



Environmental impacts – summary

The below tables summarise the likely environmental impacts of the three options. A full Environmental Impact Assessment (EIA) would need to be undertaken at the next stage of design, once a preferred option has been selected. This would allow for a comprehensive set of surveys to be undertaken, allowing full assessment of all environmental impacts.

Option A

<p>Air Quality</p>	<p>Activities during the construction phase such as demolition, construction and track out are likely to generate airborne dust. Construction plant such as HGVs would also emit nitrogen dioxide and particulate matter. A Construction Environmental Management Plan would be implemented and mitigation applied such as damping down, ensuring a clean and tidy site and effective storage of materials. Monitoring will be in place during construction to ensure works do not produce excessive emissions that breach UK air quality objectives.</p> <p>During operation of the scheme, impacts on air quality are considered to be negligible as the rail line would be electrified.</p>
<p>Cultural Heritage</p>	<p>The proposed route will not physically impact any designated historic buildings. It would lie within 200m of a Grade II listed building and within 800m of a Grade II* and four Grade II listed buildings. It would also be within 550m of nine English Heritage Past Scapes, five Local Historic Environment Record (HER) Points and two Local HER Record Areas. Three English Heritage Past Scapes and two Local HER would be in immediate vicinity of the proposed scheme. No World Heritage Sites are located within significant vicinity.</p> <p>The proposed viaduct would reach within 100m of a designated Conservation Area, the Grand Union Canal. Old Oak and Wormholt of London Borough of Hammersmith and Fulham are located to the southwest of Wormwood Scrubs and Oxford Gardens Conservation Area of Royal Borough of Kensington and Chelsea to the southeast of the Scrubs.</p> <p>Sympathetic Landscape Management during and post construction will reduce impact in terms of visual obstruction. We would also consult with relevant stakeholders such as English Heritage and Local Boroughs.</p>
<p>Geology and Soils</p>	<p>It is likely that the proposed scheme would disturb contaminated land given the current land use in the area is predominantly industrial and rail land. Additionally it is understood Wormwood Scrubs was bombed heavily during WWII.</p> <p>Further ground investigations will be required. If contaminated land is disturbed, remediation would be necessary. Best practice and a waste management plan would be implemented on working sites to restrict the</p>



	<p>potential impacts or migration of contamination.</p>
<p>Biodiversity and Ecology</p>	<p>The surrounding environment is a predominantly urban area. However Option A directly impacts on Wormwood Scrubs Local Nature Reserve (LNR) and Site of Importance for Nature Conservation (SINC) resulting in loss of habitat and potential disturbance to protected species or disruption of their foraging, nesting and commuting habitats or places of shelter. Species likely within the Scrubs include bats which may be roosting in trees or adjacent buildings and are likely to be using the railway corridor for commuting and foraging. Breeding birds are likely to be present in the trackside shrubs and trees and adjacent buildings. Reptiles may be present along the rail corridor. Badger setts could also potentially be present.</p> <p>Compensation habitat will be required along with enhancement of the remainder of the LNR / SINC habitats. Replacement roost may be required for any bat roosts discovered. Habitat enhancement and sensitive lighting may be required to reduce disturbance to foraging and commuting bats. Vegetation clearance should be undertaken outside of the breeding bird season to avoid destruction of bird nests and their contents. Bird boxes can be incorporated onto retained trees to increase nesting opportunities. If reptiles or great crested newts are present then it is likely that they will need to be captured and transferred to a suitable receptor site.</p>
<p>Townscape and Visual</p>	<p>The construction period of both the viaduct within Wormwood Scrubs and the station would be particularly obtrusive due to large scale construction work, cranes and uncharacteristic plant activity. It would involve removal of vegetation and some excavation areas. Hoardings would be used to screen, however, there will be a noticeable temporary deterioration in the existing view and would be at odds with the character of the open space.</p> <p>The height of the proposed viaduct will become visible in views which previously had limited / no views of railway or viaduct structures, particularly within Wormwood Scrubs and line side residents on Wells House Road, Braybrook Street and Long Drive. The beginning of the viaduct would also be visible along Scrubs Lane and Bracewell Road. The new structure would be out of scale and character with the surrounding infrastructure.</p> <p>The proposed Overground Station and increased number of trains would be visible from properties along Shaftesbury Gardens and Midland Terrace.</p> <p>The viaduct would be designed to be a lightweight elegant structure to maintain light and reduce visual 'weight' of the structure. Mature trees would be retained where possible to maintain tree canopy in local views. The embankment is to include evergreen species for winter cover. Public space beneath the viaduct would be enhanced and include planting. Hoarding and planting would be used to screen views from the station</p>



platforms to ensure privacy to adjacent residents.

A mock ups of the proposed viaduct can be found below:

View looking north west across Wormwood Scrubs



View looking north east across Wormwood Scrubs



During construction the proposed HS2 construction compound (in the NW corner of Wormwood Scrubs) would be used in order to minimise land take. Hoarding would be used to screen visual impact to nearby residents.

Noise and Vibration

The scheme would introduce additional train movements and therefore noise to dwellings along Braybrook Street, Long Drive, Wells House Road, Old Oak Common Lane and Midland Terrace as well as within Wormwood Scrubs.

Mitigation in the form of regular wheel and track grinding, flange lubricator and noise barriers along the viaduct would reduce noise levels from the tracks. Screening would be provided alongside the station and a well



	<p>designed public address system would be installed to minimise noise impact.</p>
Water Environment	<p>No groundwater source protection zone, principal aquifer or ground water abstraction is present within proximity to the site. It is anticipated that there will be limited volumes of surface water runoff and small quantities of discharge to foul sewer during construction or operation.</p> <p>We would ensure good construction practices were implemented to reduce runoff and impact to watercourses.</p> <p>Overall there are no expected impacts on the water environment.</p>

Option B

Air Quality	<p>Activities during the construction phase such as demolition, construction and track out are likely to generate airborne dust. Construction plant such as HGVs would emit nitrogen dioxide and particulate matter. A Construction Environmental Management Plan would be implemented and mitigation such as damping down, ensuring a clean and tidy site and effective storage of materials. Monitoring will be in place during construction to ensure works do not produce excessive emissions that breach UK air quality objectives.</p> <p>During operation of the scheme impacts on air quality are considered to be negligible as the rail line would be electrified.</p>
Cultural Heritage	<p>The proposed route will not physically impact any designated historic buildings. The section running to the west lies within 400m five Grade II listed buildings located in St Mary's Catholic Cemetery and College Park, 800m of a Grade I listed building, 1km of three Grade II* and 23 Grade II listed buildings.</p> <p>No World Heritage Sites are located within a significant vicinity to any areas of track of the proposed route. The proposed station and track route for Option B also lies within 500m of a number of English Heritage Past Scapes and Local Historic Environment Record (HER) Points.</p> <p>The section of track to the north of the proposed station passes Old Oak Lane Conservation Area to the west of the track and the Grand Union Canal.</p> <p>Sympathetic Landscape Management during and post construction will reduce impact in terms of visual obstruction. We would also consult with relevant stakeholders such as English Heritage and Local Boroughs.</p>
Geology and Soils	<p>It is likely that the proposed scheme would disturb contaminated land given the current land use in the area is predominantly industrial and rail land.</p> <p>Should construction be required adjacent to the banks of the canal there</p>



	<p>would be potential for sediment to enter the canal.</p> <p>Further ground investigations will be required. If contaminated land is disturbed, remediation would be necessary. Best practice and a waste management plan would be implemented on working sites to restrict the potential impacts or migration of contamination.</p>
Biodiversity and Ecology	<p>Option B directly impacts on a Site of Importance for Nature Conservation (SINC) and associated flora and fauna which may include protected species. Bats, breeding birds and reptiles may be present. Bats may be roosting in trees or adjacent buildings and are likely to be using the railway corridor for commuting and foraging. Breeding birds are likely to be present in the trackside shrubs and trees and adjacent buildings. Reptiles may be present along the rail corridor (great crested newts a possibility though unlikely). Badger setts could potentially be present.</p> <p>Impacts can be mitigated with offsetting or enhancement and management of the remaining SINC areas. Replacement roost may be required for any bat roosts discovered. Habitat enhancement and sensitive lighting may be required to reduce disturbance to foraging and commuting bats. Vegetation clearance should be undertaken outside of the breeding bird season to avoid destruction of bird nests and their contents. Bird boxes can be incorporated onto retained trees to increase nesting opportunities.</p>
Townscape and Visual	<p>There would be clear views of the construction works of the new station along Old Oak Common Lane and from residential properties on Wells House Road, Shaftesbury Gardens and Midland Terrace.</p> <p>During operation of the scheme, line side residents would experience an increase in trains and passenger activity on the adjacent station platforms. Works would be contained within the existing railway boundary and will be of a similar scale and style to the existing surroundings.</p> <p>To ensure the privacy of adjacent residents, screening in the form of hoarding, evergreen planting and hedging will be included along the station boundary.</p>
Noise and Vibration	<p>The scheme would introduce additional train movements and therefore noise to dwellings along Wells House Road, Old Oak Common Lane, Shaftesbury Gardens, Old Oak Lane and Midland Terrace.</p> <p>Mitigation in the form of regular wheel and track grinding and flange lubricator would reduce noise levels from the tracks. Screening would be provided alongside the station and a well designed public address system would be installed.</p>
Water Environment	<p>Realignment of track, and therefore construction, may be required over the Grand Union Canal.</p> <p>No groundwater source protection zone, principal aquifer of ground water</p>



	<p>abstraction is present within proximity to the site. It is anticipated that there will be limited volumes of surface water runoff and small quantities of discharge to foul sewer during construction or operation.</p> <p>We would ensure good construction practices are implemented to reduce runoff and impact to watercourses.</p> <p>Overall there are no expected impacts on the water environment.</p>
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Option C

<p>Air Quality</p>	<p>Activities during the construction phase such as demolition, construction and track out are likely to generate airborne dust. Construction plant such as HGVs would also emit nitrogen dioxide and particulate matter. A Construction Environmental Management Plan would be implemented and mitigation such as damping down, ensuring a clean and tidy site and effective storage of materials. Monitoring will be in place during construction to ensure works do not produce excessive emissions that breach UK air quality objectives.</p> <p>During operation of the scheme impacts on air quality are considered to be negligible as the rail line would be electrified.</p>
<p>Cultural Heritage</p>	<p>The proposed route will not physically impact any designated historic buildings. It would lie within 400m of five Grade II listed buildings located in St Mary's Catholic Cemetery and College Park. Kensal Green located immediately east of St Mary's is also a Conservation Area. No World Heritage Sites are located within a significant vicinity to any areas of track of the proposed route. Option C lies within the vicinity of Heritage Points already listed for Option A and B with one English Heritage Past Scape located within 100m of the proposed Overground Station adjacent to Hythe Road.</p> <p>The section of track incorporating the western London Overground Station runs northeast across the Grand Union Canal (Conservation Area within London Borough of Hammersmith and Fulham) and would reach within 200m of the Old Oak Lane Conservation Area of London Borough of Ealing. The new pedestrian link over the Grand Union Canal is currently designed to be above the existing Car Giant buildings and therefore visual amenity will not be obstructed but it may become a new element in the view from the conservation area.</p> <p>Sympathetic Landscape Management during and post construction will reduce impact in terms of visual obstruction. We would also consult with</p>



	<p>relevant stakeholders such as English Heritage and Local Boroughs. The proposed rail bridge within the Conservation Area would be designed to be in character with existing bridges or a complimentary light-weight design.</p>
Geology and Soils	<p>It is likely that the proposed scheme would disturb contaminated land given the current land use in the area is predominantly industrial and rail land.</p> <p>Should construction be required adjacent to the banks of the canal, there would be potential for sediment to enter the canal.</p> <p>Further ground investigations will be required. If contaminated land is disturbed, remediation would be necessary. Best practice and a waste management plan would be implemented on working sites to restrict the potential impacts or migration of contamination.</p>
Biodiversity and Ecology	<p>Option C directly impacts on a Site of Importance for Nature Conservation (SINC) and associated flora and fauna which may include protected species. Bats, breeding birds and reptiles may be present. Bats may be roosting in trees or adjacent buildings and are likely to be using the railway corridor for commuting and foraging. Breeding birds are likely to be present in the trackside shrubs and trees and adjacent buildings. Reptiles may be present along the rail corridor (the presence of great crested newts are a possibility, though unlikely). Badger setts could potentially be present.</p> <p>Impacts can be mitigated with offsetting or enhancement and management of the remaining SINC areas. Replacement roost may be required for any bat roosts discovered. Habitat enhancement and sensitive lighting may be required to reduce disturbance to foraging and commuting bats. Vegetation clearance should be undertaken outside of the breeding bird season to avoid destruction of birds' nests and their contents. Bird boxes can be incorporated onto retained trees to increase nesting opportunities.</p>
Townscape and Visual	<p>There would be clear views of the construction works of the new Old Oak Common Lane station along Old Oak Common Lane and from upper windows of residential properties on Wells House Road, Shaftesbury Gardens and Midland Terrace.</p> <p>During operation of the scheme line side residents would experience an increase in trains and passenger activity on the adjacent station platforms. Works would be contained within the existing railway boundary and will be of a similar scale and style to the existing surroundings.</p> <p>To ensure the privacy of adjacent residents, screening in the form of hoarding, evergreen planting and hedging will be included along the station boundary.</p>
Noise and Vibration	<p>The scheme would introduce two stations and therefore additional noise impacts are expected to dwellings along, Wells House Road, Old Oak Common Lane, Shaftesbury Gardens, Old Oak Lane and Midland Terrace. There are no residential receptors anticipated to be impacted by the</p>



	<p>proposed Hythe Road Station.</p> <p>Mitigation in the form of regular wheel and track grinding and flange lubricator would reduce noise levels from the tracks. Screening would be provided alongside the Old Oak Common Lane station to the west and a well designed public address system would be installed.</p>
Water Environment	<p>Realignment of track and a pedestrian walkway (and therefore construction) will be required over the Grand Union Canal.</p> <p>No groundwater source protection zone, principal aquifer of ground water abstraction is present within proximity to the site. It is anticipated that there will be limited volumes of surface water runoff and small quantities of discharge to foul sewer during construction or operation.</p> <p>We would ensure good construction practices were implemented to reduce runoff and impact to watercourses.</p> <p>Overall there are no expected impacts on the water environment.</p>