Park Royal City International – summary of transport elements

Summary

Present and planned railways create a unique opportunity for new development

1. The present criss-cross network of railway lines in the Old Oak Common area, Crossrail, the proposed HS2 project, and the wider Park Royal industrial zone, provide a unique opportunity to integrate public transport in West London and create a new economic quarter – Park Royal City International.

2. The new *Old Oak Central* community of 40,000 jobs and 10,000 homes will be underpinned by investment in an interchange station for the main railways: **Old Oak Interchange**. Rapid Transit shuttles to neighbouring rail routes and other development zones will yield further large-scale business and housing opportunities, and extra transport connectivity.

Public transport is the key to unlocking new economic capacity

3. Park Royal is at the convergence of lower density outer London with a preference for car travel, and higher density inner London with greater preference for public transport. This sets the primary policy objective: secure major improvements to public transport so that it becomes a preferred mode also for outer London travel to and via Old Oak Interchange, and releases capacity for economic growth.

4. Creation of a strategic West London interchange will open up many new journey opportunities by public transport. It will stimulate significant new demand for rail travel in London and the Home Counties. Public transport will become a practical alternative to the car for more journeys.

5. Park Royal City International will gain greater economic impact because of the whole area's accessibility. That allows economic growth in the wider Western quadrant to be accommodated, sustainably, without additional main road capacity for which there is neither space nor funding.

A 'hub & spoke' Rapid Transit system will join interchanges and developments

6. An initial 'hub and spoke' system is foreseen based on Rapid Transit. It can serve *Old Oak Central*, and developments at *Kensal*, *North Acton* (Park Royal's Southern Gateway), *Willesden Junction* (Park Royal's Eastern Gateway and Central Harlesden), and towards *White City* via the *Hammersmith Hospital* health community. Eventually Rapid Transit could become an extended network. *See report JRC6.*

7. Rapid Transit will be a fast distributor network, in the same way as London Docklands is opened up by the Docklands Light Railway. Park Royal City International's transit might be DLR-style, or automated mini-trams (Personal Rapid Transit) such as used now at Heathrow Airport.

The potential for London and Home Counties rail accessibility is immense

8. Potential rail service volume at an initial Old Oak Interchange is 122 peak arrivals and departures an hour (1 arrival and 1 departure every minute). This includes Crossrail, Orbital lines, and the existing tubes at *North Acton* and *Willesden Junction* which will be linked to Old Oak Interchange via Rapid Transit shuttles.

9. Further investment in Park Royal City International, along with general growth of rail commuting in the 2020s, could stimulate overall train frequencies to rise 50% to 3 arrivals or departures every minute in a peak hour by the late 2020s. *See report JRC2.*

10. The London & South East Route Utilisation Strategy (LSE RUS) is the railway's forward planning document to 2031. It was published on 28 July 2011. In Chapters 7 and 8 it supports planning for HS2 and expansion of Crossrail in West and NW London.

HS2 adds a new dimension – national and international accessibility

11. The arrival of HS2, through Phase 1 (Birmingham and North West), Phase 2 (Midlands and Northern England) and a redefined HS2-HS1 link, could double or triple demand for interchange. The total rail service could then be more than 4 arrivals or departures every minute in a peak hour by the 2030s.

12. HS2 Ltd foresees 25-40% of all HS2 London passengers transferring to and from the London regional rail network at Old Oak Interchange, including Crossrail to Heathrow and Central London. This scale of transfer is needed to avoid overloading Euston terminus and its tubes with transferring passengers. Even so, HS2 Phase 2 is likely to require a new Euston stop on the planned Crossrail 2 North-South railway.

Scope for new London & Home Counties connections with redesigned HS2-HS1

13. The proposed HS2-HS1 link starting at Old Oak is currently proposed as a limited capacity line for international trains only. Its redesign is already considered necessary by Transport for London and local boroughs. Redesign as a London and Home Counties connector is considered a strong opportunity by Hammersmith & Fulham Council to open up new cross-London regional passenger services. The Council is submitting a separate report on HS2-HS1. *See report JRC3.*

Opportunities for Kensal and other dispersed developments

14. The impact of an Old Oak Interchange on Crossrail is to require all Central Tunnel trains to run as far west as Old Oak before trains return to Central London. By the late 2020s it is likely that all Crossrail peak trains will be travelling to and from the outer suburbs and Home Counties. *See report JRC4.*

15. With Rapid Transit, neighbouring developments will be only 3-5 minutes from Old Oak Interchange which will offer high frequency Crossrail and extensive London region accessibility. Development locations such as *Kensal* can be better off being accessible via Old Oak, than having a station with low service frequency on one rail route. This is shown in an analysis of access to *Kensal*. *See report JRC5.* The LSE RUS says a Kensal Crossrail station is not consistent with the rail strategy (para 8.3.14).

Transport elements

1. Specific transport elements and their phasing and relevance are discussed in the sections below and in attachment reports when further detail is appropriate.

2. Transport capital costs are not defined at this stage. The impact of the recent McNulty report on railway costs, with a 40% reduction sought by 2019, will need to be factored in to present typical cost levels. Schemes such as HS2 are expected to pay for some project elements, such as its station and interchange with Crossrail. However a strategic West London development should be capable of funding with its partners the required transport links, such as Rapid Transit from an initial Old Oak Interchange, and distributor roads.

3. For example, Canary Wharf Consortium offered £400m (1990 prices) towards the Jubilee Line Extension. It also has incurred all local road infrastructure costs, contributed to the DLR City extension, and is paying £150m towards the Canary Wharf Crossrail station which is also being built by Canary Wharf Contractors for a fixed price of £500m.

4. A masterplan and funding agreement are required to take forward Park Royal's transport and development portfolio. The development project is foreseen as having a Gross Value Added of £3,000 million per annum for *Old Oak Central*, and £8,900 million per annum for the entire Park Royal City International, which will enable contributory funding towards the necessary infrastructure.

5. Headlines for each transport element and its rôles are set out below.

Road access

6. *Park Royal* adjoins the A40 and North Circular and has congested local road junctions. The road network lacks some local east-west links because of the way land has previously been occupied. Overall these are constraints on economic growth, not least in the strategic industrial lands. There, a high level of car-based commuting hinders distribution businesses and is an obstacle to new SMEs who are an important component of this West London economy.

7. A new distributor road system with servicing routes is necessary if economic growth is to be achieved without new congestion. A new public transport interchange and Rapid Transit system are also essential to attract car-based commuting onto rail and free up existing road capacity.

Bus services

8. The current bus network is constrained by the road network's shortcomings, and by local congestion. Strategic bus routes currently include Hammersmith-Acton-Harlesden-NW London, Shepherds Bush-Harlesden-NW London, Central London-East Acton-Acton. However direct links to Ealing, Chiswick, Kensal, Kilburn and Wembley are poor.

9. A rail interchange, Rapid Transit and an improved road distributor network will create a framework for redefinition of local bus networks. There will be bus corridors within the new road network.

Great Western main line (GWML)

10. GWML is a core element for the Old Oak Interchange. It is the main commuter and Intercity line from Paddington to West London and Heathrow, the Thames Valley growth zone, South Midlands and further to Bristol, the West Country and South Wales.

11. At present only Heathrow services are electrified. Electrification to Oxford, Newbury, Bristol and Cardiff was authorised by the Department for Transport in 2010-11, and is due for completion in 2018. Other works including new signalling are planned or under way.

12. Crossrail will be extended over GWML from 2019-20. By the late 2020s, the London & South East Route Utilisation Strategy (LSE RUS) expects the GWML to offer 20 GW trains per hour on the fast tracks and 16 Crossrail trains on the relief lines towards Heathrow or Reading.

13. Network Rail is discussing the scope of GW electrification with the Department for Transport. An initial Old Oak Interchange could be ready by 2018, if plans and funding were approved as part of the Great Western investment projects.

Crossrail

14. Crossrail is a new East-West express metro now under construction. It creates at least 10% more economic capacity within London because of the net increase in total rail capacity. Each train has space for 1,500 passengers, with 24 trains per hour each way in peaks within Central London. 14 of the 24 would terminate at Paddington and return east.

15. By 2019-20 the initial network would offer 10 trains per hour, from the Great Western main line and Heathrow, through Central London as part of the full Crossrail service. The rest of the Crossrail service would begin at Paddington. [1]

16. By the late 2020s, Crossrail is expected to offer a full 24 trains per hour as far as Old Oak Interchange. There will be 16 trains on the GWML, and an extra Crossrail service, up to 8 tph north west to Watford and Milton Keynes which will diverge from the existing line at Old Oak.

17. Old Oak Interchange will become a primary station, with HS2 passengers changing for high frequency Crossrail to Heathrow and to the heart of Central London, Canary Wharf, etc.

18. Just with developments at *Old Oak Central* , the station will add £46m in extra rail revenues annually. Full development would be achieved by oversite construction across the planned Crossrail depot adjoining *Old Oak Central*, where a new commercial zone could be viable once the HS2/Crossrail interchange is open. *A separate note on Crossrail is attached: JRC4.*

London Overground and Orbital lines

19. London Overground is a rail franchise overseen by Transport for London. It operates the Euston-Watford local railway and the expanding Orbital network around Inner London. This includes the North London and West London Lines which go through the Park Royal City International zone, though currently there is only a station at *Willesden Junction* (and at Harlesden on the Watford line).

[1] This was the situation prior to the publication of the final London & South East Route Utilisation Strategy (LSE RUS) on 28 July 2011, one day before HS2 submissions were due into the Department for Transport. The LSE RUS is proposing (Chapter 8) through Crossrail trains to Reading by 2018.

JRC is not convinced that the through operation of Crossrail trains onto the GWML will be sorted technically by 2018 – we have suggested 2019-20 as more likely *(see report JRC4)*. However the over-riding potential is for more Crossrail trains to be running further West and North West, sooner than previously foreseen by rail planners.

20. The heart of the franchise is the Orbital network, which serves the major rail hubs at Stratford, Highbury, West Hampstead, Willesden Junction and Clapham Junction. Investment since 2007 has caused a rapid increase in passengers, and it is now the fastest growing part of the London rail network and requires further capacity investment. Old Oak Interchange offers scope to be another principal interchange hub and destination point on the network, allied to Crossrail and HS2.

21. Transport for London has already proposed options for re-routeing orbital trains via Old Oak Interchange. It has suggested further network expansion including more trains on the West London Line, and two new passenger services on freight-only links: to Hounslow via Acton and towards Brent Cross and Luton (Thameslink).

22. The key issues are how to link the existing and enlarged Orbital network most efficiently and economically with Old Oak Interchange and more widely Park Royal City International. It will be important to understand how phased works can be managed and funded to achieve early links, ideally in place and open in 2018-20 alongside the Great Western and Crossrail schemes. *Some options for Orbital routeing are shown in JRC2 (pp6-7).*

Tube lines

23. London Underground operates three tube lines which serve the peripheries of *Old Oak Central* and *Park Royal*: the Bakerloo using Overground tracks through *Willesden Junction* and Harlesden; the Central through East Acton, *North Acton* and Hanger Lane; and the Piccadilly's Rayners Lane branch which serves Park Royal station.

24. There are existing proposals to create a new tube interchange between the Central and Piccadilly Lines near Park Royal station, though these have not yet secured a business case. Rapid Transit may be another way of linking the two stations and improving accessibility into the heart of the *Park Royal* industrial zone.

25. *North Acton* and *Willesden Junction* stations are important, because early-build Transit shuttles can link these stations and their hub catchments as 'satellite' development lands to Old Oak Interchange on the GW/Crossrail line. This would create the accessibility catalyst to stimulate commercial developments which in turn could defray the transport investment through contributions from developer gains and tax revenues.

26. London Underground has a long term scheme to upgrade the Bakerloo Line through Central London, and make it into a NW-SE strategic railway by extending it to South East London via Peckham and Lewisham. This is a 2020s project.

27. A related scheme is now being considered by London Underground, to build a Bakerloo Line spur to the Old Oak area from the Queens Park/Kensal Green. It is not yet clear where this would go or how this would be funded, as developer gains allocated to transport infrastructure and any HS2 contributory funding will be required initially to pay for local distributor roads, early Rapid Transit links and the main line interchange.

High Speed 2 project

28. A high speed North-South railway is justified by its greater capacity supporting economic growth. Bringing the Midlands and North closer to London will also create new economic relationships. Forecasts show that motorways and main lines on Britain's principal economic route between the North West, the West Midlands and London will run out of capacity by

the mid 2020s unless demand is either congested away or priced off. Both would be major barriers to economic growth.

29. No solution is free of issues. An alternative to a new railway is to try to expand again the existing rail network, yet the 2000s West Coast Route Modernisation eventually cost as much as a new line but achieved much less. Further expansion of the inter-urban road network would have sustainability and environmental consequences, including in urban areas where most travel starts or finishes. Hammersmith & Fulham Council therefore supports the HS2 project.

30. HS2 Ltd has proposed a route via Old Oak, which allows use of a neglected rail corridor within London – the former GW West Midlands main line via Old Oak to South Ruislip which now has only 1 passenger train a day. Park Royal City International is a beneficiary of the HS2 project, with journey times bringing the NEC at Birmingham within 31 minutes, Central Birmingham 42 minutes, Manchester 73 minutes and Leeds 73 minutes.

31. The routeing allows direct distribution at Old Oak Interchange of 25-40% of passengers onto Crossrail for Heathrow, Central London and other rail connections. Overall there will be a high level of accessibility, with many London area destinations on a direct line.

32. A well connected Old Oak Interchange is therefore a fundamental design element of the HS2 project. HS2 strengthens the case for a major new city quarter in London – Park Royal City International – with 40,000 businesses and 10,000 homes in its central core. HS2 Phase 1 to Birmingham and the North West is planned to open in 2026, and Phase 2 to the East Midlands, Yorkshire, Humberside and Northern England in the early 2030s.

Rapid Transit

33. The Old Oak area has a large scale geography. The site's triangular boundary set by the railway lines is 2.5 miles long. The wider Park Royal City International zone extends from Kensal to Hanger Lane and Stonebridge Park, 3 miles distant. It is larger than the Royal Docks which as part of Docklands has its own local passenger distribution system, Docklands Light Railway.

34. The local distances, within *Old Oak Central* and across the wider quadrant, merit a dedicated passenger distribution network centred on the rail interchange. An initial 'hub and spoke' Rapid Transit system is foreseen for the whole zone. Initially it would serve *Old Oak Central*, and development areas at *Kensal*, *North Acton* (Park Royal's Southern Gateway), *Willesden Junction* (Park Royal's Eastern Gateway and Central Harlesden), and towards *White City* via the *Hammersmith Hospital* health community. *See JRC6.* Eventually Rapid Transit could become an extended network.

35. Rapid Transit will be a fast distributor network, implied by its name, in the same way as London Docklands is opened up by the Docklands Light Railway. It might be an equivalent to Docklands Light Railway, or automated mini-trams such as used now at Heathrow Airport.

36. With Rapid Transit, neighbouring developments will be only 3-5 minutes away from Old Oak Interchange which will offer high frequency Crossrail and extensive London region accessibility. Development locations such as *Kensal* will be better off being accessible via Old Oak Interchange, than having a station with low service frequency on one rail route. This is shown in an analysis of access to *Kensal*.

37. The Kensal accessibility study shows that even journey times to Central London can be faster via Old Oak than a direct Crossrail service. This is because of shorter access and waiting times compared to a low frequency local Crossrail service. *The report is attached as JRC5.*

38. Additionally the July 2011 London & South East Route Utilisation Strategy *(footnote 1 above)* says a Kensal Crossrail station is not consistent with the strategy for Great Western Main Line services. *See LSE RUS para 8.3.14.*

39. This says: "The RUS also recognises stakeholder aspirations emerging from the consultation for a new Crossrail station at Kensal Rise. However, given that this would be located in close proximity to the proposed HS2 interchange at Old Oak Common, such a station is not consistent with the overall GWML strategy presented in this document, including minimising of journey times on the relief lines to locations such as Heathrow Airport."