

## APPENDIX 3

### Existing Site Context and Road Conditions

#### **Highways**

The consented development site is located in the southern part of the London Borough of Barnet. The site is bounded by Park Road to the north, the A41 to the east (including Brent Cross Underground Station), the A5 and the border with London Borough of Brent to the west and the A407 Cricklewood Lane to the south.

The following existing local roads are of importance to the BXC Phase 1A (North) RMA, have a 30 mph speed limit and are the responsibility of the London Borough of Barnet except where indicated:

Prince Charles Drive provides access to BXSC from the A41 and from the existing urban areas on the eastern side of the A41 Hendon Way. It is a single carriageway two lane road. It also connects to the A406 entry slip road and to Tempelhof Avenue, at a roundabout in the west area of BXSC.

Claremont Road is a key north-south distributor for local traffic south of the A406. It passes between Tilling Road to the north and the A407 Cricklewood Lane to the south. It is a single carriageway two lane road. Claremont Road provides access to Marble Drive, The Vale and Clitterhouse Crescent.

Tilling Road is a key east-west distributor road for local traffic and existing commercial developments to the south of the A406, including via Brent Terrace North. It also provides important access to the Eastern Lands area of the site. It runs parallel to, and to the south of, the A406 between its intersections with the A41 in the east and the M1 in the west. It is a single carriageway two lane road.

Tempelhof Avenue provides a vital link across the A406 between Tilling Road and BXSC. It is a single carriageway, two lane link road on a narrow bridge over the A406.

Chichele Road provides access to/from southwest of the development area for local traffic, as well as from Willesden Green and Dollis Hill to the southwest of the scheme. It is a single carriageway two lane road. On-road parking is present on both sides of the carriageway. The road links with the A5 and A407 via the Chichele Road / Cricklewood Broadway (A5) / Cricklewood Lane (A407) junction. Responsibility for the road lies with the London Borough of Brent.

Edgware Road (A5) links central London to towns in Hertfordshire and beyond. It is predominantly single carriageway in the vicinity of the BXC site, with its width varying between 10m and 13m. The A5 is a dual carriageway with two lanes in each direction south from Staples Corner to the junction with Humber Road. South from this point the road becomes a single carriageway with two lanes in each direction.

Between its junction with Gladstone Park Gardens and the junction with the A407 Cricklewood Lane/ Chichele Road, the character and provision of the A5 varies, consisting of a mix of single lane sections, single lane sections (with bus lanes) and two lane sections in both directions.

The A5 intersects with the A406 North Circular Road via slip roads from the main carriageways of both roads, which meet at an at-grade roundabout at Staples Corner which is immediately to the west of the M1/A406 gyratory. The main carriageway of the A5 passes on a flyover above this roundabout and below the main carriageway of the A406, which is on a further flyover above the A5. It has a speed limit of 40mph in the vicinity of the site.

Responsibility for the A5 in the vicinity of the BXC site is shared between the London Boroughs of Barnet and Brent, as the borough boundary passes down the centreline of this road. TfL has oversight as it forms part of the Strategic Road Network (SRN) as well as direct responsibility for bus operations and traffic signals.

A407 Cricklewood Lane provides access to the existing Cricklewood Station. It also provides access to the BXC site from Cricklewood, Golders Green and Willesden. It intersects with both the A5 and A41 via at-grade traffic signal controlled junctions. It is a single carriageway two lane road.

Brentfield Gardens is a single carriageway two lane road which links with Tilling Road, Highfield Avenue and the A41. This road provides links to the residential areas to the south of the existing shopping centre and the south of the A406, as well as to the east of the development and the wider Brent Cross area.

Pennine Drive is divided by a roundabout at its centre point. The single carriageway two lane road has junctions with Claremont Road to the west and Hendon Way (A41) to the east. It also forms junctions with Cheviot Gardens, Cumbrian Gardens, Cleveland Gardens and Purbeck Drive. This road connects this residential area to the south of Clitterhouse Playing Fields with the A41 and subsequently the A406.

Lichfield Road links the south of the development with the West Hampstead area. The road is a single carriageway two lane road with parking along both sides of the carriageway. Lichfield Road forms a junction with the A407 Cricklewood Lane, and also forms junctions with a number of residential side roads.

Brent Cross Shopping Centre access is inbound to Prince Charles Drive from the A406 eastbound exit from the M1/A406 junction, inbound and outbound along Tempelhof Avenue over the A406 North Circular Road off Tilling Road, inbound and outbound along Prince Charles Drive under the A41 off Renters Avenue/Cooper Road providing access to the A406 and A41 and outbound via two exits: onto the A41 northbound carriageway, from Spalding Road; and a separate BXSC car park exit.

Road access to the area of the site to the south of the A406 is limited. Several sites to the north of this area, including the retail developments, are accessible only from Tilling Road. Tilling Road is accessible from the northbound A41 and westbound

A406 (at its eastern end). Tempelhof Avenue provides a link from Prince Charles Drive to Tilling Road (via Tempelhof Bridge over the A406).

Access to the Eastern Lands area is provided via Tempelhof Link Road and a mini roundabout on Tilling Road for the northern retail sites, via Claremont Road for the school facilities and Marble Drive / Prayle Grove (via Claremont Road) for residential and recreational land uses.

Brent Terrace North is a route into the west of this area from Tilling Road that serves the Claremont Way Industrial Estate and the Waste Transfer Station. There are several routes from the A41 into the area from the east between Tilling Road and A407 Cricklewood Lane, principally The Vale that forms a signal controlled all movement junction with the A41 and connects with Claremont Road. There are no connections from the A5 Edgware Road into the site between the A406 and A407 Cricklewood Lane.

### **Parking: On and Off Street**

Parking in and around the shopping centre is provided by way of controlled on-street zones, charged on-street bays, charged public off-street car parks, free off-street car parks and extensive free on-street car parking particularly in residential areas south of the A406.

There is free parking at Brent Cross Shopping Centre and during the hours of opening access is uncontrolled. There are approximately 7,600 spaces provided in a number of separate car parks. The largest car parks are multi storey car parks each with a capacity of just over 2,000 spaces. There are approximately 237 disabled spaces which represent around 3.5% of the total. There are also 68 parent and child spaces and a small number of spaces set aside for customer collections.

The majority of car parking spaces are located to the north of Prince Charles Drive with two points of access at either end of the shopping centre. Both accesses are barrier controlled and during the week open at 08:45 hours. The barrier controls are in place to deter all day commuter and staff parking.

There are three car parks located to the south of Prince Charles Drive. The easternmost car park is not used for public parking. The other two car parks have a combined capacity of just over 1,000 spaces and remain open all day. As a result they tend to be used by staff at the shopping centre.

Car parking surveys were undertaken at the Shopping Centre on Wednesday 26th, Friday 28<sup>th</sup> and Saturday 29th June 2013.

A total of 7,429 spaces within nine car parks were surveyed. The shopping centre car park is at its busiest on a Saturday at 14:00 hours with the northern and then western car parks forming the key parking areas for vehicles. During the week a similar pattern is seen on both Wednesday and Friday, when the car parks reach their peak parking occupation at around 13:00 hours. Maximum occupancy on any of the three days surveyed did not exceed 4,500 vehicles.

The average duration of stay was just over an hour and a half. Almost one quarter of visitors to the shopping centre stayed for less than half an hour, more than two thirds stayed for less than two hours and 85% stayed for less than three hours. The vast majority of those staying for more than eight hours were parked in the car parks to the south of Prince Charles Drive.

There was a significant amount of spare capacity in most areas of disabled parking with the only area fully utilised being Level 1 of both multi storey car parks. Detailed monitoring of the use of disabled parking bays at the shopping centre is included in the BXC Monitoring Strategy.

#### Public Charged Off-Street Parking

There is limited public off-street parking in the adjacent area:

- Warner Close in West Hendon, just to the west of the A5: 72 spaces including two disabled bays;
- Brent Cross Underground Station: 25 spaces including two disabled bays; and
- Hendon Thameslink Station: 41 spaces including 10 disabled bays.

There are no parking facilities at Hendon Central or Golders Green Underground Stations or at Cricklewood Railway Station which is on the Thameslink line.

#### Private Off-Street Parking

There are a number of privately owned off-street car parks in the BXC area, the most significant car parks being:

- Tesco: 440 spaces and 20 disabled bays;
- Toys R Us: 127 spaces and 3 disabled bays;
- Holiday Inn Hotel: 142 spaces and 8 disabled bays;
- Brent Cross Retail: Park 280 spaces and 20 disabled bays;
- Hendon Leisure Centre: 36 spaces and 2 disabled bays; and
- Broadway Retail Park: 487 spaces and 13 disabled bays.

#### Controlled On-Street Parking Zones

There are many Controlled Parking Zones (CPZs) within and surrounding the Brent Cross Regeneration Area. Their primary function in the area is to restrict commuter parking in the vicinity of underground and mainline railway stations. The adjacent CPZs are:

Name Location Detail of Parking Controls

Brent Cross (B): Residential roads adjacent to shopping centre: 10:00-18:30 hours Monday-Saturday.

Brent Cross Station (BX): Residential area up to 600m from station: 11:00-12:00 hours Monday-Friday.

Cricklewood1 (C1, CW, CT): (CW,CT) Area bound by the A5, Cricklewood Lane and the Railway Lands, (C1) Area around Cricklewood Lane, to Finchley Road and The Vale/Cloister Road to the north: (CW, CT) All day zones – 09:00-22:00 hours Monday-Sunday (C1) One hour zone – 10:00-11:00 hours Monday- Friday.

Golders Green (G, H): (G) All day zone boundary extends from Elmcroft Avenue and railway tracks to the north. The Ridgeway to the south, Finchley Road to the east and Gresham Gardens to the west. (H) One hour zone boundary extends from The Ridgeway to the north, Wayside/Crewys Road to the south, Finchley Road to the east and Gresham Gardens to the west: (G) All day zones 08:00 -18:30 hours (H) Controlled parking zone – 11:00-12:00 hours Monday-Friday.

Hendon Central 1 (HC1): A41 Watford Way runs from the south-east boundary and then through the middle of the CPZ, Park Road to the south, A41 Hendon Way and Raleigh Close to the East, Brampton Grove to the north and Audley Road to the west: 11:00-12:00 hours Monday-Friday.

Hendon Central 2 (HC2): St Mary Crescent/Church Road to the north, Brampton Grove to the south, Brent Street to the east and The Burroughs to the west: 10:00-17:00 hours Monday-Friday.

Hendon Central 3 (HC3): Cheyne Walk to the north, Hendon Way to the south and Denehurst Gardens to the east: North (North of Beaufort Gardens) – 08:00-18:30 hours Monday-Friday. South (south of Beaufort Gardens) – 11:00-12:00 hours Monday-Friday.

West Hendon 1 (WH1): Park Road to the south, the A5 to the west and the M1 to the east: 09:30-16:30 hours Monday-Friday.

West Hendon 2 (WH2): A5 Hendon Broadway<sup>1</sup> to the east, Garrick Road to the north, Brent Reservoir to the west, Verulam Court to the south: 10:00-11:00 hours Monday-Friday.

West Hendon 3 (WH3): Station Road to the north, Park Road to the south, Audley Road to the east and the M1 to the west: Various parking time restrictions – majority 10:00-11:00 hours Monday-Friday.

Brent (GA, MA, GM): (MA) A5 Cricklewood Broadway to the north east, Chichele Road to the north west, Owain Lane to the south (GM) Wotton Road to the north, A5 Cricklewood Broadway to the east, Olive Road to the south, Gladstone Park to the West (GA) Olive Road to the north, Chichele Road to the east, Melrose Avenue to the south, Gladstone Park to the west: (MA, GM) 10:00-21:00 hours Monday – Saturday (GA) 10:00-15:00 hours Monday – Friday.

Camden (CA-P, CA-Q): (CA-P) University College Sports Ground to the north, Fortune Green Road to the east, Minster Road to the south, Westbere Road to the west (CA-Q) Richborough Road to the north, Fordwych Road to the east, Minster Road to the south, A5 Cricklewood Broadway to the west: (CA-P) 10:00-12:00 hours Monday – Friday (CA-Q) 08:30-18:30 hours Monday-Friday.

The introduction of parking charges at Brent Cross Shopping Centre is likely to result in some parking being displaced into surrounding areas in order to avoid the parking charges. Uncontrolled parking areas or areas that are controlled for a single hour in the morning might, for example, be susceptible to displaced parking from the

Shopping Centre. Observations on parking demand were undertaken on Wednesday 4th, Friday 6th and Saturday 7th of December 2013, from 10am to 12pm and 2pm to 4pm to identify areas which may be vulnerable to additional parking pressures as the redevelopment of the Regeneration Area progresses.

#### Uncontrolled Residential Car Parking Zones

There are several areas of uncontrolled parking within and surrounding the regeneration area. The largest area is immediately south of the A406 and surrounds Clitterhouse Playing Fields. There is another significant area to the west of the A5 in the Dollis Hill area and a further area to the north east of the shopping centre close to Hendon Park. These areas are all potentially vulnerable to displaced parking as the redevelopment of the regeneration area progresses.

#### Private Car Parking Zones

Private car parking zones are areas where parking is not subject to the parking regulations of the Local Authorities. There are several private parking areas within and surrounding the Brent Cross Regeneration Area:

Parking Controls Number of Bays

Private Resident Car Parks: 1842 spaces / 35 disabled bays / 9 visitor bays

Foyer Parking: 5 spaces

Private On-Street Parking (Kerbside): 176 spaces

Uncontrolled Kerbside Parking Within Private Road: 30 spaces

#### **Pedestrians and Cyclists**

As required by Condition 1.20 of the S73 Permission and defined in Schedule 1, 3, 15 and 17 of the S106 Agreement, an Area Wide Walking and Cycling Study (AWWCS) has been submitted to the council.

Since 2008 there have been no specific schemes in the immediate area which have upgraded either the pedestrian or cycle environment or provided additional facilities. There have been some improvements to pedestrian and cycle facilities in the Hendon Central area between 2010 and 2013. However the facilities for pedestrians remain poor in general. Facilities for cyclists are somewhat better, with a number of signed routes and areas of both shared surface facilities and cycle lanes. However cycle parking facilities in the Brent Cross area remain limited and cyclists still face traversing a number of busy junctions and highways.

Fourteen key areas to link the proposed Brent Cross site were agreed, including Neasden, Dollis Hill, Colindale, Golders Green, Willesden Green, Childs Hill and Hendon Town Centres / London Underground Stations.

As part of the AWWCS, PERS (Pedestrian Environment Review System) and CERS (Cycling Environment Review System) audits were undertaken along 16 walking and 17 cycling routes from the red line boundary to key destinations in the vicinity. In addition at TfL's request, the walking and cycling links alongside the A406 and A41 were assessed. Similarly, existing links along the A5 were reviewed as part of the A5 Corridor Study.

The findings for all 33 audits of the routes alongside the A406, A41 and A5 corridors were documented in the BXC PERS and CERS Audit Findings Report in terms of the

key characteristics of their individual elements as well as their apparent quality and resultant red, amber or green (RAG) rating.

The vast majority of both pedestrian and cycle routes received amber ratings, although 11 of the 16 pedestrian routes had features that received green ratings. Often these were limited to one or two links, formal crossing points and public transport facilities.

Only a very small number of areas scored red during the assessment located in the near vicinity of the BXC redline boundary. These include the areas around Brent Cross tube and Cricklewood train stations and Brent Park Road, which connects to Layfield Road and is one of the links directly accessing the BXSC. Two of the crossing points at the A41 Watford Way/Vivian Avenue/Queen's Road junction adjacent to Hendon Central Station were also rated red.

Routes along the A406 and A41 corridors included a large number of subways, footbridges and segregated footways. Few crossings are present along the two routes as most pedestrian movements are physically separated from vehicle movements. The PERS scores for the pedestrian environment were relatively low, with no single feature considered to be of a good standard and therefore green rating on the RAG scale. On average pedestrian facilities were predominantly considered to be of an amber standard; several links, pedestrian crossings and bus stops were rated red and considered to be of a poor standard.

As part of the CERS audit the A406 corridor was not assessed due to its unsuitability for cyclists. However cycle routes which follow the corridor were assessed (i.e. Tilling Road and other road sections with signed cycle routes, footbridges and segregated footpaths). All features were rated amber and were therefore considered to have average quality cycle facilities.

In addition to the severance which currently exists in terms of the barriers to the movement of pedestrians and cyclists by road, rail and river infrastructure, there are other baseline issues which provide a basis for the changes proposed through the BXC development, including:

- Existing traffic volumes;
- Air quality, noise and micro-climate;
- Local flooding problems within the highway;
- Legibility and way finding;
- Anti-social behaviours; and
- Shopping centre infrastructure encircling the centre buildings.

## **Road Safety**

The review of Personal Injury Accident data collated between 1<sup>st</sup> March 2008 to 31<sup>st</sup> December 2013 indicates a total of 653 accidents in the vicinity of the development area, of which 89.8% resulted in slight injury, 9.0% in serious injury and 1.2% (8) fatalities.

A total of 258 accidents occurred at major junctions including Staples Corner (60 incidents), Staples Corner / M1 / A406 / Tilling Road (71 incidents), the A41/A406 (48 incidents), the A41/A407 (39 incidents) and the A5/A407 (40 incidents). As Staples Corner will be redesigned and rebuilt, the accidents record at this junction will be monitored to determine whether the safety of this junction improves in the future.

A total of 395 accidents occurred along the A5 corridor (between Staples Corner and the A4077 – 167 incidents), A41 (between the A406 and A407 – 80 incidents), A406 (Between Staples Corner and A41 – 59 incidents), A407 (between A41 and A5 – 39 incidents) and Claremont Road (between A406 and A407 – 50 incidents). As the A5 experiences approximately double the number of accidents to other links within the study area, monitoring is proposed.

### **Public Transport: Bus**

A range of bus services, operated on behalf of TfL, pass through or close to the BXC site. The area is well served by the bus route network, with frequent services to a variety of destinations in London. The majority of the bus services start from or pass through the bus station at BXSC. This bus station serves the shopping centre and also operates as a local bus hub. Other bus hubs in the vicinity are located at North Finchley and Golders Green.

Routes that originate and terminate at Brent Cross Bus Station are: 16, 102, 112, 142, 143, 182, 186, 189, 2190, 226, 245, 260, 266, 316, 326, 332, 460, C11

Routes that pass nearby Brent Cross Bus Station are: 32, 113, 316, 332

Routes that pass through Brent Cross Bus Station are: 232

Routes added since 2010 consent are: 324

Existing bus stops are located approximately every 350metres along each road in the area where bus routes are present. The bus station adjacent to BXSC has four stops for bus services and space for approximately 15 buses to stand away from the stops.

Bus lanes are provided at a number of locations in the vicinity of the BXC site. A significant proportion (approximately 30% by length) of the A5 Cricklewood Broadway and Edgware Road between the A406 and A407 are specified as bus lanes.

For monitoring purposes and to assess if modal targets and the associated modal shift to sustainable travel has been achieved, details of existing use (based on Bus Origin and Destination Surveys (BODS) data and key point data, collected by TfL) have been submitted.

### **Public Transport: Rail**

The Midland Mainline railway corridor passes through the western edge of the BXC site. The BXC site is served at the southern end by the existing Cricklewood Railway Station. Hendon Station is approximately 3km to the north, outside of the BXC site boundary.

The 'Thameslink' services are currently operated by Govia Thameslink Railway (GTR). These rail services serve Cricklewood Station and Hendon Station and provide four stopping 4-car trains per hour on the slow lines in each direction for the majority of the weekday from Luton/St Albans to the north through Kings Cross/St Pancras and beyond to the south. During the peak periods up to 15 Thameslink trains per hour pass each way on the slow and fast lines.

Information on train loading and the throughput of passengers on the national rail network has been provided to form the baseline for the Monitoring Strategy.

### **Public Transport: London Underground**

The Edgware branch of the Northern Line passes to the east of the BXC site and the Jubilee Line passes to the southwest through Willesden Green and West Hampstead. Brent Cross Underground Station is nearest the site and is located to the southeast of the A406/A41 junction. The station is isolated from the development area by the A41. The existing pedestrian links through the A406/A41 junction to BXSC and the A41 underpass to the eastern lands of BXC site are not user friendly. To the north, Hendon Central is approximately 750metres from BXSC. The route to BXSC from Hendon Central is subject to less severance and is considered to feel safer than the route from Brent Cross station.

Both Hendon Central and Golders Green stations are now step free where Brent Cross is not. Whilst at a greater distance from BXSC than Brent Cross, Hendon Central station has higher frequency bus connections running in the direction of BXSC.

### **Public Transport Accessibility Level (PTAL)**

Public Transport Accessibility Levels are a detailed and accurate measure of the accessibility to the public transport network of a locational point, which takes into account the walk access time and the service availability. The method is a way of measuring the density of the public transport network at a particular point.

The London Plan states that PTALs are used by TfL to produce a consistent London wide public transport access mapping facility to help boroughs with locational planning and assessment of appropriate parking provision by measuring broad public transport accessibility levels. There is evidence that car use reduces as access to public transport (as measured by PTALs) increases. Given the need to avoid over-provision, car parking should reduce as public transport accessibility increases.

The proposed regeneration area baseline is rated as having a range of between poor (2) and excellent (6) PTAL bands.

The areas of highest existing accessibility are clustered around Brent Cross Bus Station, Brent Cross London Underground Station and Cricklewood Railway Station. Public transport users can arrive/depart by train at Cricklewood Station, by

underground at Brent Cross Underground Station, or by bus with one of London's largest bus stations at BXSC. The largest area containing high PTAL scores is just outside the regeneration area around the Golders Green LUL Station.

Areas of particularly poor PTAL scores south of the A406 include the residential area to the north of Clitterhouse Playing fields and the area to the east of the Hendon Rail Transfer Station. North of the A406 the residential areas to the northwest and northeast of the BXSC also have particularly low PTAL scores.

## **Coaches**

Coach parking for one vehicle is currently provided at BXSC, for shopping trips to the centre by organised coach parties.

There are no express or limited-stop coaches which stop at Brent Cross Bus Station. However, there are a number of Greenline express coach services (as well as other services) that stop on the A406 North Circular Road, which provide 24 hour connections to a number of destinations including airports.

## **Taxis**

There are currently two informal and one formal taxi pick-up/drop-off points in the vicinity of the Brent Cross Shopping Centre.

The formal Hackney Carriage rank is located immediately outside and along the southern boundary of the bus station, on Prince Charles Drive. It is a one-way system accessed and egressed via Prince Charles Drive eastbound carriageway. The rank can accommodate up to nine waiting taxis. The taxi rank is currently located in an area affording poor visibility and accessibility to passengers from BXSC.

The two informal taxi pick-up/drop-off locations tend to be used by minicabs and other private hire vehicle pre-booked taxi services. One is located at the John Lewis Customer Collection Point on the western perimeter of the Shopping Centre, within the car park outside the John Lewis store. The pick-up/drop-off area within the car park for John Lewis Customer Collection contains 14 bays allocated for waiting vehicles. However taxis in general park directly outside the entrance doors when picking up/setting down.

The second informal pick-up/drop-off area is situated at a service area, located in the north-east corner of the shopping centre site along an access road outside the Waitrose store entrance. It is accessible from a mini-roundabout at the north-eastern corner of the shopping centre's internal road network. The area reserved for drop-offs/pick-ups is not formally marked.

A survey of taxi facilities was undertaken on a weekday and Saturday in July 2013 in order to establish the level of existing usage of the taxi ranks by passengers and taxis.