RINGERS ROAD, BROMLEY

OUTLINE CONSTRUCTION LOGISTICS PLAN

05 MAY 2023

EVOKE

RINGERS ROAD, BROMLEY

OUTLINE CONSTRUCTION LOGISTICS PLAN

PROJECT DETAILS	
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Client:	Ringers Road Properties Ltd
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1. Introduction

1.1. Details

Development Name:	Ringers Road, Bromley
Landowner:	Ringers Road Properties Ltd
Site Address:	2-4 Ringers Road, Bromley
Site Post Code:	BR1 1HT
Main Contractor:	TBC
Site Manager:	TBC
Phone Number:	TBC
Prepared By:	David Fletcher (Evoke Transport)
Approved by:	Ringers Road Properties Ltd

1.2. Context

1.2.1. Evoke Transport Planning Consultants Ltd ("Evoke") has been commissioned by Ringers Road Properties Ltd ("the Client") to produce an Outline Construction Logistics Plan ("CLP") to accompany a planning application for the demolition of existing buildings and construction of a mixed use development comprising residential units, ancillary residents' facilities (including co-working space) and commercial floor space (Use Class E) across two blocks, along with associated hard and soft landscaping, amenity spaces, cycle and refuse storage. The local planning authority (LPA) and local highway authority (LHA) are the London Borough of Bromley (LBB).

1.3. Objectives

1.3.1. This CLP aims to set out the proposed approach to managing construction related impacts arising from the proposed development at 2-4 Ringers Road. The focus of this CLP is to address the construction principles, which will be employed at the site and to outline mitigation measures that will be utilised to manage the impact of the construction phases on local residents, the surrounding community and the local highway network.

1.3.2. The CLP has taken into consideration the 'Transport for London (TfL) Construction Logistics Plan Guidance – for Developers', 'London Best Practice Guidance – The control of dust and emission from construction and demolition'. The overall objectives of this CLP are to:

- Lower emissions;
- Enhance pedestrian, cycle and other road user's safety;
- Reduce congestion in the vicinity of the construction site especially in peak periods; and
- Minimise the impact of the construction site on neighbouring properties.

1.3.3. To meet these objectives the following site specific and sub objectives are proposed;

- Encouraging construction workers to travel to the site by non-car modes;
- Minimise the number of construction trips and deliveries during nearby school (Harris Primary and St Mary's Catholic Primary) drop-off and pick-ups;
- Minimise disruption to residents on Ethelbert Road and Ringers Road;
- Minimise any disruption to the free flow of traffic on Ethelbert Road and Ringers Road;
- Minimise conflicts between construction vehicles and pedestrians and cyclists;
- Minimise disruption to nearby construction sites;

- Encouraging the use of low emission vehicles and machinery;
- Encouraging construction deliveries through safer vehicles (CLOCS);
- Managing the on-going development and delivery of the CLP with construction contractors;
- Communication of site delivery and servicing facilities to workers and suppliers; and
- Encouraging the most efficient use of construction freight vehicles.

1.4. Previous Application Plan

1.4.1. A planning application was submitted in November 2021 (Ref: 21/05585/FULL1) for the demolition of the existing buildings on site (2-4 Ringers Road and 5 Ethelbert Road), and construction of two new buildings which will provide a combined total of 94 residential units. Block A will comprise a 14-storey building fronting Ringers Road which will contain 45 residential units with Block B comprising a 12-storey building fronting Ethelbert Road which will contain 49 residential units. A breakdown of the unit types proposed has been provided below:

- 37 x one-bedroom apartments;
- 57 x two-bedroom apartments.

1.4.2. In addition to this, a café (160sqm) will also be provided within Block B at ground and first floor level and a total of 389.4sqm co-working office space will be provided at basement and first floor level across both Blocks.

1.5. Proposed Revised Plans

1.5.1. On 14th February 2023 the Greater London Authority (GLA) announced, with immediate effect, that all planning applications for residential buildings over 30 metres must include at least two staircases to be considered by the Mayor of London for approval. As such the plans have been revised to accommodate a second stair case.

1.5.2. The revised proposals still seek the demolition of the existing buildings and construction of two new buildings which will provide a combined total of 94 residential units. Block A will comprise a 14-storey building fronting Ringers Road which will contain 45 residential units with Block B comprising a 12-storey building fronting Ethelbert Road which will contain 49 residential units. A breakdown of the unit types proposed has been provided below:

Block A:

- 37 x one-bedroom apartments;
- 8 x two-bedroom apartments;

Block B:

- 13 x one-bedroom apartments;
- 36 x two-bedroom apartments.

1.5.3. In addition to this 97sqm of flexible use class E space will be provided in Block A at basement and ground floor level and 413 sqm of flexible use class E space will be provided in Block B at basement, ground and first floor level.

1.5.4. Drawings of the proposed site layout and plans of the buildings are attached at **Appendix A**. With the exception of the disabled car parking space and accessible car club space which will be provided along the site frontage on Ethelbert Road, the proposals will be car-free as such no vehicle accesses to the site will be provided.

1.5.5. To encourage the uptake of active travel from the outset, high quality public realm will be provided, integrating the site to any future Churchill Quarter proposals for access to and from Bromley High

Street. High quality cycle parking will also be provided from the outset, in accordance with the London Plan and London Cycling Design Guidance, further reducing any barriers to cycling for future residents.

1.6. Report Structure

1.6.1. The contents of this Outline CLP must be complied with unless otherwise agreed with LBB. The Project Manager for the development will work with LBB to review the CLP as problems arise in relation to the construction of the development. Any significant changes in the build program will be communicated to LBB in advance of any significant works taking place.

1.6.2. Following this section, the CLP is structured as follows:

- **Section 2**: Context, Considerations and Challenges – Outlines the existing site and the surrounding area's transport and highway characteristics;
- **Section 3**: Construction Programme and Methodology – Provides an overview of the proposed development and the construction programme;
- **Section 4**: Construction Route – Considers the logistics of construction, including vehicular access routes and loading and unloading arrangements;
- **Section 5**: Strategies to Reduce Impacts – Sets out the mitigation measures that will be employed during construction to minimise the impact of construction on residents, businesses and the local highway network;
- **Section 6**: Estimated Vehicle Movements – Outlines the anticipated vehicle frequencies, sizes and movements during each of the construction phases;
- **Section 7**: Implementing, Monitoring and Updating – Outlines how the CLP will be implemented, communicated, monitored and updated;
- **Section 8**: Summary and Conclusion – Summarises the key points of this CLP and provides a final conclusion.

2. Context, Considerations and Challenges

2.1. Policy

The Traffic Management Act (2004)

2.1.1. This act makes 'provision in relation to the management of road networks; to make new provision for regulating the carrying out of works and other activities in the street'. It acknowledges that highways may be occupied due to construction activities and identifies appropriate changes levied for any extended occupation.

Designing for Deliveries, Freight Transport Association (2006)

2.1.2. The Designing for Deliveries guidance provides specifications for the size of delivery vehicles, turning radii and clearance requirements and should be used to ensure that delivery vehicles can safely and efficiently access a construction site.

Delivering a Road Freight Legacy (2013)

2.1.3. This document details how stakeholders can work together to deliver a freight management legacy for London and outlines a longer-term freight plan for the capital. Seven key elements are covered:

- Better planning;
- Improving safety;
- Re-timing deliveries and collections;
- Kerbside access;
- Increasing efficiency;
- Effective communications; and
- Journey planning.

The London Plan (2021)

2.1.4. The London Plan supports the use of modern methods of construction and supports reductions in emission related to constructions projects as well as improving air quality and reducing noise impacts. The Healthy Streets approach seeks to support better management of freight so the impact of moving goods, carrying out servicing and supporting construction on London's streets is lessened. The London Plan emphasises the importance of pedestrian and cycle safety during the construction phases of developments with key schemes such as CLOCS and FORS promoted.

Mayor of London's Transport Strategy (MTS, 2017)

2.1.5. The Mayor's Transport Strategy was adopted in March 2018. The MTS aims for 80% of Londoner's trips to be undertaken on foot, by cycle or by using public transport by 2041. The strategy seeks to deliver transport solutions that will promote a shift to active, efficient and sustainable modes, reduce road congestion, improve air quality and assist in the development of attractive, healthy and active places.

Fleet Operator Recognition Scheme (FORS)

2.1.6. FORS is a unique, industry-led, membership (bronze, silver, gold) scheme to help van and lorry operators become safer, more efficient and more environmentally friendly.

LBB Local Plan (2019)

2.1.7. The LBB Local Plan states that traffic management measures will be required to be in place through encouraging appropriate measures within development proposals. Construction Logistics Plan in accordance with TfL guidance should help to mitigate the construction impacts of developments.

2.2. Context Maps

2.2.1. The following maps show the area around the development site. Figure 1 shows a regional plan with the location of the site in the context of greater London and the road network. Figure 2 shows the location of the site in relation to the surrounding local area.

Figure 1 – Greater London Context

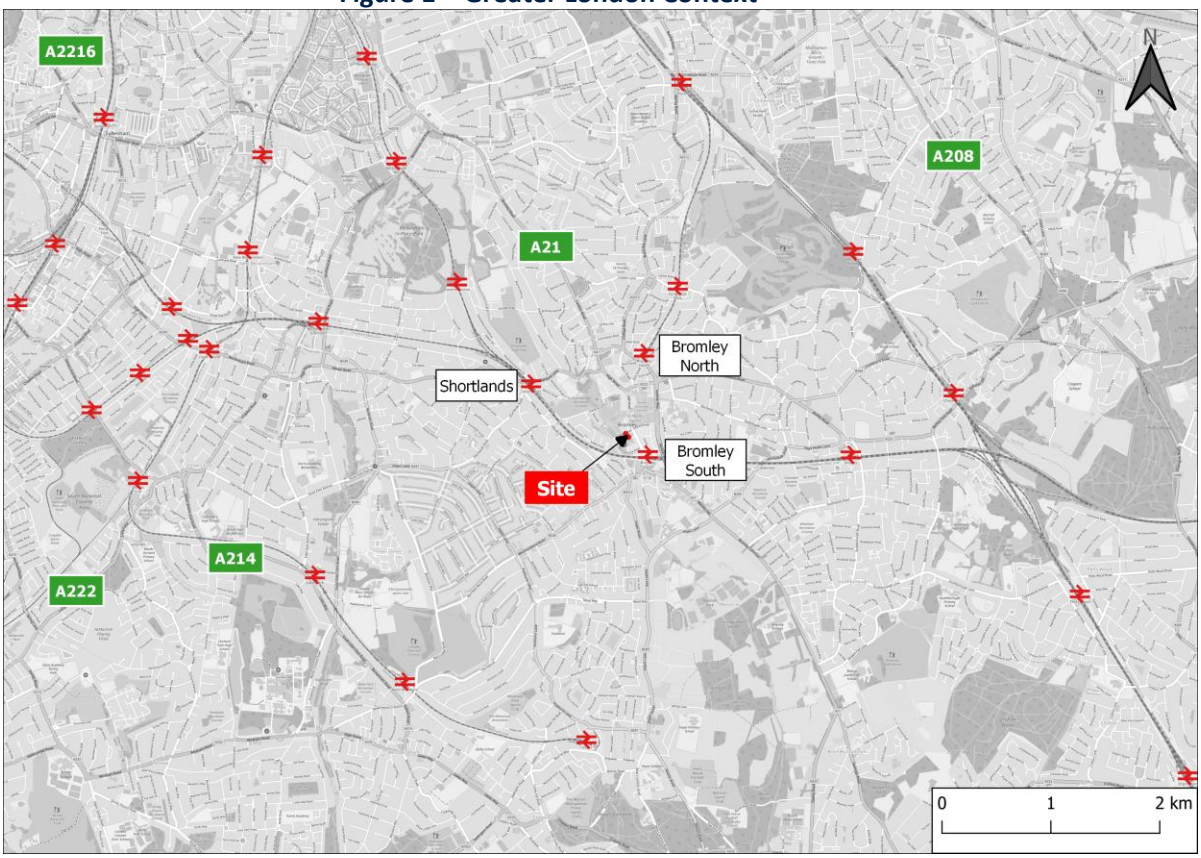
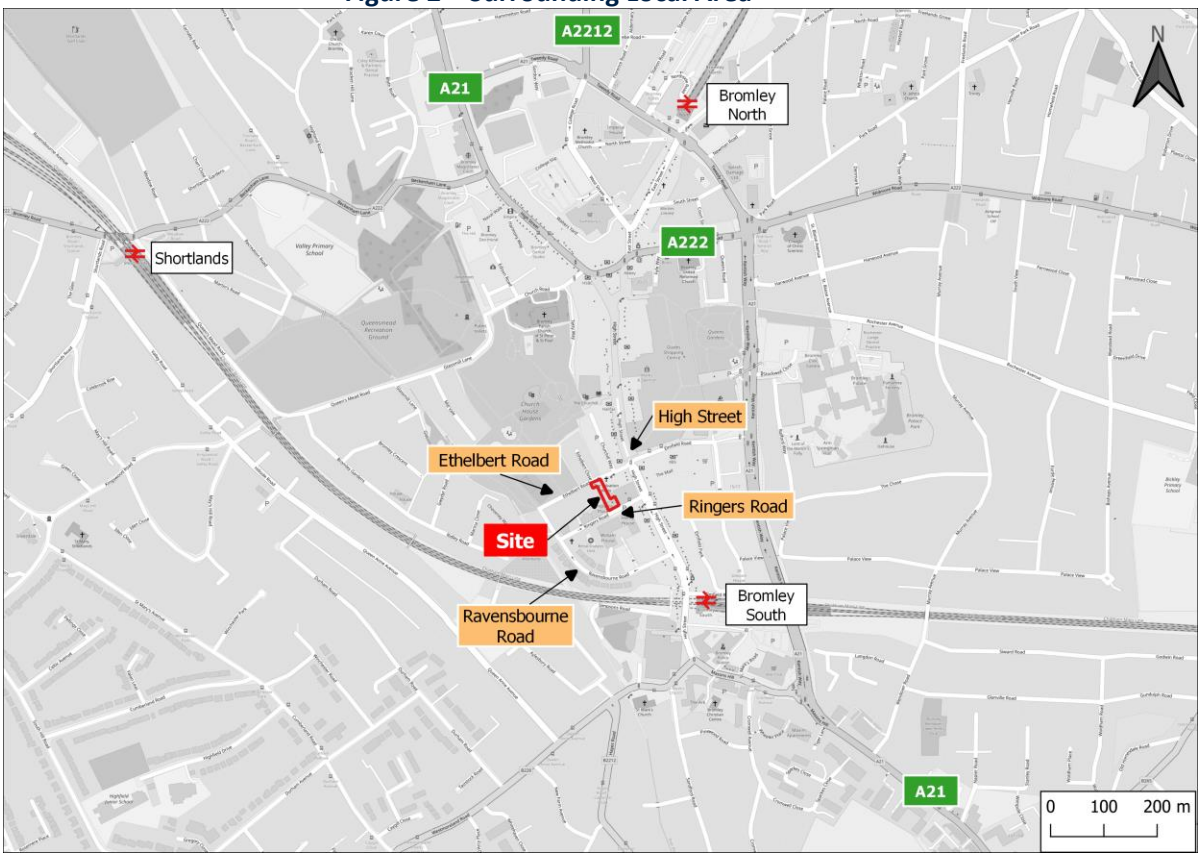


Figure 2 – Surrounding Local Area



2.3. Existing Site

2.3.1. The existing site is currently occupied by a range of independent land uses including 1,175sqm Restaurant space (A3 use), 185sqm Assembly and Leisure Space (D2 use) and six residential units (C3 use). On-site car parking is not provided for any of the land uses at the site, however, the existing restaurant is currently served by an off-carriageway servicing access to the north of the site off Ethelbert Road.

2.3.2. A summary of the quantum of the existing site has been summarised below:

- 1,175sqm A3 Restaurant use: This is currently occupied by the Smoque Bar and Restaurant and operates as a 150-cover restaurant;
- 185sqm D2 Leisure use: This has previously been occupied by a kickboxing gym (D2 Leisure Use), however more recently it has been used as a photography studio. It is of note that there are a limited number of comparable sites within the TRICS database for photography studios, therefore as the extant use at the site (D2 leisure) could be re-instated at the site without the need for further planning permission, the kickboxing gym (D2 leisure) has been used for the purpose of this assessment;
- 6 x Residential units: Currently comprise six independent studio apartments on Ethelbert Road.

2.4. Road Network

2.4.1. Ethelbert Road lies to the north of the site and connects the High Street to Ravensbourne Road. It is a single carriageway road subject to 20mph speed limit restriction and is a one-way street facilitating the movement of traffic southwest from the High Street towards Ravensbourne Road. The carriageway measures approximately 8.5m in width and has parking bays line both sides of the

carriageway. Along the northern border of the site, Ethelbert Road is lined with single yellow lines restricting parking outside the site.

2.4.2. Ringers Road borders the site to the south and provides a one-way route from Ravensbourne Road northeast towards High Street. It is a single carriageway road that is subject to 20mph speed limit restrictions and coach parking bays line the northern side of the carriageway directly to the south of the site. The carriageway measures approximately 7.8m in width. Notably the coach bays were occupied by cars during the site visit as outlined in Figure 3.

Figure 3 – Ringers Road Coach Bay

2.4.3. High Street runs north to south and is located to the east of the site. It is a dual carriageway road with a paved central reservation. The western side of the carriageway consists of a single lane routing northbound and measures approximately 3.6m in width. A taxi rank, able to accommodate circa 11 taxis, is located on the western side of the carriageway, north of its junction with Ringers Road and to the south of Ethelbert Road as shown in Figure 4.

Figure 4 – High Street Taxi Rank

2.4.4. The eastern side of the carriageway consists of two lanes routing southbound, one of which is a bus lane that routes approximately 38m south of Ethelbert Road. This lane then becomes open to all traffic and south of its junction with Ravensbourne Road, bus stops line both sides of the carriageway of High Street.

2.4.5. Ravensbourne Road routes southeast from the western extent of Ethelbert Road, past Ringers Road, and routes eastwards to connect to High Street. Between Ethelbert Road and Ringers Road it is a one-way road permitting traffic to travel southbound towards Ringers Road. Between Ringers Road and the High Street the one way flow of traffic also routes towards Ringers Road, westbound from the High Street.

2.4.6. Churchill Way lies to the northeast of the site, branching north from Ethelbert Road, and provides vehicle access to the rear of a number of retail units along High Street. The carriageway measures approximately 5.5m in width and provides a motorcycle bay and four car parking bays along the western side of the carriageway. When leaving Churchill Way, vehicles must turn left onto Ethelbert Road to adhere with the one-way flow of traffic.

2.4.7. Figure 5 below outlines the parking restrictions within 50m of the site.

Figure 5 – Existing Parking Restrictions

Source: QGIS

2.5. Pedestrian Network

2.5.1. To enable an assessment of the viability of walking between the site and key destinations in the local area, it is appropriate to establish the maximum distance that people are generally prepared to walk and the destinations that exist within these distances. As detailed above, the site is located within Bromley Town Centre, therefore, the proximity to a wide range of facilities and the associated routes have been analysed.

2.5.2. The IHT's guidance, Guidelines for Providing for Journeys on Foot (2000) states within paragraph 3.32 and Table 3.2 that the preferred maximum walking distance to facilities and local services is circa 2km. The distances for various land uses, are summarised in Table 1 below.

Table 1 – IHT's Acceptable Walking Distances

Definition	Town Centres	Commuting / School	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred Maximum	800m	2,000m	1,200m

2.5.3. Footways measuring approximately 2.0m in width are provided on either side of the carriageway Footways measuring approximately 2.0m in width are provided on either side of the carriageway along Ethelbert Road and they are also provided with street lighting. Lit footways measuring 2.0-2.4m in width are also provided along either side of the carriageway on Ringers Road. The footways on Ethelbert Road and Ringers Road are outlined below in Figure 6.

Figure 6 – Ethelbert Road and Ringers Road Footways

2.5.4. A public footpath (Figure 7) is located to the southwest of the site and provides a route from Ravensbourne Road southwest, over the footbridge that crosses the railway line past St Mark's C of E Primary School and down to Winchester Road.

Figure 7 – Footpath Connection

2.5.5. A network of pedestrian footpaths are provided throughout Bromley Park which provide connections north to Glassmill Lane and the High Street.

2.5.6. To the east of the site, wide footways measuring 5.0m in width are provided along either side of the carriageway along the High Street. Formal signalised pedestrian crossings are provided at the junction

with Elmfield Road and just north of the junction with Ravensbourne Road in the form of pelican crossings that facilitate the safe movement of pedestrians across the carriageway.

2.5.7. To the north of Ethelbert Road and Elmfield Road, High Street becomes pedestrian-only (Figure 8), routing north until it joins the A222 Market Square. Cyclists must dismount whilst using the pedestrianised area. High Street provides access to a wide range of shops, facilities and services and the car-free nature of this street makes it a safe place for people to walk and shop.

Figure 8 – Bromley High Street

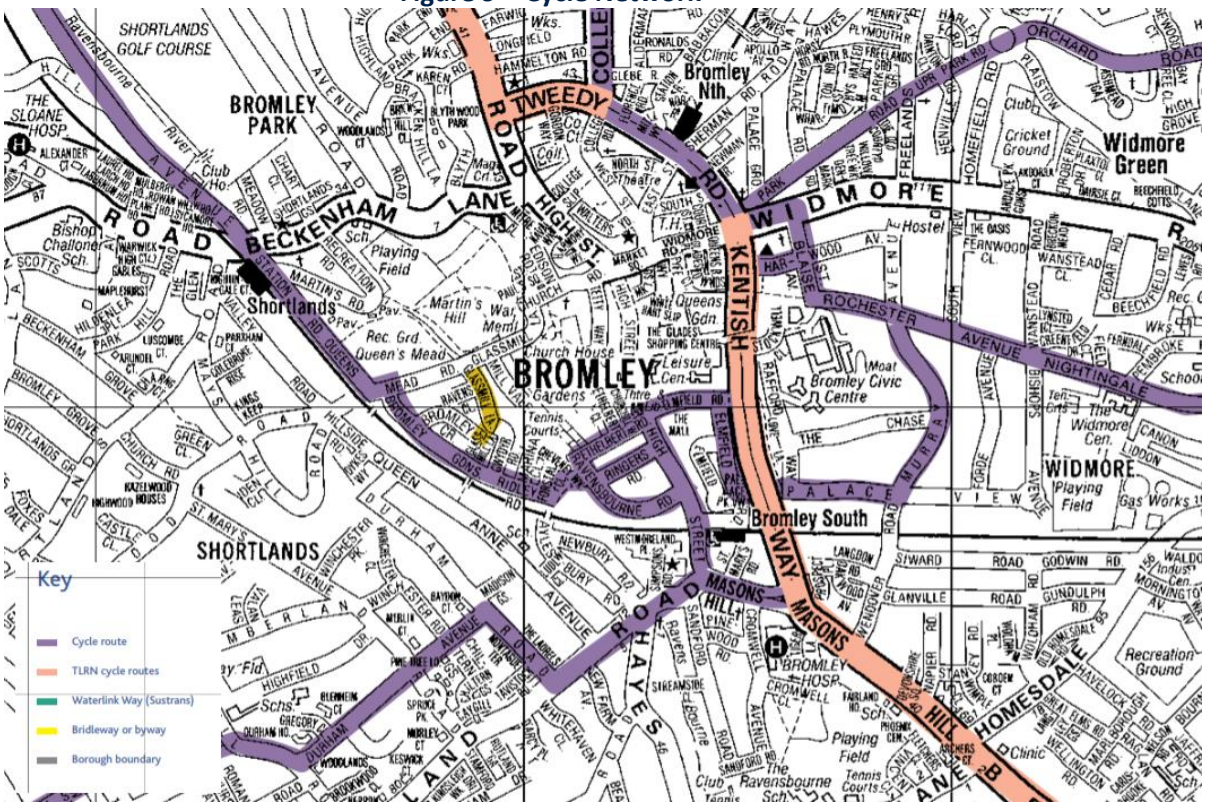
2.5.8. The site is well connected by good pedestrian routes and facilities. Legible London signs are provided throughout Bromley Town Centre which assist pedestrians with getting around and signposting key destinations.

2.5.9. The site is well connected by good pedestrian routes and facilities. Further to this, the number of retail stores, services and public transport connections that can be reached within a reasonable walking distance ensuring that walking is a viable mode to and from the site for potential construction workers and can readily form part of a multi-modal trip.

2.6. Cycle Network

2.6.1. Cycling is considered an important mode of sustainable travel and is generally considered suitable for distances of up to three miles (4.8km) for regular journeys in urban areas and five miles (8.0km) for commuting journeys (source: LTN2\08, Cycle Infrastructure Design). LBB have produced a map outlining cycle routes within the borough, which has been reproduced in Figure 9 overleaf.

Figure 9 – Cycle Network



Source: London Borough of Bromley

2.6.2. Figure 9 demonstrates that the site is well-connected in terms of cycle routes and cycle infrastructure. On-road cycle routes run along Ethelbert Road, Ringers Road, Ravensbourne Road and High Street to the east and south of the site, providing cycle links to Bromley South Station. Along High Street, the eastern side of the carriageway that routes south provides a bus lane outside its junction with Ringers Road that also permits cyclists to cycle in.

2.6.3. Further east of the site, Kentish Way makes up part of the TLRN Cycle Network and provides shared cycle/footways along wither side of the carriageway that provides a safe off-road route for cyclists. This route provides a connection north to Bromley North Station.

2.6.4. Cycle parking is provided at strategic points throughout Bromley Town Centre, at Bromley South Station and at Bromley North Station. It is considered that the site already benefits from good cycle connections to an array of services and amenities, ensuring that the opportunities for future residents to travel via sustainable modes of transport will be maximised.

2.6.5. It is considered that the site already benefits from good cycle connections to an array of services and amenities, ensuring that the opportunities for construction workers to travel to the site by bicycle will be maximised.

2.7. Local Amenities

2.7.1. The table below outlines local amenities, which can be reached within a 30-minute walk or 20-minute cycle from the Site.

Table 2 – Local Amenities

	Location	Distance (m)	Journey Times (minutes)	
			Walk	Cycle
EDUCATION / EMPLOYMENT				
Primary School:	St Mark's C of E	400	5	2
Secondary School:	Ravensbourne School	1,100	14	4
College:	London South East Colleges	2,400	30	10
Business:	Bromley Town Centre	150	2	1
	Bromley Civic Centre	510	7	2
	Regus, Elmfield Park	300	4	1
HEALTH & COMMUNITY				
Hospital:	The Sloane Hospital	1,700	21	6
	Princess Royal Hospital	5,400	67	20
Doctors:	Dysart Surgery	260	3	1
Dentist:	Bromley Dental Studio	600	8	2
Pharmacy:	Boots, High Street	150	2	1
Library:	Bromley Central Library	270	3	1
SHOPPING/RETAIL				
Post Office:	Bromley Post Office	350	4	1
Convenience Store:	Sainsbury's Local	160	2	1
Shopping Centre:	The Mall	110	1	1
	The Glades	160	2	1
Supermarket:	Waitrose	550	7	2
Town Centre:	High Street	250	3	1
LEISURE				
Cinema:	Vue Cinema	600	8	2
Leisure Centre:	Pavilion	550	7	2
Hotel:	Travelodge London Bromley Town Centre	240	3	1
Gym:	Pure Gym	100	1	1
Public House:	The Richmal Crompton	350	4	1
EXISTING PUBLIC OPEN SPACES				
Recreation Ground:	Queensmead Recreation Ground	700	9	3
	Bromley Park	185	2	1
TRANSPORT				
Bus Stop:	Ringer's Road (Stop C)	42	1	1
Car Club:	Elmfield Park	320	4	1
Season Ticket Car Park:	The Mall	110	1	1
Railway Station:	Bromley South	270	3	1
	Bromley North	800	10	3

2.7.2. It is evident from Table 2, that there are a wide range of facilities such as education, employment, retail, health and leisure uses close to the site, the majority of which are within a reasonable two kilometre walking or five kilometre cycling distance. On that basis, it is clear that the location of the site is exceptionally well placed to maximise the number of shorter distance trips that can be undertaken by alternative methods of travel to the car.

2.8. Public Transport

Public Transport Accessibility

2.8.1. Public Transport Accessibility Levels (PTALs) are a measure of accessibility from a point of interest at a side to the local public transport network. The measure considers the walk access time to a station or stop as well as the wait time and reliability of local public transport services.

2.8.2. A PTAL rating is defined by a score of 1a to 6b. A rating of 1a ('Very Poor') is the lowest level obtainable, whilst 6b ('Excellent') is the highest level achievable.

2.8.3. The site's PTAL rating has been calculated using TfL's WebCAT tool, displaying that the site has a PTAL rating of 6b with the southern extent of the site falling within the 6a category, which demonstrates an excellent level of accessibility to public transport services within the vicinity of the site. Figure 10 below shows the PTAL map.

Figure 10 – PTAL Map

Source: TfL WebCAT

2.8.4. The PTAL score does not take into consideration the location of site adjacent to excellent walking and cycling links or its proximity to a number of services and amenities in Bromley Town Centre. A range of key destinations can be accessed by a number of travel modes providing potential construction workers with a real and genuine choice of travel modes without needing to rely on the private car.

Bus

2.8.5. PTAL guidance considers that people are willing to walk up to eight minutes in order to access bus stop infrastructure. It also assumes that, on average, pedestrians will walk at a speed of 4.8 kilometres per hour (3 miles per hour) whilst travelling to a bus stop. This equates to a walking speed of 80 metres per minute. Thus, TfL consider that bus stops within 640 metres of a development (80 metres x 8 minutes) are considered to be accessible.

2.8.6. The closest bus stop to the site is located along Ringers Road (Stop C) on the northern side of the carriageway and is accessible with a 60m walk northeast of the site. The bus stop is provided with a bus flag and timetable information.

2.8.7. Additional bus stops are located along High Street (Bromley High Street / The Mall W and X) and at Bromley South Station, which are provided with seating, shelters and timetable information and are all accessible within a 260m walk from the site.

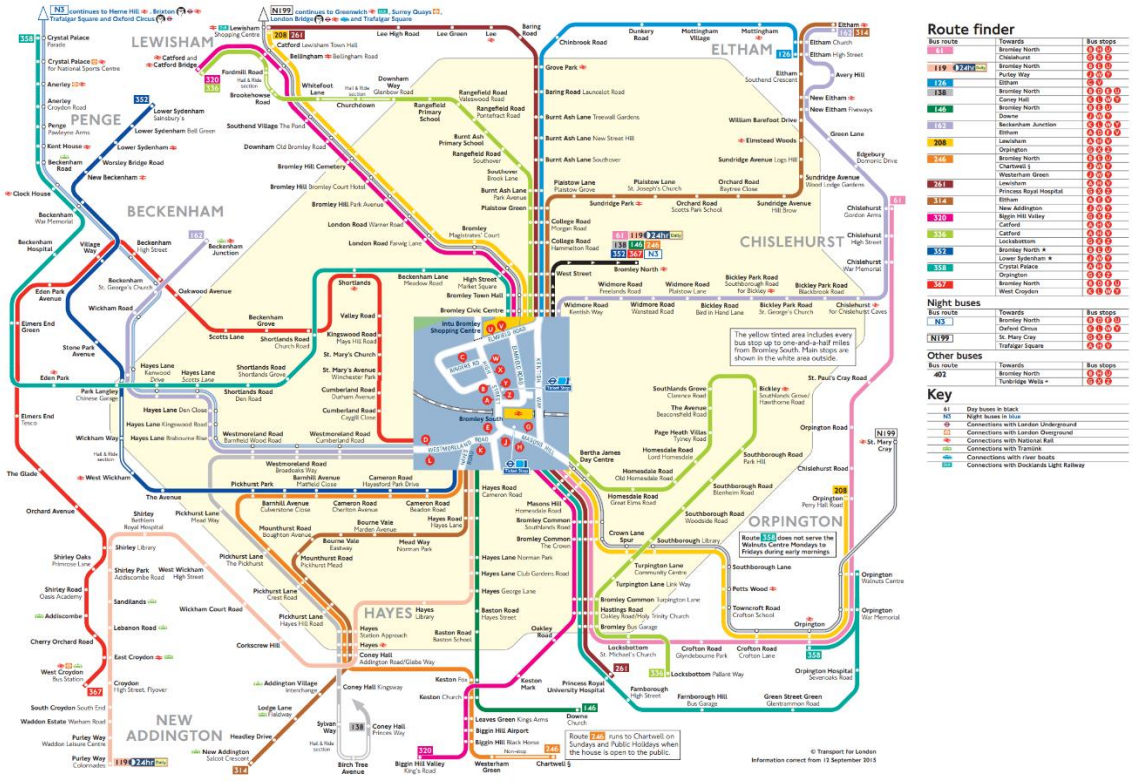
2.8.8. Table 3 outlines the frequency of the services available from the stops along Ringers Road, High Street and by Bromley South Station, whilst the TfL bus spider map is shown in Figure 11 located overleaf.

Table 3 – Bus Frequencies

No.	Route	Weekday Frequency			Weekend Frequency	
		Frequency	First Bus	Last Bus	Saturday	Sunday
61	Bromley North– Chislehurst / Gordon Arms	16 mins	05:12	00:04	15 mins	20 mins
119	Bromley North– The Colonnades / Croydon Airport	10-14 mins	00:02	23:47	10-12 mins	15 mins
126	Ringers Road – Eltham High Street / Foots Cray Rd	6-11 mins	05:25	23:55	8-11 mins	20 mins
138	Bromley North – Chestnut Avenue	20 mins	05:32	00:22	20 mins	30 mins
146	Bromley North – Downe Church	Hourly	07:30	23:56	Hourly	Hourly
162	Beckenham Jct. / Rectory Road – Eltham Bus Station	15 mins	05:40	00:35	15 mins	20 mins
208	Lewisham Station – Orpington / Perry Hall Road	10-13 mins	05:34	01:11	11-13 mins	15 mins
261	Lewisham Station – Princess Royal Hospital	10-13 mins	05:28	01:31	11-13 mins	15 mins
314	Eltham Bus Station – Salcot Crescent	11-13 mins	05:52	00:49	11-13 mins	30 mins
320	Biggin Hill Valley – Catford Bridge Station	9-12 mins	05:39	23:54	11-14 mins	20 mins
336	Thomas Lane – Locksbottom / Pallant Way	15 mins	06:03	00:37	15 mins	20 mins
352	Bromley North Station – Bell Green / Sainsbury's	20 mins	05:53	00:02	20 mins	30 mins
358	Orpington Bus Station – Crystal Palace Parade	9-13 mins	04:41	01:00	11-14 mins	19-20 mins
367	Bromley North Station – West Croydon Bus Station	20 mins	05:32	00:12	20 mins	30 mins
638	Addington Rd / Glebe Way – Kemnal Tech College	12 services	07:27	16:44	No Service	No Service
N3	Bromley North– Margaret Street / Oxford Circus	30 mins	23:47	05:17	20 mins	30 mins
N199	St Mary Cray Station – Trafalgar Sq. / Charing Cross	30 mins	00:37	04:07	20 mins	30 mins

Source: TfL Accessed July 2021

Figure 11 – Bromley South Bus Routes



Source: National Rail

2.8.9. All these routes are accessible within an acceptable walking distance from the site, based on the IHT guidance and provide access to a variety of areas. All TfL bus routes are served by low-floor vehicles with dedicated wheelchair space and access ramps. The buses are accessible with wheelchair spaces and priority seats available on all vehicles. Drivers will also pull in close to the kerb at stops to reduce the gap, lower the bus to reduce the step up and deploy the wheelchair ramps where necessary.

2.8.10. The level and frequency of bus services available within the vicinity of the site to a range of locations allows bus travel to and from the site to be able to readily form part of a multi-modal journey for construction workers.

Rail

2.8.11. The PTAL calculation takes account of all railway stations within 960 metres. Bromley South Station is located approximately 270m southeast of the site and is accessible within a four-minute walk or a three-minute cycle. Services from this station run to a number of destinations including London Victoria, London Blackfriars, Sevenoaks, Orpington, Ramsgate, Gillingham (Kent) and Ashford International. Bromley South Station is managed by South Eastern and underwent upgrades in 2011, meaning that the station now provides step free access to all platforms via lifts and ramps are provided for boarding trains. A total of 107 cycle parking spaces are provided outside the station to the right-hand side of the building.

2.8.12. Additionally, Bromley North Station is situated 1.0km northeast of the site and is accessible within a 13-minute walk or a six-minute cycle. Bromley North Station is also managed by South Eastern and provides step free access to all platforms via lifts and ramps are provided for boarding trains. The station provides a total of 10 cycle parking spaces at the station concourse. Services from this station run to Grove Park.

2.9. Car Parking

2.9.1. Although there is currently no formal car parking associated with the site, an informal parking bay is provided to the front of the service yard shutters as shown in Figure 12.

Figure 12 – Site Parking

2.9.2. Whilst it is anticipated that construction workers will almost certainly walk, cycle or use public transport modes to get to the site, there are numerous alternative car parking opportunities located within a 1.0km walk from the site, such as public car parks and on-street parking provision. The site is located within the Bromley Town Centre Controlled Parking Zone (CPZ) Zone A which restricts parking to resident permit holders only Monday to Saturday 08:00-20:00 and on Sundays between 10:00-17:00. There are on-street paid for parking bays available with a maximum stay of two hours during the restricted times. Within 50m of the site, these paid for bays can be found along:

- Ringer's Road (17 bays);
- Ethelbert Road (36 bays); and
- Churchill Way (4 bays).

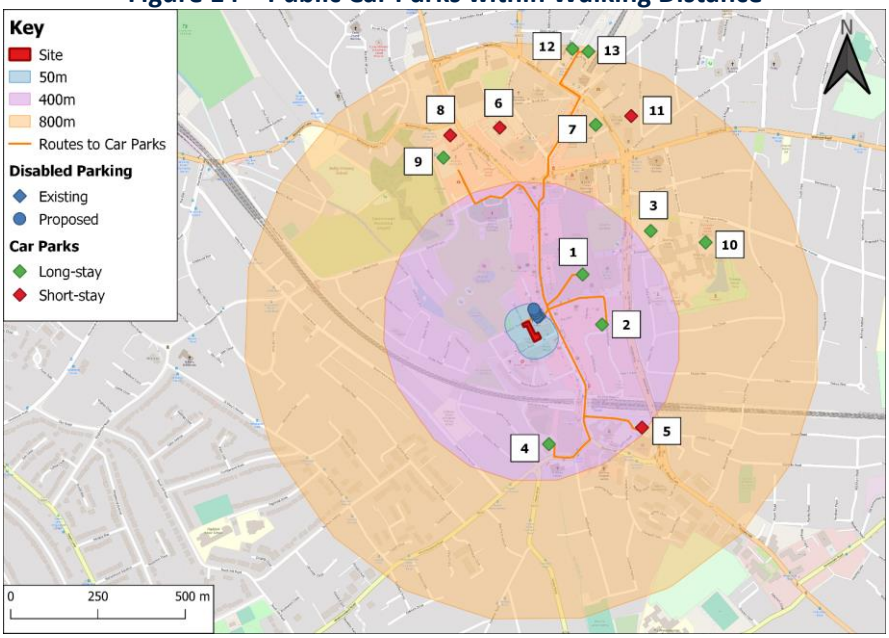
Figure 13 – Existing Parking Restrictions within 50m of the site

Source: QGIS

2.9.3. Figure 6 also shows that two on-street disabled bays are provided along Ethelbert Road, within close proximity to its junction with High Street and an additional three on-street disabled bays have been proposed to be delivered with the Churchill Quarter Scheme along Churchill Way. All of these disabled bays will be situated within a 50m walk of the site. A taxi rank is also located along the western side of the carriageway of High Street, approximately 80m east of the site.

2.9.4. Figure 7 outlines the locations of public car parks within 400m and 800m of the site (as the crow flies), with Table 4 outlining the capacities, maximum stay and walking distance from the site to the car parks.

Figure 14 – Public Car Parks within Walking Distance



Source: QGIS

Table 4 – Public Car Parks Information

No.	Car Park	Capacity	Disabled	Opening Hours	Max. Stay	Walking Distance
1	The Glades	1,500	64	Mon-Sat 07:0-21:00 Sun 09:00-19:00	-	350m
2	The Mall	255	3	24/7	-	350m
3	Civic Centre	691	19	24/7	-	500m
4	St Mark's	300	c.15	24/7	-	600m
5	Waitrose	181	8 (inc. Parent and Child)	Mon-Sat 07:30-21:00 Sun 10:00-16:00	2 hours (free for customers)	600m
6	Sainsbury's	210	23 (inc. Parent and Child)	Mon-Sat 07:00-22:00 Sun 11:00-17:00 24/7 for non-customers	2 hours (free for customers)	650m
7	South Street	50	1	24/7	-	700m
8	Mitre Close	24	0	24/7	4 hours	800m
9	The Hill	752	8	24/7	-	850m
10	St Blaise	120	3	Sat-Sun 08:30-18:30	-	850m
11	Palace Grove	97	2	24/7	4 hours	900m
12	Station Road	88	2	24/7	-	1.0km
13	Bromley North Station	220	4	24/7	-	1.0km
-	**TOTAL**	**4,488**	**152**	-	-	-

2.9.5. It is demonstrated by Table 4 that a total of 4,488 parking spaces are available within car parks within 1km of the site. Walking routes to the closest car parks are displayed in Figure 14. It is however, unlikely that construction workers will use the above option, unless they have little choice i.e. too much equipment to take on public transport.

2.10. Census Analysis

2.10.1. The site is located within the Bromley 012 mid-level super output area (MSOA). Census 2011 data has been analysed for this Output Areas in order to establish the journey to work modal split for people that live and work within the MSOA. It is of note that the 2021 method of travel to work data is not available for workplace populations at present. The results are shown below in Table 5.

Table 5 – Journey to Work Data

Mode	Bromley 018 Workday Population
Underground, Tram	3%
Train	18%
Bus	22%
Taxi	0%
Motorcycle	1%
Car Driver	42%
Car Passenger	3%
Bicycle	1%
On foot	10%
Other	0%
Total	**100%**

2.10.2. Table 5 shows that 54% of residents travel to work by sustainable modes of transport with an additional 3% car sharing. 1% of residents travel to work by bicycle, 10% by walking, 22% by bus, 3% by underground or tram and 18% by train. This demonstrates the good public transport links within the vicinity of the site and shows that the majority of trips can be made to and from the site by sustainable modes of transport, therefore, reducing the need to own a car.

2.11. Other Local Constraints

Air Quality Management Areas (AQMA)

2.11.1. The Department for Environment, Food and Rural Affairs website (https://uk-air.defra.gov.uk/aqma) has been accessed to ascertain whether there is an AQMA within the vicinity of the site. The development site lies within the Bromley AQMA and LBB has produced an Air Quality Action Plan (AQAP) setting out measures to improve the air quality and reduce Nitrogen dioxide NO2 levels.

2.11.2. The site is located within a sustainable location with good accessibility by walking, cycling and public transport. Construction workers will be encouraged to travel by sustainable modes of transport or car share. Section 5 of this report also outlines the number of measures that will be implemented to minimise the air quality and dust impacts during the construction of the site.

2.11.3. As such, it is considered that the scheme would not have a material impact on air quality and would be in accordance with the AQAP.

School

2.11.4. St Mark's Church of England Primary School (400m) and Ravensbourne Secondary School (1,100m) are both located within reasonable walking and cycling distance from the site. As such it is possible that pupils will be using adjacent footways and footpaths to walk to or from nearby residential areas, stations and transport links.

2.11.5. The Site Manager will regularly contact the schools to share information in order to maximise child and pedestrian safety. Given the proximity of the schools to the site, the Site Manager will ensure that no HGV deliveries take place during the school drop-off (08:00-09:30) and pick-up (14:30-16:00). As such all HGV deliveries associated with the site will take place between 09:30-14:30 Monday to Friday where feasible.

Neighbouring Construction Sites

2.11.6. At present there are two sites in close proximity to the site (Churchill Quarter & 66-70 High Street) which if consented would likely have construction works taking place at a similar time.

2.11.7. The Site Manager will liaise with site managers of any other construction sites that come forward within the vicinity of the site and form a Construction Steering Group. Though engaging in cross site discussions, the site managers of the individual sites will be able to schedule key works at different times to ensure disruption is minimised. In addition to this the contractors will, where possible, share procurement practices, delivery schedules and vehicle loads to help minimise the number of vehicles on the road network.

Potential Impact on Utilities

2.11.8. Utility service diversions and temporary service connections would be carried out during the initial stages of the enabling works. These would be programmed to be completed prior to any construction works. The exact location of these services will not be known until a survey has been carried prior to works starting. Prior to works commencing, utility services would be identified and disconnected across the site. Safe access routes would also be identified for vehicles and pedestrians across the site. A site investigation would be undertaken prior to the works.

2.12. Summary

2.12.1. It is evident that the site is located in a sustainable location with a range of sustainable modes of transport on offer to access the site from key residential areas and transport interchanges. There are a number of key amenities and services within close vicinity to the site which further maximises the opportunities for construction workers to travel via sustainable modes of transport which will help reduce the need to travel by car.

3. Construction Programme and Methodology

3.1. General

3.1.1. The anticipated programme of construction works for the proposed development is outlined and examined within this chapter. Potential short-term temporary environmental impacts arising from construction activity are identified together with the proposed mitigation measures.

3.1.2. It should be noted however that the project programme may be subject to change prior to work commencing on site. Following the appointment of a construction contractor for the scheme the build programme will be finalised.

3.2. Proposed Development

3.2.1. The proposed redevelopment will demolish the existing buildings on site (2-4 Ringers Road and 5 Ethelbert Road), and construct two new buildings which will provide a combined total of 94 residential units. Block A will comprise a 14-storey building fronting Ringers Road which will contain 45 residential units with Block B comprising a 12-storey building fronting Ethelbert Road which will contain 49 residential units. A breakdown of the unit types proposed has been provided below:

3.2.2. Block A:

- 37 x one-bedroom apartments;
- 8 x two-bedroom apartments;

3.2.3. Block B:

- 13 x one-bedroom apartments;
- 36 x two-bedroom apartments.

3.2.4. In addition to this 97sqm of flexible use class E space will be provided in Block A at basement and ground floor level and 413 sqm of flexible use class E space will be provided in Block B at basement, ground and first floor level. Drawings of the proposed site layout and plans of the buildings are attached at **Appendix A**.

3.3. Construction Programme and Phasing

3.3.1. A construction contractor has yet to be appointed for the scheme. Following the appointment of the construction contractor this CLP will be updated and submitted and agreed with LBB prior to any works taking place. It is anticipated that construction will last for 18-24 months with the works split into six overlapping phases as outlined below and in Table 6.

Table 6 – Indicative Construction Programme

Phase	Start	End
Site setup and Demolition	Sep-23	Nov-23
Excavation and Piling	Oct-23	Feb-24
Sub-structure and Super-structure	Jan-24	Jun-24
Cladding	Mar-24	Oct-24
Fit-out, testing and commissioning	Aug-24	Apr-25

Phase 1 – Site Setup and Demolition (Site Clearance)

3.3.2. The site setup will be crucial to mitigating the impact on the surrounding highway network as well as neighbouring residents and businesses. For the first 6 weeks of the construction period the site will

be prepared for the subsequent phases of development. This will involve the site set up, surveys and site clearance. Building inspections to identify hazardous material / asbestos will be undertaken.

3.3.3. Vehicle movements to the site during this phase are not expected to be significant with occasional deliveries of materials or removals of waste from site. It is anticipated that this is likely to result in the region of 4-8 movements per day. It is likely that the majority of vehicles during this phase will be vans with approximately one 7.5 tonne lorry per day. It is noted that all deliveries will use the single yellow line located on Ethelbert Road.

3.3.4. The measures that will be employed to minimise the environmental impacts, including in relation to noise and air quality, throughout the demolition phase are outlined within Section 5 of this report.

Phase 2 – Excavation and Piling

3.3.5. The second phase of the construction period is likely to last for up to 4 months and will involve the excavating and piling of the site. It is likely that the majority of vehicles during this phase will be 7.5 tonne lorries or concrete pump vehicles. Vehicles will access the site off Ethelbert Road, load / unload in the designated loading area before exiting in forward gear via Ringers Road. All vehicles will be met by a banksman who will make sure all items are loaded / unloaded safely.

Phase 3 – Sub Structure, Superstructure and Roof

3.3.6. The third phase of the construction period is likely to last for up to 8 months and will involve the construction of the building including floors, framing, roof structures, gutters and drainpipes. It is likely that the majority of vehicles during this phase will be vans or 7.5 tonne lorries with occasional 10m rigid vehicles. Vehicles will access the site off Ethelbert Road, load / unload in the designated loading area before exiting in forward gear via Ringers Road. All vehicles will be met by a banksman who will make sure all items are loaded / unloaded safely.

Phase 4 – Cladding and Internal Works

3.3.7. The fourth phase of the construction period is likely to last for up to 8 months and vehicle movements to the site during this phase will be in the region of 3-6 van deliveries per day with 2-4 lorries / rigids a day. It is noted that all deliveries will use the single yellow line located on Ethelbert Road.

Phase 5 – Fit Out

3.3.8. The fifth phase of the construction period is likely to last for up to 4 months and will involve the internal works and fit out such as the fitting of plasterboards, windows, carpentry, tiling, electrics, plumbing, floor coverings and painting.

3.3.9. Vehicle movements to the site during this phase will primarily be smaller vehicles such as vans delivering internal fittings such as bathrooms and kitchen units. It is anticipated that this phase is likely to generate in the region of 2-8 van deliveries per day with up to two lorries a day. It is noted that all deliveries will use the single yellow line located on Ethelbert Road.

Working Hours

3.3.10. In accordance with LBB Noise Pollution Control hours, all works will be conducted between 08:00-18:00 hours Monday to Friday and if required on Saturdays between 08:00-13:00 with no works taking place on Sundays and Public Holidays.

3.3.11. As aforementioned, due to the proximity of the schools in the vicinity of the site no HGV deliveries will take place during school drop off and pick up times. As such all HGV deliveries will take place between 09:30-14:30 where possible. It is noted that all deliveries will use the single yellow line located on Ethelbert Road.

3.3.12. For any noisy works where there is a direct impact upon surrounding properties within the specified times, the Site Manager will make contact with the neighbours to consult on the duration, extent and impact of the works to see if an informal agreement can be reached to minimise the duration of these works or carry them out at specific times.

4. Construction Route

4.1. General

4.1.1. Local traffic, transport and parking impacts are primary issues and concerns for all construction projects, particularly within Greater London. As such, managing the potential impacts of construction is a key priority. Potential construction impacts include on-street congestion causing traffic delays, potentially increased road hazards, conflict with pedestrians and cyclists, noise from vehicles and air quality impacts from vehicle emissions and dust. This section provides an overview of the logistics of construction, including vehicular access routes, loading and unloading locations, anticipated vehicle frequencies, sizes and movements, and details of core working hours.

4.2. Construction Vehicle Routing

4.2.1. The major road network within London is known as 'Red Routes' or the Transport for London Road Network (TLRN). Red Routes make up only 580km (5%) of London's roads, but carry a third of its traffic. It is considered appropriate to avoid routes where vulnerable road users and construction vehicles could conflict. Likewise, it is considered appropriate to avoid routes where scheduled road works and construction vehicles could conflict.

4.2.2. It is likely that all construction vehicles accessing the site will arrive via Ethelbert Road from the High Street which in turn connects with Masons Hill and the A21 Kentish Way. The A21 Kentish Way provides northbound access towards A2212, which provides access towards inner city areas of south-east London or alternatively onto London Road, which provides access onto A205. The A21 Kentish Way also provides southbound access towards the A232 or M25. Vehicles will subsequently egress via Ringers Road, which can provide access back onto High Street, and subsequently back towards A21 Kentish Way. The wider and local routes are shown in Figure 15 and Figure 16.

Figure 15 – Wider Construction Route

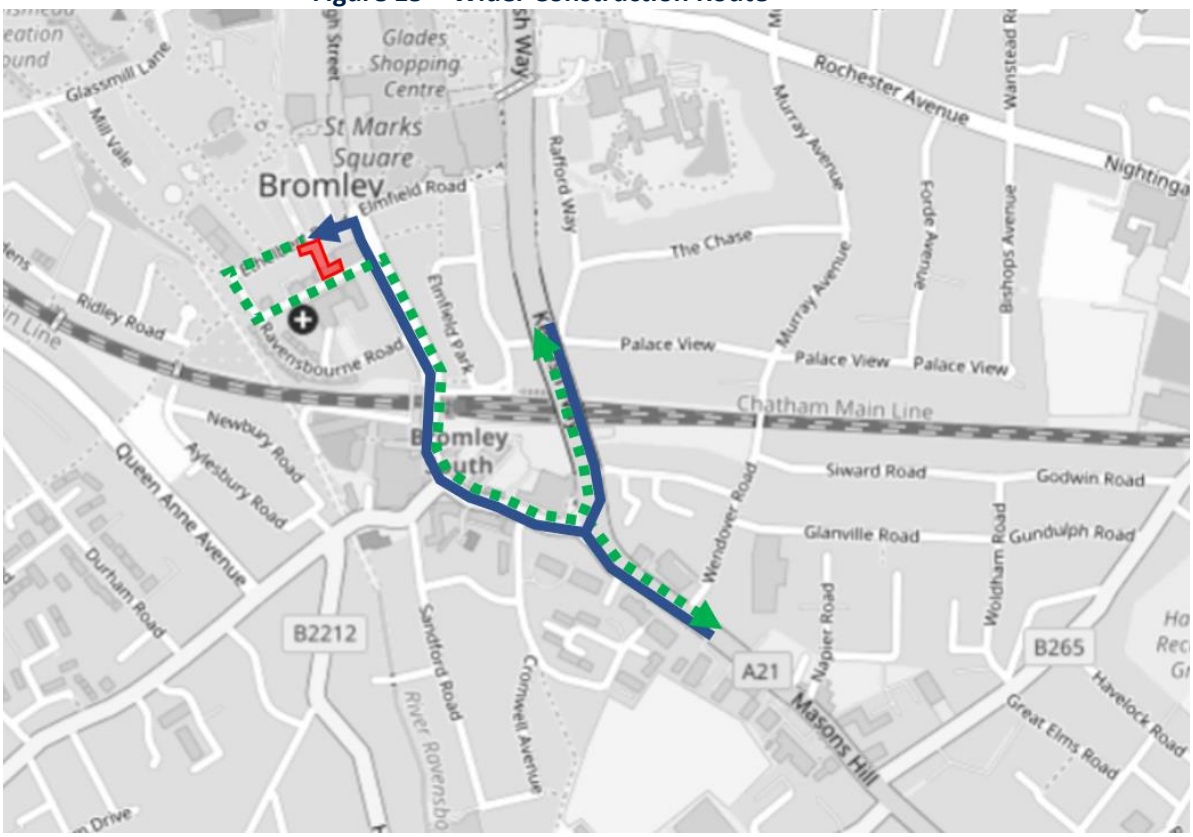
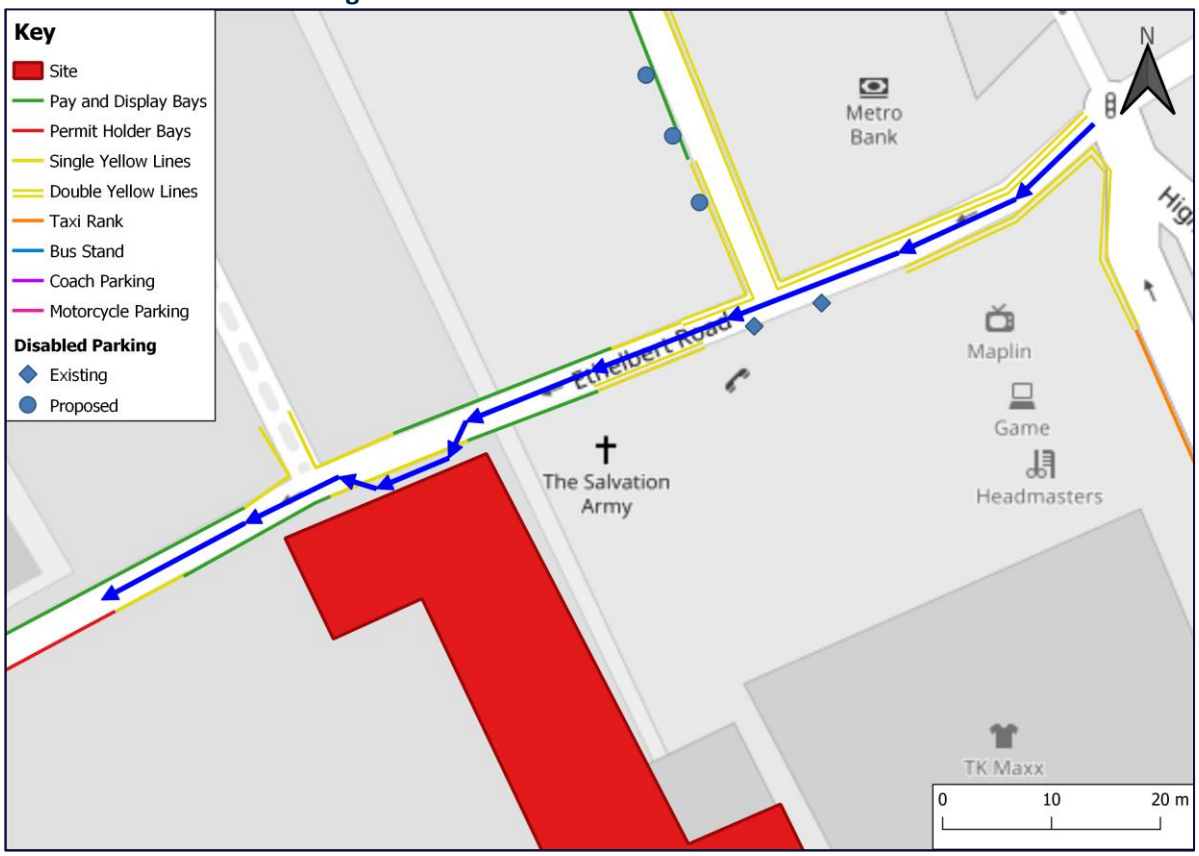


Figure 16 – Local Construction Route



Source: QGIS

4.2.3. It is considered that the proposed routing avoids the use of minor roads and maximises the use of the major strategic roads where possible.

4.2.4. All construction contractors will be made aware of construction route and loading / unloading location and appropriate safety measures and signage will be put in place to ensure safety of staff and pedestrians.

4.3. Delivery of Plant and Materials

4.3.1. All materials associated with the development process will be stored within the footprint of the site. Skips and other plant will also be stored within the curtilage of the site within the Site Storage Area, which will likely be centrally located between the two blocks. Hoarding will be in place to both the front and rear of the site i.e. where the site is bound by Ethelbert Road and Ringers Road respectively.

4.3.2. All deliveries to the site will have to book in advance with the banksman who will keep a record of the schedule and all deliveries. All deliveries will then be met by the banksman who will assist the vehicle with accessing the site and will guide the vehicles to the loading / unloading area whilst ensuring pedestrian and cyclist safety in the vicinity of the site. It is noted that all deliveries will use the single yellow line located on Ethelbert Road.

4.4. Site Office

4.4.1. Site accommodation, storage and welfare facilities will be provided on site.

5. Strategies to Reduce Impacts

5.1. General and Checklist

5.1.1. This section of the CLP sets out the mitigation measures that will be employed during construction to minimise the impact of construction on the local residents, businesses and the local highway network.

5.1.2. The checklist outlined in Table 7 outlines the various mitigation methods considered and committed as part of the construction phase of the development.

Table 7 – Construction Mitigation Checklist

	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and programmes	X		
Adherence to designated routes	X		
Delivery scheduling	X		
Re-timing for out of peak deliveries	X		
Re-timing for out of hours deliveries		X	
Use of holding areas and vehicle call off areas			X
Use of logistics and consolidation centres			X
Measures to encourage sustainable freight			
Freight by Water			X
Freight by Rail			X
Material procurement measures			
DfMA and off-site manufacture			X
Re-use of material on site		X	
Smart procurement		X	
Just in time deliveries		X	
Other Measures			
Air Quality Management	X		
Nosie and Vibration Management	X		
Collaboration amongst other sites in the area	X		
Implement a staff travel plan	X		

5.2. Measures influencing construction vehicles and deliveries

Safety and Environmental Programmes

5.2.1. Pedestrian safety throughout the construction programme will be paramount. To ensure pedestrian safety during loading and unloading activity, a Banksman / traffic marshal will be present to minimise the likelihood of conflict with pedestrians.

5.2.2. Warning signage will be provided within the site to ensure that vehicles, pedestrians and cyclists are aware that construction activity is taking place. Site contact details and out of hours emergency contact details will be prominently displayed at the building entrance on to Ethelbert Road and Ringers Road.

5.2.3. Daily inspections will be undertaken in the vicinity of the site and on footways to check for potential hazards.

5.2.4. All contractors and suppliers employed at the site will be members of the TfL Fleet Recognition Scheme (FORS). As such all contractors and suppliers working on the site will be committed to safer and more efficient ways or working.

5.2.5. The Construction Logistics and Cyclist Safety (CLOCS) Standard for Construction Logistics: Managing Work Related Road Risk (WRRR) is the direct result of collaboration between developers, construction logistic operators and industry associations. CLOCS aims to achieve a visionary change in the way the construction industry manages work related road risk. This is being achieved through three industry led work streams:

- Improving vehicle safety through design and manufacture of safer new vehicles and fitment of appropriate safety equipment to existing vehicles;
- Addressing the safety imbalance in the construction industry through ensuring road safety is considered as important as health and safety on site; and
- Encouraging wider adoption of best practice across the construction logistics industry through taking best in class examples, developing a common national standard and embedding a new cultural norm.

5.2.6. The Site Manager will ensure that all contractors and fleet operators at the site sign up to the CLOCS standards for managing WRRR. All vehicles over 3.5 tonnes accessing the site will be required to have the vulnerable road user safety kit.

5.2.7. All personnel will be required to wear safety helmets when on site, and safety instructions will be strictly adhered to. All precautions will be taken to ensure the safety of working personnel, visitors and the general public.

5.2.8. All relevant COSHH regulations will also be enforced. Manual handling regulation will also be implemented. Plant operatives are to be fully aware of all hazards e.g. Overhead cables, uneven ground, operatives and basements.

5.2.9. Operatives are always to work from a firm secure platform, especially when working at height. Roof ladders or crawling boards will be used when working on roofs. Service drawings will also be available on-site to make all personnel aware of potential hazards on-site including any live services.

5.2.10. The use of a cable avoidance tool to locate live services will also be utilised. Foremen are to ensure that any live services are clearly marked, and operatives are to be informed of location and type of live services.

5.2.11. A fire marshal will also be appointed. The fire marshal will ensure that all fire escapes are signed, and the appropriate extinguishers are in place and escape plan in place for the building. The fire marshal will inspect the areas at least once a day and report and put right any deficiencies. The main firefighting equipment will be fire extinguishers. The assembly point will be clearly signed and kept clear of materials.

Adherence to Designated Routes

5.2.12. Use of the agreed routes will be contractor requirement and will be communicated to all individuals associated with the works. It is envisaged that this information will be communicated in the form of a leaflet or email and will include information with regard to delivery times of operation (09:30-14:30), delivery routes, the call up procedure and delivery slot information.

5.2.13. Any repeated non-compliance of the proposed construction route and delivery slots could result in disciplinary procedures or the termination of the workers / supplier's contract.

Delivery Scheduling

5.2.14. All deliveries will be controlled by a strict delivery booking system, which will distribute deliveries across the week and across the delivery hours (09:30-14:30). Deliveries will not be accepted outside of their designated timeslot, and such deliveries will be asked to re-book. Unless there is capacity to accommodate within the specified loading area, unplanned deliveries will be turned away and advised to return to the site at a pre-arranged delivery time. All deliveries will use the single yellow line located on Ethelbert Road.

5.2.15. On a weekly basis the Site Manager will evaluate details of the daily profile of deliveries proposed for the upcoming week. Hauliers will be required to contact the site on a daily basis and indicate their delivery schedule for the following day. The proposed deliveries will be checked against the weekly delivery schedule. This will be overseen by the Site Manager to ensure that no more than one construction delivery occurs at the site at any one time, thereby ensuring that there is always space at the site to accommodate the necessary plant and deliveries. All deliveries to the site will be restricted to the timings set out within this document;

- Deliveries will be permitted only in the specified loading area on site;
- A policy to stagger deliveries will be employed to avoid vehicles queuing or waiting on the local highway network in the vicinity of the site; and
- Material storage areas will be prepared on-site in advance of deliveries to minimise loading and unloading times.

5.2.16. Sufficient time will be given to deliveries to allow for any delays as a result of the delivery vehicle getting stuck in traffic or the loading / unloading taking longer than expected to avoid any vehicles waiting on the surrounding highway network.

5.2.17. To reduce the number of vehicle movements to and from the site 'Backloading' will be in place, whereby site delivery vehicles are utilised to remove waste materials from the site as part of the same trip, where possible. With proper planning and an efficient delivery schedule, unnecessary vehicle trips to the site will be kept to a minimum.

Delivery Timing

5.2.18. As aforementioned, due to the schools within the vicinity of the site as outlined earlier and on the local construction route, deliveries will be scheduled to mitigate the peak school drop-off and pick-up times. As such, all deliveries to the site will be undertaken between 09:30-14:30 Monday to Friday.

Journey Planning

5.2.19. All construction workers and suppliers will be advised to use the Lorry Route Freight Journey Planner www.lorryroute.com/go/freight-journey-planner which is designed to help freight operators plan their route for a specified size of vehicle and identify where to stop legally.

5.2.20. The Site Manager or Banksman will keep up to date on scheduled roadworks, events and incidents in the area using the http://public.londonworks.gov.uk/roadworks/home website or the http://roadworks.org/ website. Any major roadworks or events on the preferred route that result in the deviation of the preferred route will be agreed with officers at LBB in advance where feasible.

Efficient Freight

5.2.21. The Department for Transport (DfT) have published guidance relating to the efficient use of freight on the network. Review of low carbon technologies for heavy goods vehicles (2009) sets out a number of HGV technologies with the potential for reducing carbon emissions. Within this DfT report it

assesses a number of vehicle technologies and driver behavioural styles for reducing the environmental impact of HGVs.

5.2.22. Some of these measures could be incorporated into the vehicle fleet in order to reduce the environmental impact of generated construction traffic. Such measures would include (where not used already by the contractor / haulier):

- Aerodynamic improvement to Trailers – Reduce the aerodynamic drag of the vehicle;
- Spray Reduction Mud Flaps – Reduces Spray and Provides Aerodynamic Benefits;
- Low Rolling Resistance Tyres – Can reduce CO2 emissions by up to 5%;
- Automatic Tyre Pressure Adjustment – Automatically monitors and adjusts tyre pressures which could provide CO2 reductions of around 7-8%;
- Predictive Cruise Control – Improves fuel efficiency of vehicles;
- SAFED Driver Training Scheme – Aims at improving accident prevention and reduction and improved fuel consumption.

5.3. Measures to encourage sustainable freight

Freight by Water

5.3.1. The potential for waterborne deliveries has been considered as part of the proposed development. It is considered that there is limited potential for transporting materials to the site using the River Thames or canals given the site is not located in close proximity to either. Further there would inevitably be a requirement for the final leg of the journey to be undertaken by road, leading to road trips and double handling, and financial implications. Furthermore, there are currently no formal docking areas in the vicinity of the site creating a barrier for the transfer of goods / deliveries from the water to the site. As such, this option has been discounted.

Freight by Rail

5.3.2. Given the limited number of movements proposed at the site, it is considered that transporting materials to the site using the rail network would not be necessary or financially viable. Similarly, as with water transport, there would inevitably be a requirement for the final leg of the journey to be undertaken by road, leading to road trips and double handling, and possible disruptions and capacity issues on potential rail links in the locality.

5.4. Material procurement measures

Design for Manufacture and Off-Site Manufacture

5.4.1. Given the scale of the development coupled with the materials used there is considered to be limited scope for off-site manufacturing.

Re-Use of Material On-Site

5.4.2. The contractor will look to maximise the reuse of materials on site to avoid unnecessary trips associated with the removal of spoil.

Smart Procurement

5.4.3. As a means to minimise the impact on construction vehicle movement, the appointed contractor will consider all vehicle activity associated with the site and appropriate measures to reduce its impact in conjunction with the procurement process.

5.4.4. Where practicable, the contractor will source items locally, and where possible amalgamate deliveries in order to reduce the overall number of vehicle movements taking place. The use of backloading,

where delivery vehicles are utilised to remove waste materials from the site as part of the same trip, will be maximised where possible.

Storage of Materials

5.4.5. The following policies and procedures, for the storage and handling of materials on-site, will be applied by the contractor:

- Providing dedicated material storage areas and suitable containers and covers that prevent / minimize the risk of contamination from spilled materials, e.g. placement of covered containers on hardstanding as well as prevent damage or loss through exposure to the elements;
- All liquids and solids of a potentially hazardous nature (for example, diesels, oils and solvents) will be stored in appropriate bunds over hard standing areas to prevent leakage to the ground and water regime, in compliance with legislation, Environment Agency standards and best practice;
- Using 'just in time' delivery regime and effective co-ordination between contractors and suppliers to prevent materials being spoiled, lost and / or wasted; and
- All material/fuel storage areas will be secured to prevent and dissuade vandalism.

Waste Management

5.4.6. Contractors will be required to minimise waste at source and maximise recycling and re-use of materials wherever possible and practicable; such arisings will be dealt with in a manner that reduces environmental effects and maximises potential re-use of materials.

5.4.7. All wastes that cannot be reused or recycled will be disposed of in accordance with legislation and best practice. All waste materials will be collected and stored in suitable receptacles before they are taken off site. Waste materials will not be allowed to accumulate because of the fire / vermin risk.

5.4.8. It is envisaged that site waste will be sorted and segregated off site. The supply chain will include specialist waste carriers that provide services off site to separate waste into materials that can be recycled and who then deal with the segregated waste appropriately.

5.4.9. The control and handling of any contaminated materials will also be carried out in accordance with the relevant legislation. Any asbestos cement materials (ACMs) will be surveyed prior to demolition and removed by an appropriately licensed contractor in accordance with the Control of Asbestos Regulations 2006.

5.4.10. Whenever deliveries are undertaken, Banksmen will be used to ensure that no dirt or rubbish is left on the highway.

5.5. Other Measures

Air Pollution, Dust and Dirt Control

5.5.1. The control of dust is a prime concern for all construction projects, particularly during periods of dry and windy weather. Best practice guidance contained within the Greater London Authority's 'The Control of Dust and Emissions from Construction and Demolition' and 'Dust and Air Mitigation Measures' guidance provided by the Institute for Air Quality Management will be utilised to control dust.

5.5.2. The following measures will be implemented at the site:

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- The Site Manager's contact details will be displayed on entrances to buildings at the site; and
- Regular liaison meetings with and other construction sites within 500m of the site boundary that come forward will help to ensure plans are coordinated and dust and particulate matter emissions are minimised.

Site and Dust Management

- A Dust Management Plan (DMP) will be implemented at the site;
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- The Complaints Log will be available upon request to LBB;
- Record any exceptional incidents that cause dust and/or air emissions, either on or offsite, and the action taken to resolve the situation in the logbook;
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to LBB when asked; and
- The Site Manager will increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Preparing and Maintaining the Site

- Machinery and dust causing activities will be located away from receptors, as far as is possible;
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;
- Avoid site runoff of water or mud;
- The provision of easily cleaned hardstanding's for vehicles;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below;
- Cover, seed or fence stockpiles to prevent wind whipping. Damping down of dusty materials using water sprays during dry weather; and
- Undertake daily on-site and off-site inspections to monitor dust, record results, and make the log available to LBB when asked. This will include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary.

Vehicles and Machinery

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone;
- Ensure all vehicles switch off engines when stationary i.e. no idling vehicles;
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable;
- Ensure a hose down facility for wheel washing is provided at the site;
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; and
- Comply with the Construction Logistics and Travel Plan measures within this report.

Operations

- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate;
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods;
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Avoid scabbling (roughening of concrete surfaces) if possible;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery;
- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.

Waste Management

- No bonfires or burning of waste materials on site.

5.5.3. Daily inspections will take place at the site identify any dust or debris. Dust emissions will be monitored visually throughout working hours. Whilst a CLP is in place, in the event that significant levels of dust are observed either in the air or deposited on vehicles or other sensitive receptors, works will be immediately suspended and working practice reviewed to determine a method to prevent the issue reoccurring.

5.5.4. Footways fronting the site will be swept daily, and the need for this will be continuously monitored throughout the day, in light of site operations and weather conditions. Goods, waste material and wheelbarrows will be secured and covered prior to being transported to and from the site to prevent the escape of debris and dust. The contractor will ensure that the area around the site including the public highway is regularly and adequately swept to prevent any accumulation of dust and dirt.

Noise & Vibration Control

5.5.5. The Client will endeavour to keep noise levels to a minimum at all times. Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974, will be employed at all times to reduce and control noise and vibration.

5.5.6. The quietest / lowest impact processes that are reasonably practicable will be employed on site to carry out the construction works. Other measures to be implemented to minimise noise are:

- No construction works, without prior approval from LBB, will take place outside the hours of 08:00-18:00 Monday to Friday or 08:00-13:00 on Saturdays, with all HGV deliveries scheduled between 09:30-14:30;
- The quietest vehicles and plant shall be used as far as is reasonably practicable;
- Keep voices and conversation outside the site perimeter to a minimum and low in volume;
- Ground activities that excite significant vibration levels around the frequency range 10 – 40 Hz will be discouraged whenever practical alternatives can be found;
- No banging of doors, gates, scaffolding, or other objects;
- No machinery starting up on site before the designated start times;

- Locating plant, equipment, storage areas and worksites away from neighbouring properties, where reasonably practicable;
- Machines and equipment in intermittent use will be shut down or throttled down to a minimum when not in use;
- The use of portable acoustic enclosures/screens, where practicable;
- Fixed items of construction machinery will be electrically powered rather than powered by diesel or petrol (where feasible);
- The use of noise reducing shrouds during any piling operations;
- Maintaining and operating all vehicles, plant and equipment in an appropriate manner, to ensure that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum;
- No engines left running on vehicles unloading / loading to the front of the site;
- Construction personnel carefully placing waste into the skip / vehicles when loading;
- Using low impact and low volume machinery and tools where possible; and
- Local residents will be advised of the start and finishing dates/times of particularly noisy works and these will be timed to minimise the disruption to local residents.

5.5.7. The Site Manager will inform all neighbours in advance of noisy works and will, in accordance with Section 72 of the Control of Pollution Act 1974, take best practicable means to minimise noise and vibration. The various measures outline above will be employed to help minimise noise generated by the site.

5.5.8. In the event that noise levels are high, or a complaint or concern is raised by a local resident, business or Council, an immediate review will be carried out to establish the degree of noise created and to establish how to best develop a solution. A Digital Sound Level Meter can be used to record sound levels and a record of noise levels and complaints will be kept in the Site Office for inspection at any point.

Mud on Roads

5.5.9. Vehicles will remain on hard standing and as such it is not envisaged that there will be debris or mud on the Local Highway Network. Nonetheless jet washing wheel wash and bund facilities will be located on site during the construction process.

5.6. Collaboration with Neighbours

Good Neighbour Policy

5.6.1. The contractor will strive to be 'Good Neighbours', with systems employed to ensure local issues are understood. As part of this the contractor will sign up to the Considerate Constructor Scheme (CCS).

5.6.2. Consultation and communication with local residents and businesses will begin prior to commencement of construction. Adjacent residents within the vicinity of the site as well as St Mark's C of E Primary School and Ravensbourne School will be provided with information on the planned construction including times and contact details of the Site Manager based on site.

5.6.3. An induction specific to the development site will be provided to all personnel before construction commences. This will incorporate health and safety; on-site construction works and issues and sensitivities in the context of the surrounding community.

5.6.4. Work associated with construction at the site will be restricted to between the LBB specified hours of 08:00 and 18:00 Monday to Friday and 08:00 to 13:00 on Saturdays where required. No work is permitted on Sundays or Bank Holidays. All suppliers will be made aware of the stringent delivery

time restrictions (09:30-14:30). Any work that is anticipated to occur outside core working hours will be discussed and agreed with LBB prior to commencement.

5.6.5. Contact details of the Site Manager will be publicised on the building entrances at the site, as well as provided to adjacent businesses, construction sites, schools and residents, to allow any questions or queries to be appropriately dealt with.

Neighbouring Construction Sites

5.6.6. At present, there are two potential developments located in close proximity to the site. The site will form a Construction Steering Group with the two sites. The first is the Churchill Quarter (Ref: 18/02181/FULL1), which lies to the north of the site and includes Ethelbert Close, Churchill Way and 104-108 High Street. The site is pending a decision but seeks to demolish the existing buildings and redevelop the area to provide a mixed-use scheme comprising up to 410 residential dwellings with a mix of use classes A1, A2, A3, B1, D1 and D2 at ground floor level.

5.6.7. The second is an application (Ref: 19/04588/FULL) for the demolition of 66-70 High Street to provide a new 16-storey mixed-use residential building comprising 68 residential dwellings and 581sqm of retail floorspace was submitted in November 2019 and is currently awaiting a decision from LBB.

5.6.8. A Construction Steering Group will be set up and the Site Manager will liaise with the Site Managers of any other constructions sites that come forward in the vicinity of the site. Though engaging in cross site discussions, the Site Managers of the individual sites will be able to schedule key works at different times to ensure disruption is minimised. In addition to this the contractors will, where possible, share procurement practices, delivery schedules and vehicle loads to help minimise the number of vehicles on the road network. Through liaison it is envisaged that the cumulative impact on the surrounding road network will be minimised.

5.7. Lighting

5.7.1. It is not foreseen that any external lighting at the site will be needed. Any temporary task lighting or route lighting will be turned off when the site is closed to minimise impact.

5.8. Construction Personnel

5.8.1. During the construction timeline, the number of construction workers that will be employed on site is likely to range from 20-50 people. The contractor, where feasible, will seek to recruit construction workers from the local area. This will help maximise the potential for construction workers to walk and cycle to the site. The developer will engage with LBB to discuss relevant local employment and skills leads with the hope of ensuring that a minimum of 10% of the total workforce are from the local area.

5.8.2. As such, it is likely that the construction workforce will reside in the London metropolitan area and therefore, in most instances, the majority of construction staff will have the opportunity to arrive at the site via public transport, bicycle or via foot.

5.8.3. There will be no parking provision for the contractors on site. All construction workers will be encouraged to travel to the site by sustainable modes of transport. In the event that any construction workers are required to drive then they will be advised to pay to park in local car parks as outlined within Section 2. Should any site personnel park illegally on-street then the Site Manager will not hesitate to remove them from the site.

5.8.4. As identified in Section 2 of this report the site is located in an accessible location with public transport services present in the vicinity of the site. Details of the transport services serving the site will be provided to all site personnel. Good quality pedestrian and cycle routes connect the site with various

residential areas and other public transport interchanges further supporting the accessibility of the site for construction workers.

5.8.5. In the event that any construction workers are required to drive to the site then they will be advised to pay to park in the public car parks outlined in Section 2.

5.8.6. All contractors and suppliers employed at the site will be members of the TfL Fleet Recognition Scheme (FORS). As such all contractors and suppliers working on the site will be committed to safer and more efficient ways or working.

5.9. Construction Travel Plan

5.9.1. A Travel Plan is a package of measures aimed at promoting greener, cleaner travel choices and reducing reliance on the private car. This Construction Travel Plan seeks to address activities related to the construction works at the site which includes commuter journeys for construction workers, material supplies and deliveries. By successfully addressing these different types of travel by promoting travel via sustainable modes and sourcing labour and goods locally, the Travel Plan objectives can help to reduce the impact of the construction project.

5.9.2. There is great potential for construction workers to travel to the site by sustainable modes such as walking, cycling and public transport. It is therefore deemed appropriate to promote the local services available as well as the following measures to promote sustainable travel by construction staff;

- Include local public transport timetables and route maps within the on-site compound for construction staff to review;
- Give construction staff the opportunity to change clothes within the site compound if walking or cycling to the site in inclement weather;
- Provide a safe and secure storage area for bicycles within the construction site;
- Provide a seating area on site to reduce the need for construction workers to leave the site at lunch, thus reducing the number of trips generated by the site; and
- Minimise where possible the number of contractors on site at any one time to reduce trips generated.

Car Sharing

5.9.3. Given the limited number of workers that are anticipated to drive to work, it is considered that opportunities to car share will be limited. Nonetheless, car sharing represents a relatively convenient form of travel offering a significant potential to reduce overall private mileage of construction workers. Construction workers could also potentially car share with people working in other locations nearby.

5.9.4. The Site Manager would promote a car-sharing scheme throughout the construction project program and would set up a database of construction workers willing to share journeys. The Site Manager would also make construction workers aware of existing car sharing schemes such as https://london.liftshare.com/.

On Site Facilities

5.9.5. The construction site will provide facilities in accordance with requirements set out in the HSE guidelines. As such the site will provide a drying area, storage facilities, toilets and offices. This will further encourage people to travel to the site by sustainable modes such as walking and cycling whilst having the added benefit of reducing the number of trips made off site during lunch breaks

6. Estimated Vehicle Movements

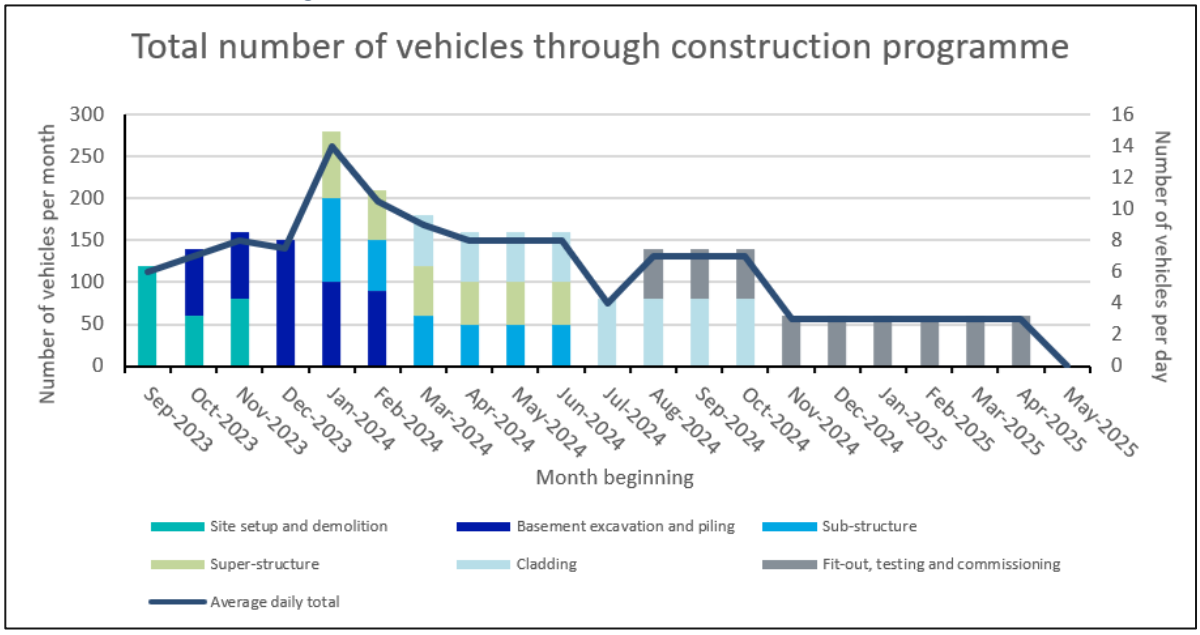
6.1. Construction Vehicle Frequency

6.1.1. There will be a maximum of 10 deliveries per day to the Site. The timing of these will be staggered due to the vehicle booking system in place. The estimated breakdown per construction phase is outlined in Table 8 and Figure 17.

Table 8 – Construction Vehicles

Construction phase	Period of stage	No. of trips (monthly)	Peak no. of trips (daily)
Site setup and demolition	Q3 2023 - Q4 2023	120	6
Basement excavation and piling	Q4 2023 - Q1 2024	150	8
Sub-structure	Q1 2024 - Q2 2024	100	5
Super-structure	Q1 2024 - Q2 2024	80	4
Cladding	Q1 2024 - Q4 2024	80	4
Fit-out, testing and commissioning	Q3 2024 - Q2 2025	60	3
Peak period of construction	Q1 2024 - Q1 2024	280	14

Figure 17 – Estimated Construction Vehicles



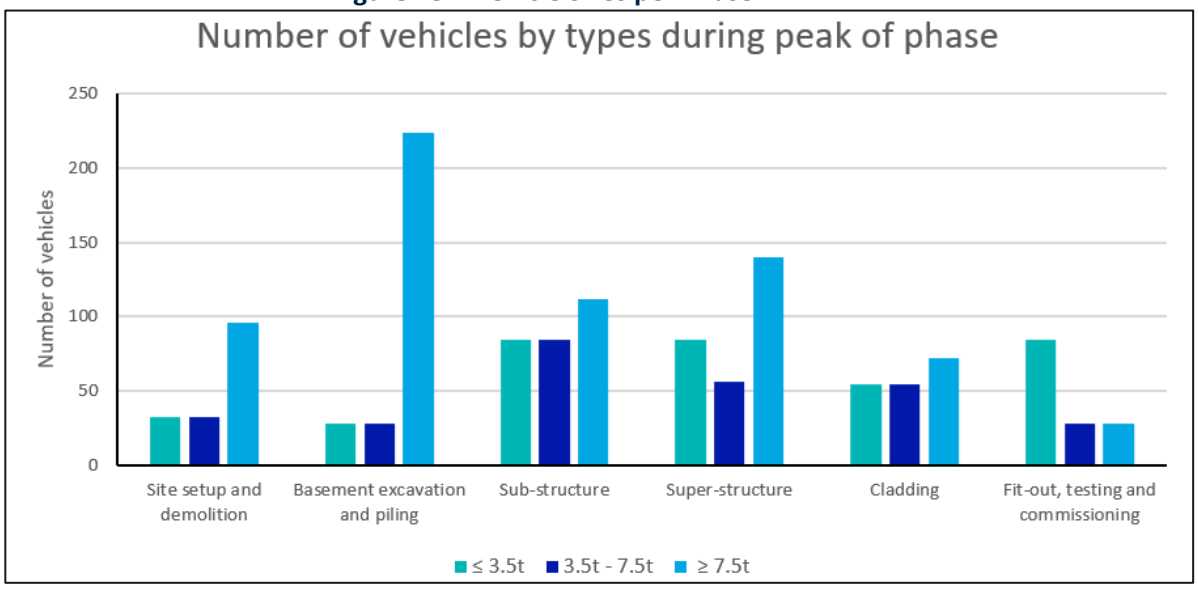
6.1.2. The vehicle booking system will ensure that there is never more than one construction HGV delivery at the site at a time. If any vehicle is ahead of schedule or delayed, then they will be required to phone the Site Manager, in order to ensure that there is availability on site to make their delivery.

6.1.3. The site will have banksmen on duty during working hours who have the specific task of ensuring that site traffic is as safely, quickly and efficiently loaded / unloaded and released only when safe and possible to do so.

6.2. Construction Vehicle Size

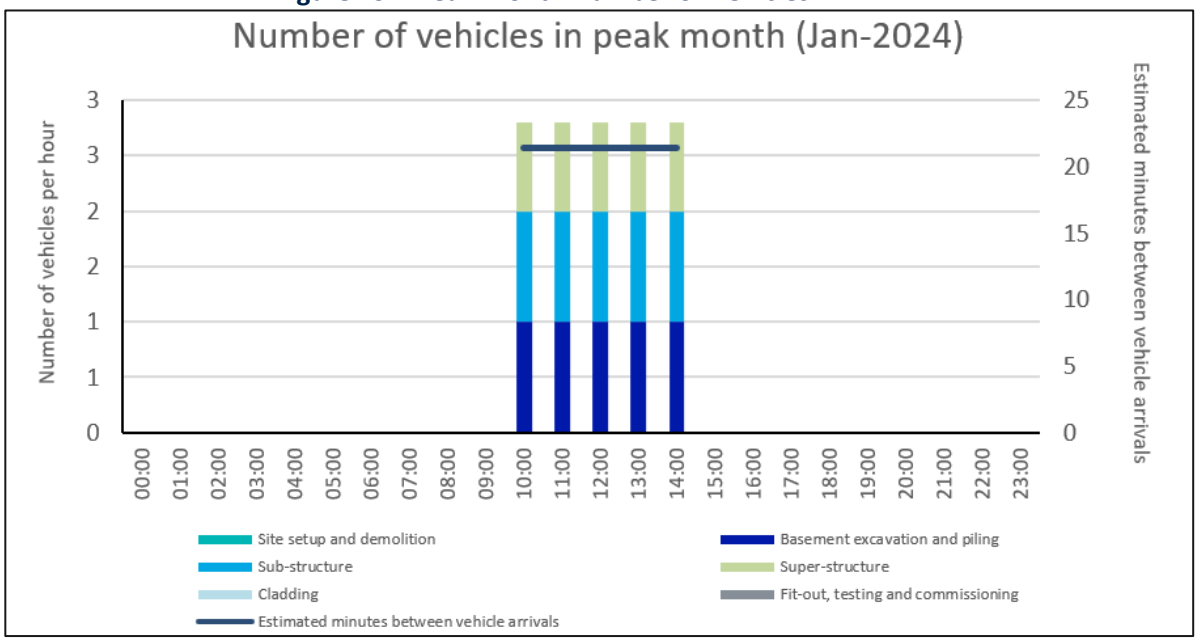
6.2.1. The deliveries to the site will be undertaken by a mix of delivery vans (5.6 metres), flatbed vans (5.0 metres), 7.5 tonne box vans / flatbed with some 10m rigid vehicles. A banksman will be on hand to meet all delivery vehicles and also will assist with all manoeuvres.

Figure 18 – Vehicle Sizes per Phase



6.2.2. As aforementioned, where possible school drop-off and pick-up times will be avoided for deliveries. The temporal distribution of deliveries during the busiest phase of construction is shown in Figure 19.

Figure 19 – Peak Month Number of Vehicles



6.3. Vehicle Dwell Times

6.3.1. The vast majority of delivery vehicles are unlikely to attend the site for longer than 15 minutes. The delivery booking system will allow sufficient times between deliveries to ensure that no vehicles arrive whilst a vehicle is currently loading / unloading at the designated destination.

7. Implementing, Monitoring and Updating

7.1. Construction Manager

7.1.1. A designated Site Manager will be appointed who will deal with any complaints and enquiries from the general public and any other interested parties. Any changes to the designated Site Manager will be notified to the LBB. The Site Manager for the project is TBC. The Site Manager's details will also be advertised at the site entrance.

7.1.2. The Site Manager for the project will undertake the transport co-ordination role for the site. In this respect, their main responsibilities will include:

- Managing the implementation of the CLP;
- Vehicle scheduling;
- Informing local residents and LBB of the commencement of construction works;
- Informing local residents and LBB of any major or noise intensive works associated with the construction of the site to avoid / minimise disruption;
- Checking for scheduled road works, special events and incidents on http://public.londonworks.gov.uk/roadworks/home website;
- Checking for scheduled refuse collections with LBB;
- Handling any complaints; and
- Acting as a point of contact for employees / contractors, LBB, TfL and general public.

7.1.3. The Site Manager will be responsible for keeping neighbours informed of the construction progress. In this respect, the Site Manager will ensure that there is adequate liaison between the following key stakeholders throughout the construction period:

- The Contractor and Developer;
- Residential neighbours and schools;
- Neighbouring construction sites;
- LBB / TfL (if required); and
- Other local stakeholders such as emergency services or local transport providers.

7.1.4. In accordance with TfL 'Construction Logistics Plan Guidance for developers' regular review meetings and telecommunication will be held between the Site Manager and LBB. It is envisaged that update meetings / telecommunication will be held on an ad-hoc basis with an update provided to LBB approximately every 3 months. Furthermore, the Site Manager will provide any monitoring data, delivery schedules, complaints or breaches of agreements to LBB if requested.

7.2. Subcontractors

7.2.1. Individual subcontractors involved in activities such as waste removal will be required to incorporate the relevant requirements from the CLP into their activities as well as statutory requirements. Any potential sub-contractors will be required to show how they will comply with the CLP and how targets will be achieved, and effects minimised.

7.3. CLP Monitoring

7.3.1. The CLP will be regularly reviewed and monitored, with feedback provided to LBB where necessary. Further reviews will be discussed with LBB.

8. Summary and Conclusion

8.1.1. Evoke has been commissioned by Ringers Road Properties Ltd to produce an Outline Construction Management Plan ("CLP") to accompany a planning application for the demolition of existing buildings and construction of a mixed use development comprising residential units, ancillary residents' facilities (including co-working space) and commercial floor space (Use Class E) across two blocks, along with associated hard and soft landscaping, amenity spaces, cycle and refuse storage. The local planning authority (LPA) and local highway authority (LHA) are the London Borough of Bromley (LBB).

8.1.2. It is anticipated that construction will last for approximately 18-24 months, with the works split into five overlapping phases. A construction contractor has yet to be appointed for the scheme. Following the appointment of the construction contractor, this CLP will be updated and submitted and agreed with LBB prior to any works taking place.

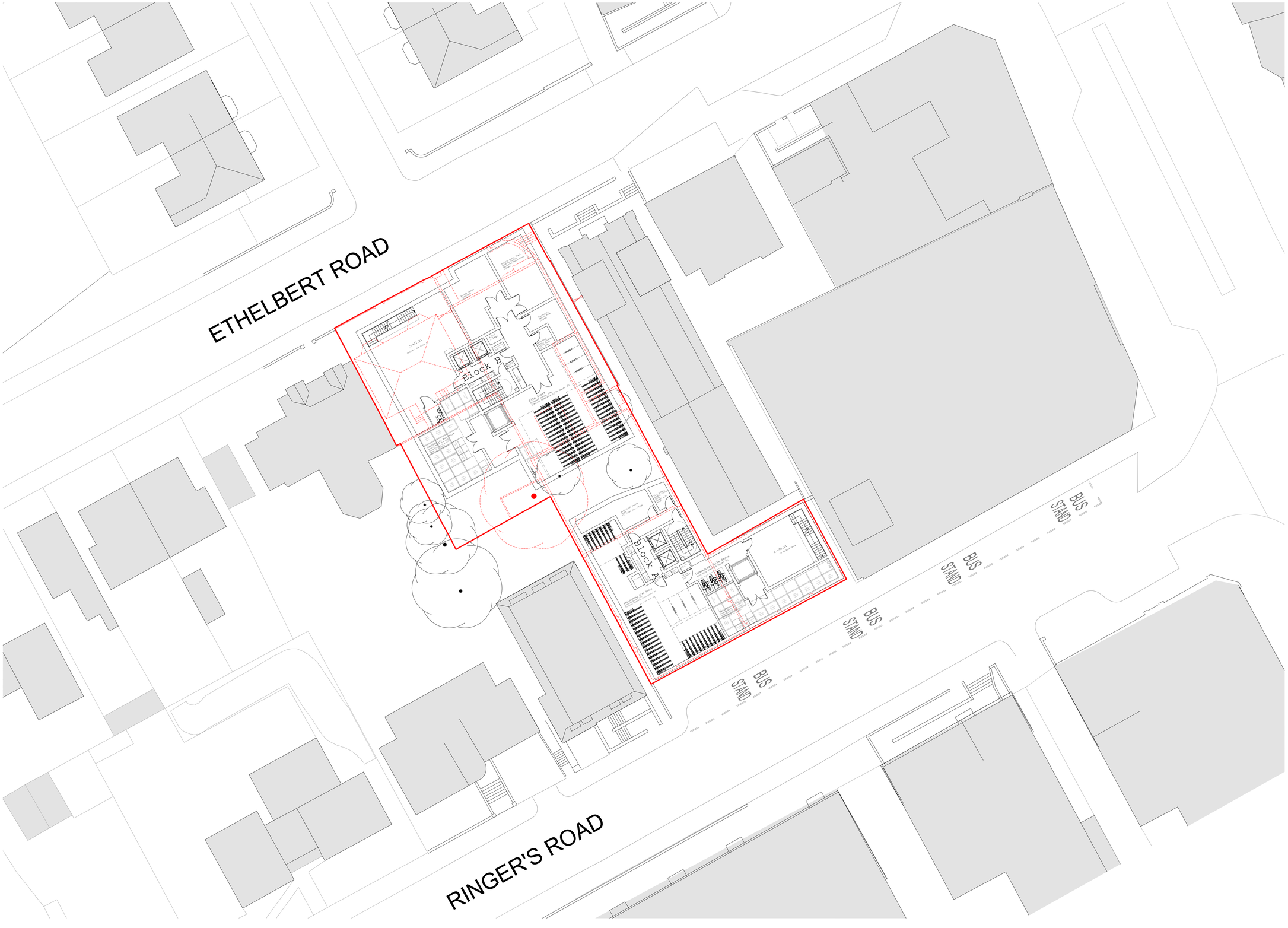
8.1.3. All construction vehicles accessing the site will have to book in advance with the Site Manager (TBC) who will keep a record of the schedule and all deliveries. Banksmen will be on hold to meet the vehicle. The Banksmen will ensure that, during these times, appropriate pedestrian and road safety information is relayed to local users and vehicle checks are made.

8.1.4. The construction process will be managed by the designated Site Manager, with any changes to the designated Site Manager being notified to the LBB. Their responsibilities will include acting as a point of contact for the local authority, stakeholders and members of the public. Further to this, they will also be responsible for delivery scheduling, construction route compliance and managing other contractors employed on-site.

8.1.5. The contractor will liaise with LBB, as the Local Planning Authority, should circumstances arise under which amendments will be required to this CLP.

8.1.6. The CLP will be complied with unless otherwise agreed in writing by LBB. Overall, it is considered that the measures and control processes outlined in this CLP are appropriate to overcome the identified constraints associated with the site.

Appendix A – Proposed Plans



Site Boundary
Demolition

R1	Alterations to internal layouts	LC	21.07.07
R2	General amendments following comments from fire consultant	LC	21.09.10
R3	Updates for Planning Submission		27.10.2021
R4	Amendments to Floor Plans following comments	OH	05.10.2022
R5	Addition of 2nd Stair	OH	23.02.2023
R6	Amendments for Planning resubmission	LC	28.04.2023

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Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Lower Ground Floor Site Plan

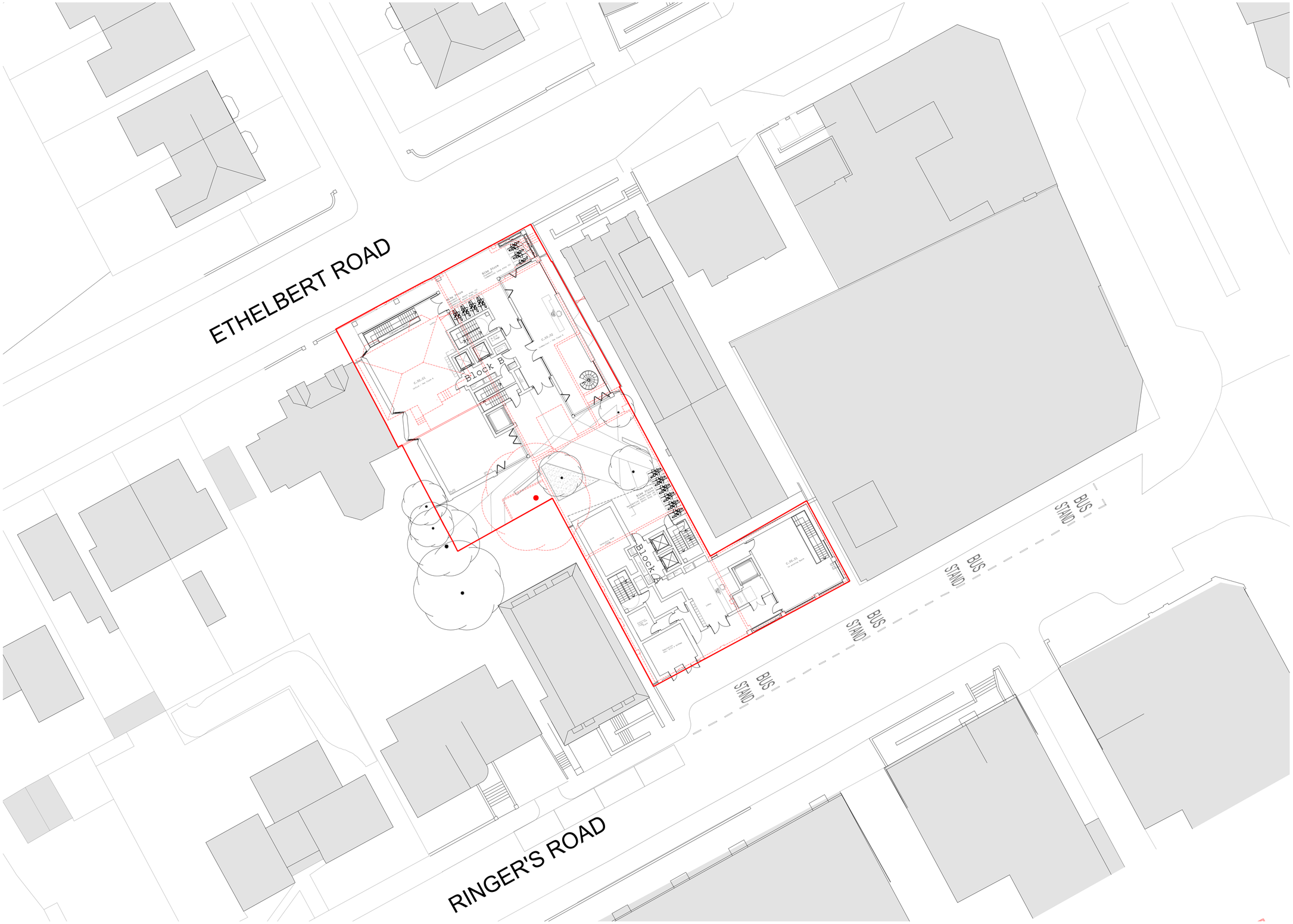
Status | PLANNING

Scale@A1 | 1:200 **Date** | 21.01.21 **Drawn** | GG **Chk'd** | LC

Project Number 18.085
Birm Number

Drawing Number 100.03

Revision R6



Site Boundary
Demolition

R3	Updates for Planning Submission		27.10.2021
R4	Updates for Planning Submission	OH	20.01.2022
R5	Amendments to Floor Plans following comments	OH	05.10.2022
R6	Addition of 2nd Stair	OH	23.02.2023
R7	Amendments for Planning resubmission	LC	28.04.2023

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Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Ground Floor Site Plan

Status | PLANNING

Scale@A1 | 1:200 **Date** | 21.01.21 **Drawn** | GG **Chk'd** | LC

Project Number 18.085
Birn Number

Drawing Number 100.04

Revision R7

0 1 2 4 6 8 10M

N

Site Boundary
Demolition

R3	Updates for Planning Submission		27.10.2021
R4	Amendments to Plans following Comments	OH	05.10.2022
R5	Addition of 2nd Stair	OH	23.02.2023
R6	Amendments for Planning resubmission	LC	28.04.2023

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Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Typical Floor Site Plan

Status | PLANNING

Scale@A1 | 1:200 **Date** | 21.01.21 **Drawn** | GG **Chk'd** | LC

Project Number 18.085
Birn Number

Drawing Number 100.06

Revision R6