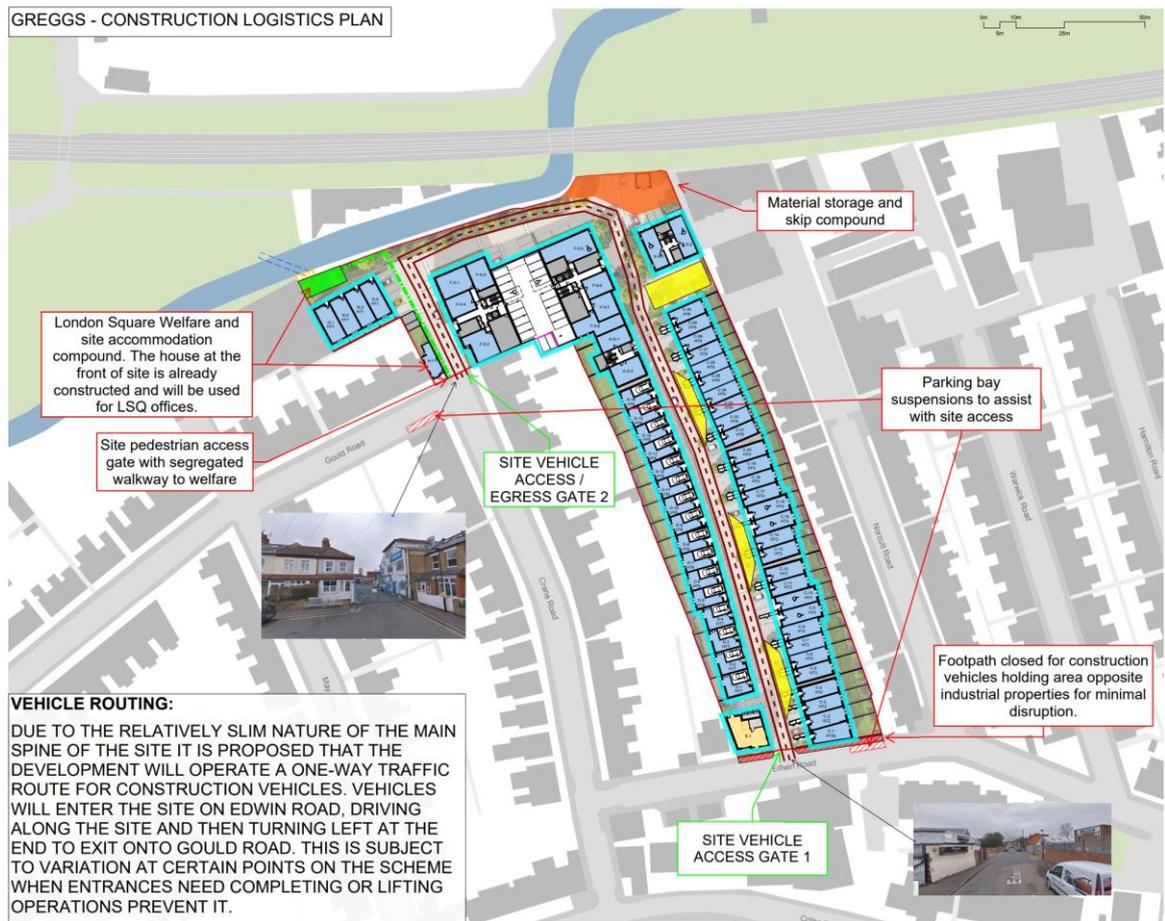


Figure 3-3: Site Routing Plan



- 3.1.8 Qualified traffic marshals will be present at all times at each of the site accesses and will ensure the deliveries are unloaded safely and vehicles exit the site in a safe manner to ensure Gould Road is not blocked in any way.
- 3.1.9 The marshals and the drivers will be expected to know and understand the relevant safety procedures and correct signalling systems. Traffic and pedestrians will be given priority with management at all times using 'stop-works' paddles.
- 3.1.10 Vehicles will enter and exit the site in a forward position where possible, minimising the need for reversing. The access gate will be closed at all times other than for deliveries.
- 3.1.11 All delivery drivers will be required to wear full PPE when on-site and will be provided with a summary of site rules when they sign in.
- 3.1.12 Swept path analysis has been undertaken to ensure construction vehicles can safely access and egress the site. The drawings are included in **APPENDIX C**.



3.2 SCREENING AND HOARDING

- 3.2.1 Where necessary to ensure safety, individual locations within the site where hazardous activities are being carried out will be secured with the installation of herras fence panels or similar. The site perimeter will be delineated and will be provided with warning signs to inform of the dangers of construction sites and advise against unauthorised access.
- 3.2.2 Site hoarding will be located at the main unsecured areas of the site boundary, mainly at the entrances. Existing boundary treatments will be maintained in all other areas.



4 CONSTRUCTION PROGRAMME AND METHODOLOGY

4.1 PROGRAMME

4.1.1 Construction is expected to last for approximately 122 weeks (28 months).

- ⦿ **Enabling, demolition and foundation work (pre-superstructure)** – The period to carry out these works (subject to the discharge of pre-commencement planning conditions) is 61 weeks (14 months).
- ⦿ **Super-structure** – The period to carry out the super-structure works will be a period of 53 weeks (12 months).
- ⦿ **External works** – The period to carry out external works, including cladding, fit-out, testing and commissioning, is 91 weeks (21 months).

4.1.2 Once planning has been granted and the pre-commencement planning conditions have been discharged, the development works would commence on-site.

4.1.3 For the purpose of the indicative construction programme, the works are assumed to commence in January 2024 and be completed around May 2026. **Table 4-1** and **Figure 4-1** outline the main activities to be undertaken and the approximate duration of the works. Some activities will occur concurrently.

Table 4-1: Indicative Sequence of Works and Estimated Duration

ACTIVITY	PROGRAMME	
	START DATE	END DATE
Site setup and demolition	January 2024	August 2024
Sub-structure	July 2024	March 2025
Super-structure	August 2024	August 2025
Cladding	August 2024	October 2025
Fit-out, testing and commissioning	October 2024	May 2026



Figure 4-1: Construction Programme

Activity	2024											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Site Setup and Demolition												
Sub-Structure												
Super-Structure												
Cladding												
Fit-Out, Testing and Commissioning												
Activity	2025											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Site Setup and Demolition												
Sub-Structure												
Super-Structure												
Cladding												
Fit-Out, Testing and Commissioning												
Activity	2026											
	Jan	Feb	Mar	Apr	May							
Site Setup and Demolition												
Sub-Structure												
Super-Structure												
Cladding												
Fit-Out, Testing and Commissioning												

4.2 CONSTRUCTION METHODOLOGY

- 4.2.1 Prior to the commencement of any site works, all occupiers surrounding the site will be notified in writing of the nature and duration of works to be undertaken. The name and contact details of the person responsible for the site works will be included in the introductory letter, and this will be used for all enquiries and complaints about the entire duration of the works updates of work will be provided regularly, and any complaints will be properly addressed as quickly as possible as part of the Contractor's commitment to the Considerate Contractors Scheme.
- 4.2.2 The safety of the public and protection of pedestrians will be ensured at all times by having the construction area, materials storage areas and waste storage areas either hoarded or fenced with lockable access. Relevant signage will be erected to ensure adequate warning/information regarding the health and safety of the public.

SITE SETUP AND DEMOLITION

- 4.2.3 The enabling works will comprise:
- ⦿ Establishment of secure site hoarding and access/egress gates.
 - ⦿ Establishment of temporary site offices and welfare facilities.
 - ⦿ Disconnection/diversion of services.
- 4.2.4 The demolition works will comprise:
- ⦿ Asbestos removal.
 - ⦿ Demolition of the south of the site.
 - ⦿ Breaking up hardstanding and reducing level dig.
 - ⦿ Excavate and backfill below-ground tanks.
 - ⦿ Ground remediation Block A.
 - ⦿ Diverting existing sewers.
 - ⦿ Demolition of the north of the site.
 - ⦿ Removing ground floor slabs and reduce level dig.



4.2.5 The early construction of the final roads will allow for surfaced haul roads to facilitate the construction of the development and will comprise of:

- ⦿ Construction of the road between houses to the base course, including services, ducts and drainage.
- ⦿ Construction of the road north of the site to the base course, including services, ducts and drainage.

SUB-STRUCTURE

4.2.6 The foundation construction methodology is still to be confirmed but is anticipated to be either mass concrete strip foundations for the terraced housing or shallow reinforced pad foundations for the apartment blocks.

4.2.7 Under-slab drainage and service ducts will then be installed prior to the construction of the ground floor slab. It is intended to form the ground floor slab in precast block and beam on the ground bearing foundations to provide for the remainder of the structural frame.

4.2.8 The foundation sequence shall reflect an entry and exit strategy for ease of access and egress. The foundations shall commence at the southern side of the site and be complete on the northern side of the site.

SUPER-STRUCTURE

4.2.9 The frames construction methodology is still to be confirmed but is anticipated to be brick & block with timber upper floors and roofs for the terraced houses.

4.2.10 The frame construction of the apartment blocks will comprise an RC precast slab solution up to 4 storeys, excluding the uppermost floor. The pitched roofs lend themselves to lightweight prefabricated steel trusses supported by steel posts to frame out the upper floor.

4.2.11 The requirement for any concrete slab or steel placement will be assisted by a Manitou 360 Telehandler or mobile site cranes.

CLADDING

4.2.12 London Square will become the principal Contractor for the development upon commencement of the façade works. The detailing of the envelope, faces and roof is still to be confirmed.

4.2.13 The installation of private oversailing balconies will complete the final stages of the façade works.

FIT-OUT, TESTING AND COMMISSIONING

4.2.14 Following the apartment block becoming watertight, works will commence to the formation of the security and acoustic apartment demise walls, with each new apartment then primarily formed. Fit-out works will also commence on the terrace houses once watertight has been achieved.

4.2.15 External works comprising hard and soft landscaping will be the final activities to commence to each block, completing before the internal fit-out of the block.



5 STRATEGIES TO REDUCE IMPACT

5.1.1 A number of strategies and measures are planned to reduce the impacts of construction and construction traffic on the local area. The planned measures can be categorised as follows:

- ⊙ Committed – Measures that will be implemented as part of the CLP.
- ⊙ Proposed – Measures that are feasible and likely to be implemented. Once a contractor is appointed, these measures will be studied further and confirmed within the Detailed CLP.
- ⊙ Considered – Measures that are unlikely to be implemented or feasible but could be investigated or become relevant in the future.

5.1.2 **Table 5-1** summarises the planned measures for the construction of the Proposed Development, based on the checklist provided in TfL's CLP guidance.

Table 5-1: Construction Planned Measures

PLANNED MEASURES	COMMITTED	PROPOSED	CONSIDERED
MEASURES INFLUENCING CONSTRUCTION VEHICLES AND DELIVERIES			
Safety and environmental standards and programmes	✓		
Adherence to designated routes	✓		
Delivery scheduling	✓		
Re-timing for out-of-peak deliveries		✓	
Re-timing for out-of-hours deliveries			✓
Use of holding areas and vehicle call-off areas			✓
Use of logistics and consolidation centres			✓
MEASURES TO ENCOURAGE SUSTAINABLE FREIGHT			
Freight by water			✓
Freight by rail			✓
MATERIAL PROCUREMENT MEASURES			
Design for Manufacture and Assembly and off-site manufacture			✓
Re-use of material on site	✓		
Smart procurement		✓	
OTHER MEASURES			
Collaboration with other sites in the area			✓
Implement a Staff Travel Plan	✓		



5.2 CLOCS AND FORS

- 5.2.1 The CLOCS (Construction Logistics and Community Safety) standard will be signed up to, which will ensure that the construction contractor (as well suppliers and sub-contractors) follow safe practices in the management of their operations, vehicles, drivers and construction sites.
- 5.2.2 Fleet Operator Recognition Scheme (FORS) accreditation confirms that a fleet operator can demonstrate that appropriate systems and policies exist to ensure drivers are suitably fit, qualified and licenced to operate vehicles that are properly maintained, equipped and insured.
- 5.2.3 All construction vehicle operators will be required to detail how they will adopt the ethos of FORS and CLOCS and register for membership. FORS Silver accreditation will be required for all construction vehicles.

5.3 DELIVERY SCHEDULING

- 5.3.1 A delivery scheduling system is planned to allow for the control and management of the timings of deliveries. Booking availability will be determined by unloading space available as well as activities on-site, so it will be managed carefully to minimise impacts on the local transport network. A comprehensive daily logistics schedule will be maintained, and unauthorised deliveries will be turned away until the approved procedure has been followed.
- 5.3.2 Construction staff on-site will be prepared for the arrival of all vehicles to prevent vehicles from needing to wait on the public highway. Deliveries will be made ‘just in time’ to minimise the amount of space required on-site for construction materials. Hard copies of daily delivery schedules will be displayed at prominent locations, e.g., provided at the gate/offloading points, at hoists and also issued to drivers, forklift drivers and any other materials handling equipment operators, all of whom need to be in constant radio communication with one another. All radio users will be trained on correct radio procedures and protocols.
- 5.3.3 There will be a rota system requiring all deliveries to be pre-booked at least 24 hours in advance to avoid on-site and off-site congestion by spreading the resulting traffic over a longer period. Whenever possible, there will be no major vehicle movement during “rush hours”, defined as 07:30 – 10:00 and 16:30 – 18:30 Monday to Friday.
- 5.3.4 Where possible, vehicles will be fully loaded, thereby minimising the number of vehicle trips made by tipper trucks and concrete mixing trucks.

5.4 INTERACTION WITH THE PUBLIC HIGHWAY

- 5.4.1 Contractors will be required to take all necessary measures to ensure that public roads are kept clear from construction debris. Measures include:
- ⊙ Vehicles carrying loose aggregate and workings to the site will always be sheeted;
 - ⊙ At the point of entry and exit from the site onto the public highway, wheel washing facilities will be provided. No vehicle that is likely to deposit mud or other material on the road surface will be permitted onto the public highway. Wheel cleaning facilities will be regularly monitored and maintained to ensure they remain fit for purpose; and
 - ⊙ On and off-site routes will be inspected daily, with road sweepers employed as necessary.



5.4.2 The need for lorries to reverse onto public highways will not normally be allowed, but if it is required, this will be carried out under the strict control of a traffic marshal.

5.5 PROTECTION MEASURES FOR PEDESTRIANS AND CYCLISTS

5.5.1 The site access and egress will be manned by a banksman who will ensure that vehicles entering and exiting the site consider pedestrians and cyclists using the public highway.

5.6 ABNORMAL LOADS

5.6.1 Any abnormal loads will be planned in advance and agreed upon with the Highway Authority.

5.7 CONSTRUCTION PERSONNEL

5.7.1 No construction staff car parking will be provided on-site, and no construction workers are expected to travel by car. A Construction Staff Travel Plan will be prepared by the Contractor to encourage the use of sustainable modes considering the good level of public transport accessibility. Pedestrian access to the site will be provided from a turnstile/gate on Gould Road. Staff cycle parking facilities will be provided.

5.8 RE-USE OF MATERIALS ON-SITE

5.8.1 To minimise the demand for primary aggregates, it is intended to recycle suitable demolition material for use on-site in the redevelopment works wherever possible. For example, the inert materials from the demolition works will be crushed on site and re-used in the permanent works to form hard surfaces for haul roads or fill material.

5.9 VEHICLE ROUTING

5.9.1 No construction vehicles will be allowed to travel off the identified inbound and outbound routes, and no waiting will be permitted on the access or egress routes. It is recognised that neighbours and residents along the routes are often best placed to advise if drivers are not complying with these requirements.

5.9.2 Residents will be able to contact the Site Manager to report any non-compliance. For a first offence, suppliers will be reminded of the site access route requirements. For a second offence, suppliers will have a 5% proportion of their load fee withheld. For a third offence, suppliers will be replaced.

5.10 LORRY HOLDING

5.10.1 A thorough review of opportunities to implement a lorry holding has demonstrated that there may be an opportunity to incorporate a holding area on Edwin Road with the use of parking bay suspensions.

5.11 COORDINATION WITH OTHER CONSTRUCTION SITES

5.11.1 Investigation of the opportunity to collaborate with other construction sites in the area will be undertaken.

5.12 SUSTAINABILITY

5.12.1 Off-site manufacture and re-use of material will be investigated and proposed if practical. Smart procurement will be maximised where practical.



5.13 RAIL AND WATER FREIGHT

- 5.13.1 The use of water and rail modes to transport freight is unlikely to be practical due to the lack of local facilities and relatively low amount of waste materials to be removed, and the need for supplies to arrive 'just in time.'



6 ESTIMATED VEHICLE MOVEMENTS

6.1 CONSTRUCTION TRAFFIC MOVEMENTS

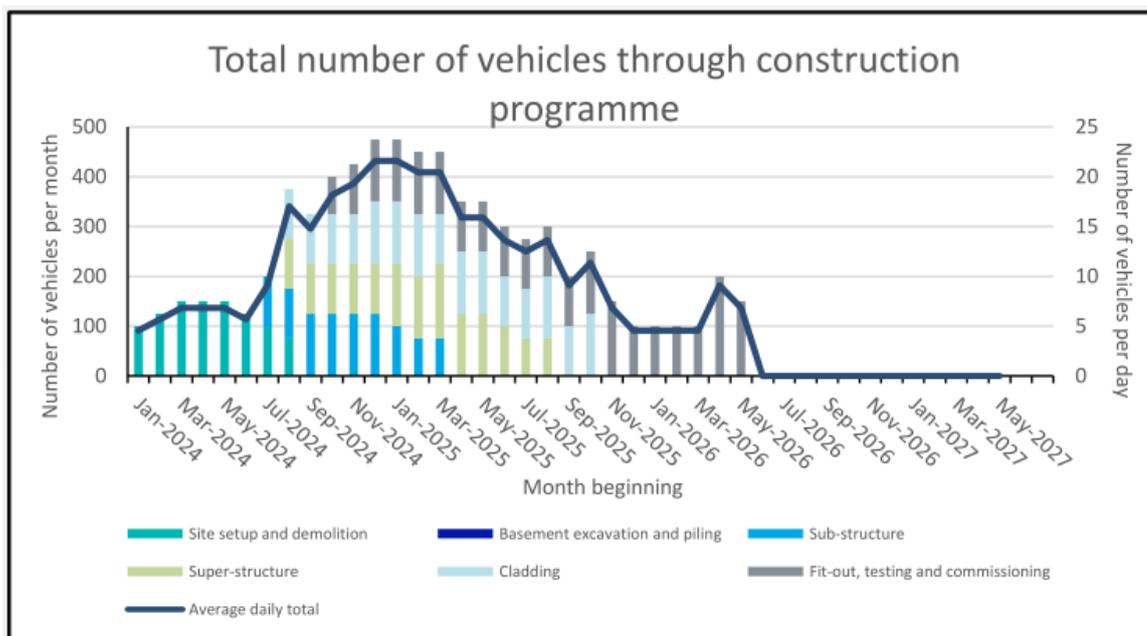
6.1.1 The number of vehicles accessing the site summarised in **Table 6-1** has been estimated based on our previous experience, proposed programme and construction methodology.

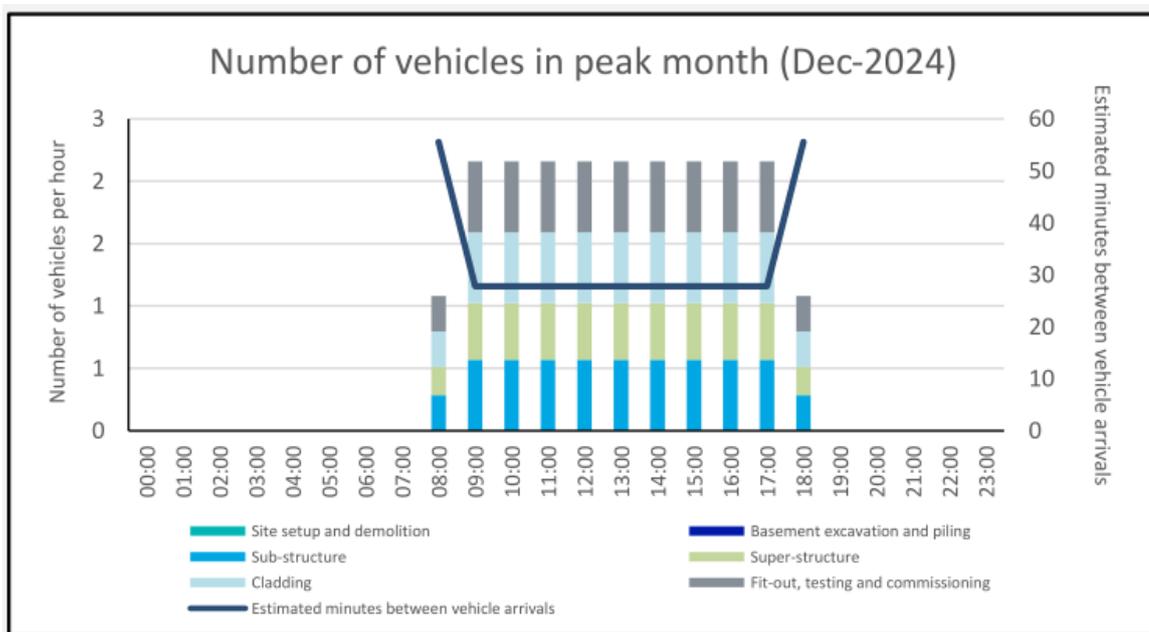
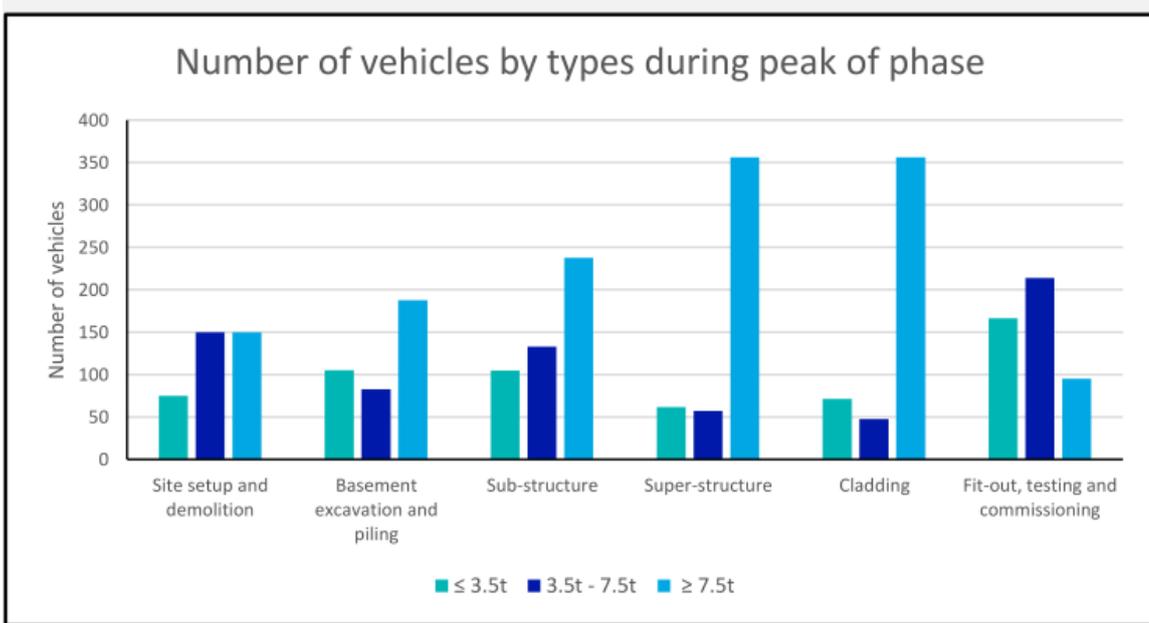
Table 6-1: Estimated Construction Vehicles

Construction phase	Period of stage	No. of trips (monthly)	Peak no. of trips (daily)
Site setup and demolition	Q1 2024 – Q3 2024	150	7
Sub-structure	Q3 2024 – Q1 2025	125	6
Super-structure	Q3 2024 – Q3 2025	150	7
Cladding	Q3 2024 – Q4 2025	125	6
Fit-out, testing and commissioning	Q4 2024 – Q2 2026	200	9

6.1.2 **Figure 6-1** illustrates the peak hourly volumes of construction vehicles anticipated during construction based on estimations of construction material volumes and the programme within **Table 4-1**.

Figure 6-1: TfL CLP Tool Graphs





6.1.3 Around seven construction vehicle arrivals and seven construction vehicle departures are expected on a typical day. The peak demands can be accommodated on the transport network with minimal impact.



7 IMPLEMENTATION, MONITORING AND UPDATING

7.1 IMPLEMENTING

- 7.1.1 The Contract Manager shall be responsible for implementing the delivery schedules and ensuring all deliveries are fully in compliance with the detailed procedures above.
- 7.1.2 The Contract Manager shall appoint qualified Traffic Marshals who will be responsible for all deliveries – from booking them in to marshalling them to the offloading bay and record keeping. The traffic marshals will undertake specific training, including operating the temporary traffic signals if required to minimise disruption to through traffic.
- 7.1.3 Procedures will be implemented to ensure effective liaison with the neighbouring properties, adjacent residents and local community through:
- ⊙ Any circulated newsletters will be displayed outside the site entrance, along with letter drops to nearby residents when construction activities are likely to affect the local residents
 - ⊙ Information boards mounted at the site entrance will provide details of the following information:
 - Developer/Contractor details;
 - Local Authority details;
 - Nature and duration of the project;
 - Principal milestones of the project;
 - Site operating times; and
 - Site management names and contact details.
- 7.1.4 This will also enable the local community to raise any concerns about construction activity and traffic. If a concern or complaint is received, the matter will immediately be referred to the site manager, who will record the matter and raise it to the management team, who will investigate. The site management team will record the date, time and reason for the complaint and what action has been taken to investigate and respond to the complaint.

7.2 MONITORING

- 7.2.1 Data sharing remains a key principle for the success and continuous improvement of construction. A list of items will be agreed upon, and specific data will be disseminated. This will include:
- ⊙ Compliance
 - CLOCS compliance – suppliers to provide pre-qualification evidence
 - FORS compliance – suppliers to provide pre-qualification evidence
 - Routing compliance – to be monitored through resident feedback



- No staff car parking
- ⊙ Data from the delivery scheduling system and the recorded log of vehicle movements to the site, including:
 - Vehicle type and size
 - Duration on site
- ⊙ Safety issues, including any injuries or near, misses recorded, in the site logbook
- ⊙ Breaches and complaints
 - No construction vehicles will be allowed to travel off the identified inbound and outbound routes, and no waiting will be permitted on the access or egress routes. We recognise that the neighbours and residents along the routes are often best placed to advise if drivers are not complying with these requirements. Residents will be able to contact the Site Manager to report any non-compliance. For a first offence, suppliers will be reminded of the site access route requirements. For a second offence, suppliers will have a 5% proportion of their load fee withheld. For a third offence, suppliers will be replaced.
- ⊙ Staff Travel Plan

7.2.2 The traffic marshal shall keep a record of every delivery, such as:

1. Number of vehicle movements to site
 - ⊙ Total
 - ⊙ By vehicle type/size/age
 - ⊙ Time spent on site
 - ⊙ Consolidation centre utilisation (if used)
 - ⊙ Delivery/collection accuracy compared to schedule
2. Breaches and complaints
 - ⊙ Vehicle routing
 - ⊙ Timing of delivery
 - ⊙ Unacceptable queuing or parking
 - ⊙ Adherence to safety and environmental standards & programmes
 - ⊙ Low Emissions Zone (LEZ) compliance
3. Safety
 - ⊙ Logistics-related incidents
 - ⊙ Record of associated fatalities and serious injuries
 - ⊙ Ways staff are travelling to the site
 - ⊙ Vehicles and operators not meeting safety requirements



7.3 UPDATING

- 7.3.1 The procedures shall be reviewed through the different phases of the programme. If anything is not working well, or there are improvements that can be made, these shall be documented, agreed with highways (if necessary) and put into action and monitored accordingly.
- 7.3.2 The CLP will be kept on-site and updated by the Principal Contractor in consultation with the Highway Authority.



APPENDIX A

CONTEXT PLANS



Key

Site Boundary

Public Transport

TfL Bus Stops

Amenities

Supermarkets

Place Of Worship

Denhurst Gardens

Rosecroft Gardens

Playing Field

Allotments

Barreby Close

Rowntree Road

Gould Road

Crane Road

Norcutt Road

Warwick Road

Hamilton Road

Talbot Road

Marsh Farm Road

Lion Road

Lansdowne Close

Albert Road

Mereway Road

Andover Road

Gravel Road

May Road

Colne Road

Edwin Road

Lion Avenue

Laurel Avenue

Edwin Road

GEMS Twickenham Primary Academy

A305

A305

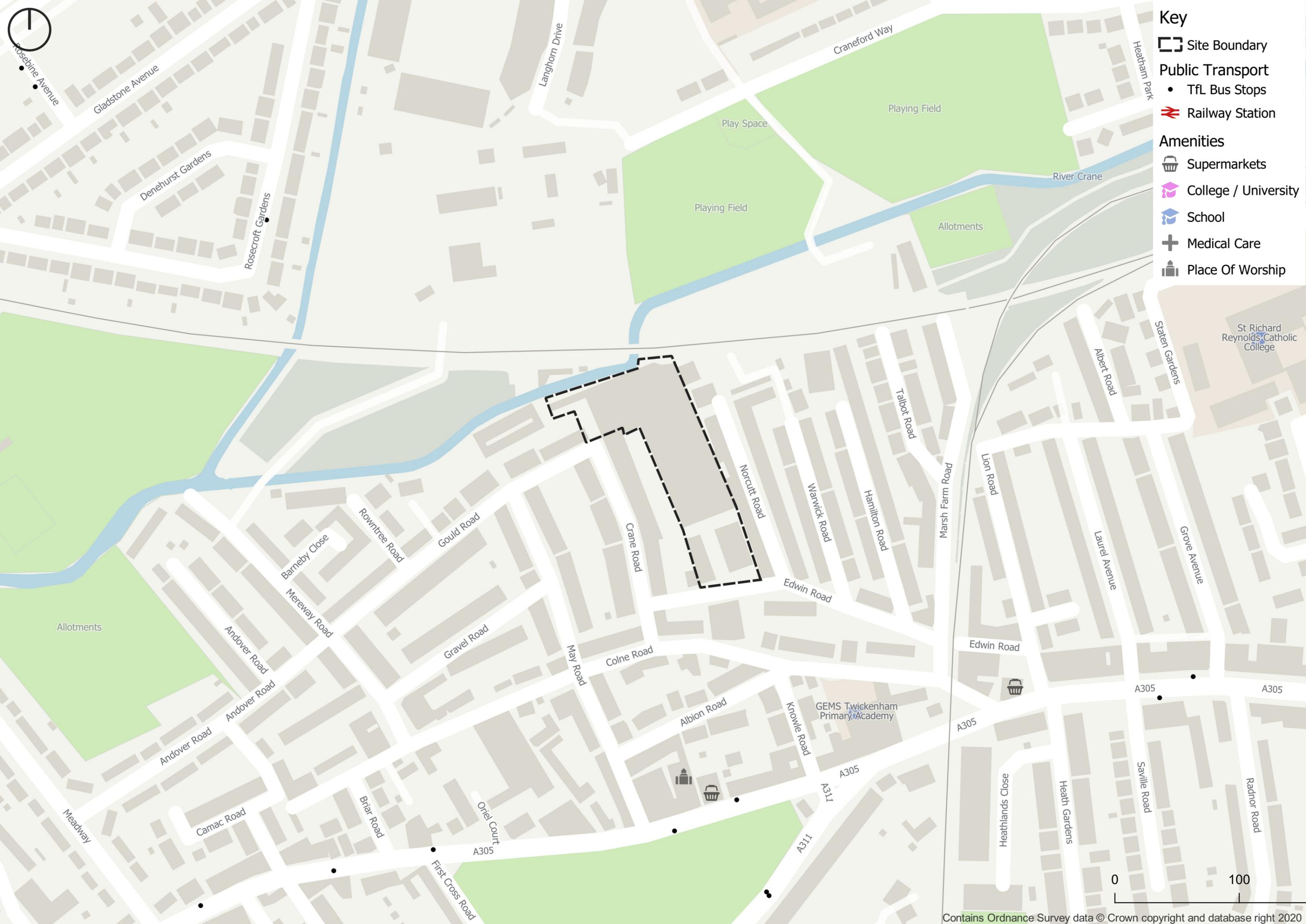
Heath Gardens

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Key

-  Site Boundary
- Public Transport**
 -  TfL Bus Stops
 -  Railway Station
- Amenities**
 -  Supermarkets
 -  College / University
 -  School
 -  Medical Care
 -  Place Of Worship

