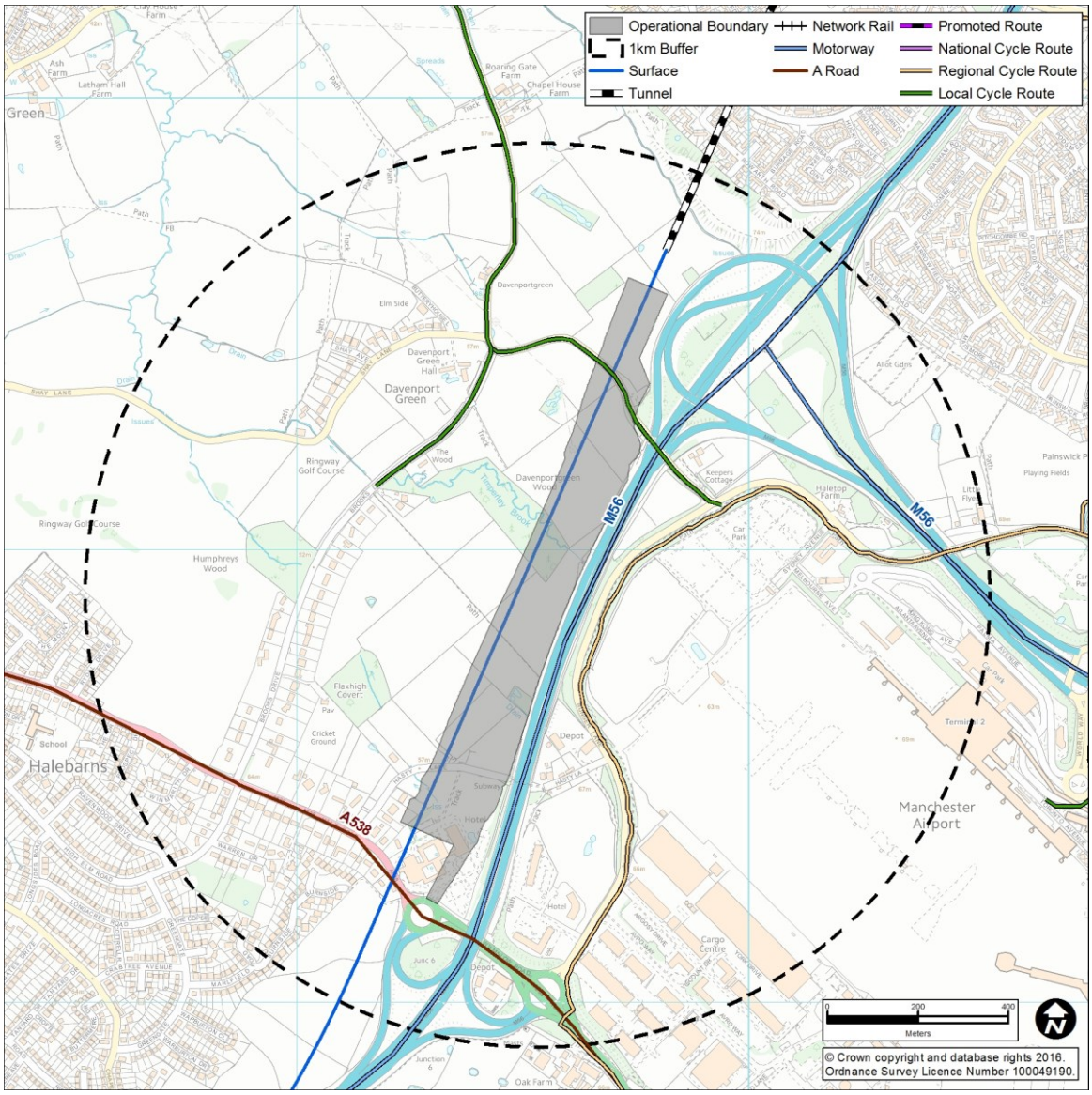
3.2.5. The site enjoys direct connection to the motorway network via Junctions 5 and 6 on the M56. The M56 provides connections north, into central Manchester and west, towards Liverpool. The A538 Wilmslow Road provides an east-west connection from the M56 serving local towns of Altrincham and Wilmslow. These existing road connections are illustrated in **Figure 3-1**. A number of improvements are planned or underway to improve accessibility by easing congestion on the surrounding road network; these proposals will be revised, and their performance validated, to include the traffic components generated by the interchange station.

3.2.6. Taxi and private vehicle drop off and pick up facilities would be located next to the station entrance. Two car parks providing for a total of up to 3,000 cars are proposed, aligned longitudinally some 15m from the station concourse between the HS2 route and the M56,

[2] Manchester Airport Group (2015). Draft Sustainable Development Plan

and across five floors. The airport itself has over 30,000 parking spaces. These are for use by passengers, staff and service providers.

Figure 3-1 - Manchester Airport station and surrounding transport connections



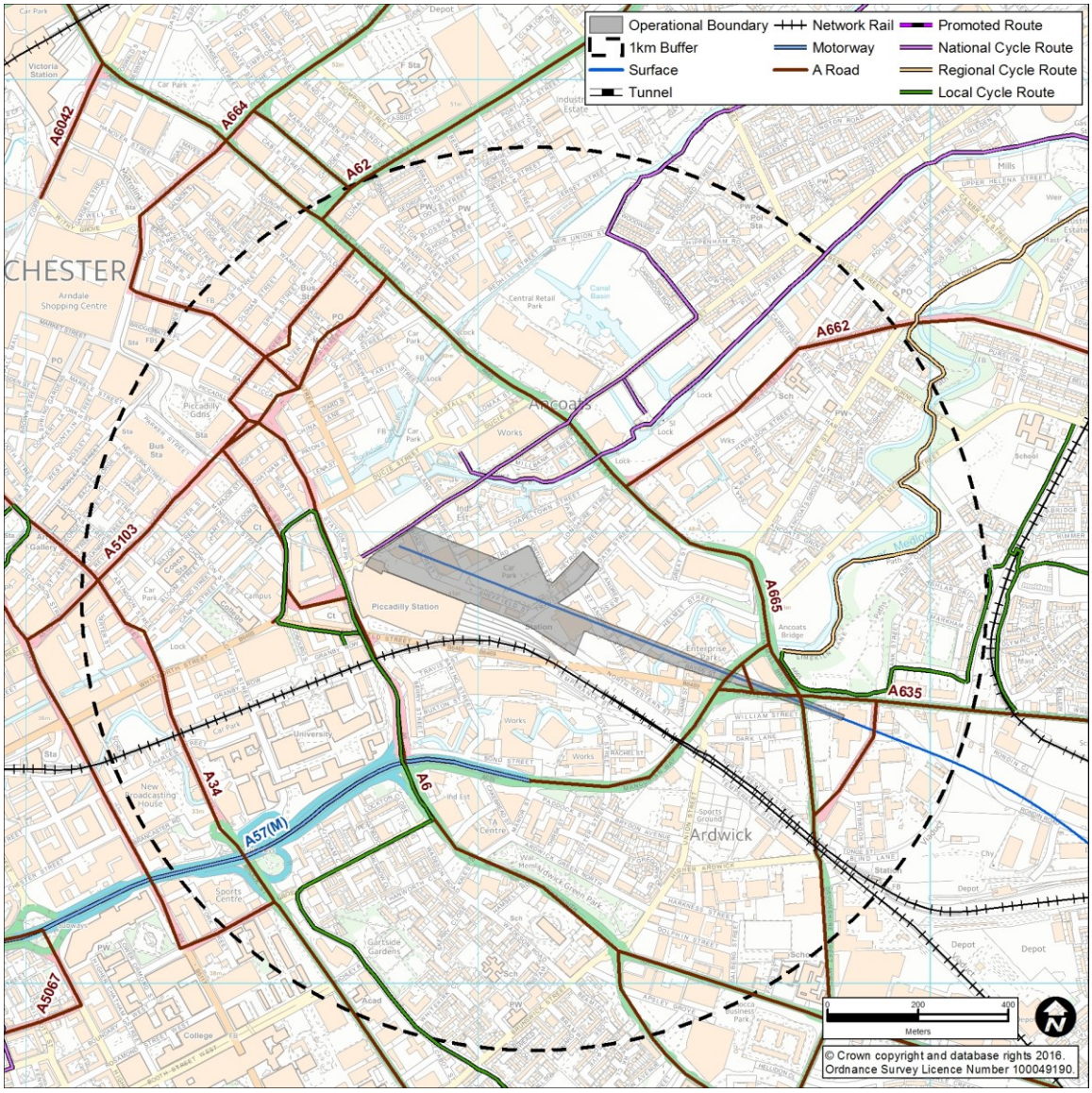
Manchester Piccadilly station

3.2.7. This station is to be built alongside the existing Manchester Piccadilly station (parallel with Platform 1) in the centre of the city. The station would have four elevated platforms with concourse facilities below to the west side of Metrolink – Manchester's light rail system. The primary pedestrian entrance to the HS2 concourse would be from the realigned Sheffield Street parallel with, and to the north of, the HS2 station. Onward pedestrian travel from the concourse to the city centre would be either via Store Street and London Road, or via the pedestrian link between Store Street and Ducie Street which is proposed as part of the adjacent Inacity Tower development.

3.2.8. Manchester Piccadilly station offers existing rail connections to various key destinations across the city and region including Manchester Airport, Salford, Stockport and Bolton as well as destinations further afield including London Euston, Birmingham New Street, South Wales, the south coast of England, Edinburgh and Glasgow. The HS2 station would also be served by Metrolink, which provides connections to Bury, Altrincham, Eccles, Salford Quays, Manchester Airport, East Didsbury and other destinations. A programme of works is

currently underway to improve rail connectivity via the Ordsall Chord (under construction) and Manchester Victoria Station due to open in 2017/2018.

Figure 3-2 - Manchester Piccadilly station and surrounding transport connections



3.2.9. Taxi drop off and pick up would be provided for by a new forecourt running parallel with the station and Sheffield Street. Connections to local bus services would be provided outside the Fairfield Street entrance on Sheffield Street. The Manchester Central Coach Station is a short walk away on Chorlton Street, and provides numerous regional coach services.

3.2.10. The Inner Ring Road in Manchester city centre would provide the main route connecting the HS2 Station to radial and regional routes, specifically via the A635 and A635(M) (Mancunian Way). A new spur off Fairfield Street junction would be constructed off Mancunian Way to provide access to the station itself. A new multi-storey car park with a capacity of up to 2,100 spaces would be built to serve both classic rail and HS2 passengers, and accommodate spaces displaced through the removal of existing car parks.

3.2.11. **Figure 3-2** shows the surrounding area, to a catchment of 1km. A significant amount of development is planned for Manchester city centre in the city's Core Strategy and City Centre Regeneration Strategy. Additionally, Network Rail's Northern Hub project will

transform the existing Piccadilly station to increase it's accessibility and functionality. Enhanced Metrolink services will also improve local access to the station. As HS2's route and stations are finalised, the development would need to (and aspire to) incorporate the station and ensure good access, to maximise the benefits brought by HS2's proximity.

3.3. Eastern leg

East Midlands Hub

3.3.1. A new station at Toton, called the East Midlands Hub, is located between Nottingham and Derby. The closest town centre is Long Eaton and the area is primarily residential and agricultural, with some commercial land (see **Figure 3-3**).

3.3.2. Currently, there are sidings and a train depot at Toton but no passenger station, although a network of passenger railway lines exists in the area that would be connected to serve Derby, Leicester and Nottingham. There is provision to the east of the station for future passenger connectivity with proposed new Network Rail platforms to facilitate this connectivity. There are no other rail stations in the immediate vicinity, with the nearest stations at Attenborough to the east, on the line to Nottingham, and Long Eaton to the south, on the line to Derby.

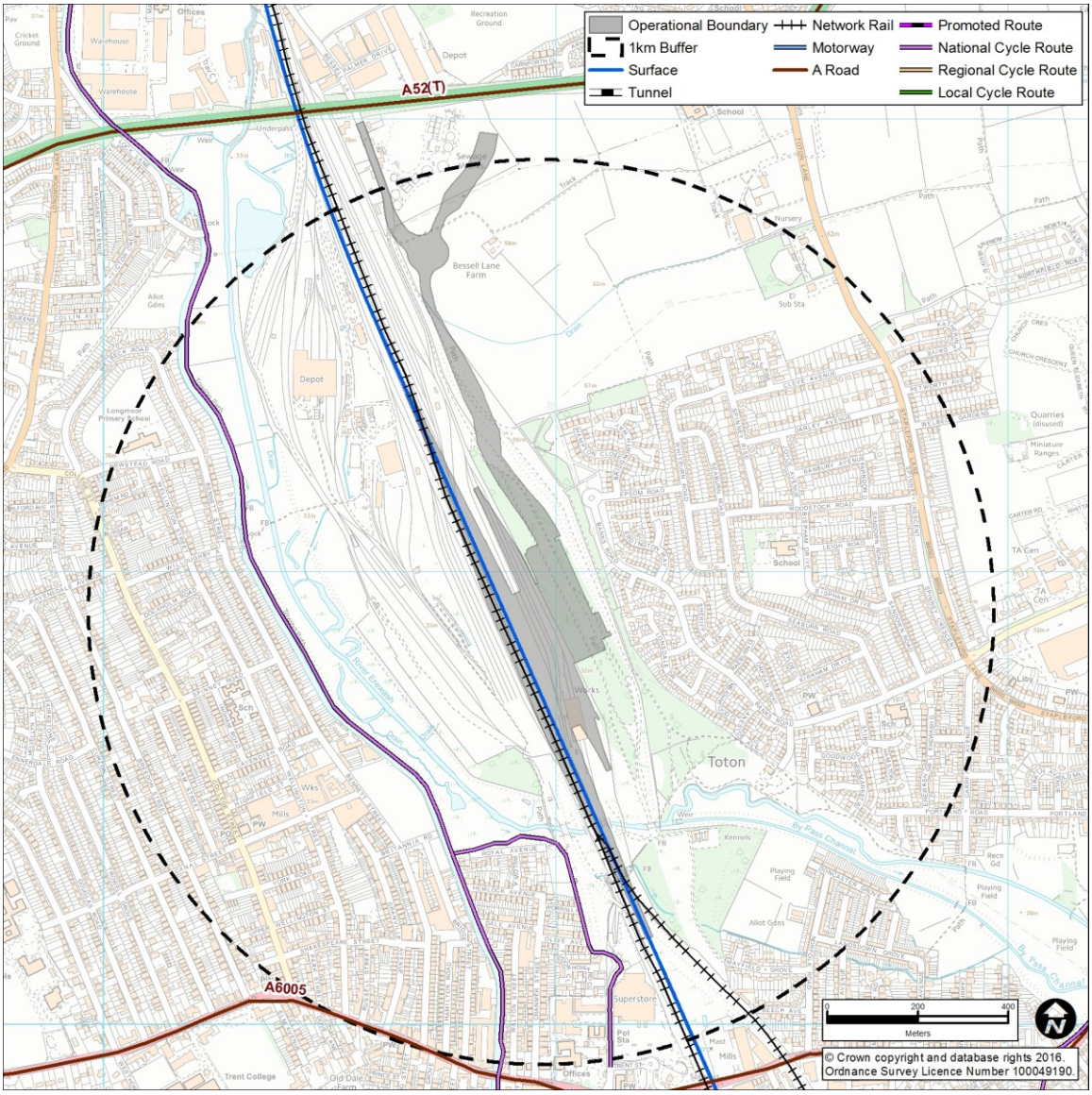
3.3.3. . There is potential for the Nottingham Express Transit Line 3 tram network to be extended by 1km across Toton Lane to the station site. This would provide a direct interchange between high speed rail, Nottingham city centre, the residential areas of Beeston and Chilwell, the University of Nottingham, and the Queens Medical Centre.

3.3.4. The area is currently well served by an extensive network of regular bus services. Modifications would be required to provide an expanded service to this new station at Toton. Bus bays would be incorporated into the station forecourt layout. Pick up and drop off bays for taxis and private vehicles would also be located in the forecourt directly outside the station entrance.

3.3.5. The HS2 station would be connected to the strategic road network via the A52 running east and west between Derby and Nottingham. The link road to the station would minimise land acquisition by keeping close to the edge of an existing sewage treatment works south of the A52. The A52 also connects with the M1 via Junction 25, just under 2km away, providing highway access to Leicester and the wider region. East Midlands Airport is approximately a 20 minute drive south along the M1.

3.3.6. The site would have ample space for provision of short stay and long stay parking in a multi-storey configuration beneath the forecourt. Up to 1,700 car parking spaces (including both long and short stay parking) are currently proposed, although these numbers will be appraised as part of the EIA and discussed with the local authority in light of their policies and assessed as part of on-going work.

Figure 3-3 - East Midlands Hub and surrounding transport connections



Leeds station

3.3.7. The new HS2 station in central Leeds would be directly south of and perpendicular to, the existing Leeds station, spanning the River Aire (see **Figure 3-4**). The existing station offers connections to a number of regional rail destinations such as Bradford, Halifax and Castleford, as well as to the city's extensive bus network. Destinations further away are also served by the existing station to areas such as Hull, Newcastle and Edinburgh.

3.3.8. Two concourses are proposed at the station, one to the north of the River Aire along Neville Street and the other along Victoria Road, to the south of the river. Pedestrian access would be via both of these concourses, with additional pedestrian connectivity provided within the station between HS2 and services on the existing rail network. Neville Street is proposed to be remodelled for pedestrians and public transport use only. Taxi ranks would be located at the station's southern concourse, along its west side and fed from the junction of Victoria Road and Meadow Lane.

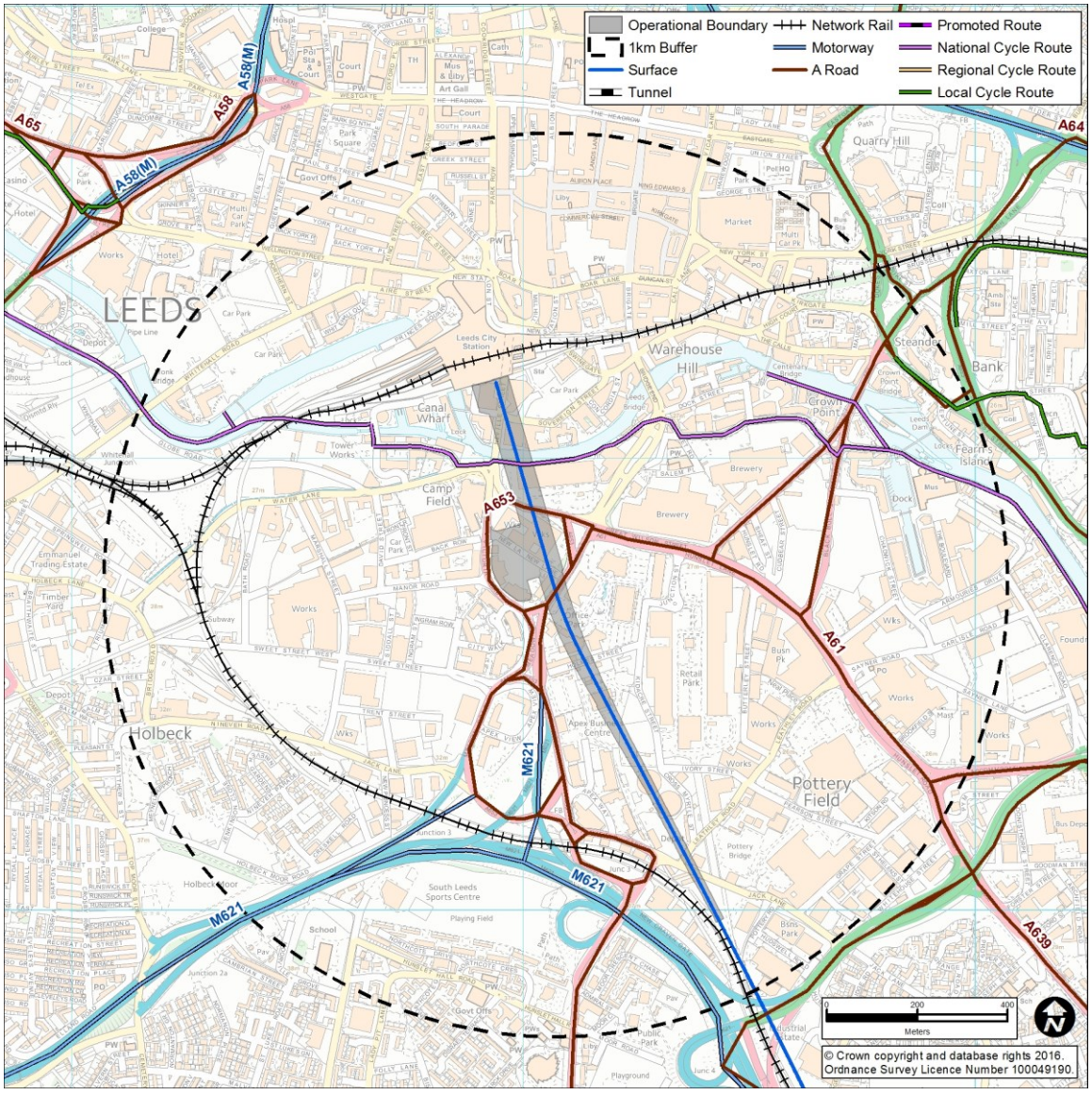
3.3.9. The existing Leeds station has a bus interchange providing connections to the city's extensive bus network. In addition, a new bus drop off will be located to the west of the southern concourse, near to the taxi ranks. The existing station also includes facilities for cyclists.

3.3.10. Highway access to the station would be from the M621 (Junction 3), which connects to the

Inner Ring Road and also to regional motorways. Car parking for the HS2 station is currently proposed at the southern entrance and would provide up to 1,500 spaces (1,333 long stay and 167 short stay), although these numbers will be discussed with the local authority in light of their policies and assessed as part of on-going work.

3.3.11. Leeds-Bradford International Airport is located to the north-west of the city, some 30 minutes drive away. There are also direct bus services (half-hourly in daytime) to the airport from Leeds and Bradford city centres.

Figure 3-4 - Leeds Station and surrounding transport connections



3.3.12. Direct interchange with the existing Leeds station would be via bridge link from the high speed station to the existing platform via a proposed concourse elevated above platforms at Leeds station.

4. DEVELOPMENT PRINCIPLES

4.1.1. Interchange principles, adapted from the Transport for London Interchange guidance, applied to the design of all stations include:

- Maximising **efficient** passenger use of the interchange – minimising walking distances, reducing possibility of conflict of movement.
- Optimising **usability**, maximising the number of usable transport options for interchange, paying attention to safety, personal security and accident prevention as part of design.
- Adopting best practice in **legibility** of signage, adopting clear and consistent messages, wayfinding and the latest technology in service information.
- Demonstrating good **quality** of design, urban realm and sense of place at the new interchanges.

5. PUBLIC RIGHTS OF WAY APPRAISAL

5.1.1. A review of the anticipated crossings of PRoWs (such as footpaths, bridleways and cycleways) has been undertaken. Where the preferred route or its construction would potentially sever rights of way, new crossings or temporary access would be provided where practicable, subject to discussions with relevant local authorities. As a result, not all such impacts have been identified at this stage of design. However, we have recorded any 'promoted recreational routes' or long distance footpaths potentially affected. These rights of way are given additional status, albeit informally, by their designation as long distance paths, including National Trails.

Western leg

5.1.2. The western leg of the preferred route would cross four promoted recreational routes, including the Crewe and Nantwich Circular Walk; the Cheshire Ring Canal Walk (four intersections), North Cheshire Way and the Trans Pennine Trail. Three national cycle routes would also be crossed by the preferred route.

5.1.3. HS2 Ltd would aim to avoid stopping up existing rights of way where possible, and to maintain access across the railway through the on-going design of the scheme. This would involve working with local people, local authorities and relevant organisations to determine the best way of achieving this where feasible. A detailed appraisal of all access crossings will be undertaken as part of the EIA.

5.1.4. No country parks would be directly affected on the western leg.

Eastern leg

5.1.5. The eastern leg of the preferred route would cross 11 promoted recreational routes, including the Trans Pennine Way National Trail, which would be intersected in five locations. The other crossings would affect the Heart of England Way; Ivanhoe Way (two intersections); Derwent Valley Heritage Way; Midshires Way; Trent Valley Way; Nutbrook Trail (two intersections); Robin Hood Way (two intersections); Cuckoo Way; Dearne Way (two intersections); and Leeds Country Way (five intersections). Six named national cycle routes would be crossed by the preferred route.

5.1.6. HS2 Ltd would aim to avoid stopping up existing rights of way where possible, and to maintain access across the railway through the on-going design of the scheme. This would involve working with local people, local authorities and relevant organisations to determine

the best way of achieving this where feasible. A detailed appraisal of all access crossings will be undertaken as part of the EIA.

Three country parks would be intersected on the eastern leg, namely Kingsbury Water Park (for around 1,930m); Pooley Country Park (for around 570m); and Rothwell Country Park (for around 30m). At Rothwell Country Park, the route would also pass alongside the northern boundary in existing rail corridor.

6. FINDINGS

6.1. Phase 2b station accessibility and integration

6.1.1. The proposed stations are well located in terms of existing public transport connections and integration into local networks, and HS2 would improve existing facilities within these interchange vicinities.

Western leg

6.1.2. A significant programme of improvements at Manchester Piccadilly station will take place in connection with the Northern Hub programme of targeted upgrades to the railway in the North of England. Scheduled for completion in 2019, it will allow up to 700 more trains to run each day and provide space for 44 million more passengers a year. The programme includes the construction of a link between Manchester Victoria and Manchester Piccadilly stations, as well as two new platforms at Piccadilly that will enable better onward connections to the North. There will be new direct services to Manchester Airport and more fast trains to a variety of destinations.

6.1.3. At Manchester Airport station, long distance connections are excellent, and local connections are reasonable. These include:

- Manchester Airport, which provides connections to 215 destinations, domestic and international;
- Excellent road access via Junction 5 of the M56 and Wilmslow Road for an east-west connection, and a planned multi-storey car park at the station and ample existing parking at the nearby airport;
- Rail services (such as the TransPennine Express and Northern Rail);
- Local buses serve many locations throughout Greater Manchester area; and
- National Express coach services operate to destinations further afield.

6.1.4. At Manchester Piccadilly station, both local and longer distance connections are very good, given the urban location at a major city centre, and include the following:

- Regional rail services to stations such as Salford, Stockport, and Bolton;
- Good road access, using the Inner Ring Road and the A635 and A635 (M) (Mancunian Way), and a planned multi-storey car park on site;
- Manchester Metrolink;
- Manchester Central Coach station;
- Local buses; and
- Walking and cycling (cycle parking would be provided).

6.1.5. In terms of PRoWs, the western leg of the preferred route would cross four promoted recreational routes and three national cycle routes.

Eastern leg

6.1.6. At the East Midlands Hub station, transport connections are reasonable, and there is a lot of scope for significant enhancements such as local rail connections and extensions of the Nottingham Express Transit. Existing connections include:

- Regular local bus services;
- Connections would be made with the A52 which runs east and west between Derby and Nottingham, and to the M1 via Junction 25. A multi-storey car park is planned on site as part of HS2; and
- East Midlands Airport is a 20 minute drive south along the M1.

6.1.7. At Leeds station, there are good transport linkages due to its city centre location. These include:

- Regional and national rail services, directly accessible from the HS2 Leeds station;
- Access to the existing Leeds station bus interchange, providing connections to the city's extensive bus network;
- Highway access to the HS2 Leeds station would be from the M621 (Junction 3). A multi-storey car park is also planned; and
- Walking and cycling connections, including a cycle hub at the existing Leeds station.

6.1.8. In terms of PRoWs, the eastern leg of the preferred route would cross 11 promoted recreational routes and six named national cycle routes.

6.2. Network integration

6.2.1. Throughout the development of the Phase 2b preferred route, HS2 Ltd has established 'Stations City Working Groups', as an engagement channel with Station Development Partners (such as Local Enterprise Partnerships , Local Authorities, Passenger Transport Executives, Network Rail and the Highways Agency). The purpose of these working groups is to provide a mechanism for local stakeholders to be involved in the development of the station to work collaboratively on the proposals to create vibrant new transport hubs, integrated into their built environment in a way which will attract new development and act as a catalyst for regeneration.

6.2.2. In particular, the groups have concentrated on the relationship between the region and the external facing elements of the station, including:

- Advancing synergy between HS2, Network Rail and local transport networks (including Transport for the North) to develop an integrated transport hub;
- Exploring potential impacts on the local highway network and identifying options to improve the network;
- Examining passenger flow and accessibility to the station from the region; and
- Ensuring that indicative HS2 proposals are in line with local planning frameworks.

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