

# B&Q Cricklewood ES Volume I

Chapter 15: Traffic and Transport

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## 15. Traffic and Transport

### 15.1 Introduction

- 15.1.1 This chapter of the Environmental Statement (ES) reports the findings of an assessment of the likely significant traffic and transport effects as a result of the proposed 'B&Q Cricklewood' development (hereafter referred to as the 'Proposed Development') in the London Borough of Barnet (LBB). This chapter draws on the findings of the Transport Assessment (TA) dated July 2020, prepared by Entran Ltd which is included as *ES Volume III Appendix 15-1*.
- 15.1.2 The potential for effect interactions on a single receptor (Type 1 effects) are discussed in *Chapter 17: Effect Interactions*. Combined cumulative transport effects (Type 2 effects) of the Proposed Development with other development schemes are discussed at the end of this chapter.
- 15.1.3 This chapter describes: the assessment methodology; the baseline conditions at the Site and surroundings; the likely significant environmental effects; the mitigation measures required to prevent, reduce or offset any significant effects; and an assessment of the likely residual effects after these measures have been employed.
- 15.1.4 This assessment and ES chapter has been produced by Entran Ltd.

### 15.2 Legislation and Planning Policy Context

#### National Planning Policy

##### National Planning Policy Framework (2019)<sup>1</sup>

- 15.2.1 The NPPF sets out "the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities".
- 15.2.2 The NPPF aims to promote greater accessibility to jobs, shopping, leisure facilities and services through the use of walking, cycling and public transport in order to reduce the growth in the number and length of journeys made by private car.
- 15.2.3 Paragraph 111 of the NPPF requires that all developments which generate significant amounts of movement should be required to provide a travel plan and the application should be supported by a transport statement or transport assessment. Planning decisions should take account of whether the proposed development:
- Has taken up appropriate opportunities to promote sustainable transport modes, given the type of development and its location;
  - Safe and suitable access to the site can be achieved for all users; and
  - Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.
- 15.2.4 Paragraph 109 says that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

##### National Planning Practice Guidance<sup>23</sup>

- 15.2.5 Reference to and commentary on any applicable planning policies from this document.

<sup>1</sup> DCLG, 2019; National Planning Policy Framework (NPPF)

<sup>2</sup> DCLG, 2015; National Planning Practice Guidance

<sup>3</sup> DCLG, 2017; National Planning Practice Guidance

## Regional Planning Policy

### The London Plan – Spatial Development Strategy for Greater London (2016)<sup>4</sup>

- 15.2.6 The latest London Plan published in 2016, is consolidated with all the alterations to the London Plan since 2011. It is the policies in this document (and any subsequent Alterations to it) that form part of the development plan for Greater London, and which should be taken into account in taking relevant planning decisions, such as determining planning applications.
- 15.2.7 It is a strategic plan, which sets out the integrated social, economic and environmental framework for the future development of London. It also looks at integrating the physical and geographic dimensions of the Mayor's other strategies including broad locations for change and providing a framework for land use management and development which is strongly linked to improvements in infrastructure especially transport.

### The London Plan – The Spatial Development Strategy for Greater London: Intend to Publish Version to Secretary of State (December 2019)<sup>5</sup>

- 15.2.8 The Intend to Publish London Plan 2019 was published for consultation in 2018; the consultation has closed but the Intend to Publish London Plan has not yet been adopted. The Examination in Public (EiP) was held in January 2019; the Panel of Inspectors appointed by the Secretary of State issued their report and recommendations to the Mayor in October 2019. The Mayor considered the Inspector's recommendations and in December 2019 issued his intention to publish the London Plan.
- 15.2.9 Section 10 sets out the strategic approach to transport. It states that *“Development Plans and development proposals should support the delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041”*.
- 15.2.10 A response from the Secretary of State was issued on 13 March 2020, outlining that the New London Plan cannot yet be published until amendments and directions outlined by the Secretary of State have been incorporated into a revised document. A response was issued by the Mayor, however currently both parties are still to informally agree text on the New London Plan prior to publishing the Final New London Plan.
- 15.2.11 The Draft London Plan is a material consideration in planning decisions.

### The Mayor's Transport Strategy (2018)<sup>6</sup>

- 15.2.12 The Mayor is required to publish a Transport Strategy (MTS) which contains his policies for the promotion and encouragement of safe, integrated, efficient and economic transport facilities and services to, from and within Greater London; his proposals for discharging his duty of exercising his powers under Part IV of the Greater London Authority Act 1999 ('the GLA Act') for the purpose of securing the provision of those transport facilities and services; and his proposals for providing accessible transport.
- 15.2.13 On 21 June 2017 the Mayor published his draft MTS and Integrated Impact Assessment (IIA) for public consultation. The consultation ran for 14.5 weeks, closing on 2 October 2017. The MTS was adopted in February 2018.
- 15.2.14 The transport strategy should:
- Support economic development and population growth;
  - Enhance the quality of life for all Londoners;
  - Improve the safety and security of all Londoners;
  - Improve transport opportunities for all Londoners; and

<sup>4</sup> GLA, 2016; The London Plan – The Spatial Development Strategy for London Consolidated with Alterations Since 2011

<sup>5</sup> GLA, 2019; The London Plan – Spatial Development Strategy for Greater London – Intend to Publish Version. December 2019

<sup>6</sup> GLA, 2018; Mayor's Transport Strategy

- Reduce transport's contribution to climate change and improve its resilience.
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

15.2.15 The Strategy recognises that improving transport has a vital role to play in improving economic performance and the quality of life of London's residents and workers.

#### Accessible London: Achieving an Inclusive Environment SPG (2011)<sup>7</sup>

15.2.16 The GLA publishes Supplementary Planning Guidance (SPG) to provide detailed advice and guidance on the policies in the London Plan. The SPG 'Accessible London: achieving an inclusive environment' published in 2004 provides advice on implementing the inclusive design policies contained in the previous London Plan. The GLA updated this advice in 2011 and is mainstreaming it into the new SPGs being published on particular topics. This should help to ensure a wider readership of the inclusive design advice by developers, designers, planners, and the wider community, as well as by access consultants, local access groups, and organisations of disabled and deaf people.

15.2.17 Of particular relevance to the transport effects of the Proposed Development are the requirements for all new developments to ensure that the barriers to meeting the needs of and expanding opportunities for particular groups and communities and tackling inequality across London are addressed; and that all new development in London are to achieve the highest standards of accessible and inclusive design.

15.2.18 The SPG also includes guidance on the design of the public realm, car parking facilities, the walking and pedestrian environment, accessible sports facilities, access to arts and culture, and the historic environment.

#### Accessible London (Draft Supplementary Planning Guidance) (2014)<sup>8</sup>

15.2.19 The Mayor has issued for public consultation Draft Supplementary Planning Guidance on Accessible London. The Accessible London publications give advice on how to promote and achieve an inclusive environment in London.

#### Shaping Neighbourhoods: Character and Context (2014)<sup>9</sup>

15.2.20 The SPG on Character and Context sets out an approach to understanding character and context so that it can be considered in the planning and design process to guide change in a way which is responsive to individual places and locations. The SPG explains that understanding the existing character and local context of a place is essential to an appreciation of how a place could develop in the future, whether that is protecting important elements crucial to an area's distinctiveness as a place or identifying those elements that could be enhanced through managed change.

#### Local Planning Policy

15.2.21 The local planning policy documents that have been taken into consideration throughout the preparation of this ES include the list below:

#### London Borough of Barnet Local Plan

15.2.22 The Local Plan replaces the Unitary Development Plan (UDP) (adopted May 2006). It provides the overarching local policy framework for delivering sustainable development in Barnet. Barnet's Local Plan provides a 'folder' of separate documents with the following documents relevant to this assessment.

15.2.23 LBB's Core Strategy Development Plan Document (DPD), 2012<sup>10</sup> sets out the vision, objectives and related strategic policies; within the two chapters devoted to transport, the document addresses current issues with excessive private car use and the potential for promoting increased use of the public

<sup>7</sup> GLA, 2011; Accessible London: Achieving an Inclusive Environment Supplementary Planning Guidance

<sup>8</sup> GLA, 2014; Accessible London (Draft Supplementary Planning Guidance April 2014)

<sup>9</sup> GLA, 2014; Shaping Neighbourhoods: Character and Context

<sup>10</sup> London Borough of Barnet (LBB), 2012; Local Plan (Core Strategy)

transport network and active travel. The document address four inter-related priorities for Barnet's transport network.

- Ensuring more efficient use of the local road network;
- Taking a comprehensive approach to tackling the school run;
- Delivery of high quality transport systems in regeneration areas; and
- More environmentally friendly transport networks

15.2.24 LBB's Site Allocations DPD<sup>11</sup>, currently emerging (LBB have only progressed to 'Call for Sites' stage to date) identifies future sites for development. However, the Site is not allocated within the DPD.

15.2.25 LBB's Development Management Policies DPD, 2012<sup>12</sup> sets out the borough-wide planning policies that implement the Core Strategy and will be used for day to day decision making by the Planning Service and for planning committee determinations. Transport policies are addressed in Chapter 18 of this document in particular Policy DM17: Travel Impact and Parking Standards sets out the policies on 'movement' which are intended to contribute towards a safe, effective and efficient transport system. Parking standards are also addressed, although Cricklewood parking standards are detailed in the suite of policies specific to Brent Cross and Cricklewood.

#### London Borough of Barnet Draft Local Plan (Reg 18) Preferred Approach Consultation (2020)

15.2.26 The LBB are currently in the process of reviewing and updating the borough's adopted Local Plan documents, and recently published its Draft Local Plan<sup>[1]</sup> (Regulation 18 document) for public consultation. The consultation period took place between 27 January – 16 March 2020, with the Regulation 19 (i.e. Publication of Local Plan for making representations on soundness issues (NPPF para 35) document scheduled for publication in Winter 2021. Adoption of the revised Draft/New Local Plan is not expected until Spring 2022.

15.2.27 The Draft Local Plan also includes Transport policy. Matters such as movement hierarchies and cycle and car parking standards have been brought into line with the London Plan and the overall Transport policy framework creates a better integration between movement and land-use policy. The general principles of promoting sustainable travel behaviour remain in common with the current Local Plan.

15.2.28 By virtue of being at an early stage in the adoption process, the Draft Local Plan is considered to be of limited weight and is not a material consideration within this EIA.

#### Cricklewood, Brent Cross and West Hendon Regeneration Area Development Framework<sup>13</sup>

15.2.29 The Unitary Development Plan (since replaced by the local plan.) devoted a chapter to enabling the regeneration of Cricklewood, Brent Cross and West Hendon to be delivered. In July 2004, the Framework was endorsed by the Mayor of London as an Opportunity Area Planning Framework to the London Plan. The transport vision included in this document was developed in consultation with key transportation authorities, including Transport for London (TfL), the (then) Highways Agency and the Department for Transport Rail (DfT), formerly the Strategic Rail Authority (SRA).

15.2.30 Policies C7 and C8 refer to Transport improvements and Parking standards. Policy C7 sets out transport improvements the Council seeks to provide through S106 agreement. Policy C8 specifies maximum parking standards for Residential, Business, and Retail development, with use classes falling outside those cited following guidance set out in The London Plan.

<sup>11</sup> LBB, Emerging; Site Allocations Development Plan Document (DPD)

<sup>12</sup> LBB, 2012; Development Management Policies DPD

<sup>[1]</sup> LBB, 2020; Draft Local Plan for Public Consultation – Regulation 18 Document

<sup>13</sup> LBB, 2005; Cricklewood, Brent Cross and West Hendon Regeneration Area Development Framework Supplementary Planning Guidance

### Brent Cross – Cricklewood Opportunity Area<sup>14</sup>

- 15.2.31 The Cricklewood/Brent Cross Opportunity Area is designated in the London Plan document. In December 2005 the Cricklewood, Brent Cross and West Hendon Regeneration Area Development Framework was adopted by the council and the Mayor of London as Supplementary Planning Guidance. The Brent Cross Cricklewood regeneration area covers around 370 acres. The area is bordered by Brent Cross in the north, the A41/Hendon Way in the east; Cricklewood Lane in the south; and the A5 Edgware Road in the west.
- 15.2.32 The document outlines several large transport and infrastructure improvement schemes that will improve the area's accessibility and promote active travel, with a budget of £500 million. An additional Thameslink station is proposed, along with improved pedestrian and cycling facilities.

### Other Relevant Policy, Standards and guidance

#### MHCLG (then DCLG) Planning Practice Guidance – Travel Plans, Transport Assessments and Statements (2014)<sup>15</sup>

- 15.2.33 The national Planning Practice Guidance (PPG) is a resource to use alongside the NPPF. The PPG provides advice on when Transport Assessments and Transport Statements are required, and what information they should contain. The PPG covers:
- Overarching principles on Travel Plans, Transport Assessments and Statements;
  - Travel Plans;
  - Transport Assessments and Statements.
- 15.2.34 The Government considers that when combined these documents can positively contribute to:
- Encouraging sustainable travel;
  - Lessening traffic generation and its detrimental impacts;
  - Reducing carbon emissions and climate impacts;
  - Creating accessible, connected, inclusive communities;
  - Improving health outcomes and quality of life;
  - Improving road safety ;and
  - Reducing the need for new development to increase existing road capacity or provide new roads.

#### MHCLG National Design Guide (2019)<sup>16</sup>

- 15.2.35 The National Design Guide helps to inform development proposals and their assessment by local planning authorities and it supports the MPPF which states that permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions.
- 15.2.36 The National design Guide includes a chapter on Movement but is clear that patterns of movement for people are integral to well-designed places. They include walking and cycling, access to facilities, employment and servicing, parking and the convenience of public transport. They contribute to making high quality places for people to enjoy. Their success is measured by how they contribute to the quality and character of the place, not only how well they function.

<sup>14</sup> GLA, 2014; Brent Cross – Cricklewood Opportunity Area Framework

<sup>15</sup> MHCLG, 2014, Travel Plans, Transport Assessments and Statements

<sup>16</sup> MHCLG, 2019, National Design Guide, Planning practice guidance for beautiful, enduring and successful places

## 15.3 Assessment Methodology

15.3.1 This section of this ES chapter presents the following:

- Information sources that have been consulted throughout the preparation of this chapter;
- Details of consultation undertaken with respect to traffic, transport and means of access;
- The methodology behind the assessment of transport effects, including the criteria for the determination of the importance of, and magnitude of, change from the existing 'baseline' condition;
- An explanation as to how the identification and assessment of potential transport effects has been reached; and
- The significance criteria and terminology for the assessment of residual transport effects.

15.3.2 The following sources of information that define the Proposed Development have been reviewed and form the basis of the assessment of likely significant effects on the local transport network:

- Parameter plans and illustrative scheme plans;
- Area schedules; and
- Design and Access Statement (informative).

### Methodology for Determining Baseline Conditions and Sensitive Receptors

#### Baseline conditions

15.3.3 The Proposed Development is assessed against a baseline condition that reflects a 2020 (current) baseline which represents the existing Site uses, existing walking, cycling and public transport facilities and existing road traffic flow, taking into account any known or planned improvements.

15.3.4 A detailed traffic survey was carried out in June 2019. The survey locations are shown in Figure 15-1 below. The traffic survey comprised peak hour manual turning counts at:

- North car park access (1);
- South car park access (2);
- Cricklewood Broadway (A5) j/w Depot Approach (3); and
- Cricklewood Broadway (A5) j/w Cricklewood Lane and Chichele Road (A407) (4)

15.3.5 The traffic survey also included automatic traffic counts (ATC) in seven locations:

- North car park access (a);
- South car park access (b);
- Cricklewood Lane (A407) (c);
- Cricklewood Broadway (A5) (SE) (d);
- Chichele Road (A407) (e);
- Cricklewood Broadway (A5) (NW) (f); and
- Depot Approach (g).

15.3.6 The traffic survey locations are illustrated in Figure 15-1 below.



Figure 15-1 Traffic survey locations



15.3.7 The roads listed in Figure 15-1 represent the traffic impact study area. The study area for pedestrians, cyclists and public transport passengers included an extended study area to include the Active Travel Zone defined by 15 minute walking and cycling distances. These are shown in Section 15.4 below. The pedestrian, cycle and public transport infrastructure within the study area was recorded by means of site visits. Public transport services and facilities were derived by means of desk studies. Wider pedestrian and cycle infrastructure and facilities were derived from desk studies, predominantly by reference to LBB and TfL websites.

### Sensitive receptors

15.3.8 The 'Guidelines for the Environmental Assessment of Road Traffic, IEMA, 1993'<sup>17</sup> set out a number of potential environmental effects relating to highways and transport considerations which potentially require assessment. Those which relate to this assessment are:

- Severance;
- Delay (driver, pedestrian, cycle, public transport);
- Amenity;
- Fear and Intimidation;
- Accidents and Safety; and
- Hazardous loads.

### Severance

15.3.9 Severance is defined by the guidance in paragraph 4.27:

*"Severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. It can also relate to quite minor traffic flows if they impede pedestrian access to essential facilities".*

15.3.10 The guidance refers to potential delays to drivers and to pedestrians. Users of other modes can also experience delays, such as cyclists and those travelling by bus and rail.

15.3.11 Drawing upon the 'IEMA, Guidelines' and professional experience, driver delay and delay to bus users may change where:

<sup>17</sup> IEMA, 1993, Guidelines for the Environmental Assessment of Road Traffic

- Traffic flows change at junctions;
- New junctions are introduced;
- Existing junctions are changed;
- Speeds on existing links are changed;
- Existing links are closed;
- New links are opened;
- Frequency of use of controlled pedestrian or cycle crossings change; and
- New controlled pedestrian or cycle crossings are introduced.

### Delay

- 15.3.12 The IEMA Guidelines note that the Department of Transport has assumed 30%, 60% and 90% changes in traffic levels should be considered as “slight”, “moderate”, and “substantial” impacts respectively. The IEMA Guidelines also note that increases in traffic of as little as 5% may be significant in terms of the capacity criteria of a highway but not its environmental effects, and the criteria set out within the guidance make the higher thresholds more relevant to the assessment of the environmental effects of traffic increases.
- 15.3.13 Delay to bus users may also change where bus routes or bus stops are proposed to be changed or where demand for a bus exceeds capacity.
- 15.3.14 Pedestrian and cyclist delay may change where:
- Pedestrians and cyclists cross existing roads where traffic flows are projected to change;
  - Pedestrians and cyclists cross new roads;
  - Existing roads which pedestrians and cyclists would have crossed are removed;
  - Road speeds change;
  - Pedestrian and cycle volumes change;
  - New crossing facilities are provided; and
  - Existing pedestrian crossing facilities change.
- 15.3.15 Public transport delay may change where:
- Passenger areas become congested; and
  - Demand for trains or buses exceeds capacity.
- 15.3.16 Amenity is defined by the guidance in paragraph 4.39:
- “It is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition, and pavement width/separation from traffic. This definition also includes pedestrian fear and intimidation and, can be considered to be a much broader category including consideration of the exposure to noise and pollution, and the overall relationship between pedestrians and traffic.”*
- 15.3.17 Fear and intimidation is defined by the guidance in paragraph 4.40.
- “The impact of this is dependent on the volume of traffic, its HGV composition, its proximity to people or the lack of protection caused by such factors as narrow pavement widths.”*
- 15.3.18 Amenity, fear and intimidation may be considered for pedestrians, cyclists, bus passengers and rail passengers. Amenity, fear and intimidation can be considered together as they are strongly interrelated.
- 15.3.19 The key issue in assessing accidents and safety is in understanding the potential for change. There can be some small changes in prevailing road safety conditions arising simply as a result of having a greater

number of journeys being made on a network; very simply, the more people that are travelling, the more people that are liable to become involved in an accident. By far the more important issue to consider is how travel and the design of the transport networks interrelate to affect prevailing road safety. In that context, prevailing road safety may change where:

- Material; changes are proposed to the form of nature of a transport network such as changes to the geometry of a junction or changing the form of a junction; and
- Material changes are proposed to prevailing travel patterns on transport networks not designed to cater for them such as introducing a pedestrian demand on a rural road without footways or introducing a pedestrian demand across a heavily trafficked and high-speed road without a suitable crossing provision.

15.3.20 Hazardous loads are discussed in paragraph 4.43.

*“Some developments may involve the transportation of dangerous or hazardous loads by road and this should be recognised within any Environmental Statement. Such movements should include specialist loads which might be involved in the construction or decommissioning phases of the development, in addition to movement associated with the operation of the establishment.”*

15.3.21 Hazardous loads could include, for example:

- Explosives;
- Gases;
- Flammable liquid;
- Flammable solids;
- Oxidising substances;
- Toxic substances;
- Radioactive material; and
- Corrosive substances.

## Methodology for Determining Demolition and Construction Effects

15.3.22 The Proposed Development will be delivered in phases, as described in *Chapter 6: Demolition and Construction*. Impacts during the construction phase on any future on-site occupants or users of parts of the Site while construction is still on-going will be qualitatively considered as part of the demolition and construction assessment of certain technical chapters and will be discussed within their respective methodology sections. However, any quantitative modelling will only be undertaken for the peak year of construction that is considered to represent the worst case scenario.

15.3.23 Demolition and construction vehicle numbers have been forecast by Stace LLP based on the proposed demolition and construction works and associated programme and are discussed in *Chapter 6: Demolition and Construction*, outlining the estimated HGV vehicle deliveries to the Site during peak times throughout the construction programme.

15.3.24 This forecast has been assessed against the baseline traffic data for the study area in accordance with the IEMA Guidelines. Where the change in traffic flow is less than 30% (10% for sensitive receptors / road links), the environmental effects have been assessed to be negligible as the IEMA Guidelines recommend that these limits should be used as a screening process to define the scale and extent of the assessment. The proposed route management is set out in *Chapter 6: Demolition and Construction*.

### Severance

- 15.3.25 A Construction Logistics Plan (CLP) is expected to be secured through an appropriately worded planning condition to manage routing and arrival profile of demolition and construction related vehicles to minimise disruption to the surrounding area.
- 15.3.26 Demolition and construction vehicles will arrive at the Site directly from Depot Approach which, based on its character and nature is not particularly sensitive to construction road traffic related severance. No likely significant effects to severance as a result of the demolition and construction works are therefore anticipated and as such, an assessment of severance during demolition and construction is scoped out of this assessment.

### Delay

- 15.3.27 The volume of vehicular demolition and construction trips is forecast to be low, relative to existing flows and would also be managed as part of a CLP. No likely significant effects to driver/bus delay and pedestrian and cyclists delay are therefore anticipated. Assessment of driver/bus delay and pedestrian and cyclists delay during construction is therefore scoped out of this assessment.
- 15.3.28 The volume of construction staff travelling by rail is not expected to significantly increase baseline demand and these staff are also expected to be travelling outside of peak network times. Rail delay has therefore been scoped out of this assessment.

### Amenity, Fear and Intimidation

- 15.3.29 During demolition and construction, the HGV activity is not expected to result in changes which could affect accidents and safety. Traffic changes arising from the construction of the Proposed Development will be low and not considered to be perceptible relative to baseline conditions. Road safety will also be further managed and mitigated through the Construction Logistics and Cycle Safety (CLOCS) scheme and use of contractors registered on the Considerate Contractors Scheme. CLOCS brings the construction logistics industry together to improve the management of work related road risk and ensure a road safety culture is embedded across the industry. An assessment of accidents and safety is therefore scoped out of the assessment.

### Hazardous Loads

- 15.3.30 The Proposed Development is not expected to generate or attract hazardous loads during the demolition and construction works and, on this basis, no likely significant effects are anticipated so an assessment of hazardous loads is scoped out of this assessment.

### Assumptions

- Construction vehicles will adhere to the Site access protocol and route management strategy set out in *Chapter 6: Demolition and Construction*;
- A CLP will be secured through a planning condition, setting out the strategy to manage demolition and construction related vehicles to minimise disruption to the surrounding area; and
- Road safety will be further managed through the Construction Logistics and Cycle Safety (CLOCS) scheme and use of contractors registered on the Considerate Contractors Scheme.

### Methodology for Determining Complete and Operational Effects

- 15.3.31 The travel demand associated with the proposed development has been determined using surveys of comparable sites contained in the TRICS® database, adjusted where necessary to take account of the restricted level of parking proposed on-site. This approach was set out in the EIA Scoping Report (*ES Volume III: Appendix 7-1: EIA Scoping Report and Scoping Opinion*) and described in detail in the Transport Assessment (*ES Volume II: Appendix 15-1: Transport Assessment*).
- 15.3.32 For the purpose of a robust assessment a reasonable worst case has been calculated for the proposed non-residential uses. In order to derive a reasonable worst case the total daily travel demand was

calculated for each of the non-residential use classes. The application seeks a flexible permission for up to 1200m<sup>2</sup> of A3/B1/D1/D2 use as described in *Chapter 4: The Proposed Development*. The non-residential uses will likely be located in Development Parcels A, B and D. The likely distribution will include 'D' class uses in Blocks B and D, and space suitable for all non-residential uses in Development Parcels A and B. Due to the location and likely distribution of the non-residential uses (as indicated on the Illustrative Masterplan as seen within the Masterplan Design and Access Statement<sup>18</sup>) it would be impractical and unviable for 100% of the non-residential floorspace to be in A3 or D2 use. It is highly unlikely that the floorspace would be 100% B1 or D1 but these options have been considered for a robust assessment. Based on the Illustrative Masterplan, eight options were considered as shown in Table 15-1 below.

**Table 15-1 Non-residential units option analysis**

Option	Gross Floor Area	Use class
A	1200	B1
B	1200	D1
C	434	A3
	766	B1
D	434	A3
	766	D1
E	434	D2
	766	B1
F	434	D2
	766	D1
G	434	A3
	434	D2
	332	B1
H	434	A3
	434	D2
	332	D1

15.3.33 Of these eight possible options for the non-residential uses, Option G would generate the highest total daily travel demand by all modes. This is therefore considered to be the reasonable worst case. The transport effects of the Proposed Development have therefore been assessed by combining travel demand associated with the proposed residential use and the reasonable worst case (Option G) non-residential unit mix.

15.3.34 In the same manner as the demolition and construction assessment, the forecast road traffic associated with the completed Proposed Development has been assessed against the observed 2019 (and calculated 2020) baseline traffic data for the study area in accordance with the IEMA Guidelines. Where the change in traffic flow is less than 30% (10% for sensitive receptors / road links), the environmental effects, relating to highways and transport, have been assessed to be negligible as the IEMA Guidelines recommend that these limits should be used as a screening process to define the scale and extent of the assessment.

### Severance

15.3.35 The Proposed Development includes adjustment of the existing access points, including the removal of a vehicular junction on Cricklewood Lane. A quantitative assessment of the study area has been

<sup>18</sup> EPR Architects, 2020; B&Q Cricklewood – Masterplan Design and Access Statement (DAS)

undertaken by comparing the percentage change in vehicle and HGVs between the baseline and the forecast trip generation and applying the rules set out in the IEMA guidelines.

- 15.3.36 The Proposed Development also includes a new area of traffic-free public realm linking Depot Approach to Cricklewood Lane. The beneficial effects of this new route have been taken into consideration when assessing severance.

#### Delay

- 15.3.37 The volume of vehicular trips for the completed Proposed Development is forecast to be low relative to existing flows. No likely significant effects to driver/bus delay and pedestrian and cyclists delay are therefore anticipated. Assessment of driver/bus delay and pedestrians and cyclists delay during operation is therefore scoped out of this analysis.

- 15.3.38 The volume of public transport passengers associated with the completed Proposed Development is not expected to significantly increase baseline demand however, in response to the scoping opinions, a qualitative assessment has been provided in this chapter to assess the impact.

#### Amenity, Fear and Intimidation.

- 15.3.39 The Proposed Development will result in changes to the local network which would beneficially affect perceptions of amenity, fear and intimidation during operation. The design of the Proposed Development and the pedestrian and cycle routes within it are designed to create an attractive and secure environment. A qualitative discussion of amenity, fear and intimidation is included in this chapter.

#### Accidents and safety

- 15.3.40 The Proposed Development is not expected to result in changes which could adversely affect accidents and safety during operation. Any effects arising from highway and public realm scheme improvements proposed as part of the Proposed Development are designed to have a negligible or beneficial impact. Assessment of accidents and safety during the operation of the Proposed Development is therefore scoped out.

#### Hazardous loads

- 15.3.41 The Proposed Development is not expected to generate or attract hazardous loads once complete and occupied; on this basis, no likely significant effects associated with hazardous loads are anticipated. Assessment of hazardous loads during the operation is therefore scoped out.

#### Type of assessment - summary

- 15.3.42 Table 15-2 summarises the type of assessments that have been undertaken for each potential environmental effect.



**Table 15-2 Type of analysis - Summary**

Potential Environmental Effect	Demolition and Construction	Completed development
Severance	-	Quantitative
Driver delay	-	-
Pedestrian/cycle delay	-	-
Public Transport delay	-	Qualitative
Amenity, fear and intimidation	Qualitative	Qualitative
Accidents and Safety	-	-
Hazardous loads	-	-

### Qualitative assessments

- 15.3.43 Qualitative assessments have been undertaken through application of professional judgement to consider anticipated changes in the prevailing baseline conditions as defined in this chapter.

### Quantitative assessments

A quantitative assessment has been undertaken for the completed Proposed Development's highway network capacity effects. The sensitivity of the receptor and its users has been assigned based on that presented in Table 15-3 and a review of the nature, character and activity on the road. The magnitude of impact has been defined by reference to the IEMA Guidance as set out in Table 15-4 and

- 15.3.44 Table 15-5.

### Significance Criteria

- 15.3.45 The IEMA Guidance has been applied to identify the significance criteria applicable to the assessment.

- 15.3.46 Paragraph 4.5 of the IEMA Guidance states that:

*"For many effects there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible."*

- 15.3.47 The nature of effects is described as **Beneficial, Negligible, No Effect** or **Adverse**:

- **Beneficial** – meaning that the changes produce benefits in terms of transport and access (such as reduction of traffic, travel time or patronage, or provision of a new service, access or facility); or
- **Adverse** – meaning that changes produce dis-benefits in terms of transport and access (such as increase of traffic, travel time, patronage or loss of service or facility).

### Receptor sensitivity

- 15.3.48 The potential receptors are the users of the transport networks within the relevant study area for each mode. The criteria that has been used to assess receptor sensitivity is described in Table 15-3.

**Table 15-3 Receptor Sensitivity Criteria**

Sensitivity	Criteria
High	Modes of transport which are heavily used (by all users or particularly by vulnerable road users) relative to other modes within the study area or those which have a low capacity to accommodate change without significant effects arising
Medium	Modes of transport which are used (by all users or particularly by vulnerable road users) to an average level relative to other modes within the study area or those which have a moderate capacity to accommodate change without significant effects arising.
Low	Modes of transport which are lightly used (by all users or particularly by vulnerable road users) relative to other modes within the study area or those which have a high capacity to accommodate change without significant effects arising
Negligible	Modes of Transport which are very lightly used (by all users or particularly by vulnerable road users) relative to other modes within the study area or those which have a very high capacity to accommodate change without significant effects arising.

### Magnitude of impact

The criteria used to assess the magnitude of impact are described in Table 15-4 and

15.3.49 Table 15-5.

**Table 15-4 Magnitude of Impact Criteria – Delay, amenity, Fear and Intimidation, Accidents and Hazardous Loads**

Magnitude	Criteria
Substantial	Changes which are likely to be perceptible and which would significantly change conditions which would otherwise prevail to the extent that it would significantly affect travel behavior.
Moderate	Changes which are likely to be perceptible and which would materially change conditions which would otherwise prevail to the extent that it may affect travel behaviour to a measurable degree.
Slight	Changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail.
Negligible	Changes which are unlikely to be perceptible.

**Table 15-5 Magnitude of Impact Criteria – Severance**

Absolute change in flow (or HGV)	Percentage change in flow (or HGV)			
	<30%	<60%	<90%	>90%
<30 vehicles	Negligible	Negligible	Negligible	Negligible
< 60 vehicles	Negligible	Slight	Slight	Slight
< 90 vehicles	Negligible	Slight	Moderate	Moderate
> 90 vehicles	Negligible	Slight	Moderate	Substantial



15.3.50 These criteria reflect the guidance set out in paragraph 4.31 of the IEMA guidance which states the following:

*“Changes in traffic flow of 30%, 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance respectively. These figures have been derived from studies of major changes in traffic flow and therefore should be used cautiously in any environmental assessment”.*

15.3.51 The inclusion of the absolute change criteria reflects the fact that the percentage change criteria are derived from studies of major changes in traffic flow. This seeks to prevent nonsensical and counterintuitive ‘default’ results such as increase of four vehicles on a road with an existing flow of three vehicles being classified as a ‘large’ change.

### Effect Scale and Significance

15.3.52 The scale of a likely effect has been derived by considering both the sensitivity of the receptor and the magnitude of impact, as demonstrated in Table 15-6.

**Table 15-6 Significance Criteria**

Receptor sensitivity (from Table 15-3)	Magnitude of Impact (from Table 15-4 and Table 15-5)			
	Substantial	Moderate	Slight	Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

15.3.53 In terms of effect significance, moderate and major effects are considered to be ‘significant’. Effects that are minor and negligible are not significant.

15.3.54 Effects have also been described as:

- **Permanent;**
- **Temporary** - Short (<5 years), Medium (5-10 years) or Long-Term (10+ years);
- **Local** level (on Site or neighbouring site);
- **District** level (i.e. within the LBB);
- **Regional** level (Greater London),
- **National** level (UK).

15.3.55 Temporary short and medium-term effects are those associated with the demolition and construction works and permanent and long-term effects are those associated with the Proposed Development once completed and operational.

15.3.56 Direct effects result without any intervening factors whilst indirect or ‘secondary’ effects are not directly caused by an action or trigger or result from something else.

## Consultation

- 15.3.57 Detail consultations held (include reference to the AECOM EIA Scoping Report (3 December 2019) and LBB EIA Scoping Opinion (Received February 2020). Include reference to any further correspondence with statutory consultees of relevance (include evidence of correspondence in your technical appendix).

**Table 15-7 Comments raised in the LBB EIA Scoping Opinion**

Comments Raised	Response Provided in the ES/Planning Application
<p>The applicant is advised to have reference to the comments from National Rail set out within Appendix 1 and to include an assessment of the impact of the both the operational development and construction phase on railway safety:</p> <p><i>“In relation to the above application I can confirm that any Environmental Impact Assessment should consider the impact of the scheme upon operational railway safety. Any Transport Assessment included in the EIA should include an assessment of the impact of the scheme upon the adjacent Cricklewood Station in terms of increase in number and type of passengers.”</i></p>	<p>The Traffic and Transport assessment includes a review of existing rail infrastructure, rail services and capacity, and an assessment of forecast rail passenger numbers and the potential for delay. The matter of railway safety during construction is addressed in <i>Chapter 6: Demolition and Construction</i>.</p>
<p>The EIA Scoping report recognises the need for a Transport Assessment (TA) to be submitted and this is welcomed. The TA should be produced in line with latest updated TfL’s Transport Assessment Guidance</p>	<p>The TA has been carried out in accordance with TfL guidance and is included as (<i>ES Volume III: Appendix 15-1</i>).</p>
<p>The EIA and TA must take into account the Mayor’s Transport Strategy (MTS) and the new Draft London Plan and should in particular reflect policy approaches such as the “Healthy Streets, planning for Good Growth” and the Mayoral Mode share targets. As such, the development needs to be designed in order to achieve mode shift in favour of walking, cycling and public transport</p>	<p>The TA (<i>ES Volume III: Appendix 15-1</i>) takes full account of the MTS and includes a Healthy Streets assessment in accordance with TfL guidance. The Proposed Development is low-car and only provides the minimum parking in accordance with the Intend to Publish London Plan. The Proposed Development will be supported by a Framework Travel Plan in order to promote sustainable travel choices from the outset.</p>
<p>Due to congestion and poor air quality at road network in the vicinity of the site the A5 in particular, the proposal should focus on promoting sustainable travel behaviour, as well as reducing car use. The sites enjoy an excellent public transport access level (PTAL) of 5, therefore no general car parking with the exception of disabled parking should be provided.</p>	<p>The Proposed Development will significantly reduce vehicle trips in the vicinity of the Site, including the A5. Car parking for disabled drivers will be provided at 3% from the outset with space reserved to increase that to 10% subject to demand. In accordance with the Intend to Publish London Plan. The TA includes a draft Car Park Management Plan, a final version of which will be secured by planning condition.</p>
<p>Highway modelling to be undertaken shall also take into account of proposed work from the Brent Cross Cricklewood redevelopment project.</p>	<p>The Proposed Development will result in a material reduction in vehicle trips when compared to the existing use of the Site. No junction capacity modelling is required.</p>
<p>High quality of public realm, walking and cycling provision should be made to attract sustainable travel as well as improving safety. An Active Travel Zone (ATZ) assessment should be undertaken to identify improvement opportunities and to reduce conflicting demand by various road users, such as pedestrians, cyclists, rail users, bus passengers as well as car traffic in the area in line with Mayor’s Vision Zero objective.</p>	<p>An Active Travel Zone assessment is included as part of the TA.</p>
<p>TfL would require the submission of a framework Delivery and Servicing Plan (DSP). Details on DSPs can be found at <a href="http://content.tfl.gov.uk/delivery-and-servicing-plans.pdf">http://content.tfl.gov.uk/delivery-and-servicing-plans.pdf</a></p>	<p>A framework DSP is included within the TA, a final version of which will be secured by planning condition.</p>
<p>The impact of construction traffic on pedestrians, cyclists, buses must be considered and could be mitigated through the provision of a Construction Logistics Plan (CLP). TfL would encourage the applicant to submit a framework CLP as part of the</p>	<p>The Traffic and Transport chapter includes an assessment of the effects of construction traffic during the Demolition and Construction phase. A draft CLP is</p>

Comments Raised	Response Provided in the ES/Planning Application
application. Details on CLPs can be found at <a href="http://content.tfl.gov.uk/construction-logistics-plan-guidance-for-developers.pdf">http://content.tfl.gov.uk/construction-logistics-plan-guidance-for-developers.pdf</a> .	included as part of the TA, a final version of which will be secured by planning condition.
As the site is immediately adjacent Cricklewood Railway Station , Network Rail should therefore be consulted ensuring that no rail infrastructure in the vicinity of Cricklewood Rail station would be adversely impact by the proposal.	Network Rail will be consulted as part of the planning application.
A Travel Plan for all elements of the proposal should be submitted within the supporting information of the application for each of the uses on site, in accordance with TfL's Travel Planning best practice guidance. Details on travel planning can be found at: <a href="https://tfl.gov.uk/info-for/urban-planning-and-construction/travel-plans">https://tfl.gov.uk/info-for/urban-planning-and-construction/travel-plans</a>	As the planning application is Outline, a Framework Travel Plan (FTP) has been prepared in support of the planning application. It sets out the structure, obligations, targets, action plan and monitoring regime for individual Travel Plans to be prepared for the residential and non-residential uses prior to first occupation. The final Travel Plans, prepared in accordance with the FTP, will be secure by planning condition.
Any mitigation measures relating to TfL infrastructure and services must be secured through a S106 agreement. Depending on the level of transport mitigation agreed, it may be appropriate for TfL to be a signatory. Less significant issues can be dealt with by use of planning conditions. In some cases TfL may request that it is consulted prior to any discharge of a condition.	Agreed

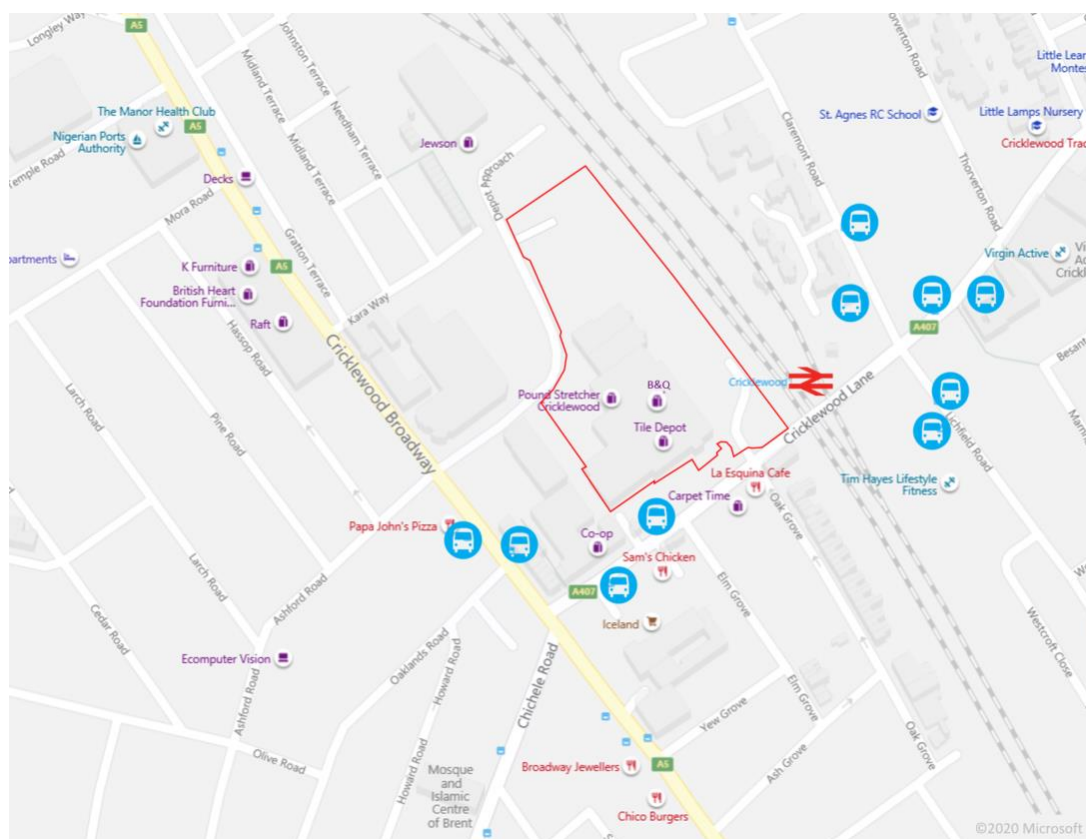
## Limitations and Assumptions

- 15.3.58 Detailed traffic surveys were carried out in 2019 to derive baseline traffic flows for the Site and the surrounding highway network. No multi-modal surveys were conducted so the baseline figures relate to vehicular traffic only, not walking, cycling or public transport journeys associated with the existing use of the Site.
- 15.3.59 The traffic surveys were conducted in 2019 so 'current' 2020 and future (2024 and 2026) traffic levels have been calculated by applying a growth factor to the observed baseline. Since the surveys were carried out Government restrictions on travel have been imposed due to the coronavirus pandemic. This assessment has been based on a standard methodology, applying nationally available growth rates that were derived prior to the current Government restrictions. Future traffic flows and forecast mode share for the Proposed Development may be affected by current and future Government advice and legislation, but as this cannot be predicted at this time it has not been taken into account as part of this assessment.

## 15.4 Baseline Conditions

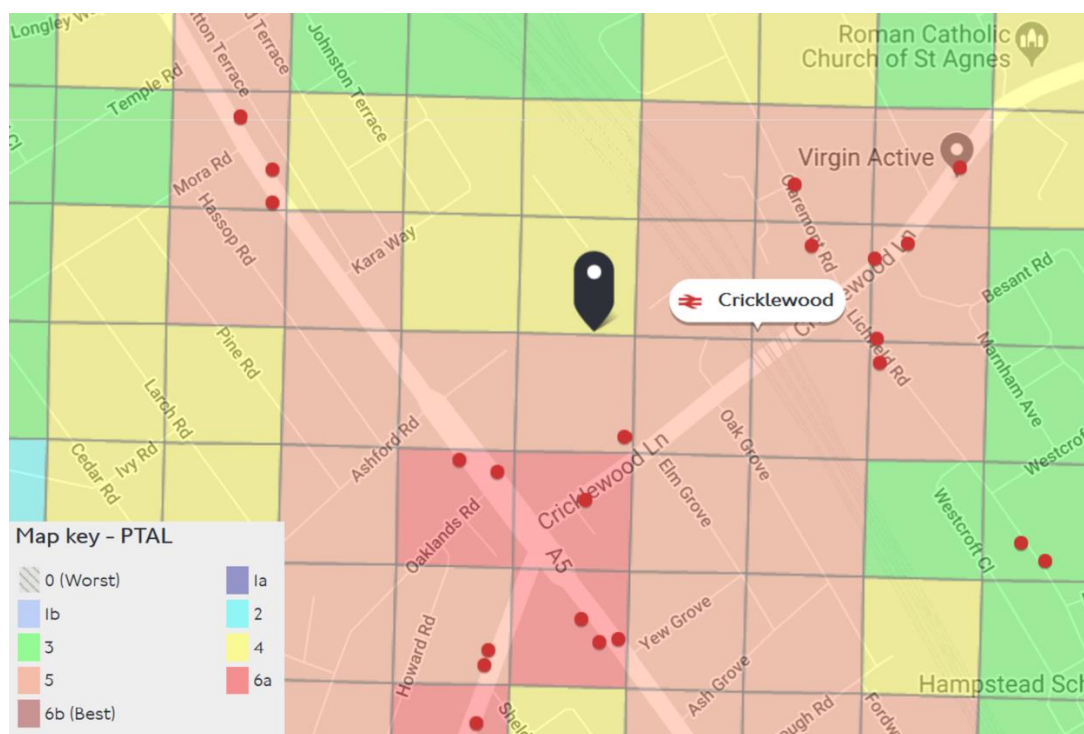
- 15.4.1 The following sections of this chapter provide an overview of the current baseline transport and accessibility conditions within the study area considering pedestrian and cycle facilities and access; public transport accessibility, and the operation of the existing highway network. Consideration is also given to the existing baseline flows.
- 15.4.2 Following on from this, consideration is then given to the likely evolution of the baseline conditions in respect of planned / known improvements / upgrades in respect of cycle infrastructure and public transport provision.
- 15.4.3 Baseline traffic and transport conditions have been established from a combination of desktop studies, site investigation and formal surveys. The Site is currently occupied by a retail warehouse (use class A1) owned and operated by B&Q. Two additional smaller retail warehouse units (Poundstretcher and Tile Depot) adjoin B&Q. The combined gross floor area (GFA) of the existing retail units is 7,990m<sup>2</sup>.
- 15.4.4 The site location and its relation to the local transport network is illustrated in Figure 15-2 below.

Figure 15-2 Local transport network



- 15.4.5 The existing Site use incorporates a car park with 470 car parking spaces. The Site has three vehicular accesses, one of which joins Cricklewood Lane (A407) whereas the other two join Depot Approach. The Cricklewood Lane access is a priority junction with a narrow ghost right-turn lane for drivers turning right into the Site, and a restricted-movements layout preventing right turns out of the Site. The two accesses onto Depot Approach comprise the service access and a second access into the car park. The service access takes the form of a wide bellmouth (to allow for large service vehicles) with gates at the back edge of the pedestrian footway. The service yard serves all three retail units situated within the Site. The car park entrance on Depot Approach is another wide bellmouth with entry and exit lanes divided by a central splitter island. The entry and exits are gated, and signage indicates that the private car park is for customer use with a maximum stay of three hours.
- 15.4.6 Site investigation indicates that 'We buy any car, Cricklewood' also trades from the Site and photographic evidence (Aug '14 - Jan '20) shows the small temporary office has been located within the car park for at least five years. In addition, 'The Lunch Box' is a mobile catering van which is also located within the car park.
- 15.4.7 The Site is located in an area with a 2011 Public Transport Accessibility Level (PTAL) rating of 4/5. The PTAL rating for the Site takes into account the time taken to access the public transport networks. The methodology is based on a walk speed of 4.8km/hr (80m/min) and considers rail stations within a 12 minute walk (960m) of a site and bus stops within an 8 minute walk (640m). PTAL is categorised into six levels from 1 to 6 where 1 represents a low level of accessibility and 6 a high level. A PTAL contour plan is included below as Figure 15-3.

Figure 15-3 PTAL contour plan



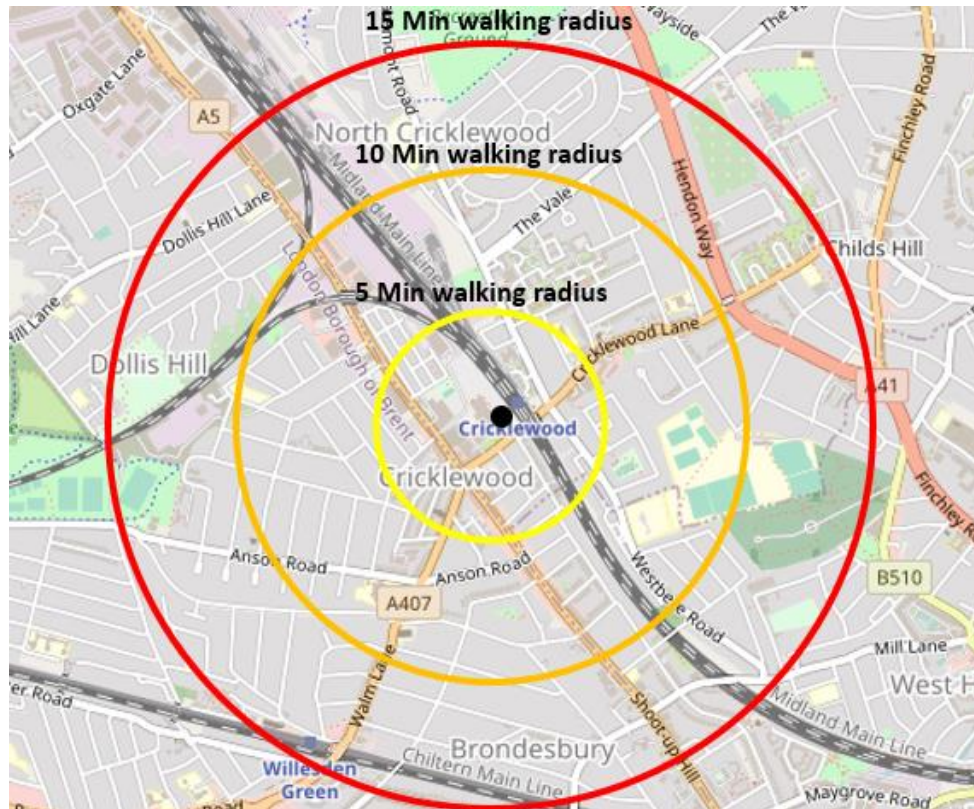
- 15.4.8 The PTAL contour plan is based on 100m grid squares. This suggests the south-eastern portion of the Site is currently PTAL 5 whereas the north-western portion is PTAL 4. The lower PTAL rating at the north-western end of the Site is influenced by the walking distance to Cricklewood Station via Depot Approach. This walking distance would reduce if public access was formally allowed through the Site.
- 15.4.9 Transport for London describe PTAL 4/5 as a 'Good' level of accessibility, indicating that residents, staff or visitors in this location would not be solely reliant on travel by private car. This is a suitable location to promote travel by sustainable modes.

### Pedestrian environment

- 15.4.10 The site benefits from good existing pedestrian facilities. To the east of the Site Depot Approach joins the Cricklewood Broadway; where many shops and services are located. This stretch of Cricklewood Broadway is a heavily trafficked road but with wide footways, street lighting and regular controlled pedestrian crossings along its length, it is suitable for travel by foot.
- 15.4.11 The junction between Depot Approach and Cricklewood Broadway is signal controlled with pedestrian stages on all four arms. The same applies to the junction between Cricklewood Lane and Cricklewood Broadway, providing safe pedestrian routes to all local shops and services.
- 15.4.12 Cricklewood Lane on the south-eastern boundary of the Site is another well-lit street with wide footways, joining Cricklewood Broadway to the south-west and passing under the railway bridge and continuing towards Childs Hill to the north-east. There is currently a very wide footway below Cricklewood Green flanking the Northern side of the road, and a 3m footway on its southern side. Cricklewood Lane benefits from three uncontrolled pedestrian crossing islands within the vicinity of the Site and controlled crossings at the junctions with Cricklewood Broadway and Claremont Road.
- 15.4.13 Figure 15-4 shows walking radii from the Site, and given that most local services, shops and transport hubs can be found within a 400m radius (5 minute walk), this Site is very well placed to promote travel by foot.



Figure 15-4 Pedestrian isochrones



Cycling

15.4.14 Specific cycle infrastructure is limited in Cricklewood but many local roads are suitable for travel by bike. Figure 15-5 indicates the local roads that have been considered suitable for cycling, with the short stretch of Quietway 3 (running between Regent’s Park and Gladstone Park) also shown. There are also a number of leisure routes in nearby Hampstead Heath.

15.4.15 Despite the limited segregated infrastructure it is very possible to reach a large area within a 20-minute cycle from the Site, as shown in Figure 15-5.

Figure 15-5 Cycling isochrones



## Bus network

- 15.4.16 The Site is well placed for travel by bus with two stops serving 8 bus routes within a maximum 300m walk from any part of the Site. Table 15-8 summarises the routes available from Cricklewood Lane, Stop BP to the west of the Site and Cricklewood Broadway, Stop CW south of the Site.

**Table 15-8 Summary of local bus routes**

Number	Route	Duration	Frequency
16	Cricklewood – Kilburn - Victoria	0515-2350	7-8 minutes
32	Edgware - Burnt Oak - Cricklewood - Kilburn	0505-0018	7-8 minutes
226	Ealing - Cricklewood - Pennine Drive - Golders Green	0501-0106	12 minutes
245	Alpertion - Cricklewood - Golders Green	0540-0400	12 minutes
260	Golders Green - Cricklewood - White City	0514-0018	12 minutes
316	Cricklewood - Queen's Park - White City	0517-0003	12 minutes
332	Neasden <i>Tesco</i> - Cricklewood - Kilburn - Paddington	0538-0009	10 minutes
632	Kilburn Park - Cricklewood -Grahame Park	0750-0754-0758	3 times per day

- 15.4.17 This shows that within easy walking distance of the Site the eight bus services provide an average of 42 buses per hour in each direction (84 total), or 504 in each direction (1008 total) across a 12 hour day.

## Rail

- 15.4.18 The Site's proximity to Cricklewood Railway Station in fare zone 3 means that it is extremely well placed for travel by rail. A short walk (less than two minutes) along the wide footway in front of Cricklewood Green and under the railway bridge provides a safe and attractive route to the station. Cricklewood Station is served by a 24 hour Thameslink service to London, Wimbledon, Sutton, Luton, and St Albans. The station has a small amount of CCTV monitored Cycle Storage and is served by a number of bus routes. Table 15-9 summarises the services from Cricklewood station.

**Table 15-9 Summary of rail services from Cricklewood station**

Route	Duration	Frequency	Capacity
Sutton (Surrey)	0456-2330	15 mins	8-12 carriages
Wimbledon	0316-2330	15 mins	8-12 carriages
London Blackfriars	24 hours	15-18 mins	8-12 carriages
St Albans	24 hours	15 mins	8-12 carriages

- 15.4.19 This shows that at present the trains stopping at Cricklewood Station provide an average of 16 trains per hour (160 carriages), or 288 trains per day (tpd).

## Local road network

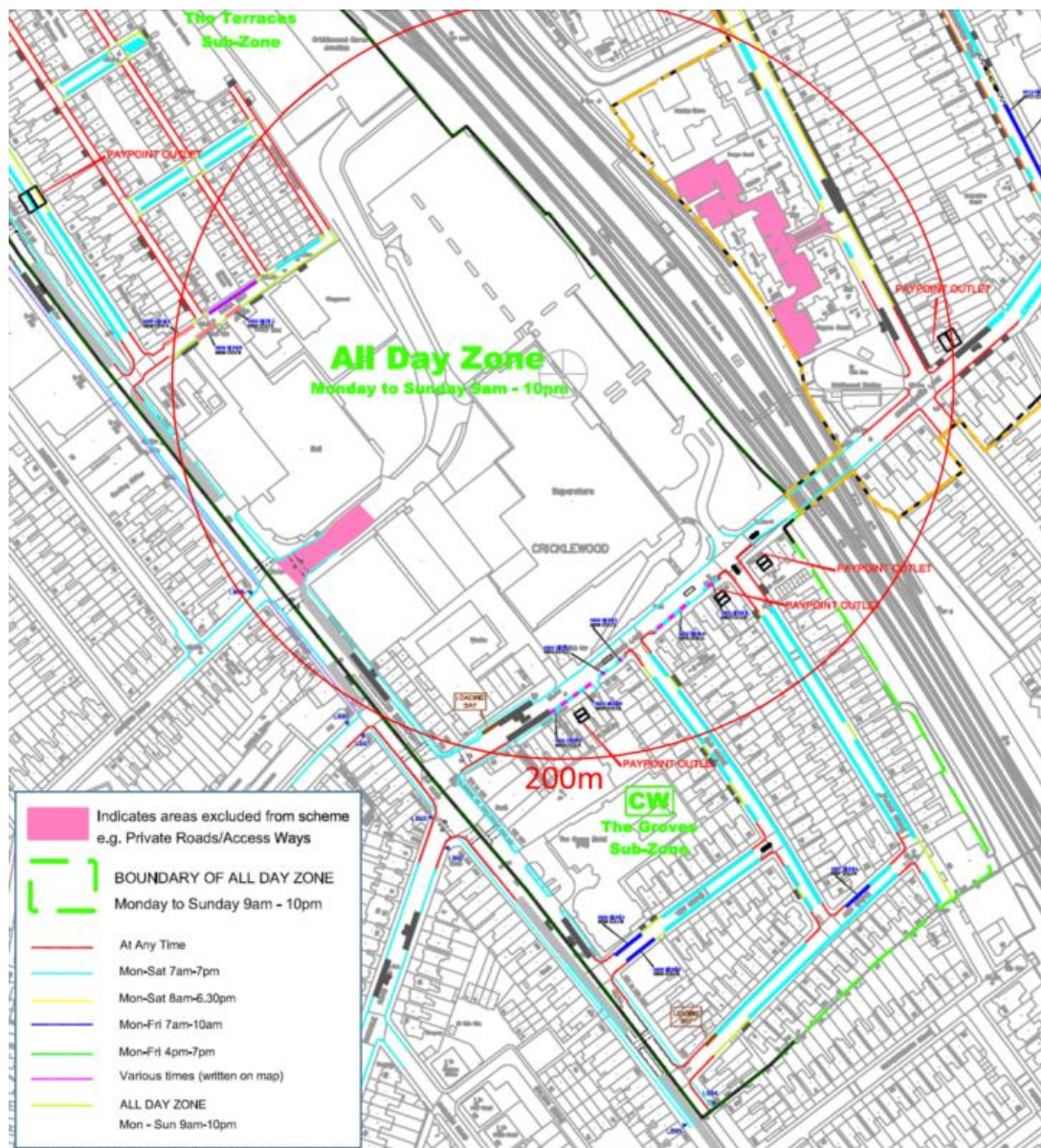
- 15.4.20 Cricklewood Lane (A407) is a local distributor road joining the Cricklewood Broadway (A5) to the south west and Hendon Way (A41) to the north east.
- 15.4.21 Depot Approach is a private cul-de-sac serving a range of commercial premises including the Site, Beacon Bingo (premises and two car parks), Jewson building supplies, hand car wash, tyre supply and fitting business and a vacant development plot. Each of these businesses attract vehicular traffic in the form of customer cars and large service vehicles.
- 15.4.22 Depot approach takes access from Cricklewood Broadway (A5) by means of a four-arm signal controlled junction with yellow hatched box-junction markings.
- 15.4.23 All service vehicles visiting the Site currently use Depot Approach. Customers arriving at the Site from the north-west generally use Depot Approach. Those arriving and departing to and from the north-east generally use the Cricklewood Lane access. Those arriving from the south have a choice of either access, but the right-turn ban out of the Cricklewood Lane exit means that all those leaving the Site to the south would use Depot Approach.

## Parking controls

- 15.4.24 All roads within 200m of the Site are either private, and therefore subject to private enforcement, or public highway and subject to waiting restrictions or Controlled Parking Zones (CPZ). The Site falls within the All Day Zone which operates seven days a week from 9am to 10pm. To the north of the Site is The Terraces sub-zone, to the south is The Groves sub-zone and to the north-east of the Site (beyond the rail bridge) is the C1 One-Hour Zone.
- 15.4.25 Generally, in the vicinity of the Site, Cricklewood Lane and Cricklewood Broadway have single yellow lines on both sides restricting parking Mon-Sat 7am to 7pm. All junctions are protected by double yellow lines denoting no waiting at any time.
- 15.4.26 On the south-eastern side of Cricklewood Lane a series of parking bays provide a mix of daytime (9am-5.30pm) short-stay (90 min) pay and display parking bays, and evening (5.30pm-10pm) resident permit holders only bays. The bays are for resident permit holders only on Sundays.
- 15.4.27 Waiting restrictions are shown on Figure 15-6 below.



Figure 15-6 Waiting restrictions



Baseline traffic flows

15.4.28 The observed 2019 traffic flows are shown in Table 15-10 below. A growth rate has been applied to derive 2020 'current' traffic flows. The growth rate from 2019 to 2020 is based on the Low National Road Traffic Forecast (NRTF) rate. It should be noted that a permanent traffic monitoring station is located on Cricklewood Broadway which provides daily traffic flow data from 2000-2019. That data demonstrates that observed growth from 2014 to 2019 is below Low NRTF, so the use of Low NRTF is considered robust.

**Table 15-10 Existing baseline traffic flows**

Road link	2019 observed two-way traffic (AADF)	2020 baseline two-way traffic (AADF)
North car park access	2075	2075
South car park access	2516	2516
Cricklewood Lane (A407)	14167	14280
Cricklewood Broadway (A5)(SE)	21723	21897
Chichele Road (A407)	11313	11404
Cricklewood Broadway (A5)(NW)	24572	24768
Depot Approach	1747	1761

15.4.29 The traffic survey also specifically identified any traffic using the Site car park as a short-cut to avoid the Cricklewood Lane traffic signals. The survey identified 40 drivers cutting through the car park from Depot Approach to Cricklewood lane during the morning peak hour (0800-0900) and 41 during the evening peak (1700-1800). In the reverse direction, the survey only identified 2 or 3 vehicles during the peak hours. This traffic should not be using the car park as a 'rat-run' and would be redirected onto the public highway as a result of the Proposed Development.

15.4.30 The Site currently generates 4591 vehicle trips per day via the two Site accesses.

### Likely evolution of baseline conditions

15.4.31 Committed transport improvements include LBB's planned upgrades to the Cricklewood Lane/Cricklewood Broadway junction, and the Cricklewood Lane/Claremont Road junction. Funding has been secured for these local improvements and work has commenced; however, further design work is currently being undertaken to improve the designs to comply with TfL Healthy Streets guidance.<sup>19</sup>

15.4.32 The Brent Cross opportunity area will deliver substantial transport improvements. The Thameslink station quarter will bring forward the new Brent Cross West station which will link the Brent Cross Cricklewood development to King's Cross St Pancras in under 15 minutes. The new station is required to accommodate the additional travel demand generated by the opportunity area, but will also divert some existing rail passengers away from the existing Cricklewood Station.

15.4.33 Baseline traffic flows have been calculated for 2024 (peak construction) and 2026 (year of completion) in each case, future traffic flows have been calculated using Central NRTF growth in order to take account of committed development. Baseline flows include traffic for the existing Site use (B&Q) but no growth factor has been applied to the existing Site traffic.

**Table 15-11 Future year baseline traffic flows**

Road link	2024 baseline two-way traffic, incl committed development (AADF)	2026 baseline two-way traffic, incl committed development (AADF)
North car park access	2075	2075
South car park access	2516	2516

<sup>19</sup> TfL, 2017, Healthy Streets for London

Road link	2024 baseline two-way traffic, incl committed development (AADF)	2026 baseline two-way traffic, incl committed development (AADF)
Cricklewood Lane (A407)	14904	15173
Cricklewood Broadway (A5)(SE)	22853	23265
Chichele Road (A407)	11902	12117
Cricklewood Broadway (A5)(NW)	25850	26316
Depot Approach	1838	1871

## 15.5 Environmental Design and Management

- 15.5.1 The Proposed Development has been designed from the outset to promote sustainable travel behaviour, to reduce the need to travel, especially by car.
- 15.5.2 The movement strategy gives clear priority to pedestrians and cyclists and promotes the following movement hierarchy:
- Walking
  - Cycling
  - Public transport
  - Shared private transport
  - Singles occupancy car journeys
- 15.5.3 The Proposed Development will include secure cycle parking for every dwelling and commercial occupier in accordance with the London Plan and will incorporate further secure short-stay cycle parking close to building entrances, incorporated into the landscaping.
- 15.5.4 Car parking will be kept to a minimum. Residential parking will be provided at 105, of which 3% will be allocated to Blue Badge holders from the outset. Only operational parking will be provided for the commercial and community uses. At least 20% of the car parking will have electric vehicle charging points and the remainder will have passive provision.
- 15.5.5 A new Car Club space will be provided on-site for the benefit of the new residents as well as the wider local community.
- 15.5.6 The Illustrative Masterplan demonstrates that the Proposed Development has been designed around the Healthy Streets principles and through this good design will actively encourage healthy travel choices.

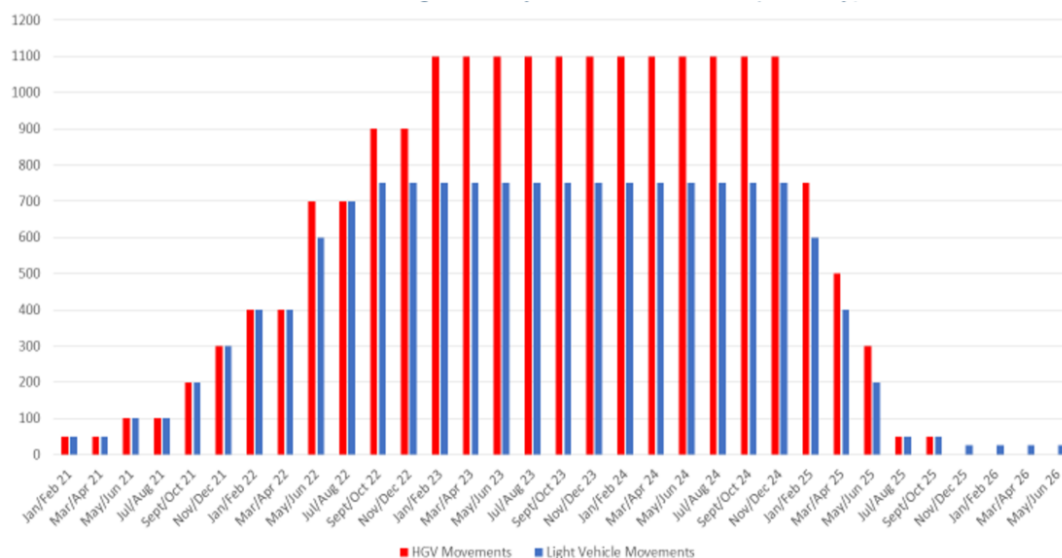
## 15.6 Assessment of Effects and Significance

### Effects during Demolition and Construction

#### Traffic flows

- 15.6.1 During the Demolition and Construction phase the estimated average monthly vehicle trips will be as shown below.

Figure 15-2 Estimated average monthly vehicle trips (demolition and construction)



15.6.2 This indicates that the peak construction period will be during 2024. At peak construction the average daily vehicle trips will comprise 40 HGV trips (i.e. 20 HGVs arriving and then departing) and 30 LGV trips (15 cars and vans arriving and then departing). All vehicles will arrive via Cricklewood Broadway and Depot Approach and depart via Cricklewood Lane and Cricklewood Broadway. The result would therefore comprise 35 vehicles leaving via Cricklewood Lane and turning right at the Cricklewood Broadway signal junction; and 70 construction vehicle trips (arrivals and departures) via Cricklewood Broadway. These figures represent 0.2% increase in vehicle trips on either road.

15.6.3 The 35 arrivals via Depot Approach would represent a 1.9% increase in traffic on that road.

Amenity, Fear and Intimidation.

15.6.4 During the peak demolition and construction period, the HGV activity is not expected to result in changes which could affect accidents and safety. Total traffic changes arising from the construction of the Proposed Development will be less than 1% on any part of the public highway and less than 2% on Depot Approach; this is not considered to be perceptible relative to baseline conditions. Road safety will also be further managed and mitigated through the Construction Logistics and Cycle Safety (CLOCS) scheme and use of contractors registered on the Considerate Contractors Scheme. CLOCS brings the construction logistics industry together to improve the management of work related road risk and ensure a road safety culture is embedded across the industry.

15.6.5 The 20 HGVs per day arriving via Depot Approach would equate to an average of one vehicle every 30 minutes. That may be perceivable by pedestrians and cyclists but only in that regular users of Depot Approach may be more likely to encounter a single HGV on their journey that prior to the peak demolition and construction period.

15.6.6 The additional HGVs during the demolition and construction period would have a temporary local negligible effect on Amenity, Fear and Intimidation on Depot Approach.

Effects once Complete and Operational

Travel demand

15.6.7 This is an Outline planning application so whereas means of access will be determined, the layout is a reserved matter. For this reason the total number of car parking spaces are not defined as part of this planning application. However, the Illustrative Masterplan has been tested to demonstrate that it can accommodate up to 110 car parking spaces, all of which have been designed with dimensions suitable to be used by Blue Badge holders.

15.6.8 The Illustrative Masterplan shows that 10% accessible spaces could be provided for the residential accommodation, but that a minimum of 3% would be provided from the outset in accordance with the London Plan. The non-residential uses would have operational and Blue Badge spaces only (nominally

set at 8 operational and 4 Blue Badge spaces but to be determined as part of the Layout reserved matters).

- 15.6.9 Traffic generation resulting from the complete and operational Proposed Development will therefore be low due to the suppressed level of parking provision when compared to the baseline of 470 car parking spaces, which reflects the highly accessible nature of the Site location.
- 15.6.10 Traffic generation associated with the Proposed Development has been assessed by interrogating the TRICS® database. Other development Sites in London comprising flats in private ownership were used to calculate the predicted traffic generation from the residential uses within the Proposed Development. The selection criteria resulted in surveys being selected from sites with parking provision at a ratio of 0.32 to 0.49 spaces per dwelling. This is significantly higher than the parking ratio for the Proposed Development. The resultant residential vehicle trip rates are therefore robust for the Proposed Development.
- 15.6.11 Multi-modal trip rates have been derived from the TRICS® database for both the residential use and the Option G (reasonable worst case) non-residential uses. The trip rates and TRICS® output data are contained in the Transport Assessment contained in *ES Volume III: Appendix 15-1*. The resultant multi-modal trips are shown below.

**Table 15-12 Multi-modal residential trips (1100 flats)**

	Vehicles	Car passenger	Walk	Cycle	Bus	Rail	Total
AM	118	156	193	4	116	123	710
PM	85	118	175	2	96	99	574
Daily	898	1123	2046	57	980	901	6005

- 15.6.12 The total travel demand for the reasonable worst case non-residential unit mix is shown below.

**Table 15-13 Multi-modal non-residential trips (Option G mix)**

	Vehicles	Car passengerr	Walk	Cycle	Bus	Rail	Total
AM	5	0	21	7	10	9	53
PM	17	13	45	2	24	13	113
Daily	97	100	567	29	270	151	1216

- 15.6.13 The total travel demand for the Proposed Development is therefore as shown below.

**Table 15-14 Multi-modal trips (Proposed Development)**

	Vehicles	Car passengerr	Walk	Cycle	Bus	Rail	Total
AM	123	157	213	11	126	133	762
PM	102	130	220	4	119	112	688
Daily	995	1224	2613	87	1250	1052	7220



- 15.6.14 When compared to the baseline conditions the Proposed Development would result in a substantial reduction in daily vehicle trips. A comparison of Table 15-11 and Table 15-14 demonstrates a reduction of 3,596 vehicle trips per day on the local highway network.

#### Severance.

- 15.6.15 Whereas the absolute reduction in vehicle numbers would be substantial, the reduction as a percentage of baseline traffic flow would be less than 30% on any road link. The effect on Severance, purely in terms of vehicle movements would therefore be negligible. However, the Proposed Development will provide a new traffic-free pedestrian and cycle route between Depot Approach and Cricklewood Lane. This will serve not only the Proposed Development, but will provide a more direct link between Cricklewood Station and land to the north-west of the Site. This will reduce walking distances for any future development on that land and could also serve as a traffic-free link for The Terraces. The new public realm will also provide a route to Kara Way playground for those living to the north and east of the Site. The overall effect of the Proposed Development will be a permanent local moderate beneficial effect on Severance.

#### Public Transport delay

- 15.6.16 The public transport trips associated with the Proposed Development are set out in Table 15-14. There are no recorded surveys for public transport trips associated with the existing land use. The effect of the Proposed Development on public transport is therefore considered in terms of a gross increase in travel demand rather than the net increase when compared to the existing use of the Site. This is a very robust form of assessment as it over-estimates the net effect of redeveloping the Site. The effect of this trip generation is considered per mode in turn.

- 15.6.17 It is noted also that the Mayor of London is targeting an increase in cycling across London and this is likely to reduce the number of public transport users. This modal shift is supported through the Framework Travel Plan, which is appended to the TA. It is also expected that the recent coronavirus pandemic is likely to result in a modal shift from public transport towards walking and cycling. It is important to note, however, that this has not been quantified or forecast and has therefore not been taken into account in this assessment.

#### Bus trips

- 15.6.18 The existing bus services within easy walking distance of the Proposed Development provide 84 buses during each peak hour and 1008 across the day as a whole. The gross travel demand from the Proposed Development would therefore constitute an average of 1.5 additional passengers per bus during the peak hour and 1.24 per bus across the day as a whole (This is the gross travel demand, not the net increase when compared to the existing use of the Site). This would not affect bus capacity and would have a medium term local negligible effect on bus passenger delay.

#### Rail trips

- 15.6.19 The existing rail services provide 16 trains (160 carriages) during each peak hour and 288 across the day as a whole. The gross travel demand from the Proposed Development would therefore constitute 8 additional passengers per train during the AM peak hour (less than 1 per carriage) and 7 per train in the PM peak. The gross travel demand from the Proposed Development would comprise an average of 3 to 4 additional passengers per train across the day as a whole. This would have no material effect on rail capacity and would therefore have a temporary (medium term) local negligible effect on rail delay.

#### Amenity, Fear and Intimidation

- 15.6.20 The reduction in traffic flow and new pedestrian connections along with the overall public realm enhancements creates a substantially more permeable and attractive place to travel to, from and through. The Proposed Development has been developed in accordance with Secure by Design standards throughout and the increase in pedestrians and cyclists will improve passive surveillance in the area. The overall effect of the Proposed Development on amenity, fear and intimidation is therefore permanent local major beneficial. The effect is significant.

## 15.7 Additional Mitigation and Monitoring Measures

- 15.7.1 The IEMA guidance describes secondary mitigation as follows:
- Secondary mitigation - Actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the ES. Examples include mitigation to be conditioned by the Local Planning Authority or other commitments made but not included within the plans and proposals submitted for planning.
- 15.7.2 The TA (*ES Volume III: Appendix 15-1*) sets out a four-part Transport Implementation Strategy (TIS) comprising:
- Construction Logistics Plan;
  - Framework Travel Plan;
  - Delivery and Servicing Plan; and
  - Car Park Management Plan.
- 15.7.3 The TIS will act as a package of management tools to control and regulate the movement of people and goods to, from and within the Proposed Development. The mitigating effects of the TIS are described below.

### Mitigation during Demolition and Construction

- 15.7.4 No significant effects have been identified by the assessment of the demolition and construction works and therefore no additional mitigation is required. A Construction Logistics Plan (CLP) will be submitted and agreed prior to work commencing on Site.

#### Construction Logistics Plan (CLP)

- 15.7.5 An outline CLP is included as part of the TA (*ES Volume III: Appendix 15-1*). The final CLP will be secured by an appropriate planning condition to be submitted and approved prior to work commencing on Site. The CLP will be prepared in accordance with the TfL Construction Logistics Planning Guidance. The CLP will include route management, site management, hours of operation and measure to protect the highway and its users.

### Mitigation Once the Proposed Development is Operational

- 15.7.6 No significant effects have been identified by the assessment of the completed and operational Proposed Development and therefore no additional mitigation is required. The following management documents will be submitted and agreed prior to the Proposed Development being occupied.

#### Framework Travel Plan (FTP)

- 15.7.7 A draft FTP is appended to the TA (*ES Volume III: Appendix 15-1*). The FTP will provide a framework within which individual Travel Plans can be prepared for the residential and non-residential elements of the Proposed Development, in accordance with TfL guidance. The Travel Plans will provide a means to pro-actively encourage sustainable travel behaviour through a package of information, incentives and infrastructure. The Travel Plans will include a package of measures, an Action Plan and a schedule of monitoring and reporting. The FTP and individual Travel Plans will be secured by an appropriate planning condition to be submitted and approved prior to the first occupation of the residential and non-residential elements of the Proposed Development respectively.

#### Delivery and Servicing Plan (DSP)

- 15.7.8 An outline DSP is included as part of the TA (*ES Volume III: Appendix 15-1*). The final DSP will be secured by an appropriate planning condition to be submitted and approved prior to first occupation of each phase of development. The DSP will be prepared in accordance with the TfL guidance, Managing

freight effectively: Delivery and Servicing Plans. The DSP will provide a means to pro-actively manage the movement of goods and materials to and from the Proposed Development and to minimise goods vehicle trips.

### Car Park Management Plan (CPMP)

- 15.7.9 An outline CPMP is included as part of the TA (*ES Volume III: Appendix 15-1*). The final CPMP will be secured by an appropriate planning condition to be submitted and approved prior to first occupation of each phase of development.

### Summary

- 15.7.10 Table 15-15 provides a summary of the identified, committed secondary mitigation measures.

**Table 15-15 Summary of proposed secondary mitigation measures**

Potential effects identified	Proposed secondary mitigation measures
<b>Demolition and Construction</b>	
Amenity, Fear and Intimidation	Construction Logistics Plan
<b>Completed Development</b>	
Severance	Framework Travel Plan, Car Park Management Plan
Public transport delay	Framework Travel Plan
Amenity, Fear and Intimidation	Framework Travel Plan, Delivery and Servicing Plan

## 15.8 Residual Effects and Conclusions

- 15.8.1 This assessment has identified any significant effects resulting from the Proposed Development in accordance with IEMA guidance. Only moderate and major effects are considered to be 'significant'. Effects that are minor and negligible are not significant. Once completed and operational the Proposed Development will deliver **permanent major local beneficial** effects on amenity, fear and intimidation, and **permanent local moderate beneficial** effects on severance. The potential effects are summarised below.



**Table 15-16 Highways and Transport Summary of Potential Effects**

Description of Effect	Sensitivity of Receptor	Nature of effect/Geographic Scale	Magnitude of Impact	Initial Classification of Effect (with embedded mitigation)	Additional Mitigation	Residual Effect and Significance
<b>Demolition and Construction</b>						
Amenity, fear and intimidation	Low	Temporary (Short Term) and Local	Slight	Negligible	CLP	<b>Negligible (Not Significant)</b>
<b>Complete and Occupied</b>						
Severance	High	Permanent Local	Slight	Moderate beneficial	FTP, CPMP	<b>Moderate beneficial (Significant)</b>
Public Transport Delay	Low	Temporary (Long term) and Local	Negligible	Negligible	FTP	<b>Negligible (Not Significant)</b>
Amenity, fear and intimidation	High	Temporary (Long term) and Local	Moderate	Major beneficial	FTP, DSP	<b>Major beneficial (Significant)</b>

## 15.9 Statement of Effect Significance

- 15.9.1 Once completed and operational the Proposed Development will deliver **permanent major local beneficial** effects on amenity, fear and intimidation, and **permanent local moderate beneficial** effects on severance. The potential effects are summarised below.

## 15.10 Cumulative Effects Assessment

- 15.10.1 The future year baseline traffic flows for 2024 (peak construction) and 2026 (year of completion) have been calculated to take account of committed development. The cumulative effects of committed development are therefore taken into account in this assessment.