www.yeseng.co.uk

Construction Logistics Plan

Lockcorp House, Norcutt Road, Twickenham, TW2 6SR

Prepared for Leek Real Estate (No 1) Limited

By YES Engineering Group Limited

July 2019

Revision History

Revision Nº	Prepared By	Description	Date

Document Acceptance

Action	Name	Signed	Date
Prepared by	K Backhouse		July 2019
Reviewed by	P Willis		July 2019
Approved by	K Backhouse		July 2019
on behalf of	YES Engineering Group Ltd		

Table of Contents

1 Introduction

YES Engineering Group Ltd was appointed by Leek Real Estate to prepare a Construction Logistics Plan (CLP) in support of a planning application for the redevelopment of the Lockcorp House, Norcutt Road, Twickenham, TW2 6SR ("the Site").

The development proposals are for the replacement of the light industrial building with 241.78m^2 floor space with a residential development of 15 residential units comprising 6 no. one bedroom units, 6 no. two bedroom units and 3 no. three bedroom units.

This CLP has been produced in accordance with the Transport for London (TfL) Construction Logistics Plan Guidance (July 2017) which sets out the requirement for an outline CLP to be produced and submitted in support of the planning application.

The aim of this document is to maximise safety of the workforce and the travelling public during the construction period. Every attempt is also made to ensure that traffic is kept flowing as freely as possible on the public highway in the vicinity of the Site operations.

The London Borough of Richmond upon Thames (LBRT) will be consulted on issues relating to any works affecting the public highway, maintenance and repair, and the avoidance of mud on roads and dust.

1.1 CLP Objectives

The objectives of the CLP are:

- Lower emissions
- Enhance safety - Improved vehicle and road user safety
- Reduce congestion - Reduced trips overall, especially in peak periods

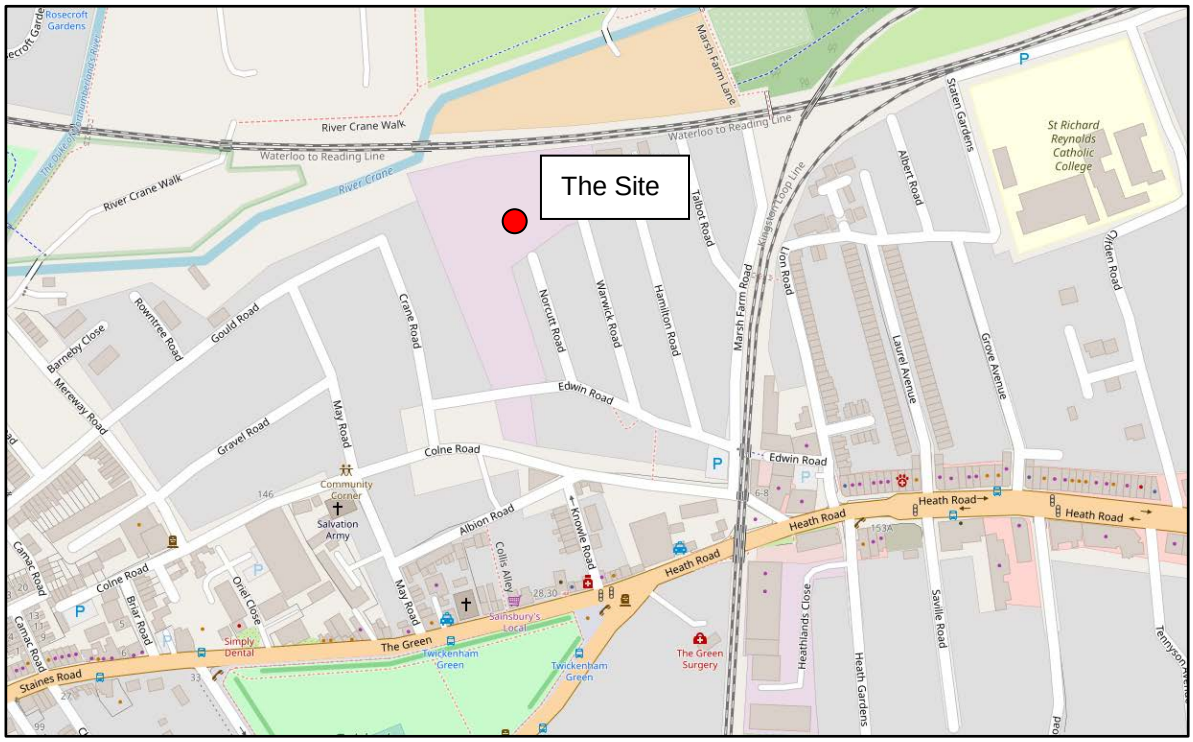
To support these objectives, the CLP aims to:

- Encouraging construction workers to travel to the Site by non-car modes
- Promote smarter operations that reduce the need for construction travel or that reduce or eliminate trips in peak periods
- Encouraging greater use of sustainable freight modes
- Encouraging the use of greener vehicles
- Managing the on-going development and delivery of the CLP with construction contractors
- Communication of Site delivery and servicing facilities to workers and suppliers
- Encouraging the most efficient use of construction freight vehicles

1.2 Site Context

As shown in **Figure 1.1** it can be seen that the Site is located on the northern end of Norcutt Road.

Figure 1.1 – Location Plan



The Site lies within the administrative area of the London Borough of Richmond upon Thames (LBRT) and the Greater London Authority (GLA).

1.3 Development Proposals

The development proposals are for the replacement of the light industrial building with 241.78m^2 floor space with a residential development of 15 residential units. The 15 residential units will be comprising 6 no. one bedroom units, 6 no. two bedroom units and 3 no. three bedroom units.

The proposed ground floor layout is shown on the architects' plans attached at **Appendix A**.

Access

The existing vehicular and pedestrian access will be retained from Norcutt Road as shown in **Appendix A**.

Access to the secure cycle parking located at the rear of the Site on the ground floor level will be via Norcutt Road.

The refuse store is located on the ground floor at the front of the building for the convenience of collection.

The Site is located within a residential development. As such, it benefits from the typical pedestrian facilities such as sufficient wide footways on both sides of the road, dropped kerbs and street lighting at regular intervals. The area is subject to a 30mph speed limit.

Parking

It is proposed that 12 car parking spaces will be provided. It is the intention to provide one Blue Badge space on-site for the development and this will be closest to the main entrance. The parking provision is in line the London Plan parking standards.

In line with the parking standards set out in the London Plan 2016, 20% of all spaces should be provided for electric vehicles with an additional 20% passive provision for electric vehicles in the future. It is therefore proposed 2 of the 12 proposed parking spaces will have electric charging points provided and a further 2 space will have a passive provision.

It is proposed that 28 cycle parking spaces will be provided in the building on the ground floor level and 2 visitor spaces will also be provided.

The proposed cycle parking provisions are in accordance with the new draft London Plan (2018) cycle parking standards in order to encourage sustainable modes of travel, making use of the many local cycle paths.

Servicing

Bin stores and pedestrian entrances are conveniently located for servicing activity shown on the architect's plan (**Appendix A**) and agreed with LBRT. It is proposed that all deliveries and refuse collection for the residential development can take place from the Norcutt Road carriageway within the existing turning head provided adjacent to the site access. The applicant has full and unrestricted rights of access over this adjoining land. **Figure 1.2** demonstrates that a refuse vehicle can enter and exit in a forward gear (as per the existing situation). **Figure 1.2** also shows a large tipper and a 7.5 tonne box van can turn in this area.

A refuse storage area is be located at ground floor level within the building as shown on the architects ground floor plan as contained in **Appendix A**. This refuse storage area will provide a total of 4 no. bins which will offer refuse storage for all required waste streams.

1.4 CLP Structure

The remaining sections of the CLP will be structured as:

Section 2 – sets out the relevant policy and guidance and discusses the local transport networks and existing conditions

Section 3 – sets out the construction programme and methodology

Section 4 – details the proposed vehicle routeing and access

Section 5 – sets out the strategies to reduce impacts

Section 6 – Estimated vehicle movements

Section 7 – Implementing, monitoring and updating

2 Context, Considerations and Challenges

This section describes the local context and issues identified that need to be considered and addressed during construction.

2.1 Policy Context

There are a number of national, regional and local policies that refer to or requirement for a CLP to be produced in support of a planning application. This section outlines the relevant national, regional and local transport policy and guidance relevant to the CLP.

Traffic Management Act (2004)

Part 2 of the Traffic Management Act (2004), highlights the duty of local traffic authorities in managing road networks within their ownership; including the efficient use of the local network as well as their ability to adopt measures when necessary to avoid the occurrence of heavy traffic congestion.

Part 5 of the Traffic Management Act (2004) similarly outlines this responsibility but highlights the extent to which local authorities in Greater London should seek to avoid, eliminate and reduce disruptions which have negative implications on neighbouring authorities. Local authorities within London are encouraged to plan and act on their management duties in the interest of ensuring traffic can move freely and smoothly through their roads, and onwards to the roads of neighbouring traffic authorities without overwhelming the network. This includes the role that Transport for London (TfL) holds in managing the Greater London route network.

National Planning Policy Framework (NPPF) (2019)

The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations.

London Plan (2016)

The London Plan promotes the use of CLPs in order to support its sixth objective to create and sustain a city that is safe to access, with a transport system that actively encourages the efficient use of the road network.

Policies 6.3 and 6.14 within the London Plan (Chapter 6) note the efficiency gains which developers have in submitting CLPs and considering freight when addressing the impact of development on the local transport network. This reference adds that developers should address and clarify construction phasing arrangements when forming a wider submission for their development to ensure that works can be completed without adding strain to the local road network.

Chapter 6 of the London Plan also notes that CLPs should be supported by delivery and servicing plans to ensure that developments align with the main goals and objectives of the London Freight Plan. There is also additional information within TfL's Transport Assessment Best Practice Guidance.

The Mayor's Transport Strategy (2018)

The Mayor's Transport Strategy (2018) promotes the use of CLPs. For all planning applications that meet the criteria for referral to the Mayor, comprehensive transport assessments, travel plans, Delivery and Servicing Plans (DSPs) and CLPs will need to be submitted in accordance with TfL's best practice guidance.

The London Freight Plan

London Freight Plan (2008) The London Freight Plan acknowledges the important role of the movement of goods in supporting future growth of London's economy. The Plan also recognises that such transport can have negative impacts on the local environment. CLPs, along with transport assessments, travel plans and DSPs, are key documents that support the aims of the London Freight Plan. They have all subsequently been incorporated within the Mayor of London's Transport Strategy (2018) and the London Plan (2016).

Transport for London Construction Logistics Plan Guidance (July 2017)

TfL's CLP guidance sets out the content requirement for delivery of high-quality CLPs prior to construction with the aim to minimise the impact of construction logistics on the road network. Well-planned construction logistics will: reduce environmental impacts through lowered emissions; reduce road risk and improve safety for all road users; reduce congestion by reducing the number of vehicle trips; and reduce costs by implementing efficient working practices and reduced deliveries.

Control of Pollution and Noise from Demolition & Construction Sites (May 2008)

This Code of Practice has been prepared to help developers and their contractors ensure that they undertake their works in the most considerate manner, in order to reduce the impact of the work on local communities. The purpose of this Code of Practice is to ensure that disturbances due to noise, vibration, dust and smoke arising from demolition and construction works on all building sites, including the Public Highway, are kept to an acceptable level without the imposition of unnecessary or unduly onerous restrictions on contractors.

London Borough of Richmond upon Thames Local Plan (July 2018)

The Local Plan which was previously known as the Local Development Framework was adopted in July 2018 and replaces the previous policies within the Core Strategy and Development Management Plan. Section 11 covers transport and the relevant policies are below.

Policy LP 44

Sustainable Travel Choices

The Council will work in partnership to promote safe, sustainable and accessible transport solutions, which minimise the impacts of development including in relation to congestion, air pollution and carbon dioxide emissions, and maximise opportunities including for health benefits and providing access to services, facilities and employment. The Council will:

A. Location of development

Encourage high trip generating development to be located in areas with good public transport with sufficient capacity, or which are capable of supporting improvements to provide good public transport accessibility and capacity, taking account of local character and context.

B. Walking and cycling

Ensure that new development is designed to maximise permeability within and to the immediate vicinity of the development site through the provision of safe and convenient walking and cycling routes, and to provide opportunities for walking and cycling, including through the provision of links and enhancements to existing networks.

C. Public transport

Ensure that major new developments maximise opportunities to provide safe and convenient access to public transport services. Proposals will be expected to support improvements to existing services and infrastructure where no capacity currently exists or is planned to be provided.

Protect existing public transport interchange facilities unless suitable alternative facilities can be provided which ensure the maintenance of the existing public transport operations. Applications will need to include details setting out how such re-provision will be secured and provided in a timely manner.

D. The road network

Ensure that new development does not have a severe impact on the operation, safety or accessibility to the local or strategic highway networks. Any impacts on the local or strategic highway networks, arising from the development itself or the cumulative effects of development, including in relation to on-street parking, should be mitigated through the provision of, or contributions towards, necessary and relevant transport improvements.

In assessing planning applications the cumulative impacts of development on the transport network will be taken into account. Planning applications will need to be supported by the provision of a Transport Assessment if it is a major development, and a Transport Statement if it is a minor development.

E. River transport

Encourage the use of the River Thames for passenger and freight transport through the protection of, improvement to, and provision of new relevant infrastructure including wharves, slipways and piers.

F. Safeguarding of routes and facilities

Land required for proposed transport schemes as identified in the London Plan and the Council's Local Implementation Plan for Transport will be protected from developments which would prevent their proper implementation.

Local filling stations and supporting services such as car repair facilities will be protected from redevelopment for alternative uses unless exceptional circumstances can be demonstrated that warrant their loss.

G. Taxis and private hire vehicles

Ensure that taxis and private hire vehicles are adequately catered for in appropriate locations.

Policy LP 45

Parking Standards and Servicing

Parking standards

The Council will require new development to make provision for the accommodation of vehicles in order to provide for the needs of the development while minimising the impact of

car based travel including on the operation of the road network and local environment, and ensuring making the best use of land.

It will achieve this by:

1. Requiring new development to provide for car, cycle, 2 wheel and, where applicable, lorry parking and electric vehicle charging points, in accordance with the standards set out in Appendix 3. Opportunities to minimise car parking through its shared use will be encouraged.

2. Resisting the provision of front garden car parking unless it can be demonstrated that:

a. there would be no material impact on road or pedestrian safety;

b. there would be no harmful impact on the character of the area, including the streetscape or setting of the property, in line with the policies on Local Character and Design; and

c. the existing on-street demand is less than available capacity.

3. Car free housing developments may be appropriate in locations with high public transport accessibility, such as areas with a PTAL of 5 or 6, subject to:

a. the provision of disabled parking;

b. appropriate servicing arrangements; and

c. demonstrating that proper controls can be put in place to ensure that the proposal will not contribute to on-street parking stress in the locality.

All proposals for car free housing will need to be supported by the submission of a Travel Plan.

4. Managing the level of publicly available car parking to support the vitality and viability of town and local centres within the borough whilst limiting its impacts on the road network.

Freight and Servicing

New major development which involves freight movements and has servicing needs will be required to demonstrate through the submission of a Delivery and Servicing Plan and Construction and Logistics Plan that it creates no severe impacts on the efficient and safe operation of the road network and no material harm to the living conditions of nearby residents.

2.2 Site Location and Transport Networks

Site Location

As shown in **Figure 1.1** it can be seen that the Site is located on the northern end of Norcutt Road

Highways, Carriageways and Footways

Norcutt Road is a residential cul-de-sac road and is un-adopted from No. 49 where it becomes a shared surface, which the applicant has full rights over. On the southern part of Norcutt Road there are footways on both sides of the road and a shared surface at the northern end. On-street parking is permitted (permit holders only), and 3 disabled parking bays are present on the eastern side of the road. Beyond No.49 the parking is private allocated to the adjacent properties. There is a 30mph speed limit imposed with the appropriate street lighting.

Edwin Road is residential in nature and joins Norcutt Road at the southern end. Edwin Road forms a priority junction to the east with Lion Road and to west with Crane Road. Waiting

restrictions are present in the form of double yellow lines at junctions and in front of industrial and commercial properties, otherwise on-street parking occurs (permit holders only). East on Edwin Road on-street parking occurs part on and part off the street in accordance with the street signs. Footways are present on both sides of the road and the road is subjected to a 30mph speed limit with appropriate street lighting.

The site is located in a Controlled Parking Zone (CPZ) which operates Monday to Saturday 8:30am to 6:30pm.

The Site is located 800m (a 10-minute walk) from Twickenham Town Centre located east of the Site. Twickenham Town Centre provides access to a wide range of shops including banks, restaurants, takeaways and other facilities suitable for future residents.

2.3 Public Transport

Rail

Twickenham railway station is located approximately 1.3km (a 16-minute walk or a 6-minute cycle) from the Site and provides access to South Western Railway services. Typical mainline services provide up to 16 services per hour to Chiswick, Windsor and Eton Riverside, London Waterloo via Kingston, Wimbledon and Reading.

Strawberry Hill rail station is located approximately 1.3km (a 17-minute walk or a 6-minute cycle) from the Site and provides access to South Western Railway services. Typical mainline services provide up to 4 services per hour to London Waterloo via Kingston and Richmond.

Both stations have cycle stands to facilitate pedestrians who chose to cycle to the stations.

Bus

There are seven bus service available within the maximum accessibility distance of 404m set out in the PTAL methodology. The nearest bus stops are located on the Twickenham Green providing access to bus service nos. 110, 267, 281, 290, 490, H22, and R70. There is also the 681 (school bus) operating in the area.

2.4 Public Transport Accessibility Level (PTAL)

For Sites in London PTALs (Public Transport Accessibility Levels) are the most widely recognised form of measuring accessibility to the public transport network. The assessment combines data regarding the frequency of public transport services and walking distance between the Site and the service to establish a measure of the relative density of the public transport network. PTALs range from 1 to 6 where 6 represents a high level of accessibility and 1 a low level of accessibility. Levels 1 and 6 have been further subdivided into two sub-levels to provide greater clarity.

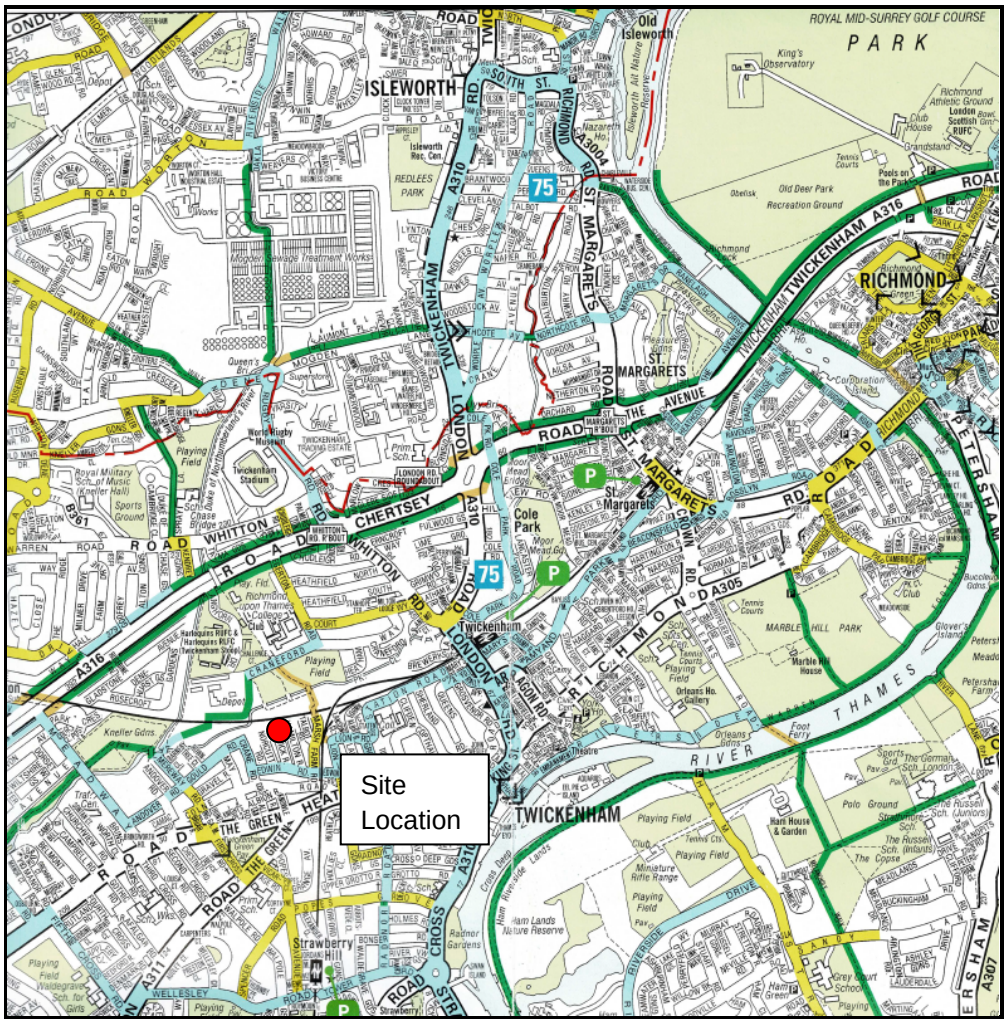
The postcode of the Site (TW2 6SR) was put in TfL's Planning Information Database https://tfl.gov.uk/info-for/urban-planning-and-construction/planning-with-webcat/webcat?intcmp=25932 / in order to establish the PTAL. An accessibility index of 8.97 is calculated giving a corresponding PTAL of 2 representing a low level of public transport accessibility. The summary report obtained from this website is attached at **Appendix B**. This level of accessibility provides the future residents and visitors with a range of public transport alternatives to the private car.

East of the Site at Twickenham Town Centre approximately a 10-minute walk, the PTAL accessibility index increases to 23.54 giving the PTAL band of 5 (high accessibility).

London Cycle Network (LCN)

Figure 2.1 is an extract from TfL Local Cycling Guide 9 which shows the cycling environment surrounding the Site. It can be seen that there are many cycle routes in the immediate vicinity signed for cyclists linking the Site to the surrounding areas. It can also be seen that the railway stations have cycle parking provision.

Figure 2.1 – TfL Local Cycling Guide Network



Note: Yellow routes='Route on quieter roads recommended by cyclists', Brown routes = 'Route adjacent to a busy road usually shared with pedestrians', Blue routes='Route signed for cyclist, may be on busy roads' Green routes='Route signed for cyclists, through a park or bedside canal or river. Usually shared with pedestrians'

2.5 Considerations

Pedestrians

The site is located within an area of mixed-use development. As such it benefits from the typical pedestrian facilities provided such as sufficient footways on both sides of the road, dropped kerbs and street lighting. Due care and attention will be given to the routeing of

construction and delivery vehicles to remove impacts on the pedestrian network and remove any foreseen risks.

Community Liaison Officer

A Community Liaison Officer will be appointed and will have the role of being the point of contact on behalf of the contractor and the developer. It is anticipated that this role will be undertaken by a member of the construction team. The role will encompass liaison with all and any external parties. The Community Liaison Officer will to mitigate and resolve any issues raised by the local community. This approach will ensure there is effective communication and as required, collaboration throughout the construction period.

This CLP has prepared a strategy for preventing potential issues, however any difficulties encountered during construction will be reported/recorded in a full log.

3 Construction Programme and Methodology

As the Contractor for the site is yet to be appointed, details of the construction methodology and programme of works are yet to be determined. The below commentary sets out the information which the contractor, once appointed, will include in the CLP.

3.1 Construction Programme

The contractor will include the details of the construction methodology within the CLP. The construction method statement and updated CLP will include details on the construction programme, setting out programmed start and end dates of all phases of demolition and construction details (as appropriate):

- Site set up and demolition
- Excavation and piling
- Sub and superstructure (as appropriate)
- Finishes/cladding
- Fit out

3.2 Hours of Construction

Working hours will be agreed with LBRT and may be restricted through a planning condition. Hours of operation are expected to be in accordance with current guidance published on the LBRT website and as detailed in the LBRT Good Practice Guide - Control of Pollution and Noise from Demolition and Construction Sites. The guidance states that where residential occupiers are likely to be affected by noise, the hours of construction will normally be restricted to the following times:

- Monday – Friday 08:00 – 18:00
- Saturday 08:00 – 13:00
- Sundays and Bank Holidays the site would be closed

This guidance is also in line with the Control of Pollution and Noise from Demolition & Construction Sites (May 2008) Code of practice development used by London Boroughs.

Notwithstanding this there may be certain occasions when work outside these hours may be necessary. In the event of this, work would only be carried out following consultation and agreement with LBRT and the contractor informing local residents.

Vehicles would only travel to and from Site between the hours set out above in order to avoid noise being generated by heavy goods vehicles close to residential properties around the Site. The contractor will be responsible for ensuring these instructions are given to all drivers, including those delivering site materials.

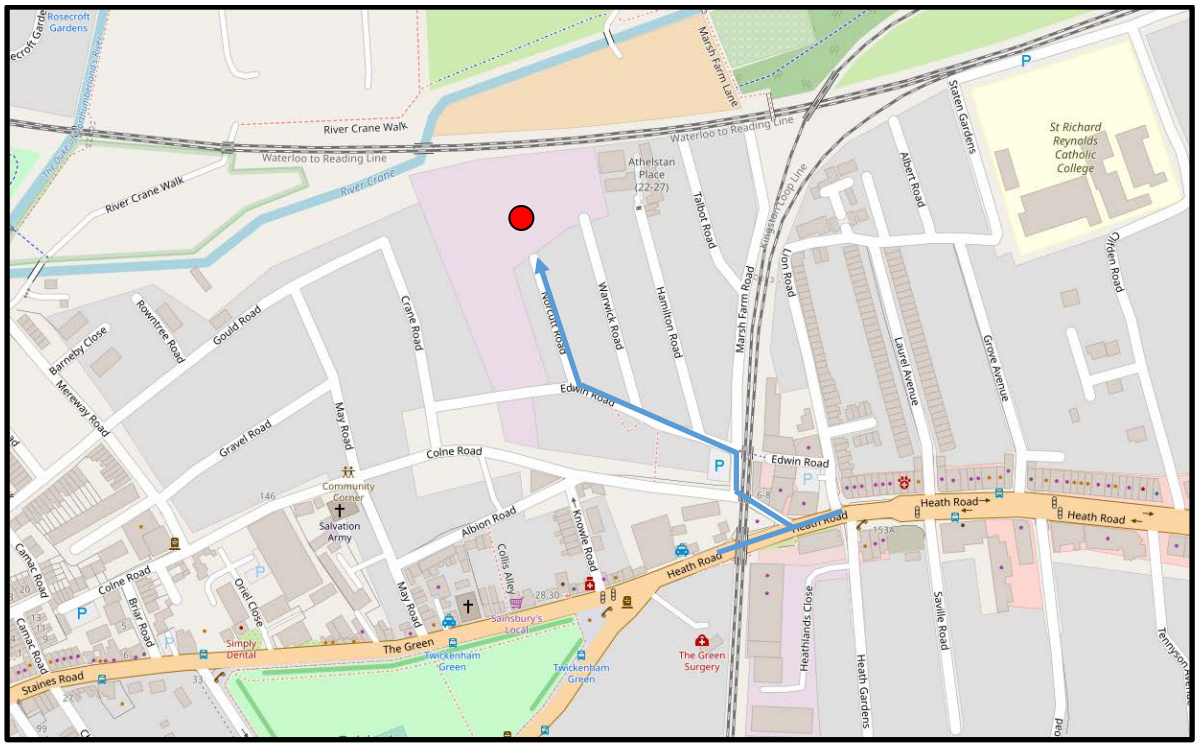
The Site will be manned during the working hours set out above. The contractor will appoint a person(s) who will have responsibility for ensuring adherence to good practice measures. A designated person should be on Site at all times that operations are taking place and have the necessary authority to initiate changes to work practices and, or mitigation as appropriate.

3.3 Deliveries

Deliveries made by vehicles up to 10m in length will occur from the carriageway of Norcutt Road using the existing turning area shown in **Figure 1.2**. Subject to vehicle type and size, as shown on **Figure 3.1**, access to the site can be taken from Heath Road turning into Colne Road, turning right on Marsh Farm Road, left onto Edwin Road and right onto Norcutt Road. The vehicle will turn at the end of Norcutt Road to carry on in forward gear to exit along Norcutt Road, turning right onto Edwin Road, left onto Crane Road, right onto Colne Road and left onto May Road to join the Twickenham Green.

Figure 3.1 shows the potential vehicle arrival routeing to the Site using blue arrows as this is the shortest route to the site on residential roads. It is recommended that all construction vehicle drivers are asked to use a vehicle routeing plan which will be agreed between the contractor and the LBTH.

Figure 3.1 – Vehicle Routeing Plan



The Site will operate a material delivery scheduling and booking system to ensure that congestion is avoided on the surrounding highway. Each delivery will be allocated a delivery time period and an allotted area from which to load or unload. Clear instructions will be issued to all direct suppliers and subcontractors detailing access routes. Only one delivery will be permitted to visit the Site at any one time.

Delivery vehicles will be controlled to ensure that unloading only takes place within designated times and in the correct location. All subcontractors will be required to produce a procurement schedule for their materials, which will be monitored and they will be required to book a delivery slot with the Traffic Controller.

"Just in Time" scheduling of deliveries will be used where possible, so as to minimise the storage capacity required. Where "Just in Time" deliveries are not economic or practical, Site storage of materials and plant will be very carefully controlled by restricted allocation of zones.

Although abnormal loads are not anticipated, should it be necessary to deliver using abnormal loads, the Local Authorities/Police will be notified in advance. All deliveries to the Site will be scheduled by the Site Manager.

As much waste as possible will be recycled. Whenever possible and to help reduce trips, vehicles delivering materials to the Site will leave with waste.

3.4 Materials storage and security

All plant and materials will be stored on-site when not in immediate use and will be secure against vandalism and theft. Where this is not possible alternative arrangements off-site will be made to ensure they do not affect any of the adjacent footways/carriageways.

On-site tool storage will be provided, and this location will be insured for contractors' tools as well as supplied tools to reduce the number of vehicle journeys to Site.

4 Vehicle Routeing and Access

4.1 Construction Vehicle Routes

It is proposed that all construction vehicle drivers will be asked to use the principal road network using Heath Road which has been designed to accommodate heavy goods vehicle traffic to serve the existing lawful land use of the site as an industrial unit.

Vehicle routeing will be discussed with LBRT and TfL and agreed as part of the CLP. In the event that there is any need to amend the proposed vehicle routeing and access arrangements during the course of construction, the LBRT and TfL will be consulted, and the new arrangements agreed.

4.2 Access

Access to the Site is gained from the northern end of Norcutt Road.

The contractor will confirm information on the vehicle specifications and numbers to ensure that the construction vehicles can satisfactorily stop on-site without conflict. Traffic management measures associated with these vehicles will also need to be approved by LBRT prior to commencement of construction.

4.3 Consultation with LBH Highways Department and Transport for London

The development of CLP will be undertaken in consultation with LBRT, any changes to the content of this CLP will be discussed and agreed with LBRT.

5 Strategies to Reduce Impacts

It is recommended that the following measures are introduced during construction period. The contractor should discuss the implementation of the below measures with LBRT during the post application phase and further development of the CLP.

5.1 Safety and Environmental Standards and Programmes

The developer is committed to ensuring all contractor and sub-contractor vehicles arriving at the Site comply with sufficient safety measures and requirements relating to Work Related Road Risk.

All vehicles and driver management practices to comply with the FORS and Construction Logistics and Community Safety (CLOCS).

A collision reporting system will be mandated to ensure all collisions and accidents involving the projects' vehicle and drivers are reported to the Project Manager and any relevant parties.

5.2 Considerate Constructors Scheme (CCS)

The site will be registered with the Considerate Constructors Scheme.

5.3 Deliveries

To minimise any potential impacts from the delivery of or collection of materials, it is recommended that the following measures are introduced during construction:

- Deliveries do not take place between 8am and 9am, and from 3.15pm to 4pm Monday to Friday during term times
- Areas will be identified within the Site for the storage of plant and materials throughout the course of construction
- A route for heavy goods vehicles associated with the construction phase will be identified and a route map produced to provide to the drivers.
- Construction vehicle drivers will be informed of the loading/unloading areas available for use for each stage of construction

This Site will operate a material delivery scheduling and booking system to ensure that congestion is avoided on the surrounding highway. Each delivery will be allocated a delivery time period and a location from which to load or unload. Clear instructions will be issued to all direct suppliers and subcontractors detailing access routes. Only one delivery will be permitted to visit the site at one time.

The contractor will give the planning authority access to the booking data for monitoring and statistical analysis purposes.

Delivery vehicles will be controlled using a Banksman to ensure that unloading only takes place within designated times and in the correct location. All subcontractors will be required to produce a procurement schedule for their materials which will be monitored, and they will be required to book a delivery slot with the Site Manager.

"Just in Time" scheduling of deliveries will be used where possible will minimise storage capacity required. Where "Just in Time" deliveries are not economic or practical, site storage of materials and plant will be very carefully controlled by restricted allocation of zones.

Although abnormal loads are not anticipated, should it be necessary to deliver using abnormal loads the Local Authorities/Police will be notified in advance. All deliveries to the Site will be scheduled by the Site Manager.

Suppliers will phone through prior to delivery to ensure they can park in the proposed delivery bay, avoiding any problems on the adjacent highway. As appropriate the kerbside delivery space will be free of vehicles as required by the timings of the delivery schedule.

Any damage made to the carriageway during the course of construction will be repaired prior to occupation.

5.4 Measures to Avoid Disruption on the Public Highway

As previously stated, all deliveries to the Site will be pre-booked and Banksmen available for ensuring safety is maintained and disruption to the free-flow of traffic kept to a minimum.

Information will be obtained from the local authority on refuse collection dates and times to ensure these times during that particular day of the week can be avoided when booking deliveries. Removal of waste and refuse from the site will also be coordinated to avoid conflict.

5.5 Vulnerable Highway Users

There are footways on both sides of the road on Norcutt Road for the southern part and a shared surface to the north from No. 49. Hoarding will be erected as appropriate on the southern boundary of the site.

It is anticipated that the lorry movements per day associated with the construction process will not have a material impact. Details of the number and size of vehicles anticipated to visit the site during the construction site will be confirmed.

Other vulnerable highway users such as wheel chair users, the elderly, people with walking difficulties, parents with young children or prams, blind and partially sighted, etc will also be considered during the construction period. As appropriate, the site frontage will be secure (boarded/locked) and free from obstacles at all times to protect vulnerable users from harm.

Signage will be in place on the footways on Norcutt Road and Edwin Road, forewarning pedestrians of construction activity, i.e. accessing vehicles or the transfer of materials between the Site.

The carriageway of Norcutt Road will receive regular sweeping to make certain any debris is cleared.

5.6 Waste Minimisation

As much waste as possible will be recycled. Whenever possible and to help reduce trips, vehicles delivering materials to the Site will leave with waste.

The contractor will separate waste on Site where possible in order to maximise reuse of construction and demolition waste within the development.

5.7 Environmental Considerations

The Site is located on Norcutt Road with predominantly residential road use. It is the developer's intention to minimise the impact that the construction process could cause to the Local Environment and the neighbouring community. All care will be taken not to cause the primary environmental nuisances, noise and dust pollution. Below are some actions that will be carried out to abate these problems.

Reduction in Construction Noise:

- Coordinated delivery times and efficient traffic management to prevent queues of traffic accessing the Site
- Ensuring all plant has sound reduction measures (mufflers, baffles or silencers)
- Utilising construction techniques that minimise the production of noise
- Using acoustic hoarding where necessary

Reduction in Dust Pollution and other Airborne Debris:

- Ensure that all materials transported to and from Site are in enclosed containers or fully sheeted
- During dry periods the works are to be damped down to control the generation of dust
- Ensuring materials have a minimum of packaging
- Ensuring all polystyrene and similar light-weight materials are weighted down
- Making sure all dust generating materials are adequately packaged
- Ensuring loads are covered where spoil or demolition material is being removed
- Provide regular road cleaning using road sweepers or brushes to control dust and mud
- Keeping the loading drop heights of spoil into lorries as low as possible
- Implementing an effective procedure to deal with complaints from third parties to ensure issues are dealt with efficiently and quickly, via an advised and dedicated telephone number

5.8 Use of Alternative Modes of Transport

Given the location of the Site, there is little alternative other than to use the road network to deliver material to and from Site.

5.9 Staff Travel

Staff, contractors' and visitors will not be expected to travel to the Site by public transport and will be expected to make their own travel arrangements. The application site is accessible by modes of transport other than the private car with access to the London Bus Network and the overground train services within a short walk.

5.10 Collaboration

The Site Manager will keep in contact with organisations that have an interest in the Site and how the development is progressing. These bodies, groups and individuals include planning and highways authorities, local residents, businesses and community groups.

6 Estimated Vehicle Movements

Given that the contractor has not yet been appointed it is not possible to confirm the type, size or frequency of vehicles travelling to the Site. However, it is anticipated that the following vehicle types will be required to access the Site:

- Low loader (16.5m), in exceptional circumstances
- Tipper Lorry (10m)
- Rigid Crane lorries/lorry mounted Hiab (7.7m)
- Concrete lorries
- Skip lorries (6.3m)
- Light goods vehicles

It is the contractors' responsibility to confirm the number and size of vehicles prior to construction commencing on-site. This information will be discussed, agreed and signed off by LBRT and included within the developed CLP.

7 Implementing, Monitoring and Updating

7.1 Site Monitoring

The implementing, monitoring and updating of the CLP will be the responsibility of an appointed Construction Logistics Manager, this individual may typically be the Site Manager during construction. The Construction Logistics Manager will be given sufficient time as necessary to manage the CLP to ensure the measures are carried out.

The Construction Logistics Manager takes responsibility for the day-to-day management of the CLP and is the first point of contact for Site issues. They help the development run smoothly by making sure each construction phase complies with the CLP. It is also the Construction Logistics Manager's job to oversee the effectiveness of the CLP and prepare regular updates to the planning authority when asked.

The Construction Logistics Manager's name will be supplied to the Planning Authority once the CLP is finalised and the developer will inform the planning authority, and other organisations, if and when the Construction Logistics Manager is replaced. The Construction Logistics Manager will respond to any questions or queries about the development and put in place any mitigation measures needed to resolve traffic issues connected with the construction work. For example, the Construction Logistics Manager will:

- Remind contractors and subcontractors about designated routes to and from the Site
- Check vehicles arriving at Site to make sure they meet the developer's safety requirements
- Manage the delivery booking and scheduling and record deliveries
- Ensure that the policies set out in CLP are adhered to

Additionally, the Construction Logistics Manager will oversee collecting the following data:

- Number of vehicle movements to Site, collected through the delivery booking-in system
- Total vehicles
- Vehicles by vehicle type/size/age
- Time spent on Site
- Consolidation centre utilization
- Delivery/collection accuracy compared to schedule

- Breaches and complaints (may be relative to)
  - Vehicle routeing
  - Unacceptable queuing
  - Unacceptable parking
  - Supplier FORS accreditation

- Safety
    - Logistics related accidents
    - Vehicles and operations staff not meeting safety requirements

7.2 Publicising the CLP

Explaining and marketing the CLP to the supply chain, local community, residents and businesses will be undertaken by the Construction Logistics to raise awareness and show the developer's commitment to using safe and efficient construction vehicle practices. This commitment will need to be communicated to all parts of the supply chain involved in the development.

7.3 Keeping other Organisations and Local People Informed

Explaining and marketing the CLP to the supply chain, local community, residents and businesses will be undertaken by the nominated member of staff to raise awareness and show the developer's commitment to using safe and efficient construction vehicle practices. This commitment will need to be communicated to all parts of the supply chain involved in the development.

The CLP will also explain how the developer will keep in contact with organisations that have an interest in the Site and how the development is progressing. These bodies, groups and individuals include planning and highways authorities, local residents, businesses and community groups.

Figures and Appendices

Figure 1.2 – Swept Path Assessment

YES ENGINEERING

75 East Road, London N1 6AH

Client: LEEK REAL ESTATE (NO.1) LTD

Drawing No.: FIGURE 1.2

Scale: 1:500@A4

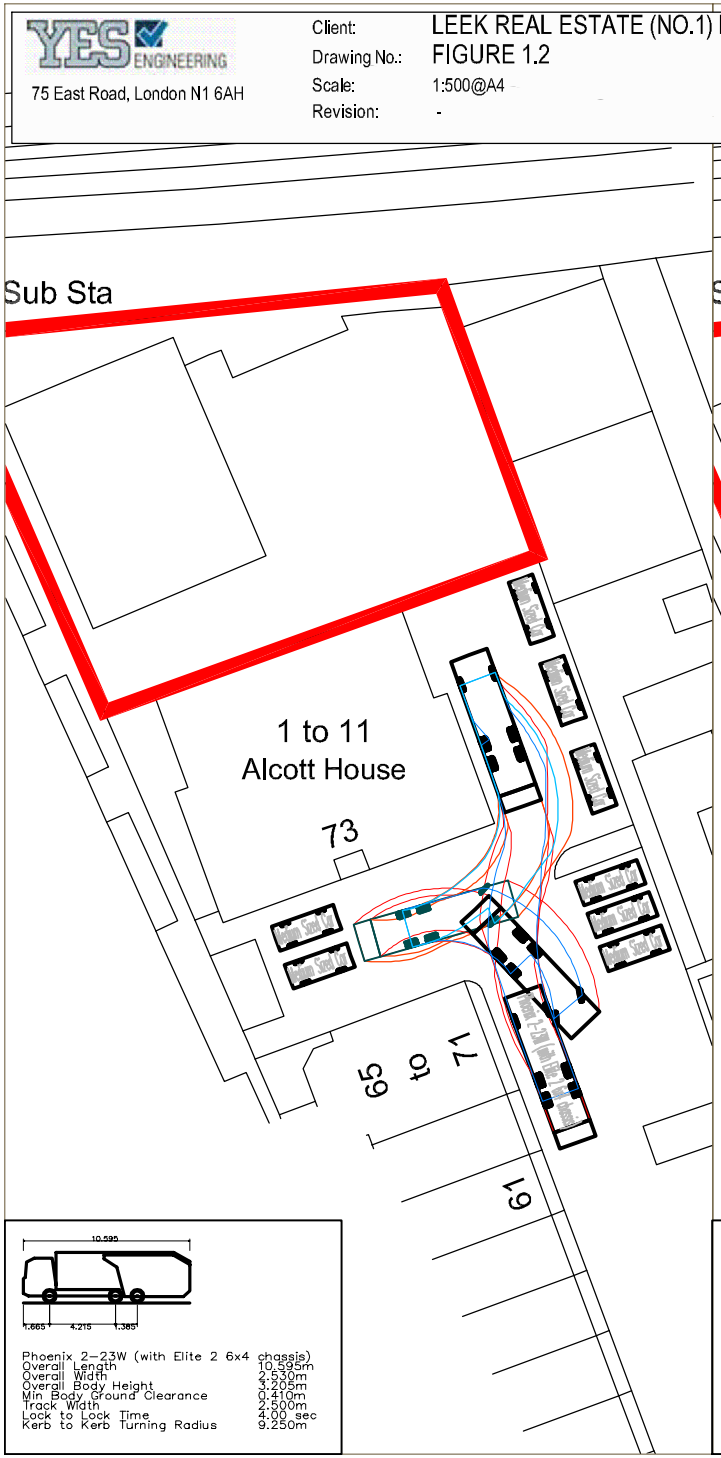
Revision: -

NOTES:

SWEPT PATHS FOR INDICATIVE PURPOSES ONLY. ALL ROAD HIGHWAY DIMENSIONS/ARRANGEMENTS TO BE CONFIRMED ON SITE AND VEHICLE MEASUREMENTS AND CHARACTERISTICS CONFIRMED BY END USER.

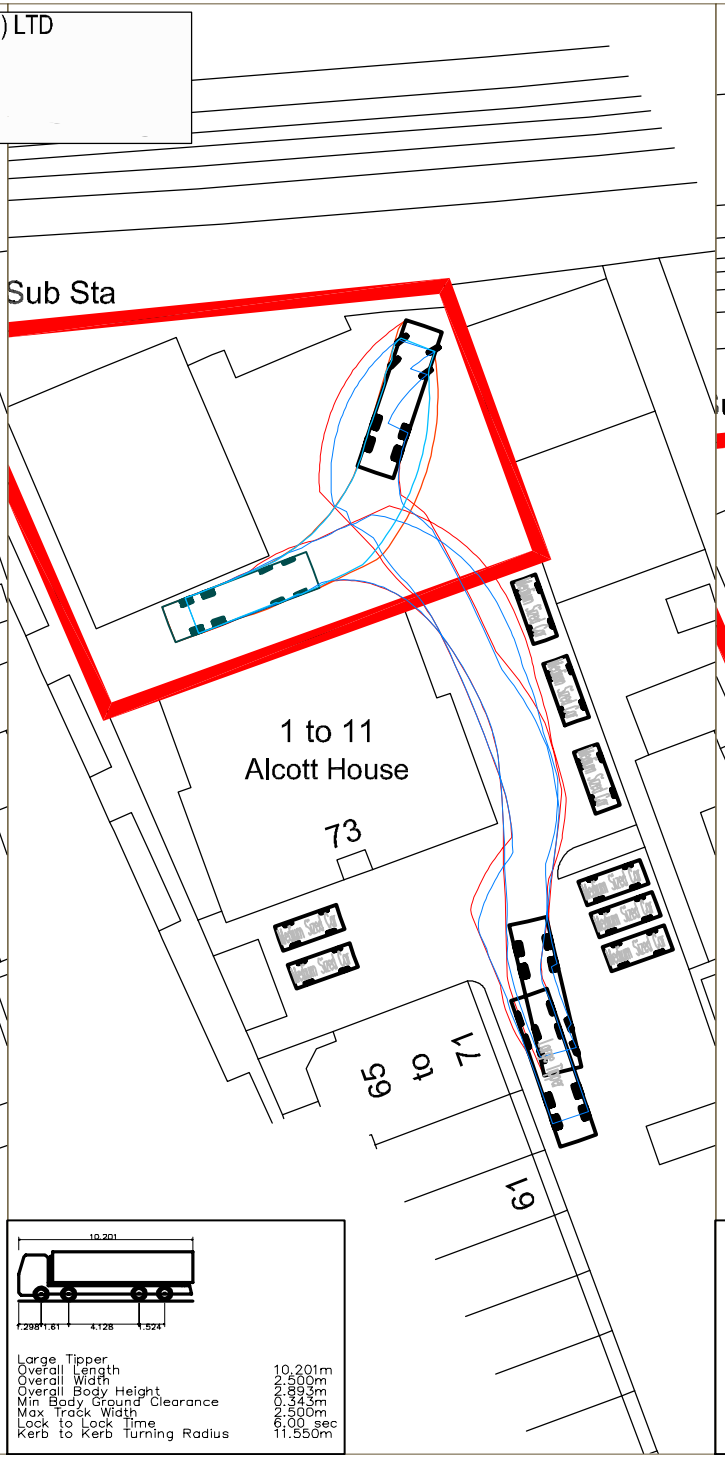
HIGHWAY ARRANGEMENT TO BE AGREED/APPROVED WITH LOCAL HIGHWAY AUTHORITY.

FOR PLANNING ONLY, NOT TO BE USED FOR CONSTRUCTION.



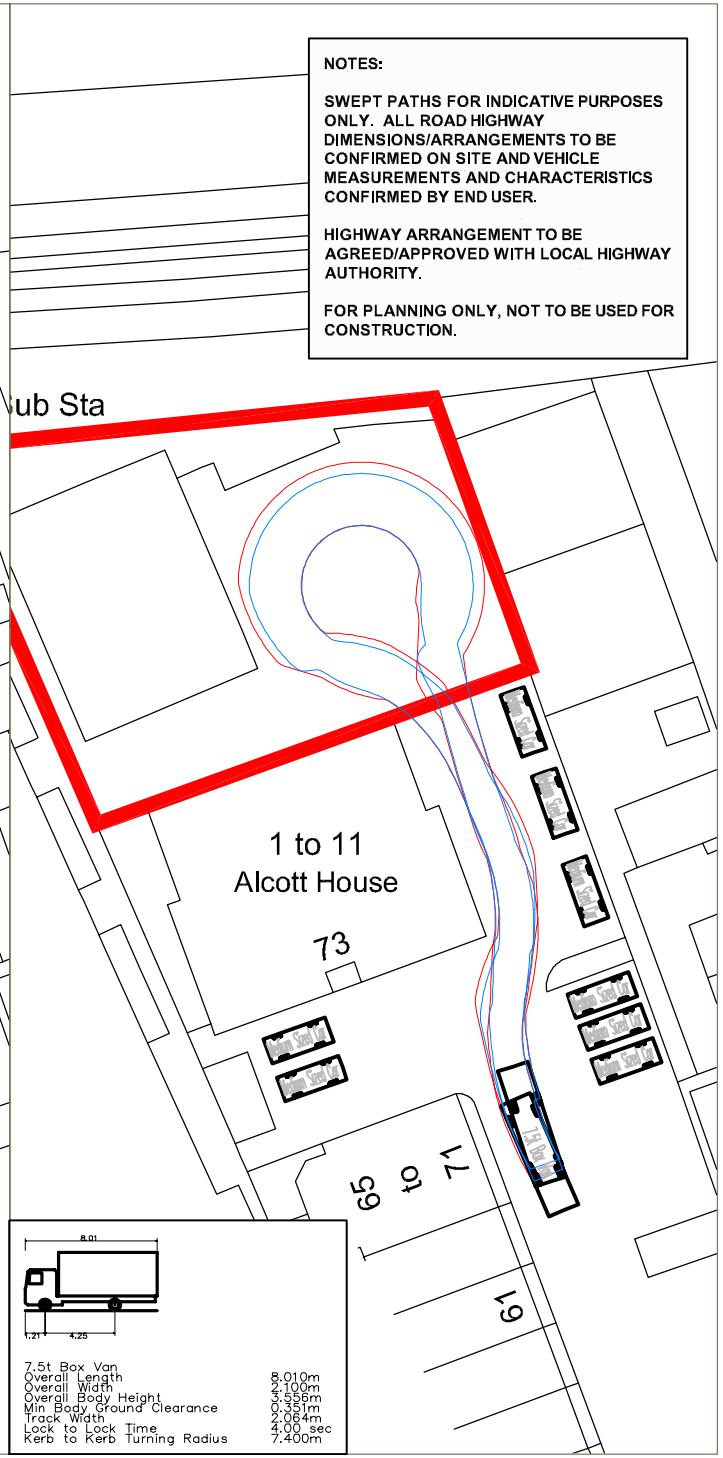
Phoenix 2–23W (with Elite 2 6x4 chassis)

Overall Length	10.595m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	9.250m



Large Tipper

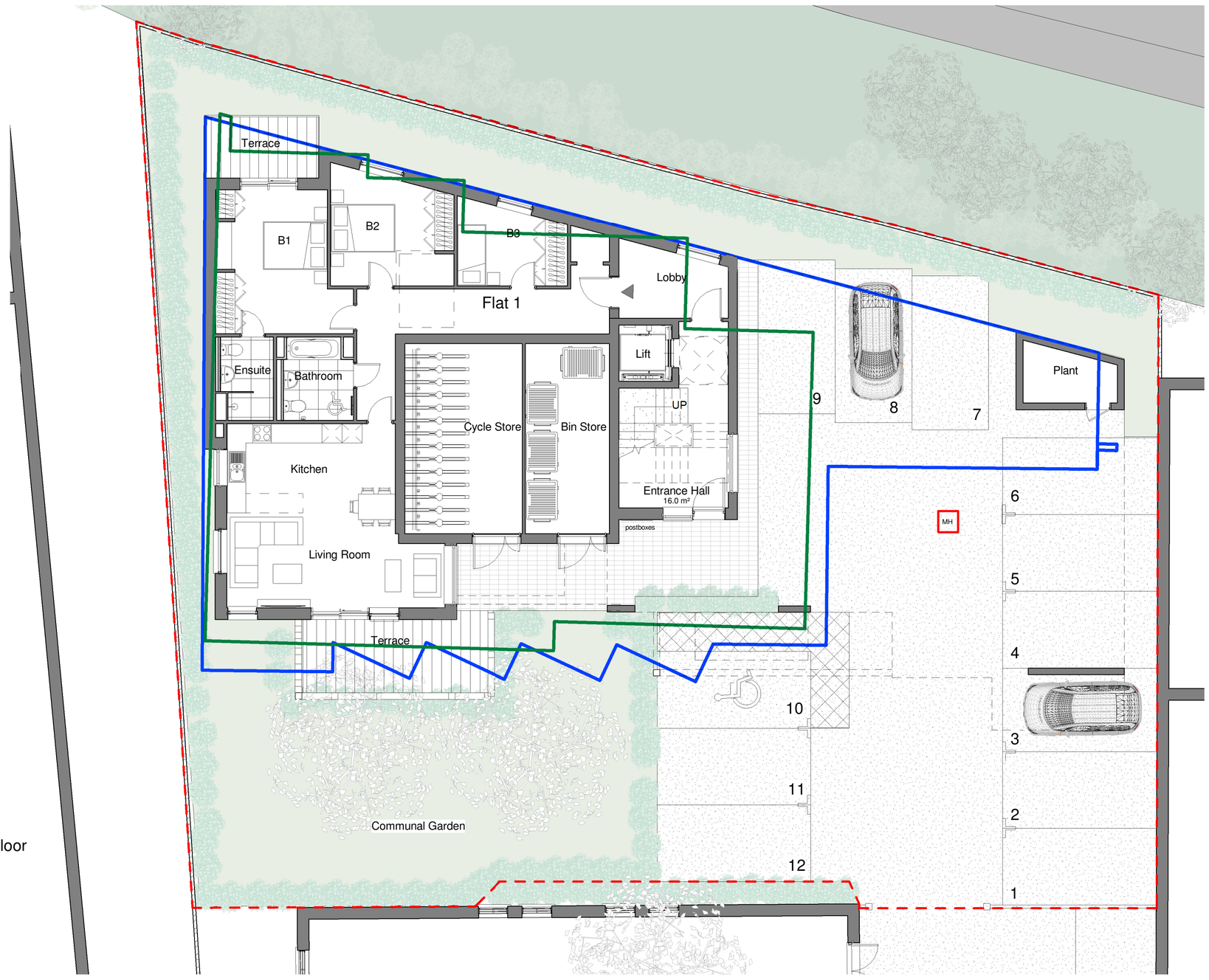
Overall Length	10.201m
Overall Width	2.500m
Overall Body Height	2.893m
Min Body Ground Clearance	0.343m
Max Track Width	2.500m
Lock to Lock Time	6.00 sec
Kerb to Kerb Turning Radius	11.550m



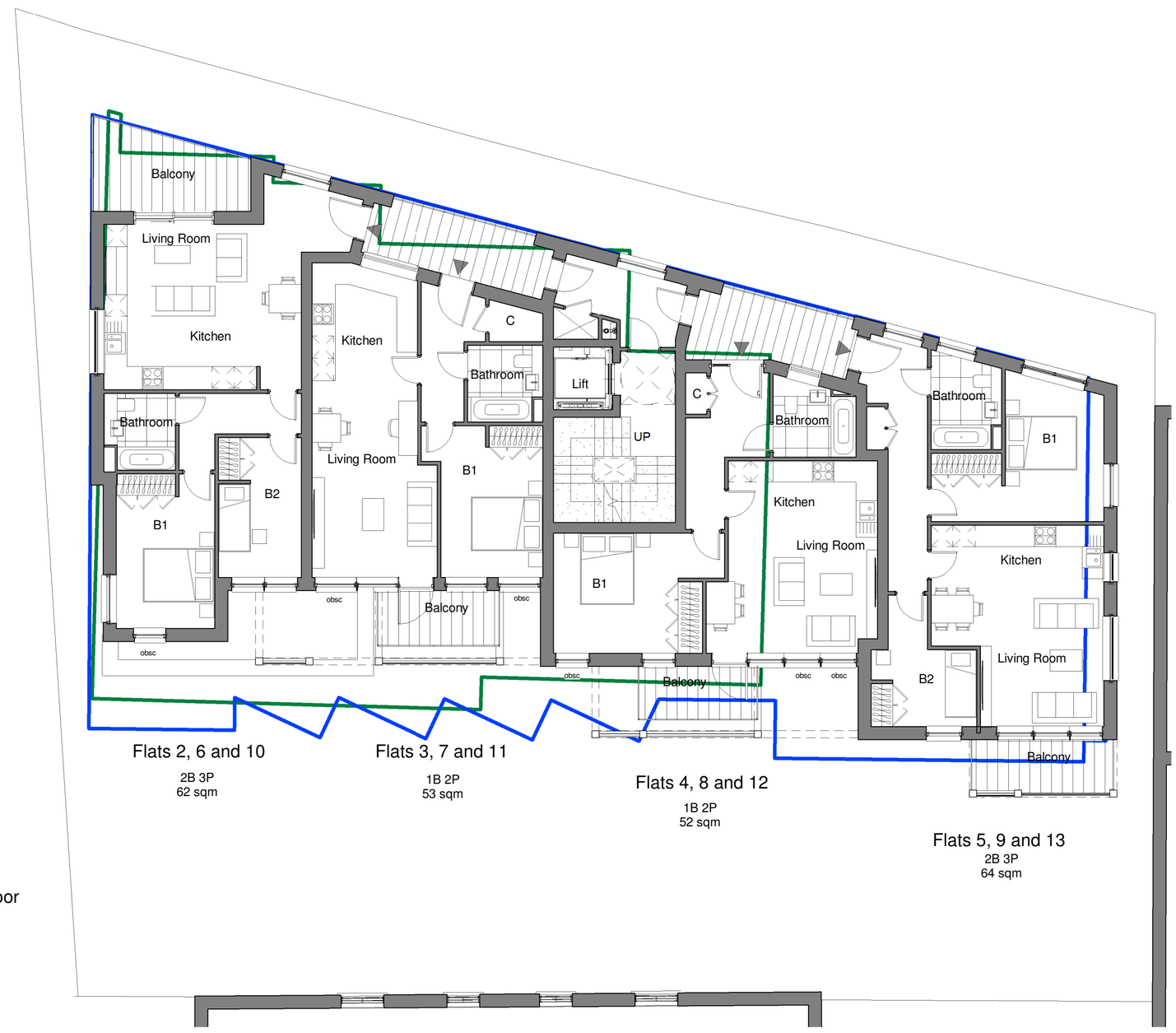
7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	7.400m

Appendix A – Proposed Ground Floor Layout Plan



Ground Floor



First, Second and Third Floor

Fourth Floor

Do not scale from this drawing

DO NOT SCALE this drawing (printed or electronic versions). Contractors must check all dimensions from site.

All other design team elements, where indicated, have been imported from the consultant's drawings and reference should be made to the individual consultant's drawings for exact setting out, size and type of component.

Discrepancies and / or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to the architect for clarification before proceeding.

All works are to be carried out in accordance with the latest British Standards and Codes of practice unless specifically directed otherwise in the specification.

Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to Specifications and / or Details for actual sizes and / or specific contractor construction information.

This original document is issued for the purpose indicated below and contains information of a confidential nature. Further copies and circulation will be strictly in accordance with the confidentiality agreement under the contract. This original must be destroyed or returned to the originator.

Safety, Health & Environmental Iinformation
Refer to the relevant Construction (Design and Management) documentation where applicable.

It is assumed that all works on this drawing will be carried out by a competent contractor, working where appropriate to an approved method statement.

Student Scheme Overlay

Flat Scheme Overlay

0 1 2 3 4 5 10 m

PLANNING

Rev	Description	Issued	Dwn	Chk
D	Updated Roof - PV Panels, AOV, Hatch	25/06/19	CK	CH
C	Updated Kitchen Window to Units 3,7,11	07/05/19	CK	CH
B	Updated Unit 5,9,13	07/05/19	CK	CH
A	Preliminary Planning Issue	03/05/19	CK	CH

Client
Leek Real Estate (No. 1) Ltd

Project
Lockcorp House,
75 Norcutt Road
Twickenham, TW2 6SR

Drawing
PROPOSED
General Arrangement Floor Plans

Scale	Date	Drawn	Checked
1:100@A1	12/18/18	CK	CH

BrookesArchitects
Upstairs at The Grange
Bank Lane, London SW15 5JT

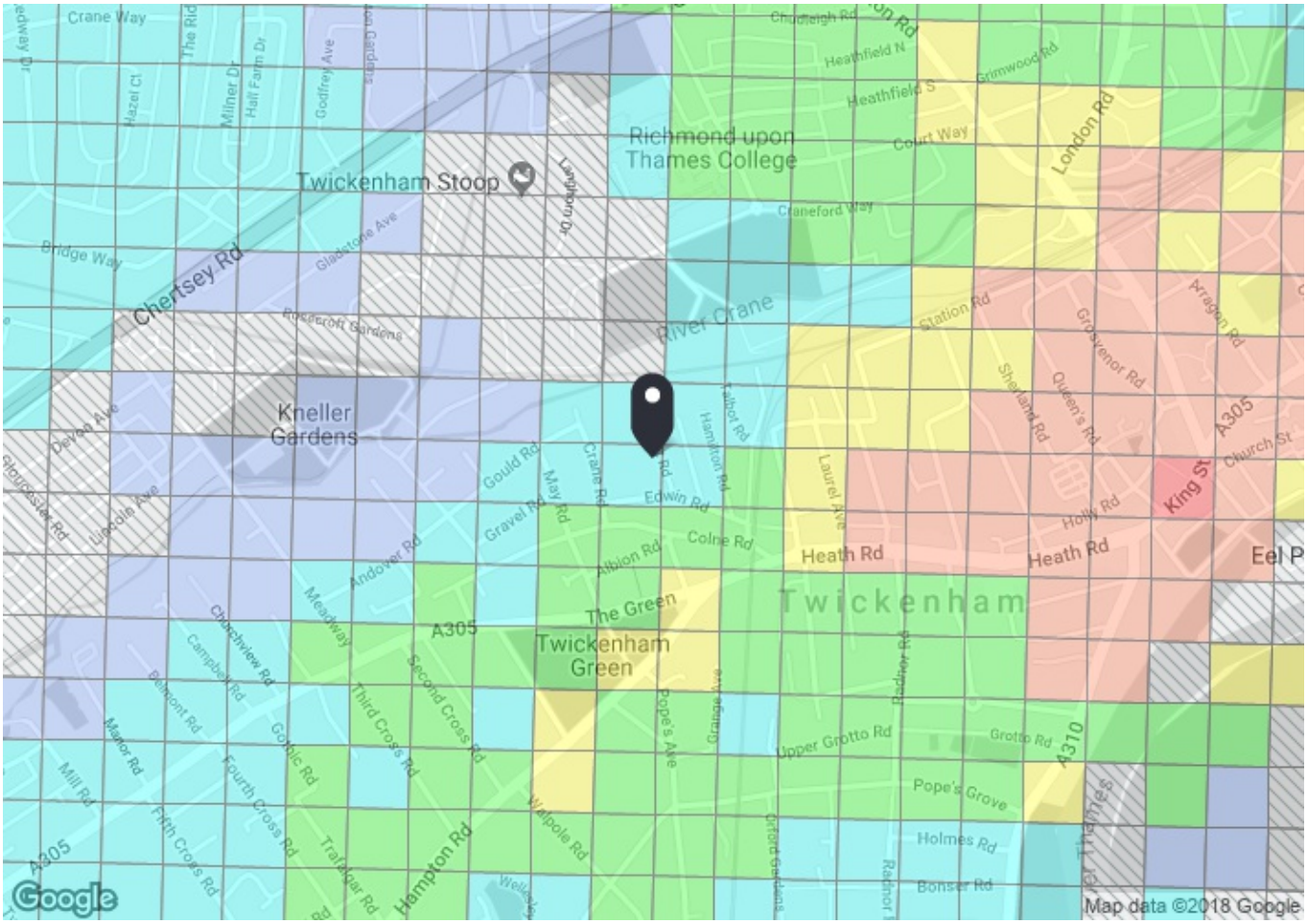
T 020 8487 1223
F 020 8876 4172
E info@brookesarchitects.co.uk

www.brookesarchitects.co.uk

			Rev. No.
5076	3	02	D

Appendix B - PTAL

TRANSPORT FOR LONDON



PTAL output for Base Year
2

TW2 6SR
Norcutt Rd, Twickenham TW2 6SR, UK
Easting: 515383, Northing: 173265

Grid Cell: 45397

Report generated: 17/10/2018

Map key - PTAL

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

Map layers

PTAL (cell size: 100m)

Calculation Parameters

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

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	TWICKENHAM GREEN	290	452.01	3	5.65	12	17.65	1.7	0.5	0.85
Bus	TWICKENHAM GREEN	281	452.01	7.5	5.65	6	11.65	2.58	1	2.58
Bus	TWICKENHAM GREEN	R70	452.01	6	5.65	7	12.65	2.37	0.5	1.19
Bus	TWICKENHAM GREEN	267	452.01	6	5.65	7	12.65	2.37	0.5	1.19
Bus	TWICKENHAM GREEN	110	404.43	3	5.06	12	17.06	1.76	0.5	0.88
Bus	TWICKENHAM GREEN	490	404.43	5	5.06	8	13.06	2.3	0.5	1.15
Bus	TWICKENHAM GREEN	H22	404.43	5	5.06	8	13.06	2.3	0.5	1.15
									Total Grid Cell AI:	**8.97**