Peabody Developments Ltd & London Borough of Ealing

The Green, Southall
Transport Assessment

July 2021

transport planning practice

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1 INTRODUCTION

1.1.1 Transport Planning Practice has been appointed by Peabody Developments Ltd & London Borough of Ealing to provide transport planning advice in relation to the redevelopment of a site located in Southall within the London Borough of Ealing (LBE).

1.1.2 The existing site comprises a 150 space public car park, business premises and associated parking, roads and adjacent land lying to the north-west and rear of The Green and the adjoining Featherstone Terrance, Dominion Road and Dilloway Yard. The planning application site comprises 2.3 hectares.

1.1.3 The proposed development will comprise 564 residential units, flexible retail and commercial space and community use. The proposals will also provide a total of 60 car parking spaces allocated to the residential development (which equates to approximately 11% of the total number of residential units) and will retain 90 public car parking spaces (a reduction of 60 from the existing 150). The proposed cycle parking provision is in line with the minimum standards provided in The London Plan 2021. The low car parking provision and the provision of on-site cycle parking is in line with the policies of the Mayor's Transport Strategy which encourage sustainable transport throughout London.

1.1.4 This Transport Assessment (TA) provides supporting information to a planning application submitted to LBE and has been prepared in accordance with Transport for London's (TfL) 'Transport Assessment Best Practice' guidance document and the Healthy Streets guidance for Transport Assessments. This report is structured as follows:

- **Chapter 2: Transport planning for people** – describes who the development is for.
- **Chapter 3: Site and surroundings** – assesses the site's accessibility by different transport modes and sets out current transport conditions in proximity to the site. It also describes current parking conditions near the site and provides a description of the car ownership levels within the area. It outlines the proposed development in terms of operation, access, parking and servicing arrangements.

- **Chapter 4: Active Travel Zone** – assesses how people of all abilities will make key journeys within a 20-minute cycle around the site.

- **Chapter 5: London-wide network** – outlines a multimodal trip generation assessment for the proposed development.

- **Chapter 6: Construction** – provides information on the Draft Construction Logistics Plan.

- **Chapter 7: Transport policy** - provides a summary of the local, regional and national transport policies against which the proposals are assessed.

- **Chapter 8: Conclusion** – provides a summary and presents the conclusions to this report.

2 TRANSPORT PLANNING FOR PEOPLE

2.1.1 The proposed development will comprise 564 residential units, flexible retail and commercial space and community use.

2.2 Types of users

2.2.1 Based on the proposals, the user groups at the site will be residents (and their visitors), staff members and visitors of the flexible non-residential uses.

2.3 Travel to the proposed development

2.3.1 The proposals are expected to generate trips by cars and sustainable transport modes during peak times. This is further elaborated in Chapter 5 of this document.

2.3.2 The weekday peak period for trips are expected to occur between 08:00-09:00 and 17:00-18:00. In the morning, the majority of trips are expected to be generated by the departures by residents on their way to work and the arrival of employees of the non-residential uses at the site. In the afternoon, the majority of trips are expected to be the arrivals of the returning residents and the departures of the employees from the site. There will also be movements associated with visitors to the developments, particularly the non-residential uses.

3 SITE AND SURROUNDINGS

3.1.1 This section provides information about the existing site and its location and assesses accessibility by different transport modes.

3.2 Site location and use

3.2.1 The existing site is accessible from the western side of The Green, as well as from the northern ends of Dominion Road and Featherstone Terrace. It comprises a variety of uses including several vehicle repair/servicing/tyre businesses, a banqueting venue, a musical entertainment venue and other commercial uses. It also comprises a public car park that is accessible from Dominion Road and Featherstone Road, which comprises 150 spaces of which 15 are reserved for members and staff of The Gym Group. There is also a private car park for the Dominion Centre providing 39 spaces.

3.2.2 The site is within walking distance of a number of local amenities. The nearest primary school is St Anselm's Catholic Primary School, located on Church Avenue to the east of the site within a 300m walking distance (3-4 minute walk). The nearest secondary school is Featherstone High School, located on Montague Waye to the south of the site within a 450m walking distance (5-6 minute walk). The nearest nursery to the site is the Little Inventors Montessori Nursery & Pre-school which is located on Hartington Road, within a 300m walk (3-4 minute walk) to the west of the site.

3.2.3 The nearest doctor's surgery / GP practice is the Featherstone Road Health Centre, located on Featherstone Road within a 200m walking distance (less than a 3-minute walk) to the west of the site. The nearest dentistry is Kings Dental Surgery, located on King Street to the south of the site within a 300m walking distance (3-4 minute walk).

3.2.4 A wide range of retail, restaurant and commercial premises typical of a high street such as shops, restaurants, cafes, ATMs, a post office and convenience stores are located on The Green and King Street. **Figure 1** shows the site's location relative to the local area.

3.3 Walking

3.3.1 Pedestrian access to the existing site can be taken from The Green, Dominion Road and Featherstone Terrace. The Green provides footways on both sides of

the carriageway and provides a number of restaurants / cafes along its western side. The road extends northbound to facilitate pedestrian access to Southall Railway Station. To the south, The Green forms a junction with King Street (and Featherstone Road) which provides footways on both sides if the carriageway and facilitates pedestrian access to local amenities.

3.3.2 Dominion Road and Featherstone Terrace link with Featherstone Road to the south of the site. Featherstone Road provides footways on both sides of the carriageway and extends eastbound and westbound from the aforementioned junctions. To the east, Featherstone Road forms a junction with The Green and King Street. Hence, pedestrians from the site are able to access the local amenities on The Green / King Street via Featherstone Road.

3.3.3 The footways of the aforementioned roads seem to be adequately lit as they provide light columns at regular intervals.

3.3.4 Informal and zebra crossing points are regularly provided along The Green, King Street and Featherstone Road which link the footways on both sides of the carriageway. Signalised crossings are provided on each arm of the four-arm junction between King Street, Western Road and Havelock Road which is located to the south-east of the site.

3.3.5 The pedestrian infrastructure in the local area is suitable for people of all abilities. The surface of the footways provides good grip, a flat surface and is generally in good condition which reduces risks of slipping and tripping. Tactile paving and dropped kerbs are provided at the crossing facilities (both formal and informal) on The Green, King Street and Featherstone Road which facilitate movement for visually impaired pedestrians.

3.4 Cycling

3.4.1 The site is located near a number of recommended cycle routes according to TfL's Local Cycling Guide 6 (as shown in **Figure 2**) which enable cyclists to approach the local area from every direction. The Green, Featherstone Road and King Street are some of the local roads that have been recommended by cyclists within the guide which "may connect other route sections". These routes provide access to a wider network of recommended routes which link with the A4020 to the north, which has been labelled as a signed/marked route within the guide.

This route facilitates cycle access to Ealing, which is located to the north-east of the site within an approximate 20-minute cycle.

3.4.2 The vicinity of the site also provides a number of off-road cycle routes. The nearest is located by the Grand Union Canal, located to the south of the site within a 5-minute cycle. This route extends to the south-east to Brentford. A second off-road path is provided on the Paddington Branch of the Grand Union Canal which is located to the west of the site, within an 8-minute cycle. This path extends northbound towards Greenford.

3.5 Public transport

Public Transport Accessibility Levels (PTAL)

3.5.1 The industry standard accessibility indicator for London, the Public Transport Accessibility Level (PTAL) rating, has been used to identify the level of accessibility of the site to the local public transport network.

3.5.2 The current access points to the site located on The Green, Dominion Road and Featherstone Road have been identified as being located in an area with a PTAL rating of 4, indicating a good level of public transport accessibility, whilst the eastern part of the site has a PTAL rating of 3. However, with the improved permeability of the proposed development, the eastern part of the site will have a more direct route to The Green as well as to Southall Station. Additionally, Southall Station will provide additional Crossrail services of the Elizabeth Line in the future. A manual PTAL assessment has been undertaken to assess the level of accessibility of the eastern part of the site to account for the above and indicated that the PTAL will increase from 3 to 4.

Bus services

3.5.3 The site is within walking distance of a number of bus services. Bus stops L and M are located on The Green, to the east of the site and are served by the 105, 120, 195, 482, E5 and H32 bus routes in the northbound and southbound directions respectively. There are other bus stops located within the vicinity of the site that are served by the same routes.

3.5.4 The aforementioned bus stops are served by six routes which provide a total frequency of over 50 buses in the morning and evening peak times.

3.5.5 Table 3.1 presents the bus services which are accessible from the site. The frequencies presented below were observed pre-Covid. **Figure 3** shows a bus route map of local services and stops.

Table 3.1 – Local bus services (pre-Covid)

Service	Towards	AM Peak	PM Peak	Saturday	Sunday
		0800 – 0900	1700 - 1800		
105	Nene Road	5	5	5	4
	Greenford Station	5	5	5	4
120	Hounslow Bus Station	6	5	5	5
	Northolt Station	5	5	5	5
195	Charville Lane Estate	5	5	5	4
	Brentford County Court	5	5	5	4
482	Heathrow Terminal 5	3	3	3	2
	Southall Town Hall	3	3	3	2
E5	Toplocks Estate / Glade Lane	5	5	5	3
	Perivale Tesco	5	5	5	3
H32	Hounslow Bus Station	5	5	-	-
	Southall Town Hall	5	5	-	-
Total		57	56	46	36

National Rail

3.5.6 The nearest national rail station is Southall which is located within a 300m walking distance (3-4 minute walk) to the north-east of the site (i.e. from the north-eastern end of the site). The station is served by Great Western Railway and by TfL Rail. The peak hour frequencies at the station are shown in Table 3.2. The frequencies presented below were observed pre-Covid.

Table 3.2 – Services & frequencies from Southall Station (pre-Covid)

Destination	Frequency			
	AM Peak	PM Peak	Saturday	Sunday
London Paddington	9	8	7	6
Hayes & Harlington	9	8	6	6
Reading	5	4	2	2
Heathrow Terminal 4	2	2	2	2
Total	25	22	17	16

Crossrail

3.5.7 Southall Station will be part of the Elizabeth Line and the station is currently being developed to incorporate its services. When the full route opens, the Elizabeth Line will provide up to 10 services an hour in each direction, making it easier and quicker to access destinations across central London, South Bucks and Berkshire.

3.6 Local parking conditions and highway network

3.6.1 The site is located within Controlled Parking Zone (CPZ) V (Southall 2) which operates from Monday to Saturday between 08:30-18:00 and on Sunday between 14:00-18:00.

3.6.2 The Green extends from the mini-roundabout with the A3005 South Road (located to the northeast of the site) to the junction with King Street and Featherstone Road (located to the south of the site). The road has a 30mph speed limit and provides pay and display bays on both sides of the carriageway.

3.6.3 Featherstone Road has a 30mph speed limit and extends westbound from the junction with The Green and King Street until it forms a four-arm junction with Dudley Road and Hartington Road.

3.6.4 King Street also has a 30mph speed limit and extends southbound from the junction with The Green and Featherstone Road to the junction with Montague Waye, Adelaide Road and Norwood Road.

3.6.5 The A3005 extends northbound from the junction with The Green and links with the A4020 which extends through Buckinghamshire, Ealing, Hammersmith and Fulham and Hillingdon. The A3005 also extends southbound from Southall to Heston and links with the A4 which links with the M4, M5, M25 and M49.

Local traffic conditions

3.6.6 The Green tends to be a busy route throughout the day for a number of reasons including:

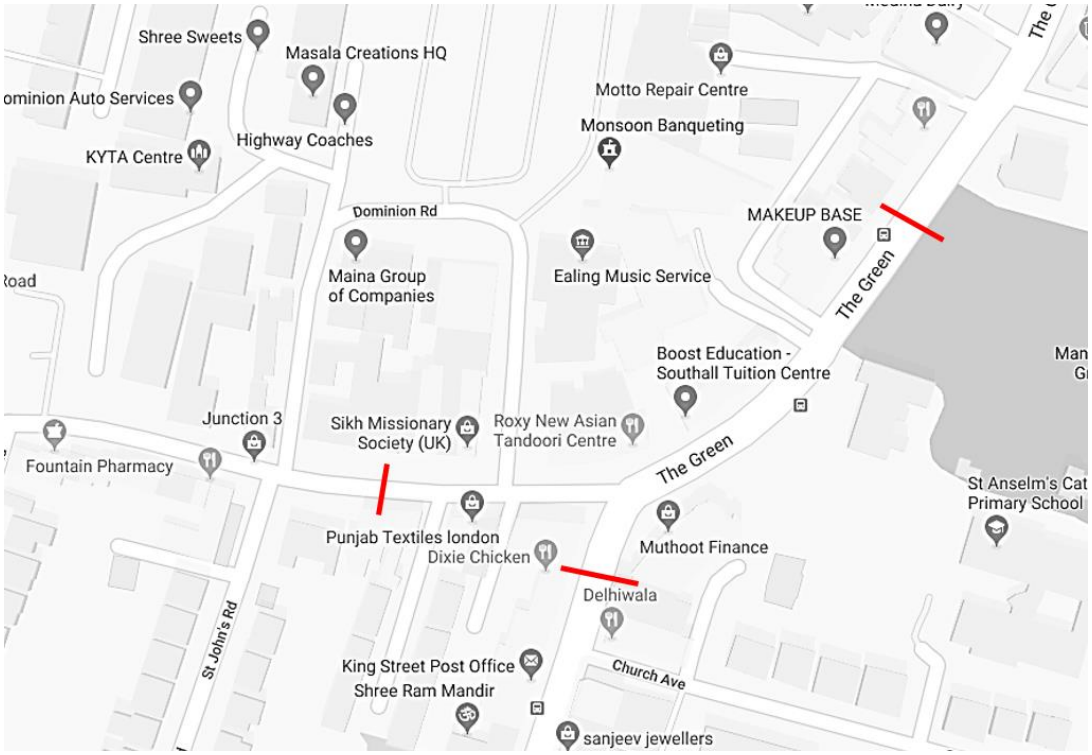
- The high street nature of The Green and King Street means that both roads attract a high number of pedestrian and vehicles. This results in a high number of pedestrian crossing movements and vehicles manoeuvring in and out of parking spaces on the roads for deliveries or customer shopping activities.
- The Green links with South Road to the north which crosses the Great Western mainline railway. Alternative crossing points are 2.0km to the west and 1.8km to the east. Given these distances, there is as concentration of vehicle movements along South Road leading on to The Green.

- Southall Station, located on South Road, is a key attractor for both pedestrian and vehicular movements (private cars, taxis and buses), with The Green being one of the primary routes leading to the station.

3.6.7 Given the above factors, The Green can experience congestion during the typical AM and PM peak periods and at other times.

3.6.8 ATCs were installed on Featherstone Road, King Street and The Green to record local traffic conditions from Monday 24th June 2019 to Sunday 30th June 2019. The locations of the ATCs are shown in Inset 1.

Inset 1 - ATC locations on Featherstone Road, The Green and King Street



3.6.9 A summary of the vehicle movements at the above locations on Tuesday 25th June 2019 is presented in Table 3.3.

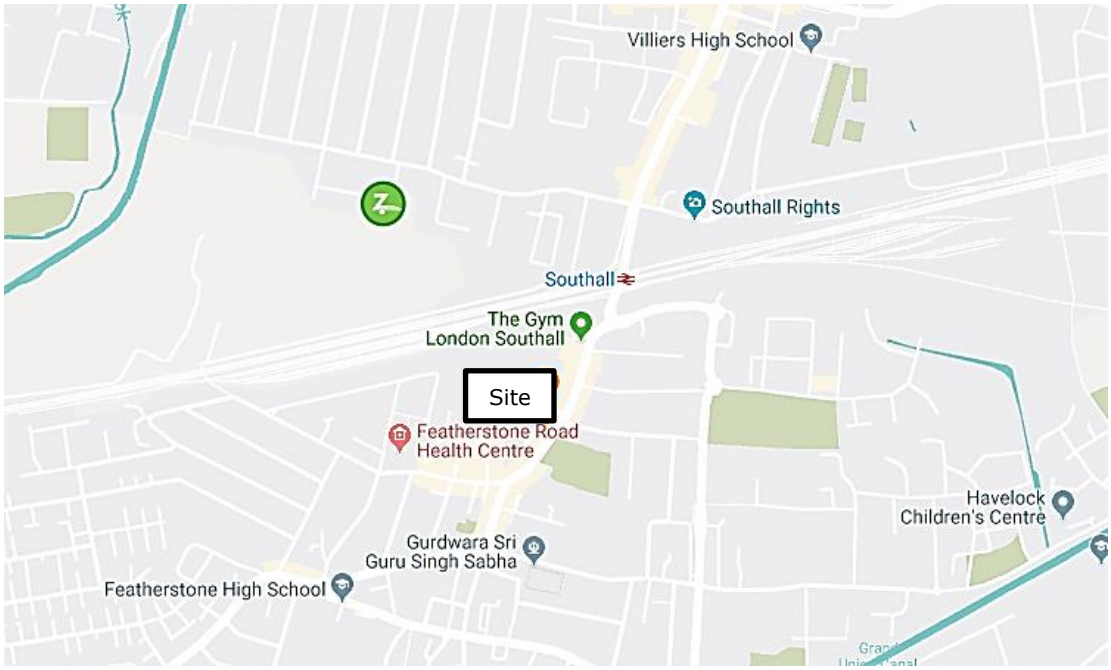
Table 3.3 – ATC movements on Featherstone Road, The Green and King Street

Location	AM Peak (0800-0900)	PM Peak (1700-1800)
	Two-way vehicle flow	Two-way vehicle flow
Featherstone Road	330	329
The Green	853	615
King Street	560	472

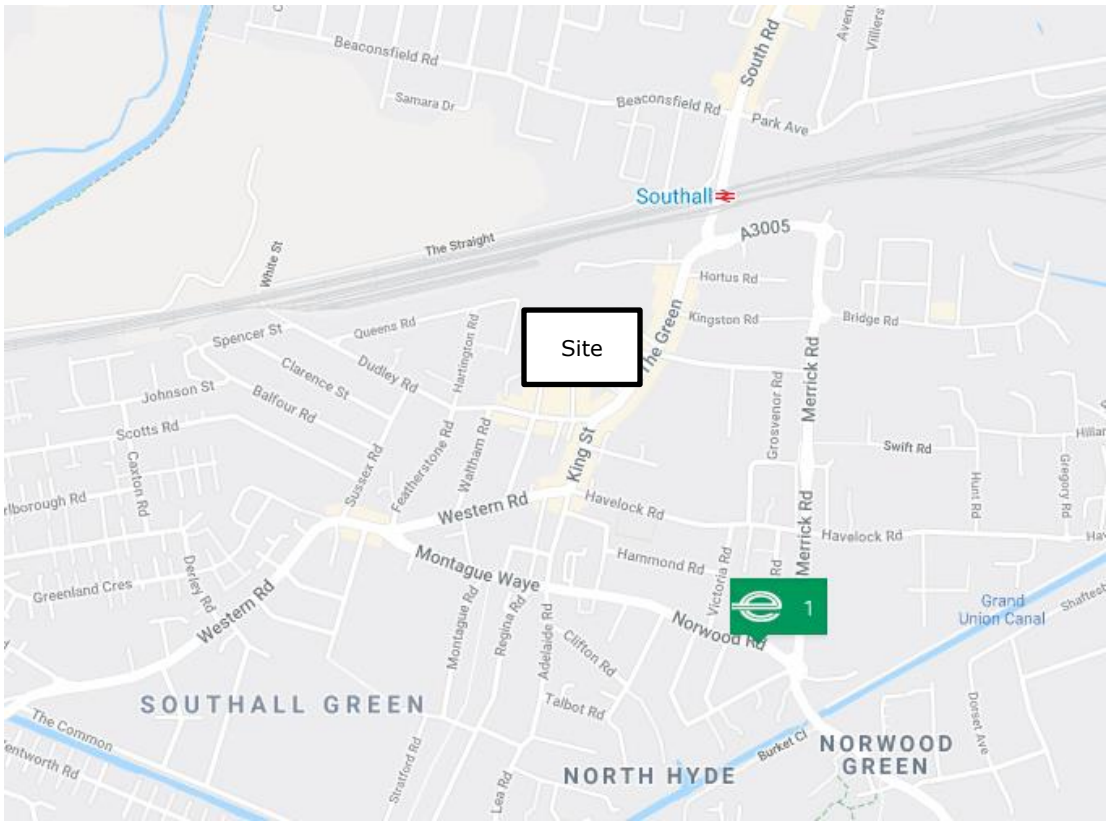
3.7 Car clubs

3.7.1 Zipcar provides a car sharing location on Samara Drive, to the north-west of the site, from which an Audi A3 can be rented. Enterprise Car Club is located on Norwood Road, to the south-east of the site, from which a number of vehicles can be rented. The location of local car renting services provided by Zipcar and Enterprise Car Club are presented in the Insets 2 and 3, respectively.

Inset 2 - Location of Zipcar car renting service



Inset 3 - Location of Enterprise Car Club car renting service



3.8 Parking beat survey results

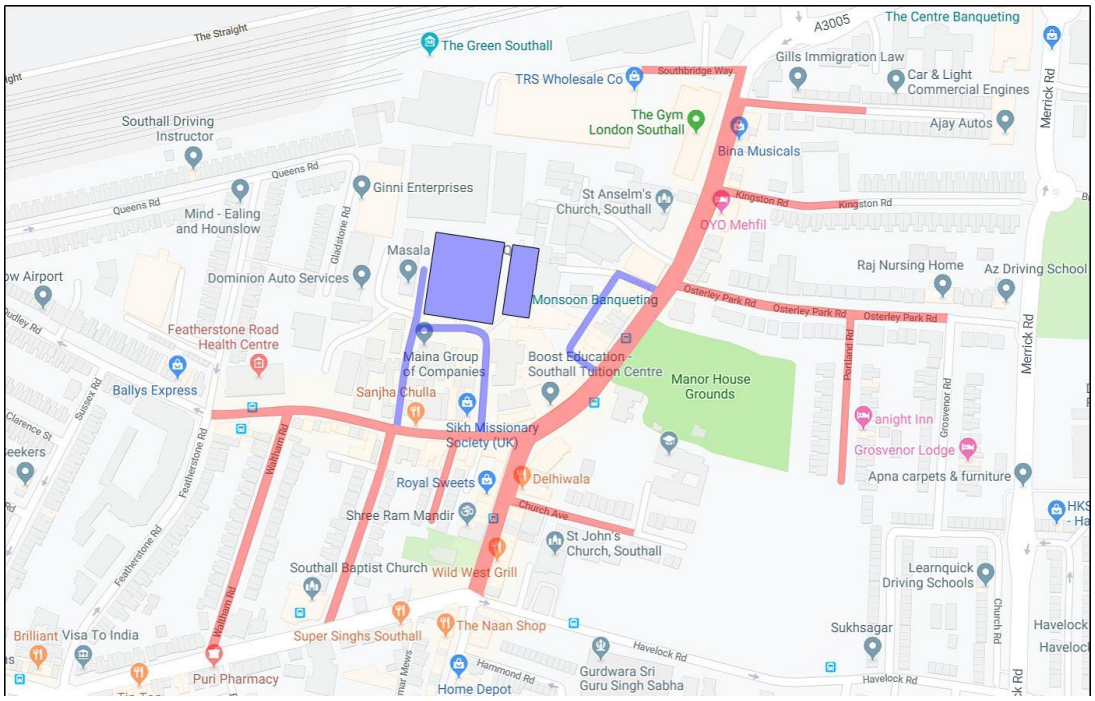
3.8.1 A parking stress survey was undertaken by Footmark Surveys on Tuesday 25th and Saturday 29th of June 2019 to establish the parking levels along the local road network. The results of the survey are provided in **Appendix A**.

3.8.2 The survey recorded results between 05:00 and 21:00 at two hour intervals for local roads. The survey area included all roads within 200m from the site. The survey boundary stopped at junctions so the boundary typically exceeds the 200m cut-off by a varying amount. The survey also recorded the parking conditions within the site on hourly basis. The extent of the survey is shown in Inset 4. The areas highlighted in red represent the local roads whereas the areas highlighted in blue represent the site.

3.8.3 Parking surveys which are older than 2 years may be required to be updated for the purpose of a planning application. However, given COVID restrictions and the impact of the pandemic the use of public car parks are generally lower than pre-pandemic times. In this case the limited use of several banqueting/club venues nearby will have reduced parking demand, as well as other factors reducing

demand. As such the June 2019 surveys are considered appropriate for assessing the parking demand in normal conditions.

Inset 4 - Extent of parking survey



Off-site parking conditions

3.8.4 The inventory of the survey indicates that the local area provides a total of 153 permit only bays and 10 permit or pay bays. The parking demand and relative spare parking capacity on these bays during both days of the survey are summarised on Tables 3.4 and 3.5.

Table 3.4 – Parking demand and spare parking capacity on permit holders/pay bays – Tuesday 25th June 2019

Time	Permit only bays			Permit or pay		
	Vehicles Parked	Occupied %	Spare Parking Spaces	Vehicles Parked	Occupied %	Spare Parking Spaces
05:00	95	62%	58	5	50%	5
07:00	87	57%	66	4	40%	6
09:00	65	42%	88	2	20%	8
11:00	67	44%	86	3	30%	7
13:00	75	49%	78	5	50%	5
15:00	60	39%	93	6	60%	4
17:00	69	45%	84	7	70%	3
19:00	99	65%	54	8	80%	2
21:00	105	69%	48	6	60%	4

Table 3.5 – Parking demand and spare parking capacity on permit holders/pay bays – Saturday 29th June 2019

Time	Permit only bays			Permit or pay		
	Vehicles Parked	Occupied %	Spare Parking Spaces	Vehicles Parked	Occupied %	Spare Parking Spaces
05:00	92	60%	61	6	60%	4
07:00	85	56%	68	6	60%	4
09:00	81	53%	72	6	60%	4
11:00	77	50%	76	4	40%	6
13:00	81	53%	72	6	60%	4
15:00	93	61%	60	9	90%	1
17:00	92	60%	61	8	80%	2
19:00	100	65%	53	6	60%	4
21:00	116	76%	37	6	60%	4

3.8.5 Table 3.4 indicates that the maximum demand in the local area on Tuesday was 111 and occurred at 21:00 which resulted in a spare parking capacity of 52 spaces. Table 3.5 indicates that the demand on Saturday also peaked at 21:00 with a total of 122 vehicles parked in the local area. This resulted in a spare parking capacity of 41 spaces.

On-site parking conditions

3.8.6 The peak parking demand during the Tuesday was 40 spaces which occurred at 13:00. On the Saturday there was an early peak at 15:00 of 110 before levels reduced and then the parking demand spiked at 20:00 with 122 parked vehicles. It is expected that the evening peak occurred as a result of an event taking place at one or more of the halls in immediate vicinity of the site, the biggest of which being the Monsoon Banqueting venue which will be removed as part of the redevelopment of the site.

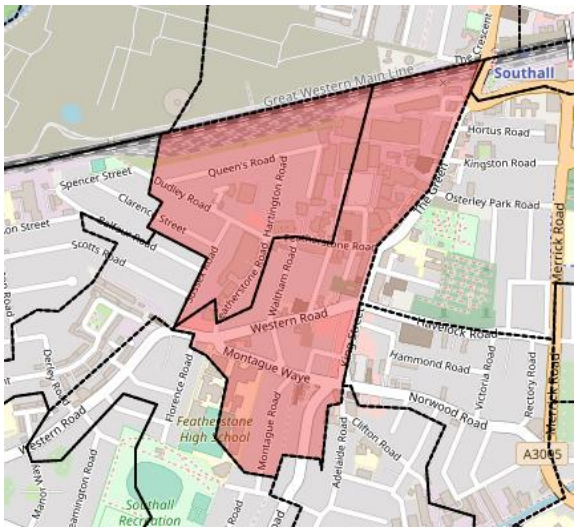
Table 3.6 – Public car park demand

Time	Car parked (total 150 spaces)	
	Tuesday 25 June	Saturday 29 June
05:00	7	6
06:00	8	5
07:00	9	6
08:00	10	10
09:00	18	13
10:00	27	47
11:00	34	56
12:00	37	69
13:00	40	75
14:00	39	90
15:00	24	110
16:00	28	75
17:00	37	61
18:00	30	57
19:00	17	86
20:00	24	122
21:00	14	110

3.9 Local car ownership

3.9.1 In order to identify the existing car ownership levels in the area, the 2011 Census data for the Ealing 037D and 037G Super Lower Layer Output Areas, shown in Inset 5, have been analysed. These areas comprise the location of the site and its vicinity.

Inset 5: Extent of Ealing 037D and 037G Super Lower Layer Output Areas



3.9.2 It is noted that the area includes 635 (68%) houses and 304 (32%) flats. Given that the proposals comprise a flatted development, this analysis focuses on the level of car ownership of the 304 flats. The results of this analysis are provided in Table 3.7.

Table 3.7 – Car ownership – Ealing 037D and 037G Super Lower Layer Output Areas

Accommodation type	Flats
No cars or vans	70%
1 car or van	24%
2 or more cars or vans	6%
All cars or vans	110
All households (Flats)	304
No. of cars per household	0.36

3.9.3 The census data indicates that there is an average of 0.36 cars owned per flat within the local area.

3.10 Proposed development

3.10.1 The proposed development will comprise 564 residential units and flexible retail, commercial and community uses. A breakdown of floor space of the proposed non-residential uses that has been used for the trip generation assessment of this report is provided below. However, the proposed non-residential uses are flexible and may vary from the quantum listed below.

- Creative workshops/studios (B1b/B1c) – 1,951.6m^2
- Retail (A1/A3) – 400.3m^2
- Office (B1a) – 150.1m^2
- Nursery (D1/D2) – 420.7m^2

Access and internal layout

3.10.2 The proposed uses will be provided in three separate Blocks: A, B and C. The proposed site layout is illustrated in **Appendix B**.

Access to Block A

3.10.3 Block A will be located at the western side of the site and will replace the existing public and private car parks. Vehicular and pedestrian/cycle access to the block from Featherstone Road can be achieved via Dominion Road, which will be realigned where it runs alongside the southern elevation of Block A. Pedestrian access to Block A will be also available from Featherstone Road by making use of Featherstone Terrace, which will have an enhanced footway on the western side of the carriageway, which will be widened to provide a minimum 1.8m width. The pedestrian/cycle access points to Block A will be segregated from the vehicular access points to avoid conflicts and to ensure the safety of pedestrians and cyclists.

3.10.4 The block will comprise commercial floor space, residential units and a concierge at ground level and residential units (as well as a small element of commercial space) on the first floor. There will be an under croft car park located at the centre of the block which will comprise 25 car parking spaces (including 20 wheelchair accessible bays) allocated to the residential units, as well as a loading area that can be used for deliveries and servicing associated with the residential and commercial units that are part of the block.

3.10.5 Loading bays will be located around the perimeter of the block and will be accessible via a perimeter road linked to Dominion Road / Featherstone Terrace. The road will lead to a turning head located to the north of the block which will allow for delivery vehicles to turn around when departing from the site.

3.10.6 There will be three loading bays located adjacent to the south-east corner of the block which will be available to use for deliveries and servicing associated with the proposed development, as well as by the Dominion Centre (e.g. deliveries and mini-bus drop-off for school trips) and by nearby businesses. There will also be eight car parking spaces, comprising three disabled bays, located to the south of the block which will be available for use of visitors to the development and the surrounding area including the Dominion Centre.

3.10.7 The road around the Block A which tie into Dominion Road is expected to be adopted by LBE along with the short-stay parking and loading bays, as such the use of these bays will be managed and enforced by the highway authority.

Access to Block B

3.10.8 Block B is located to the east of Block A and will comprise commercial floor space at ground level with residential units on upper floors. The block will be accessible (for pedestrians, cyclists and vehicles) via a two-way vehicular route along the northern frontage of the block which connects to The Green, adjacent to Saint Anselm's Catholic Church.

3.10.9 The route joins The Green at an existing junction to the north of 68 The Green (i.e. The Tudor Rose) which will be improved to better facilitate pedestrian and two-way vehicles movements. To achieve this the road will be widened to the north by approximately 2.5m which will result in land take from Saint Anselm's Catholic Church. This will result in the reduction of the raised planting area, and the loss of one parking space in the forecourt area. The proposed new junction is shown in drawing no. 31051/AC/043_B.

3.10.10 The pedestrian/cycle access points to Block B will be segregated from the vehicular access points to avoid conflicts and to ensure the safety of pedestrians and cyclists. Five public car parking spaces, comprising four disabled bays, will be provided along this route.

3.10.11 The access road and short-stay parking are expected to be adopted by LBE, as such the use of the bays will be managed and enforced by the highway authority.

3.10.12 There will be an under croft car park located within the block which will comprise 31 car parking spaces (including 11 wheelchair accessible bays) allocated to the residential units. The car park will also include a loading bay that can be used for deliveries and servicing associated with the commercial units located at the western end of the block.

Access to Block C

3.10.13 Block C will be located to the north of Block B and will comprise commercial space at ground level with residential units on upper floors. This block will be accessible (for pedestrians, cyclists and vehicles) via the same route that provides access to Block B.

3.10.14 Four wheelchair accessible car parking spaces associated with the residential units of the block will be provided to the south of the building. A loading bay will also be provided adjacent to the bays to accommodate deliveries to the block.

Featherstone Terrace

3.10.15 The development boundary includes vacant industrial land to the west of Featherstone Terrace which will be redeveloped to provide 32 short stay public parking spaces. As part of the proposals the footway on the western side will be improved by increasing its width to a min. 1.8m mainly by dedicating development land for widening the footway, and relocating lamp columns and telegraph poles to the back of the footway. The section footway at the southern end of Featherstone Terrace will be widened by encroaching into the carriageway which will necessitate the loss of one on-street parking bay on the eastern side to maintain a satisfactory road width.

3.10.16 The narrow two-way road will be amended to make it one-way southbound only with the existing minimum lane width of 3.1m together with the retained on-street parking bays on the eastern side. The new layout of the road is illustrated in drawing 31051/AC/044_B.

3.10.17 It is noted that the development at 22-28 Featherstone Road (planning ref: PP/2015/6723) which is a car-free development of 23 apartments with a ground floor commercial use, is proposing two on-street disabled bays at the southern end of Featherstone Terrace should the need arise in the future. With the proposed widening of the narrow footway on the western side of Featherstone Terrace the ability to introduce two new on-street disabled bays would not be practical given the available road space. However, if future residents at the 22 Featherstone Road development require disabled spaces these could be created by the highway authority by converted existing CPZ bays further north on Featherstone Terrace or allocating spaces in the new car park alongside Featherstone Terrace.

Access to 70 to 98 The Green

3.10.18 There is currently an access point located to the south of 68 The Green (Tudor Rose) which leads to a service road to the rear of commercial properties 70 to 98 The Green. The current access point is approximately 3.3m wide and the service road extends from the south of 68 The Green to another access point on The

Green, located opposite Manor House. The service road is used by commercial properties to the east and west of it, although deliveries associated with properties 70-98 is predominantly undertaken on The Green due in part to the poor management and access arrangements to the rear of the properties.

3.10.19 The proposals comprise of a one way arrangement whereby vehicles enter from the northern end and exit via the south. With the exception of the sub-station other commercial properties which previously had accessed via the service road are being removed, thereby reducing traffic movements. With the improved access arrangements, drivers will be encouraged to undertake more servicing to the rear of the commercial properties which will assist in minimising congestion on The Green.

3.10.20 Where the service road meets with the east-west pedestrian route between The Green and the development, retractable bollards or a boom barrier will be provided to manage the flow of vehicles from the service road into the shared surface route which will have a high number of pedestrian movements.

On-site pedestrian permeability

3.10.21 There will be a north-south pedestrianised route between Block A and Block B which will link the site to The Green. Albeit pedestrianised, the eastern end of the route will be designed to allow for occasional vehicle movements when required for maintenance, emergency access and deliveries associated with some commercial properties on The Green. Access for these vehicles will be via the service road to the rear of 70 to 98 The Green.

3.10.22 Additionally, the redevelopment of a number of adjoining properties will allow for a significant improvement to permeability through the development site which will benefit the future residents, staff and visitors to the development, and also existing residents and staff of businesses in the surrounding area. This comprises the improvement of Dominion Road and Featherstone Terrace (as part of the redevelopment of the Working Men's Club), which link to Featherstone Road to the south, and two links to The Green (i.e. one opposite Manor House Grounds and the other south of St Anselm's Church).

3.10.23 All four routes will improve the permeability of the overall site and will allow residents, staff, customers and visitors to access The Green or Featherstone Road by walking through the development site.

3.10.24 Additionally, the vehicular routes within the site will usually provide footways on the side of the carriageway to ensure that pedestrians are separated from commercial vehicles.

Car parking

Residential car parking

3.10.25 The proposals comprise 60 car parking spaces for the residential development. These will be provided within the undercroft car parks of Block A (25 spaces) and B (31 spaces) with the remaining four provided to the south of Block C. This represents a provision of approximately 11% of the total number of residential units. This provision is considered to be low and well below the maximum provision that could be provided in accordance with maximum standards at regional and local levels. This, and the good accessibility of the site, is expected to maximise the use of public transport and other non-car modes of transport.

3.10.26 Of the 60, 35 spaces are to be provided as accessible spaces and the other 25 spaces will be standard spaces. All spaces will be offered to users on short rolling term leases to ensure that they can quickly be recycled. Disabled spaces which are not taken up by blue badge holders will be made available to other occupiers, however Peabody will set aside two unallocated spaces should there be an urgent requirement by a new blue badge holder. The natural recycling of spaces as people move out of the development and return their leased spaces will enable Peabody to maintain a reserve of one/two unallocated bays.

3.10.27 Should additional demand for disabled parking from the proposed residential development arise, then any available standard bays will be first considered for converting to disabled bays. If spaces are not available some of the public car parking spaces will be converted into wheelchair accessible bays for the use of residents. It is envisaged that a Car Park Management Plan will be agreed with LBE prior to occupation of the development and that this will be secured as a planning condition. This will set out in more detail how the residential spaces will be allocated and manged.

3.10.28 Residential occupiers at the development will not be eligible to apply for CPZ permits to park on the surrounding roads, except blue badge holders. This will ensure that the impact that the proposed residential development will have on off-site local parking conditions will be minimal.

3.10.29 Car parking for the residential development will comprise 20% of spaces provided with active electric vehicle charging provisions, with the remaining 80% provided with passive electric vehicle charging provision. This is in accordance with the standards provided in The London Plan.

Non-residential car parking

3.10.30 Car parking will not be allocated to non-residential uses. However, should demand for disabled parking from staff of the non-residential uses arise, then some of the public car parking spaces will be available to lease for the use of disabled members of staff.

Public car parking

3.10.31 The proposed development comprises the reduction and relocation of the existing public car parking spaces. The proposals will comprise the provision of 90 on-site public car parking spaces. Of these, 45 will be located to the east of Block C, 32 to the west of Featherstone Terrace, eight to the south of Block A and five on the access road to Blocks B and C. Of the total public car parking provision, 10 bays will be disabled parking spaces (approximately 11% of the total provision). A tariff would be implemented for the public car parking bays in order to discourage residents who own a car from parking in these locations overnight.

3.10.32 The public short stay parking provision will include electric vehicle charging points which represents 10% of the total parking provision. This increases the current provision from 3 spaces to 9 spaces. It is understood that the Council currently works in partnership with Source London in connection with the operation of the existing provision and it is envisaged that the provision of replacement and additional charging points will be subject of a planning condition to agree the type of chargers to be used (i.e. slow/medium/fast), their location and the provider.

Car clubs

3.10.33 As part of the proposals, one of the parking spaces within the public car park will be leased to a car club operator. This will provide the users of the site, as well as residents and employees in the surrounding area, with an alternative to the use of their private vehicle. If demand for the car club vehicle is high in the future, it

will be possible for a second bay within the public car park to be converted into a car club bay to accommodate the additional demand.

3.10.34 Summarised below is the existing and proposed public parking provision:

Table 3.8 – Public short stay parking provision

Public parking	Total no. of spaces	Disabled bays	Electric vehicle charging point	Car club bays
Existing	150 (incl 15 leased to The Gym Group)	7	3	0
Proposed	90	9	9	1

Cycle parking

3.10.35 The proposed cycle parking provision has been determined based on the minimum cycle parking standards provided in The London Plan (2021) for the residential and commercial uses in terms of both long stay and short stay provisions. The London Plan provides the following cycle parking standards.

Table 3.9 – The London Plan (2021) minimum cycle parking standards

Land use	Cycle parking	
	Long-stay	Short-stay
Non-food retail (above 100sqm)	first 1000 sqm: 1 space per 250 sqm thereafter: 1 space per 1000 sqm (GEA)	first 1000 sqm: 1 space per 125 sqm; thereafter: 1 space per 1000 sqm (GEA)
Office	1 space per 150 sqm (GEA)	first 5,000 sqm: 1 space per 500 sqm thereafter: 1 space per 5,000 sqm (GEA)
Light industry and research and development	1 space per 250 sqm (GEA)	1 space per 1000 sqm (GEA)
Dwellings	1 space per studio or 1 person 1 bedroom dwelling 1.5 spaces per 2 person 1 bedroom dwelling 2 spaces per all other dwellings	5 to 40 dwellings: 2 spaces Thereafter: 1 space per 40 dwellings
Nurseries	1 space per 8 FTE staff + 1 space per 8 students	

3.10.36 The minimum requirement for cycle parking for the residential development is presented below.

Table 3.10 – Minimum cycle parking requirement for residential development

Unit Type	Number of units	Minimum Long-Stay requirement	Minimum Short-stay requirement
1B2P	259	389	20
2B3P	62	124	
2B4P	182	364	
3B4P	2	4	
3B5P	41	82	
3B6P	8	16	
4B	10	20	
Total	**564**	**999**	**20**

3.10.37 The proposed residential development will provide a long-stay cycle parking provision that will exceed the minimum requirements set out above. The proposals will comprise the provision of 1,006 long-stay cycle parking spaces which will be secure and covered. This provision will also include 46 spaces for oversized bicycles. The long-stay residential provision will be provided on the mezzanine level of Block A, the ground floor and first floor of Block B and the ground floor of Block C.

3.10.38 The non-residential uses will be provided with 24 long-stay cycle parking spaces which will be secure and covered. These will be provided in the undercroft of Block A and the undercroft of Block B.

3.10.39 A total of 44 short-stay spaces will be provided with cycle hoops spread across the site.

3.10.40 The proposed cycle parking will be broadly consistent with the LCDS guidance in terms of quality, form and security.

Delivery and servicing arrangements

Block A

3.10.41 The majority of deliveries and servicing associated with Block A will be undertaken on the loading bays located around the perimeter of the block. A turning head will be provided to the north of the block, to allow for delivery and servicing vehicles to turn around and depart via the same route through which they arrived. Deliveries to the commercial units which front onto the pedestrianised route will be undertaken from the rear of the commercial units in the under croft car park. The under croft car park will be designed with 4.65m

headroom clearance to facilitate the maximum size of delivery vehicle which could potentially service the commercial units i.e. 12m rigid HGV.

3.10.42 Refuse will be collected from the residential and commercial refuse stores located around the perimeter of the block, and also from the route through the under croft car park within the building. To collect the residential waste, refuse vehicles will stop adjacent to each residential refuse store (ensuring that the vehicle is located within a 10m distance) and each bin will be wheeled by waste operatives from the store to the vehicle for collection. This is indicatively illustrated in drawing 31051/AC/037_B.

3.10.43 The swept path analysis which illustrates the HGV movements associated with Block A is illustrated in drawing 31051/AC/033_B.

Block B

3.10.44 The majority of servicing and refuse collection activities for Block B will take place from the access road along the northern frontage of the building, with the exception for the commercial units fronting onto the pedestrianised street to the west which will primarily be serviced from the rear of the units within the under croft car park (of Block B). HGVs of up to 8m in length can access the under croft car park. However, if larger vehicles are to perform deliveries to the commercial units to the west of Block B, they will stop within the loading bay located to the north of the block with goods trolleyed to the respective units. This is illustrated in drawing 31051/AC/035_B.

3.10.45 To collect the residential waste, refuse vehicles will stop either along the access road or adjacent to the loading bay to the north of Block B. The refuse collection vehicle will stop adjacent to each residential refuse store (ensuring that the vehicle is located within a 10m distance) and each bin will be wheeled by waste operatives from the store to the vehicle for collection. However, there is a refuse waste store located at the southern end of Block B and at a further distance than 10m from the loading bay to the north of Block B (where the refuse vehicle will stop). In this occasion, the bins will be wheeled by staff of the estate management team to the loading bay and will be stored within the bay for collection. The refuse vehicle will stop adjacent to the bay on collection days. The staff members of the estate management team will ensure that the bins will not impact the movement of pedestrians. After the collection, the bins will be

returned to their original location by staff members of the estate management team. This is illustrated in drawing 31051/AC/037_B.

3.10.46 The ground floor commercial units in the south-east corner of Block B will be serviced from a loading bay that will be located on the pedestrian link that connects Blocks A and B to The Green. The loading bay will be located on the southern side of the link (alongside the flank wall of 102 The Green) and will be accessible from the service route to the rear of commercial properties 70 to 98 The Green (located to the east of Block B). This is illustrated in drawing 31051/AC/036_B.

3.10.47 The pedestrian link into the development site from The Green will be a shared surface between The Green and the service road behind 70-98 The Green. Vehicle access will be one-way from the service road to The Green and access will be controlled will retractable bollards where the service road joins the shared surface area. Retractable bollards will also be provided where the shared surface area meets the footway on The Green.

Block C

3.10.48 All deliveries associated with Block C will be undertaken on the loading bay located to the south of the block. This is illustrated in drawing 31051/AC/035_B. With regard to waste collection, the waste bins will be wheeled on collection days to the refuse vehicle which will be parked adjacent to the loading bay to the south of the block. The vehicle will be located within a 10-15m distance from the location of the store of Block C. After the collection, the bins will be returned to their original location. This is illustrated in drawing 31051/AC/037_B.

70 to 98 The Green

3.10.49 The ability to service the commercial premises at 70-98 The Green will be improved through the introduction of a one-way arrangement whereby vehicles enter from the northern end and exit via the south. With the removal of commercial properties to the west of the service road this will reducing traffic movements which will make the use of the route easier for other users, esp those who may have previously serviced properties from The Green.

Industrial estate

3.10.50 The industrial estate located to the west of the site will continue to be serviced as per the existing situation. A 16.5m articulated HGV accessing and egressing the estate is illustrated in drawing 31051/AC/034_B.

Waste storage arrangements and locations

3.10.51 The proposed residential development will provide a total of 45 Eurobins for Block A, 36 Eurobins for Block B and 20 Eurobins for Block C.

3.10.52 The proposed non-residential uses will provide a total of four Eurobins for Block A, eight Eurobins for Block B and five Eurobins for Block C.

3.10.53 The residential and non-residential refuse will be segregated and provided in separate storage facilities. The location of each waste storage facility for the residential and non-residential uses and the respective stopping location of the refuse collection vehicle are illustrated in drawing 31051/AC/037_B.

Delivery and servicing trip generation

C3 residential

3.10.54 The servicing demands of the residential units have been based on servicing surveys on four weekdays at a residential scheme in Victoria, London (Waterside Development), which is a mixed tenure scheme of circa 600 apartments. The trips recorded include the delivery of goods and also contractors undertaking work at the development. This scheme is deemed suitable for this trip generation assessment as it comprises a similar number of residential units to the proposed residential development. Additionally, the use of this scheme would ensure a robust assessment as it includes the trips associated with contractors undertaking work at the development, rather than just the trips associated with the residents. The daily servicing trip rate derived from the survey averaged 0.09 trips per unit. These were spread throughout the day between 07:30 and 19:00 with no discernible peak period. The split of the vehicle types used for servicing were:

3% by motorcycle

80% by car or van

10% by small rigid

4% by large rigid

3% by PT, cycle and walking modes

3.10.55 Based on the above modal split, the 564 residential units are expected to generate up to 51 deliveries between 07:30 and 19:00. Of these 51, 41 are expected to be undertaken by a car or van, five by small rigid vehicles, two by large rigid vehicles and three by an alternative mode (i.e. motorcycle, public transport, bicycle or walking). The delivery and servicing trips are spread throughout the day between 07:30 and 19:00 which would equate to approximately four deliveries per hour.

B1 office

3.10.56 A daily servicing trip rate of 0.28 per 100m^2 has been assumed for the proposed B1 office. This value was taken from the comprehensive set of delivery vehicle survey data provided in the research paper 'Business, goods and service vehicle trip generation at office developments' produced by JMP Consultants. The trip rate takes into account Central London sites only.

3.10.57 Based on the above trip rate, it is estimated that the proposed B1 office would generate one delivery throughout a typical day. This delivery is typically expected to be undertaken by a car or LGV, with occasional deliveries being undertaken in larger vehicles.

3.10.58 For this use, deliveries and refuse collections will be arranged between the hours of 08:00 to 18:00 on Monday to Friday, 09:00 to 18:00 on Saturdays and at no time on Sundays and Public/Bank Holidays.

B1b/B1c creative workshop/studio

3.10.59 The delivery and servicing trip generation associated with the proposed workshops has been determined based on trip rates obtained from comparable sites within London from the TRICS database. The sites selected are the ones presented (in more detail) in Chapter 5.

3.10.60 The sites provided a daily trip rate of 0.161 OGVs per 100m^2. Based on this, it is estimated that the proposed workshops would generate three deliveries on a typical day. These are expected to be undertaken by HGVs.

3.10.61 For this use, deliveries and refuse collections will be arranged between the hours of 08:00 to 18:00 on Monday to Friday, 09:00 to 18:00 on Saturdays and at no time on Sundays and Public/Bank Holidays.

Retail (A1/A3)

3.10.62 The delivery and servicing trip generation associated with the proposed retail has been determined based on trip rates obtained from comparable sites within London from the TRICS database. The sites selected are the ones presented (in more detail) in Chapter 5.

3.10.63 The sites provided a daily trip rate of 0.167 OGVs per $100m^2$. Based on this, it is estimated that the proposed retail would generate one delivery on a typical day. This is expected to be undertaken by a HGV.

3.10.64 For this use, deliveries and refuse collections will be arranged between the hours of 08:00 to 18:00 on Monday to Friday, 09:00 to 18:00 on Saturdays and at no time on Sundays and Public/Bank Holidays.

Nursery

3.10.65 It has been assumed that the proposed nursery will generate one delivery throughout a typical day.

3.10.66 For this use, deliveries and refuse collections will be arranged between the hours of 08:00 to 18:00 on Monday to Friday, 09:00 to 18:00 on Saturdays and at no time on Sundays and Public/Bank Holidays.

Combined

3.10.67 Based on the above, the proposed development is expected to generate approximately 57 deliveries on a typical day. These are expected to be spread throughout the day, over a 10-12 hour period, which would equate to approximately 4-5 deliveries per hour.

On-street and off-street impacts

3.10.68 It is anticipated that the proposed development will generate 4-5 deliveries (generating 8-10 movements) per hour on a typical day. The ATC flows presented in Table 3.3 indicated a total of 330 and 329 on Featherstone Road

during the AM and PM peaks respectively, flows of 853 and 615 on The Green during the AM and PM peaks respectively and flows of 560 and 472 on King Street during the AM and PM peaks respectively. Based on these flows, the impacts that the proposed deliveries would generate on the local highway network are expected to be low.

3.10.69 The dwell time of delivery vehicles within the site is expected to be short and, hence, it is not anticipated that two vehicles will perform deliveries at the same time. However, the proposed scheme can accommodate multiple delivery vehicles at the same time.

Servicing access during phased implementation of development

3.10.70 The current plans for a phased construction and occupation of the development with Block A built and occupied in Phase 1, Block B in Phase 2, and Block C in Phase 3, is not expected to have an adverse impact on servicing and vehicular access strategy of the development as it is occupied in phases.

3.10.71 When Block A in Phase 1 is complete and occupied its access arrangements via Dominion Road and Featherstone Terrace will be unaffected by any works to Phase 2 and 3.

3.10.72 When Block B in Phase 2 is complete and occupied its access arrangements for servicing and residential parking via the new access from The Green will be shared with construction vehicles serving the Phase 3 construction of Block C. Measures will be developed as part of the Construction Logistic Plan to minimise the risk of any conflicts occurring with Phase 3 construction traffic and vehicle/cycle/pedestrian movements associated the occupied Block B.

Healthy Streets Indicators

3.10.73 The proposed development will be permeable with pedestrians able to walk through the site from the access points on Featherstone Terrace / Dominion Road and The Green. The site will also be accessible to the public who will be able to access the landscaped area located at the centre of the site as well as the proposed commercial facilities. This is in line with the Healthy Streets Indicators as described below:

- Shade and shelter – the landscaped area at the centre of the site and the on-site retail facilities are provided can present a location for the members of the public to take shade and shelter. Additional shade would also be provided by the residential blocks.

- Places to stop and rest – the landscaped area at the centre of the site and the on-site retail facilities are provided can present a location for the members of the public to stop and rest.

- Not too noisy – levels of traffic within the site are not anticipated to be high on hourly basis. This would ensure that the site is not too noisy.

- People choose to walk, cycle and use public transport – the public realm and the commercial facilities within the site is expected to attract locals who are likely to choose to walk. The site is located within short distance of cycle routes, bus stops and Southall Station which is expected to influence travel behaviour towards active and sustainable forms of transport.

- People feel safe – the users of the site should feel safe given the relatively low level of traffic expected.

- Things to see and do – the proposals will comprise a number of workshops and retail facilities which are expected to attract locals or users within the area. Additionally, the provision of the public realm could also represent a destination for the public.

- People feel relaxed – the users of the site should feel relaxed given the relatively low level of traffic expected.

- Clean air – the development is expected to generate relatively low levels of traffic which are not expected to impact air quality conditions substantially. Additionally, the proposals comprise the provision of cycle parking for all uses which is expected the users of the site (and visitors) to cycle rather than driving which will contribute to cleaner air.

4 ACTIVE TRAVEL ZONE

4.1.1 The Healthy Streets Approach is a system of policies and strategies to deliver a healthier, more inclusive city where people choose to walk, cycle and use public transport. The Active Travel Zone (ATZ) assessment forms part of Healthy Streets and aims at assessing pedestrian and cycle routes from the site to key destinations within the local area. This assessment supersedes the PERS and CERS assessments that were originally undertaken to assess pedestrian and cycle conditions.

4.1.2 Figure 4 illustrates the 20-minute cycle ATZ surrounding the site, based of TfL's WebCAT tool. This map identifies all the potential key destinations in the ATZ, including LU stations, rail stations, hospitals, colleges / universities, schools and green spaces are also shown within the ATZ in relation to the Proposed Development.

Key destinations classification

4.1.3 Table 4.1 classifies the key destinations from low to high priority in terms of active travel and the likelihood of users of the Proposed Development travelling to other key destinations from the Proposed Development.

Table 4.1 – Classification of Key Destinations in the ATZ

Key Destination	Priority
Town Centres / High Street	High
LU / National Rail Station	High
Bus Stops	High
Strategic Cycle Network	High
Hospitals / Medical Centres	High
Green Space	Medium/Low
School	High/Medium
College / University	Medium/Low

4.1.4 The key destinations have been used to inform Figure 5 which shows the ATZ at neighbourhood scale showing these key facilities.

4.2 Neighbourhood Active Travel Zone

4.2.1 Based on the priority of key destinations (Table 4.1) within the ATZ, the Neighbourhood Active Travel Zone shown in Figure 5 illustrates the routes to the nearest bus stops and rail station together with clusters of collisions in the area. These key destinations include:

- Southall Station
- The nearest bus stops
- The nearest signed/marked cycle routes
- The nearest local amenities (shops, medical centres, schools etc)
- Accident clusters which led to serious injuries in the local area

4.2.2 The majority of the above amenities are located in close vicinity to the site. However, the scope of the assessment extends to up to 1.5km to include the nearest signed/marked cycle route which is located on The Broadway, to the north of the site.

Casualty analysis

4.2.3 The Mayor's Transport Strategy is committed to Vision Zero to end deaths and serious injuries on London roads and transport networks. The strategy sets out the goal that, by 2041, all deaths and serious injuries would be eliminated from London's road and transport network.

4.2.4 Casualty data recorded within the vicinity of the proposed site for the five-year period from December 2015 to December 2018 has been obtained from TfL. A review of the casualties has been undertaken to determine clusters of "killed/seriously injured" (KSI) casualties.

4.2.5 During this period, there were a total of 16 KSIs within the vicinity of the site, all of which were classified as serious.

4.2.6 Clusters of KSI casualties along key routes in the vicinity of the site (ATZ Neighbourhood Zone) have been illustrated in Figure 5. A cluster is defined as one or more fatal casualties and two or more serious casualties. The locations of the casualty clusters are set out in Table 4.2. A map illustrating the accidents and details of the accidents that have occurred in the local area is provided in **Appendix C**.

Table 4.2 – Locations of casualty clusters in ATZ neighbourhood zone

Location	Number of KSIs
Norwood Road / King Street / Montague Waye / Adelaide Road	3 serious
Featherstone Road / Dudley Road	2 serious
King Street / Havelock Road	2 serious

4.2.7 The above clusters indicate that there have been accidents that caused seven serious casualties at local junctions over a three year period. This indicates an average of 2-3 casualties every year. Additionally, there have not been any fatal casualties in the vicinity of the site.

4.2.8 The junctions identified in Table 4.2 can be classified as locations with safety issues. In order to determine physical measures to improve safety issues at these locations, the following actions could be undertaken:

- Liaise with LBE's Road Safety officer to determine which junction(s) should be prioritised for physical improvements.
- Undertake traffic surveys at the junction(s) to determine pedestrian, cyclist and traffic flows / turning movements. Undertake vehicle speed surveys.
- Assess the results of the surveys to determine the reasons for which the accidents occur.
- Undertake a design assessment of the junction(s) to determine feasible physical improvements to improve safety conditions.

4.2.9 The above process is likely to highlight possible improvement measures such as making changes to signal phasing, provision of warning signage, enhanced pedestrian crossing facilities, toucan crossing facilities etc.

4.2.10 Figures 6 and 7 show the photographic records of the journeys from the key locations identified in the previous paragraphs (Table 4.1 and Figure 5). As per the Healthy Streets Transport Assessment Guidance, following each figure commentary on the 'worst' part of each journey is provided using the Healthy Streets indicators as the structure, including description of factors that could improve the environment in this location.

Routes to local bus stops and amenities (i.e. schools, medical centre, shops)

4.2.11 The routes from the site to the local bus stops and amenities are illustrated in Figure 6. The footways of the routes are generally in good condition which encourage walking as a mode of travel. The footways on The Green are generally wide and spacious although the width of the footways on Featherstone Road is relatively narrower.

4.2.12 The images that are considered to reflect the worst part of the journey within the local area are 9, 11 and 13. These image show evidence of neglect (image 9), a lack of a crossing facility at the junction between Featherstone Road / Hartington Road / Dudley Road (image 11) and cracked slabs on the eastern footway of Featherstone Road (image 13). These conditions are considered to be low quality compared to the rest of the routes.

4.2.13 These are considered to be localised issues and it is not anticipated to deter people from walking from the site through the local area. It is acknowledged that there are issues for pedestrians at other points along these route, such as obstruction by street furniture (i.e. trees, bollards, bins etc.). The images (and the remainder of the routes) are reviewed against healthy streets indicators in Tables 4.3.

Table 4.3 – Comments on images 9, 11, 13 of Figure 6

Healthy Streets Indicator	Observations	Areas for Improvements
Shade and shelter	The residential properties nearby will provide some shade and shelter from high winds.	There is no area for improvement.
Places to stop and rest	There are no places to stop and rest at these location. However, there are places to stop and rest along The Green and King Street.	There is little area for improvement as these are unattractive places for seating and would obstruct pedestrians.
Not too noisy	There is not too much noise as people do not have to raise their voices to hold a conversation.	There is no area for improvement.
People choose to walk, cycle and use public transport	Pedestrian footways are provided on both sides of the carriageway on Featherstone Road, The Green and King Street which encourage walking. The Green, Featherstone Road and King Street are recommended routes and can be used by cyclists to access a network of marked / signed routes. There are also a number of bus stops in the local area which promote sustainable transport.	The footways of Featherstone Road could benefit from maintenance to improve their appearance and cleanliness. A crossing facility could also be provided at the junction between Featherstone Road, Hartington Road and Dudley Road.
People feel safe	This location is in the vicinity of numerous residential units which could provide aid in the case of criminal activities. There are also a number of shops located on Featherstone Road which provide active frontages which should	The proposed development will generate additional pedestrian and cyclist movement and activity in the area which will increase the amount of natural surveillance.

	discourage criminal behavior. The footways at this location are provided with regular street lighting which makes the local area feel safer at night. Furthermore, the routes located on The Green and King Street are in a public area with high pedestrian footfall, traffic and local amenities. It is highly unlikely that criminal activity will occur at this location. Also, the footways on The Green are also spacious which ensures that pedestrians will not be required to walk close to the carriageway.	A crossing facility could also be provided at the junction between Featherstone Road, Hartington Road and Dudley Road.
Things to see and do	The Green and King Street provide numerous active frontages along their length.	There is no area for improvement.
People feel relaxed	The low pedestrian and cycle flows at these locations make it feel quiet and relaxed.	There is no area for improvement.
Clean air	The Green, Featherstone Road and King Street are recommended routes and can be used by cyclists to access a network of marked / signed routes. There are also a number of bus stops in the local area which promote sustainable transport.	There is no area for improvement.

Route to Southall Station and marked / signed cycle route

4.2.14 The route from the site to Southall Station and the nearest local cycle network of signed / marked cycle route (The Broadway) is illustrated in Figure 7. The image that is considered to reflect the worst part of the journey is 7. The image shows cracked paving slabs on the A3005 at the roundabout with The Green (to the south of Southall Station). These conditions are considered to be low quality compared to the rest of the route. The image (and the remainder of the route) is reviewed against healthy streets indicators in Tables 4.4.

Table 4.4 – Comments on image 7 of Figure 8

Healthy Streets Indicator	Observations	Areas for Improvements
Shade and shelter	The commercial properties located along the route will provide some shade and shelter from high winds. There are also bus stops which provide seating facilities and shelter along the route.	There is no area for improvement.
Places to stop and rest	There are places to stop and rest along the route. These are provided in the form of seating facilities at bus stops or benches provided on South Road.	There is no area for improvement.
Not too noisy	Although South Road is a trafficked link, people can still converse without raising their voices.	There is no area for improvement.
People choose to walk, cycle and use public transport	Spacious footways are provided on both sides of the carriageway on South Road which encourage walking. There are also a number of bus stops along the route which promote sustainable transport. Furthermore, the route provides access to Southall Station.	The footways of the A3005 could benefit from maintenance to improve their appearance and cleanliness.
People feel safe	There is street lighting along South Road which helps people feel safe using this route at night. Furthermore, the route is located in a public area with high pedestrian footfall, traffic and local amenities. It is highly unlikely that criminal activity will occur at this location.	There is no area for improvement.
Things to see and do	South Road provides numerous active frontages along its length.	There is no area for improvement.
People feel relaxed	The footways on both sides of South Road are spacious and allow for comfortable and relaxed movement for pedestrians.	There is no area for improvement.
Clean air	There are a number of bus stops on this route which promote sustainable transport.	There is no area for improvement.

Cumulative schemes

4.2.15 The nearest scheme to the proposed development is the Southall Working Man's Club which comprised the redevelopment of the site to provide a new club at ground level, 34 flats on upper floors and 10 parking spaces. The proposals will improve Dominion Road and Featherstone Terrace.

4.2.16 Additionally, the redevelopment of the Southall Gas Works site, located to the north of the proposed development, will comprise the provision of new bus stops and high permeability which is expected to improve access to Southall Station. This would minimise the increase in car trips in favour of sustainable transport.

4.2.17 The other local schemes have also been considered as part of the cumulative assessment include:

- Havelock Estate – development to provide 922 residential units and commercial space

- Malgavita Works – proposed car-free redevelopment to provide 302 residential units and commercial space
- Former Honda Garage – proposed car-free redevelopment of the site to provide 170 residential units
- Former Esso Petrol Station – car-free residential-led mixed use development comprising 166 units
- Arches Business Centre – proposed development to provide 176 residential units, a hotel and commercial space. This comprised a reduction in car parking from 49 to 23
- Kings House – redevelopment of the site to provide a car-free development comprising 77 residential units and commercial space
- Middlesex Business Centre – redevelopment of the site to provide 2,083 residential unit, a hotel and flexible commercial space

4.2.18 The above schemes are located in the local area within walking distance of the site and it is expected that their cumulative impacts will essentially involve an increase in the number of pedestrian and cycling trips to the high street shops provided along The Green and King Street. The mitigation and improvement measures of these developments are primarily around those sites.

4.2.19 However, the proposed development situated off The Green will effectively expand the district centre providing a good public realm environment for pedestrians and cyclists arising from the new developments in the surrounding area. In most cases those developments will also provide enhanced public realm areas and amenities for new residents, which will also benefit people in the surrounding area.

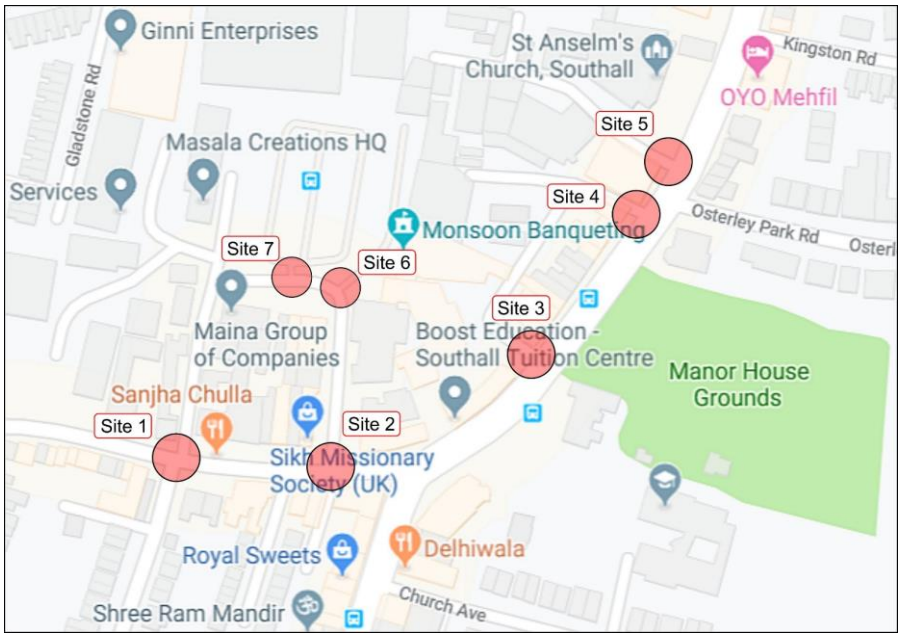
5 NETWORK IMPACT

5.1.1 This chapter outlines the vehicle trip generation associated with the existing site and the proposed development. It also presents the multimodal trip generation associated with the proposals and the impacts it would have on the local network.

5.2 Vehicle trip generation – Existing site

5.2.1 Automatic traffic counters (ATCs) were installed at the main access points into the site and recorded inbound and outbound movements on Tuesday 25th June 2019. The locations of the ATCs are shown in Inset 5.

Inset 5: ATC locations to site's access



5.2.2 The counters recorded the inbound and outbound movement from the private and public car parks, as well as from three access points from The Green. Sites 3 and 4 facilitate access to the rear of commercial properties 70 to 98 The Green whereas 5 facilitates access to the car body shop located at the northern end of the site. Site 6 facilitates access to the private car park for the Dominion Centre and the library whereas Site 7 facilitates access to the public car park.

5.2.3 A summary of the total vehicle trip generation to / from the existing site during peak times is presented in Table 5.1. Given that the proposals will comprise the retention of some of the public car park, it is assumed that the vehicle trips to the public car park (Site 7) will remain as part of the proposed development.

Hence, the total number of vehicles for the existing site has been calculated with and without the number of vehicles from Site 7.

Table 5.1 – Existing site – Vehicle trip generation

Location	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Access to existing site commercial uses (Site 3)	0	0	0	1	3	4
Access to existing site commercial uses (Site 4)	5	1	6	6	8	14
Access to existing site commercial uses (Site 5)	9	0	9	12	15	27
Access to Dominion Centre car park (Site 6)	4	0	4	5	7	12
Access to public car park (Site 7)	12	3	15	24	23	47
Total	**30**	**4**	**34**	**48**	**56**	**104**
Total without Site 7	**18**	**1**	**19**	**24**	**30**	**54**

5.2.4 Table 5.1 indicates that the existing site generates 34 and 104 vehicle movements during the AM and PM peak hours, respectively. With the exclusion of Site 7, the existing site would generate 19 and 54 vehicle movements during the AM and PM peak hours respectively.

5.2.5 Some of the vehicle movements recorded during the survey are expected to be associated with the banqueting events that occur at the site. The event venues will be removed as part of the proposals which would result in the reduction of these vehicle movements.

5.3 Multimodal trip generation – Proposed development

C3 residential

5.3.1 To calculate the number of vehicle and person trips generated from the proposed residential development, the TRICS database has been reviewed to obtain trip rates for the morning and evening peak hours. Details of the selected surveys are presented in Table 5.2 below and in **Appendix D** of this report.

Table 5.2 - TRICS sites used to derive vehicle and person trips for the proposed residential development

TRICS Site	Area	Location	Units
BT-03-C-02	Wembley	Suburban Area	472
IS-03-C-07	Islington	Edge of Town Centre	185

5.3.2 The above sites were selected because they were considered to be the most comparable to the proposed units in terms of location.

5.3.3 The trip rates have been multiplied by the total number of proposed residential units (564) in the table below. The number of vehicle trips was then subtracted from the person trips to determine the number of non-vehicle trips associated with the residential development.

Table 5.3 – Vehicle and person trip rates and trips for the residential development

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Vehicle Trip Rates	0.023	0.026	0.049	0.038	0.020	0.058
Vehicle Trips	13	15	28	21	11	32
Person Trip Rates	0.064	0.327	0.391	0.213	0.129	0.342
Person Trips	36	184	220	120	73	193
Non-Vehicle Trips	**23**	**169**	**192**	**99**	**62**	**161**

5.3.4 It is expected the proposed residential development would generate 28 and 32 vehicle trips during the AM and PM peak hours, respectively. Table 5.3 also indicates that the proposed residential development would generate 192 and 161 non-vehicle trips during the AM and PM peak hours, respectively.

5.3.5 To determine the multimodal trip generation associated with the proposed residential development, the non-vehicle trips presented in the above table have been distributed by mode share using the 2011 Census "Method of travel to work" data for the Ealing 037B and 037G Lower Layer Super Output Areas (where the site is located). The modal split, as presented in Table 5.4, excludes the "car or van" mode share with the remaining modes were re-distributed pro-rata. The modal split also excludes categories such as "working from home" and "unemployed".

Table 5.4 – Proposed multi-modal non-vehicle residential trips

Mode	Mode Split %	AM Peak (0800-0900)			PM Peak (1700-1800)		
		In	Out	Total	In	Out	Total
Underground	9%	2	15	17	9	6	15
Train	9%	2	15	17	9	6	15
Bus	56%	13	95	108	55	34	89
Taxi	0%	0	0	0	0	0	0
Motorcycle	0%	0	0	0	0	0	0
Passenger	6%	1	10	11	6	4	10
Bicycle	2%	1	3	4	2	1	3
On foot	17%	4	29	33	17	10	27
Other	1%	0	2	2	1	1	2
Total	100%	23	169	192	99	62	161

B1a office

5.3.6 To calculate the number of vehicle and person trips generated from the proposed office development, the TRICS database has been reviewed to obtain trip rates for the morning and evening peak hours. Details of the selected surveys are presented in Table 5.5 below and in **Appendix D** of this report.

Table 5.5 - TRICS sites used to derive vehicle trips for the proposed office development

TRICS Site	Area	Location	GFA (m^2)	PTAL
BT-02-A-03	Wembley	Suburban Area	920	6a
WH-02-A-02	Battersea	Town Centre	1,215	5

5.3.7 The above sites were selected because they were considered to be the most comparable to the proposed in terms of size and public transport accessibility.

5.3.8 The trip rates have been multiplied by the total number of proposed office floor space (150.1m^2) in the table below. The number of vehicle trips was then subtracted from the person trips to determine the number of non-vehicle trips associated with the office development.

Table 5.6 – Vehicle and person trip rates and trips for the office development

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Vehicle Trip Rates	0.375	0.094	0.469	0.187	0.468	0.655
Vehicle Trips	1	0	1	0	1	1
Person Trip Rates	3.607	0.187	3.794	0.562	3.888	4.450
Person Trips	5	0	5	1	6	7
Non-Vehicle Trips	**4**	**0**	**4**	**1**	**5**	**6**

5.3.9 It is expected the proposed office development would generate one vehicle trip during the AM and PM peak hours. Table 5.6 also indicates that the proposed residential development would generate four and six non-vehicle trips during the AM and PM peak hours, respectively.

5.3.10 To determine the multimodal trip generation associated with the proposed office development, the non-vehicle trips presented in the above table have been distributed by mode share using the 2011 Census Workday Population "Method of travel to work" data for the Ealing 037 Mid Layer Super Output Area (where the site is located). The modal split, as presented in Table 5.7, excludes the "car or van" mode share with the remaining modes were re-distributed pro-rata. The

modal split also excludes categories such as "working from home" and "unemployed".

Table 5.7 – Proposed multi-modal non-vehicle office trips

Mode	Mode Split %	AM Peak (0800-0900)			PM Peak (1700-1800)		
		In	Out	Total	In	Out	Total
Underground	10%	1	0	1	0	1	1
Train	9%	0	0	0	0	1	1
Bus	46%	2	0	2	1	2	3
Taxi	0%	0	0	0	0	0	0
Motorcycle	1%	0	0	0	0	0	0
Passenger	7%	0	0	0	0	0	0
Bicycle	5%	0	0	0	0	0	0
On foot	21%	1	0	1	0	1	1
Other	1%	0	0	0	0	0	0
Total	100%	4	0	4	1	5	6

B1b/B1c creative workshops/studios

5.3.11 To calculate the number of vehicle and person trips generated from the proposed workshops, the TRICS database has been reviewed to obtain trip rates for the morning and evening peak hours. Details of the selected survey are presented in Table 5.8 below and in **Appendix D** of this report.

Table 5.8 - TRICS sites used to derive vehicle trips for the proposed workshops

TRICS Site	Area	Location	GFA (m^2)
BT-02-C-01	Kilburn	Neighborhood Centre	620

5.3.12 The multimodal trip rates obtained from the above site are presented in Table 5.9 below.

Table 5.9 – Proposed workshops multimodal trip rates

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle (driver)	0.323	0.000	0.323	0.000	0.484	0.484
Vehicle Occupants	0.323	0.000	0.323	0.000	1.129	1.129
Vehicle Occupants (excluding driver)	0.000	0.000	0.000	0.000	0.645	0.645
Pedestrians	0.323	0.161	0.484	0.000	0.161	0.161
Public Transport	0.000	0.000	0.000	0.000	0.161	0.161
Total (excluding driver)	0.646	0.161	0.807	0.000	1.451	1.451

5.3.1 The above trip rates have been multiplied by the total proposed floor space of the workshops (1,951.6m^2) in Table 5.10. The number of vehicle occupants has been estimated with and without the driver.

Table 5.10 – Proposed workshops multimodal trips

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle	6	0	6	0	9	9
Vehicle Occupants	6	0	6	0	22	22
Vehicle Occupants (excluding the driver)	0	0	0	0	13	13
Pedestrians	6	3	9	0	3	3
Public Transport	0	0	0	0	3	3
Total (excluding the driver)	12	3	15	0	28	28

5.3.2 The above table indicates that the proposed workshops would generate six vehicle trips during the AM peak and nine vehicle trips during the PM peak.

5.3.3 It is also estimated that four trips will be undertaken by public transport in the PM peak. Given that the TRICS survey that was utilised for this assessment does not categorise the mode of public transport (i.e. bus, London Underground or National Rail), it has been assumed that these trips will be undertaken by bus as this is the dominant mode of public transport for the proposed residential and office developments (as highlighted in Tables 5.4 and 5.7).

Retail (A1/A3)

5.3.4 To calculate the number of trips generated from the proposed retail use, the TRICS database has been reviewed to obtain trip rates for the morning and evening peak hours. Details of the selected survey are presented in Table 5.11 below and in **Appendix D** of this report.

Table 5.11 - TRICS sites used to derive trips for the proposed retail

TRICS Site	Area	Location	GFA (m^2)
WH-01-G-01	Wandsworth	Edge of Town Centre	600

5.3.5 The multimodal trip rates obtained from the above site are presented in Table 5.12. The proposed retail element will not comprise on-site car parking and the primary new vehicle trips associated with this element of the development will be deliveries. Given that deliveries are unlikely to be undertaken during peak hours, the retail element has been excluded from this trip generation assessment. Customer vehicle trips to the retail units are likely to form part of

combined trips whereby existing people driving to the high street make a visit to the new retail units. Hence, the retail units are not expected to generate new vehicle trips associated with customers. The morning peak has also been excluded from the assessment as the surveyed site opened at 10:00 and, therefore, did not generate trips beforehand.

Table 5.12 – Proposed retail trip rates

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle Occupants	0.000	0.000	0.000	0.833	0.833	1.666
Pedestrians	0.000	0.000	0.000	0.500	0.500	1.000
Total	0.000	0.000	0.000	1.333	1.333	2.666

5.3.6 The above trip rates have been multiplied by the proposed floor area of the retail use (400.3m^2) to determine the multimodal trip generation. This is set in Table 5.13 below.

Table 5.13 – Proposed retail non-vehicle trips

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle Occupants	0	0	0	3	3	6
Pedestrians	0	0	0	2	2	4
Total	0	0	0	5	5	10

D1 nursery

5.3.7 To calculate the number of trips generated from the proposed nursery use, the TRICS database has been reviewed to obtain trip rates for the morning and evening peak hours. Details of the selected survey are presented in Table 5.14 below and in **Appendix D** of this report.

Table 5.14 - TRICS sites used to derive trips for the proposed nursery

TRICS Site	Area	Location	GFA (m^2)
ES-04-D-01	Brighton	Neighborhood Centre	185

5.3.8 Site ES-04-D-01 is located in Brighton and has a GFA of 185m^2 and was selected due to the absence of nursery sites in London and because it has a similar GFA to the nursery of the proposed development.

5.3.9 The multimodal trip rates (which exclude vehicle trip rates) are shown in Table 5.15.

Table 5.15 – Proposed nursery trip rates

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle	7.027	7.027	14.054	3.243	3.784	7.027
Vehicle Occupants	14.054	7.027	21.081	3.243	8.108	11.351
Vehicle Occupants (excluding driver)	7.027	0.000	7.027	0.000	4.324	4.324
Pedestrians	0.000	0.000	0.000	2.703	2.162	4.865
Bus	0.000	1.081	1.081	0.000	0.000	0.000
Total (excluding driver)	14.054	8.108	22.162	5.946	10.27	16.216

5.3.10 The above trip rates have been multiplied by the proposed floor area of the nursery (420.7m^2) to determine the multimodal trip generation. This is set in Table 5.16 below.

Table 5.16 – Proposed nursery multimodal trips

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle	30	30	60	14	16	30
Vehicle Occupants	59	30	89	14	34	48
Vehicle Occupants (excluding the driver)	30	0	30	0	18	18
Pedestrians	0	0	0	11	9	20
Bus	0	5	5	0	0	0
Total (excluding the driver)	60	35	95	25	43	68

5.3.11 Table 5.16 indicates that the proposed nursery would generate 60 vehicle movements during the AM peak and 30 vehicle movements during the PM peak. These flows are considered to be excessive given that the majority of trips to the nursery are expected to be undertaken by parents and pupils located within the on-site residential development. The majority of parents are expected to drop the pupils at the nursery in the morning before walking to Southall Station to travel to work. In the afternoon, parents are expected to pick up the pupils when returning from work. To account for this expected behaviour, the number of vehicle and vehicle occupant trips during peak times has been halved and redistributed as 'Pedestrian' trips. This is summarised in Table 5.17.

Table 5.17 – Proposed nursery amended multimodal trips

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Vehicle	15	15	30	7	8	15
Vehicle Occupants	30	15	45	7	17	24
Vehicle Occupants (excluding the driver)	15	0	15	0	9	9
Pedestrians	30	15	45	18	26	44
Bus	0	5	5	0	0	0
Total (excluding the driver)	60	35	95	25	43	68

Combined proposed vehicle trip generation

5.3.12 The vehicle trip generation for the residential development and non-residential uses have been combined in Table 5.18 to determine the total vehicle trip generation of the proposed development.

Table 5.18 – Vehicle trips for the proposed development

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Vehicle Trips	35	30	65	29	29	58

5.3.13 It is expected the proposed development would generate 65 and 58 vehicle trips during the AM and PM peak hours, respectively.

Net impact assessment – Vehicle Trip Generation

5.3.14 The net change in trips based on the existing site (Table 5.1) and the proposed scheme (Table 5.18) is set out in the following table. This net change excludes the number of vehicle trips to the public car park (Site 7 in Table 5.1) which will continue to be undertaken as part of the proposals.

Table 5.19 – Net change in vehicle trips

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Vehicle Trips	+17	+29	+46	+5	-1	+4

5.3.15 Table 5.19 shows that the proposals will result in an increase of 46 vehicle trips during the AM peak and four vehicles during the PM peak compared to the existing site.

Impact on local highway network

5.3.16 The proposed development is predicted to generate 65 two-way vehicle trips during the AM peak and 58 two-way car trips during the PM peak. Additionally, the redevelopment will also comprise movements associated with the existing Site 7 which will partially remain as part of the proposals.

5.3.17 The proposals would result in an increase of 46 and four trips during the AM and PM peaks when compared to the existing site. These trips have been distributed onto the highway network based on the turning movements from the traffic surveys undertaken to inform this assessment. This accounts for the vehicle flows generated by the proposals as well as the removal of flows associated with the existing site (excluding the flows associated with the public car park i.e. Site 7).

5.3.18 Table 5.20 shows the predicted effect these trips would have on the local highway network during the AM and PM peak for the predicted year of opening (2026). The table illustrates the future baseline for the year 2026, which was calculated by applying growth factors to the flows presented in Table 3.3. Additionally, the predicted flows from Southall Gasworks have also been added to the baseline flows.

Table 5.20 – Effect of Proposed Development Trips on Future Baseline Traffic Flows

Location	Future Baseline (2026)		Future Baseline + Cumulative Schemes		Future Baseline (with Cumulative) + Proposed Development – Existing Flows		Percentage Difference	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Featherstone Road	355	354	362	360	370	345	+2.2 %	-4.2%
The Green	917	661	1,021	875	1,046	889	+2.4 %	+1.6 %
King Street	602	507	706	721	731	735	+3.5 %	+1.9 %

5.3.19 Table 5.20 shows that the largest increases in traffic flows during the peak hours would take place on King Street with flows increasing by 3.5% during the AM peak and by 1.9% during the PM peak. There is also an increase of 2.2% and a decrease of 4.2% on Featherstone Road and increases of 2.4% and 1.6% on The Green during the AM and PM peaks respectively. The impact of these uplifts on the local and wider local highway network is considered to be low.

5.3.20 As presented above, the proposals are expected to have a low impact on the local highway network during peak times. Over time, the impact on local traffic conditions is expected to reduce as car ownership levels associated with the users of the site are expected to decrease for the following reasons:

- The improvement of the pedestrian and cycle permeability throughout the site and the wider area will result in quicker and more comfortable movement through the development and wider area. This is expected to encourage the users of the site to walk and cycle ahead of using a private vehicle and is likely to result in a lower number of cars owned at the site.

- The opening of Crossrail at Southall Station will provide more services towards key destinations throughout London. This is expected to result in a high number of site users travelling to / from the site by train and lower levels of car ownership.

- The presence of car club services in the local area could provide an economic alternative to owning a vehicle for the users of the site.

- The measures provided within the Travel Plan, which will be distributed to both residents and staff at the site, will aim at encouraging sustainable transport ahead of the use of private vehicles.

Access junctions modelling assessment

5.3.21 A capacity assessment has been undertaken for the access junctions located on The Green and the junction located on Featherstone Road. The junctions has been modelled using Junctions 9 which presents the maximum likely traffic queues and the average delay per vehicle. The assessment for Featherstone accounts for the redevelopment of the road into a one-way southbound route.

5.3.22 The assessment was undertaken for a future year with development scenario for the weekday morning and evening peak hours. This involved factoring up the traffic data of The Green and Featherstone Road presented in Table 3.3 with local growth factors which have been derived using TEMPRO. These are summarised below:

- Weekday morning peak hour – 1.075079778 (for minor roads) and 1.075174126 (for principal roads); and

- Weekday evening peak hour – 1.074629723 (for minor roads) and 1.074724032 (for principal roads).

5.3.23 The results are presented in Tables 5.21 and 5.22.

Table 5.21 – Site access / The Green – Junctions 9 results

Arm	AM Peak			PM Peak		
	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)
Site Access – left out	0.02	0.0	6.87	0.00	0.0	0.00
Site Access – right out	0.05	0.0	12.11	0.00	0.0	0.00
The Green – ahead	0.35	1.0	6.32	0.19	0.5	4.43
The Green – right in	0.35	0.0	6.02	0.20	0.0	4.22

Table 5.22 – Featherstone Terrace / Featherstone Road – Junctions 9 results

Arm	AM Peak			PM Peak		
	RFC	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)
Site Access – left out	0.01	0.0	6.64	0.01	0.0	6.59
Site Access – right out	0.01	0.0	9.22	0.01	0.0	9.50
Featherstone Road – ahead and right in	0.00	0.0	0.00	0.00	0.0	0.00

5.3.24 The model results show that the proposed site access junctions will be sufficient to accommodate the peak hour traffic demand of the scheme. The results of the junction modelling assessment are presented in **Appendix E**.

Combined proposed non-vehicle multimodal trip generation

5.3.25 The non-vehicle multimodal trip generation for each proposed use has been combined in Table 5.23.

Table 5.23 – Non-vehicle multimodal trips for the proposed development

Mode	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground / Train	5	30	35	18	14	32
Bus	15	100	115	56	39	95
Passenger / Vehicle Occupant	16	10	26	9	29	38
Bicycle	0	3	3	2	1	3
On foot	41	47	88	37	42	79
Other	0	2	2	1	1	2
Total	77	192	269	123	126	249

5.3.26 The impacts of the above multimodal trips are assessed in the following paragraphs.

Pedestrian impact

5.3.27 Walking trips to/from the application site would comprise those making dedicated walking trips to the local area, as well as walking to bus stops and Southall Station for public transport services. The total two-way walking trips to and from the proposed development would be 238 and 206 in the AM and PM peak hours respectively. In the AM peak, the 238 trips comprise 88 dedicated walking trips and 150 walking trips to public transport services. In the PM peak, the 206 trips comprise 79 dedicated walking trips and 127 walking trips to public transport services.

5.3.28 The walking trips are expected to dissipate across the existing network. The main pedestrian desire lines are anticipated to be towards Southall Station and bus stops located along Featherstone Road, The Green, and King Street.

5.3.29 The existing pedestrian infrastructure is considered sufficient to meet the additional pedestrian demand generated by the proposed development. As such, the proposed development would have a low impact on the available pedestrian capacity in the local area.

Cycle impact

5.3.30 The proposed development is expected to generate three cycle trips in the AM and PM peak. Given the site's good connectivity to cycle routes and relatively low volume of trips, this is expected to have a low impact on the capacity of the local cycle network.

Bus services

5.3.31 The proposed development is predicted to generate 115 two-way bus trips during the AM peak and 95 two-way bus trips during the PM peak. Based on an average bus operational capacity of 63 persons and a weekday AM and PM peak bus frequency of 57 and 56 respectively, the planning bus capacity is calculated as 3,591 passengers during the AM peak and 3,528 during the PM peak. On this basis, the additional bus trips associated with the proposed development on the bus network is set out in Table 5.24.

Table 5.24 – Bus network impact assessment

Time	Bus trips from proposed development	Bus network capacity (hr)	% of bus network capacity
AM Peak	115	3,591	3.2%
PM Peak	95	3,528	2.7%

5.3.32 Table 5.24 shows that the greatest change on the bus network as a result of the proposed development would be 3.2% which would occur in the AM peak and equates to approximately two additional passengers per bus. This level of increase in passengers is considered to have a low impact as it could be adequately accommodated on the existing bus network.

London Underground / National Rail services

5.3.33 The proposed development is predicted to generate 35 two-way London Underground / train trips during the AM peak and 32 two-way London Underground / train trips during the PM peak. These are expected to travel from Southall Station (with passengers that require London Underground services travelling from Southall to their required LU station).

5.3.34 The station is currently served by 25 trains during the AM peak and 22 trains during the PM peak. This would result in approximately 1-2 additional passengers per train during both peak times which is considered to be very low. Additionally, Southall Station will be part of the Elizabeth line which will provide up to 10 services an hour in each direction. This is expected to provide additional capacity to meet the demand generated by the proposed development.

6 CONSTRUCTION

6.1.1 A Draft Construction Logistics Plan has been submitted along this TA as part of the planning application and comprises details on the construction programme and vehicle routes.

7 TRANSPORT POLICY

7.1.1 This chapter provides a summary of the relevant transport policy against which the proposals are assessed. The main policy documents in this regard are:

- New National Planning Policy Framework (2019)
- The London Plan (2021)
- LBE Development Strategy 2026 DPD (2012)
- LBE Development Management DPD (2013)
- LBE Sustainable Transport for New Development (2013)

7.2 National Policy

National Planning Policy Framework (2019)

7.2.1 The NPPF sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced. The document was published on 24th July 2018 (and updated on 19th February 2019) and replaced the first NPPF (published in March 2012).

7.2.2 The NPPF recognises that the transport system should be balanced in favour of sustainable transport modes so that people are given a real choice about how they travel. It encourages solutions which support reductions in both greenhouse gas emissions and congestion.

7.2.3 Chapter 9 – Promoting sustainable transport states that "Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- *the potential impacts of development on transport networks can be addressed;*
- *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*

- *opportunities to promote walking, cycling and public transport use are identified and pursued;*

- *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*

- *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places*".

7.2.4 The proposals are in line with Chapter 9 of the NPPF and will favour sustainable transport. They will comprise a low car parking provision of the residential development and no car parking allocated to the other proposed uses which is expected to promote low levels of car ownership. Additionally, cycle parking will be provided for each use which will encourage cycling as a mode of transport. The site is also located in the vicinity of Southall Station which will provide services at improved frequencies with the opening of Crossrail. Hence, site users are expected to be encouraged to travel to/from the site via train.

7.2.5 The impacts on the local traffic and transport infrastructure have been considered as part of Chapter 5. The results of the assessment indicated that the proposals would result in low impacts on the local infrastructure.

7.3 Regional Policy

The London Plan (2021)

7.3.1 The London Plan (2021) is the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth.

7.3.2 Policy T1 Strategic approach to transport states that "Development Plans should support and development proposals should facilitate 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". The proposals will comprise a low car parking provision of the residential development and no car parking allocated to the other proposed uses which is expected to promote low levels of car ownership and sustainable transport. Additionally, cycle parking will be provided for each

use which will encourage cycling as a mode of transport. The site is also located in the vicinity of Southall Station which will provide services at improved frequencies with the opening of Crossrail. Hence, site users are expected to be encouraged to travel to/from the site via train.

7.3.3 Policy T4 Assessing and mitigating transport impacts states that "Transport assessments should focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development. Travel Plans, Parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required in accordance with relevant Transport for London guidance". This TA has been prepared in accordance with TfL's Healthy Streets guidance. A Travel Plan, Delivery and Servicing Management Plan and Draft Construction Logistics Plan have also been provided as part of this application.

7.3.4 Policy T5 Cycling states that "Development Plans and development proposals should help remove barriers to cycling and create a healthy environment in which people choose to cycle. This will be achieved through: securing the provision of appropriate levels of cycle parking which should be fit for purpose, secure and well-located". Cycle parking for the proposed development will be provided in accordance with The London Plan for each use which will encourage cycling as a mode of transport.

7.3.5 The London Plan sets out standards for car and cycle parking. Table 7.1 sets out the maximum car parking standards for a C3 residential development and Table 7.2 sets out the minimum cycle parking standards for all the uses of the proposed development.

Table 7.1 – The London Plan (2021) maximum car parking standards for C3 residential developments

Location	Number of beds	Maximum provision
Outer London PTAL 4	1 – 2	Up to 0.5 - 0.75 spaces per dwelling+
Outer London PTAL 4	3+	Up to 0.5 - 0.75 spaces per dwelling+
Outer London PTAL 2 – 3	1 – 2	Up to 0.75 spaces per dwelling
Outer London PTAL 2 – 3	3+	Up to 1 space per dwelling

7.3.6 The proposals are in line with the above as they comprise a car parking provision that is considerably lower than what is set in Table 7.1.

7.3.7 The London Plan sets out standards for cycle parking which are set out in Table 7.2.

Table 7.2 – The London Plan (2021) minimum cycle parking standards

Land use		Cycle parking	
		Long-stay	Short-stay
A1	Non-food retail (above 100sqm)	first 1000 sqm: 1 space per 250 sqm thereafter: 1 space per 1000 sqm (GEA)	first 1000 sqm: 1 space per 125 sqm; thereafter: 1 space per 1000 sqm (GEA)
B1	Office	1 space per 150 sqm (GEA)	first 5,000 sqm: 1 space per 500 sqm thereafter: 1 space per 5,000 sqm (GEA)
B1	Light industry and research and development	1 space per 250 sqm (GEA)	1 space per 1000 sqm (GEA)
C3	Dwellings	1 space per studio or 1 person 1 bedroom dwelling 1.5 spaces per 2 person 1 bedroom dwelling 2 spaces per all other dwellings	5 to 40 dwellings: 2 spaces Thereafter: 1 space per 40 dwellings
D1	Nurseries	1 space per 8 FTE staff + 1 space per 8 students	

7.3.8 The document states that the residential development "must, as a minimum, ensure that for three per cent of dwellings, at least one designated disabled persons parking bay per dwelling is available from the outset". It should also be demonstrated "how an additional seven per cent of dwellings could be provided with one designated disabled persons parking space per dwelling in future upon request as soon as existing provision is insufficient. This should be secured at the planning stage.". Of the proposed 62 car parking spaces, 33 (6% of the total number of units) are to be provided as accessible spaces whereas the remaining 19 will be standard parking bays. Should additional demand for disabled parking from the proposed residential development arise, then some of the public car parking spaces will be converted into wheelchair accessible bays for the use or residents.

7.3.9 The London Plan indicates that "All residential car parking spaces must provide infrastructure for electric or Ultra-Low Emission vehicles. At least 20 per cent of spaces should have active charging facilities, with passive provision for all remaining spaces". The proposed car parking provision will be provided in accordance with the standards of the current London Plan.

7.4 Local Policy

LBE Development Strategy DPD (2012)

7.4.1 LBE's Development Strategy DPD was adopted on 3rd April 2012. This document will guide the development of Ealing to 2026.

7.4.2 Chapter 6: 'Ensuring sustainable delivery' of the document is in line with national and regional policies and sets out the need for good infrastructure planning to achieve sustainable delivery of the Development Strategy.

LBE Development Management DPD (2013)

7.4.3 LBE's Development Management DPD was adopted on 10th December 2013 and is part of the broader Local Plan which also includes the Development Strategy. The document sets out the local variations to the regional policy set out in the London Plan.

7.4.4 Chapter 6 of the document relates to transport. It states the local variations to the London Plan parking standards and disabled parking.

8 CONCLUSION

8.1.1 The existing site comprises a 150 space public car park, business premises and associated parking, roads and adjacent land lying to the north-west and rear of The Green and the adjoining Featherstone Terrance, Dominion Road and Dilloway Yard.

8.1.2 The site is located in an area with a good level of public transport accessibility and is within a short distance of a number of bus stops located on The Green, King Street and Featherstone Road as well as Southall Station. The site has been classified with a PTAL of 4.

8.1.3 The proposals will redevelop the site to provide 564 residential units and flexible retail, commercial and community uses. The proposals will also provide a total of 60 car parking spaces allocated to the residential development (which accounts for approximately 11% of the number of residential units) and will retain 90 public car parking spaces (a reduction of 60 from the existing 150). The proposed cycle parking provision is in line with the minimum standards provided in The London Plan (2021).

8.1.4 A trip generation assessment has been undertaken in Chapter 5 of this report. The assessment indicates that the proposals will generate an increase of 46 vehicle trips during the AM peak and four vehicle trips during the PM peak compared to the existing site. The largest increases in traffic flows during the peak hours would take place on King Street with flows increasing by 3.5% during the AM peak and by 1.9% during the PM peak. There is also an increase of 2.2% and a decrease of 4.2% on Featherstone Road and increases of 2.4% and 1.6% on The Green during the AM and PM peaks respectively. The impact of these uplifts on the local and wider local highway network is considered to be low. Over time, the impact on local traffic conditions is expected to reduce as car ownership levels associated with the users of the site are expected to decrease for the following reasons:

- The improvement of the pedestrian and cycle permeability throughout the site and the wider area will result in quicker and more comfortable movement through the development. This is expected to encourage the users of the site to walk and cycle ahead of using a private vehicle and is likely to result in a lower number of cars owned at the site.

- The opening of Crossrail at Southall Station will provide more services towards key destinations throughout London. This is expected to result in a high number of site users travelling to / from the site by train and lower levels of car ownership.

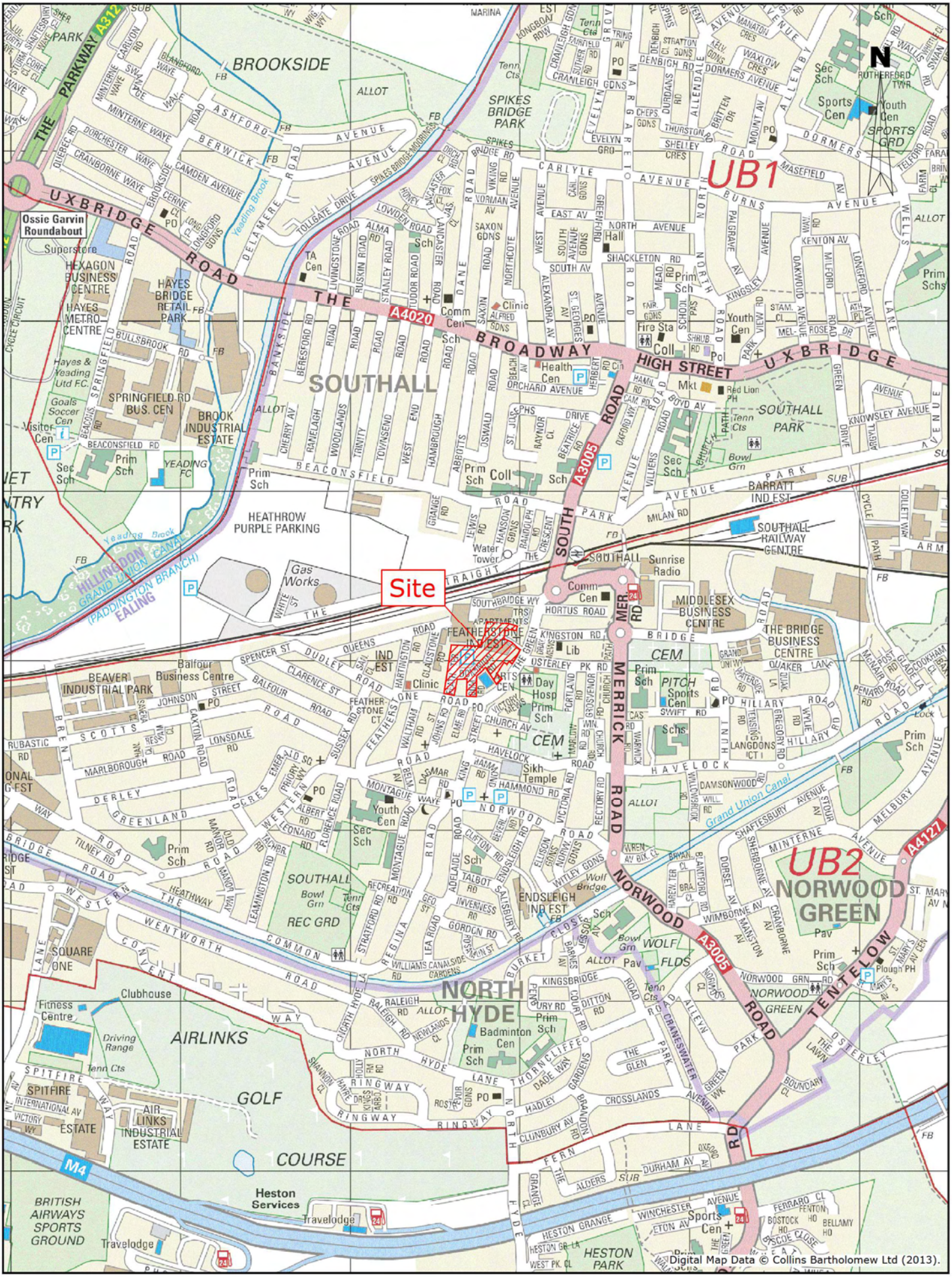
- The presence of car club services in the local area could provide an economic alternative to owning a vehicle for the users of the site.

- The measures provided within the Travel Plan, which will be distributed to both residents and staff at the site, will aim at encouraging sustainable transport ahead of the use of private vehicles.

8.1.5 The assessment in Chapter 5 also considered the impact on the local pedestrian, cycle and public transport network. It is concluded that the impact that the proposals would have on these networks will be low.

8.1.6 In conclusion, the resulting net increase in vehicle trips is not expected to have a substantial impact on the local transport network. The design of the development will also help to encourage sustainable travel, in terms of the provision of secure on-site cycle parking.

Figures



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Site location plan

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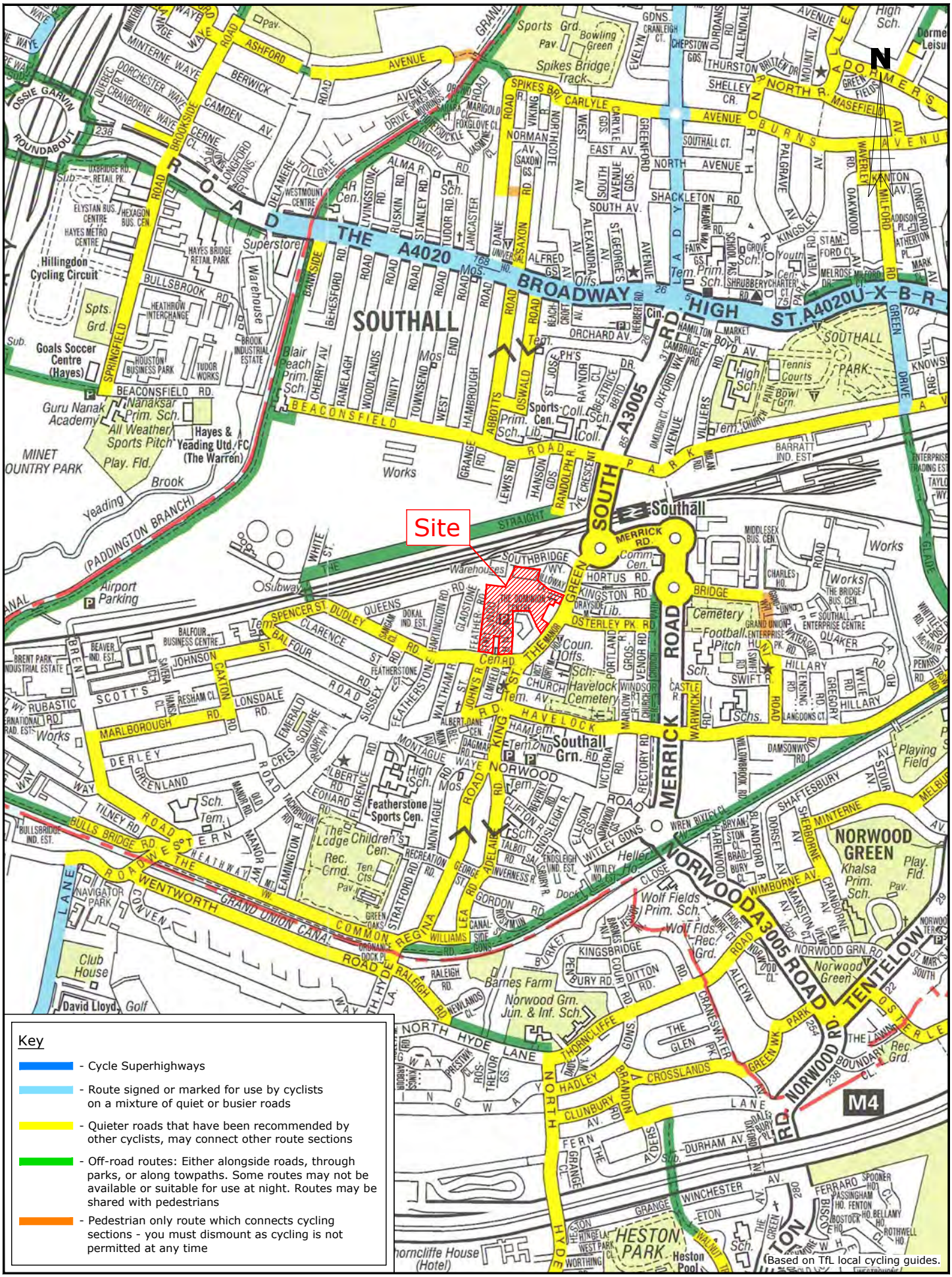
Figure 1



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Local cycle network

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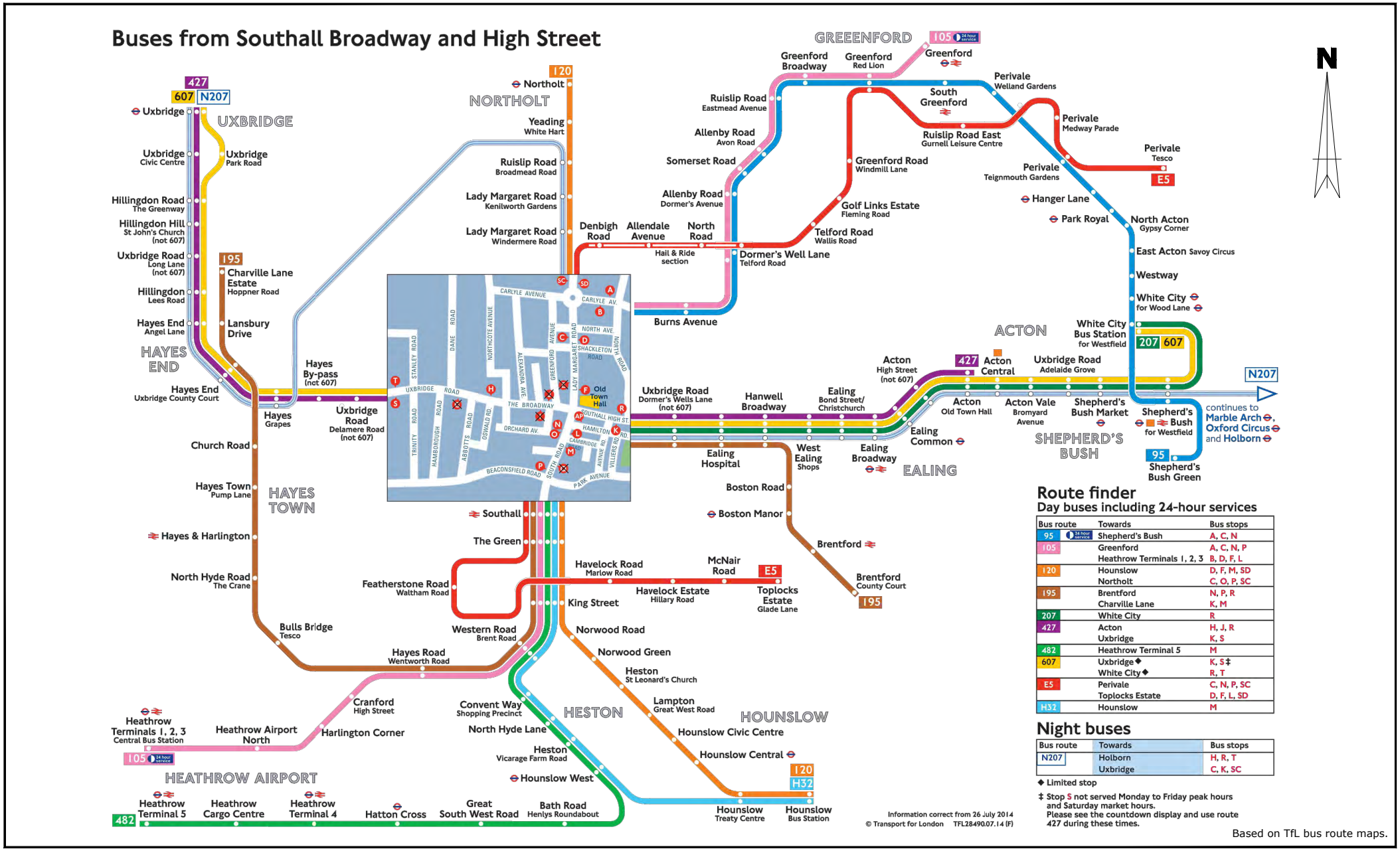
Figure 2



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Local bus network

Figure 3

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N

Northolt
Greenford
Greenford
South Greenford
Castle Bar Park
Drayton Green
West Ealing
Hanwell
Southall
Hayes & Harlington
South Ealing
Northfields
Boston Manor
Brentford
Syon Lane
Osterley
Hounslow East
Isleworth
Hounslow West
Hounslow Central
Hatton Cross
Hounslow

UXBRIDGE
HILLINGDON
HAYES
YIEWSLEY
WEST DRAYTON
NORTHOLT
SOUTHALL
EALING
BRENTFORD
HOUNSLOW
ISLEWORTH
RICHMOND

Key

- Site
- LU/DLR
- National Rail/Overground
- Hospitals/medical centres
- Schools
- Colleges/universities
- Green spaces / Recreational grounds / Playing fields
- Town Centre

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Active Travel Zone

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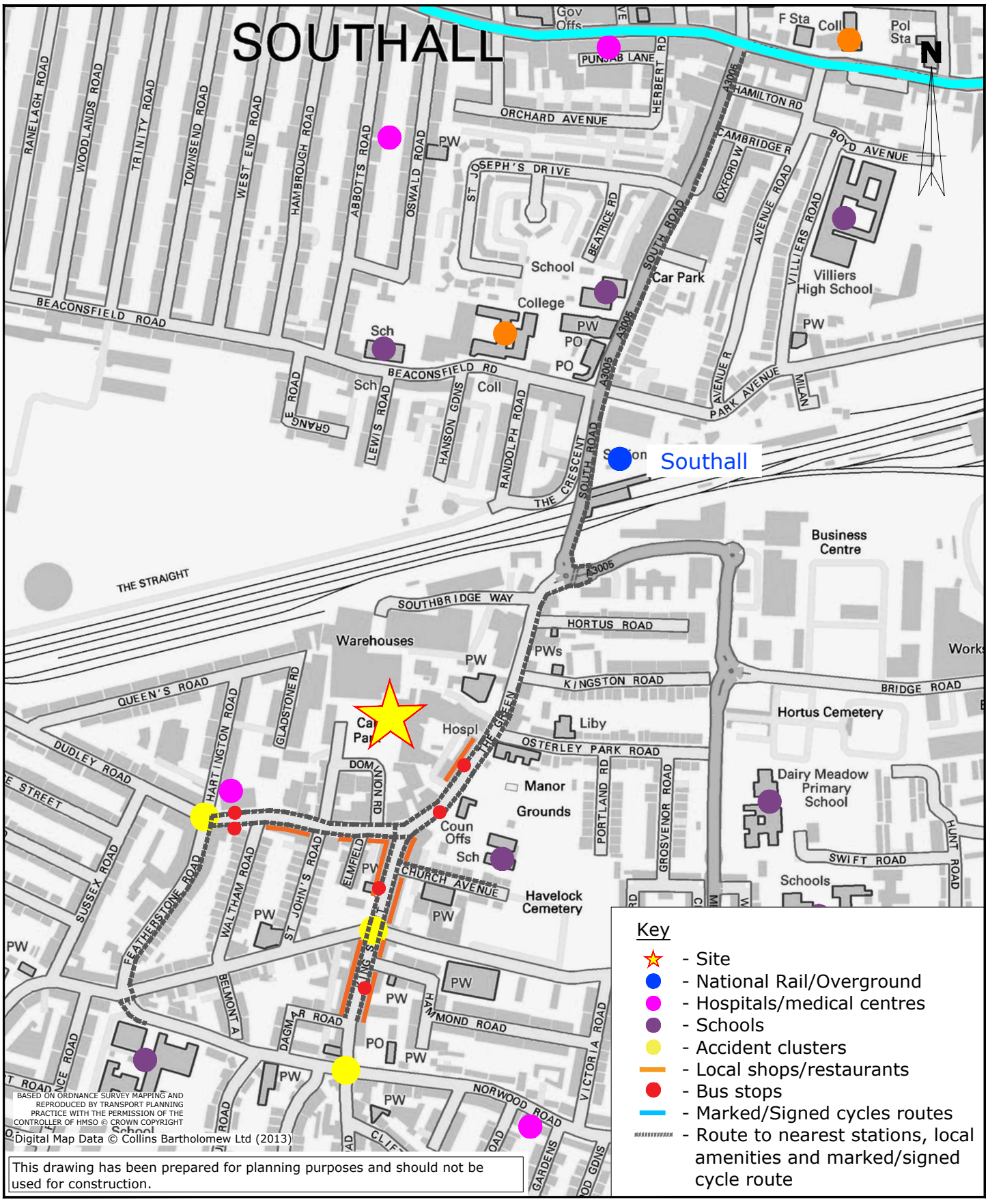
Figure 4



This drawing has been prepared for planning purposes and should not be used for construction.

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Figure 5
Neighborhood Active Travel Zone

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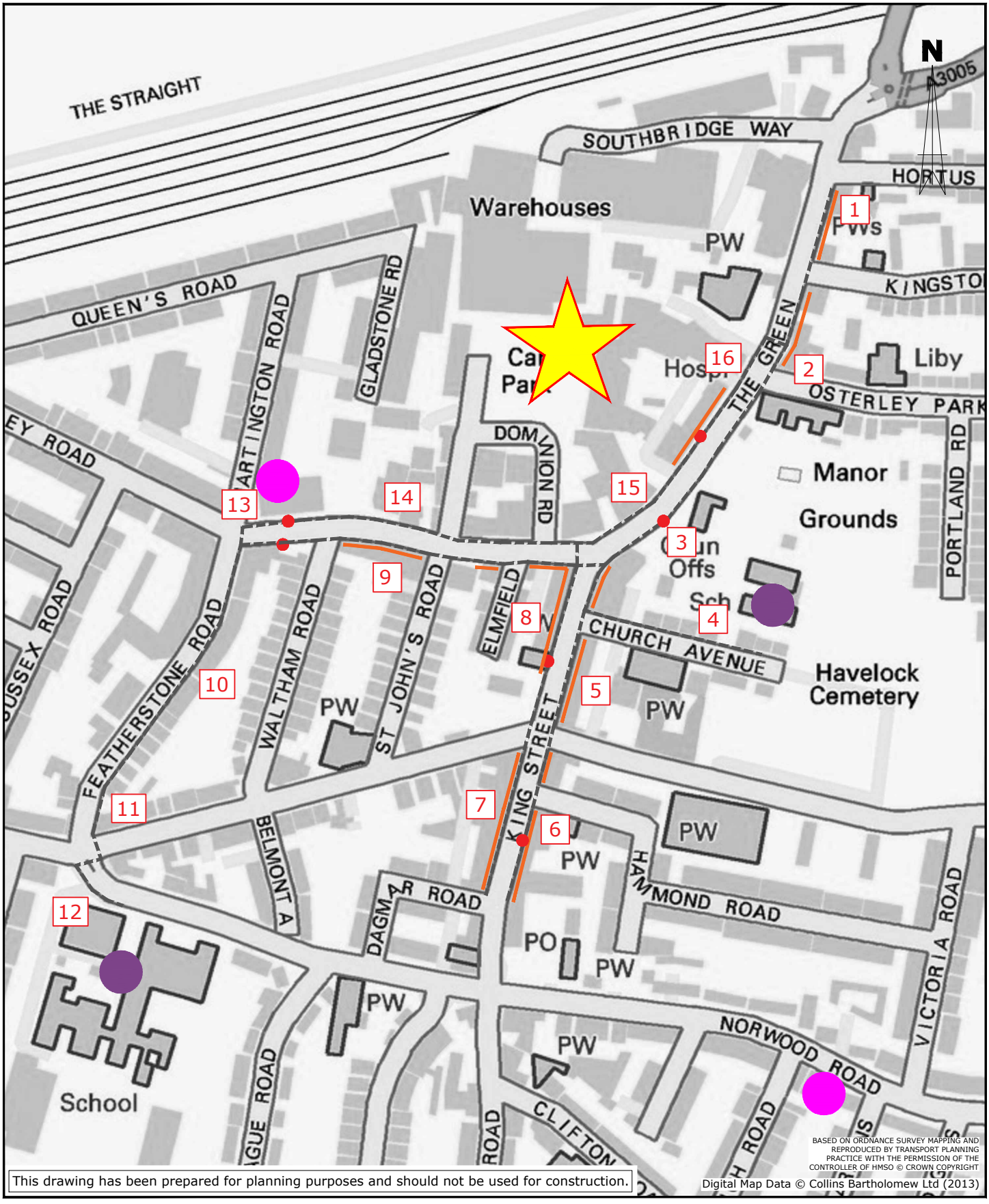

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Figure 6
Routes to local amenities and bus stops

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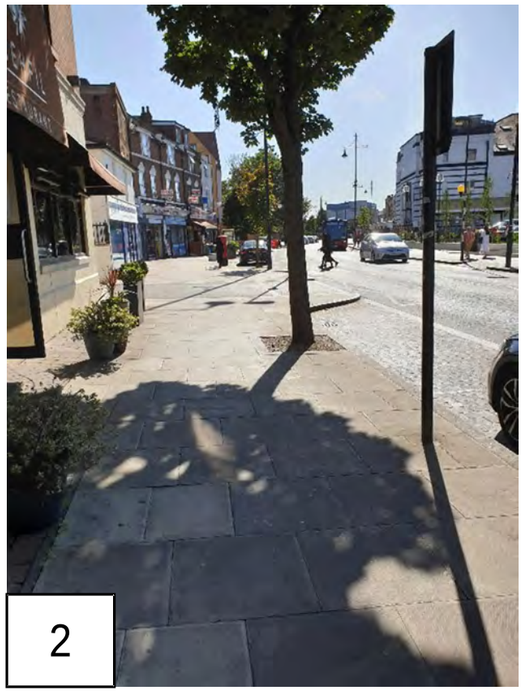

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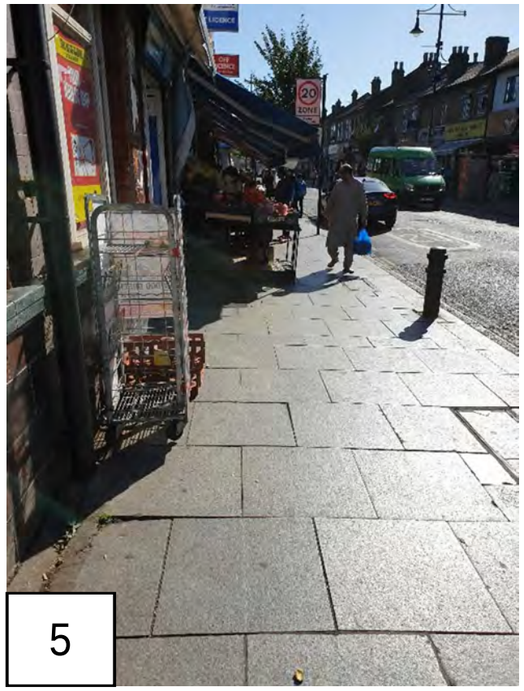

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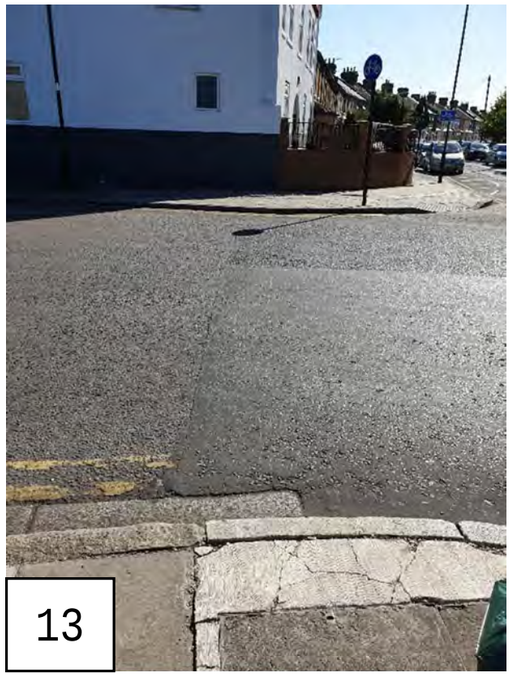

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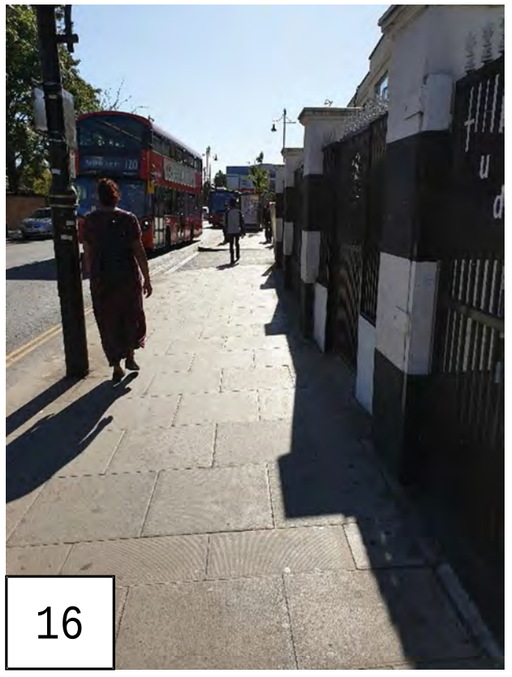

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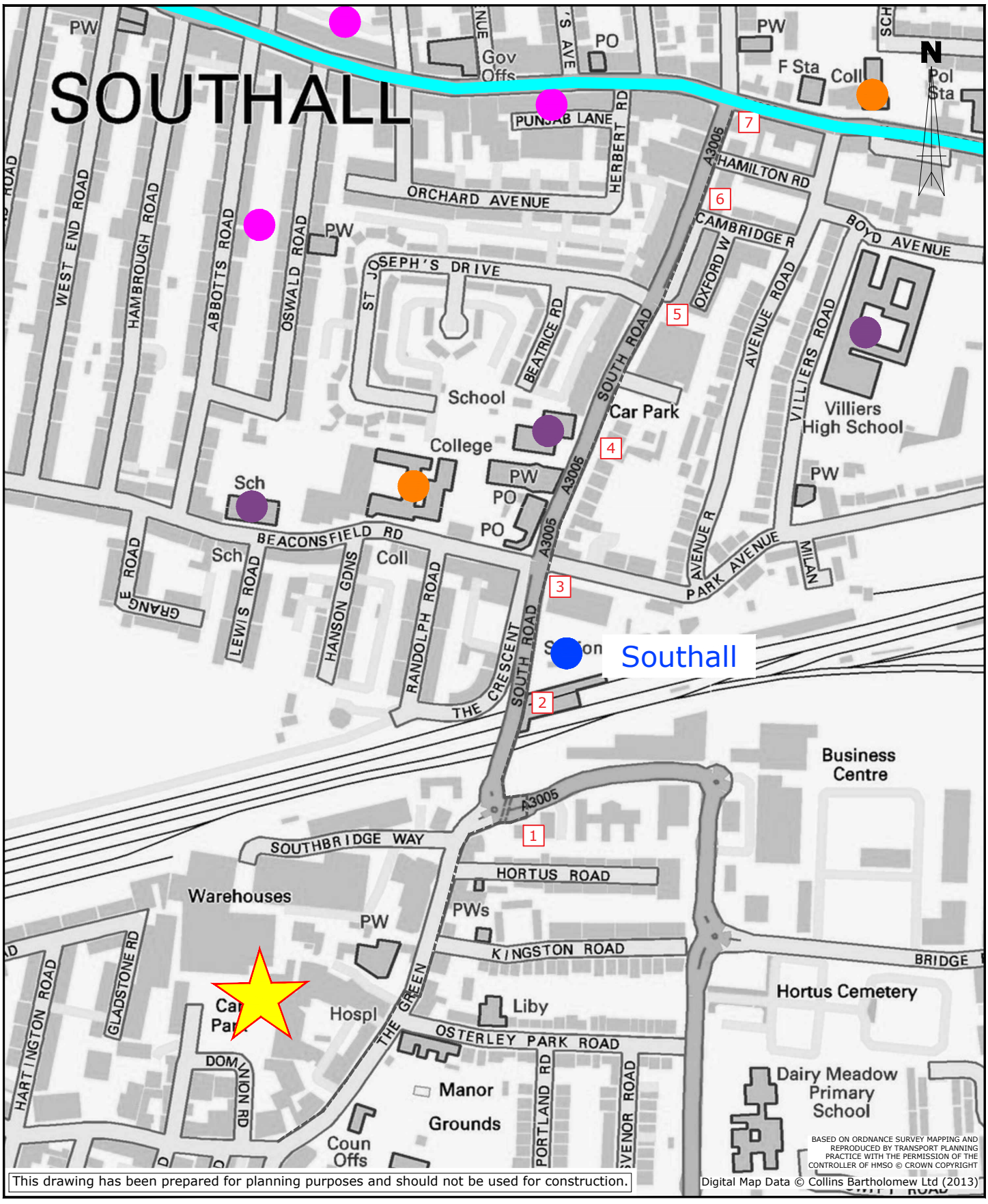

THE GREEN, SOTUHALL

Figure 7
Route to Southall Station and marked / signed cycle route

SCALE @ A4	DATE	DRAWN BY	CHECKED
NTS	25/10/19	LB	CVR

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