CANEPARO ASSOCIATES
Transport Planning & Highway Design

London Borough of Bromley

West Wickham Library

Transport Statement

October 2021

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Contents

Appendices

1 INTRODUCTION

1.1 Caneparo Associates has been appointed by Bromley Council ('the Applicant') to provide traffic and transport advice in relation to the proposed redevelopment of Station Road Car Park, Croft Avenue, BR4 0SH (the 'site') within the London Borough of Bromley (LBB).

1.2 The existing site currently comprises 64 parking spaces, with access taken from Croft Avenue to the north, with a secondary access to the west which runs parallel to the car park and provides a service road to the rear of a row of commercial properties to the west.

1.3 The proposals comprise 26 residential units (5 x studios, 15 x 1-bed and 6 x 3-bed) in the form of a block of flats and a row of flats/maisonettes, with an associated access road and parking. A copy of the Architect's relevant plans is included at **Appendix A.**

1.4 This report assesses the proposal in traffic and transportation terms, setting out the existing situation, the accessibility of the site and the effects of the proposed development in terms of trip generation, access, parking, servicing and refuse collection. It concludes that the proposal will result in no adverse material impact on the surrounding highway and transport network.

1.5 This report has been prepared with the benefit pre-application advice from LBB in August 2021, with a copy included at **Appendix B.** The comments relevant to highways were predominantly in relation to the access road and parking requirements, which have been addressed within this report.

1.6 A public exhibition also took place in the library between Monday 19th – Friday 23rd July 2021 with residents and local businesses consulted in the local area. The responses received helped the design team to develop the proposals which have been incorporated within the proposed layout.

1.7 The remainder of the report is set out as follows:

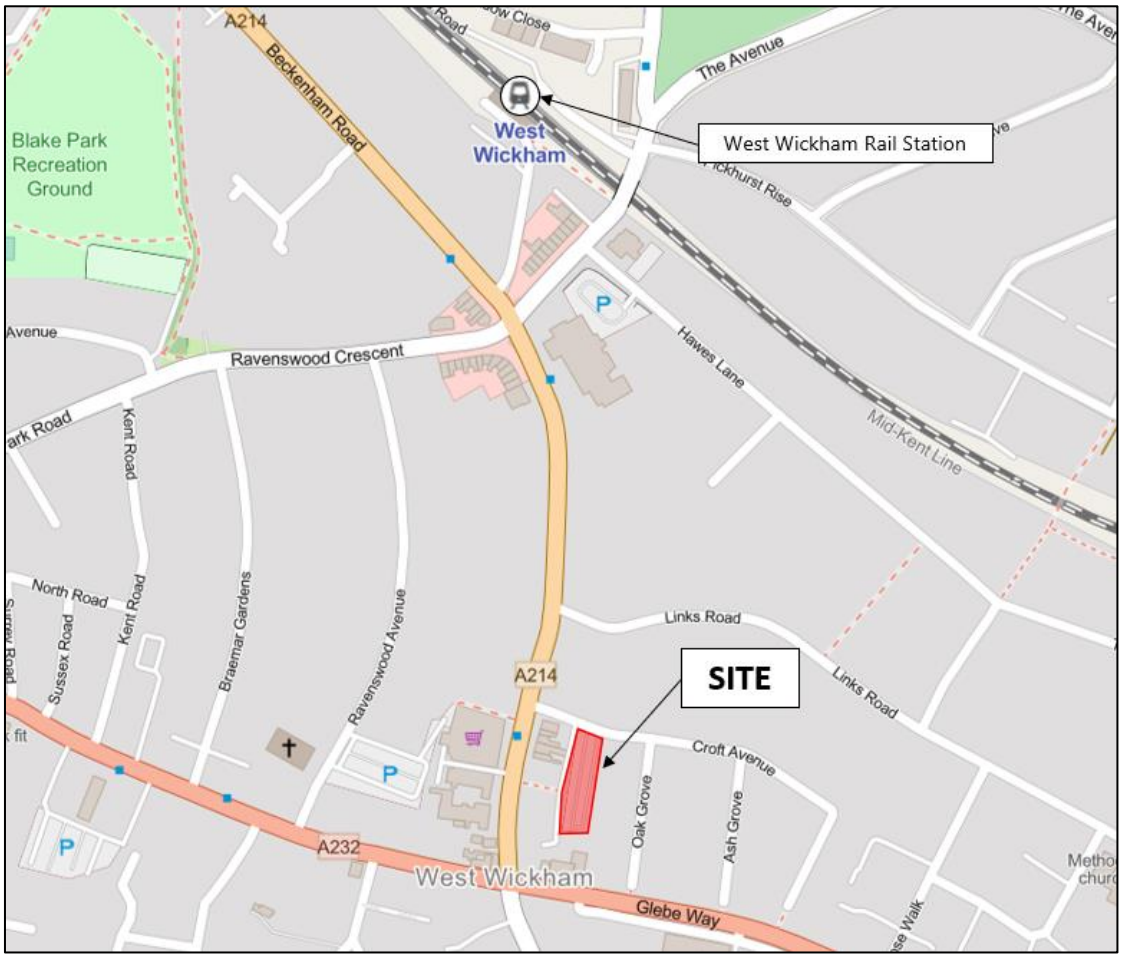
- Section 2 - describes the site and surrounding area;
- Section 3 - summarises the accessibility of the site;
- Section 4 - outlines the proposed development;
- Section 5 - assesses the effects of the development proposal; and
- Section 6 - provides a summary and conclusion.

2 THE SITE AND SURROUNDING AREA

The Site

2.1 The site is located to the north of the A232 Glebe Way and to the south of Croft Avenue, with a row of residential properties along its eastern boundary and a row of commercial properties located along its western boundary. The location of the site is shown in **Figure 2.1** below.

Figure 2.1 – Site Location Plan



[Source: www.osmaps.ordanancesurvey.co.uk]

2.2 The existing site currently comprises a public car park providing 64 parking spaces which is owned by the Council, with access taken from the north on Croft Avenue. A service road access forms the western section of the site running parallel to the car park, which provides a route to the rear of the commercial properties that front Station Road. The service road is in a poor condition and has no footways on either side.

Image 2.1 – Existing Service Road

[Source: www.googlemaps.com]

Local Highway Network

2.3 The A232 (Glebe Way) is a two-way carriageway operating in a predominantly east-west orientation connecting from the A233 in the east to the A217 to the west. In the vicinity of the site, the carriageway measures circa 8m in width and forms part of the Transport for London Route Network (TLRN). There is a row of parking bays on the north of Glebe Way to the south of the library which provide short-stay parking for up to three cars as well as one disabled space.

2.4 The A214 (Station Road) is a two-way carriageway operating in a north-south orientation connecting from the A222 in the north to A232 to the south. In the vicinity of the site, the carriageway measures circa 9m in width with circa 1m cycle lanes on both sides. The southern section of Station Road forms part of the TLRN and restricts stopping from Monday – Saturday between 7am – 7pm.

2.5 Croft Avenue is a two-way carriageway operating in an east-west orientation along the northern boundary of the site and provides a cul-de-sac and connects to Station Road to the west. In the vicinity of the site, the carriageway measures circa 8m in width with footways on both sides. There is a mixture of single yellow lines and unrestricted parking along its length, with traffic subject to a 30mph speed limit.

Personal Injury Collision Data

2.6 A review of the latest 60 months of Personal Injury Collision (PIC) data has been undertaken through referencing the www.crashmap.co.uk website. There were no recorded collisions along Croft Avenue during this period up until December 2019 which is the latest available date. It is therefore deemed that there are no existing highway safety issues in the vicinity of the site.

Parking Surveys

Daytime Car Park Surveys

2.7 Daytime parking surveys were undertaken at four Council run car parks across West Wickham, which included the site, on Friday 2nd July 2021 and Saturday 3rd July 2021 between 09:00 – 19:00. It was confirmed with LBB highways that surveys could be undertaken during this period on the basis the majority of COVID-19 restrictions had been lifted at this point. The highways officer also agreed the scope of the surveys, ensuring that each Council owned car park in the vicinity of the site was surveyed. The four car parks and their capacity have been outlined below, with **Table 2.1** providing a summary of the survey results, with the raw survey data included in **Appendix C** which also includes a map detailing the location of the car parks.

- West Wickham High Street Car Park: 115 spaces (113 standard + 2 disabled).
- Ravenswood Avenue Car Park: 143 spaces (139 standard + 4 disabled).
- Station Road Car Park: 64 spaces (62 standard + 2 disabled).
- West Wickham Pools Car Park: 54 spaces (52 standard + 2 disabled).

Table 2.1: Daytime Parking Survey Results (376 Spaces in Total)						
Period	Friday 2nd July 2021			Saturday 3rd July 2021		
	Cars Parked	Spaces	Occupancy (%)	Cars Parked	Spaces	Occupancy (%)
09:00	106	270	28%	73	303	19%
10:00	169	207	45%	162	214	43%
11:00	222	154	59%	247	129	66%
12:00	236	140	63%	243	133	65%
13:00	255	121	68%	224	152	60%
14:00	236	140	63%	211	165	56%
15:00	187	189	50%	192	184	51%
16:00	113	263	30%	140	236	37%
17:00	98	278	26%	81	295	22%
18:00	61	315	16%	52	324	14%
19:00	79	297	21%	46	330	12%
Average	**160**	**216**	**43%**	**152**	**224**	**40%**

2.8 Table 2.1 demonstrates that the peak hour across the two surveyed days was 13:00 on the Friday when 255 cars were parked and 121 spaces were still available, which represents a 68% parking occupancy. On average across the surveyed time period there were 216 available spaces on the Friday and 224 spaces available on the Saturday. This The effects of the loss of Station Road car park which currently occupies the site is assessed in more detail within Section 5.

2.9 The raw traffic survey data also reveals that peak parking demand of the disabled spaces was at 60% on both Friday and Saturday, with 6 cars parked out of a total of 10 spaces.

Overnight Parking Surveys of the Local Area

2.10 Overnight parking surveys were also undertaken on Tuesday 29th June 2021 (04:00) and Wednesday 30th June 2021 (05:00) in order to understand the existing parking demand in the vicinity of the site. This included roads within a 200m walking distance of the site, with the survey undertaken by an independent survey company using the Lambeth Methodology. This was agreed with LBB highways during pre-application discussions. A summary of the parking survey results is included in **Table 2.2** below, with the full survey data included in **Appendix D.**

Table 2.2: Overnight Parking Survey Results			
Period	**Cars Parked**	**Observed Spaces**	**Occupancy (%)**
Tuesday 29th June 2021 (04:00)	57	37	60.6%
Wednesday 30th June 2021 (05:00)	52	41	55.9%
Average	**55**	**39**	**58.3%**

2.11 Table 2.2 above demonstrates that occupancy on average was 58% across the two surveyed periods, with an average of 39 spaces available within a 200m walking distance of the site.

Census Data

Method of Travel to Work

2.12 Reference has been made to the 2011 Census Method of Travel to Work data for *'Bromley 030 Middle Super Output Area (MSOA)'*, in which the site is located. Bromley 030 MSOA has been selected as the 'origin' with all other areas selected as the 'destination'. This is an accurate method of predicting how future residents would travel to/from the site as it is based on existing travel habits for residents living in the area. A summary is provided in **Table 2.3** below.

Table 2.3: Census Method of Travel to Work Data	
Method of Travel	**Percentage**
Underground	2%
Train	32%
Bus	8%
Taxi	0%
Motorcycle	2%
Driving a Car	45%
Passenger in a Car	3%
Bicycle	1%
On Foot	7%
Total	**100%**

Note: Figures subject to rounding.

2.13 Table 2.3 demonstrates that the majority of residents currently travel to work by car (45%), whilst 42% travel by public transport.

Car Ownership Data

2.14 Reference has been made to the 2011 Census data to understand existing levels of car ownership in the local area, in which there are 0.64 cars per flat on average. This is analysed further in Section 5.

3 ACCESSIBILITY

Pedestrians

3.1 It is generally accepted that for journeys of up to 2km walking is an appropriate mode to replace car trips as set out in The Chartered Institution of Highways and Transportation (CIHT) Guidelines *(Guidelines for Providing for Journeys on Foot, 2000)*[1] which suggests a maximum 'acceptable' walking distance for pedestrians without mobility impairment of 2km.

3.2 Further research when reviewing walking distances includes the National Travel Survey data for 2010-2012 (How far do people walk? WYG Research Paper, 2015)[2], which suggests that walking should be considered suitable for distances up to 1.95km.

3.3 **Table 3.1** sets out details of approximate distances between the existing site and local amenities, where an average walk speed of 80 metres/minute is assumed with distances measured from the centre of the site.

Table 3.1: Approximate Distances to Local Facilities

Amenity	Location	Distance (metres)	Approx. Walk Time (min)
West Wickham Library	Glebe Way	60m	1 minute
West Chem (Pharmacy)	Station Road	60m	1 minute
Sainsburys	Station Road	90m	1 minute
Station Road Surgery	Station Road	120m	2 minutes
Costa Coffee	High Street	240m	3 minutes
Lidl	Glebe Way	250m	3 minutes
NatWest Bank	High Street	250m	3 minutes
West Wickham Post Office	High Street	270m	3 minutes
St Francis Church	Ravenswood Av	340m	4 minutes
West Wickham Leisure Centre	Station Road	420m	5 minutes
Marks and Spencer	High Street	440m	6 minutes
Public Transport Facilities			
Bus Stop 'Station Road / High Street Stop E'	Station Road	40m	<1 minute
West Wickham Railway Station	Station Approach	540m	7 minutes

[1] CIHT, *Guidelines for Providing for Journeys on Foot*, 2000
[2] WYG, *How far do people walk?*, 2015

3.4 The table above demonstrates that there are an abundance of local amenities and public transport facilities in the vicinity of the site, as such, a high proportion of future trips can be undertaken by sustainable modes, particularly on foot.

3.5 There are dropped kerbs and tactile paving located at the Glebe Way / Station Road signalised junction. This will allow future residents a controlled crossing to the southern side of the High Street. There is also a signalised crossing circa 50m walking distance west of the site on Station Road. This provides a walking route towards Sainsburys and Ravenswood Avenue car park.

Cycling

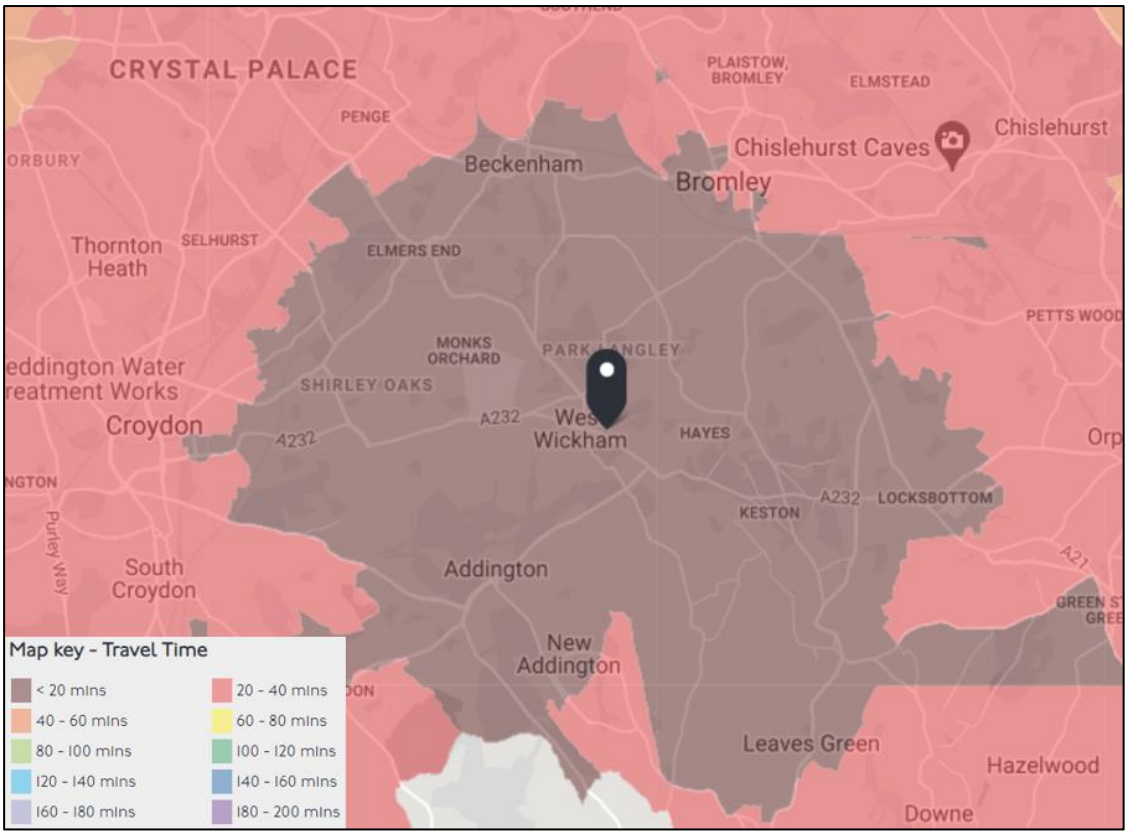
3.6 Guidance on cycling can be found in 'Designing Cycle Friendly Infrastructure' published by the CIHT[3]. This guidance highlights previous research by the DfT that three quarters of all journeys are less than 5 miles (8km), of which 60% are undertaken by private cars.

3.7 The guidelines highlight that there is a 'substantial potential' for substituting cycling for driving for distances up to 5 miles.

3.8 **Figure 3.1** shows a 20-minute cycling isochrone from the site, which includes areas such as Bromley, Addington, Beckenham, and east Croydon.

[3] CIHT, *Designing Cycle Friendly Infrastructure*, 2014

Figure 3.1 – 20-minute Cycling Isochrone



[Source: www.tfl.gov.uk]

3.9 There is a good level of cycling infrastructure in the vicinity of the site, with advisory cycle lanes provided on Glebe Way and Station Road. There are advanced cycle stop lines located at the Glebe Way / Station Road signalised junction. Furthermore, there are 4 Sheffield hoops located under a shelter on Glebe Way providing parking for up to 8 cycles.

Public Transport Accessibility Level (PTAL)

3.10 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walking time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point.

3.11 The PTAL is categorised in six levels, 1 to 6 where 6 represents a high level of accessibility and 1 a low level of accessibility. The PTAL levels 1 and 6 are further subdivided into 'a' and 'b' levels, with level 'a' indicating the location is rated towards the lower end of the PTAL category and 'b' towards the higher end.

3.12 The centre of the site has a PTAL rating of 2 according to TfL, which is towards the lower end of the scale. However, PTAL is not considered to accurately reflect the true accessibility of the site – it is an empirical means of examining 'accessibility' through a limited methodology which only considers public transport services (not walking and cycling) within a defined distance, taken to be 640m for bus stops and 960m for rail services. In reality people are not bound by these distances and will generally be prepared to walk (or cycle) much further. which suggests the site has a 'poor' level of access to public transport. A copy of the PTAL report is included at **Appendix E.**

Bus Services

3.13 The nearest bus stop is located approximately 40m west of the site (1-minute walk) on Station Road (Bus Stop 'Station Road / High Street Stop E'), which comprises sheltered seating and timetable information. This provides access to Route 194 which provides a service between Bell Green and West Croydon Bus Station, with approximately 5 services an hour Monday to Saturday and 3 services an hour on Sundays.

Rail Services

3.14 West Wickham Railway Station is located approximately 540m north of the site (7 minutes' walk) and is operated by Southeastern services. There are approximately 8 services each hour to the following destinations:

- 4 trains per hour to Hayes.
- 2 trains per hour to Cannon Street.
- 2 trains per hour to Charing Cross.

4 DEVELOPMENT PROPOSALS

4.1 The proposals comprise the redevelopment of Station Road car park to provide 26 residential units (5 x studios, 20 x 1-bed and 6 x 3-bed), comprising a block of flats and a row of flats/maisonettes, with associated parking and an improved access road.

Access

4.2 The existing access into the car park will be made redundant and reinstated as footway, with the main access into the site taken from the existing service road, which will be improved as part of the proposals.

4.3 The access road will measure 4.8m in width, with a 1.8m wide footway on the eastern side. The access road then varies in width from 3.7m – 4.8m with a footway along the eastern side for its length, with a footway also present on the western side to provide access to the rear of the row of commercial properties that front Station Road. The width of the access road ensures that two-way vehicle movement is feasible for the majority of its length, with sufficient space for two cars to wait at the access which ensures that there will be no queuing back onto Croft Avenue. A drawing demonstrating this is included at **Appendix F.**

4.4 The access road provides an enhanced walking route through the site and provides access to 8 on-site parking spaces, whilst providing sufficient space for refuse and delivery vehicles to turn, with further details provided later within this Section.

4.5 A junction visibility assessment has been undertaken for the access which demonstrates that a 2.4m x 43m visibility is achievable which is based on the speed limit of the road (30mph), with the associated drawing included in **Appendix G**. Vehicles are expected to travel much slower than 30mph due to the access being located near to a junction and therefore vehicles will naturally slow down and travel at lower speeds. It is pertinent to note that there is already an access in the location where the new access is proposed, which will be significantly improved for the benefit of all users, particularly pedestrians given there is no existing footway.

4.6 Vehicle swept path analysis of a car accessing/egressing the parking bays at the southern end of the access road is included in **Appendix H.**

4.7 It is proposed for the access road to become adopted. This was discussed with LBB during pre-application discussions in which it was advised that reference should be made to the *'LBB Design Manual for Development Part 1 – Highway Design Criteria For New Development (January 1998)*[4]*.'*

4.8 The access road will therefore be built to adoptable standards based on a shared surface as the access itself serves less than 25 dwellings. As mentioned previously, this includes a 4.8m wide carriageway with a 1.8m wide footway. This will be secured through a Private Street Works process as the Council cannot enter into a s106 agreement with itself. A detailed design process would be undertaken post-planning which will make reference to the design guide for the depths and types of surfacing that are required.

Parking

Car Parking

4.9 The proposals include a total of 13 parking spaces, of which 3 will be for disabled users. A total of 5 spaces will be accessed directly from Croft Avenue, whilst the remaining 8 spaces will be accessed via the internal access road to the south of the row of flats/maisonettes. A total of 3 spaces will be fitted with active electric charging facilities (<7kW), with all remaining spaces provided with passive provision. The level of parking is deemed appropriate and in accordance with standards, as well as complying with the pre-application feedback.

4.10 It is pertinent to note that the row of existing parking bays to the south of the library on Glebe Way will remain as existing, therefore maintaining short-stay parking for the town centre.

Loss of Car Parking

4.11 The proposed redevelopment of the site will result in the loss of 64 car parking spaces;. However, as set out later in this report, there are alternative public car parks in West Wickham that can accommodate the displaced demand.

[4] London Borough of Bromley, *LBB Design Manual for Development Part 1 – Highway Design Criteria For New Development*, 1998

Cycle Parking

4.12 The proposals include a total of 43 cycle parking spaces, of which 41 will be long-stay spaces provided in sheltered and secure storage, with 2 external visitor spaces in the form of a Sheffield hoop. Furthermore, the 8 sheltered cycle parking spaces on Glebe Way will be retained. The level of cycle parking is in accordance with London Plan 2021 standards, with further details included in Section 5.

Servicing and Refuse Collection

4.13 A communal refuse and recycling bin store will be located to the north of the block of flats which will be associated with the block, with individual bins located in front of the row of flats/maisonettes. Residents will be responsible for transferring their waste from their household into the correct bins. All servicing and refuse collection can take place on-site, with vehicles able to access/egress the site in forward gear, with the associated vehicle swept path analysis included at **Appendix I**. This ensures that bin dragging distances are minimised for Council collection operatives, whilst vehicles can also wait on Croft Avenue adjacent to the communal bin store. Servicing and refuse collection are considered further in Section 5.

5 EFFECTS OF THE PROPOSALS

5.1 This Section considers the potential effects of the proposed development in terms of trip generation, parking and servicing.

Trip Generation

5.2 In order to assess the potential number of trips associated with the proposed residential use, reference has been made to the TRICS database for affordable flats, located within Greater London only and of a similar size development to the proposals. A summary is included in **Table 5.1** below, with the TRICS output data included at **Appendix J,** with a focus on the weekday AM (08:00-09:00) and PM (17:00-18:00) peak hours.

Table 5.1: TRICS Trip Rates and Trip Generation – Proposed Residential Use

Time Period	Total Person Trip Rates (Per Unit)			Total Person Trips (Based on 26 Units)		
	In	Out	2-Way	In	Out	2-Way
AM Peak (08:00-09:00)	0.131	0.869	1.000	3	23	26
PM Peak (17:00-18:00)	0.355	0.257	0.612	9	7	16

Note: Figures subject to rounding

5.3 As can be seen in the table above, the proposed residential use has the potential to generate 26 two-way person trips across the morning peak hour and 16 two-way trips across the evening peak hour.

Modal Split

5.4 The modal split for the proposed residential use, as outlined previously in Table 2.3, has been applied to the trip generation assessment in Table 5.1, with a summary provided below in **Table 5.2.**

Table 5.2: Proposed Trip Generation by Mode (Residential)							
Mode	**Split**	**AM Peak**			**PM Peak**		
		In	**Out**	**2-Way**	**In**	**Out**	**2-Way**
Underground	2%	0	0	**1**	0	0	**0**
Train	32%	1	7	**8**	3	2	**5**
Bus	8%	0	2	**2**	1	1	**1**
Taxi	0%	0	0	**0**	0	0	**0**
Motorcycle	2%	0	0	**0**	0	0	**0**
Driving a car	45%	2	10	**12**	4	3	**7**
Passenger in car	3%	0	1	**1**	0	0	**0**
Bicycle	1%	0	0	**0**	0	0	**0**
On foot	7%	0	1	**2**	1	0	**1**
Total	**100%**	3	23	**26**	9	7	**16**

Note: Figures subject to rounding.

5.5 As can be seen from Table 5.2, there will be approximately 12 and 7 additional car trips in the AM and PM peak periods respectively. This equates to one additional vehicle every 5 – 9 minutes. It is pertinent to note that the existing site comprises a public car park which generates more vehicle trips than the proposed development. As such, the proposals will provide a net-benefit on the local highway network.

Public Transport

5.6 As outlined in Table 5.2 above, it is anticipated that the proposed residential units at the site will result in an additional 8 and 5 two-way rail trips in the AM and PM peaks respectively. When based on the total number of services operating in the vicinity of the site (8 services an hour in each direction, therefore a total of 16), this equates to 1 additional person per every 2-3 services, the effect of which is expected to be negligible.

5.7 There is expected to be 2 additional bus trips in the AM peak and 1 additional bus trip in the PM peak. When based on the total number of services operating in the vicinity of the site (5 services an hour in each direction, therefore a total of 10), this equates to 1 additional passenger per 5-10 services. It can therefore be concluded that the level of impact on buses services and public transport services generally will be negligible and fall within daily fluctuations.

Removal of Existing Car Park

5.8 It was agreed during the pre-application process that it would need to be demonstrated that the other car parks within West Wickham will be able to accommodate any displaced demand arising from the removal of the existing public car park on the site. An assessment has therefore been undertaken based on the survey results from the other car parks in West Wickham, with a summary provided in **Table 5.3** below. The removal of 64 parking spaces from the site will result in a total of 312 spaces still being available across the 3 remaining car parks (West Wickham High Street, Ravenswood Avenue and West Wickham Pools).

Table 5.3: Assessment of Removing Station Road Car Park (312 Remaining Spaces)

Period	Friday 2nd July 2021			Saturday 3rd July 2021		
	Cars Parked	Spaces	Occupancy (%)	Cars Parked	Spaces	Occupancy (%)
09:00	106	206	34%	73	239	23%
10:00	169	143	54%	162	150	52%
11:00	222	90	71%	247	65	79%
12:00	236	76	76%	243	69	78%
13:00	255	57	82%	224	88	72%
14:00	236	76	76%	211	101	68%
15:00	187	125	60%	192	120	62%
16:00	113	199	36%	140	172	45%
17:00	98	214	31%	81	231	26%
18:00	61	251	20%	52	260	17%
19:00	79	233	25%	46	266	15%
Average	**160**	**152**	**51%**	**152**	**160**	**49%**

5.9 The above table demonstrates peak parking occupancy would be 82% at 13:00 on the Friday, with 57 spaces still available. On the Saturday, peak parking demand would be 79% at 11:00 with 65 spaces still available, with a reduced demand at all other times. This therefore demonstrates that there is sufficient capacity across the remaining 3 car parks to accommodate expected demand. Therefore, the loss of 64 on-site car parking spaces will not have a materially detrimental impact on parking availability within the town centre.

5.10 It is pertinent to note that Ravenswood Avenue car park is circa 110m west of the site, equivalent to a 1–2-minute walk. This is therefore likely to be used by people who currently use Station Road car park, with only a slight increase in walking distance.

5.11 Buses are also equipped with ramps and therefore can be used by disabled users. This will ensure that the function of the library to the south of the site will not be adversely affected by the removal of the car park. Furthermore, there are existing parking bays on the northern side of Glebe Way immediately to the south of the library and therefore provides further opportunities to continue accessing the library.

Car Parking

5.12 The proposals include 13 parking spaces, of which 3 are disabled bays, with 10 standard bays. This is in accordance with the London Plan 2021 standards which allow up to 0.75 spaces per 1-2 bed unit and up to 1 space per 3 bed unit for sites located within a PTAL 2-3 area in outer London. The pre-application advice stated that a minimum of 13 spaces should be provided for the development which the proposals accord with. Furthermore, 20% of the parking bays will be fitted with active electric charging points, with all remaining spaces fitted with passive provision.

5.13 The car ownership data as previously outlined within Section 2, states that flats would generate a car ownership of 0.64 cars per household. Based on this, the proposed 26 flats would generate a parking demand for 17 cars. This would result in a theoretical parking overspill of 4 vehicles taking account of the 13 proposed spaces on-site.

5.14 When referencing the parking survey data as outlined within Table 2.2, if 4 additional vehicles were to park locally, this would increase parking occupancy rates to approximately 63% with 35 spaces still available on average. Based on this, it is evident that the level of parking provision on-site is appropriate and there would not be a materially detrimental impact to on-street parking resulting from the proposed development.

Cycle Parking

5.15 A total of 43 cycle parking spaces will be provided, of with 41 will be in sheltered and secure storage. The cycle parking for the block of flats will be provided in Josta two-tier racks, whilst the parking associated with the row of flats/maisonettes will be provided within the curtilage of each dwelling. This ensures there are 2 spaces per unit and 2 spaces for visitors, which is in accordance with London Plan standards, with require 1 space per 1-bed/studio, 1.5 spaces per 1-bed 2 person unit and 2 spaces per all other dwellings. A further 2 spaces are required for visitors up to 40 units which will be provided externally in the form of a Sheffield hoop. The provision of cycle parking will promote the use of active modes of travel to future residents.

Deliveries and Refuse Collection

Deliveries

5.16 Deliveries will take place on-site with access taken from Croft Avenue. The width of the access road ensures that a car can still pass a delivery vehicle if loading/unloading at the site.

5.17 It is expected that the majority of deliveries to the proposed residential units will be undertaken by small to medium sized vehicles e.g. transit vans, with the occasional requirement for larger vehicles such as a 7.5T box van.

5.18 Based on survey information contained with the TRICS database, residential developments generate around 8 or 9 delivery / collections per 100 units per day on average. Based on this, the development is likely to generate 2-3 additional delivery / collection trips per day, on average. This level of impact will be immaterial and will fall within daily fluctuations. Furthermore, the delivery will most likely form part of an existing trip and will therefore already be travelling on the local highway network.

Refuse Collections

5.19 A communal refuse and recycling bin store will be located to the north of the block of flats which will be associated with the block of flats, with individual bins located in front of the row of flats/maisonettes.

5.20 Refuse collection will take place on-street on Croft Avenue for the communal store with vehicles able to stop adjacent to the store to minimise bin dragging distances.

5.21 Refuse collection will also take place on-site, with sufficient turning space at the southern end of the access road to ensure that all manoeuvres will be in forward gear. As mentioned previously, vehicle swept path analysis demonstrating this is included at **Appendix I.**

6 SUMMARY AND CONCLUSION

Summary

6.1 The site is known as Station Road Car Park, comprising 64-spaces, with access taken from Croft Avenue to the north, with a secondary service road to the west that runs parallel to the car park. The Applicant is seeking a proposed development to provide 26 residential units, with associated parking and an improved access road.

6.2 The potential considerations in traffic and transportation terms can be summarised as follows:

- The site is accessible by non-car modes being within walking and cycling distance of day-to-day amenities and near to bus services on Station Road, with West Wickham Railway Station located within a 7-minute walk.
- The proposals include 13 on-site parking spaces which is in accordance with London Plan 2021 standards, of which 3 will be disabled spaces. A total of 3 spaces will also be provided with electric vehicle charging points, with all remaining spaces provided with passive provision.
- The new access road will be built and adopted through a Private Street Works process. The access road measures 4.8m at the entry point, whilst providing a 1.8m footway on the eastern side. Footways are then provided further into the site on both sides whilst sufficient space is provided for two-way vehicle movements and ensuring there is no queuing back onto the local highway network.
- The proposed 26 units is likely to generate a theoretical parking demand for 17 vehicles based on local car ownership data, with 4 cars potentially required to park on local streets taking account of on-site provision. The results of the parking surveys demonstrate that there is sufficient capacity on-street to accommodate the theoretical overspill demand, with parking occupancy increasing to approximately 63%, with 35 spaces still available on average during the week.
- A total of 43 cycle parking spaces will be provided, 41 of which will be provided in sheltered and secure storage, with 2 visitor cycle parking spaces provided externally. Furthermore, the 8 sheltered cycle parking spaces on Glebe Way will be retained.

- All vehicular deliveries and the majority of refuse collection will take place on-site with all manoeuvres in forward gear. There will be an increase of circa 2-3 deliveries across the entire day, therefore not creating a material impact on the local highway network.
- Using the TRICS database it has been demonstrated that the proposed 26 residential units would result in 12 and 7 two-way vehicle trips in the AM and PM peak periods respectively, equating to one additional vehicle every 5 – 9 minutes. This does not take into account the existing car park and therefore it is expected that vehicle trips would in fact reduce, with the net impact expected to be beneficial.

Conclusion

6.3 The proposed development is consistent with relevant transport policy guidance and is not anticipated to give rise to any major transport issues. It therefore meets the test of the NPPF and paragraph 111, which states that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

6.4 It can therefore be concluded that the proposed development is acceptable in traffic and transport terms.

Appendix A

Do not scale from this drawing, except for town planning purposes.
Work to figured dimensions only.

The areas on the drawing have been measured directly from a CAD drawing and have no tolerances added or subtracted.
The areas have been calculated in accordance with the Code of Measuring Practice, 6th Edition (2007) using the stated options NIA, GIA, GEA. They are approximate and relate to the likely areas of the building at the current state of the design. Any decisions to be made on the basis of these predictions, whether as to project viability, pre-letting, lease agreements and the like, should make allowance for the following:
- Design development
- Accurate site survey, site levels and dimensions need to be fully evaluated
- Allowance for construction methods and building tolerances.
- Local authority consents

rev	date	drwn by	chkd	description
.	08.06.21	SJW	SE	First Issue
A	22.06.21	SJW	SE	Pre-app 2 revisions
B	17.09.21	SJW	SE	Layout Updates, consultant issue
C	24.09.21	SJW	SE	Planning Issue

status
FOR PLANNING

BRIMELOW McSWEENEY ARCHITECTS
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project
West Wickham
Mixed-used Project

title
Ground Floor
Site Plan

scale	date	drawn
1:500@A3	27.11.20	SJW

drawing no.	revision
2023-1100	C

Appendix B

Housing, Planning, Property and Regeneration
Civic Centre, Stockwell Close, Bromley BR1 3UH

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Deborah Wood
London Borough of Bromley

Our Ref: PREAPP/21/00127
Contact: Robin Evans

3 August 2021

Dear Ms Wood,

Pre-planning application request PREAPP/21/00127 – West Wickham Library, Glebe Way, West Wickham.

Proposal

The proposal is for extensions to the library and for redevelopment of the public car park behind it for residential development:

Library: redevelopment of the existing library and toilet block (which has been closed for approx. 5 years) to provide expanded library stock, a Makerspace (https://www.gov.uk/government/publications/libraries-and-makerspaces/libraries-and-makerspaces), new community space, outdoor classroom and business hire lounge, as well as toilets (available during open hours only), enhancement of the public realm to the front of the library entrance. This would add one floor to the library and increase the floorspace of the mezzanine area, almost doubling the floorspace from 489sqm to 872sqm with a limited increase in external footprint.

Residential: re-use of Council carpark off Croft Avenue for 26 residential units comprising:

- Block A – 1x 3 storey block containing 14x 1 bedroom affordable flats with balcony/terraces,
- Block H – 1 row of terraced maisonettes containing 12x market units ("stacked mews") of 6x 1-bedroom ground floor units with gardens and 6x 3-bedroom upper floor units with terraces,

with access from Croft Avenue, 12x parking spaces in two communal locations, communal play space area and landscaping. The existing carpark access would be closed, and the proposal seeks to modify and formally adopt the existing service access road behind Station Road for the development.

The revised design (following on from the earlier design PREAPP/20/00323) now comprises one option only described above and includes alterations to the upper floor of the library extension and alterations to the balconies in Block A and removes the previously proposed children's social care facility.

Although the residential element would be physically and functionally unrelated to the library it is understood to be necessary to financially enable the library improvements.

The submission is supported by the following documents

- Design and Planning Statement,
- Floor layout/floor plan drawings,
- Floor area schedules,
- Parking Surveys

Location and Key Constraints

The application site is West Wickham Library, Glebe Way, West Wickham, close to the junction with Station Road, and Council carpark on Croft Avenue. The library site ("Plot D") is a predominantly single storey building, the main element has a pitched roof with some space within the roof (although this is not visible or apparent from the outside), single storey flat roofed elements to the east elevation, comprising the main entrance, and to the north east corner, and a single storey flat roofed addition to the west elevation comprising public toilets, self-contained and not linked to the library itself. There is a private carpark to the north west ("Plot C"). No. 105A Station Road to the north ("Plot B") is a single storey building in separate ownership stated in the application details as an office although it may have previously been a health centre or a nursery school. The carpark ("Plot A") is an open surface carpark of level tarmac hard surfacing of approximately 67 spaces, accessed via Croft Avenue, and also provides access to No. 105A. As discussed, it is understood that Plots B and C were considered for inclusion in the application site although this has not come to fruition and the proposal shall proceed without those parcels of land.

As shown in the application details the whole application site lies within the West Wickham Town Centre Area (TCA), the library within the Secondary Retail Frontage. The Secondary Retail Frontage continues along Station Road comprising two storey post war buildings: commercial on the ground floor and mostly residential on the upper floors, backing on to a single service track. The wider area is residential in nature and characterised mainly by detached and semidetached two storey post war dwellings set within regularly sized and shaped plots, although they are not necessarily long/deep plots.

Planning History

The relevant planning history relating to the application site is summarised as follows:

Overall site
PREAPP/20/00323 – Erection of expanded library and affordable housing (23-28 units) – comments issued.

Library
CORRES/13/00023 – internal correspondence for potential development at library.
There may be potential for accommodation above the library, subject to preserving neighbouring amenities, particularly in Oak Grove. This may limit development to one/part two storey height. Lack of useable curtilage/private amenity space would restrict the flats to non-family units. Absence of on-site parking would require consultation and consideration of the Highway Department.

Carpark
A number of advertisement consent applications for the carpark itself.

105A Station Road
00/03795/FULL1 – Detached single storey building for use as health and beauty salon, with carparking space was approved on 8 March 2001.

02/03220/RECON – Continued use as health and beauty salon without complying with condition 5 of permission 00/03795 granted for detached single storey building for use as health and beauty salon, to allow opening Tuesdays, Wednesdays and Thursdays until 8 p.m. was approved on 31 October 2002.

19/05336/FULL1 – Change of use application from Beauticians (Sui Generis) into a Nursery (Use Class D1). Erection of a part boundary fencing to front and side elevation and front gate to provide outdoor play space was approved on 18 March 2020.

Policy Context

Section 70(2) of the Town and Country Planning Act 1990 (as amended) sets out that in considering and determining applications for planning permission the local planning authority must have regard to:
(a) the provisions of the development plan, so far as material to the application,
(b) any local finance considerations, so far as material to the application, and
(c) any other material considerations.

Section 38 (6) of the Planning and Compulsory Purchase Act (2004) makes it clear that any determination under the planning acts must be made in accordance with the development plan unless material considerations indicate otherwise.

The Development Plan for Bromley comprises the Bromley Local Plan (2019) and The London Plan (2021). The NPPF does not change the legal status of the Development Plan.

The application shall be determined in accordance with the following policies:

<u>The London Plan 2021</u>

GG2 Making the best use of land
D3 Optimising site capacity through the design-led approach
D4 Delivering good design
D5 Inclusive design
D7 Accessible housing
D1 1 Safety, security and resilience to emergency,
H1 Increasing housing supply
H2 Small sites,
H4 Delivering affordable housing
H5 Threshold approach to applications
H6 Affordable housing tenure
G5 Urban Greening
G6 Biodiversity and access to nature
G7 Trees and woodlands
SI 1 Improving air quality
SI 12 Flood risk management
SI 13 Sustainable drainage
T1 Strategic approach to transport
T5 Cycling
T6 Car parking
T6.1 Residential parking
T9 Funding transport infrastructure through planning
DF1 Delivery of the Plan and Planning Obligations

<u>Mayoral Supplementary Planning Guidance</u>

Providing for Children and Young People's Play and Informal Recreation (2012)
Accessible London: Achieving an Inclusive Environment (2014)
Sustainable Design and Construction (2014)
Shaping Neighbourhoods: Character and Context (2014)
Housing (March 2016)
Control of Dust and Emissions During Construction and Demolition (2014)
Housing (2016)
Homes for Londoners - Affordable Housing and Viability (2017)

<u>Bromley Local Plan 2019</u>

1 Housing Supply
2 Affordable Housing
4 Housing Design
8 Side Space
20 Community Facilities
30 Parking
32 Road Safety
37 General Design of Development
42 Development adjacent to a conservation area
113 Waste Management in New Development
116 Sustainable Urban Drainage Systems
120 Air Quality
123 Sustainable Design and Construction
124 Carbon reduction, decentralised energy networks and renewable energy
125 Delivery and Implementation of the Local Plan

Bromley Supplementary Planning Guidance

Affordable Housing (2008) and subsequent addendums
Planning Obligations (2010) and subsequent addendums
SPG1 General Design Principles
SPG 2 Residential Design Guidance

Considerations

The main issues to be considered in respect of this proposal are:

- Principle and location of Development
- Housing matters
- Design and Landscaping
- Heritage
- Neighbouring amenity
- Sustainability
- Other (drainage/flooding/noise/pollution)
- CIL
- S106

Principle and location of development

Land use

The application site lies within the District Town Centre of West Wickham an urban area where there is no objection in principle to new development including change of use or residential development subject to certain criteria, essentially that it would not compromise the retail function of the Town Centre.

The scheme involves residential development on a public car park accessed via Croft Avenue. A Transport Assessment should be supported by a Parking Survey to justify/demonstrate the loss of the public car park serving West Wickham District Centre (which consists predominantly of units along the High Street and Glebe Way TfL Strategic Road Network), this should include a breakdown of disabled and non-disabled bays to ensure there would remain adequate provision within the overall West Wickham District Centre.

Plot B (library) is part of the Secondary Frontage and the proposal would retain the existing library and aims to strengthen its facilities and functions. In accordance with Local Plan Policy 21 the proposal seeks to maximise the opportunity to enhance the social infrastructure provided by the

current library and developing a community “hub” by providing a range of social infrastructure on accessible existing community sites and/or in retail centres such as the TCA in this case.

However, such proposals should ‘provide appropriate parking and should not adversely affect highway safety or the amenities of adjoining occupiers’ and should provide facilities to ensure that they are easily accessible to all sections of the community, through the principles of inclusive design. As such, the access to existing retained parking areas/spaces including disabled spaces in the TCA that would continue to serve the library should be identified and other accessible transport services to demonstrate that the loss of the existing car park would not adversely affect the function of the library, particularly given its improved/enhanced facilities thereby increasing its appeal to the community. There is an on-street parking bay on Glebe way outside the library including one disabled parking bay and consideration could be given to increasing this and/or allocating an additional disabled bay to improve the parking provision, and could be explored with TfL, although the proximity to the junction with Station Road and traffic island to the east could limit this opportunity.

The revised scheme provides a comparative analysis of the existing and proposed floorspace for the library areas and should clarify that any “non-library” uses, such as the Makers Space, would still be ancillary to the main use as a library, and the proposed management arrangements for the space(s) should be provided in a forthcoming planning application.

The internal layout(s) should be accessible with suitable/convenient access to lifts or other accessible facilities. It is understood that the existing public W/C has been closed for a number of years, although there is a Community Toilet Scheme in place including a café toilet opposite the library and Sainsbury’s in Station Road which are likely to be available during the opening hours of those premises. The proposal would provide toilet facilities within the library/café and although they would be available during opening hours only this would be a similar arrangement to the existing provision within the Community Toilet Scheme, it would increase the amount of toilets available and it may be more accessible and convenient to the public and in any event this would be an overall enhancement to the current closed WC facilities at the site.

It is understood that the café and external improvements intend to support the current under-used or mis-used open space at the corner of Glebe Way and Station Road.

Effect of the loss of the public car park

Plot A positioned behind the frontage, but still within the TCA boundary, would re-use the existing carpark for residential development. The amended scheme includes a survey of the existing car parking provision in West Wickham: High Street, Ravenswood Avenue, Croft Avenue/Station Road and Leisure Centre. They all appear to be public (Council owned) which is important to the survey results and conclusions that can be drawn from them as there needs to be some certainty that the other car parks would be retained in the long term, in order to be considered a genuine or feasible alternative to Station Road, and this could not necessarily be guaranteed if they were privately owned/commercial car parks and in the Council’s ownership or control. For the avoidance of doubt, it would therefore be prudent to confirm they are public car parks.

The parking survey identifies the geographical location(s) of the surveyed car parks which is useful given that their location will naturally influence motorists’ choice over where to park around the TCA and this could affect the suitability of those car parks as genuine alternatives to Station Road. However, it is noted that not all of the car parks surveyed lie within the TCA boundary.

According to the submitted parking surveys:

TCA total peak capacity: 376,
TCA total off-peak/overnight capacity: 94
TCA peak occupancy: 255 cars or 68% of TCA total capacity,

TCA off-peak/overnight occupancy: 55 cars or 58% off-peak capacity

Station Road Car Park capacity: 64 spaces or 17% of TCA total capacity

TCA adjusted capacity (following loss of Station Road Car Park): 312,
TCA adjusted peak occupancy (following loss of Station Road Car Park): 255 cars or 82% of TCA adjusted capacity,
TCA adjusted off-peak/overnight occupancy (following loss of Station Road Car Park): unknown.

The parking survey indicates that, following the loss of Station Road car park, the other car parks would continue to provide car parking within West Wickham to support the users of the TCA. The peak and off-peak differentiation is noted, concluding that there is sufficient on-street parking to accommodate off-peak parking and it would be ideal if the statistics and effect of the loss of the Station Road Car Park on off-peak capacity within the car parks themselves could also be set out for comparison.

Highway matters

The proposal would result in loss of the existing Council car park and the effect on residual parking within West Wickham is discussed above.

Given that the proposal involves the closure of the existing carpark access and formation of a new access by adopting the existing service road, the highway access is critical and therefore part of the principle of the development. The residential development would be served by an access track service road behind the commercial units on A214 Station Road. The existing service road is currently a single lane track mainly serving the rear of the commercial units, it is not part of the adopted highway network, it is not up to the Council's Highway Standards for new/intensified residential development, and would need to meet its Standards to be formally adopted and please bear in mind the process and timescales for formal highway adoption. This should include detail of the proposed highway surfacing to ensure their long term durability and that they could be maintained once adopted by the Council. All the land necessary to carry out the proposed development (e.g. land required for access to the site from a public highway, visibility splays, landscaping, car parking and open areas around buildings) should be included within the red edged application site.

The Highway Department raises caution over the adoption and more intensive use of the service road due to the potential conflict between vehicles and pedestrians accessing the rear of the commercial units and residences of units fronting Station Road. The revised design omits the dedicated parking for Block H and this consequently widens the access road providing greater passing space and the width of the road appears to be acceptable. However, the turning areas continue to appear constrained and should demonstrate with swept path analysis domestic vehicles and service vehicles such as refuse collection vehicles (RCVs) could access, turn, and exit in forward gear. The access road should also continue to offer access to the other properties, the rear of units on Station Road, Plot B and Plot C. The proposal should also provide an accurate plan of the proposed road layout showing greater detail of the access points, demonstrating sufficient width, ensuring that there would be no "queuing" on the highway to enter the site (particularly given the proximity to the junction of Croft Avenue and Station Road, and with the required vehicle and pedestrian visibility splays shown.

The application site lies within a low PTAL 2 rated area (on a scale of 0 has poorest access and 6b has best access to public transport services) indicating that the site and any new development would more reliant upon private transport, including the private car or bicycle, than on public transport services. Glebe Way is part of the TfL Road Network where TfL has responsibility.

The London Plan Car Parking Standards should be adhered to:

PTAL	1-2 bed	3 bed

PTAL 2-3	Up to 0.75 (max)	Up to 1 (max)

The revised residential scheme shows:

- 12 car parking spaces (including 3 disabled bays) with 4 bays positioned fronting directly on to Croft Avenue and 8 bays adjacent to No. 105A Station Road.

However, for this site the proposal should provide at least 0.5 parking spaces per unit equating to a minimum of 13 bays be provided for the 26 units. An additional space could potentially be provided by relocating the cycle storage, and indeed the cycle storage should ideally be positioned in a less secluded area for improved surveillance and security thereby increasing the attractiveness of cycling and the likely uptake in cycling.

London Plan Policy T6.1 requires a designated disabled persons parking bay for 3% of dwellings with potential for an additional 7% dwellings to be provided with one designated disabled persons parking space per dwelling in future. In effect a requirement for 10% of dwellings i.e. 3 parking spaces for this proposed development.

The proposal should provide at least 20% parking space with active electric charging (ready to use) and the remaining spaces with passive electric charging (ready to be converted) in accordance with The London Plan.

The London Plan Cycle Parking Standards should be adhered to and would appear to require at least 42 spaces for this development:

1-bed/studio	1-bed 2 person	All others
1	1.5	2 spaces

The development would need to be serviced by the Council's waste collection service and refuse storage should comply with the Council's Standards. Please note the Council's Waste Management Team would be notified in a forthcoming planning application and it is advisable to discuss the proposal and any potential waste storage or collection issues at an early stage.
https://www.bromley.gov.uk/downloads/file/3164/refuse_collection_-_notes_for_developers_and_architects

Please note that if planning permission is granted before the access road is acquired by the Council or adopted by the Council, it would need to be secured through a Private Street Works (PSW) process as the Council cannot enter into s106 legal agreement with itself, as the Applicant. The Highway Department advises that the PSW process can be a complex and lengthy process (and can include referral to the High Court) and the Applicant is advised to begin the public consultation process for the PSW as soon as possible.

The application site fronts on Glebe Way to the South; part of the Transport for London Road Network (TLRN). In any forthcoming planning application, the future status/location/repositioning of street furniture on Glebe Way frontage, (within on the TLRN): two benches and a litter bin (third party owned) and cycle parking (TfL owned) should be considered and addressed. The relationship of the proposal with the TLRN boundary/footpath will need to be detailed, and any works proposed to the TLRN e.g. repaving will require a s278 agreement with TfL. The servicing for the commercial unit/café fronting on to Glebe Way should be clarified. TfL would prefer that the site is serviced via Croft Avenue. On Glebe Way there is a parking bay (30 minute maximum stay during red route control hours) and a disabled parking bay; the former could potentially be used for servicing however its availability could not be guaranteed and therefore the servicing should take place within site. A Construction Logistics/Management Plan should be submitted to the Council for approval in consultation with TfL. Highway licences/permissions may be required from TfL to allow for construction e.g. hoardings and scaffold licences if required on the TLRN/TfL land. The outside space for the café including any 'tables and chairs' positioned on the footway should not be located on the TLRN/TfL land to allow unobstructed pedestrian movement.

Housing matters

Housing supply and mix

The residential element of at least 26 units would contribute significantly towards the Council's housing supply in accordance with Local Plan Policy 1. The housing tenure need within the Borough up to 2031 identified in the SHMA 2014 is as follows:
1-bedroom units (53%), 2-bedroom units (21%) and 3-bedroom unit (20%) units.

The amended scheme would provide 20x 1-bedroom units comprising 77% of the total and 6x 3-bedroom units comprising 23% of the total and this would support the overall greater need for 1-bedroom units within the Borough, although some 2-bedroom units could be provided to provide a mixture of units across the development.

Nonetheless, please note that the Council's Housing Department would be consulted on any forthcoming planning application for advice on the Borough/local need for certain unit size(s).

Optimising site capacity through design led approach (density)

The application site lies within suburban residential area characterised mostly by low rise two storey semidetached and detached dwellings. As mentioned, the revised design would include Block A; a three storey flatted block fronting on to Croft Avenue, and a two-three storey block containing terraced maisonettes in the centre of the site, seeking to maximise the number of residential units within the site constraints including the character of buildings in the area and impact on neighbouring properties, and the design is discussed in further detail below.

Affordable housing and review

The London Plan Policy H4 1) requires Major developments of 10 units or more to provide genuinely affordable housing, and specific measures to achieve this aim include:
H4 4) public sector land delivering at least 50 per cent affordable housing on each site and public sector landowners with agreements with the Mayor delivering at least 50 per cent affordable housing across their portfolio. This proposal indicates approximately 14 affordable units or approximately 54% of the total development in accordance with Policy H4. The tenure split of the proposal has yet to be confirmed.

The London Plan Policy H5 specifies the threshold approach to applications for Major development proposals that trigger affordable housing requirements set at 50 per cent for public sector land where there is no portfolio agreement with the Mayor. According to Policy H5 D) developments providing 75% or more affordable housing may follow the Fast Track Route (where the tenure mix is acceptable) to the Borough or the Mayor where relevant. Fast tracked applications are not required to provide a viability assessment at the planning application stage, although to ensure the Applicant fully intends to build out the permission, an Early Stage Viability Review will be required if an agreed level of progress on the implementation is not made within two years of the permission being granted (or a period agreed by the Borough).

However, if the application would provide less than 75% affordable housing it would follow the Viability Tested Route including a viability statement to demonstrate the financial viability for providing less than the required affordable housing threshold and please note that this would be assessed by an independent consultant at the Applicant's expense. Viability Tested schemes will be subject to Early and Late Stage Viability Review.

The London Plan Policy H6 A) specifies the following split within residential developments: a minimum of 30% for affordable/social rent, a minimum of 30% for genuinely affordable housing such as London Living Rent/London Shared Ownership, and the remaining up to 40% to be determined by the Borough as low-cost rented homes (affordable/social rent) or intermediate units based on identified need. The Bromley Local Plan specifies a 60:40 tenure split, is consistent with

London Plan Policy H6. Any variation from this tenure split must be justified in line with Local Plan Policy 2.

Standard of residential accommodation and amenity space

In March 2015 the Government published The National Technical Housing Standards. This document prescribes internal space within new dwellings and is suitable for application across all tenures. It sets out requirements for the Gross Internal (floor) Area of new dwellings at a defined level of occupancy as well as floor areas and dimensions for key parts of the home, notably bedrooms, storage and floor to ceiling height. The Gross Internal Areas in this standard will not be adequate for wheelchair housing (Category 3 homes in Part M of the Building Regulations) where additional internal area is required to accommodate increased circulation and functionality to meet the needs of wheelchair households.

The Mayor's Housing SPG sets out guidance in respect of the standard required for all new residential accommodation to supplement London Plan policies. The standards apply to new build, conversion and change of use proposals. Part 2 of the Housing SPG deals with the quality of residential accommodation setting out standards for dwelling size, room layouts and circulation space, storage facilities, floor to ceiling heights, outlook, daylight and sunlight, external amenity space (including refuse and cycle storage facilities) as well as core and access arrangements to reflect the Governments National Technical Housing Standards.

The proposal should comply with the minimum space standards in the Technical housing standards – nationally described space standard for the relevant dwelling type and size (including the relevant internal storage and room dimension criteria). Some of the 'Block A' units appear to fall below the minimum space standard Flats 1.4 and 2.4 and others just meet the minimum. The floor space for the mews terrace units should be provided and should ensure a suitable staircase width for access to the upper floor maisonettes. The units in Block H would be dual aspect. Some the units in Block A would be genuinely dual aspect although others would appear to be dual aspect although this is mainly through some windows being placed perpendicular and would not be genuinely dual aspect, although it is noted that this is balanced with preserving neighbouring privacy amenity. Some of the ground floor windows, the wheelchair unit in particular, face directly onto the play space which is not ideal for the amenities of those occupants.

Amenity Space

The site lies within an Area of Open Space Deficiency and therefore the provision of appropriate open space is particularly important. Block A for 14x 1-2 person units would each provide 5sqm of private amenity space/balcony in accordance with the standards.

Block H would provide:

- 6x 1-bed ground floor flats with gardens measuring between 41-44sqm,
- 6x 3-bed upper floor flats with upper floor balcony/terraces measuring approximately 14sqm

This would also be in accordance with the standards although given that the smaller ground floor units would have the larger garden area and the larger upper floor units (likely to be family sized units) would have the smaller terrace space it would be prudent to consider switching their positions for more proportionate amenity space however it is noted that the maisonette nature and staircase access has limitations in this respect.

London Plan Policy S4 Play and Informal Recreation Clause B(2) requires residential developments to incorporate good-quality, accessible play provision for all ages and 10sqm of playspace should be provided per child.

The proposal indicates 87sqm of playspace for children 0-17yrs to the rear of Block A. Although this exceeds the 53.9sqm that the GLA Child Yield calculator indicates is necessary it would be

positioned immediately adjacent to the ground floor wheelchair unit where it could potentially lead to a unneighbourly effect on those occupants and it should be laid out to ensure the amenities of that unit are adequately protected. In this respect it would also be prudent to provide a noise impact assessment to ensure that the noise to future residents would be acceptable and incorporate any necessary noise attenuation.

The London Plan makes clear that ninety percent of new housing should meet Building Regulation requirement M4 (2) 'accessible and adaptable dwellings' and ten per cent of new housing should meet Building Regulation requirement M4 (3) 'wheelchair user dwellings', i.e. is designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users. The relevant category of Building Control Compliance should be secured by planning conditions. All flats appear to be designed to be adaptable however please note that at least 10% should be M(4) 3 wheelchair designed (even if the first occupants are not wheelchair users). If the first occupants are wheelchair users then the specification M(4) 3 2b (in Local Plan para 2.1.61) should be used.

London Plan Policy T6.1 requires a designated disabled persons parking bay for 3% of dwellings with potential for an additional 7% dwellings to be provided with one designated disabled persons parking space per dwelling in future. In effect a requirement for 10% of dwellings i.e. 3 parking spaces for this proposed development.

Although the application site does not lie within an Air Quality Management Area it would nonetheless be encouraged to comply with the air quality neutral requirements of The London Plan. Furthermore, appropriate boilers should be installed to meet the dry NOx emission rates.

Given the existing use of the carpark there is potential for ground contamination which should be assessed and addressed/mitigated through a Contaminated Land Assessment before re-used for residential development.

<u>Heritage assets</u>

The NPPF sets out in section 16 the tests for considering the impact of a development proposal upon designated and non-designated heritage assets. The test is whether the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset and whether it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits. A range of criteria apply.

Paragraph 196/197 state where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use. The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

The application site does not lie within a Conservation Area or an Area of Special Residential Character and the library building is not statutorily listed or locally listed.

However, Plot B the existing library building has an attractive design and character, it could potentially be regarded as a non-designated asset, which should be retained, preserved and enhanced. The pitched roof would be removed and replaced by a flat roof which would alter the nature of the building although as noted from the submitted details and the discussion the proposal considers and seeks to incorporate the heritage of the area into the design, particularly the proposed front/side extension to the ground floor entrance and café element. In the revised scheme the upper floor extension to the library has been stepped back from the edge reducing its size and bulk and providing some additional visual subservience to the existing building below, although it would still have an integrated appearance. The external materials are important to the

overall appearance and a materials palette or board should be submitted with a forthcoming planning application. There are other designated heritage assets nearby in in the TCA including The Swan Pub, referenced in the application details and mentioned in the meeting.

As such the revised scheme is improved from the perspective of the setting of nearby listed building(s). However there appears to be some differentiation between the materials shown in the application details (page 18 dark materials compared with pages 22-23 showing lighter materials) and this should be clarified/confirmed in a forthcoming planning application. The interface/transition between the materials in the proposed new entrance and the existing building appears difficult to achieve a suitable match in brick and an alternative material or approach might be more suitable in this part of the development (page 18).

Plot A for the housing element is set behind the main frontage and further away from the heritage assets and there is no objection from a Historic Conservation perspective.

<u>Design and landscaping</u>

Design is a key consideration in the planning process. Good design is an important aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people.

Paragraph 124 of the NPPF (2018) states that the creation of high quality buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.

Paragraph 127 of the NPPF (2018) requires Local Planning Authorities to ensure that developments will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development; are visually attractive as a result of good architecture, layout and appropriate and effective landscaping and are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities). New development shall also establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit; optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.

The London Plan and Local Plan policies further reinforce the principles of the NPPF setting out a clear rationale for high quality design.

Urban Design

Library element
Scale and Massing: The proposed library element would not appear to overdevelop Plot B or appear cramped in relation to the existing building and its site. The setback of the roof extension in response to previous conservation/heritage comments is welcomed. However, although the design seeks to reference the horizontal banding on the existing building, the revised design appears ‘heavy’ at the top of the roof, partly due to the thickness of the roof fascia edge in comparison to the previous design. It is important that the contemporary roof extension appears subservient to the original building so as not to appear overly prominent or detract from its heritage value and further consideration should be given to this element of the scheme. Emphasising the vertical glazing/window frames (as originally envisaged) may reduce the “heavy” feel at the top of

the roof. The small protruding element on the roof of the eastern wing unfortunately detracts from the balance and simple stepped form of the extensions as they read collectively from east to west. However, that extension is understood to be necessary to accommodate the internal stairwell (head height). Its removal to enhance the overall appearance of the building would be preferable (subject to the design and access requirements).
Layout: The design rationale for relocating the main entrance and introducing the café function within a colonnade to activate the street frontage and extend the public realm is noted and supported. The historical analysis has informed the architectural design which is a positive approach. The Design Team is encouraged to re-examine the junction between the existing library building and the new front/side entrance extension; perhaps by extending the colonnade (in place of the brick return at the main entrance) which would create a more subtle transition and a clear visual break between the 'old' and the 'new' parts of the building. The revision to the ground floor plan at the rear of the building; simplifying the building form and improving the size and quality of the external amenity space, is welcomed. However, the scheme would benefit from incorporating Plot B and Plot C as those spaces would further improve the outside spaces and relationship with the boundary and would optimise the development potential and quality of place and the Applicant is strongly encouraged to continue efforts to acquire those plots.
Architecture: The modern style and design would differ from the existing although it would retain and reflect existing features and heritage and would not necessarily be unacceptable.

Housing element
Scale and Massing: Plot A is a compact, narrow, and deep parcel of land and, as mentioned, the residential element would have a greater density than the prevailing residential density, although in the revised scheme the combination of Block A and Block H would be less dense than the combination of the two flatted blocks in the previous pre-application scheme.
Layout: Revisions made to the previously proposed 'Option 2' scheme include;

- reduction in the width of the mews terrace,
- removal of mews terrace parking spaces and realignment of the terrace/access road,
- widening of mews units to improve internal living spaces,
- lengthening mews units rear gardens to improve the layout, increase separation from neighbouring properties and to improve the size of amenity space for the mews units.

However, the layout still appears tight in places indicating the size/shape of the site is constrained and presents challenges to provide the amount of development, the provision of amenity/playspace and car parking requirements. The playspace area should be carefully designed to include natural surveillance to improve security for those using it and to avoid crime when it is not in use. Similarly, blank ended walls at the ends of the terrace should provide some natural surveillance (particularly the southern end), to avoid anti-social behaviour and crime in an otherwise secluded area at the rear of the library with little natural footfall.
The rationale for the shared highway/access surface and the intended tree planting to enhance character and Urban Greening is noted. However, care should be taken that the proposal and its design aspirations do not conflict with the servicing requirements of the proposed residential units and the neighbouring commercial units and this again indicates the constrained nature, size and shape of the site and the proposed development and the pressures being placed on the proposal and all of the elements it is seeking to achieve.
Scale and Massing: Revisions made to the previously proposed 'Option 2' scheme include:

- Reduction in flatted 'Block A' from 4 storeys to 3 storeys would be more appropriate to the setting and the surrounding context. However, the proposal should provide indicative street scene elevations to properly assess the relationship of the building with the neighbouring properties and the wider streetscene.
- The terraced mews would be 3 storeys across the full width (previously limited to the central part of the block), however notwithstanding this, efforts have been made to address issues of potential overlooking omitting east facing second floor windows.

Architecture: The design seeks to create a self-contained identity for the site with a unified architectural language, and there is merit in creating a family of buildings which relate to each other throughout the site. However, 'Block A' in particular would have a distinctive contemporary appearance and as it would have a prominent position and a different form and design from its

neighbours there is some concern as to how it would integrate with and relate to the more traditional suburban character of Croft Road. The Design Team is encouraged to examine the way in which 'Block A' could be more sympathetic to this setting in terms of its form and appearance, perhaps taking aspects of the surrounding context to inform a contemporary interpretation/design language while incorporating a more subtle and responsive approach to the character of the area. Materiality and architectural detailing is key in this regard, taking cues from the local context to ensure that the building does not appear incongruous within the streetscene. There is a wide variety of individual variation in the design and architecture of neighbouring roads even within a fairly uniformly designed neighbourhood. The proposed high-quality brick finish with projecting brickwork marking the entrance cores and articulating the principal elevation(s) is welcomed. Recessed windows, stone copings, and bespoke metal balustrades will help to lift the quality of the development. Referencing local design features and characteristics and incorporating them into the scheme will help to create a clear identity and sense of place.
Internal Design: The internal layout of 'Block A', in particular, presents some issues and challenges which should be considered and addressed:

- the position and proximity of the staircase would provide long, narrow corridors to some of the Units e.g. Flats G.4, 1.4, 2.4,
- the stepped southern elevation seeks to provide a mixture of aspects to the Flats G.4, 1.4, 2.4 however this would not provide a genuine dual aspect to these units and would compromise the living conditions which could be improved by inserting additional windows, particularly at the western elevation of Flat G.4 and/or some other form of ventilation such as angled windows elsewhere in those units (subject to avoiding actual and perceived overlooking). This could also help to relieve some of the otherwise blank flank elevations, at Flat G.4 and the bike store area,
- some of the 'Block A' units appear to fall below the minimum space standard Flats 1.4 and 2.4 and others just meet the minimum,
- floor space for the mews terrace units should be provided and should ensure a suitable staircase width for access to the upper floor maisonettes,

Locally distinctive and positive aspects of the existing context can be used to help shape the development as well as integrate it into the wider area, reinforcing and sustaining local distinctiveness, ultimately contributing to a sense of place. Although the dwellings in the area are traditional the more modern architectural style and design would not necessarily be unacceptable although it should be justified in a design rationale. There is potential to take cues from the surrounding context to inform a contemporary interpretation/design language, which should respond to the character of the area.

The site has limited capacity to accommodate everything that is currently being proposed and such a dense approach would compromise the living experience for future occupants and the amenities of existing residents. In order for the site to function in the way that is being envisaged the design team will need to be architecturally inventive to address the many site constraints and reduce the impact on neighbouring amenity. The compromises that are currently being made demonstrates that the site is having to work hard to deliver the housing numbers in the brief, although the revised scheme proposes a reduced number of units and density which alleviates this issue.

Crime Prevention (Secured by Design)

Major developments are expected to achieve Secured by Design (SbD) accreditation, the Developer should discuss the proposal with the Metropolitan Police before submitting a planning application in order to incorporate SbD requirements, and please note that the Met Police would be consulted on a planning application. It is understood that the development has not yet been discussed with the Met Police. The development should therefore incorporate relevant design features and physical building measures, materials, equipment and technologies. For instance, the design layout development should avoid alley ways, niches and secluded areas where people could loiter, such as the space between the proposed café and the neighbouring building (Boots

optician) and areas that have no natural surveillance and/or are dark. In this respect the car parking and cycle storage areas should ideally be overlooked for natural surveillance to deter loitering, vandalism and theft. The access to and permeability throughout a development should be considered to avoid or discourage access to those not permitted to be there i.e. non-residents. Access to buildings should be secure i.e. with entry systems or key fobs to prevent unauthorised entry. Internal spaces within buildings such flats should be compartmentalised to minimise access and circulation throughout the building. Cycle and bin stores should be secure and ideally integrated within the building(s). fittings and fixtures such as doors and windows should accredited.

Trees and landscaping

The application site by its nature is not currently well landscaped. The proposal would offer opportunity for new landscaping and planting in the external space(s) outside the library, the residential units and in the private amenity spaces and this can be shown in the proposed drawings and landscaping plan.

Neighbouring amenity

Policies 6 and 37 of the Bromley Local Plan seek to protect existing residential occupiers from inappropriate development. Issues to consider are the impact of a development proposal upon neighbouring properties by way of overshadowing, loss of light, overbearing impact, overlooking, loss of privacy and general noise and disturbance.

The additions to the library, particularly the upper floor additions would be visible from the nearest neighbouring residential properties in Oak Grove in direct alignment with the library, separated by approximately 20m, and Peacock House, Station Road, also separated by approximately by approximately 20m although offset at an oblique angle. This may have an effect on the outlook and overshadowing to those properties and although the effect is indicated in the submitted Planning Statement this could be addressed in fully worked up Sun/Daylight Assessment.

The nature of the proposed re-use of the carpark would generally be compatible with the surrounding residential area although it would depend upon the intensity, scale, and form of the building(s).

By its nature the residential element would have an inherently different relationship and impact upon the outlook of surrounding residential properties compared with the existing open car park area:
Block A positioned close to No. 2 Croft Avenue would have an effect on its outlook and some overshadowing however in the revised scheme it would be reduced from four storeys to three storeys with a consequent reduced impact. The balconies/terraces would be physically screened from the neighbouring properties thereby reducing the actual impact of overlooking, although there may still be some perceived overlooking in various directions and some noise impacts from the use of the balconies.

Block H positioned close to and in direct alignment with properties in Oak Grove although in the revised scheme the separation would be increased by the deeper gardens thereby comparatively reducing the amenity impact. Block H would be positioned closer to some of the residential properties at the rear of Station Road and should ideally be positioned out of direct alignment with them to alleviate their effect on outlook. The use of the gardens would be unlikely to have a significantly harmful additional effect, and particularly as this is not an uncommon relationship between residential gardens. The upper floor terraces, positioned to the west side elevation, would be aligned with fewer residential properties than if they were on the east side elevation facing Oak Grove, however they would be in close proximity to some of the upper floor residential properties at the rear of Station Road and the effects could be alleviated through appropriate privacy screening.

The neighbouring properties on Station Road would be served by the improved access road and the properties on Croft Avenue and Oak Grove would be adjoined by residential amenity space and turning spaces compared with the existing public carpark bays reducing some of the noise and disturbance from cars being parked.

Sustainability

The NPPF requires Local Planning Authorities to adopt proactive strategies to mitigate and adapt to climate change. London Plan and Draft Local Plan Policies advocate the need for sustainable development. All new development should address climate change and reduce carbon emissions.

Policy SI 2 'Minimising greenhouse gas emissions' of the London Plan states that:
A Major development should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:
1) be lean: use less energy and manage demand during operation
2) be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly
3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site
4) be seen: monitor, verify and report on energy performance.
B Major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy.
C A minimum on-site reduction of at least 35 per cent beyond Building Regulations152 is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:
1) through a cash in lieu contribution to the borough's carbon offset fund, or
2) off-site provided that an alternative proposal is identified, and delivery is certain.

The proposal should include energy efficient and sustainable construction methods improving its environmental performance and it would offer the opportunity to incorporate renewable energy generating technology such as ground source or air source heat pumps and/or solar panels thereby also contributing towards carbon dioxide emissions savings. As a Major development it should strive to achieve a "zero carbon" target (or provide a payment in lieu with calculations for any shortfall below "zero carbon"). Furthermore, as a proposal by the Council it should lead by example; maximising opportunities for carbon reduction/Urban Greening.

Biodiversity and Urban Greening

In accordance with policy G5 of the London Plan, Major development proposals should contribute to the greening of London by including Urban Greening as a fundamental element of site and building design, and by incorporating measures such as high quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage. Urban greening, including green roofs/living walls should be designed-in to the development at the earliest stages. It is not acceptable to consider these elements post determination.

The Mayor has developed an Urban Greening Factor model to assist boroughs and developers in determining the appropriate provision of Urban Greening for new developments. The Urban Greening Factor for a proposed development should be calculated in accordance with the formula in paragraph 8.5.6 of the London Plan. The pre-application scheme has not identified biodiversity as a particular site constraint or provided detail on the opportunities to improve it. A formal planning application includes the relevant Ecological Impact Assessment (EcIA) and specific

enhancement proposals to ensure a 10% biodiversity net gain, along with details for achieving Urban Greening.

Drainage

A forthcoming planning application should account for flood risk with an appropriate Flood Risk Assessment (as necessary) and regardless of flood risk the should provide suitable drainage/sustainable drainage including:

- demonstration that opportunities to implement sustainable drainage techniques at the site have been maximised, Green Roofs on flat roofs are recommended,
- surface water from the site should reflect greenfield run-off rate for the area of the site,
- surface water attenuation system must be able to accommodate any storm event up to the critical duration 1 in 100 plus climate change storm event for the site without the flow balancing system being bypassed. Sufficient information must be provided to demonstrate that the critical duration storm has been used,
- Management plan for future maintenance of all SUDS.

CIL

The Mayor of London and Bromley Borough CIL are material considerations. CIL **would** be payable on this proposal and a planning application should include the relevant forms and information.

Application documents

The Applicant is advised of the Council's published Local Information Requirements document which can be viewed on the Council's website at the following address and this should assist in providing the necessary items to validate a planning application. Please note that the Council can decline to validate an application that is not accompanied by the necessary relevant documents.
https://www.bromley.gov.uk/downloads/file/2362/validation_guidance_and_local_information_requirements_for_planning_applications
The National Planning Practice Guidance and the Planning Portal also set out guidance on submitting a planning application.
https://www.gov.uk/guidance/making-an-application
https://www.planningportal.co.uk/info/200126/applications/59/how_to_apply

At Officer's discretion, the Council can decline to validate an application not accompanied by relevant documents.

At this stage it is likely that the following should be submitted with a forthcoming planning application:

Application form/fee:

- Completed Application Form,
- Signed Ownership and Agricultural Holdings Certificate,
- Application fee (to help verify the fee please state the fee category in the Planning Fee Regulations and provide the site/floor areas used to calculate the fee),
- CIL Additional Information Form.

Application drawings:

- Red edged site location plan,
- Existing and proposed block plan,
- Existing and proposed site layout plans,
- Existing and proposed elevations, floor plans and roof plans,
- Section drawings and plans to show existing and proposed ground levels

- Existing and proposed street scene elevations

Reports/documents:
- Accessible/Adaptable Homes Statement
- Accommodation Schedule,
- Affordable Housing Statement,
- Air Quality Assessment,
- Biodiversity/Ecology and Geological Survey Report,
- Construction and Environmental Management Plan,
- Daylight/Sunlight Assessment
- Design and Access Statement,
- Economic Statement
- Energy Statement,
- Flood Risk Assessment,
- Financial Viability Assessment (Viability Tested Route),
- Fire Statement,
- Heritage Statement,
- Land Contamination Assessment
- Landscaping Scheme,
- Landscape/Townscape and Views Impact Assessment
- Lighting Assessment,
- Materials Schedule and sample materials board,
- Noise Impact Assessment (future residential amenities),
- Parking Provision for Cars and Bicycles,
- Photographs of existing site,
- Planning Statement (may include some of the items listed within it),
- Planning Obligations – Draft Heads of Terms,
- Refuse and Recycling Storage Details
- Statement of Community Involvement (SCI),
- Surface Water Drainage Assessment,
- Transport Assessment,
- Tree Survey, Arboricultural Implications Assessment, Arboricultural Method Statement and Tree Protection Plan,

External consultees and engagement

Before finalising any forthcoming planning application submission, the Applicant should consider liaising with other relevant external organisations (that the Council may consult on a forthcoming planning application) in order that their advice or requirements can be incorporated. For instance, some consultees may raise issues during a planning application that the Council could not necessarily identify at the pre-planning application stage.

For Major development and prominent or public schemes it is also encouraged to engage with the local community, Local Members and the Development Control Committee. This should not be an opportunity for lobbying Council Members, however Applicants may present their scheme objectively for Members' information and advance notice prior to submitting a planning application.

Pre-commencement conditions

The Council is seeking to reduce the number of pre commencement conditions for all applications, should planning permission be granted for any forthcoming application on this site. In view of this the Council would encourage the submission of sufficient information to enable details to be agreed at application stage for matters including (but not exclusively) drainage, materials, landscaping, parking, slab levels, Designing Out Crime, refuse/recycling arrangement, cycle parking, highway matters (visibility splays, details of turning areas, position of wheel wash, Construction Management Plan etc).

Disclaimer

These comments are made without prejudice to the determination of an application as each case is determined on its own merits in light of the relevant planning policies of the development Plan and any other material land use planning considerations.

Please note that the above advice is based on the written material submitted with your pre-application request and any additional information and/or change to the scheme may alter the planning issues and our response to the proposal. Also, it is the case that, on occasions, new issues do arise during processing of a formal planning or other application which could not be identified during the pre-application process, such as those raised by local residents.

Please note that all pre application advice given is without prejudice to the recommendation or final decision on any application submitted.

Yours sincerely,

Robin Evans

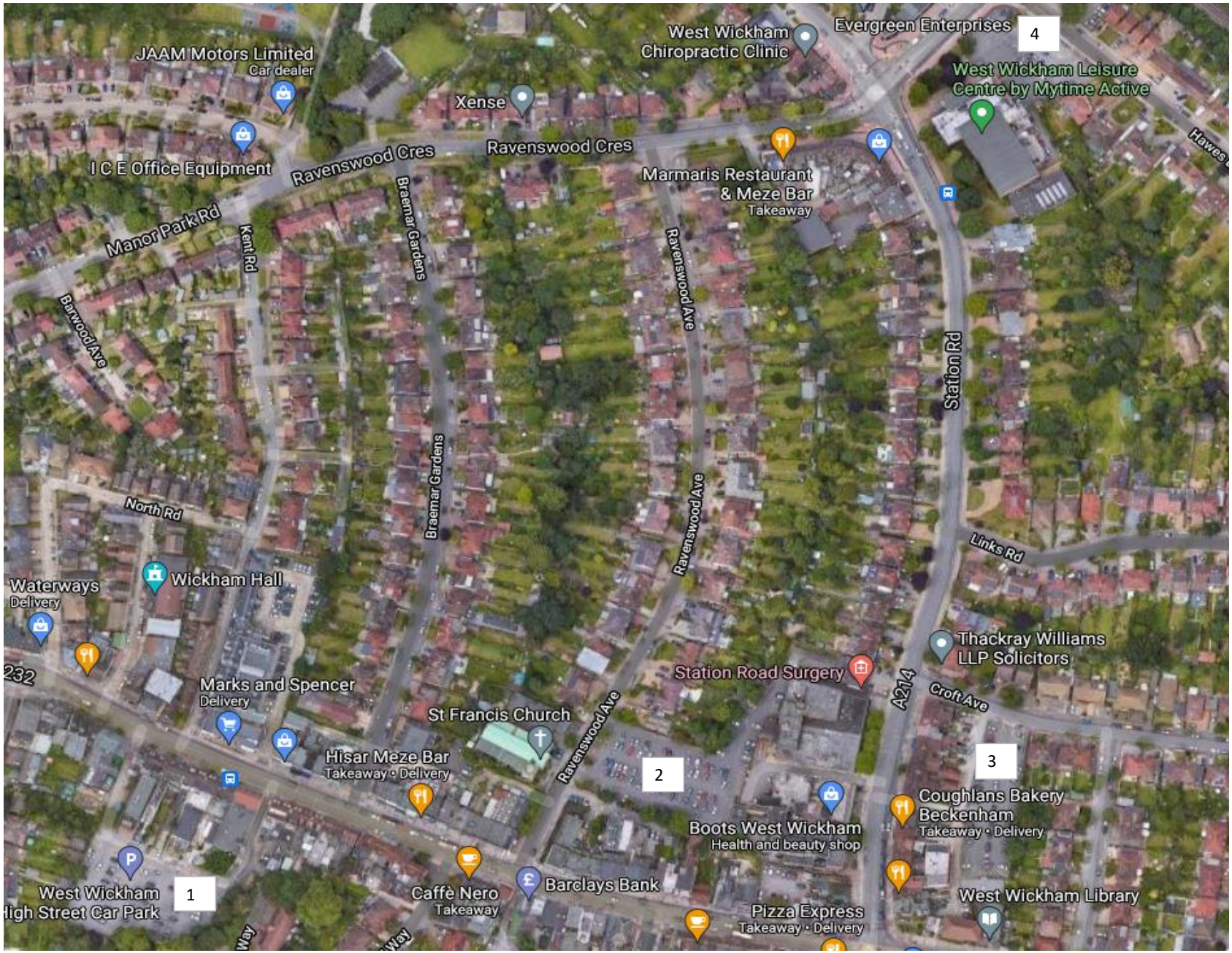
Robin Evans
Planner
Development Management
London Borough Bromley

Appendix C

K&M Traffic Surveys

DATE : FRIDAY 2ND & SATURDAY 3RD JULY 2021

LOCATION : WEST WICKHAM, KENT



K&M Traffic Surveys

DATE : FRIDAY 2ND JULY 2021 LOCATION : WEST WICKHAM, KENT

WEATHER : DRY & SUNNY

	1				2				3				4			
	WEST WICKHAM HIGH ST CAR PARK				RAVENSWOOD AVENUE CAR PARK				STATION ROAD CAR PARK				WEST WICKHAM POOLS CAR PARK			
	UNRESTRICTED		DISABLED		UNRESTRICTED		DISABLED		UNRESTRICTED		DISABLED		UNRESTRICTED		DISABLED	
	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS
09:00	28	85	0	2	58	81	2	2	12	50	0	2	6	46	0	2
10:00	58	55	1	1	60	79	2	2	35	27	0	2	12	40	1	1
11:00	89	24	1	1	74	65	4	0	31	31	0	2	22	30	1	1
12:00	86	27	1	1	89	50	2	2	37	25	1	1	18	34	2	0
13:00	100	13	2	0	82	57	2	2	36	26	0	2	32	20	1	1
14:00	94	19	1	1	68	71	3	1	35	27	0	2	34	18	1	1
15:00	67	46	1	1	56	83	0	4	32	30	0	2	31	21	0	2
16:00	30	83	1	1	38	101	1	3	28	34	0	2	14	38	1	1
17:00	23	90	1	1	37	102	2	2	20	42	0	2	15	37	0	2
18:00	17	96	0	2	20	119	2	2	8	54	0	2	14	38	0	2
19:00	29	84	0	2	23	116	1	3	14	48	1	1	11	41	0	2
TOTAL SPACES	113		2		139		4		62		2		52		2	

K&M Traffic Surveys

DATE : SATURDAY 3RD JULY 2021 LOCATION : WEST WICKHAM, KENT

WEATHER : DRY

	1				2				3				4			
	WEST WICKHAM HIGH ST CAR PARK				RAVENSWOOD AVENUE CAR PARK				STATION ROAD CAR PARK				WEST WICKHAM POOLS CAR PARK			
	UNRESTRICTED		DISABLED		UNRESTRICTED		DISABLED		UNRESTRICTED		DISABLED		UNRESTRICTED		DISABLED	
	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS	PARKED	EMPTY BAYS
09:00	20	93	0	2	19	120	0	4	15	47	0	2	17	35	2	0
10:00	53	60	0	2	48	91	2	2	42	20	1	1	16	36	0	2
11:00	90	23	2	0	88	51	0	4	43	19	1	1	23	29	0	2
12:00	81	32	2	0	96	43	2	2	41	21	0	2	19	33	2	0
13:00	86	27	2	0	71	68	1	3	42	20	1	1	20	32	1	1
14:00	87	26	1	1	75	64	2	2	28	34	0	2	16	36	2	0
15:00	74	39	0	2	67	72	0	4	29	33	0	2	21	31	1	1
16:00	52	61	0	2	45	94	3	1	19	43	0	2	20	32	1	1
17:00	29	84	0	2	23	116	1	3	13	49	0	2	14	38	1	1
18:00	17	96	0	2	19	120	0	4	10	52	0	2	6	46	0	2
19:00	17	96	0	2	8	131	0	4	12	50	0	2	9	43	0	2
TOTAL SPACES	113		2		139		4		62		2		52		2	

Appendix D

K&M TRAFFIC SURVEYS

DATE : 29th AND 30th JUNE 2021

DAY : TUESDAY & WEDNESDAY

LOCATION : WEST WICKHAM, Lbo BROMLEY, BR4 0SH

K&M TRAFFIC SURVEYS

DATE : 29th AND 30th JUNE 2021

DAY : TUESDAY & WEDNESDAY

LOCATION : WEST WICKHAM, Lbo BROMLEY, BR4 0SH

KEY:

- = SINGLE YELLOW LINE MON-SAT 0800-1830
- = DOUBLE YELLOW LINE
- = SINGLE RED LINE
- = DOUBLE RED LINE
- = DROPPED KERB
- = PEDESTRIAN CROSSING
- = ACCESS
- = DISABLED BAY
- = BUS STOP
- = RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600 30 MINS NO RETURN WITHIN 1 HOUR
- = RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600, LOADING 20 MINS & DISABLED 3 HOURS
- = RED ROUTE BAY MON-SAT 0700-1900 30 MINS NO RETURN WITHIN 1 HOUR

BLANK = UNRESTRICTED

K&M TRAFFIC SURVEYS

DATE : 29th AND 30th JUNE 2021

DAY : TUESDAY & WEDNESDAY

LOCATION : WEST WICKHAM, Lbo BROMLEY, BR4 0SH

ROAD NAME	ZONE	RESTRICTION	METRES	5 METRES = 1 SPACE	TUESDAY 29th JUNE 2021 TIME : 0400 PARKED	OBSERVED SPACES	%RESTRICTION STRESS	WEDNESDAY 30th JUNE 2021 TIME : 0500 PARKED	OBSERVED SPACES	%RESTRICTION STRESS
CROFT AVE	1	DOUBLE YELLOW LINE	5.3							
		DROPPED KERB	28.8							
		UNRESTRICTED	4.1		1			1		
		SINGLE YELLOW LINE MON-SAT 0800-1830	47.2							
		ACCESS	10							
STATION RD	2	PEDESTRIAN CROSSING	49.3							
		SINGLE RED LINE	4.7							
		DROPPED KERB	4.3							
		RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600 30 MINS NO RETURN WITHIN 1 HOUR	20.1	4	0	4	0.0%	0	4	0.0%
		RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600, LOADING 20 MINS & DISABLED 3 HOURS	17.7	3	0	3	0.0%	0	3	0.0%
		DOUBLE RED LINE	35							
GLEBE WAY	3	DOUBLE RED LINE	28.8							
		DISABLED BAY	8	1	1	0	100.0%	0	1	0.0%
		RED ROUTE BAY MON-SAT 0700-1900 30 MINS NO RETURN WITHIN 1 HOUR	20.4	4	2	1	66.7%	2	1	66.7%
		SINGLE RED LINE	37.8							
		DROPPED KERB	4.7							
	4	DOUBLE RED LINE	44.6							
	5	DOUBLE RED LINE	43							
WICKHAM COURT RD	6	DOUBLE RED LINE	18.6							
		SINGLE YELLOW LINE MON-SAT 0800-1830	79.1							
		DROPPED KERB	104.2							
	7	SINGLE YELLOW LINE MON-SAT 0800-1830	104.2							
		DROPPED KERB	55.9							
		DOUBLE RED LINE	26							
STATION RD	8	DOUBLE RED LINE	38.7							
		DISABLED BAY	5.8	1	0	1	0.0%	0	1	0.0%
		RED ROUTE BAY MON-SAT 0700-1900 30 MINS NO RETURN WITHIN 1 HOUR	8.2	1	0	1	0.0%	0	1	0.0%
		ACCESS	7.6							
		BUS STOP	14.3							
	9	DOUBLE RED LINE	6.7							
		PEDESTRIAN CROSSING	65.3							
		DROPPED KERB	34.2							
		SINGLE YELLOW LINE MON-SAT 0800-1830	44.9							
LINKS RD	10	DROPPED KERB	32.3							
		SINGLE YELLOW LINE MON-SAT 0800-1830	64							
	11	SINGLE YELLOW LINE MON-SAT 0800-1830	52.6							
		DROPPED KERB	43.6							
STATION RD	12	SINGLE YELLOW LINE MON-SAT 0800-1830	38.8							
		DROPPED KERB	29.3							
CROFT AVE	13	SINGLE YELLOW LINE MON-SAT 0800-1830	44.9							
		DROPPED KERB	126.3							
		UNRESTRICTED	93.9	11	12	4	75.0%	10	6	62.5%
	14	DROPPED KERB	39.3							
		UNRESTRICTED	46.1	8	4	3	57.1%	5	1	83.3%
	15	DROPPED KERB	12.7							
		UNRESTRICTED	67.8	13	2	10	16.7%	2	10	16.7%
	16	DROPPED KERB	36.5							
		UNRESTRICTED	30.8	5	5	1	83.3%	5	1	83.3%
		DOUBLE YELLOW LINE	7.9							
ASH GROVE	17	DOUBLE YELLOW LINE	9.4							
		UNRESTRICTED	70.3	13	5	6	45.5%	5	7	41.7%
		DROPPED KERB	38.7							
	18	UNRESTRICTED	71.5	12	6	7	46.2%	5	8	38.5%
		DROPPED KERB	39.1							
		DOUBLE YELLOW LINE	8.5							
CROFT AVE	19	DOUBLE YELLOW LINE	12.9							
		UNRESTRICTED	22.3	4	4	0	100.0%	4	0	100.0%
		DROPPED KERB	28.3							
OAK GROVE	20	DOUBLE YELLOW LINE	8.3							
		UNRESTRICTED	62.1	11	10	1	90.9%	9	2	81.8%
		DROPPED KERB	46.8							
	21	UNRESTRICTED	54.8	8	6	4	60.0%	5	4	55.6%
		DROPPED KERB	47.9							
		DISABLED BAY	5.6	1	1	0	100.0%	1	0	100.0%
		DOUBLE YELLOW LINE	9							

K&M TRAFFIC SURVEYS

DATE : 29th JUNE 2021

DAY : TUESDAY

LOCATION : WEST WICKHAM, Lbo BROMLEY, BR4 0SH

TIME : 0400

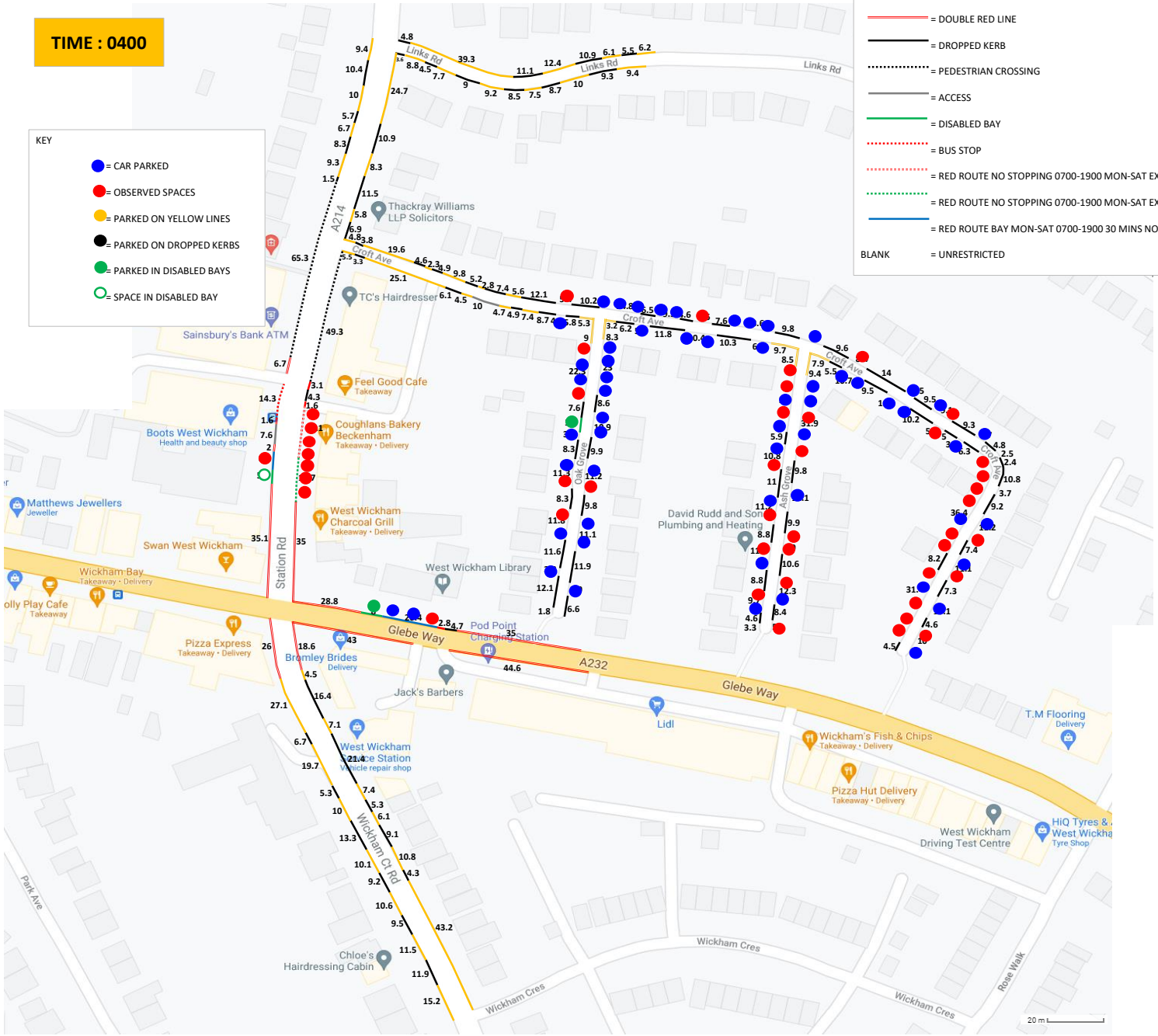
KEY

- = CAR PARKED
- = OBSERVED SPACES
- = PARKED ON YELLOW LINES
- = PARKED ON DROPPED KERBS
- = PARKED IN DISABLED BAYS
- = SPACE IN DISABLED BAY

KEY:

- = SINGLE YELLOW LINE MON-SAT 0800-1830
- = DOUBLE YELLOW LINE
- = SINGLE RED LINE
- = DOUBLE RED LINE
- = DROPPED KERB
- = PEDESTRIAN CROSSING
- = ACCESS
- = DISABLED BAY
- = BUS STOP
- = RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600 30 MINS NO RETURN WITHIN 1 HOUR
- = RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600, LOADING 20 MINS & DISABLED 3 HOURS
- = RED ROUTE BAY MON-SAT 0700-1900 30 MINS NO RETURN WITHIN 1 HOUR

BLANK = UNRESTRICTED



K&M TRAFFIC SURVEYS

DATE : 30th JUNE 2021

DAY : WEDNESDAY

LOCATION : WEST WICKHAM, Lbo BROMLEY, BR4 0SH

TIME : 0500

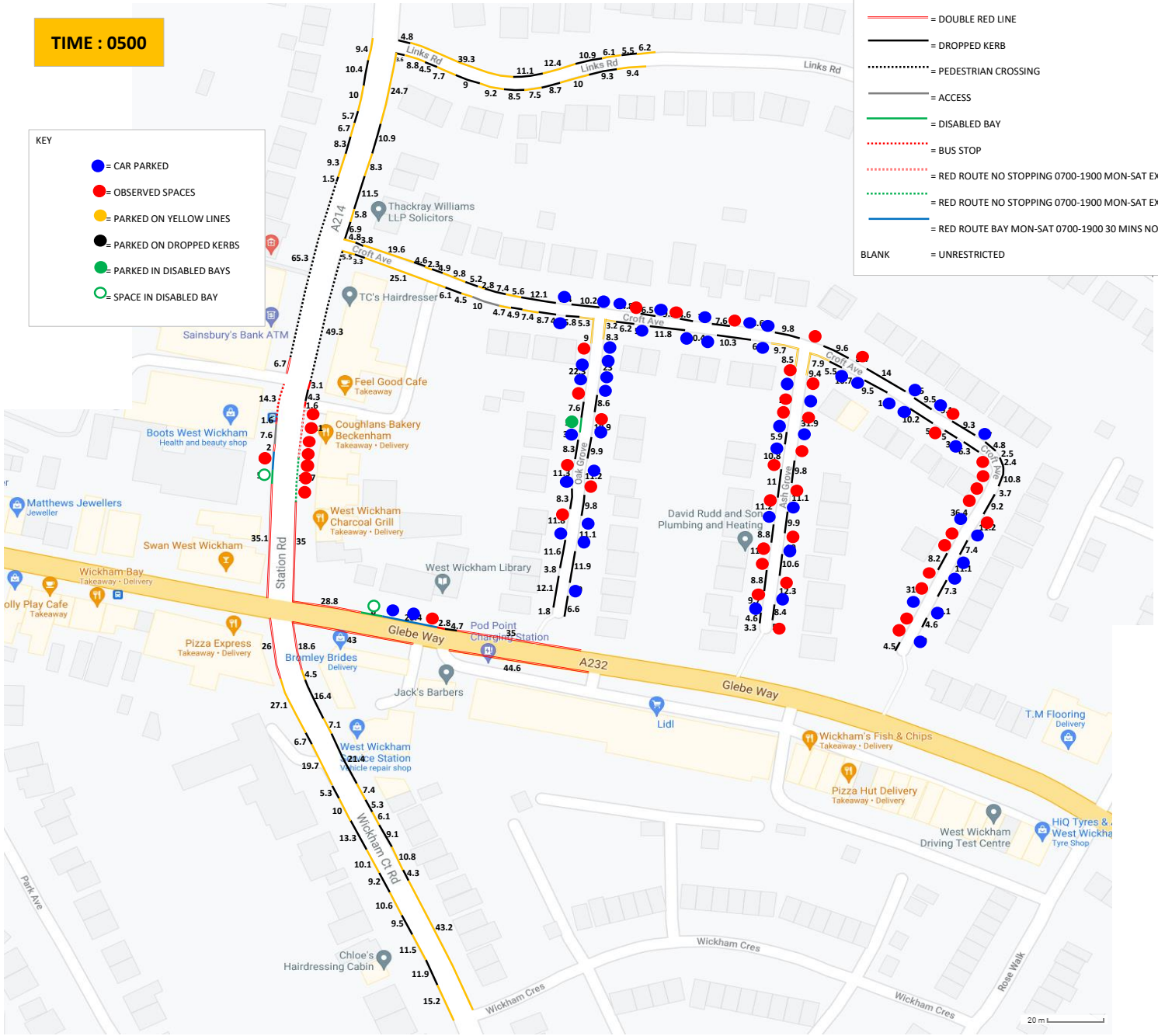
KEY

- = CAR PARKED
- = OBSERVED SPACES
- = PARKED ON YELLOW LINES
- = PARKED ON DROPPED KERBS
- = PARKED IN DISABLED BAYS
- = SPACE IN DISABLED BAY

KEY:

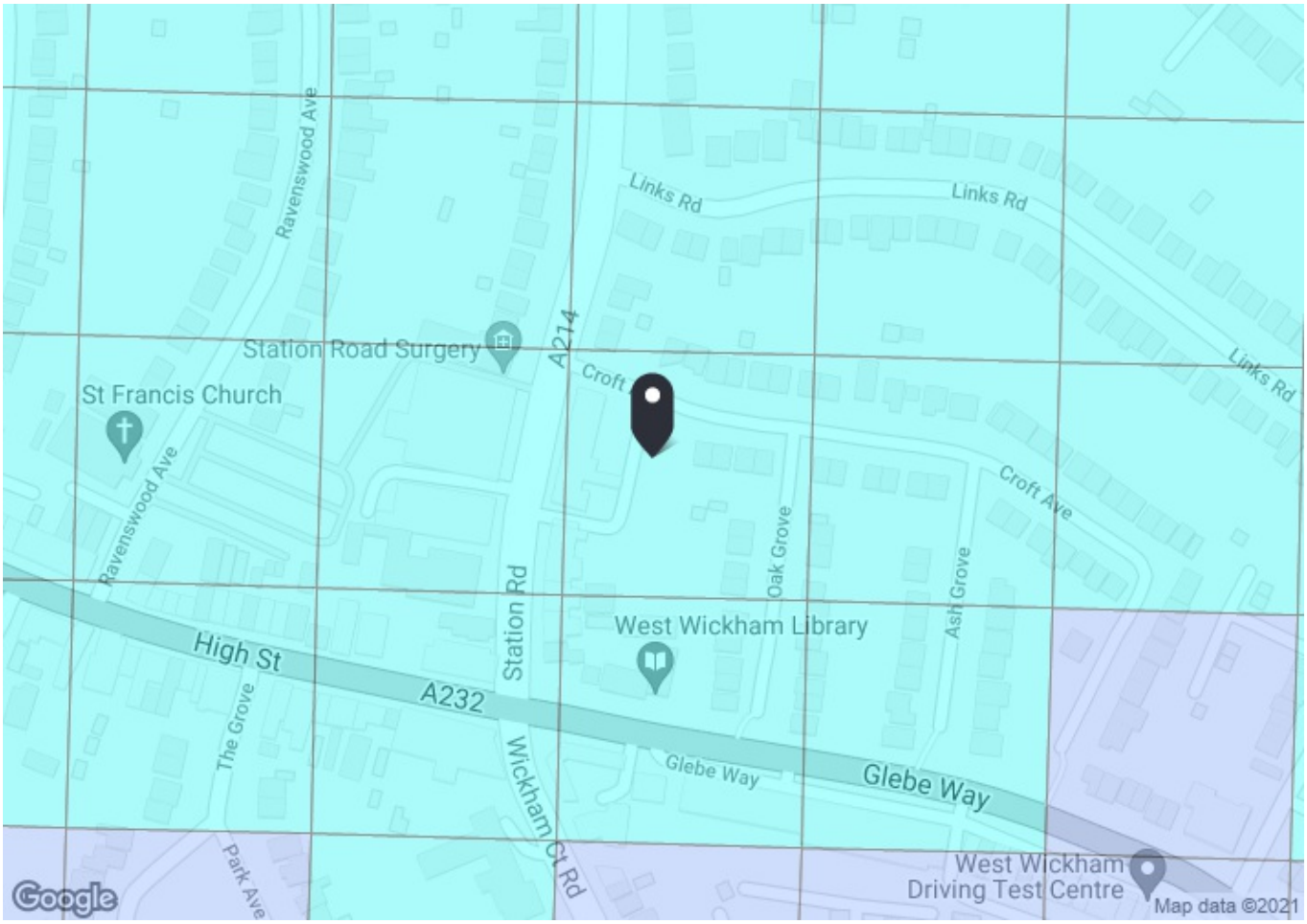
- = SINGLE YELLOW LINE MON-SAT 0800-1830
- = DOUBLE YELLOW LINE
- = SINGLE RED LINE
- = DOUBLE RED LINE
- = DROPPED KERB
- = PEDESTRIAN CROSSING
- = ACCESS
- = DISABLED BAY
- = BUS STOP
- = RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600 30 MINS NO RETURN WITHIN 1 HOUR
- = RED ROUTE NO STOPPING 0700-1900 MON-SAT EXCEPT 1000-1600, LOADING 20 MINS & DISABLED 3 HOURS
- = RED ROUTE BAY MON-SAT 0700-1900 30 MINS NO RETURN WITHIN 1 HOUR

BLANK = UNRESTRICTED



Appendix E

TRANSPORT FOR LONDON



PTAL output for Base Year
2

83 Station Rd, West Wickham BR4 0PX, UK
Easting: 538333, Northing: 166050

Grid Cell: 18692

Report generated: 18/10/2021

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

PTAL (cell size: 100m)

Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

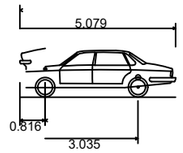
Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	WEST WICKHAM THE SWAN	119	298.73	6	3.73	7	10.73	2.79	0.5	1.4
Bus	WEST WICKHAM STATION RD	194	133.42	5	1.67	8	9.67	3.1	1	3.1
Bus	W WICKHAM RED LODGE ROAD	352	601.73	3	7.52	12	19.52	1.54	0.5	0.77
Rail	West Wickham	'HAYS-CANONST 2K09'	646.81	2	8.09	15.75	23.84	1.26	1	1.26
Rail	West Wickham	'HAYS-CANONST 2K11'	646.81	0.33	8.09	91.66	99.74	0.3	0.5	0.15
Rail	West Wickham	'CANONST-HAYS 2V09'	646.81	2	8.09	15.75	23.84	1.26	0.5	0.63
Rail	West Wickham	'HAYS-CHRX 1K90'	646.81	1.33	8.09	23.31	31.39	0.96	0.5	0.48
Rail	West Wickham	'HAYS-CHRX 2K08'	646.81	1	8.09	30.75	38.84	0.77	0.5	0.39
Rail	West Wickham	'CHRX-HAYS 2V10'	646.81	2	8.09	15.75	23.84	1.26	0.5	0.63
									Total Grid Cell AI:	**8.81**

Appendix F

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

LARGE CAR



Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	5.900m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev	Details	Drawn	Checked	Date
A	Updated Layout	COS	JT	21.09.2021

REVISION HISTORY

Status:
- [ ] Preliminary
- [ ] For Approval
- [ ] For Construction
- [x] For Information
- [ ] For Tender
- [ ] As Built

Client:

...

Project:

West Wickham

Drawing Title:

Swept Path Analysis using a Large Car

Scale:	Size:
1:250	A3

Drawn by:	Checked by:	Date:
COS	JT	23.08.2021

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
CA4527	TR008	1 of 1	A

CA4527_TR008 A - SWEPT PATH ANALYSIS - LARGE CAR (2-WAY WORKING).DWG

Appendix G

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

KEY:

	JUNCTION VISIBILITY SPLAYS
	PROPOSED 43m VISIBILITY SPLAYS

Rev	Details	Drawn	Checked	Date
A	Updated Layout	COS	JT	21.09.2021

REVISION HISTORY

Status:
- ☐ Preliminary
- ☐ For Approval
- ☐ For Construction
- ☑ For Information
- ☐ For Tender
- ☐ As Built

Client:

...

Project:

West Wickham

Drawing Title:

Proposed Junction Visibility Splays

Scale:	Size:
1:250	A3

Drawn by:	Checked by:	Date:
COS	JT	21.09.2021

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
4527	001	1 of 1	A

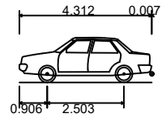
CA4527_001_A - PROPOSED JUNCTION VISIBILITY SPLAYS.DWG

Appendix H

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

MEDIUM SIZE CAR



Overall Length	4.319m
Overall Width	1.686m
Overall Body Height	1.466m
Min Body Ground Clearance	0.228m
Max Track Width	1.591m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	5.042m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev	Details	Drawn	Checked	Date
B	Revised scheme layout and swept paths.	COS	JT	21.09.2021
A	Revised scheme layout and swept paths.	COS	JT	23.08.2021

REVISION HISTORY

Status: ☐ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client:

...

Project:

West Wickham

Drawing Title:

Swept Path Analysis using a Medium Sized Car

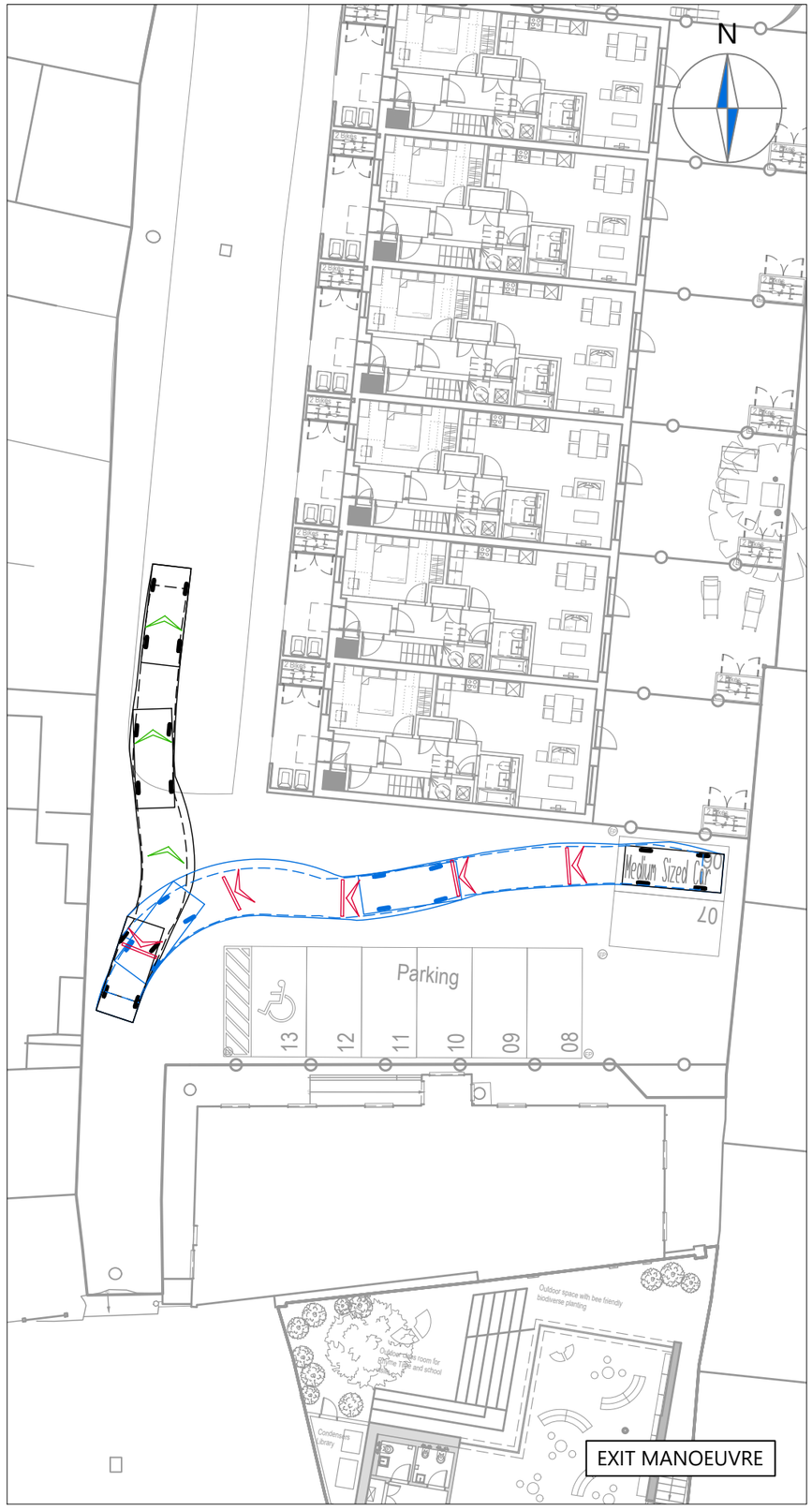
Scale:	Size:
1:250	A3

Drawn by:	Checked by:	Date:
COS	JT	07.06.2021

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
CA4527	TR007	1 of 2	B

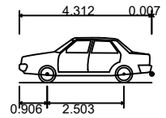
CA4527_TR007 B - SWEPT PATH ANALYSIS - MEDIUM SIZED CAR.DWG



NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

MEDIUM SIZE CAR



Overall Length	4.319m
Overall Width	1.686m
Overall Body Height	1.466m
Min Body Ground Clearance	0.228m
Max Track Width	1.591m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	5.042m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev	Details	Drawn	Checked	Date
B	Revised scheme layout and swept paths.	COS	JT	21.09.2021
A	Revised scheme layout and swept paths.	COS	JT	23.08.2021

REVISION HISTORY

Status:
- [ ] Preliminary
- [ ] For Approval
- [ ] For Construction
- [x] For Information
- [ ] For Tender
- [ ] As Built

Client:

...

Project:

West Wickham

Drawing Title:

Swept Path Analysis using a Medium Sized Car

Scale:	Size:
1:250	A3

Drawn by:	Checked by:	Date:
COS	JT	07.06.2021

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
CA4527	TR007	2 of 2	B

CA4527_TR007 B - SWEPT PATH ANALYSIS - MEDIUM SIZED CAR.DWG

Appendix I

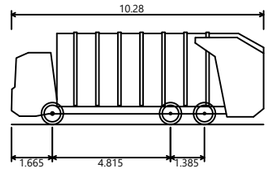
ENTRY, TURNING & COLLECTION MANOEUVRE

EXIT MANOEUVRE

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

Phoenix 2 One-Pass (with Elite 6x4 chassis) - LB Bromley



Overall Length	10.280m
Overall Width	2.550m
Overall Body Height	3.760m
Min Body Ground Clearance	0.312m
Track Width	2.550m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.150m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev	Details	Drawn	Checked	Date
E	Revised scheme layout and swept paths.	COS	JT	21.09.2021
D	Revised scheme layout and swept paths.	COS	JT	23.08.2021
C	Revised scheme layout and swept paths.	COS	JT	07.05.2021
B	Revised scheme layout and swept paths.	HE	JT	25.02.2021

REVISION HISTORY

Status: ☐ Preliminary ☐ For Approval ☐ For Construction ☑ For Information ☐ For Tender ☐ As Built

Client: ...

Project: West Wickham

Drawing Title: Swept Path Analysis using a 10.28m Phoenix 2 One-Pass (with Elite 6x4 chassis & tailgate down)

Scale:	Size:
1:500	A3

Drawn by:	Checked by:	Date:
HE	JT	19.02.2021

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

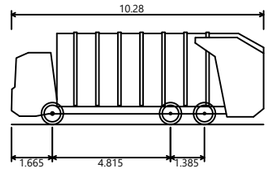
Scheme Ref:	Drawing No:	Sheet :	Rev:
CA4527	TR005	1 of 2	E

CA4527_TR005 E - SWEPT PATH ANALYSIS - LBB REFUSE VEHICLE.DWG

NOTES

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

Phoenix 2 One-Pass (with Elite 6x4 chassis) - LB Bromley



Overall Length	10.280m
Overall Width	2.550m
Overall Body Height	3.760m
Min Body Ground Clearance	0.312m
Track Width	2.550m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.150m

FORWARD MOVEMENTS ARE SHOWN IN BLACK *(design speed - 5kph)*

REVERSE MOVEMENTS ARE SHOWN IN BLUE *(design speed - 2.5kph)*

Rev	Details	Drawn	Checked	Date
E	Revised scheme layout and swept paths.	COS	JT	21.09.2021
D	Revised scheme layout and swept paths.	COS	JT	23.08.2021
C	Revised scheme layout and swept paths.	COS	JT	07.05.2021
B	Revised scheme layout and swept paths.	HE	JT	25.02.2021

REVISION HISTORY

Status:
- ☐ Preliminary
- ☐ For Approval
- ☐ For Construction
- ☑ For Information
- ☐ For Tender
- ☐ As Built

Client:

...

Project:

West Wickham

Drawing Title:

Swept Path Analysis using a 10.28m Phoenix 2 One-Pass (with Elite 6x4 chassis & tailgate down)

Scale:	Size:
1:250	A3

Drawn by:	Checked by:	Date:
HE	JT	19.02.2021

CANEPARO ASSOCIATES
Transport Planning & Highway Design
21 Little Portland Street • London • W1W 8BT • Tel. 020 3617 8200

Scheme Ref:	Drawing No:	Sheet :	Rev:
CA4527	TR005	2 of 2	E

CA4527_TR005 E - SWEPT PATH ANALYSIS - LBB REFUSE VEHICLE.DWG

Appendix J

Calculation Reference: AUDIT-358901-210917-0903

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	HA	HARROW	1 days
	HG	HARINGEY	1 days
	IS	ISLINGTON	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 36 to 90 (units:)
Range Selected by User: 15 to 100 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 26/09/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

25,001 to 50,000	1 days
50,001 to 100,000	1 days
100,001 or More	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

3 Moderate	1 days
4 Good	1 days
6a Excellent	1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	HA-03-D-01	BLOCKS OF FLATS		HARROW
	THE MALL			
	KINGSBURY			
	KINGSBURY CIRCLE			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total No of Dwellings:		88	
	Survey date: THURSDAY		*17/07/14*	*Survey Type: MANUAL*
2	HG-03-D-03	BLOCKS OF FLATS		HARINGEY
	COMMERCE ROAD			
	WOOD GREEN			
	WOODSIDE PARK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:		90	
	Survey date: FRIDAY		*26/09/14*	*Survey Type: MANUAL*
3	IS-03-D-03	BLOCK OF FLATS		ISLINGTON
	HAWES STREET			
	ISLINGTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:		36	
	Survey date: THURSDAY		*21/11/13*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	71	0.084	3	71	0.280	3	71	0.364
08:00 - 09:00	3	71	0.131	3	71	0.869	3	71	1.000
09:00 - 10:00	3	71	0.187	3	71	0.248	3	71	0.435
10:00 - 11:00	3	71	0.159	3	71	0.178	3	71	0.337
11:00 - 12:00	3	71	0.136	3	71	0.168	3	71	0.304
12:00 - 13:00	3	71	0.234	3	71	0.299	3	71	0.533
13:00 - 14:00	3	71	0.206	3	71	0.168	3	71	0.374
14:00 - 15:00	3	71	0.224	3	71	0.276	3	71	0.500
15:00 - 16:00	3	71	0.416	3	71	0.243	3	71	0.659
16:00 - 17:00	3	71	0.561	3	71	0.243	3	71	0.804
17:00 - 18:00	3	71	0.355	3	71	0.257	3	71	0.612
18:00 - 19:00	3	71	0.313	3	71	0.159	3	71	0.472
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.006			3.388			6.394

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*