

Promoter's Note on submission made by GM Partners following Select Committee Visit to Old Oak Common station on 05/07/23 (PICCADILLY HIGH SPEED STATIONS – TECHNICAL NOTE SETTING OUT THE GM UNDERGROUND THROUGH STATION PROPOSAL AND COMPARISON WITH THE HS2 OLD OAK COMMON STATION – Date 27/07/23)

As set out in the Promoter's evidence, HS2 Ltd considers that six platforms are required to reliably operate the indicative train service specification (see P418(6)) or four platforms with two nearby underground turnback sidings for terminating trains (see P418(24-28)) and that this is required as a matter of principle under the Bill because it is part of the principle of the Bill that the route should terminate at Manchester Piccadilly, and these works are required for Manchester Piccadilly to operate as a terminus. The Promoter reiterates that GM Partners' proposal is contrary to the principle of the Bill identified by Parliament.

The Promoter further refers the Select Committee to its evidence that if one is comparing for a potential underground station at Manchester Piccadilly with that at Old Oak Common it would necessarily need to be Option B1, as assessed by HS2 Ltd in 2020/21 in conjunction with GM Partners. The full report and description of Option B1 can be found in the Promoter's evidence at P421 which is not repeated again here.

The following table sets out a comparison of key station dimensions and information as requested by the Select Committee following its visit to Old Oak Common which the Promoter considers represent only some of the fundamental differences between the two stations and the construction and cost consequences covered in much more detail in the Promoter's evidence that the Select Committee has heard.

	Old Oak Common	Manchester Piccadilly Option B1
Station Box – length	850m (930yards or 0.53miles)	1,165m (1274yards or 0.72miles)
Station Box – width	65m (213ft or 71yards)	76m (249ft or 83yards)
Station Box – depth	20m (66feet or 22yards)	28m (92feet or 31yards)
Passenger concourse	Ground level	Underground
Vertical transition	1 vertical transition from street to HS2 platforms	2 vertical transitions - 1 from street to concourse, 1 from concourse to HS2/NPR platforms
Spoil removal	Majority via conveyor to rail sidings at Willesden	Majority via conveyor to rail sidings at Ardwick *
Passenger interchange time from forecourt to HS2/NPR platforms	3 mins to mid-platform 5 mins to end of platform (assumed walking speed of 1.4m/s)	4 mins to mid-platform 6 mins to end of platform (assumed walking speed of 1.4m/s)

Passenger experience	Natural light at platform level	No natural light
End State Operational concept	Entirely through running	Mix of through and terminating services

*As set out in Promoter's evidence P418(30), GM Partners have proposed using additional Tunnel Boring Machines (TBMs) driving from Ardwick and Manchester Airport simultaneously. This would require additional areas at Ardwick for the tunnel drive site. There is insufficient capacity at Ardwick to export material by rail from both the station excavation and tunnelling spoil from southbound TBMs. Maintaining the same construction programme would lead to approximately 100,000 extra HGV movements in and out of the city centre.

The Old Oak Common station design is at a much greater level of maturity than that of any underground proposal for Manchester Piccadilly. GM Partners refer to the potential for efficiencies in the length and width of the Manchester Piccadilly station box to be realised through further detailed design and analysis. However it is not possible to say that they would be realised let alone to identify the magnitude of them. It is considered unlikely that the box depth can be materially reduced in Manchester, as is set out in Promoter's evidence P421(209-213).

GM Partners' note seeks to refer to what it considers to be example comparable station depths, particularly in relation to Crossrail (Elizabeth Line) stations in London. The Promoter does not consider such comparators to be valid given fundamental differences between the Elizabeth Line (a high-frequency metro-style service) and HS2 (lower-frequency inter-city service). Amongst other things: (1) HS2 platforms (~450m) will be nearly twice the length of Elizabeth Line platforms (~240m); (2) HS2 requires a minimum of four platforms as compared with two platforms for central London Elizabeth Line stations; (3) the lower-frequency, terminating nature of HS2 trains to Manchester could see 1100 passengers disembarking simultaneously from a 400m-long HS2 train, whereas the hop-on hop-off nature of a through-running Elizabeth Line service would only expect to offload all of its passengers (up to 1500) in the event of an emergency; (4) the Bill scheme demonstrates that a surface station and above-ground approach are viable to provide in this location, whereas the central section of Crossrail could only practically have been constructed in tunnel with underground platforms; either side of the central section Crossrail runs at surface with above ground stations where possible (e.g. Acton Main Line, Ealing Broadway).

In addition, it is relevant to note that train services at Old Oak Common will operate differently to Manchester Piccadilly. Old Oak Common is designed to be a station solely for terminating train services in the period before London Euston becomes operational, and solely for through-running services when Euston does become operational. By contrast, the principle of the HS2 Crewe to Manchester hybrid Bill, set out in the proposed indicative Train Service Specification (see P418(6)) for Manchester Piccadilly is to deliver a combination of through and terminating trains, which drives the need for either six platforms (whether at surface or underground) or four underground platforms with turnback sidings (see P418(24-28)).