

13 Mitigation Measures, Monitoring and Residual Effects

13.1 Introduction

- 13.1.1 Tables 13.1 and 13.2 provide a summary of the likely significant effects, mitigation measures and residual effects of the Development as detailed in each of the ES technical chapters (7 to 13) for the demolition and construction phase and the completed Development, respectively.
- 13.1.2 There has been no worsening of significance of effect over that which was assessed within the 2017 ES or 2018 ES Addendum for Socio-Economics, Transport and Traffic, Townscape and Visual Impact, Air Quality, Noise and Vibration and Wind Microclimate. The increase in new households from the 2017 Detailed Application has resulted in an estimated additional spending from between £92,00 to £138,00 per annum to between £110,000 to £162,000 per annum at the local level. This has resulted in a change in significance from minor beneficial to moderate beneficial at the local level.
- 13.1.3 For the programme of demolition and construction works, the Applicant has committed to implementing a CEMP. A CTMP was also prepared as part of the planning submission (Appendix 7.1), with proposed construction traffic routing. These would be secured by planning condition prior to the commencement of any works commencing for the Development. These documents include mitigation measures identified as part of the EIA in the technical assessments as well as good practice, and outline how the critical construction activities will be undertaken, specifically in relation to the environmental, public health and safety aspects and traffic management of the Development.
- 13.1.4 Mitigation measures are designed-in to the Development where possible, although Table 13.2 identifies those measures where additional measures are deemed necessary by the preceding technical chapters (6 to 11). The Applicant has also committed to a Travel Plan and Delivery and Servicing Plan which accompany the ES (Appendix 7.1) and would serve to minimise traffic disruption.
- 13.1.5 As stated previously, a CEMP and CTMP would be secured by appropriate planning conditions prior to the commencement of any works for the Development and mitigation measures are designed-in to the Development where possible.
- 13.1.6 The Applicant has committed to a Travel Plan, Delivery and Servicing Plan and Car Park Management Plan, which are submitted as part of the Transport Assessment for the planning application. The implementation of these measures would serve to minimise traffic disruption once the Development is completed and occupied.

Table 13.1: Summary of Construction Effects

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Securing Mechanism	Residual Effect
Socio- Economics	Loss of employment on site	Low (Local)	None	n/a	Minor adverse effect
	Generated construction employment (500 FTE)	Low (Regional)	None	n/a	Negligible
	Indirect benefits including supply chain effects and spending by construction workers.	Low (Local)	None	n/a	Minor beneficial effect
Traffic and Transport	Construction Traffic on Traffic	High (Local)	None additional	n/a	Minor adverse
	Construction Traffic on Pedestrians	Low (Local)	None required	n/a	Negligible
	Construction Traffic on Cyclists	Low (Local)	None required	n/a	Negligible
	Construction Traffic on Travel by Bus	High (Regional)	None additional	n/a	Minor adverse
	Construction Traffic on Travel by Rail	High (Regional)	None required	n/a	Negligible
	Construction Traffic on Travel by London Underground	Medium (Regional)	Working outside of peak traffic hours	n/a	Negligible
	Accidents and Safety on Traffic, Pedestrians and Cyclists	Low (Regional)	None required	n/a	Negligible
Townscape and Visual Assessment	Effect on Site Character: Demolition of existing buildings	Low (Local)	Best practice as part of CEMP, including hoardings, tree protection, controls on lighting and good housekeeping. Assumed to be incorporated – the reported effects are therefore residual.	Planning condition to require the Development to be carried out in accordance with the provisions of the CEMP.	Moderate Beneficial
	Effect on Site Character: Construction activities	Low (Local)			Moderate Adverse
	Effect on Character Areas: Edgware & Burnt Oak	Medium (District)			Minor Neutral
	Effect on Character Areas: All Other Character Areas	Low to High (District)			Negligible Adverse
	Effect on Setting of Conservation Areas: Watling Estate	High (Regional)			Minor Adverse

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Securing Mechanism	Residual Effect
	Effect on Setting of Conservation Areas: Mill Hill	High (Regional)			Negligible Adverse
	Effect on Setting of Conservation Areas: Effect on Important View from Mill Hill Field	High (District)			Minor Adverse
	Effect on Visual Amenity: Residents of Bunns Lane and nearby streets	High (Local)			Substantial to Major Adverse
	Effect on Visual Amenity: Residents of Grahame Park Estate	High (Local)			
	Effect on Visual Amenity: Users of Mill Hill Park	Medium (Local)			
	Effect on Visual Amenity: All other receptors	Low (Local)			
Air Quality	Dust impacts	High (Local)	Implementation of the mitigations identified within the Construction Dust Risk Assessment within a Construction Management Plan.	Planning condition	Negligible
Noise and Vibration	Construction activity noise	High (Local)	Implementation of the CEMP (including adoption of 'best practicable means contained in BS 5228-1 and BS 5228-2', non-statutory scheme for compensation)	Planning condition	Temporary, minor to moderate adverse
	Construction vehicle noise	High (Local)	Implementation of the CTMP		Temporary, negligible adverse
	Construction vibration	High (Local)	Implementation of the CEMP		Temporary, minor adverse
Wind Microclimate	Wind effect on construction site	High (Local)	None required	n/a	Negligible

Table 13.2: Summary of Completed Development Effects

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Securing Mechanism	Residual Effect
Socio-Economics	Provision of employment floorspace	High (Local)	None	n/a	Minor beneficial at local level, negligible at all other scales
	Housing Delivery	Medium (Local, Borough, Region)	None	n/a	Moderate beneficial at local and borough level, negligible at regional level
	Demand placed on education facilities	Low (Local, Borough)	Financial contributions via CIL/S106	Section 106 agreement	Negligible
	Demand placed on primary healthcare facilities/provision of a new health centre	High (Local)	None required	n/a	Negligible
	Demand for healthcare	Low	None required	n/a	Negligible
	Demand for open space and playspace	Medium (Site, Local)	None required	n/a	Minor beneficial at the local level, negligible at all other spatial scales
	Additional spending	High (Local, Borough, Region)	None required	n/a	Moderate beneficial at local and borough level, negligible at regional level
Traffic and Transport	Additional Vehicle Trips on Traffic (Link 16)	Low (Local)	Provision of on-site car club	Section 106 agreement	Negligible
	Additional Vehicle Trips on Traffic (Links 6, 8 and 10)	Medium (Local)	Provision of on-site car club	Section 106 agreement	Negligible
	Additional Vehicle Trips on Traffic (Links 1, 2, 3, 4, 5, 7, 9, 11, 12, 14, 14, 15, 17 and 18)	High (Local)	Provision of on-site car club	Section 106 agreement	Minor adverse
	Effect of Vehicle Trips on Pedestrians	Low (Local)	Provision of on-site car club	Section 106 agreement	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Securing Mechanism	Residual Effect
	Effect of Vehicle Trips on Cyclists	Low (Local)	Provision of on-site car club	Section 106 agreement	Negligible
	Effect of additional Bus Trips to Route 221	High (Regional)	None additional	n/a	Minor adverse
	Effect of additional Bus Trips to other bus routes	High (Regional)	None required	n/a	Minor adverse
	Effect of Additional Trips on Rail Travel	High (Regional)	None additional	n/a	Minor adverse
	Effect of Additional Trips on London Underground	Medium (Regional)	None required	n/a	Negligible
	Effect of Pedestrian Trips on Pedestrians	Low (Local)	None required	n/a	Negligible
	Effect of Pedestrian Trips on travel by Car	High (Local)	None additional	n/a	Minor adverse
	Accidents and Safety on Traffic, Pedestrians and Cyclists	Low (Local)	None required	n/a	Negligible
Townscape and Visual Assessment	Effect on Site Character	Low (Local)	Massing, facade treatment and materiality of proposed buildings Landscaping of site perimeter and green space	None required	Moderate to Substantial Beneficial
	Effect on Character Areas: Edgeware + Burnt Oak	Medium (District)			Moderate Neutral
	Effect on Character Areas: Mill Hill East	Medium (District)			Moderate Neutral
	Effect on Character Areas: Mill Hill	High (District)			Minor Neutral
	Effect on Character Areas: Colindale	Low (District)			Minor Beneficial
	Effect on Character Areas: Hendon	Medium (District)			Minor Neutral
	Effect on Setting of Conservation Areas: Watling Estate	High (District)			Moderate Neutral

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Securing Mechanism	Residual Effect
	Effect on Setting of Conservation Areas: Mill Hill	High (District)			Minor Neutral
	Effect on Setting of Conservation Areas: Effect on Important View from Mill Hill Field	High (Local)			Minor Adverse
	Effect on Visual Amenity: Residents of Bunns Lane and nearby streets	High (Local)			Mainly Substantial Adverse, but occasionally Major Adverse.
	Effect on Visual Amenity: Residents of Grahame Park Estate	High (Local)			
	Effect on Visual Amenity: Users of Mill Hill Park	Medium (Local)			
	Effect on Visual Amenity: All other receptors	Low (Local)			
Air Quality	Site Suitability	Low (Local)	n/a	n/a	Negligible
	Energy Centre emissions – on site	Low to Medium (~200m diameter)	SCR System required to achieve Air Quality Positive position against benchmarking	Planning condition	Negligible
	Energy Centre emissions – wider areas	Low to Medium (6km ²)	SCR System required to achieve Air Quality Positive position against benchmarking		Negligible
	Traffic emissions	Low to Medium (~1.5km north-west to ~1.5km south-east (along local road network))	Implementation of Active Travel within Travel Plan and Offsetting to achieve Air Quality Positive position against benchmarking		Negligible
Noise and Vibration	General environmental noise	High (Local)	Facade design	n/a	Permanent, negligible adverse
	Noise intrusion into proposed dwellings	High (Local)	Facade design	n/a	Permanent, negligible adverse
	Noise levels in proposed outdoor amenity spaces	High (Local)	Facade design	n/a	Permanent, negligible adverse

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Securing Mechanism	Residual Effect
	Operational noise from plant / machinery with commercial uses	High (Local)	Appropriate plant selection, installation of noise barriers and acoustic attenuators. Means of implementation: through design	Planning condition	Permanent, negligible adverse
	Operational noise from commercial uses	High (Local)	Appropriate plant selection, installation of noise barriers and acoustic attenuators. Means of implementation: through design	Planning condition	Permanent, negligible adverse
	Indirect operational noise impacts resulting from changes in traffic flow	High (Local)	None required	n/a	Permanent, negligible adverse
Wind Microclimate	Safety	High (Local)	None required	n/a	Negligible
	Comfort – Throughfares	High (Local)	None required	n/a	Negligible
	Comfort – Entrances/Waiting Areas	High (Local)	None required	n/a	Negligible
	Comfort – Recreational Spaces	High (Local)	None required	n/a	Negligible
	Comfort – Balconies	High (Local)	None required	n/a	Negligible
	Comfort – Rooftop Terraces	High (Local)	None required	n/a	Negligible