

7. DEVELOPMENT PROPOSALS

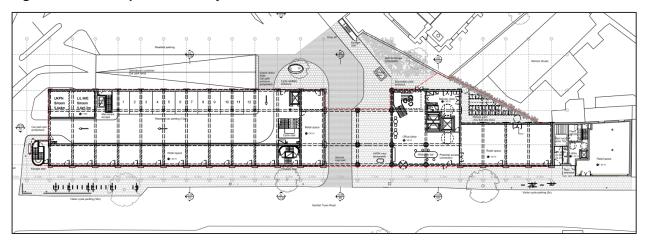
7.1. INTRODUCTION

7.1.1. This chapter details the Proposed Development scheme in terms of land use, access strategy, servicing arrangements, and parking provision.

7.2. DEVELOPMENT PROPOSALS

7.2.1. The architect's proposed site layout is shown in Figure 7-1 and in **Appendix C**.

Figure 7-1: Proposed Site Layout



7.2.2. The Proposed Development scheme would comprise the demolition of the existing building to first floor slab level, and construction of new building from first floor slab up to fourth floor level. The proposed schedule of accommodation for Grand Union House is as follows.

Table 7-1: Proposed Area Schedule

| Use Class | SQM (GEA) |
|---|--|
| Flexible retail and/ or restaurant/ café (Class A1 and/or A3) | 311sqm |
| Flexible retail, restaurant/ café and/or leisure (Class A1, A3 and/or D2) | 289sqm |
| Office (B1) | 5,550sqm |
| Residential (C3) | 6 units |
| Car Parking Spaces | 12 owned by residents of Grand Union Walk retained |
| Cycle Parking Spaces | 87 long stay and 42 short stay |



PEDESTRIAN ACCESS

- 7.2.3. The proposed pedestrian access points to the residential, office and flexible retail and leisure aspects of the Site will be provided from Kentish Town Road. There will be separate pedestrian access points for each of the ground floor units, as well separate office and residential lobbies.
- 7.2.4. The local pedestrian infrastructure will also be improved with a new crossing proposed on Kentish Town Road, as part of the improvements of Camden Town Underground Station and new exit on Buck Street.
- 7.2.5. The pavement width on Kentish Town Road will be 4.4m at its narrowest as per the existing situation. Short stay visitor cycle parking will be provided in the form of Sheffield stands on the northern section of the development where the pavement is in excess of 6m wide, maintaining sufficient space for pedestrians to pass.

CYCLE PARKING

- 7.2.6. The proposed 77 long-stay office and flexible retail and leisure cycle parking provision will be covered and secure; located on the mezzanine floor and therefore secure and sheltered. A platform lift and a single access stair with associated gulley is provided for access to the commercial long-stay cycle parking which will be provided in the form of high density cycle hoops which are positioned on a steel frame stand.
- 7.2.7. The 10 residential long-stay cycle parking is located on the ground floor of the residential building and provided in the form of Dutch two tier rack with 2.5 clear behind the racks for access.
- 7.2.8. The cycle parking provision adheres to LBC and Draft New London Plan cycle parking standards for all land uses. The long-stay cycle parking calculations below are based on the proposed floor areas.

Table 7-2: Draft London Plan Long-Stay Cycle Standards and Requirements

| Land Use | Minimum Standards | Units/Area | Long-Stay |
|----------------|---|------------|-----------|
| A1 (food) | 1 space per 175sqm (from a threshold of 100sqm GEA) | 600 | 3 |
| A1 (non-food) | 1 space per 250sqm (from a threshold of 100sqm GEA) | 600 | 2 |
| A3 Retail | 1 space per 175sqm (from a threshold of 100sqm GEA | 600 | 3 |
| B1 Office | inner/central London: 1 space per 75sqm GEA | 5,550 | 74 |
| C3 Residential | 1 space per studio, 1.5 spaces per 1 bedroom unit, 2 spaces per all other dwellings | 6 units | 10 |
| D2 Leisure | 1 space per 8 FTE staff | 289 | 2 |

- 7.2.9. Showers, changing facilities and lockers will be provided separately for the retail and office uses.
- 7.2.10. The 42 short-stay cycle parking calculation below is based on the proposed floor areas 602 sqm of retail, 5,542 sqm of office floorspace and 6 residential units. As specific uses of the ground floor units is unknown, the cycle parking requirements for flexible retail and/ or restaurant/ café/ leisure uses has been calculated for the full 602 sqm. The cycle parking provision takes into account the

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'worst case' requirement for the retail use, which is 30 spaces, along with the 11 short stay cycle parking spaces required for the offices and one for the residential units. The short-stay (visitor) cycle parking will be provided within the public realm in the form of 21 Sheffield stands for 42 spaces and secured via a S278 agreement.

Table 7-3: Draft London Plan Short-Stay Cycle Standards and Requirements

| Land Use | Minimum Standards | Units/Area | Short-Stay |
|----------------|--|------------|------------|
| A1 (food) | 1 space per 20sqm (from a threshold of 100sqm GEA) | 600 | 30 |
| A1 (non-food) | 1 space per 60sqm (from a threshold of 100sqm GEA) | 600 | 10 |
| A3 Retail | 1 space per 20sqm (from a threshold of 100sqm) | 600 | 30 |
| B1 Office | 1 space per 500sqm GEA | 5,550 | 11 |
| C3 Residential | 1 space per 40 units | 6 units | 1 |
| D2 Leisure | 1 space per 30 seats/ 1 space per 100sqm | 289 | 3 |

7.3. CAR PARKING

- 7.3.1. The development will be 'car-free' albeit that 12 car parking spaces owned by the residents of Grand Union Walk need to be retained at ground floor level.
- 7.3.2. LBC's Local Plan states that parking for disabled people for both residential and non-residential developments should be provided where it can be demonstrated as necessary, taking into account existing availability of on-street parking for Blue Badge holders. Considering there are on street spaces near to the Site which Blue Badge holders can use for free with a two hour time limit, which are within appropriate distance of the entrances to the residential, office and ground floor flexible uses of the proposed building, there is no need to provide Blue Badge car parking on Site for customers or visitors, but there will be a requirement for employees. This was agreed with Steve Cardno at the pre-application meeting on 17th October 2018.
- 7.3.3. Accordingly, one Blue Badge bay will be provided on street on Kentish Town Road for employees or whoever may require the space. As a result, one 'pay and display parking bay will be relocated further south on Kentish Town Road, as discussed with Steve Cardno at the pre-application meeting on 17th October 2018. The location of the proposed relocated bay is illustrated in Figure 7-2.



Figure 7-2: Relocated Pay and Display Bay

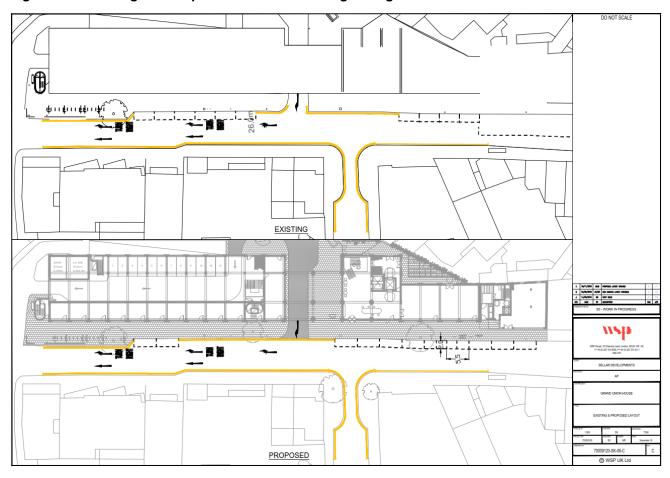




ON-STREET PARKING

7.3.4. In order to accommodate servicing vehicles on Kentish Town Road a number of parking bays have been repositioned at the southern end of the development. No parking bays have been lost as a result of the proposed reconfiguration of on street parking bays as illustrated in Figure 7-1 and **Appendix D**, therefore it is deemed to be acceptable in highway terms.

Figure 7-1: Existing and Proposed On-Street Parking Configuration





7.3.5. Appropriate S278 works would be required to re-mark the re-configured parking bays on street.

7.4. SERVICING AND REFUSE COLLECTION

- 7.4.1. The results of the surveys detailed in Chapter 4 demonstrate that only five vehicles used DYL2 throughout the course of the surveyed day, including two refuse vehicles, and three cars/ LGVs which stopped for less than 5 minutes.
- 7.4.2. As detailed within Chapter 4 refuse collection for the existing Site is currently undertaken on Kentish Town Road outside the Site, and therefore will continue to for the proposed development.
- 7.4.3. It is proposed to undertake all servicing on street as shown in Figure 7-2, and in **Appendix E**. Servicing vehicles travelling on Kentish Town Road will be able to pull up on street and service all elements of the building. LBC agreed during the pre-application meeting that this would be acceptable.

Figure 7-2: Proposed Servicing Location



SAINSBURY'S

7.4.4. Deliveries to Sainsbury's would continue to take place in the Sainsbury's Delivery Yard to the rear of the site and accessed via Hawley Crescent.



WASTE MANAGEMENT STRATEGY

- 7.4.5. Residents will be responsible for transporting their waste from their individual apartments directly to the residential waste store on the ground floor. The residential waste will be collected on a weekly basis by LBC waste collection operatives who will wheel out the bins to the refuse vehicle on Kentish Town Road.
- 7.4.6. For the small ground floor flexible retail units (class A1, S3 and/or D2), the occupiers will be required to provide waste storage areas within their premises. The waste storage areas will be where the waste produced by the individual units will be sorted prior to collection. On collection days the collection operatives will collect the waste directly from the small units to the refuse vehicle parked on Kentish Town Road.
- 7.4.7. The office and larger flexible retail and leisure (class A1, S3 and/or D2) units will utilise the communal refuse yard which will be collected twice weekly. There is a clear path between the communal refuse yard and the location of the refuse vehicle on Kentish Town Road and bins can be brought out to a collection point prior to collection to ensure the dragging distance is kept to a minimum.
- 7.4.8. A Waste Management Strategy has been produced for the development and submitted as part of the Application. It summarises relevant policy and guidance documents, forecasts the volume of household and commercial waste produced and provides details of the storage areas and the strategy for collection.

EMERGENCY ACCESS

7.4.9. A fire tender will access the Site via Kentish Town Road in the event of an emergency. A fire management strategy has been produced which sets out the details of the fire strategy for the whole Site.

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8. TRIP GENERATION

8.1. INTRODUCTION

8.1.1. The trip generation at the Site has been forecast to determine the likely scale of effect of the development proposals. The trip generation for the Proposed Development has been compared with the operation of the existing Site use to determine the net effect of the proposals.

8.2. EXISTING TRIP GENERATION

OFFICE

- 8.2.1. Total person trip generation rates (per 100sqm) for the existing office floorspace have been extracted from the TRICS database as the Site is currently only partially occupied. The trip generation rates have been derived from a comparable scheme located in central London.
- 8.2.2. An initial assessment of comparable sites from the TRICS database were selected based on the following criteria:
 - Surveyed between 2010 and present;
 - A minimum of 2,000sqm, and a maximum of 10,000sqm;
 - Parking ratio on-site at or less than 1.0 per 100sqm; and
 - PTAL Rating of 5-6b.
- 8.2.3. The Site selected as a result of the filtering process is listed in Table 8-1 along with selection criteria. The highest two-way trip rates have been identified from the peak periods and used for robustness for the peak hour review.

Table 8-1: TRICS Selection Criteria

| No. | Site and Location | Survey Date | PTAL | Floor area (sqm) | Parking Ratio | Two-way AM Trip Rate | Two-way PM Trip Rate |
|----------------|--|----------------|------|---------------------|------------------|----------------------------|----------------------------|
| CI-02-A- 02 | Gracechurch Street, City of London | 2013 | 6b | 7,567 | 0 | 0.251 | 0.211 |

8.2.4. Total person trip rates for a weekday AM (08:00 - 09:00) and weekday PM (17:00 – 18:00) peak hours are set out in Table 8-2. A copy of the full TRICS output report is included at Appendix F.

Table 8-2: TRICS Selection Criteria

| | Time Period | In | Out | Two-way |
|----------------------------|--------------|------|------|---------|
| All Person Trip Rate | AM Peak Hour | 3.10 | 0.13 | 3.22 |
| | PM Peak Hour | 0.26 | 2.85 | 3.11 |
| All Person Trip Generation | AM Peak Hour | 121 | 5 | 126 |
| | PM Peak Hour | 10 | 111 | 122 |



Modal Split

- 8.2.5. The 2011 Travel to Work Census data has been examined to identify the travel patterns of the daytime population in Camden 19 and 21 output areas, in which the Site is located. This data provides an analysis of peoples' modes of travel to and from employment at that time. The journey to work data from the census output areas is considered to have a more representative of the local population.
- 8.2.6. Figure 8-1 illustrates Camden 19 and 21 output areas which are geographic areas with a geographic hierarchy designed to improve the reporting of small areas in England and Wales. Table 8-3 provides a summary of the chosen modes of travel to work for the daytime population.

A5205

London
Zoo

Morningto
Crescott

The Regent's
Park

A421

Euston

Square
Warren
Square
Warren
Square
Warren
Street

Figure 8-1: Camden 19 and 21 Output Areas



Table 8-3: 2011 Census Travel to Work Data for Daytime Population

| Mode | Daytime Population (| aytime Population (%) | | | | |
|---------------|----------------------|-----------------------|---------|--|--|--|
| | Camden 19 | Camden 21 | Average | | | |
| Underground | 31% | 37% | 35% | | | |
| Train | 26% | 30% | 29% | | | |
| Bus | 12% | 10% | 10% | | | |
| Taxi | 0% | 0% | 0% | | | |
| Motorcycle | 2% | 1% | 1% | | | |
| Car Driver | 14% | 11% | 12% | | | |
| Car Passenger | 1% | 1% | 1% | | | |
| Cycle | 5% | 4% | 4% | | | |
| On Foot | 8% | 6% | 6% | | | |
| Other | 0% | 0% | 0% | | | |
| Total | 100% | 100% | 100% | | | |

8.2.7. The average modal split was applied to the total person trip generation to determine the AM and PM peak hour trips for the office use as detailed in Table 8-4.

Table 8-4: Existing Trip Generation (3,916sqm)

| Mode | Weekday / | AM Peak (08 | 3:00-09:00) | Weekday PM Peak (17:00-18:00 | | |
|---------------|-----------|-------------|-------------|------------------------------|-----|---------|
| | In | Out | Two-way | In | Out | Two-way |
| Underground | 43 | 2 | 45 | 4 | 39 | 43 |
| Train | 35 | 1 | 36 | 3 | 32 | 35 |
| Bus | 12 | 1 | 13 | 1 | 11 | 12 |
| Taxi | 0 | 0 | 0 | 0 | 0 | 0 |
| Motorcycle | 2 | 0 | 2 | 0 | 2 | 2 |
| Car Driver | 15 | 1 | 16 | 1 | 14 | 15 |
| Car Passenger | 1 | 0 | 1 | 0 | 1 | 1 |
| Cycle | 5 | 0 | 5 | 0 | 5 | 5 |
| On Foot | 8 | 0 | 8 | 1 | 7 | 8 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 121 | 5 | 126 | 10 | 111 | 121 |



8.3. PROPOSED TRIP GENERATION

OFFICE

8.3.1. The 2011 Census Travel to Work data shows that car trips form approximately 12% of total person trips, however as no car parking is provided on the Proposed Development the car driver and car passenger trips have been redistributed onto underground, train and bus modes of travel. The forecast total person trips by mode of travel for the office floorspace during peak hours are shown in Table 8-5.

Table 8-5: Forecast Multi-Modal Trip Generation – Office Use (5,550sqm)

| Mode | Car Trips Redistrib uted | | | Weekday PM Peak (17:00-18:00) | | | |
|------------------|--------------------------------|-----|-----|----------------------------------|----|-----|---------|
| | | In | Out | Two-way | In | Out | Two-way |
| Under- ground | 41% | 71 | 3 | 74 | 6 | 65 | 71 |
| Train | 34% | 58 | 2 | 60 | 5 | 53 | 58 |
| Bus | 12% | 21 | 1 | 22 | 2 | 19 | 21 |
| Taxi | 0% | 1 | 0 | 1 | 0 | 1 | 1 |
| Motorcycle | 1% | 2 | 0 | 2 | 0 | 2 | 2 |
| Car Driver | 0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Car Passenger | 0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Cycle | 4% | 8 | 0 | 8 | 1 | 7 | 8 |
| On Foot | 6% | 11 | 0 | 11 | 1 | 10 | 11 |
| Other | 0% | 1 | 0 | 1 | 0 | 1 | 1 |
| Total | 100% | 173 | 6 | 179 | 15 | 158 | 173 |

8.3.2. In total 179 two-way trips are forecast during the AM peak and 173 two-way trips are forecast during the PM peak. The majority of trips by employees during peak hours are undertaken on public transport services.

FLEXIBLE RETAIL AND LEISURE USES

- 8.3.3. It is considered that the proposed scale and nature of the units would generally serve the local resident and daytime population of the surrounding area, as well as new office workers at the Site. It is considered that mainly walk-in trips from the adjacent network would be generated.
- 8.3.4. No car parking would be provided on Site for the flexible retail and leisure uses. Predicted delivery and servicing trips for the proposals is provided later in this section.



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RESIDENTIAL

- 8.3.5. Total person trip generation rates (per unit) for the six proposed residential units have been established by the TRICS database. The trip generation rates have been derived from a comparable scheme located in central London.
- 8.3.6. An initial assessment of comparable sites from the TRICS database were selected based on the following criteria:
 - Surveyed between 2010 and present; and
 - 15-50 units.
- 8.3.7. The Site selected as a result of the filtering process is listed in Table 8-6 along with selection criteria. The peak hour two-way trip rates have been identified and used for robustness for the review. A copy of the full TRICS output report is included at **Appendix G**.

Table 8-6: TRICS Selection Criteria

| No. | Site and Location | Survey Date | PTAL | Dwellings | Parking Ratio | Two-way AM Trip rate | Two-way PM Trip rate |
|------------|-------------------------------|----------------|------|-----------|------------------|----------------------------|----------------------------|
| IS-03-D-03 | Hawes Street, Islington | 2014 | 6a | 36 | 8 | 1.028 | 0.667 |

Modal Split

- 8.3.8. The 2011 Travel to Work Census data has been examined to identify the travel patterns of the resident population in three immediate local output areas. This data provides an analysis of peoples' modes of travel to and from employment at that time. The journey to work data from the census output areas is considered to have a more representative of the local population.
- 8.3.9. Figure 8-2 illustrates three local output areas and Table 8-7 provides a summary of the chosen modes of travel to work for the daytime population.



Figure 8-2: Camden Super Output Areas (Census 2011)

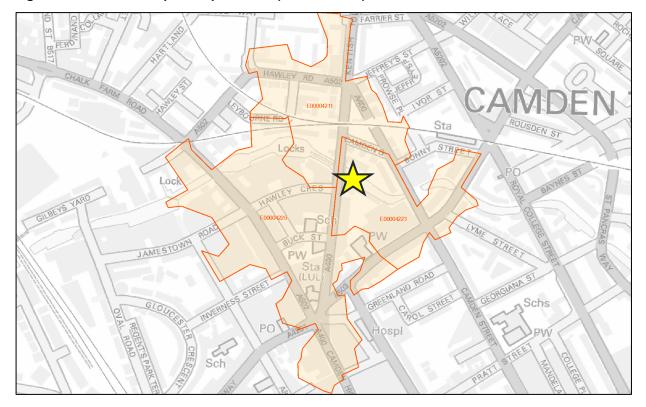


Table 8-7: 2011 Census Travel to Work Data for Resident Population

| Mode | Resident Population | Resident Population (%) | | | | | |
|---------------|---------------------|-------------------------|-----------|---------|--|--|--|
| | E00004211 | E00004223 | E00004225 | Average | | | |
| Underground | 28% | 25% | 42% | 33% | | | |
| Train | 6% | 4% | 7% | 6% | | | |
| Bus | 26% | 34% | 21% | 26% | | | |
| Taxi | 0% | 0% | 0% | 0% | | | |
| Motorcycle | 1% | 0% | 0% | 0% | | | |
| Car Driver | 7% | 13% | 2% | 6% | | | |
| Car Passenger | 0% | 0% | 0% | 0% | | | |
| Cycle | 10% | 7% | 6% | 7% | | | |
| On Foot | 22% | 16% | 21% | 20% | | | |
| Other | 1% | 1% | 0% | 0% | | | |
| Total | 100% | 100% | 100% | 100% | | | |



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8.3.10. The average modal split was applied to the total person trip generation to determine the AM and PM peak hour trips for the residential use as detailed in Table 8-8.

Table 8-8: Proposed Residential Trip Generation

| Mode | Weekday AM Peak (08:00-09:00) | | | Weekday PM Peak (17:00-18:00) | | | |
|---------------|-------------------------------|-----------|---------|-------------------------------|-----------|---------|--|
| | Arrival | Departure | Two-way | Arrival | Departure | Two-way | |
| Underground | 0 | 2 | 2 | 1 | 1 | 2 | |
| Train | 0 | 0 | 0 | 0 | 0 | 0 | |
| Bus | 0 | 1 | 1 | 0 | 1 | 1 | |
| Taxi | 0 | 0 | 0 | 0 | 0 | 0 | |
| Motorcycle | 0 | 0 | 0 | 0 | 0 | 0 | |
| Car Driver | 0 | 0 | 0 | 0 | 0 | 0 | |
| Car Passenger | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cycle | 0 | 0 | 0 | 0 | 0 | 0 | |
| On Foot | 0 | 1 | 1 | 0 | 0 | 0 | |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 0 | 4 | 4 | 1 | 2 | 3 | |

8.3.11. In total 4 two-way trips are forecast during the AM peak and 2 two-way trips are forecast during the PM peak. All residential trips during peak hours are undertaken on public transport services or by walking.

8.4. TOTAL DEVELOPMENT TRIP GENERATION

8.4.1. The total development trip generation for the Proposed Development including all servicing trips is summarised in Table 8-9. This table combines the trip generation for the proposed commercial and residential floorspace.



Table 8-9: Total Development Trip Generation

| Mode | Weekday Al | Weekday AM Peak (08:00-09:00) | | | Weekday PM Peak (17:00-18:00) | | | |
|---------------|------------|-------------------------------|---------|---------|-------------------------------|---------|--|--|
| | Arrival | Departure | Two-way | Arrival | Departure | Two-way | | |
| Underground | 71 | 5 | 76 | 7 | 66 | 73 | | |
| Train | 58 | 2 | 60 | 5 | 53 | 58 | | |
| Bus | 21 | 2 | 23 | 2 | 20 | 22 | | |
| Taxi | 1 | 0 | 1 | 0 | 1 | 1 | | |
| Motorcycle | 2 | 0 | 2 | 0 | 2 | 2 | | |
| Car Driver | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Car Passenger | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Cycle | 8 | 0 | 8 | 1 | 7 | 8 | | |
| On foot | 11 | 1 | 12 | 1 | 10 | 11 | | |
| Other | 1 | 0 | 1 | 0 | 1 | 1 | | |
| Total | 173 | 10 | 183 | 16 | 160 | 176 | | |

8.5. NET CHANGE IN TRIP GENERATION

8.5.1. Table 8-10 shows the expected net trip generation for the Proposed Development compared with the existing site use.

Table 8-10: Forecast Net Trip Generation

| Mode | Weekday AM Peak (08:00-09:00) | | | Weekday PM Peak (17:00-18:00) | | | |
|---------------|-------------------------------|-----------|---------|-------------------------------|-----------|---------|--|
| | Arrival | Departure | Two-way | Arrival | Departure | Two-way | |
| Underground | 28 | 3 | 31 | 3 | 27 | 30 | |
| Train | 23 | 1 | 24 | 2 | 21 | 23 | |
| Bus | 9 | 1 | 10 | 1 | 9 | 10 | |
| Taxi | 1 | 0 | 1 | 0 | 1 | 1 | |
| Motorcycle | 0 | 0 | 0 | 0 | 0 | 0 | |
| Car Driver | -15 | -1 | -16 | -1 | -14 | -15 | |
| Car Passenger | -1 | 0 | -1 | 0 | -1 | -1 | |
| Cycle | 3 | 0 | 3 | 1 | 2 | 3 | |
| On foot | 3 | 1 | 4 | 0 | 3 | 3 | |
| Other | 1 | 0 | 1 | 0 | 1 | 1 | |
| Total | 52 | 5 | 57 | 6 | 49 | 55 | |



8.5.2. Table 8-10 demonstrates that there will be a net increase of 57 two-way trips in the AM peak and a net increase of 55 two-way trips in the PM peak. The majority of trips will be spread on the local underground, train and bus networks. There will be a reduction in the number of car driver and car passenger trips as the Proposed Development will not provide any parking, other than the 12 bays that are to be retained.

8.6. SERVICING TRIP GENERATION

EXISTING OFFICE USE

8.6.1. As detailed in Chapter 4 the surveys undertaken on Kentish Town Road demonstrates a total of 21 servicing trips were recorded between 07:00-19:00, which equates to 42 two-way servicing trips. However, it is unknown whether all these trips were serving the just the existing development.

FORECAST DELIVERY TRIPS

8.6.2. The proposed servicing trip rates have been obtained from 24 hour period surveys for comparable sites (Bow Quarter and Imperial Wharf) previously conducted by WSP. Average trip rates for these sites have been applied to the Proposed Development as detailed in Table 8-11 and included at **Appendix H**.

Table 8-11: Proposed Servicing Trip Generation

| | Office | Retail | Residential | Total Deliv | Total Deliveries | | | |
|-----------|------------|------------|-------------|-------------|------------------|-------|--|--|
| Time | Deliveries | Deliveries | Deliveries | LGV | HGV | Total | | |
| 0700-0800 | 1 | 0 | 0 | 1 | 0 | 2 | | |
| 0800-0900 | 1 | 0 | 0 | 1 | 0 | 1 | | |
| 0900-1000 | 1 | 0 | 0 | 1 | 0 | 1 | | |
| 1000-1100 | 1 | 1 | 0 | 1 | 1 | 2 | | |
| 1100-1200 | 1 | 0 | 0 | 1 | 0 | 1 | | |
| 1200-1300 | 0 | 0 | 0 | 1 | 0 | 1 | | |
| 1300-1400 | 0 | 0 | 0 | 1 | 0 | 1 | | |
| 1400-1500 | 0 | 0 | 0 | 1 | 0 | 1 | | |
| 1500-1600 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1600-1700 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1700-1800 | 0 | 0 | 0 | 1 | 0 | 1 | | |
| 1800-1900 | 0 | 0 | 0 | 1 | 0 | 1 | | |
| 0700-1900 | 7 | 3 | 1 | 9 | 3 | 12 | | |

^{*}Numbers subject to rounding

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- 8.6.3. In total 24 two-way servicing trips are forecast per day comprising 9 LGVs (vans) and 3 HGVs (8-10m rigid lorries) with one delivery on average in the peak hours and a maximum of two deliveries in an hour.
- 8.6.4. The office and ground floor commercial units will consolidate their trips were possible, and have a management system in place to determine slots for each delivery. The only deliveries which will not be controlled will be the refuse collection twice a week, and any residential servicing trips which are likely to be infrequent due to the low number of residential units.



9. IMPACT ASSESSMENT

9.1. INTRODUCTION

9.1.1. This section considers the likely effect of the development proposals on the local pedestrian, cycle, public transport and highway infrastructure.

9.2. EFFECTS ON PEDESTRIAN NETWORK

- 9.2.1. The development is forecast to generate a net increase of 4 and 3 two-way pedestrian trips to and from the proposed development during the weekday AM and PM hours, respectively.
- 9.2.2. A further 65 and 66 trips per peak hour are forecast towards the public transport service access at Camden Town Underground Station, Camden Road Station and the local bus stops within the vicinity. This has been calculated based on the net trip generation detailed in Chapter 8. The total number of two-way AM and PM peak hour trips is therefore 69 and 66, respectively, as detailed below in Table 9-1.

Table 9-1: Net Change in Total Pedestrian Trips

| Mode | Weekday AM Peak (08:00-09:00) | | | Weekday PM Peak (17:00-18:00) | | | |
|-------------|-------------------------------|---|---------|-------------------------------|---------|----|--|
| | Arrival Departure Two-way | | Arrival | Departure | Two-way | | |
| On Foot | 3 | 1 | 4 | 0 | 3 | 3 | |
| Underground | 28 | 3 | 31 | 3 | 27 | 30 | |
| Rail | 23 | 1 | 24 | 2 | 21 | 23 | |
| Bus | 9 | 1 | 10 | 1 | 9 | 10 | |
| Total | 63 | 6 | 69 | 6 | 60 | 66 | |

9.2.3. The main pedestrian desire lines from the development would be south towards Camden Town Underground Station. Other key routes would be towards local bus stops and facilities.

MITIGATION OF WALKING TRIPS

9.2.4. The pedestrian movement within the Site will be of high quality with the provision of an attractive open space, well maintained and legible pathways and lighting, providing natural surveillance. Given the low number of total walking trips expected across the peak hours (equivalent to one per minute), the impact of the development is seen to be negligible and no future mitigation will be necessary.

9.3. EFFECTS ON CYCLE NETWORK

- 9.3.1. The Proposed Development is expected to generate a net increase of 3 two-way cycle trips during the AM and PM peak hour each. This estimated cycle trip generation considers existing, planned and proposed cycle infrastructure that the Site will benefit from, including on-site cycle parking provision.
- 9.3.2. The summary table below shows the expected net trip generation of cyclists as a result of the Proposed Development, for weekday AM and PM peak hours.



Table 9-2: Net Change in Total Cycle Trips

| Mode | Weekday | / AM Peak (08:0 | 00-09:00) | Weekday PM Peak (17:00-18:00) | | |
|-------|---------------------------|-----------------|-----------|-------------------------------|-----------|---------|
| | Arrival Departure Two-way | | Two-way | Arrival | Departure | Two-way |
| Cycle | 3 | 0 | 3 | 1 | 2 | 3 |

MITIGATION OF CYCLING TRIPS

- 9.3.3. As detailed in Chapter 3, the Site is well connected within an efficient network of on- and off-road cycle routes. Cycle parking will be provided for 87 long-stay cycles and 42 short-stay cycles, and will be conveniently located, secure and sheltered from the elements.
- 9.3.4. The impact of the development is seen to be negligible and no further mitigation will be necessary. The proposed cycle parking spaces within the buildings and the public realm would meet the immediate operational demands of the development and are considered to future proof the scheme. The high quality cycle parking provision will encourage an increase in the use of cycling; there is an opportunity, therefore, to encourage the use of this mode for many trips. Any increases would be monitored and encouraged as part of the Travel Plan.

9.4. EFFECTS ON PUBLIC TRANSPORT

9.4.1. The Proposed Development is forecast to generate a net increase of 65 and 63 public transport trips during the AM and PM peak, respectively. The public transport mode forecasted to be used most is the London Underground, followed by rail services.

Table 9-3: Net Change in Total Public Transport Trips

| Mode | Weekday A | M Peak (08:0 | 0-09:00) | Weekday PM Peak (17:00-18:00) | | | |
|-------------|---------------------------|--------------|----------|-------------------------------|---------|----|--|
| | Arrival Departure Two-way | | Arrival | Departure | Two-way | | |
| Underground | 28 | 3 | 31 | 3 | 27 | 30 | |
| Rail | 23 | 1 | 24 | 2 | 21 | 23 | |
| Bus | 9 | 1 | 10 | 1 | 9 | 10 | |
| Total | 60 | 5 | 65 | 6 | 57 | 63 | |

IMPACTS ON BUS SERVICES

- 9.4.2. From the trip generation calculations, it has been identified that the development proposals would generate a net increase of 10 two-way bus trips during the AM and PM peak hours, respectively.
- 9.4.3. Taking into account the existing bus frequencies as set out in Table 4-1, it can be noted that there are a total of at least 191 buses per hour within close proximity. Based on the findings set out above this would result in a negligible number of passengers per bus.



GRAND UNION HOUSE

Project No.: 70009120 | Our Ref No.: 70009120

Camden Mixed Developments Limited

MITIGATION OF BUS TRIPS

9.4.4. The above assessment shows that the forecast increase in passengers would not present any material impact on existing bus services, and no further mitigation is proposed.

IMPACTS ON UNDERGROUND SERVICES

- 9.4.5. From the trip generation calculations, it has been identified that the development proposals would generate a net increase of 31 and 30 two-way underground trips during the AM and PM peak hours, respectively.
- 9.4.6. Taking account of the existing underground services as set out in Chapter 4, it can be noted that there are a total of at least 87 underground services per hour during the peak hours. Based on the findings set out above, this would result in less than one additional passenger per underground services which is considered negligible. The new entrance/ exit on Buck Street will provide improved access employees, residents and visitors at the Site.

MITIGATION OF UNDERGROUND SERVICES

9.4.7. The above assessment shows that the forecast increase in passengers would not present any material impact on existing underground services, and no further mitigation is proposed.

IMPACTS ON RAIL SERVICES

- 9.4.8. From the trip generation calculations, it has been identified that the development proposals would generate a net increase of 24 and 23 two-way rail/ Overground trips during each of the AM and PM peak hours.
- 9.4.9. Taking account of the existing rail/ Overground services as set out in Chapter 4, there are at least 15 Underground services per hour during the peak hours. Based on the findings set out above, this would result in one additional passenger per rail/ Overground service which is considered negligible.

MITIGATION OF RAIL TRIPS

9.4.10. The above assessment shows that the forecast increase in passengers would not present any material impact on existing underground services, and no further mitigation is proposed.

9.5. LOCAL ROAD NETWORK

9.5.1. The scheme will not have a material impact over the consented scheme given its car free nature. The number of vehicle trips generated by the Proposed Development will be reduced compared to the existing scheme, amounting to a reduction of 16 and 15 private vehicle trips during the AM and PM peak hours, respectively. On this basis, the scheme will have a positive impact on the local highway network and therefore no junction modelling will be required.



10. TRAVEL PLAN

- 10.1.1. Travel Plans have been developed for the purposes of facilitating the use of sustainable modes of travel and reducing the number of single occupancy vehicle trips generated by the Site.
- 10.1.2. A Framework Travel Plan has been produced for the Residential and Commercial land uses, with the document being prepared in accordance with the Transport for London, (TfL), Travel Planning for New Development in London; incorporating deliveries and servicing, (February 2011), the TfL Travel Planning Guidance November 2013 as well as the DfT's 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process, (DfT, 2009).
- 10.1.3. The Travel Plan sets out the Site wide management structure and outlines the sustainable travel principles and measures to be incorporated within the proposals.
- 10.1.4. The implementation of pre-occupation measures included within the Travel Plan will be the responsibility of the Travel Plan Co-ordinator (TPC). The TPC role will be undertaken by either a nominated employee of the Site management company or an appointed consultant. The success of the Travel Plan will be regularly monitored, and reviewed to ensure that the Travel Plan continually develops during its lifetime.
- 10.1.5. A copy of the Travel Plan is included as **Appendix I** of this report.



11. SUMMARY AND CONCLUSION

11.1. SITE LOCATION

- 11.1.1. The Site is accessed via Kentish Town Road with a further pedestrian access from Camden Road. The existing building is an office building within a retail unit and a retail bar at ground floor level. There are 12 car parking spaces which belong to the residents of Grand Union Walk which are all located are ground floor level and retained.
- 11.1.2. Five parking bays are provided on street to the northeast of the Site on Kentish Town Road (31m), and four parking bays (26m) are provided on street to the southeast of the Site, measuring 6m each also on Kentish Town Road.
- 11.1.3. The nearest station is Camden Town Underground Station, which is served by both branches of the Northern Line, and the nearest bus stops are located 70m from the Site.

11.2. DEVELOPMENT PROPOSALS

- 11.2.1. The Proposed Development would comprise of the partial demolition and redevelopment of the existing building, to provide a new office (Class B1) building with associated roof terraces, ground floor flexible town centre uses (Class A1 and/or A3 and/or D2), and 6 affordable housing units, along with associated landscaping works.
- 11.2.2. The development will be 'car-free' apart from 12 car parking spaces that are retained.
- 11.2.3. Cycle parking spaces will be provided in line with the minimum Draft London Plan standards.
- 11.2.4. The local pedestrian infrastructure will also be improved with a new crossing proposed on Kentish Town Road, as part of the improvements of Camden Town Underground Station.

11.3. SUMMARY OF FINDINGS

- 11.3.1. This Transport Assessment considers the net effect of the development proposals on the local highway and transport networks and demonstrates the following:
 - The Site has excellent accessibility by non-car modes of travel including on foot, by cycle, bus, underground and overground networks (PTAL 6b);
 - The proposed level of car parking provision accords with the aims of the Draft New London Plan (November 2017), and to LBC's policy on parking;
 - The offering of good quality cycle parking facilities in line with the Draft New London Plan would encourage cycling to and from the Site, and there is readily available cycle infrastructure which is considered suitable for accommodating the development proposals;
 - With consideration to existing public transport provision, it is not expected that the development proposals would have a detrimental effect on the local bus and train networks;
 - In order to accommodate servicing vehicles on Kentish Town Road, a number of parking bays have been repositioned at the southern end of the development, however no parking bays have been lost:
 - Servicing will continue to take place on Kentish Town Road; and
 - A Framework Travel Plan has been prepared for the application Site.



11.4. CONCLUSION

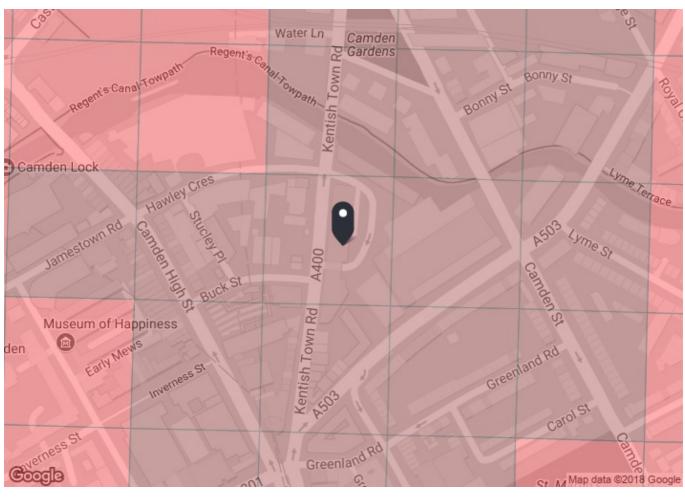
11.4.1. The TA demonstrates that the impact of the Proposed Development would be negligible on the public transport network, with a reduction in car trips, thus the application is acceptable from a highways and transport perspective.

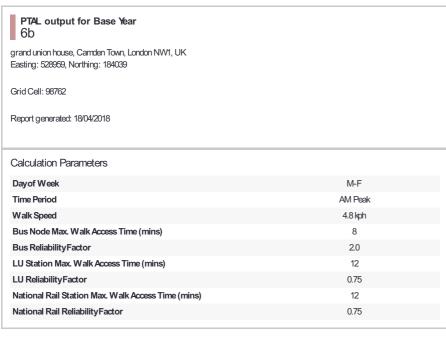
Appendix A

PTAL REPORT











| Mode | Stop | Route | Distance (metres) | Frequency(vph) | Walk Time (mins) | SWT (mins) | TAT (mins) | EDF | Weight | A |
|------|--------------------------|-----------------------|-------------------|----------------|------------------|------------|------------|------|--------|------|
| Bus | CAMDEN ST CAMDEN GARDENS | 46 | 257.67 | 6 | 3.22 | 7 | 10.22 | 2.94 | 0.5 | 1.47 |
| Bus | CAMDEN TN KENTISH TN RD | C2 | 112.07 | 8 | 1.4 | 5.75 | 7.15 | 4.2 | 0.5 | 2.1 |
| Bus | CAMDEN TN KENTISH TN RD | 134 | 112.07 | 12 | 1.4 | 4.5 | 5.9 | 5.08 | 1 | 5.08 |
| Bus | CAMDEN TN KENTISH TN RD | 88 | 112.07 | 9 | 1.4 | 5.33 | 6.73 | 4.45 | 0.5 | 2.23 |
| Bus | CAMDEN TN KENTISH TN RD | 214 | 112.07 | 8 | 1.4 | 5.75 | 7.15 | 4.2 | 0.5 | 2.1 |
| Bus | CAMDEN TOWN PARKWAY | 274 | 233.14 | 7.5 | 2.91 | 6 | 8.91 | 3.37 | 0.5 | 1.68 |
| Bus | CAMDEN TOWN STN HIGH ST | 24 | 236.96 | 10 | 2.96 | 5 | 7.96 | 3.77 | 0.5 | 1.88 |
| Bus | CAMDEN TOWN STN HIGH ST | 31 | 236.96 | 10 | 2.96 | 5 | 7.96 | 3.77 | 0.5 | 1.88 |
| Bus | CAMDEN TOWN STN HIGH ST | 27 | 236.96 | 8 | 2.96 | 5.75 | 8.71 | 3.44 | 0.5 | 1.72 |
| Bus | CAMDEN TOWN STN HIGH ST | 168 | 236.96 | 9 | 2.96 | 5.33 | 8.3 | 3.62 | 0.5 | 1.81 |
| Bus | CAMDEN TOWN BAYHAM ST | 29 | 263.95 | 15 | 3.3 | 4 | 7.3 | 4.11 | 0.5 | 2.06 |
| Bus | CAMDEN TOWN BAYHAM ST | 253 | 263.95 | 12 | 3.3 | 4.5 | 7.8 | 3.85 | 0.5 | 1.92 |
| Bus | KTRD PRINCE OF WALES R | 393 | 622.89 | 5 | 7.79 | 8 | 15.79 | 1.9 | 0.5 | 0.95 |
| Rail | Camden Road | 'CLPHMJ2-STFD 2L50' | 357.11 | 3.67 | 4.46 | 8.92 | 13.39 | 2.24 | 1 | 2.24 |
| Rail | Camden Road | 'STFD-CLPHMJ22Y11' | 357.11 | 3.67 | 4.46 | 8.92 | 13.39 | 2.24 | 0.5 | 1.12 |
| LUL | Camden Town | 'Edgware-Morden' | 222.48 | 9 | 2.78 | 4.08 | 6.86 | 4.37 | 0.5 | 2.19 |
| LUL | Camden Town | 'Morden-HighBarnet' | 222.48 | 14.67 | 2.78 | 2.79 | 5.58 | 5.38 | 1 | 5.38 |
| LUL | Camden Town | 'Morden-MillHillE' | 222.48 | 4 | 2.78 | 8.25 | 11.03 | 2.72 | 0.5 | 1.36 |
| LUL | Camden Town | 'Morden-Edgware' | 222.48 | 4.67 | 2.78 | 7.17 | 9.95 | 3.01 | 0.5 | 1.51 |
| LUL | Camden Town | 'HighBarnet-Morden' | 222.48 | 0.33 | 2.78 | 91.66 | 94.44 | 0.32 | 0.5 | 0.16 |
| LUL | Camden Town | 'Kennington-Edgware' | 222.48 | 14.67 | 2.78 | 2.79 | 5.58 | 5.38 | 0.5 | 2.69 |
| LUL | Camden Town | 'HighBarnet-Kenningt' | 222.48 | 5.33 | 2.78 | 6.38 | 9.16 | 3.28 | 0.5 | 1.64 |
| LUL | Camden Town | 'MillHill-Morden' | 222.48 | 1.67 | 2.78 | 18.71 | 21.5 | 1.4 | 0.5 | 0.7 |
| LUL | Camden Town | 'MillHillE-Kenningt' | 222.48 | 1.67 | 2.78 | 18.71 | 21.5 | 1.4 | 0.5 | 0.7 |

Appendix B

SURVEY RESULTS

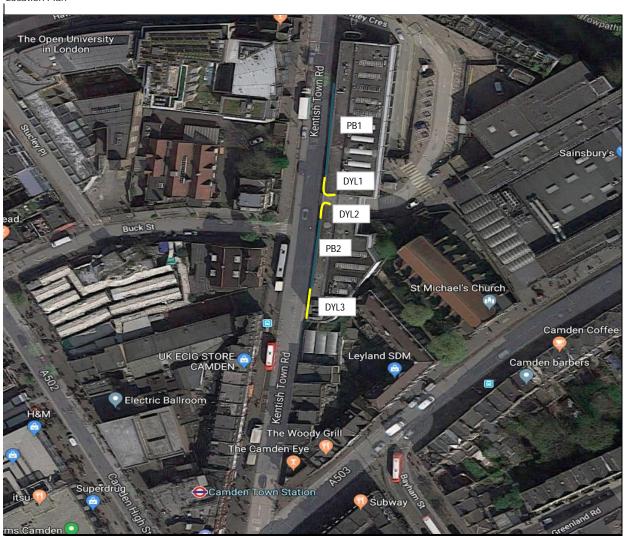


Intelligent Data Collection Limited



Client: WSP
Project Number: ID04025
Date of Survey: 12.07.2018
Survey Type: Kerbside Activity

Location Plan



Weather Conditions 12.07.2018: Dry

Additional Notes (Factors which may impact on survey results such as accidents, roadworks, special events):

The southern two parking bays are not analysed as they were closed on the day of survey due to road works.

Intelligent Data Collection Limited

Client: WSP
Project Number: 1D04025
Date of Survey: 12.07.2018
Survey Type: Kerbside Activity

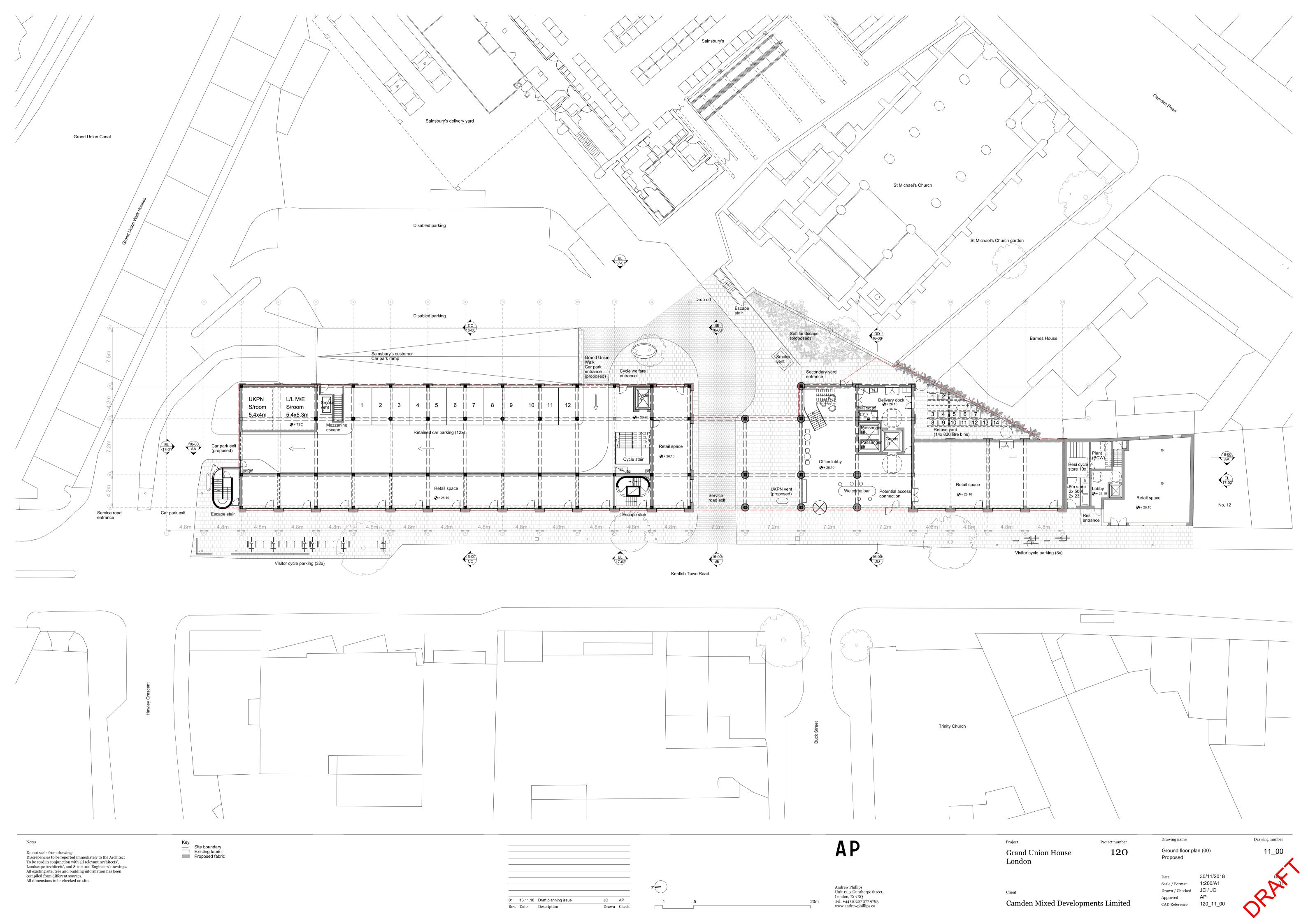


| ID | Stopping Zone | Time of Arrival | Time of Departure | Duration of Stay | Vehicle Classification | Reason For Stopping | Comments |
|---------------|------------------|---------------------------------|--|----------------------|---------------------------|------------------------|----------------|
| 1 2 | PB1 PB1 | Parked before 07:00 07:37:31 | 16:50:14 07:37:53 | 00:00:22 | Car LGV | Parking | |
| 3 | PB1 | 08:06:32 | 08:26:33 | 00:20:01 | Car | Waiting Parking | |
| 4 | PB1 | 08:43:36 | 08:55:46 | 00:12:10 | LGV | Parking | |
| 5 6 | PB1 PB1 | 08:56:00 09:15:30 | 10:57:08 11:09:10 | 02:01:08 01:53:40 | LGV Car | Loading Parking | |
| 7 | PB1 | 09:31:12 | 10:15:04 | 00:43:52 | Car | Parking | |
| 8 | PB1 PB1 | 10:03:52 10:50:48 | 10:04:21 10:57:00 | 00:00:29 00:06:12 | Car Car | Waiting Parking | |
| 10 | PB1 | 11:04:07 | 11:09:50 | 00:05:43 | Car | Parking | |
| 11 | PB1 | 11:17:32 | 11:36:16 | 00:18:44 | Car | Parking | |
| 12 13 | PB1 PB1 | 11:17:46 11:18:31 | 11:29:36 11:53:41 | 00:11:50 00:35:10 | LGV Car | Unloading Parking | |
| 14 | PB1 | 11:41:14 | 16:17:42 | 04:36:28 | Car | Parking | |
| 15 16 | PB1 PB1 | 11:48:56 12:03:04 | 14:20:18 12:06:20 | 02:31:22 00:03:16 | LGV Car | Parking Parking | |
| 17 | PB1 | 12:04:51 | 14:14:28 | 02:09:37 | Car | Parking | |
| 18 | PB1 | 12:37:16 | 12:44:36 | 00:07:20 | Car | Parking | |
| 19 20 | PB1 PB1 | 12:50:42 13:52:52 | 13:34:08 13:56:11 | 00:43:26 00:03:19 | Car Car | Parking Parking | |
| 21 | PB1 | 14:01:23 | 14:35:49 | 00:34:26 | Car | Parking | |
| 22 23 | PB1 PB1 | 14:29:17 14:30:39 | 16:27:04 14:41:49 | 01:57:47 00:11:10 | Car Car | Parking Parking | |
| 24 | PB1 | 14:51:58 | 16:01:32 | 01:09:34 | Car | Parking | |
| 25 26 | PB1 PB1 | 14:54:43 15:18:43 | 14:57:39 17:29:33 | 00:02:56 02:10:50 | LGV Car | Parking Parking | |
| 27 | PB1 | 16:08:58 | 16:25:58 | 02:10:30 | Car | Parking | |
| 28 | PB1 | 16:31:06 | 16:53:08 | 00:22:02 | Car | Parking | |
| 29 30 | PB1 PB1 | 16:36:49 16:59:14 | 16:54:35 Parked after 19:00 | 00:17:46 | Car LGV | Parking Parking | |
| 31 | PB1 | 17:30:55 | 17:36:05 | 00:05:10 | Car | Parking | |
| 32 33 | PB1 PB1 | 17:47:12 17:58:10 | 17:47:31 18:09:54 | 00:00:19 00:11:44 | Car LGV | Pick Up Parking | |
| 34 | PB1 | 18:03:25 | 18:03:51 | 00:11:44 | Car | Drop Off | |
| 35 | PB1 | 18:08:40 | Parked after 19:00 | - | Car | Parking | |
| 36 37 | PB1 PB1 | 18:09:54 18:16:16 | 18:46:42 Parked after 19:00 | 00:36:48 | Car Car | Parking Parking | |
| 38 | PB1 | 18:40:32 | Parked after 19:00 | - | Car | Parking | |
| 1 2 | PB2 PB2 | 07:18:03 07:48:07 | 07:22:16 07:51:50 | 00:04:13 00:03:43 | Car M/C | Pick Up Unloading | |
| 3 | PB2 | 08:39:33 | 08:41:40 | 00:02:07 | LGV | Drop Off | |
| <u>4</u> 5 | PB2 PB2 | 08:45:35 08:49:55 | 10:02:33 09:07:38 | 01:16:58 00:17:43 | Car LGV | Parking Waiting | |
| 6 | PB2 | 10:01:49 | 11:03:45 | 01:01:56 | Car | Parking | |
| 7 | PB2 | 10:09:34 | 10:10:57 | 00:01:23 | Car | Drop Off | |
| 8 | PB2 PB2 | 10:32:22 10:54:46 | 10:45:02 11:23:00 | 00:12:40 00:28:14 | Car Car | Parking Parking | |
| 10 | PB2 | 10:56:15 | 11:04:29 | 00:08:14 | LGV | Parking | |
| 11 12 | PB2 PB2 | 11:06:38 11:09:41 | 11:22:31 11:17:09 | 00:15:53 00:07:28 | LGV LGV | Waiting Unloading | |
| 13 | PB2 | 11:22:51 | 11:26:13 | 00:03:22 | Car | Pick Up | |
| 14 15 | PB2 PB2 | 11:25:49 11:58:34 | 11:34:00 14:29:23 | 00:08:11 02:30:49 | LGV Car | Parking Parking | |
| 16 | PB2 | 12:13:58 | 12:14:38 | 00:00:40 | Car | Pick Up | |
| 17 18 | PB2 PB2 | 12:25:43 12:36:36 | 12:51:19 12:50:42 | 00:25:36 00:14:06 | Car Car | Parking Parking | |
| 19 | PB2 | 12:42:47 | 14:21:55 | 01:39:08 | Car | Parking | |
| 20 | PB2 | 12:52:16 | 13:27:18 | 00:35:02 | Car | Parking | |
| 21 22 | PB2 PB2 | 13:14:15 13:17:39 | 13:32:01 13:24:27 | 00:17:46 00:06:48 | M/C Car | Parking Parking | |
| 23 | PB2 | 13:29:27 | 13:52:00 | 00:22:33 | Car | Parking | |
| 24 25 | PB2 PB2 | 13:32:41 14:00:12 | 15:16:47 14:00:23 | 01:44:06 00:00:11 | Car Car | Parking Waiting | |
| 26 | PB2 | 14:10:54 | 14:21:56 | 00:11:02 | Car | Parking | |
| 27 | PB2 PB2 | 14:29:38 14:44:42 | 15:47:36 14:52:58 | 01:17:58 00:08:16 | Car | Parking Parking | |
| 28 29 | PB2 | 14:46:19 | 14:51:14 | 00:04:55 | Car Car | Parking | |
| 30 | PB2 | 14:51:56 14:54:00 | 14:59:06 | 00:07:10 00:05:23 | Car | Parking | |
| 31 32 | PB2 PB2 | 14:54:00 15:02:05 | 14:59:23 15:38:10 | 00:05:23 | Car LGV | Parking Unloading | |
| 33 | PB2 | 15:03:36 | 16:02:23 | 00:58:47 | Car | Parking | |
| 34 35 | PB2 PB2 | 15:29:59 15:38:46 | Parked after 19:00 15:39:48 | 00:01:02 | Car Car | Parking Drop Off | |
| 36 | PB2 | 15:42:09 | 15:46:35 | 00:04:26 | Car | Waiting | |
| 37 38 | PB2 PB2 | 15:53:53 16:09:26 | 15:54:54 16:39:26 | 00:01:01 00:30:00 | Car Car | Parking Parking | |
| 39 | PB2 | 16:11:00 | 16:16:35 | 00:05:35 | Car | Parking | |
| 40 41 | PB2 PB2 | 16:18:40 16:23:32 | 16:36:28 16:29:15 | 00:17:48 00:05:43 | Car Car | Parking Parking | |
| 41 | PB2 PB2 | 16:23:32 | 16:39:31 | 00:05:43 | M/C | Waiting | |
| 43 | PB2 | 16:42:27 | 16:55:45 | 00:13:18 | Car | Parking | |
| 44 45 | PB2 PB2 | 16:47:35 16:56:25 | 16:49:12 16:57:21 | 00:01:37 00:00:56 | Car M/C | Waiting Waiting | |
| 46 | PB2 | 17:02:47 | 17:07:02 | 00:04:15 | Car | Pick Up | |
| 47 48 | PB2 PB2 | 17:07:46 17:16:12 | 17:09:11 17:19:38 | 00:01:25 00:03:26 | Car Car | Pick Up Pick Up | |
| 49 | PB2 | 17:28:35 | 17:29:30 | 00:00:55 | Car | Drop Off | |
| 50 51 | PB2 PB2 | 17:29:26 17:40:02 | Parked after 19:00 Parked after 19:00 | - | Car Car | Parking Parking | |
| 52 | PB2 | 17:46:43 | 18:07:45 | 00:21:02 | Car | Parking | |
| 53 | PB2 | 18:14:25 | 18:18:45 | 00:04:20 | Car | Parking | |
| 54 55 | PB2 PB2 | 18:20:56 18:46:45 | 18:44:47 Parked after 19:00 | 00:23:51 | Car Car | Parking Parking | |
| 1 | DYL1 | | | | o Entries | | |
| 1 2 | DYL2 DYL2 | 07:02:13 11:10:42 | 07:02:19 11:13:47 | 00:00:06 00:03:05 | OGV1 LGV | Servicing Parking | Refuse Vehicle |
| 3 | DYL2 | 14:23:33 | 14:24:25 | 00:00:52 | LGV | Waiting | |
| 4 5 | DYL2 DYL2 | 18:33:42 18:44:33 | 18:34:20 Parked after 19:00 | 00:00:38 | Car OGV1 | Pick Up Servicing | Refuse Vehicle |
| 1 | DYL2 DYL3 | 07:31:41 | 17:59:22 | 10:27:41 | LGV | Parking | verase seutice |
| 2 | DYL3 | 18:22:02 | 18:30:13 | 00:08:11 | LGV | Unloading | |
| 3 | DYL3 | 18:42:29 | 18:43:19 | 00:00:50 | Car | Drop Off | |

Appendix C

SITE LAYOUT



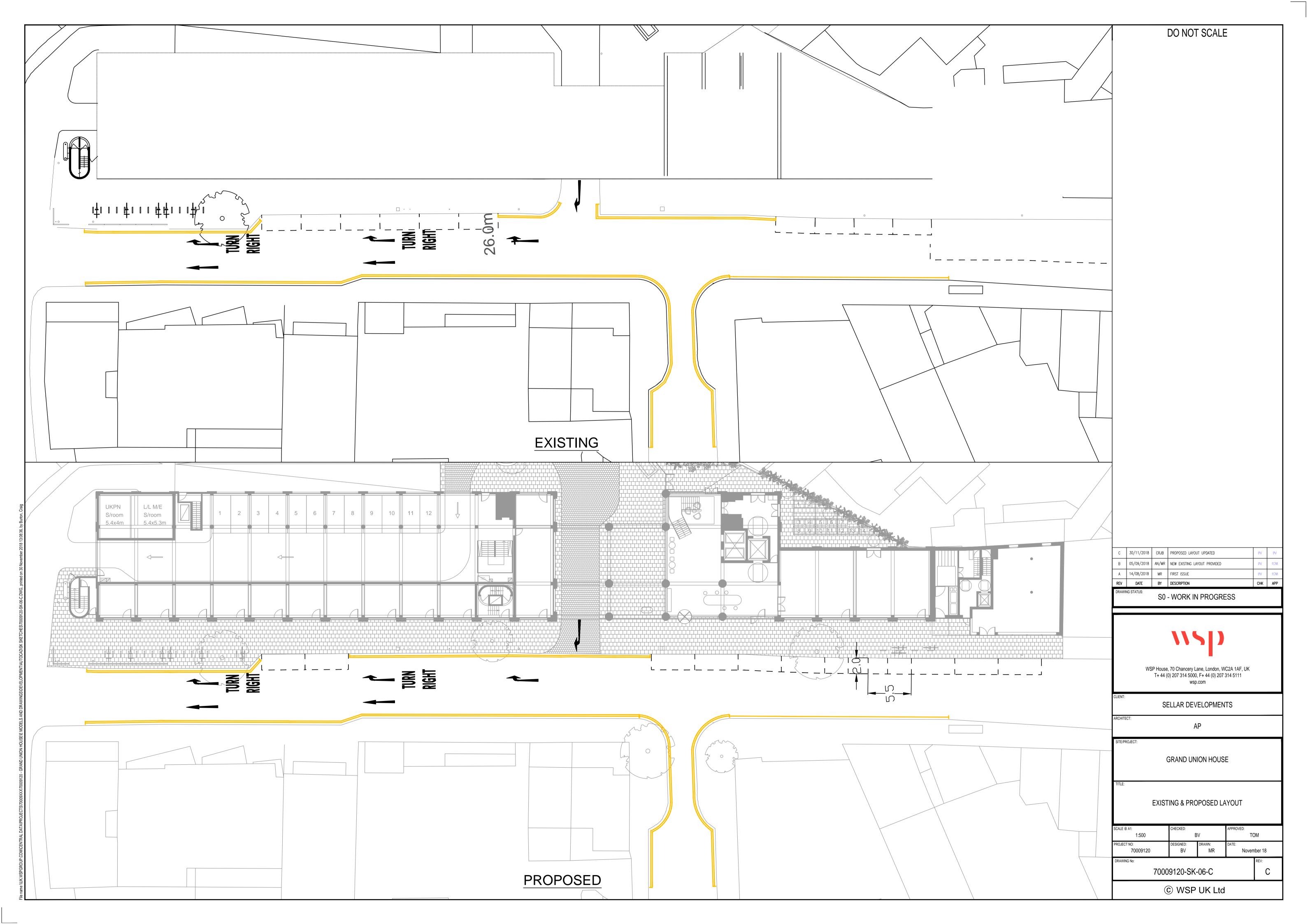


Appendix D

EXISTING AND PROPOSED ON-



STREET CAR PARKING RECONFIGURATION



Appendix E

SERVICING SWEPT PATH ANALYSIS

