



Old Oak Common Overground station – technical summary of each option

NOTE: this report refers to the following terms:

North London Line; this is also known as the Richmond to Stratford route.

West London Line; this is also known as the Clapham Junction to Stratford route.

OPTION A

Description

Option A proposes a single Overground station for both North and West London Lines located on Old Oak Common Lane to the west of the proposed High Speed 2, Crossrail and National Rail station. The pedestrian connection between the station and the HS2 / Crossrail interchange will be via a subsurface link and a new open square.

The overall Project Cost Estimate for this option is approximately £350m, excluding risk and property.

The route of the North London Line will remain unaltered, subject to some track and systems alterations. However to facilitate the connection of the West London Line to the North London Line a new viaduct would be constructed along the Wormwood Scrubs / North Pole depot boundary between North Pole junction, Scrubs Lane, and Acton Wells junction, Old Oak Common Lane. New bridges are required over Scrubs Lane, the West London Line, Old Oak Common Lane, the Great Western Main Line (GWML) and the Central line (twice).

A requirement to protect existing freight paths between the West London line and Willesden junction necessitates that the new junction should be grade separated with one of the new West London line tracks (heading towards Clapham Junction) passing over Scrubs lane just to the north of the existing Big Yellow Self Storage building (which would be retained). The second track (heading towards Willesden Junction) would run along the Wormwood Scrubs boundary with the two joining together on a single elevated viaduct to pass over the existing North Pole depot sidings at a height of approximately 12 m. Ultimately the viaduct foundations and columns would be located within the North Pole depot however land would be required temporarily alongside and within Wormwood Scrubs for construction. This would be returned to public open space on completion.

To achieve the required geometric standards, the viaduct would be constructed across the north western corner of Wormwood Scrubs as it crosses Old Oak Common Lane with foundations and columns being within the metropolitan open space, where the viaduct would be at a height of 15m. The land would be reinstated and landscaped appropriately. To the west of Wormwood Scrubs, several industrial units within the Telford Way industrial estate would be required to make way for the construction of the viaduct. The viaduct would then pass over the GWML, on a single span structure. A disused railway building would be required to the south of the Central line, before the viaduct crosses the Central line and joins the existing North London Line to the west of Wells House Road.



The viaduct would be of reinforced concrete construction as this requires less maintenance than steel and provides better sound and vibration absorption characteristics. The exact style is still to be determined but the aim, as design develops, would be to keep the support columns and deck as slender as possible. Overhead electrification line masts on the viaduct would also be designed to be as elegant as design standards permit.

The junction of the West London Line with the North London line would be at the existing grade, south of the proposed new Old Oak Common Lane station, and would accommodate the current West Acton freight lines and the junction with the Dudding Hill line. West London Line services from Clapham Junction that currently turn back at Shepherd's Bush would be extended to call at the new Old Oak Common Lane station, at a frequency of 2 trains per hour. West London Line services running between Clapham Junction and Stratford would be diverted to run on the new viaduct.

To ensure safe clearances to the track from the boundary with Wells House Road, there could be some minor impacts on rear gardens. At this early stage of development it is not possible to be more specific about the nature of any impacts, save for none of the options would affect the houses themselves. The existing signal box behind these properties would be demolished with signal operations transferred to another control centre.

The station would have a sub-surface concourse with a single island platform at the upper level, accessed via staircases and lifts. Platforms would be at the level of the surrounding streets. The station would be planned for future longer (8-car) trains, with canopy cover and Oyster card readers, as seen at many DLR stations.

Connection to the HS2 / Crossrail platforms would be via a dedicated sub-surface link with a travelator over part of the length to shorten the interchange time and for convenience. Connection to Victoria Road and Midland Terrace would be via a dedicated sub-surface link. The detailed design and material of the station and approaches are still to be defined, but it would follow principles of local character, durability, access for all and safety.

To the north of the station there would be some track and systems modifications within the railway boundary to allow for flexibility of both passenger and freight movements.



OPTION B

Description

Similar to Option A, Option B proposes a single Overground station for both North and West London Lines located on Old Oak Common Lane at the same location as Option A. The connection from the new Overground station to the HS2 Crossrail Interchange would be the same as for Option A, being via a subsurface link and a new open square.

The overall Project Cost Estimate for this option is approximately £100m, excluding risk and property.

The connectivity between the West London Line and the North London Line utilises existing railway infrastructure with additions and modifications to track, signalling and overhead line electrification. These enhancements would allow West London Line services from Clapham Junction to use the existing, but upgraded, line which connects to the West Coast Mainline but continue round the loop, through the South West sidings, over the Grand Union Canal and join into the North London Line just to the north of the proposed Old Oak Common Lane station. There would be requirement for reconfiguration of the North London Line and overhead power lines to facilitate the new station and connection to the South West sidings.

West London Line services from Clapham Junction that currently turn back at Shepherd's Bush would be extended to call at the new Old Oak Common Lane station, at a frequency of 4 trains per hour. Current through services from Clapham Junction to Stratford would continue to run on their current alignment and would not call at the new station at Old Oak Common Lane (due to capacity constraints).

As the entry to the station would be from the north, the services from Clapham Junction would have to exit the station back towards Clapham Junction in the reverse direction. The West London Line services would then head back to Clapham Junction.

To facilitate trains turning back within the station, a 3-platform station would be required at the proposed Old Oak Common Lane station to provide the required capacity. Due to capacity constraints between Clapham Junction and Stratford, it is necessary to reduce the service frequency of these services from 6 to 4 trains per hour, in order to accommodate the required service level between Clapham Junction and Old Oak Common.

The station would have a sub-surface concourse with the platforms at the upper level, accessed via staircases and lifts. Platforms would be at the level of the surrounding streets. The station would be planned for future longer (8-car) trains, with canopy cover and Oyster card readers, as seen at many DLR stations.

Connection to the HS2 / Crossrail platforms would be via a dedicated sub-surface link with a travelator over part of the length to shorten the interchange time and for convenience. Connection to Victoria Road and Midland Terrace would be via a dedicated sub-surface link. The detailed design and material of the link is still to be defined, but it would follow principles of local character, durability, access for all and safety.



OPTION C

Description

The Option C proposal is to build two new Overground stations on their existing alignments. There would not be a need for any substantial new track alignment but modifications to the existing infrastructure would be required to accommodate the new stations with some land acquisition. Both stations would have dedicated pedestrian links to allow access to and from the proposed HS2, Crossrail and National Rail station.

The overall Project Cost Estimate for this option is approximately £170m, excluding risk and property.

The North London Line station would be at Old Oak Common Lane and would be at the same location as, and very similar to, the single, Option A station. The West London Line station would be located to the north of Hythe Road where the line passes between various industrial buildings.

At Old Oak Common Lane, there would be no requirement for additional land acquisition over and above that required for construction of HS2. Whilst very similar to the Option A station, track modifications are simpler and there would be no clearance issues to the rear of Wells House Road.

The station would have a sub-surface concourse with a single island platform at the upper level, accessed via staircases and lifts. Platforms would be at the level of the surrounding streets. The station would be planned for future longer (8-car) trains, with canopy cover and Oyster card readers, as seen at many DLR stations.

Connection to the HS2 / Crossrail platforms would be via a dedicated sub-surface link with a travelator over part of the length to shorten the interchange time and for convenience. Connection to Victoria Road and Midland Terrace would be via a dedicated sub-surface link. The detailed design and material of the link is still to be defined, but it would follow principles of local character, durability, access for all and safety.

At the Hythe Road, the West London Line station would consist of 3 platforms - an additional track would be introduced to provide a terminating platform for services from Clapham Junction, involving embankment widening. This would be in the centre of the station with the through platforms being on the outside. The station would be accessed via staircases and lifts either side of the tracks, leading to a footbridge over the platforms, which would also extend to the HS2 / Crossrail interchange. In addition, the existing pedestrian underpass at Hythe Road would be improved and be modified to access the platforms. In addition, there would also be access at street level

Connection to the HS2 / Crossrail platforms would be via a dedicated footbridge link, with a travelator over part of the length to shorten the interchange time and for convenience. From Hythe Road station, this footbridge would span over the current yards and warehouses to the south of the station, running over the Grand Union Canal and Crossrail depot tracks, before dropping down to land at the HS2 interchange. The detailed design of the footbridge

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link is still to be defined, but it would follow principles of local character, durability, access for all and safety.

Both stations would be planned for future longer (8-car) trains, with canopy cover and Oyster card readers, as seen at many DLR stations.

West London Line services from Clapham Junction that currently turn back at Shepherd's Bush would be extended to the new Hythe Road station, at a frequency of 2 trains per hour. West London Line services running between Clapham Junction and Stratford would remain unaltered but would call at the new Hythe Road station. The route of the North London Line between Richmond and Stratford would remain unaltered, subject to some track and systems alterations, to facilitate the new station at Old Oak.

Land take will be limited to partial demolition of older warehouses to the north of the proposed Hythe Road station to allow for platforms and turn back facilities. Most of the land will be returned after construction. Temporary land within the Car Giant site would be required to facilitate the new footbridge. Other temporary land take for construction and site access purposes involves properties already required by HS2 or currently vacant.