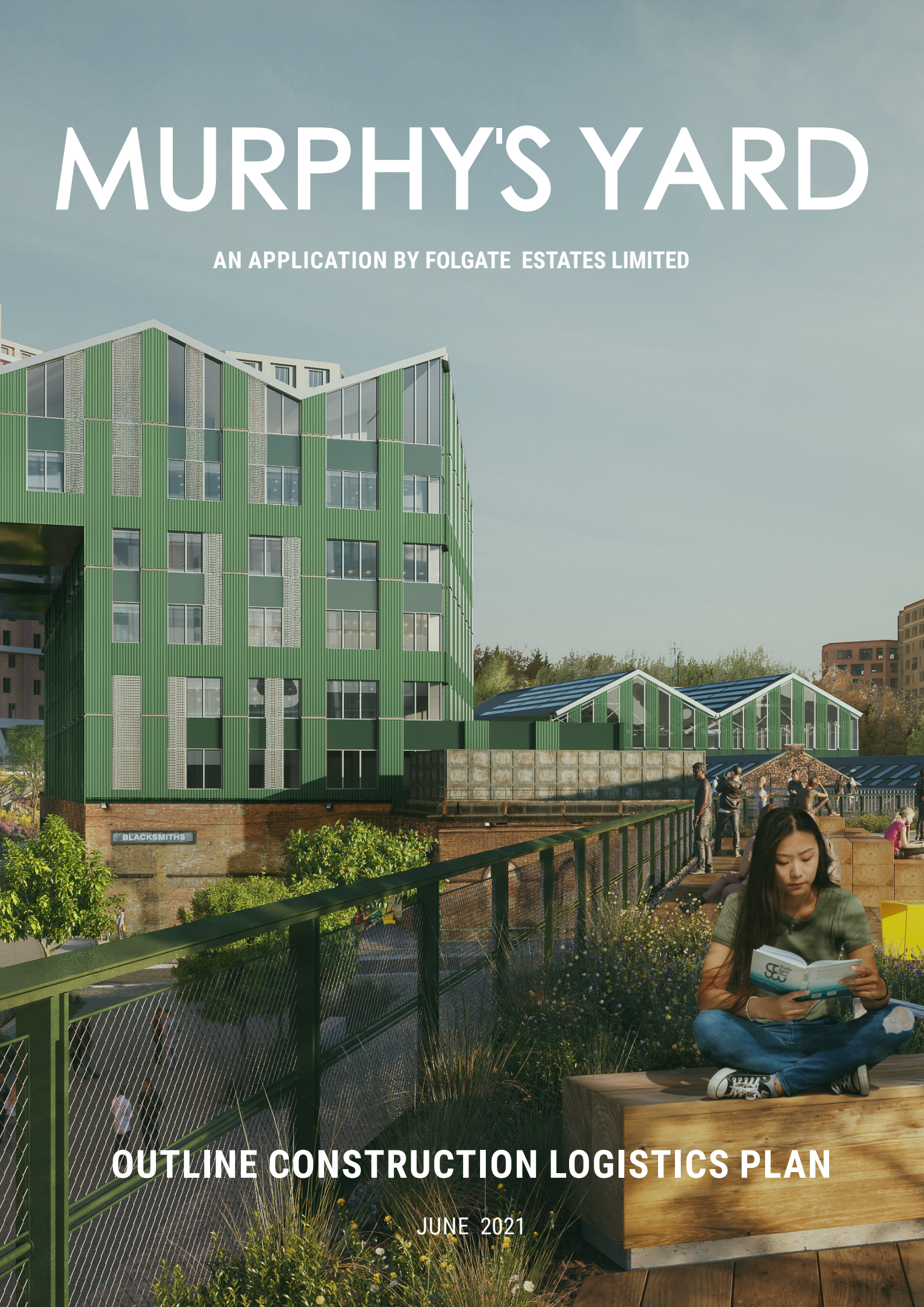
MURPHY'S YARD

AN APPLICATION BY FOLGATE ESTATES LIMITED



OUTLINE CONSTRUCTION LOGISTICS PLAN

JUNE 2021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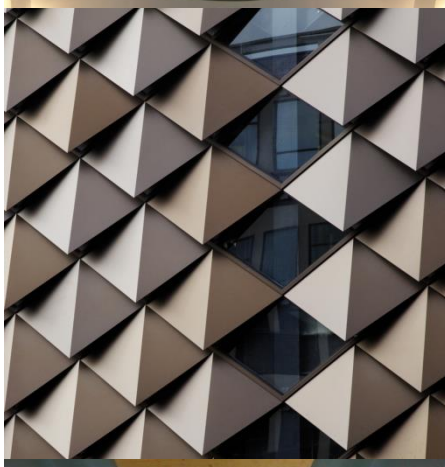

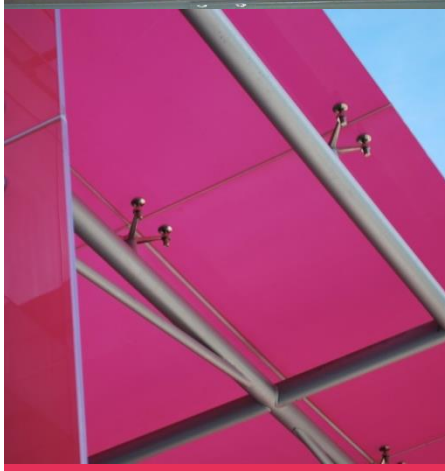

Murphy’s Yard

Outline Construction Logistics Plan

Curtins Ref: 70813

Revision: FINAL

Issue Date: 17 June 2021

Client Name: Folgate Estates

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Rev	Description	Issued by	Checked	Date
00	Final for planning	SF	SF	17 June 2021

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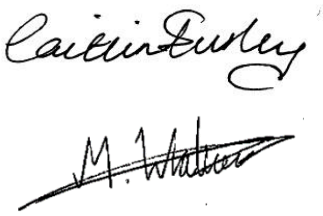
Caitlin Turley BEng (Hons) MCIHT Senior Transport Planner **Martin Walton** BSc (Hons) MCIHT Senior Transport Planner		17 June 2021

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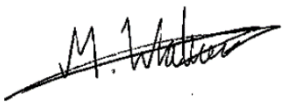
Martin Walton BSc (Hons) MCIHT Senior Transport Planner		17 June 2021

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1.0 Introduction

1.1 Introduction

1.1.1 Curtins have been appointed on behalf of Folgate Estates to provide traffic and transport advice in relation to the redevelopment of Murphy's Yard in Kentish Town, which will provide a new mixed use development to replace existing Murphy operational uses.

1.1.1 This Outline Construction Logistics Plan (CLP) supports an outline planning application with all matters reserved.

1.1.2 Along with this Outline CLP, an accompanying Transport Assessment (TA), Framework Travel Plan (FTP) and a Delivery and Servicing Plan (DSP) have been prepared to support the planning application. This documentation should be read in conjunction with all relevant submitted documentation.

1.2 Objectives of the CLP

1.2.1 The primary aim of this CLP is to reduce the impacts of construction activities and facilitate sustainable freight travel to / from the development.

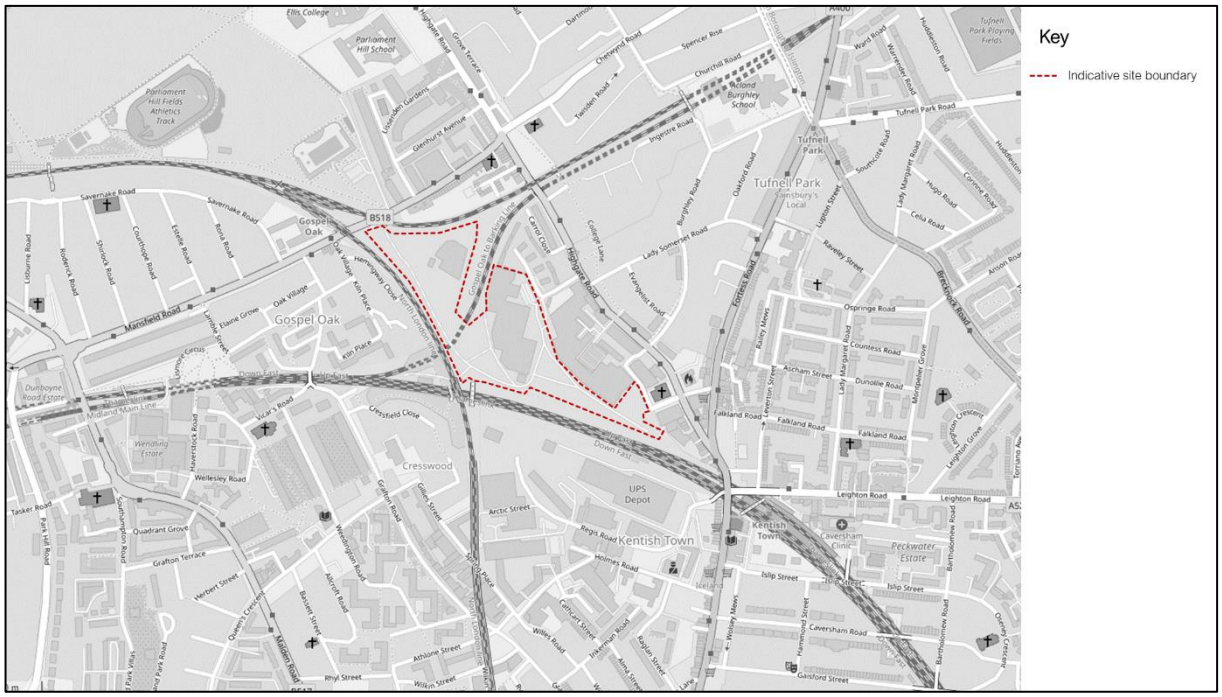
1.2.2 The objectives are to:

- Demonstrate how construction waste will be removed safely, efficiently and sustainably;
- Identify a strategy for reducing, retiming or consolidating deliveries, particularly during network peak hours;
- Help cut congestion on the surrounding highway network and ease environmental pressures;
- Improve reliability of deliveries to the site; and
- Reduce the fuel costs of the freight operators.

1.3 Site Context

1.3.1 The existing site measures approximately 62,288m^2. It currently forms Murphy's main London depot and is adjacent to their headquarter building. The site is bound by the Richmond / Clapham Junction – Stratford Overground railway to the west, the Gospel Oak – Barking Overground railway to the north, Highgate Studios and Murphy's HQ building to the east and northeast and the Thameslink Railway line to the south. **Figure 1.1** illustrates the indicative site boundary.

Figure 1.1 - Indicative Site Boundary



1.4 Summary of Development Proposals

1.4.1 The description of the development is as follows:

"Outline planning with all matters reserved for the demolition of existing buildings and structures and redevelopment comprising the following mix of uses: residential (Use Class C3), residential institution (Use Class C2), industrial (Use Class B2/B8), office (Use Class E(g(i)), light industry (Use Class E(g)(iii), research and development (Use Class E(g)(ii))), healthcare (Use Class E(e)), flexible commercial and Sui Generis floorspace (Use Class E and Sui Generis Use), Community (F1/F2), Sui Generis, and cycle and vehicle parking, refuse and recycling storage, plant, highway and access improvements, amenity space, landscape and public realm improvements, and associated works. "

1.4.2 A key principle of the proposed development is to significantly increase the permeability of the site for pedestrians and cyclists and to enhance these links with high-quality public realm. This includes the provision of routes through the site linking Greenwood Place, Sanderson Close and Gordon House Road. The primary pedestrian and cycle spine through the site is referred to as the Heath Line and provides a connection between Highgate Road (via Greenwood Place) and Hampstead Heath (via Gordon House Road).

1.4.3 The proposals also respond positively to Camden's Kentish Town Neighbourhood Plan which identifies the potential for connections to adjacent landholdings outside the control of the applicant. Whilst these links cannot be delivered by this application alone, the proposals have been developed in a way to safeguard the future delivery of these. These connections include links to Carkers Lane, Regis Road and Kentish Town Station.

1.4.1 The southern section of the site, which accommodates the commercial and employment land uses, will be accessed via Sanderson Close, with Plot C accessed via Greenwood Place. Following the completion of Phase 1, and whilst the following phases are being constructed, vehicle access for Plot F will be provided temporarily via Greenwood Place. This will subsequently be changed to Sanderson Close once the rest of the southern section of the site are completed, providing a connection between Sanderson Close and Plot F.

1.5 Construction Management Particulars

1.5.1 Proposed start and end dates for the project are highlighted in **Table 1.1**.

Table 1.1- Construction Management Details

Site Address	**Murphy's Yard** **Highgate Road** **London Borough of Camden**
Contractor	TBC
Site Working Days	Monday to Friday & Saturdays. No Bank Holidays or Sundays.
Site Working Hours	Monday to Friday: 08:00 – 18:00 Saturday: 08:00 – 13:00 Sunday and Bank Holidays: No works
24 Hour Contact Information	To be provided prior to construction

1.6 Report Structure

1.6.1 The remainder of the CLP is structured as follows:

- Section 2 provides a review of relevant policy, describes the existing conditions surrounding the site including accessibility and community considerations or challenges which may arise as part of the works;
- Section 3 outlines the construction programme methodology;

- Section 4 describes the vehicle routing including illustrative plans;
- Section 5 provides a set of measures that can be implemented to ensure the CLP is effective in achieving the aims of the CLP
- Section 6 provides an estimate for the level of trips anticipated as part of the construction process; and
- Section 7 discusses how the CLP will implemented, monitored and updated.

2.0 Context, Considerations and Challenges

2.1 Policy Context

2.1.1 This section of the CLP provides a summary of relevant policy which has been considered during the preparation of this report.

National Policy

Traffic Management Act (2004)

2.1.2 Part 2 of the Traffic Management Act sets out the responsibility of local authorities to manage traffic networks within their geographical area of responsibility. This includes efficient use of the network and the requirement to take measures to avoid contributing to traffic congestion. Part 5 outlines the responsibility of local authorities in Greater London to manage the strategic route network. This includes TfL's role to manage certain areas of the Greater London route network.

Regional Policy (London)

The London Freight Plan, Sustainable Freight Distribution: A Plan for London (2007)

2.1.3 The London Freight Plan, Sustainable freight distribution: A plan for London (2007) The London Freight Plan identifies four key projects for delivering freight in London more sustainably. These are:

- The Fleet Operators Recognition Scheme (FORS) which provides a quality and performance benchmark for the industry. It is an industry led membership scheme that aims to transform freight delivery in London by recognising and rewarding excellence, raising standards and promoting sustainability. Members of the FORS scheme are required to demonstrate a commitment to health and safety, effective management of work related road risk and improved efficiency against pre-determined standards;
- The introduction of DSPs, which are intended to ensure that the operational efficiency of buildings/sites is increased by reducing delivery and servicing impacts to premises, specifically in relation to CO2 emissions, congestion and collisions. DSPs aim to reduce delivery trips (particularly during peak periods);
- The introduction of Construction Logistics Plans (CLPs), which apply to the design and construction phases of developments and seek to improve construction freight efficiency by reducing CO2 emissions, congestion and collisions; and
- A Freight Information Portal which provides a single interface for information on freight between London's public authorities and freight operators.

2.1.4 With respect to CLPs, the London Freight Plan (2007) states on Page 6 that:

'Construction Logistics Plans (CLPs) have similar objectives to DSPs, but will be applied to the design and construction phases of premises, specifically to improve construction freight efficiency by reducing CO2 emissions, congestion and collisions. Ultimately, they will be integrated into the travel plan process and each traffic authority's response to the Network Management Duty to increase road network efficiency by minimising congestion and therefore emissions caused directly and indirectly by construction related trips.

The aim will again be for TfL and the GLA Group to take a lead in implementing such plans for their construction projects. Traffic authorities will be encouraged to review delivery arrangements for construction sites to ensure they reduce lane closures and carriageway restrictions and reduce construction duration. The approach will be integrated with the introduction of Site Waste Management Plans from 2008, in partnership with the Building Research Establishment (BRE).'

London Plan (March 2021)

2.1.5 The new London Plan was adopted in March 2021, which replaces the previous plans produced between 2004 and 2016. Policy T7: Deliveries, servicing and construction, part G states:

2.1.6 *'Development proposals should facilitate safe, clean, and efficient deliveries and servicing. Provision of adequate space for servicing, storage and deliveries should be made off-street, with on-street loading bays only used where this is not possible. Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with Transport for London guidance and in a way which reflects the scale and complexities of developments.'*

2.1.7 Part J states:

"Development proposals must consider the use of rail/water for the transportation of material and adopt construction site design standards that enable the use of safer, lower trucks with increased levels of direct vision on waste and landfill sites, tip sites, transfer stations and construction sites"

2.1.8 Part K states:

"During the construction phase of development, inclusive and safe access for people walking or cycling should be prioritised and maintained at all times."

TfL's Construction Logistics Plan Guidance (2017)

2.1.9 In 2017 TfL released a more prescriptive guidance for the preparation of outline and detailed CLPs. The guidance details the requirements dependant on scale of development, cost and impact, the purpose of CLPs, the planning process relating to CLPs and the level of detail and content expected.

Mayors Transport Strategy (2018)

2.1.10 In March 2018, the Major of London published the Mayor's Transport Strategy, which sets out the policies and proposals to reshape transport in London over the next 25 years.

2.1.11 Proposal 15 states:

"The Mayor, through TfL, will work with the boroughs, businesses and the freight and servicing industry to reduce the adverse impacts of freight and service vehicles on the street network. The Mayor aims to reduce the number of lorries and vans entering central London in the morning peak by 10 per cent by 2026."

2.1.12 Proposal 16 states:

"The Mayor, through TfL, and working with the boroughs and members of the Freight Forum, will improve the efficiency of freight and servicing trips on London's strategic transport network by:

a) Identifying opportunities for moving freight on to the rail network where this will not impact on passenger services and where the benefits will be seen within London.

b) Increasing the proportion of freight moved on London's waterways.

c) Reviewing the potential benefits of a regional freight consolidation and distribution network and completing the network of construction consolidation centres in London."

2.1.13 Proposal 17 States:

"The Mayor, through TfL, working with the boroughs and the Freight Forum, will work with landlords and all parts of the supply chain, including the freight industry, Business Improvement Districts (BIDs) and individual businesses, to improve the efficiency of last mile deliveries and servicing. This will be achieved by:

a) *Supporting BIDs and other clusters of businesses to jointly procure goods and services.*

b) *Establishing a network of microdistribution services and facilities served by zero emission vehicles and walking and cycling deliveries.*

c) *Re-timing goods and services to the times where they will have least impact on streets.*

d) *Using local access and loading restrictions to support more efficient freight practices.*

e) *Improving the design and management of loading and servicing activities at the kerbside and off-street.*

f) *Developing an online tool, incorporating a 'London lorry standard', to simplify the regulatory environment for HGVs operating in London."*

2.1.14 Policy 17 states:

"The Mayor, through TfL and the boroughs, and working with stakeholders, will seek the use of the full potential of the Thames to carry passengers, to integrate river services with the public transport system, walking and cycling networks, and to enable the transfer of freight from road to river in the interests of reducing traffic levels and the creation of Healthy Streets."

2.1.15 Proposal 81 states:

"The Mayor, through TfL and the boroughs, and working with stakeholders, will embed efficient freight and servicing in new development by:

a) *Ensuring that delivery and servicing plans facilitate off-peak deliveries using quiet technology, and the use of more active, efficient and sustainable modes of delivery, including cargo cycles and electric vehicles where practicable.*

b) *Ensuring that large-scale developments and area-wide plans include a local freight and servicing strategy (consisting of measures such as shared procurement for consumables, co-ordinated waste and recycling collection, timetabled deliveries, 'click and collect' for residents and flexible loading bays).*

c) *Piloting ambitious plans in Opportunity Areas and around major developments such as High Speed Two to reduce the impact of freight and construction trips."*

2.2 Camden Transport Strategy

2.2.1 The following measures and policies within the Camden Transport Strategy relate to construction.

- Measure 2g: Undertake surveys during temporary road closures (such as for street works or utilities works or for development/construction sites) to understand traffic displacement and the potential for permanent road closures.

- Policy 6c: Alternative footways and cycle lanes should always be re-provided during temporary closures, including during construction of developments and highways works.
- Measure 6j: Develop and implement measures from a Freight Action Plan to be completed following the production of this Strategy to mitigate the impacts of freight movements in the Borough, particularly to contribute to the overarching MTS target of a 10% reduction in morning peak freight transport in central London by 2026 (congestion charge area). Measures will include, but not be limited to:
  - Continue to develop requirements for Construction Management Plans (CMPs) and Servicing Management Plans (SMP) through the planning process to give significant consideration to timing of deliveries, routing, size of vehicles, and identifying consolidation and last mile opportunities as key elements of the Plans.

2.3 Context Maps

2.3.1 **Figure 2.1** provides a regional map showing the site in the context of Greater London and the TLRN road network. **Figure 2.2** shows the location of the site in the context of the surrounding area and illustrates the local constraints.

Figure 2.1 - TLRN in the vicinity of the site

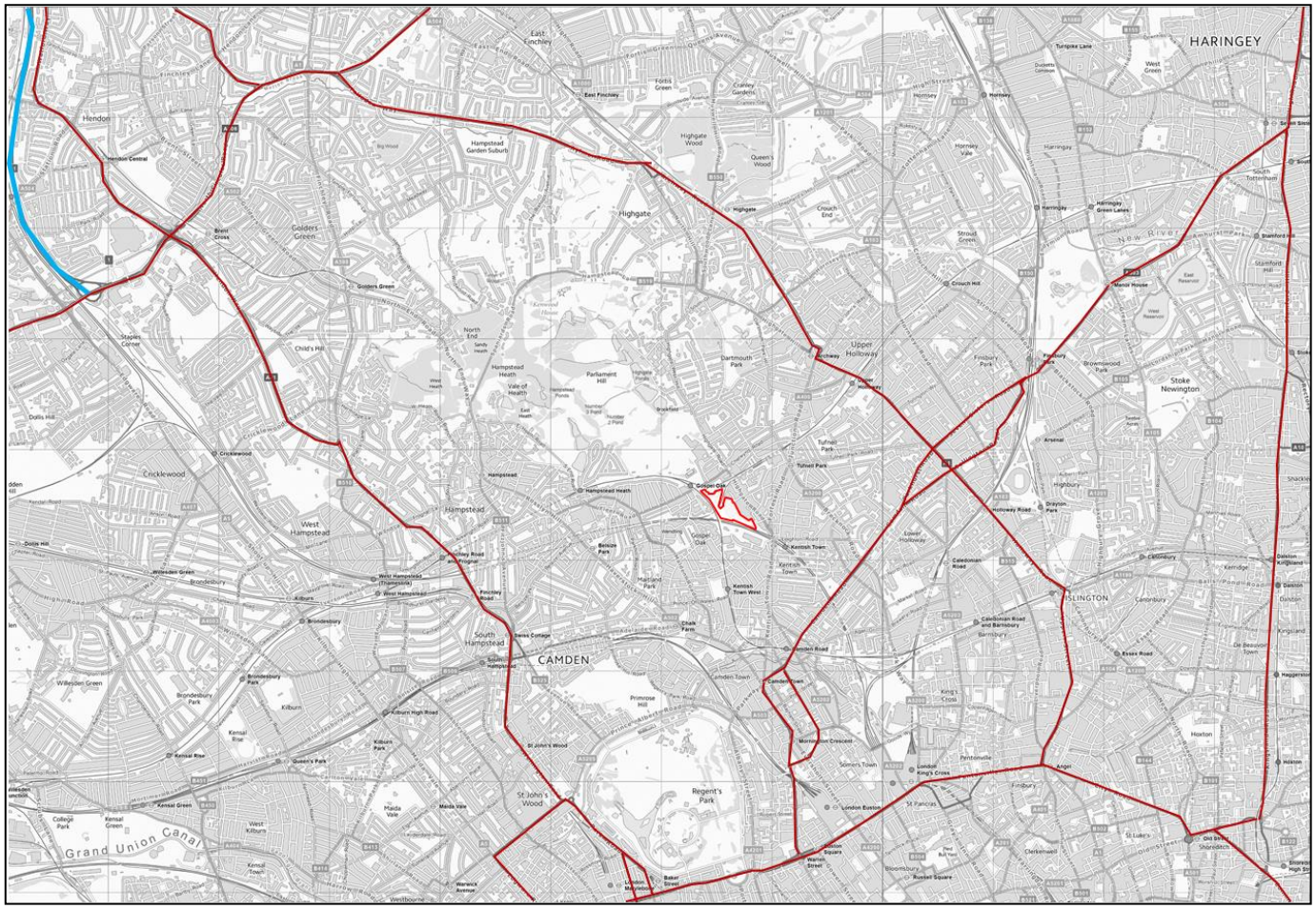
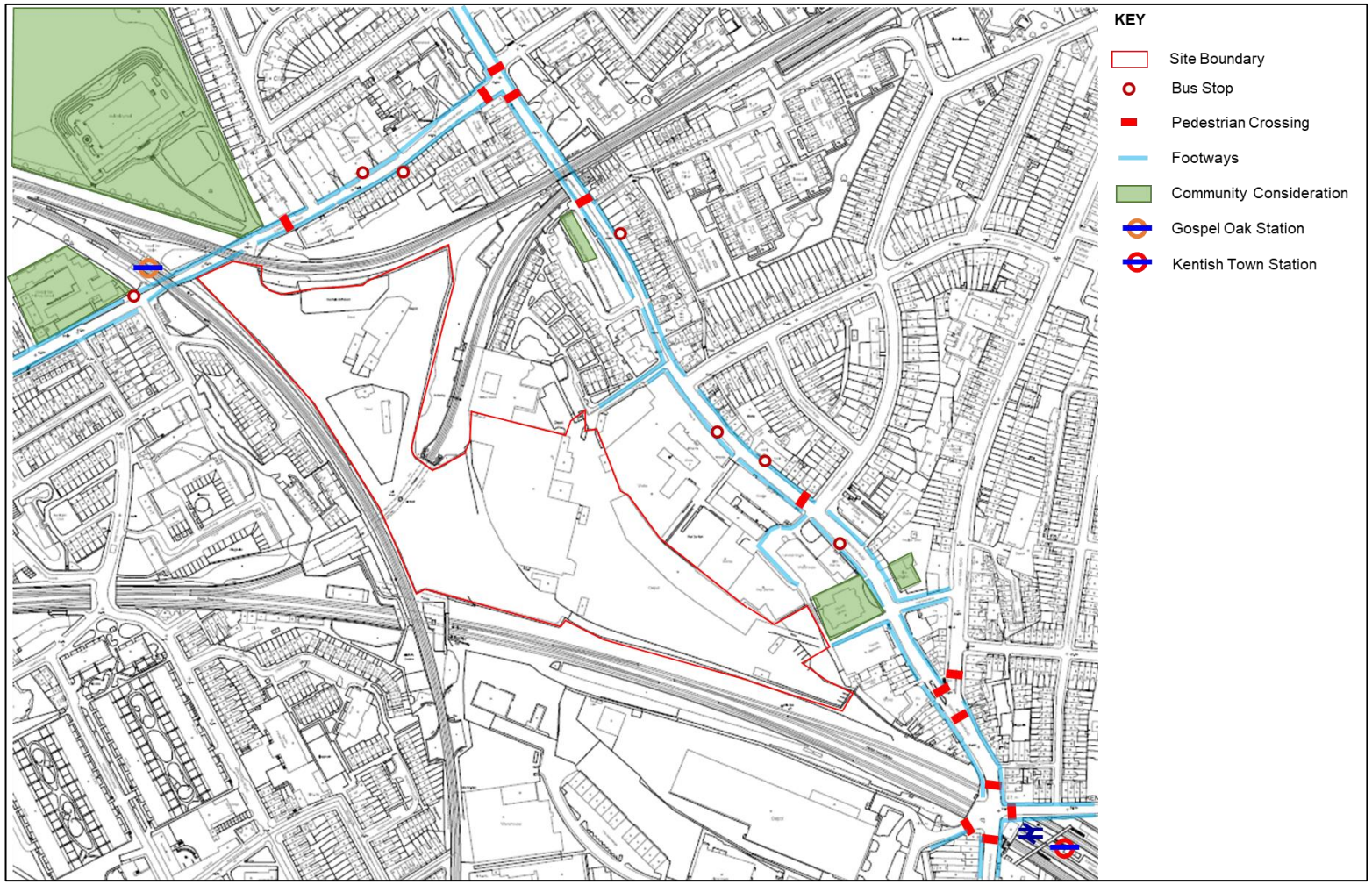


Figure 2.2 – Local Constraints



2.3.2 **Figure 2.2** illustrates that bus stops are located along the extents of Gordon House Road and Highgate Road. Footways are present along the extents of these roads with guard railing and formal pedestrian crossings also provided intermittently.

2.3.3 Gospel Oak Overground Station is located directly to the northwest of the site access from Gordon House Road. Guard railings are in place to separate the northern footway from the carriageway where the entrance to the station is, which continues under the railway bridge. Gospel Oak Primary School is located directly to the west of the station. There are guard railings located along its frontage to separate the footway from the carriageway.

2.3.4 The entrance to Hampstead Heath is located opposite the existing vehicle entrance to the site. A signalised pedestrian crossing is located circa 30m east of this.

2.3.5 A church is located directly to the north of Greenwood Place, accessed from Highgate Road. The Kentish Town fire station is located directly opposite.

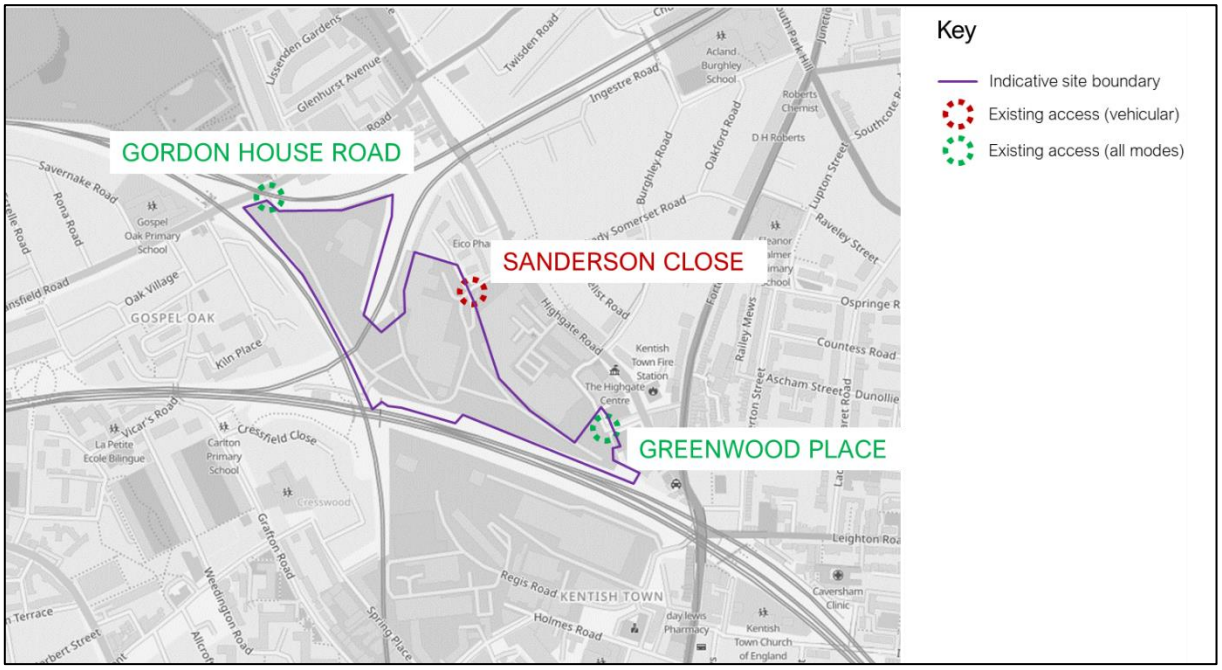
2.3.6 Kentish Town London Underground and Thameslink Station is located at the southern end of Highgate Road, which features multiple pedestrian crossings in the vicinity. High levels of pedestrian activity is experienced during the peak hours.

2.4 Local Considerations

Local Highway

2.4.1 The site can currently be accessed via three vehicle access points; Sanderson Close, Gordon House Road and Greenwood Place.

Figure 2.3 - Existing Site Access Points



Sanderson Close

2.4.2 The main vehicle access to the site is via Sanderson Close, which is shown in **Figure 2.3**. At the site entrance the access splits in two providing access into a car parking area (which is included within the site boundary) and the main site and Murphy's Head Quarters. A vehicle control barrier system is in place at the site entrance which controls vehicles entering and exiting at Sanderson Close. Pedestrian access is also provided at Sanderson Close and requires staff and visitors to pass through a control point.

Figure 2.4 - Sanderson Close Vehicle Access

Gordon House Road

2.4.3 A second vehicle access point is located on Gordon House Road on the north western border of the site and controlled by a gate.

2.4.4 The access is formed beneath a railway bridge which restricts the width of the access to 4.9m and visibility for vehicles exiting Gordon House Road to the west is substandard. The railway arch above the access limits headroom to circa 3.9m.

2.4.5 Gordon House Road also provides access to a gas compound within the site, however this is not within the red line boundary.

Figure 2.5 - Gordon House Road Access

Greenwood Place

2.4.7 A third vehicular access is taken from Greenwood Place which is flanked by the Forum to one side and a church to the other. The Forum is a music venue operated by the 02. The Forum building and its service yard (located at the rear of the building) are not contained within the proposed redline boundary.

2.4.8 Greenwood Place is relatively narrow with a carriageway measuring 4.8m in width. This is offset by the very low levels of traffic that use this route. The Murphy site is lower than Greenwood Place and a ramp is provided within the site to provide this vehicular connection.

2.4.9 Of the three site entrances serving the site, Greenwood Place is the least regularly used.

Figure 2.6 - Greenwood Place Vehicle Access

Strategic Highway

2.5 Strategic Road Network

2.5.1 The Transport for London Road Network (TLRN) is made up of London's 'red routes' which are the capital's main routes. TfL encourage all construction and HGV traffic to utilise either the strategic road network (SRN) and TLRN and avoid local level roads where possible to reduce impact on the highway network. The TLRN and SRN are illustrated in **Figure 2.11**, there are no red routes in the vicinity of the site.

TfL Road Network

2.5.2 The nearest Red Route to the site is Camden Road (A503) and is approximately 1.2 miles to the south if the site.

A1

2.5.3 The site is located approximately 2km west of the A1, which is accessible via the A400 Fortress Road. The A1 connects the A406 in the north and the A501 (which forms a ring road around Central London) in the north. It also provides a connection to the A503.

M1

2.5.4 The M1 is located approximately 8km from the M2, which is accessible via the A1 and the A406. The M1 provides a connection between Inner London (at the A406) in the south and the M25 in the south. The M1 continues northwards towards Nottingham, Leeds and the A1(M1).

London Underground and Overground

2.5.5 Kentish Town Underground and Thameslink Station is located to the south-east and Gospel Oak Overground station to the north.

Bus Services

2.5.6 Regular bus services operate from Gordon House Road, Highgate Road and Kentish Town Road connecting the site to surrounding neighbourhoods and Inner and Outer London.

Rail Services

2.5.7 Strategic rail stations such as Kings Cross, St Pancras, Euston and Paddington are situated approximately 3km south of the site, each providing national services to the north, north-west and west of the country. These stations are easily accessible by public transport or bicycle.

2.6 Considerations and Challenges

Local Policy

2.6.1 All construction work will be undertaken within the hours specified within **Table 1.1**.

Local Pedestrian Routes

2.6.2 Currently the sole pedestrian access point to the site is via Sanderson Close and there are no rights of way through the site. Existing staff at Murphy HQ will continue to use Sanderson Close to access the building. Emergency access will be maintained.

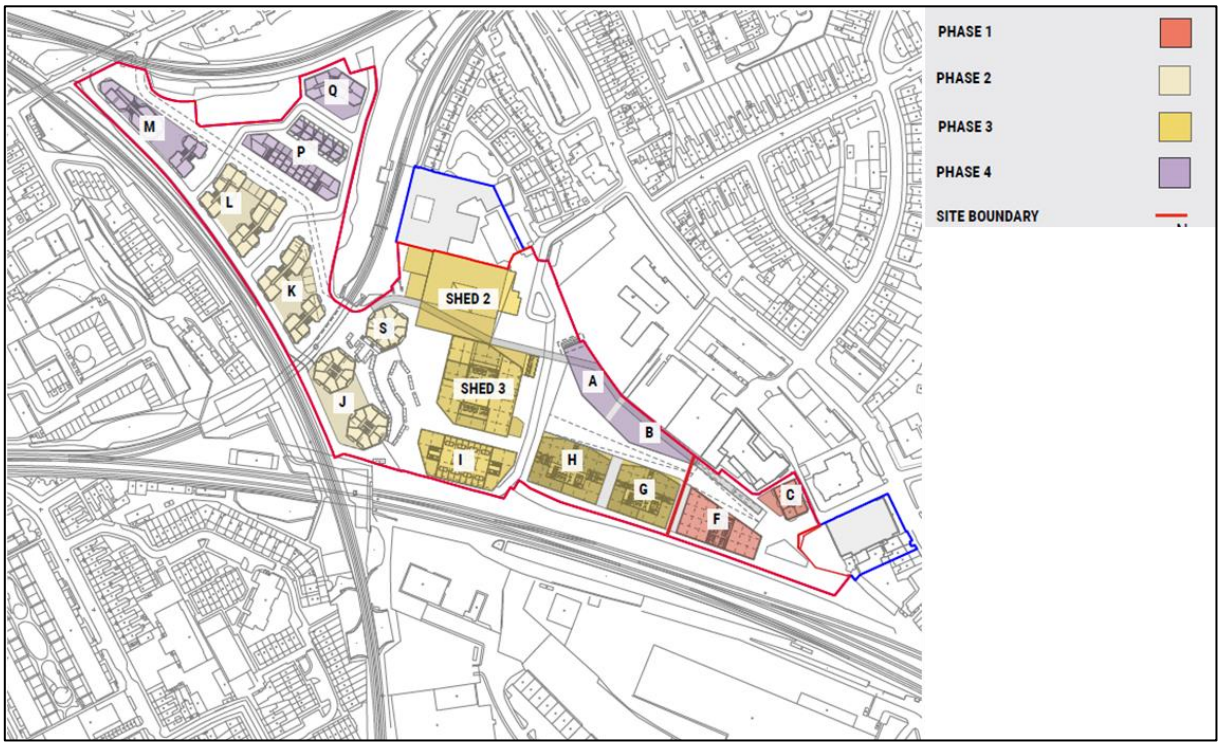
3.0 Construction Programme and Methodology

3.1 Construction Programme

3.1.1 The construction programme has been developed by STACE and is expected to comprise 4 phases relating to different sections of the site, with an overall duration of 9 years.

- Mobilisation and site setup
- Phase 1: Blocks C and F
- Phase 2 Blocks J, S, K and L;
- Phase 3 Blocks I, H, G, Shed 2 and Shed 3
- Phase 4 Blocks Q, P, A, B, M and O

Figure 3.1 - Phasing Diagram



3.1.2 Each phase is expected to be broken down into the following stages:

- Demolition and site clearance
- Earthworks, foundations and substructure
- Superstructure
- External Cladding

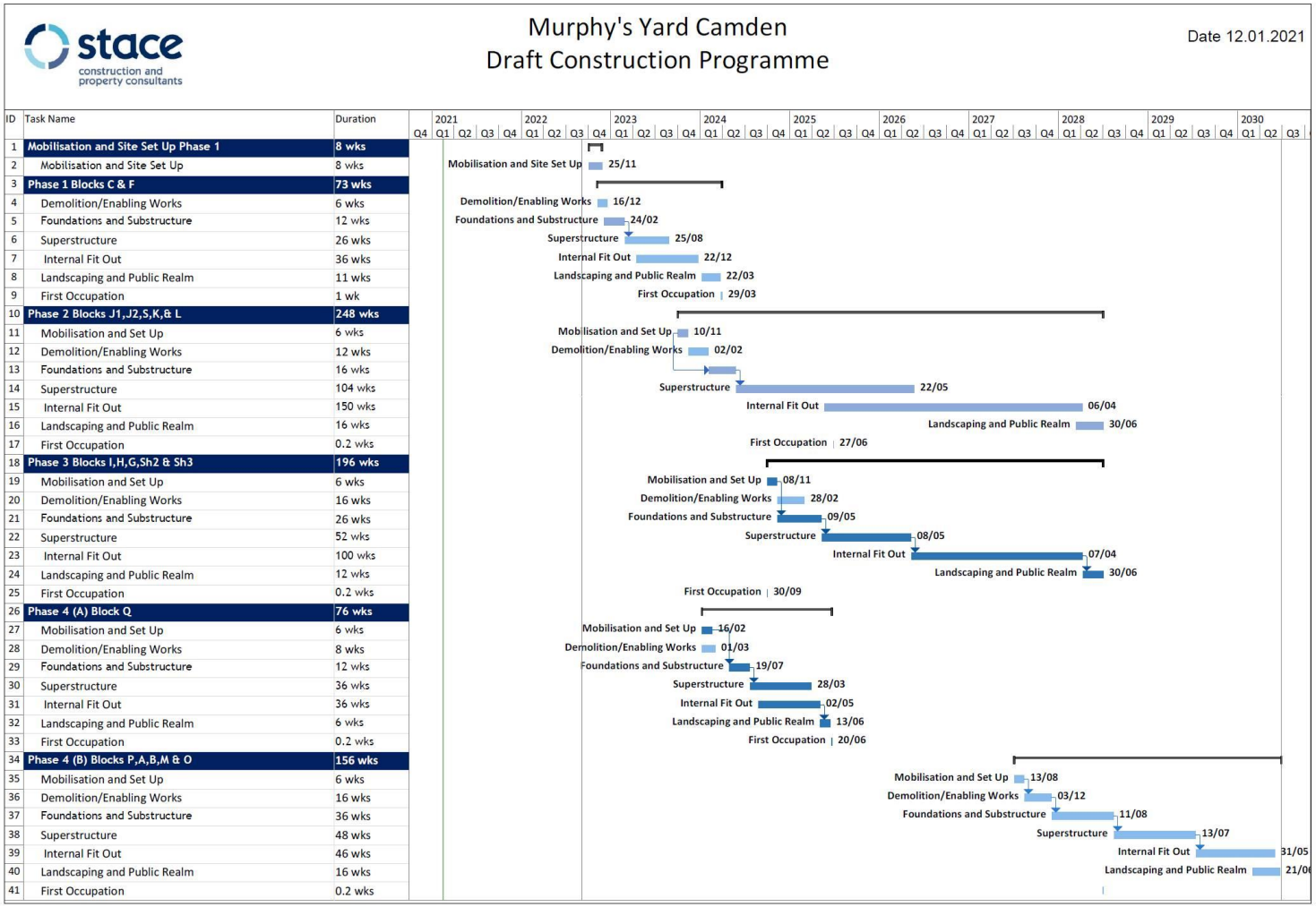
- Internal Fit-out
- Testing and Commissioning
- External works and Handover

Table 3.1 - Outline Construction Programme

Stage	Building	Duration (weeks)	Year
Mobilisation		**8**	Year 1
Phase 1	C and F	**73**	Year 2 - 4
Demolition / enabling works		6	
Foundations & Substructure		12	
Superstructure		26	
Internal Fit-out		36	
Landscaping / public realm		11	
Phase 2	J1, J2, S, K and L	**248**	Year 3 – 8
Mobilisation and setup		6	
Demolition / enabling works		12	
Foundations & Substructure		16	
Superstructure		104	
Internal Fit-out		150	
Landscaping / public realm		16	
Phase 3	I, H, G, Shed 2, Shed 3	**196**	Year 4 - 8
Mobilisation and setup		6	
Demolition / enabling works		16	
Foundations & Substructure		26	
Superstructure		52	
Internal Fit-out		100	
Landscaping / public realm		12	
Phase 4(A)	Q	76	Year 3 - 5
Mobilisation and setup		6	
Demolition / enabling works		8	
Foundations & Substructure		12	
Superstructure		36	
Internal Fit-out		36	
Landscaping / public realm		6	

Phase 4(B)		156	
Mobilisation and setup		6	
Demolition / enabling works		16	
Foundations & Substructure	P, A, B, M & O	36	Year 7 - 9
Superstructure		48	
Internal Fit-out		46	
Landscaping / public realm		16	

Figure 3.2 - Draft Construction Programme



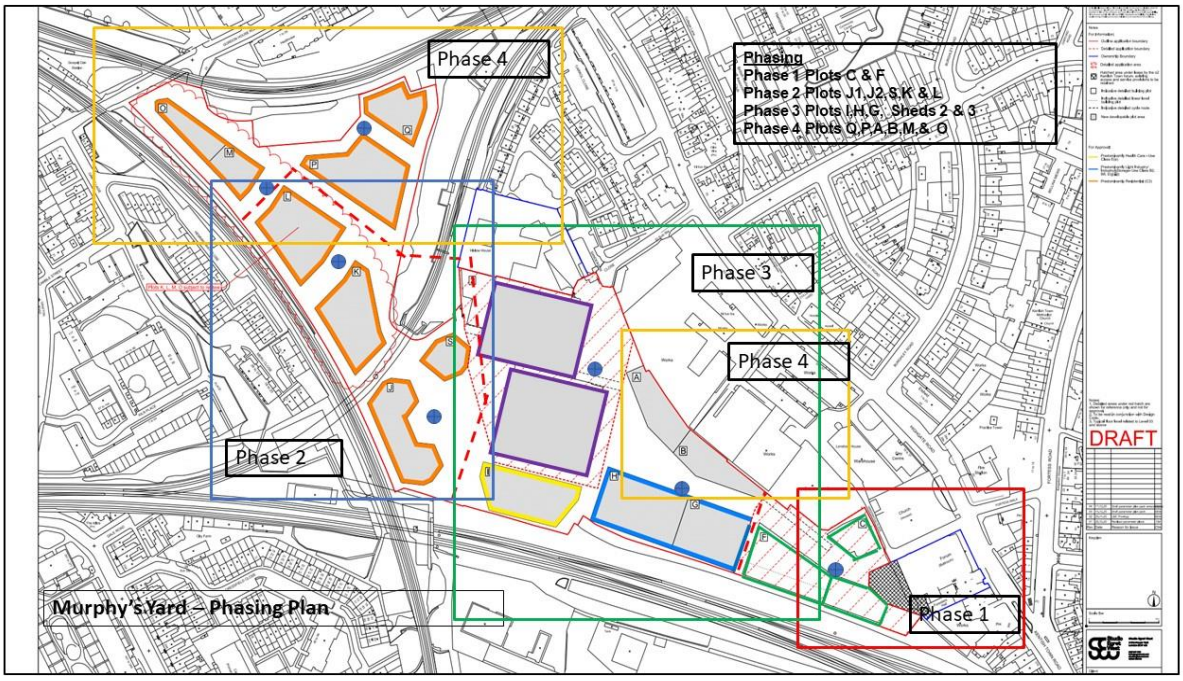
ID	Task Name	Duration
1	**Mobilisation and Site Set Up Phase 1**	**8 wks**
2	Mobilisation and Site Set Up	8 wks
3	**Phase 1 Blocks C & F**	**73 wks**
4	Demolition/Enabling Works	6 wks
5	Foundations and Substructure	12 wks
6	Superstructure	26 wks
7	Internal Fit Out	36 wks
8	Landscaping and Public Realm	11 wks
9	First Occupation	1 wk
10	**Phase 2 Blocks J1,J2,S,K,& L**	**248 wks**
11	Mobilisation and Set Up	6 wks
12	Demolition/Enabling Works	12 wks
13	Foundations and Substructure	16 wks
14	Superstructure	104 wks
15	Internal Fit Out	150 wks
16	Landscaping and Public Realm	16 wks
17	First Occupation	0.2 wks
18	**Phase 3 Blocks I,H,G,Sh2 & Sh3**	**196 wks**
19	Mobilisation and Set Up	6 wks
20	Demolition/Enabling Works	16 wks
21	Foundations and Substructure	26 wks
22	Superstructure	52 wks
23	Internal Fit Out	100 wks
24	Landscaping and Public Realm	12 wks
25	First Occupation	0.2 wks
26	**Phase 4 (A) Block Q**	**76 wks**
27	Mobilisation and Set Up	6 wks
28	Demolition/Enabling Works	8 wks
29	Foundations and Substructure	12 wks
30	Superstructure	36 wks
31	Internal Fit Out	36 wks
32	Landscaping and Public Realm	6 wks
33	First Occupation	0.2 wks
34	**Phase 4 (B) Blocks P,A,B,M & O**	**156 wks**
35	Mobilisation and Set Up	6 wks
36	Demolition/Enabling Works	16 wks
37	Foundations and Substructure	36 wks
38	Superstructure	48 wks
39	Internal Fit Out	46 wks
40	Landscaping and Public Realm	16 wks
41	First Occupation	0.2 wks

3.2 Construction Compound

3.2.1 During construction, a site compound will be created, complete with welfare facilities. The location of welfare facilities and material storage will be relocated as each stage is progressed.

3.2.2 **Figure 3.3** provides an indicative diagram of the construction compound.

Figure 3.3 - Construction Compound



3.3 Welfare Units

3.3.1 Welfare units will be provided throughout the construction stages and will include facilities such as toilets and offices.

3.3.2 All welfare units will be removed from site after construction is finalised to allow for the completion of external landscaping works.

3.4 Delivery times

3.4.1 The following section details the restriction of delivery times imposed on "Large Construction Vehicles" and "General Construction Vehicles". The aim of this configuration is to minimise the exposure of children to large construction vehicles when arriving at and leaving the surrounding schools.

Working Hours of the Site:

Monday to Friday	*08:00 am to 18:00*
Saturday	*08:00 to 13:00*
Bank Holidays and Sundays	*No works*

Large Construction Vehicles Delivery Times:

Monday to Friday	*10:00 to 14:00*
Saturday	*8:00 to 13:00*
Bank Holidays and Sunday	*No works or deliveries*

General Construction Vehicles Delivery Times:

Monday to Friday	*10:00 to 18:00*
Saturday	*8:00 to 13:00*
Bank Holidays and Sunday	*No works or deliveries*

3.4.2 It is anticipated that a delivery "log in" system will be put in place whereby suppliers and contractors book a time slot for arrival, delivery time period and departure. Thus, if the time slot is missed the contractor will not attempt delivery but reschedule the time slot. All deliveries will be managed by a qualified Logistics Manager & Traffic Marshal.

4.0 Vehicle Routing

4.1 Routing Strategy

4.1.1 Throughout the construction programme, vehicle access will be taken via Greenwood Place, Sanderson Close and Gordon House Road.

4.1.2 It is anticipated construction vehicles will utilise Greenwood Place to commence Phase 1 of the construction Programme. Sanderson Close will be used for Phases 2, 3 and 4A which are all located in the southern section of the site. Northern section of the site, Phase 4, will be constructed using vehicle access from Gordon House Road.

4.1.3 All construction vehicles will follow pre-determined routes to ensure drivers only use routes appropriate to their vehicle type.

4.1.4 The following maps illustrate the anticipated routing for the site. **Figure 4.1** illustrates vehicle routing in the context of London in terms of the TLRN, whilst **Figure 4.2** considers the local area.

4.1.5 The construction logistics routing has been developed to minimise the distance travelled on local roads which are not part of the TLRN. Furthermore, given the large numbers of pedestrians using the Kentish Town Road / Highgate Road / Fortress Road junction to access Kentish Town Station and the High Street, vehicles are expected to travel on roads north of the site to avoid this and minimise conflict.

4.1.6 Construction Vehicles exiting the site from Greenwood Place and Sanderson Close are expected to turn left onto Highgate Road. Vehicles exiting the northern section of the site will turn right onto Gordon House Road.

4.1.7 Vehicles will continue north along Highgate West Hill, to access the B519 which provides a connection to the A1. The A1 then provides connections to the wider TLRN and the M1 and M25.

4.1.8 Construction staff/banksmen will be present at vehicle access points to manage vehicles entering and exiting the site to maximise safety for pedestrians and cyclists. It is also anticipated that a banksman will be required at the Greenwood Place / Highgate Road junction.

Figure 4.1 – Anticipated Routes to and from the TLRN

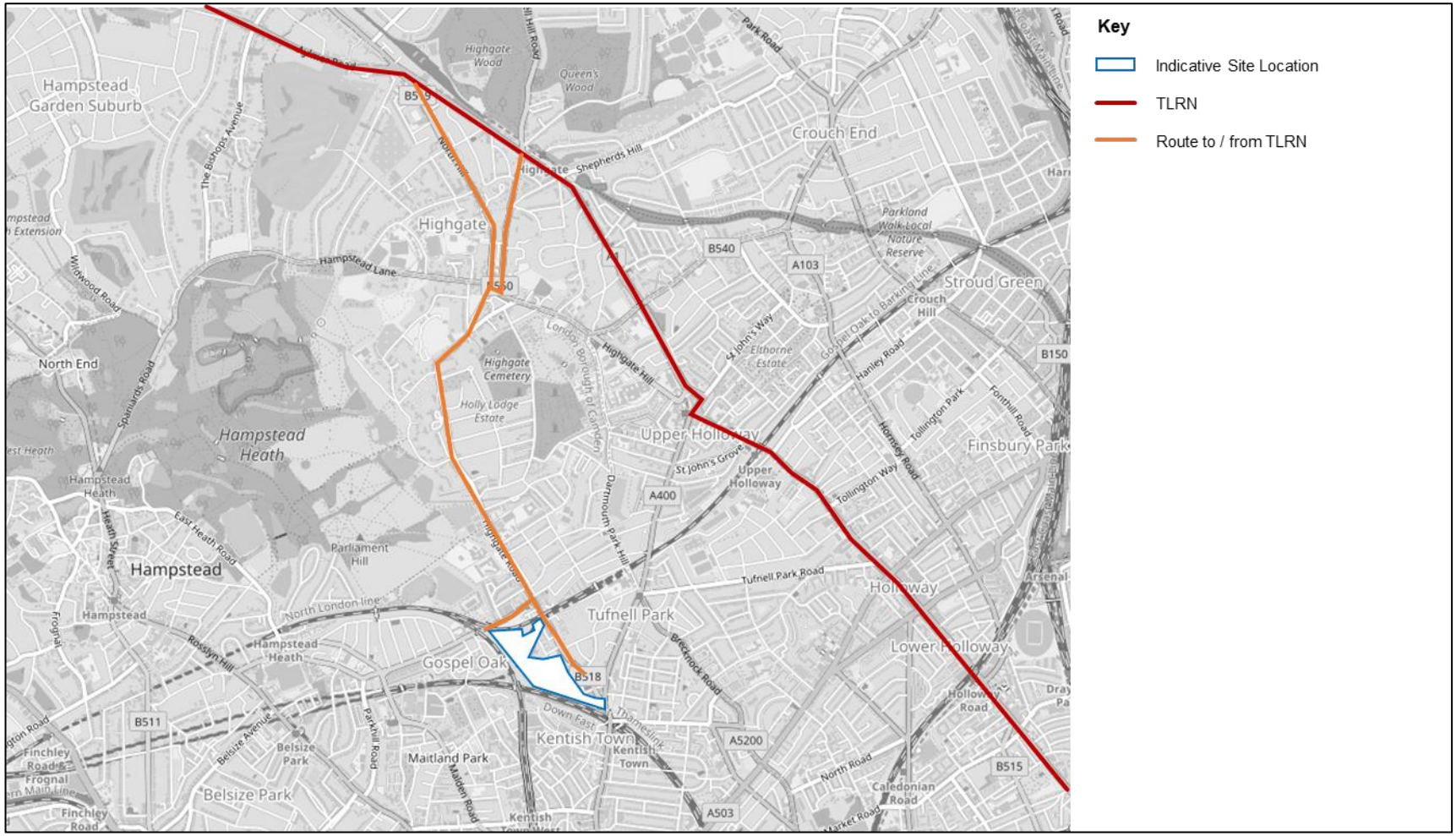
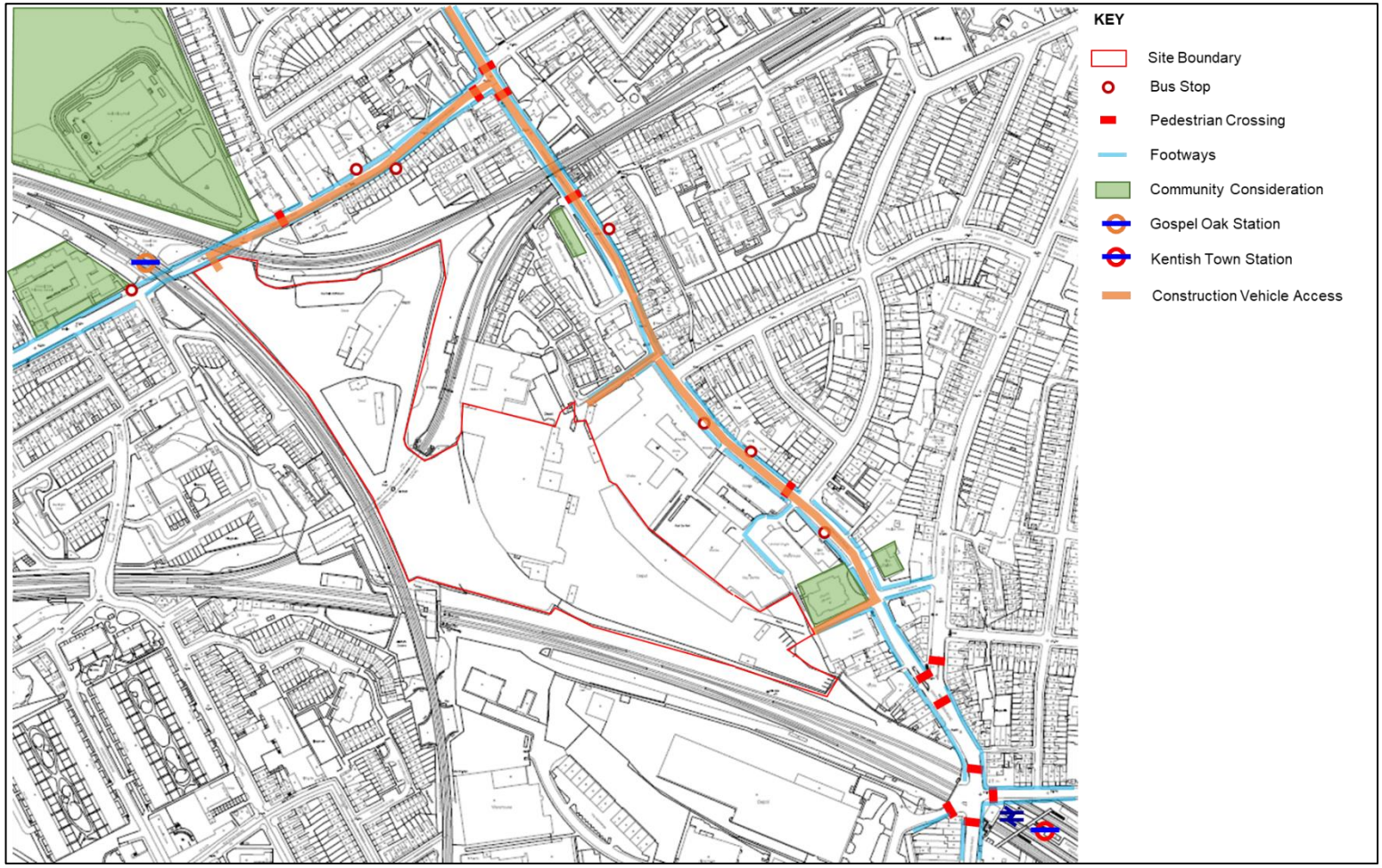


Figure 4.2 - Anticipated Localised Vehicular Routes



5.0 Strategies to Reduce Impact

5.1 Mitigation Measures

5.1.1 This section of the report provides a suite of measures (committed, proposed and considered) which could be implemented by the contractor to achieve the objectives of the CLP and mitigate challenges outlined in Section 2. **Table 5.1** presents the committed, proposed and considered measures.

Table 5.1 – Mitigation Measures

Planned Measures	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and programmes	✔		
Adherence to designated routes	✔		
Delivery Schedule		✔	
Re-timing for out of peak deliveries		✔	
Re-timing for out of hours deliveries			✔
Use of logistics and consolidation centres			✔
FORS accredited suppliers / contractors	✔		
On site logistics manager	✔		
Material Procurement Measures			
Re-use material on site		✔	
Smart procurement		✔	
Encouraging Sustainable Freight			
Freight by river			✔
Freight by rail			✔
Other Measures			
Implement a staff travel plan		✔	
Dust Control	✔		
Noise Control	✔		
Site Security	✔		
Site Enclosure	✔		

5.2 Measures to influence construction vehicles and deliveries

Health and Safety

5.2.1 It is suggested that the appointed Contractor will be a member of the Considerate Constructors Scheme (CSS) which plays a valuable role in improving health and safety standards and working practices across the construction industry.

5.2.2 A qualified site Logistics Manager will be appointed to manage vehicle movements in and out of the site and record any operational incidents.

Adherence to Designated Routes

5.2.3 All construction related traffic and deliveries will be carefully managed to ensure that journeys to and from the site adhere to agreed routes along the TLRN and local roads, which can be found previously in this report. These routes have been produced to minimise the impact of the works on the surrounding highway network and local communities.

5.2.4 Copies of the route plan will be given to all suppliers and sub-contractors to ensure drivers are aware of the designated route. This will be supplemented by on-site briefings which will further enhance this understanding.

Delivery Scheduling

5.2.5 It is anticipated that a delivery "log in" system will be implemented whereby suppliers and contractors book a time slot for arrival, delivery time period and departure. If the time slot is missed, the supplier will not attempt delivery but reschedule the time slot. All deliveries will be managed and supervised by a qualified Logistics Manager and Traffic Marshall.

Retiming for outside peak deliveries

5.2.6 The operational efficiency and capacity of the site will be significantly increased if deliveries are co-ordinated to occur outside of the morning and afternoon peak periods. Therefore, where possible delivery vehicles will be retimed outside of the peak hours to prevent large vehicles from accessing the site during these periods. This will also minimise the impact of the site on the local highway network and surrounding communities at critical times.

Retiming for out of hours deliveries

5.2.7 The developer will seek planning permission for out of hour's deliveries and commit to deliveries in these times where possible.

Use of holding and vehicle call off areas

5.2.8 The site has sufficient area to accommodate all vehicles required as part of the construction period. Therefore, it is not envisaged that an off-site holding area will be required throughout the construction process.

Consolidation centres

5.2.9 The use of a construction consolidation centre will be considered. Wincanton Greenford Consolidation Centre is the closest to the site, located approximately 22.0km north.

Fleet Operator Recognition Scheme (FORS)

5.2.10 FORS is a voluntary, national fleet accreditation scheme designed to help improve fleet operator performance in key areas such as fuel efficiency, vehicle emissions, safety and compliance. Only FORS accredited contractors and suppliers are suggested to be employed throughout the construction phase.

On-site logistics manager

5.2.11 The contractor will designate a member of on-site staff to assist with the management of traffic, pedestrians and cyclists when construction vehicles arriving and departing the site to ensure safety.

5.3 Measures to encourage sustainable freight

5.3.1 There are no opportunities in the vicinity of the site to transport freight by water or by rail.

5.4 Material Procurement Measures

Re-use of material on site

5.4.1 The re-use of materials on site will be implemented at all available opportunities to minimise the number of deliveries required at the site. The recycling of materials will also reduce the environmental impact of the site.

Smart procurement

5.4.2 All measures will be undertaken during the procurement stage to ensure that the impact of the works is minimised. Contractors will be partially selected upon their use of local staff who can travel to the site via public transport, walking or cycling. Suppliers within the local supply chain will also be used wherever possible to minimise the distance travelled by vehicles delivering materials to the site.

5.5 Waste Management, Recycling and Disposal

5.5.1 Waste will be generated at all stages of construction works. All waste will be managed and monitored in accordance with an appropriate site waste management plan.

5.5.2 It is anticipated that the following measures will be used to manage the quantum of waste generated and increase the level of material recycled:

- Material ticketing system;
- Waste reduction commitments;
- A waste champion to monitor and manage waste generation on site;
- Subcontractors will be required to document actions which have been taken relating to waste from the site;
- Use of a waste disposal business that diverts a large percentage of the waste they receive away from landfill.
- Energy usage on site will be recorded and monitored;
- The contractor will prepare a report which assesses and monitor the likely quantum of waste generated; and
- Development of a Site Waste Management Plan.

5.6 Minimising Waste

5.6.1 All reasonable measures will be employed to reduce waste produced by construction operations, following are the main controls:

- Packaging take back schemes will be used with major material suppliers (cladding, steel etc.);
- Good material storage facilities will be provided away from plant and vehicle movements;
- Off cuts will be stored to be considered for reuse before being placed in skips;
- Detailed designs will consider the use of standard sizes of materials wherever practicable; and
- Water will be recycled and allowed to evaporate as far as possible.

5.6.2 The project is currently subject to final design and specification so not all detailed waste types are known at this stage; however, the following is expected:

- Packaging (metal, cardboard, paper, timber and plastic);
- Empty CoSHH material containers (detail to be confirmed following final design);
- Timber;
- Concrete wash water;
- Plasterboard;

- Material off cuts (metal, insulation, concrete, brick); and
- Office waste (paper, ink cartridges, food and packaging, metal, glass).

5.6.3 All waste will be stored in appropriate containers (skips, 1100 litres bins or sealed metal containers for special waste) and sited on hard standing away from vehicle movements and drain gullies. Wherever practicable, containers will be provided to segregate the following waste types:

- Mix of dry recyclable waste (paper, cardboard, plastics);
- Glass;
- Metal;
- Timber;
- Plasterboard;
- Concrete wash water;
- Hazardous Waste (containers with hazardous residues, aerosols, ink cartridges); and
- Mixed residual waste (insulation, brick, concrete, containers with non-hazardous residues).

5.7 Nuisance and Mitigation Measures

5.7.1 The following measures will be used to control noise, dust and vibration:

- Prior to starting works, a Section 61 Agreement will be completed and the Local Planning Authority informed as to the type of plant to be used, a programme of the works, provision of manufacturer's literature and calculations of anticipated noise levels;
- Where required, works plant and equipment will comply with the Noise at Work Regulations 1989. Noisy operations will be further reduced by use of sound reducing enclosures;
- Skips and removal vehicles will be covered when leaving site;
- All materials removed from site will be recorded via a ticket system to ensure the disposal is tracked; and
- All vehicle movements to and from the site will be to a pre-approved route to minimise air quality issues and all vehicles will be required to comply with low emissions requirements and will be registered with FORS.

5.8 Other Measures

Implement a Staff Travel Plan

5.8.1 The provision of a staff Travel Plan will be considered, and all construction staff will be given information about how to access the site by sustainable modes of travel.

Staff Car and Cycle Parking

5.8.2 The site is easily accessible by sustainable modes of transport. The Contractor, where feasible, will seek to recruit construction workers from the local area. This will help maximise the potential for construction workers to travel sustainably to and from the site. As such it is likely that the construction workforce will reside in the Greater London area and therefore, in most instances, the majority of construction staff will have the opportunity to arrive at the site via sustainable modes.

5.8.3 Where travel by public or active modes of transport are not possible, all staff parking will be accommodated within the curtilage of the site. The size of the site is sufficient to accommodate enough the anticipated levels of staff car parking. Temporary cycle parking stands will be provided within the site. The number of car and cycle parking spaces will be determined once the contractor has been appointed.

Community Engagement

5.8.4 A dedicated point of contact will be responsible for communication with statutory authorities including LBC, the Councils appointed Construction Logistics Co-ordinator, TfL's non-statutory authorities and local interest groups. This role will be designated once the contractor has been appointed.

5.8.5 The primary stakeholders which could be affected by the construction of the proposed development include:

- Local residents, businesses and community facilities (including places of worship and schools);
- LBC;
- Other statutory authorities;
- Building control;
- Environmental health; and
- Utilities providers.

5.8.6 The main contractor will seek to actively engage with all relevant stakeholders prior to and throughout the construction programme. It is anticipated that the contractor will issue advisory notes and leaflets to local households, businesses and community facilities to keep them informed of upcoming and ongoing works and invite residents to an open forum to discuss any queries they may have.

5.8.7 All queries and complaints received will be directed to the main contractor as the dedicated point of contact. Local stakeholders will be provided with the contact details and site office location of the main contractor. A register of all complaints will be maintained. The contractor will commit to signing up to CCS throughout the construction programme.

5.8.8 The main contractor will provide a regular site induction course, which will ensure all site personnel are aware of requirements regarding health, safety and pollution and minimising the effect of the works on all adjoining owners and residents.

Vehicle Wheel Wash

5.8.9 It is anticipated that vehicle wheel wash facilities will be provided on-site, as it is the responsibility of the contractor to ensure that mud/detritus originating from the site is not deposited on the public highway. Mist-spray facilities will also be provided as required to minimise the impact of dust from construction vehicles. Alongside this, all vehicular loads will be covered when entering/egressing the school site, to reduce the risk of dust/debris on the local roads.

Compliant Safe Urban Driving Course

5.8.10 All drivers of delivery vehicles who will be required to access the site will undertake a compliant Safe Urban Driving course to ensure the safety of vulnerable road users such as cyclists, pedestrians and motorcyclists. The training fully aligned to meet the requirements of FORs and CLOCs standards. A full on-site induction will also be provided for all drivers prior to making any deliveries.

Footway Management and Hoarding Arrangements

5.8.11 Each phase of the works will be secured with plywood hoarding, approximately 2.4m in height, around the boundaries of the project facing the public. Perspex viewing panels will be incorporated to allow the public to view site progress. Hoarding will also be designed to prevent collapse in adverse weather.

5.8.12 Hoarding will be adequately lit in order to maintain suitable movement for pedestrians and discourage antisocial behaviour / petty crime, whilst minimising obstruction to visibility splays. The width of footways along all roads be maintained.

5.8.13 All hoardings will be inspected regularly and maintained throughout the construction programme. All repairs and graffiti will be dealt with immediately.

6.0 Construction Vehicle Trip Generation

6.1 Introduction

6.1.1 This section of the report sets out the anticipated level of construction vehicle activity and the type of vehicles which will be utilised.

6.1.2 The level of construction vehicles anticipated during the construction programme has been developed by STACE. The programme and the number of vehicles by phase will be refined prior to construction commencing.

6.2 Construction Staff and Labour

6.2.1 The number of staff will be decided by the Main Contractor once appointed and will be dependent on the size of the phase. The number of staff travelling to and from the site is expected to be less than the final level generated by the completed development, which has been assessed as part of the TA.

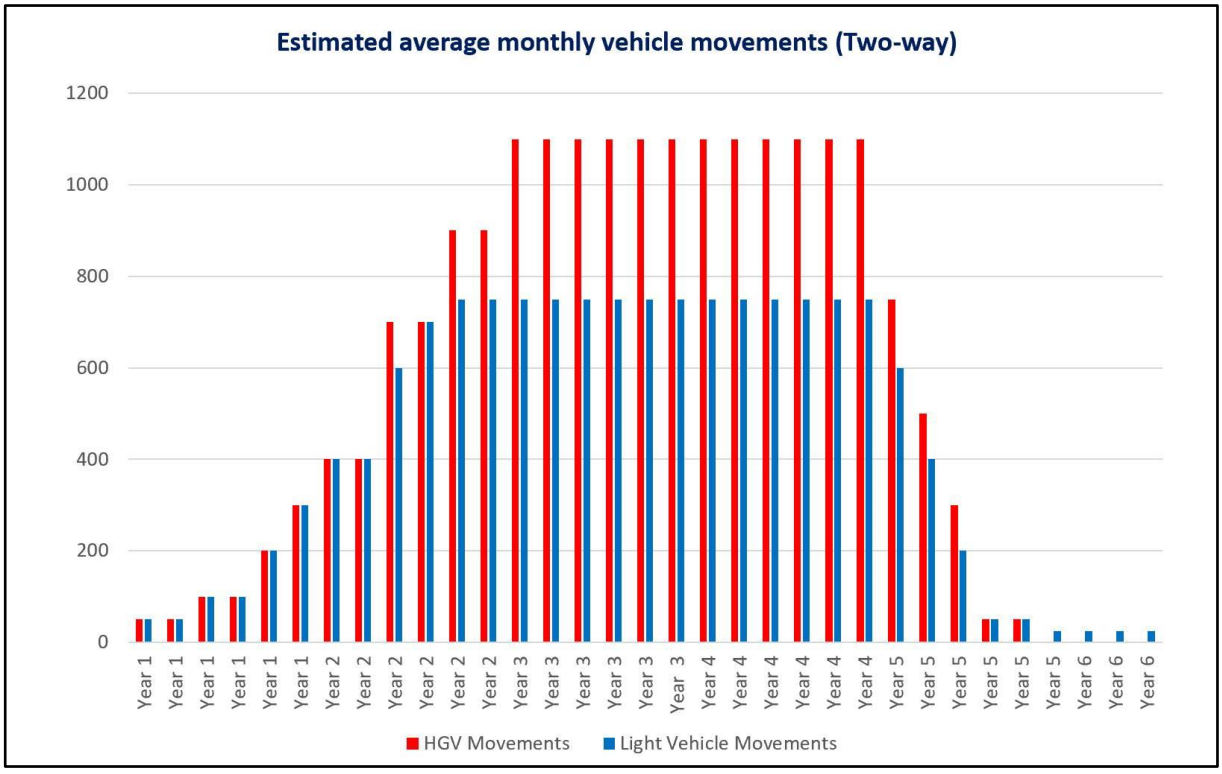
6.3 Construction Vehicle Schedule

6.3.1 The number of vehicles accessing the site (two-way trips) has been estimated according to each of the defined stages of the programme. The estimates of the construction material quantities, together with the outline construction programme have been used by STACE to estimate the peak vehicle movements over the demolition and construction period. Construction knowledge and historic data have been applied to the anticipated programme and construction methodology to develop the estimates below. The estimated peak number of vehicles per month (two way) during the main peak period construction period is summarised in **Figure 6.1**.

6.3.2 During the peak months, there will be approximately 1,500 construction HGV vehicles accessing the site per month and approximately 750 LGV vehicles per month. On this basis, the average number of vehicles in a peak month is approximately 65 to 75 HGV (two way) vehicles per day and approximately 30 LGV (two way) vehicles based on a 5.5 day working week.

6.3.3 Abnormal load vehicles will be transported to site at the hours agreed with the local Traffic Police Department. These will normally be transported in the early hours of the morning to avoid traffic delays and disruption. The final vehicle movements will be dependent upon the final development layout phasing and the final construction programme which has yet to be confirmed, but these figures are considered representative of a reasonable worst-case scenario.

Table 6.1 - Typical Large Construction Requirements



7.0 Implementing, monitoring and updating

7.1 Logistics Manager

7.1.1 The contractor will appoint a member of staff to be responsible for the day-to-day origination and monitoring of construction logistics for the site, likely this will only require a part time commitment. The responsibilities of the Logistics Manager role will include the implementation and management of the CLP for the lifetime of the construction project.

7.1.2 As well as the planning and coordinating of the day-to-day site deliveries, on-site arrangements to accommodate delivery vehicles and the arrangements for the special deliveries, the Logistics Manager will include the implementation and management of the CLP for the lifetime of the construction project.

7.1.3 The Logistics Manager will also be responsible for liaison with local residents, businesses and groups and will be required to collect the following information throughout the construction process:

- **Number of vehicle movements to site**
  - Total
  - Vehicle size, type and age
  - Time spent on site
  - Deliver/ collection accuracy compared to schedule
- **Breaches and complaints**
  - Vehicle routing
  - Unacceptable queuing and parking
  - Adherence to safety and environmental standards and programmes
  - LEZ compliance
- **Safety**
  - Logistics related incidents
  - Record of associated fatalities and series injuries
  - Ways that staff are travelling to site
  - Vehicles and operators not meeting safety requirements
  - Description of the contractor's handbook
  - Description of driver's handbook

7.1.4 The collected data will be utilised to inform the ongoing implementation of this CLP and minimise the impact of the associated construction works on the local highway network and neighbouring communities.

7.1.5 No construction related equipment, structures or activities on or over the public highway which would require authorisation is required, however, temporary parking suspensions will be agreed with the Council.

7.2 Compliance

7.2.1 This plan will be updated in accordance with any conditions of the planning consent which must be adhered to. This will subsequently determine the level of reporting and monitoring required to ensure the site is complaint with all local authority and TfL requirements. Contracts with suppliers and sub-contractors will be managed to ensure that all third parties associated with the works adhere to all standards set out.

7.2.2 A programme of monitoring and review will be implemented to generate information by which the success of this CLP can be evaluated. Monitoring and review of construction activity to the site will be the responsibility of the contractor, who will monitor and report performance.

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