Report JRC4

Crossrail project in West London

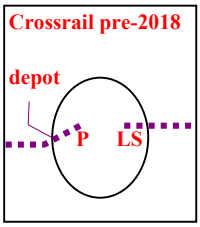
Original Crossrail specification

1. The scheme approved in the Crossrail Act was originally specified as opening in 2017 with the proposed initial services being: Central tunnel 24 trains per hour (tph) each way in peaks, 10 tph through west of Paddington, 14 tph reversing from east, back to east, at Paddington. There would be similar but lower frequency services in the offpeak.

2. Location of reversal sidings is at surface level near Westbourne Park. These sidings are required as an *emergency* reversing point for the tunnel lines, even if there is no regular use.

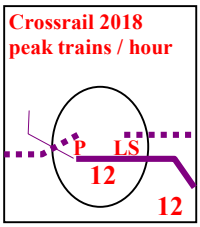
New Crossrail specification

Pre-Tunnel phase



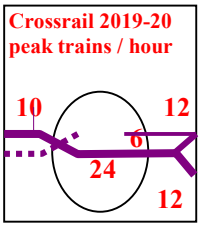
3. **Existing trains operated as 'Crossrail' from 2015 or later, west from Paddington GW terminus, and east from Liverpool Street GE terminus. Timing of the GW Crossrail services may be 2018, but could depend on the final new GW franchise.** New electric trains will be introduced as available, and Old Oak new depot will be operational in 2017.

Tunnel Phase 1 (stand alone)



4. **Central tunnel section opens December 2018 (Paddington > Canary Wharf > Abbey Wood).** Trains to/from Old Oak depot will NOT run in passenger service west of Paddington. There are signalling complexities during this Phase (see below). Trains may need to be driven manually at caution between the depot and the exclusive Crossrail tracks near Westbourne Park. The reversal sidings will be used regularly in this phase.

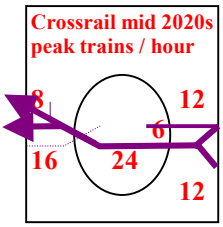
Through running phase



5. **Through running in 2019 east to Shenfield and west to Heathrow/ Maidenhead.** With through running, 10 tph west of Paddington in peaks, 14 reversing from central tunnel. Service volume might be 14 west/10 central rather than 10/14, if there is a commercial agreement with BAA for Crossrail to include Heathrow Express trains. The new London & South East Route Utilisation Strategy (LSE RUS) looks also at 12 tph west of Paddington as an early service option instead of 10 tph *(LSE RUS section 7.4 Option A1)*.

6. Date for through passenger trains west of Paddington may be 2019 or 2020. It depends on safe and satisfactory operation of Crossrail trains across the different signalling systems being installed on Crossrail and GW main line. Crossrail trains will need to carry both signalling communications systems on board, and be able to transition from one to the other on the Paddington-Old Oak section. This is technically and operationally a critical factor for a safe, high frequency railway.

Later phases in 2020s



7. These are described in the LSE RUS in pp104-111. Implementation is seen by mid 2020s.
   (1) **Through Crossrail Reading service**
   To replace Maidenhead as a western terminus. Includes Heathrow Express trains onto Crossrail between Hayes, Old Oak and Central London (if not done in 2019-20). By the mid 2020s, foreseen Crossrail frequencies towards Heathrow and Reading are 16 tph.

(2) New Crossrail NW line
This will relieve Euston of up to 8 tph commuter trains to reduce passenger crowding at Euston when HS2 arrives in 2026. Through trains will run to Tring and Milton Keynes. **It requires a new Crossrail line from Old Oak to the West Coast Main Line near Stonebridge Park/Wembley.** It needs to be authorised, funded, built and **open before 2026**. Combined with 16 tph towards Reading, this uses up Crossrail's initial 24 tph paths. No peak trains will normally reverse at Westbourne Park.

8. Crossrail identified a depot and major sidings location at Old Oak, after rejection of a proposed Romford depot which had been in the Crossrail Bill. Old Oak is existing railway land, and is accessible to the Canary Wharf and Abbey Wood line which has only limited stabling for trains. Seven Kings depot in East London would also be used, and other sidings. Operationally Crossrail intends each train (there will be over 60) to visit their depot for routine maintenance every 1-2 days. Old Oak sidings are there mainly to run the planned Paddington-Canary Wharf-Abbey Wood service, but will also be used by local ex-Great Western and Heathrow services as these become part of Crossrail in future years.

9. A supplementary note on operational factors affecting proposals for a Kensal Crossrail station is set out in *report JRC5*.

Does Crossrail expansion allow train stabling elsewhere?

10. The proposed expansion of Crossrail services in the 2020s to Reading and Milton Keynes (and potentially Northampton), and possibly in the 2030s to Gravesend where the route is safeguarded, opens up the potential for additional depot and siding accommodation in locations other than Old Oak and Seven Kings. For example, Bletchley, Reading and Slade Green have train depots, while sidings are proposed east of Gravesend.

11. Could these provide relief and some partial replacement for Old Oak, whose land is likely to be a high value location within the Park Royal City International development? It adjoins the planned HS2/Crossrail interchange, and HS2 Ltd is proposing oversite development with air rights over its platforms, while the north side of the Crossrail depot adjoins the Grand Union Canal which offers scope for environmentally attractive development.

12. It is a general fact that, as commuting grows on London & Home Counties railways, depot and siding accommodation will come under greater pressure to house more trains, not just Crossrail's. There will be a desire to hang onto the depots and sidings which exist, and re-active those which are mothballed. Nevertheless Crossrail's operational efficiency could improve in future decades if trains could start at the end of the line, and did not have to start earlier in inner West London in order to get to SE London or the Thames Valley and start carrying passengers by 5 or 6AM. Overnight engineering schedules for trains and tracks would also be easier, with a little more time for maintenance.

Public value for money and commercial returns

13. The strongest arguments are those of public value for money and commercial returns. Crossrail is to cost £14.5 billion, with taxpayers, farepayers and businesses all contributing. It is axiomatic that this public funding should secure the best possible return on investment.

14. If Old Oak Central can be transformed from low value lands to high value development, then it should be publicly worthwhile to secure more value from the Old Oak depot and

sidings lands, possibly by re-locating sidings even if the depot stays. It should also be commercially worthwhile to the key parties (Crossrail, Network Rail, Transport for London, HS2 Ltd and Government), to have an agreement to secure full oversite development in this central zone of Park Royal City International, once land values are adequate to pay for the costs of building over rail lines.

15. As a start, a rail lands commercial partnership and participation by the local authorities should be started for Old Oak. Crossrail's Depot and Trains Invitation to Tender (to be issued in Autumn 2011) should also allow pricing for depot and siding lands to have passive provision for oversite piling. Crossrail's Old Oak depot planning application is currently with Hammersmith & Fulham Council.