

Construction Management Plan



Project:
32 Haverfield Gardens,
Richmond,
TW9 3DD
Kisiel Ltd

Document Control Sheet

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1. Emergency Contact Details

Emergency Contact: Kisiel Limited Landline (24hrs) – 020 7788 7439

2. Programme Length and Phasing

Programme Length	75 Weeks
Description and Scope of Works	<p><u>Phase 1 – Soft Strip, Demolition, Foundations & Basement works.</u></p> <p>Works include:</p> <p>Protective Hoarding to boundary to protect pedestrians, neighbouring properties and neighbouring assets and to prevent unauthorized ingress to the site without supervision.</p> <p>Installation of protective measures in accordance with the approved tree protection plan/s</p> <p>Temporary Scaffolding to enable demolition of the existing property.</p> <p>Temporary support work to enable sequential demolition.</p> <p>Soft strip of internal finishes and fittings in preparation for demolition of structures at each level in sequence.</p> <p>Alterations/Disconnects/Upgrading of existing services.</p> <p>Removal of all asbestos will be carried out by a licensed professional. This ensures that the removal process is carried out thoroughly and in compliance with all safety regulations and standards.</p> <p>Removal of existing tiled roof coverings and structure.</p>

	<p>Sequential demolition of perimeter masonry, steelwork and internal floor structures at each level, from top down.</p> <p>Removal of temporary Scaffolding.</p> <p>Removal of spoil and leaving site clear to allow for construction of new build properties.</p> <p>Excavation and installation of bored piles, 450mm diameter, using suitable drill rigs.</p> <p>Bulk excavation of soil to required depth to allow basement slab to be formed.</p> <p>Installation of Reinforcement concrete basement slab and RC retaining walls</p> <p>Masonry cavity wall to rear section of Basement.</p> <p>Associated waterproofing and adaptations to existing drainage and installation of new rainwater and soil disposal systems, including sump pumps.</p> <p>Installation of Temporary scaffolding to enable construction works to begin at superstructure levels.</p> <p><u>Phase 2 – Superstructure Construction and Internal fit-out works.</u></p> <p>Works include:</p> <p>New Masonry cavity wall to perimeter. (Constructed sequentially at each floor level).</p> <p>Installation of Structural Steelwork. (Pending Structural Engineer drawings).</p> <p>Construction of internal Masonry load bearing walls.</p>
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	<p>Installation of Upper floor structures.</p> <p>Installation of Roof Structures and Roof Finishes.</p> <p>External Glazing and Doors.</p> <p>Installation of ventilation ductwork and external vents.</p> <p>Installation of Internal Drainage systems. (Internal Waste Stacks and Rainwater Pipework – Where applicable)</p> <p>Removal of Temporary Scaffolding.</p> <p>Connection of external services/utilities with isolation points/meters etc.... located internally at ground floor level.</p> <p>Underfloor heating (Where applicable)</p> <p>Screeding to floors.</p> <p>Internal drylining (Partition walls and Suspended ceilings).</p> <p>First fix plumbing and electrics.</p> <p>First Fix Joinery (Door Frames, Pipe Boxing, etc....)</p> <p>Plastering</p> <p>Installation of Kitchen Units and Accessories.</p> <p>Installation of Bathroom and Ensuite sanitaryware and brassware.</p> <p>Second fix Electrical works (Small power, lighting, integrated systems etc....)</p> <p>Testing and Commissioning</p> <p>Second Fix Joinery (Doors, Skirtings, Bespoke items)</p>
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	<p>Wall Finishes (Tiling etc...)</p> <p>Floor Finishes (Tiling, Wooden Flooring, Carpet)</p> <p>Internal Decorating.</p> <p>External Landscaping.</p> <p>Removal of Tools and small plants.</p> <p>Clean on completion.</p> <p>Snagging (Where required)</p> <p>Handover to Client</p>
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Please see the below programme attached **Appendix A**

3. Vehicle Types

Numerous types of delivery vehicles will be used to bring materials to and from the site. These may include:

- Skip lorries including roll on/roll off skips for major demolition and basement excavation works (size 7.5m long and 2.4m wide) and standard 8-yard skips for waste (size 7m long and 2.4m wide).
- Ready mix concrete lorries (size 8.25m long and 2.45m wide).
- Flat - bed delivery vehicles for the delivery of various materials including scaffolding, steelwork, reinforcement, bricks/blocks, timber, roofing materials, plaster, joinery etc. (size 8.5m long and 2.45m wide).
- Low loader for the delivery and collection of piling rig (size 20m long and 2.7m wide).
- 4-wheel drive muck away for disposal of material. These vehicles are 8.1m long and 2.5m wide with a tare weight of 12t and a maximum fully laden weight of 32t.

- 2-wheel drive rigid flat-bed lorries with crane loading arms for general deliveries from builder's merchants and suppliers. These vehicles are 8.5m long and 2.5m wide with a typical laden weight of 18t.
- 2-wheel drive rigid box vans with specialist equipment for service and decorations. The vehicles will be 8.0m long and 2.4m wide with a height of 3.4m. Typical loads will be 7.5 to 12t.

4. Vehicle routing

Deliveries will be managed to run with the progress of works so that storage is kept to a minimum.

In the later phases of the Project, deliveries may need to be phased to reduce the number of vehicles unloading at any given time to avoid disruption and increased noise levels for local residents.

The following Diagram shows a simplistic illustration of the planned route for construction and delivery vehicles. Blue colour indicates to site, Red colour indicates away from site



To site: To go site, we consider the best delivery route to the site will be from the A205/A307, through Kew Green, to Bushwood Road, and then right onto Maze Road to access Haverfield Gardens.

Away from site: To leave the site, Haverfield Gardens to Maze Road, then turn left onto Forest Road, then left again onto Bushwood Road, crossing Maze Road to connect with Kew Green and the A205/A307.

Access and Parking for site deliveries

Clear instructions will be issued to all direct suppliers and subcontractors detailing access routes and stating that delivery vehicles should use the agreed route to and from site at agreed times.

5. Construction Traffic

Proposals to Accommodate Construction Traffic

- It is anticipated that the majority of construction vehicles will enter the site in forward gear, turn and exit in forward gear. The construction vehicles will park in different locations within the site, depending on the stage of demolition / construction.
- Due to the small scale of the site, it will become more difficult for vehicles to park and turn within the site as the buildings are being constructed. As such, smaller vehicles will be used for construction which are able to turn on the site, specifically within the permanent turning head being constructed for the development. The arrival and departures of vehicles will be managed to avoid any congestion on the site which could prevent vehicles from turning.
- In order to ensure construction vehicles are able to enter the site via the existing access arrangement, swept path analysis (SPA) has been undertaken. Plans showing the SPA are included within Appendix B, which demonstrate the tracking of the expected vehicles during the construction phase. The SPA has been undertaken using the proposed scheme as a base to demonstrate that vehicles are able to perform a 3-point turn manoeuvre when the proposed structures are constructed. However, it is important to note that the gates and gardens will be constructed last, therefore additional space will be available, as well as it being unlikely that large vehicles will be required at this stage of construction, therefore the plans show a worst-case scenario.

- As stated above, owing to the width of the access road, some construction vehicles will not be able to enter the site during the construction phase, particularly when the majority of the site is constructed. Therefore, on occasion, some construction vehicles may need to temporarily park along Haverfield Gardens.
- At the appropriate time, we will contact LBRuT to request permission to temporarily suspend part of the road to allow construction vehicles to park. The carriageway will be temporarily suspended, with two parking spaces.
- Any construction vehicle that is parked along Haverfield Gardens will be required to reverse along Haverfield Gardens to the junction with Maze Road when departing. It is understood that this is common practice for delivery vehicles along this stretch of road and therefore residents are familiar with manoeuvre occurring. However, it is important to note that we will seek to minimise this from occurring.
- Fully trained traffic marshals will support the manoeuvring of vehicles along Haverfield Gardens. These will be supported by "STOP WORKS" handheld signs to be positioned to halt traffic during the vehicle manoeuvre, although it is not anticipated to be many vehicles given the quite nature of the roads within the vicinity of the site, particularly Haverfield Gardens as it is a cul-de-sac road.
- For vehicles arriving and departing to/ from the site, dwell time will be maintained to a minimum. However, it is considered necessary for ad-hoc traffic management procedures to be implemented. This will consist of stop-go traffic control to be conducted by fully trained traffic marshals, although only put in place when a situation occurs where a vehicle is required to temporarily wait along Haverfield Gardens or surrounding streets. It should be noted that this is not intended to happen often given the nature of Haverfield Gardens and local streets, however in an unforeseen circumstance it may be required over a very short time.

Estimated number of vehicles per week

Where heavier vehicles are required for certain materials or delivery of plant, the number will be limited to 1-2 vehicles per day, between the hours of 9:00am and 5:00pm, as far as reasonably practical. However, an increase in this number may be required during the most busy phases of the project. Please see the breakdown below, and the usage of each vehicle type has been mentioned above in the vehicle types section.

PHASE	VEHICLE TYPES	EXPECTED NUMBER PER WEEK
Substructure works	4-wheel drive muck away for disposal of material during basement excavation works	50
Substructure works	Ready mix concrete lorries for Piling & Basement concrete works	10
Substructure works	Flat - bed delivery vehicles for the delivery of various materials including scaffolding, steelwork, reinforcement etc.	1
Substructure works	Skip lorries including roll on/roll off skips for major demolition works and standard 8-yard skips for waste.	1
Superstructure works	Flat - bed delivery vehicles for the delivery of various materials including bricks/blocks, timber, roofing materials, plaster, joinery etc.	2
Superstructure works	2-wheel drive rigid flat-bed lorries with crane loading arms for general deliveries from builder's merchants and suppliers.	2
Superstructure works	2-wheel drive rigid box vans with specialist equipment for service and decorations. Typical loads will be 7.5 to 12t.	1
Superstructure works	Skip lorries including roll on/roll off skips	2

It is envisaged the use of traffic control on Haverfield Gardens will be limited and any impact on the free flow of traffic is negated. LBRuT will be consulted prior to any implementation if any management beyond stop-go control is considered necessary.

All supply chain/merchants etc. will be advised to the following allowing contractor control over multiple vehicle movement in peak periods:

- No deliveries before 09:00 daily
- No deliveries after 17:00 daily

Suppliers will call the site a minimum of 20mins before their vehicle arrives at site to confirm that the loading area is available.

Communication Strategy

All vehicles will be required to have pre-arranged their arrival via a 'booking system'. All vehicular movement both to and from site will be controlled by trained and experienced traffic marshals who will ensure the safety of pedestrians and cyclists by monitoring and controlling all activities related to loading and unloading operations.

Materials will be loaded and offloaded within the site to avoid any interaction with pedestrians and other road users.

Delivered items will be moved to the allocated storage area by Delivery Vehicle crane or manually transported into the ground floor area of the building.

6. Spoil Removal and Concrete Supply Methodology

Spoil Removal:

Waste will be removed from the site in accordance with the Waste (England and Wales) Regulations 2011 and the Hazardous Waste Regulations 2005 (as amended).

All waste (arisings) transported off-site will be documented and accompanied by either a Controlled Waste Transfer Note or a Hazardous Waste Consignment Note. All arisings will be cut/processed into appropriate sizes for easy/safe handling and transportation via the designated routes; in some cases, manual handling and team lifting methods may be used, but this will be minimised, and travel distances will be considered.

Once the excavation is complete, the spoil is loaded onto trucks and transported to a disposal or recycling facility. This will be undertaken by a registered company with appropriate waste carrier and environmental licences.

Concrete Supply:

Ready-mix concrete is a popular choice in the construction industry because it can be customised to meet specific design requirements. To achieve the desired mix, the cement, aggregates, and water are carefully measured and mixed off-site using advanced machinery. In situations where the exact amount of concrete required is uncertain, a volumetric concrete mixer can be used. This machine allows for precise on-site mixing, which helps to avoid waste and ensures that the concrete meets the required specifications.

Concrete pumping involves the use of specialised equipment that is designed to move concrete from delivery trucks to specific locations on the construction site. This method is particularly useful when placing concrete in elevated areas or locations with limited access. The concrete pumps are operated by skilled professionals who carefully control the flow of concrete to ensure that it is placed exactly where it is needed.

7. Loading and Unloading Details

It is critical to follow local regulations and safety standards. The construction site's entrance will be clearly marked for vehicle access. A site plan has been attached which includes designated areas for material storage, equipment placement, and loading/unloading zones to ensure safe and effective material movement. For heavier items, lifting plans will be presented in line with safety regulations.

To improve traffic flow and safety, the number of vehicles on the construction site will be reduced. During loading and unloading operations, health and safety precautions will be strictly enforced, including the use of personal protective equipment (PPE). Personnel involved in these operations will be trained and supervised to ensure compliance with safety regulations.

Effective communication with suppliers and delivery personnel is essential for coordinating arrival times and organising the unloading process. Waste management protocols cover the disposal of packaging materials and waste generated during unloading. To comply with local regulations, environmental measures such as dust and noise pollution reduction will be implemented during these activities.

8. Security hoarding and maintenance

The site is located within the London Borough of Richmond upon Thames (LBRuT).

The site is only accessible via Haverfield Gardens Road. So, in all cases, access/egress for delivery and removal of materials will be planned, scheduled, and coordinated by the site manager and all vehicle movements in and out of site will be controlled by a qualified banksman at all times when vehicles are maneuvering.

Vehicles shall not wait or stack on any road within the LBRuT.

A 2.6m high lockable site hoarding will be installed outside of the site, separating the property owners land from the public highway.

The hoarding will screen off any works or activities and protect passers-by as well as reducing dust and noise emissions from the site.

Site hoardings will also include Kisiel signage with relevant contact information, should there be enquiries outside of usual site working hours.

Welfare facilities and office/storage space will be provided within the bounds of the site.

Local Community Relations

Residents of Haverfield Gardens will be unable to use the site's rear access once construction begins; however, residents of 22 Kew Green will have a walkway in a fenced-off area.

A member of staff will be appointed to communicate with the local community to ensure that all are aware of any upcoming works, and how this may affect them.

Newsletters will be sent out prior to the works commencing and at relevant key stages of the project to provide updates.

9. Site setup drawings - Refer Appendix C

10. Swept Path Analysis - Refer Appendix B

11. Measures For Managing Highway Safety And Vulnerable Pedestrians.

The implementation of these measures is vital to preventing accidents and ensuring the safety of all people who use our roads.

Because of the small size of the site and the amount of space available for movement, the expected arrival and departure of construction vehicles will be closely monitored. Trained traffic controllers will be employed to control traffic flow, complete with high-visibility clothing. To effectively communicate changes in the traffic environment, we place advanced warning signs (Eg: Construction ahead, Reduce speed, Construction vehicles entering) ahead of construction zones.

Pedestrian safety will be prioritised by establishing and marking clear walkways away from vehicular traffic, in safe locations, with appropriate signage to allow for safe pedestrian crossings.

To ensure widespread awareness, campaigns will be launched to inform residents/pedestrians and drivers about the construction project, associated risks, and safety precautions.

Emergency preparedness is an important component of our strategy, which includes developing and communicating emergency response plans for construction workers and pedestrians.

Whilst the strategy will seek to limit the effect of construction traffic movement on local residents, there may be times where construction vehicles need to temporarily park along Haverfield Gardens, particularly when the majority of the site is constructed.

At the appropriate time, we will be contacted to LBRuT to seek approval for the suspension of part of the road to allow construction vehicles to temporary park. The arrival and departure of vehicles will be carefully monitored, and the strategy will seek to avoid suspension of parking at all costs, wherever possible. No hoarding on the highway is envisioned necessary during construction; all hoardings will be erected within the site boundary.

By implementing this comprehensive set of measures and collaborating with local authorities, construction staff members, and the community, we effectively manage highway safety during construction, lowering the risk of accidents and injuries.

Lighting and Visibility

Adequate lighting in the construction zone and on pedestrian walkways is essential. The use of barriers or fencing to separate pedestrians from construction activities and traffic will provide additional protection against potential hazards and distractions.

Temporary lighting will be installed for access and working areas to ensure good visibility at times of reduced daylight, after sunset or in bad weather.

12. Preservation of Neighboring Property Access during Construction

Our commitment is to maintain community convenience, safety, and satisfaction throughout the project. Before commencement, we consult with communities, businesses, and stakeholders, providing detailed information about the project time frame and anticipated access issues. (We have already posted a letter about the project start date to all homes on Haverfield Gardens Road, Maze Road, and Priory Road.) The majority of construction workers will arrive and leave prior to the traditional network peak hours. A commitment to specific working hours and noise control standards needs to be met. The low volume of traffic associated with the construction workforce is not expected to have a significant impact on either the highway network's operation or the amenity of nearby residents.

It is important to ensure safe and unobstructed access and exit from the site, particularly during emergencies. Any hindrance in this regard can have serious consequences and jeopardise the safety of the people involved. Additionally, it is equally important to minimise any disturbance to the neighbours, whether it is vehicular or pedestrian. Ensuring a smooth traffic flow and minimal noise pollution can lead to a harmonious relationship with the neighbours.

To encourage open communication, a member of staff will serve as a direct link between the construction team and the neighbourhood. He/she will respond to issues quickly and provide timely updates on access-related matters. We acknowledge the importance of harmonious coexistence during construction, and these steps illustrate our commitment to protecting the residents' quality of life throughout the project.

13. Protection Measures of Trees and Street Furniture

Site Protection Plan:

We have created a detailed site protection plan to ensure the preservation of existing trees and street furniture during the course of our building or maintenance project. The essential measures are:

Tree Protection Zones (TPZs)

Clearly define and set up Tree Protection Zones around all existing trees on the project site. These regions will be securely surrounded to avoid accidental disturbance with the root systems.

Fencing and Signage

Install strong fencing around the Tree Protection Zones and other street furniture, complemented by visible signage. This will highlight the importance of respecting those areas while discouraging unauthorised access.

No-Go Zones

To keep heavy equipment and machinery out of sensitive regions, designate special "No-Go Zones". This includes keeping clean passageways around tree trunks and designating routes to reduce damage.

Construction Access Routes

Plan construction access routes that purposely avoid direct touch with trees and street furniture. Construction vehicles will be guided along clearly defined tracks, minimising any disturbances.

Protective measures for street furniture

To prevent unintentional damage, apply protective covers or barriers around lighting columns, bollards, and communications cabinets. Temporary relocation of these things may be explored where possible.

Regular inspections and maintenance

Schedule routine inspections to ensure that protective measures remain effective over time. Any necessary maintenance or changes will be done as soon as possible to ensure the protection plan's integrity.

Arborist Consultation

Engage the expertise of trained arborists or tree care professionals to analyse and make specific advice for protecting the trees on the property. Their insights will inform our strategy to mitigate any consequences.

Communication and training

Provide comprehensive training sessions for our construction staff, highlighting the importance of site safety. Regular communication channels will be established to keep the team informed of safety precautions and their significance.

Adherence to Local Regulations

During construction, follow all local regulations and standards for tree protection. Our commitment is to follow all required requirements and keep the site in harmony with its surroundings.

By proactively applying these protective measures, we hope to protect both natural and urban aspects on the project site, creating a responsible and sustainable construction strategy.

14. Footways, Road closures and Highway licenses

Not required

15. Parking Suspension

After finishing the majority of the construction, we required two parking bays (10m) for a period of time. However, we believe we will require them at the end of the project and will only apply if necessary.

16. Wheel-Washing Facilities

We will maintain the existing hard surface at the entrance so that no mud will be carried during our ground work, as well as prepare the crushed concrete/concrete hard surface until the external hard landscaping work begins.

A wheel-washing system will also be set up within the site boundary to ensure that any vehicles accessing the site do not leave with dirty wheels that could affect local road.

All vehicles will be inspected before leaving the site and where required will have their wheels washed. Roads will also be swept on a regular basis to maintain cleanliness.

17. Any other restrictions/Conditions noted in the Pre-construction Information

17.1 Noise of Construction Works –

Construction works shall be carried out during site working hours, i.e., 08:00 to 18:00 hours Monday to Friday, and 08:00 to 13:00 hours on Saturdays, with no noisy activities on site being permitted on Sunday or Bank Holidays.

The Contractor will ensure that all noisy operations are carried out between the hours of 8.00 am – 5pm. Excessively noisy operations will be subject to noise assessments. The site manager must take every effort to minimize the construction noise level to an acceptable level (below 85db at least) and with appropriate rest periods during which noisy operations are temporarily ceased.

LBRuT Council realise that some activities can take place on site without residents being disturbed. This work may occur outside their standard working hours if it does not disturb people at the nearest occupied property to where the work is taking place.

All the operatives who are involved with noise creating operations must wear appropriate PPE to avoid damage and injury.

The Site Manager will also consider the effects of continuous noise nuisance to other residents within Haverfield Gardens and adjacent properties and will adopt general measures to minimise noise pollution as outlined below.

General Measures to be adopted to minimise noise pollution at 32 Haverfield Gardens:

- Coordinated delivery times and efficient traffic management to prevent queues of traffic accessing the site.

- Ensuring all plants have sound reduction measures (mufflers, baffles or silencers) where the transfer of noise to adjoining properties is likely to cause an unacceptable nuisance.
- Utilising construction techniques that minimise the production of noise.
- Utilisation, where possible, of prefabricated components.
- Strict adherence to the site working hours and suggested noisy operation hours.
- Implement an action plan where noise levels exceed acceptable levels.
- All staff to receive training and induction as per BS 5228:2009 recognising that noise and vibrations are not only hazards but also pollutants.

We will implement the necessary steps to adhere to LBRuT's Code of Construction Practice which states the following in relation to Noise and Vibration on construction sites as follows:

LBRuT's Code of Construction Practice: Section 2 Noise and Vibration

2.1 Hours of work

2.1.1 Where there are surrounding sensitive receptors, including residential and commercial premises likely to be affected by noise, the hours of noisy works shall normally be restricted to:

Monday-Friday: 08:00-18:00

Saturday: 08:00-13:00

Sunday and Bank Holidays: No noisy activities on site

2.1.2 Scaffolding is considered as noisy work and contractors should adhere to the hours above.

2.1.3 The Local Authority may set additional conditions, for example where planning conditions further limit hours of work, or formal Section 61 agreements apply.

2.1.4 Instructions should be given to ensure that vehicles and plant arriving at and leaving the site comply with the stated hours of work, unless a specific alternative agreement has been reached with the Local Authority.

2.1.5 Where particularly noisy works are scheduled and there will be a direct impact upon surrounding properties within specified times, the site manager should make contact with local residents to consult on the duration, extent and impact of the works to see if an informal agreement can be reached to minimise the duration of these works or carry them out at specific times.

2.1.6 *Dependent on the nature of the works, the Local Authority may require monitoring of noise and vibration. These arrangements will need to be discussed and agreed prior to the commencement of any work carried out on site.*

2.1.7 *The noise impact of any method of work should always be considered, and minimised where it is practicable to do so.*

2.2 Plant and equipment

2.2.1 *Noisy plant and equipment shall be situated as far as possible from noise-sensitive receptors.*

2.2.2 *Plant shall be maintained in good working order so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.*

2.2.3 *Temporary Electrical Supplies for building sites should be used wherever possible and as early as possible. Where not feasible, evidence of this may be required by Local Authorities.*

2.2.4 *Generators should only be used for emergencies or where mains power supply is not feasible. If use of a generator is unavoidable, these must comply with the London NRMM Low Emission Zone (see Section 4). Hybrid options should be considered to reduce engine running times. You should consult the local authority if you plan to use a generator continuously on a 24 hour basis.*

2.2.5 *Where practicable, emerging battery-powered, solar, hybrid and hydrogen technologies should be used in preference to diesel combustion engines, as they can significantly reduce both noise and air pollution arising from site.*

2.2.6 *Static machinery should be housed in a suitable acoustic lined enclosure or acoustic shed if situated in noise sensitive areas or operating at unsociable hours.*

2.2.7 *Barriers, such as site huts or partitions should be used to reduce noise reaching sensitive receptors wherever practicable. Additionally, old buildings around the site perimeter waiting to be demolished can provide effective noise screening. Spoil from site can be stored in bunds to further mitigate noise transmission.*

2.2.8 *Anti-idling principles should be adopted. Machines should be switched off when not in use.*

2.2.9 *Pneumatic tools should be fitted with mufflers or silencers of the type recommended by the manufacturers.*

2.2.10 *Equipment which breaks concrete, brickwork or masonry by bending, bursting, 'nibbling' or 'munching' shall be used in preference to percussive tools where practicable.*

2.2.11 Care should be taken to reduce noise when loading and unloading vehicles.

2.3 Piling

2.3.1 The noise sensitivity of the area should be considered when determining the method of piling to be used. The local authority should be consulted on the chosen method.

2.3.2 Sheet piling should, wherever practicable, be carried out using hydraulically operated or vibratory hammers. The use of conventional impact hammers should, wherever possible, be avoided.

2.3.3 Where surface contamination is present on site, appropriate piling techniques should be adopted to prevent the spread of any contamination.

2.3.4 Rapid Impact Compression techniques are extremely likely to generate complaints and are generally deemed to be unsuitable for the urban environment.

17.2 Vibration Monitoring

Carry out necessary assessments prior to the commencement of activities and monitor and control the exposure limits by following the required regulations. Subcontractors undertaking works that may generate noise or vibrations will be asked to provide an independent method statement in relation to their works (i.e. Piling contractor)

Construction work will be undertaken on site in line with the parameters set out within LBRuT Code of Construction Practice as shown in the section above.

17.3 Control of Dust

Both the main contractor's Health and Safety and environmental policies to be adhered to as well as measures specific in the construction stage health and safety plan.

We are committed to ensuring the effective control of construction dust on our site, in strict accordance with the Best Practice guidelines detailed within Health and Safety Executive (HSE) Construction Information Sheet CIS36. Our commitment includes the following measures:

Site Assessment:

We will conduct a thorough site assessment to identify and assess potential sources of dust emissions and associated hazards.

Dust Management Plan:

Based on the site assessment results, we will create a comprehensive Dust Management Plan that will outline specific measures tailored to our site's conditions.

Water Suppression:

Water suppression techniques, such as spraying or misting systems, will be used to reduce dust production during cutting, grinding, and demolition.

Enclosures and Barriers:

High-risk activities, such as indoor construction tasks, will be enclosed within barriers or screens to prevent dust from dispersing into the surroundings.

Local exhaust ventilation:

Where applicable, we will use local exhaust ventilation systems to capture dust at the source and keep it from spreading.

Personal Protective Equipment (PPE):

Workers involved in high-risk dust exposure activities will be outfitted with appropriate personal protective equipment, such as dust masks or respirators.

Equipment Selection:

Construction equipment that includes dust control mechanisms, such as water suppression systems and hoover attachments, will be used.

Training and awareness:

Workers will be thoroughly trained on the hazards of dust exposure as well as how to use control measures correctly. We will raise awareness about the importance of dust control on our construction site.

Good housekeeping practices:

We will encourage and enforce good housekeeping practices, such as regular cleaning of work areas, to reduce dust accumulation.

Work Schedules:

Construction activities will be scheduled to reduce high-risk dust-generating tasks during inclement weather, such as windy days.

Compliance with legislation:

On our construction site, we will strictly adhere to all applicable health and safety legislation and dust control regulations.

The following measures will also be implemented to ensure dust pollution is minimised:

- Ensure that all materials transported to and from site are in enclosed containers or fully sheeted.
- Ensure stockpiles of topsoil etc... are kept below hoarding heights and kept damp in dry windy conditions.
- During dry periods, the works will be dampened down to control the generation of dust, this will also include damping down when cutting Block, Brick or any other products that will generate excessive dust.
- Ensure that materials have a minimum of packaging.
- Ensure all polystyrene and similar lightweight materials are weighed down.
- Ensure all dust generating materials are adequately packaged.
- Keep the loading drop heights of spoil into Lorries as low as possible.

This commitment demonstrates our dedication to the health and safety of our employees, the community, and the environment. We will take proactive measures to control and reduce the impact of construction dust, demonstrating our adherence to the highest standards of safety and environmental responsibility.

We will implement the necessary steps to adhere to LBRuT's Code of Construction Practice which states the following in relation to Dust on construction sites as follows:

LBRuT's Code of Construction Practice: Section 3 Dust and Air Pollution

3.1 Dust Risk Assessment

3.1.1 Some sites will be required to adhere to a Dust Risk Assessment outlining formal dust control measures, agreed with the Local Authority through the planning process. This usually sits within the

site's Construction Environmental Management Plan (CEMP). Sites where there are no formal agreements in place should adhere to the principles in this Code.

3.1.2 Dust control measures should be proportional to risk, dependant on the proximity of receptors and their sensitivity, as well as the type, scale and duration of works. Detailed guidance on how to carry out a Dust Risk Assessment is available in the Mayor of London's Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance (2014).

3.1.3 The control of dust should be considered in any method of works, and dust emissions minimised wherever it is practicable to do so.

3.2 Dust suppression

3.2.1 Dust pollution should be minimised by the complete screening of the site where practicable, with debris screens, sheets or hoarding at least 2.4m in height. Shielding may not be required in areas where dusty activity is not taking place. Check with the Local Authority for their requirements for the erection of hoarding.

3.2.2 If debris is to be stockpiled on site, it must be covered and/or damped down, and should not protrude above site hoarding or dust shielding. Consider enclosing stockpiles or seeding where stockpiles are expected to stay on site for long durations.

3.2.3 Ensure that vehicles transporting dusty materials to and from site are adequately sheeted.

3.2.4 The handling of spoil should be kept to a minimum. Skips, chutes and conveyors should be completely covered to ensure that dust does not escape, and drop heights minimised to control the fall of materials.

3.2.5 Particularly dusty activities should be damped down and carried out as far from sensitive receptors as possible. Ideally, cutting, grinding and sawing should not be conducted on-site and especially not at height. Prefabricated material and modules should be brought in where possible. Some tools and machinery have dust suppression built in, and should be considered where available.

3.2.6 The chosen method of dust suppression should be proportional to the scale of the development. Dust suppression techniques can range from hosing down, through mist cannons and on to comprehensive site-wide systems.

3.2.7 These measures are also reflected in the Mayor of London's Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance (2014).

3.3 Track-out & run-off

3.3.1 The contractor shall ensure that the area around the site, including the public highway, is regularly sprayed and swept to prevent any accumulation of dust and dirt and to keep the surrounding area looking presentable.

3.3.2 Dusty areas must be damped down before being swept.

3.3.3 If possible only hard-standing surfaces should be used for haulage routes, and suitably located wheel wash facilities should be provided on larger sites. Drive-on wheel washing stations are the gold standard, but a manned jet wash is usually sufficient. If in doubt, consult your Local Authority on the method to be used.

3.3.4 Run-off from site can block local drainage, spread contaminants and later dry and turn into dust. Control measures need to be in place to prevent muddy/silty water running off site. Wheel wash areas should aim to capture or drain run-off water back onto site. The site or construction area should be bunded to prevent run-off and the spread of any contaminants to local waterways and sewers. COSHRegulations for the storage and use of hazardous substances must be complied with at all times.

3.3.5 Muddy sites must provide adequate boot washing facilities for staff.

3.4 Concrete batching

3.4.1 On-site concrete batching does not usually require a permit as a Part B process, but such activities should still follow best practice guidance. Notify the local authority if a concrete batcher is to be used on site and adopt appropriate control techniques identified in the Process Guidance note PG 3/01(12) Statutory guidance for blending, packing, loading, unloading and use of cement published by Defra and available on the GOV.UK website.

3.4.2 The batching process should be enclosed until mixing wherever possible, and aggregate stockpiles shielded from wind.

During the works, the above will be adhered to as well as any additional parameters set within LBRuT Code of Construction Practice as shown above and will be present within the site file for reference during the works.

Control of substances hazardous to health (COSHH)

A COSHH risk assessment is made where a substance may give rise to injury, disease or illness. The DHSW is responsible for them and ensuring they are kept up to date.

Hazardous substances are not to be used without a COSHH assessment having been carried out. Where a new substance is introduced the relevant COSHH assessment will be made, and the relevant training carried out.

Included as part of COSHH assessment are those relating to exposure to biological hazards e.g., Weil's disease, which may be encountered in the building.

Assessments will be used in the on-going training of employees who will be expected to become familiar with them.

Substances are grouped into assessments that require similar controls and precautions allowing for simplicity in understanding the requirements and in the issue and use of Personal Protective Equipment.

Non-Road Mobile Machinery (NRMM)

The engine emissions of Non-Road Mobile Machinery (NRMM) are controlled by EU Regulation and are required to meet emission Stage IIIB as a minimum for construction machinery operating in the Central Activities Zone and Stage IV as a minimum on all sites in the rest of London.

All Non-Road Mobile Machinery (NRMM) of net power of 37kW and up to and including 560kW used during the course of the demolition, site preparation and construction phases shall comply with the emission standards set out in chapter 7 of the GLA's supplementary planning guidance "Control of Dust and Emissions During Construction and Demolition" dated July 2014 (SPG), or subsequent guidance. Unless it complies with the standards set out in the SPG, no NRMM shall be on site, at any time, whether in use or not, without the prior written consent of the local planning authority.

Zone		
	GL	CAZ/OA
Variable speed	IIIB	IV*
Constant speed	V**	V**

(NRMM Practical Guide v.5, Current requirements)

We will implement the necessary steps to adhere to LBRuT's Code of Construction Practice which states the following in relation to NRMM on construction sites as follows:

Section 4 Non-Road Mobile Machinery (NRMM) Low Emission Zone

4.1 Scope

4.1.1 Non-Road Mobile Machinery (NRMM) is defined as any mobile machine or vehicle that is not solely intended for carrying passengers or goods on the road. Generally, this includes all machinery on site that is not a HGV, van or car, even those with road going registration plates, such as forklifts and dumpers, and those that are not self-propelled, such as generators and compressors.

4.1.2 The London NRMM emission standards only apply to machinery of net power between 37kW and 560kW.

4.1.3 Although the requirements do not apply to all sizes of machinery it is good practice to apply the same standard to all categories of NRMM. Stage V diesel machinery below 37kW is available, as well as electric, diesel hybrid and hydrogen alternatives.

4.1.4 Anti-idling principles should also be adopted for the air quality benefit, switching the engine off when the machine is not in use.

4.1.5 Alternatives to diesel-powered NRMM should be considered, including electric, hydrogen, and hybrid options.

4.1.6 To prevent unnecessary pollution, sites should be connected to mains or temporary power at the earliest opportunity to reduce the reliance on generators and other diesel machinery.

4.2 The requirements

4.2.1 Currently all NRMM on construction or demolition sites within Greater London are required to meet at least Emission Stage IIIB and NRMM on all sites within either the Central Activity Zone (CAZ) or Opportunity Areas (OAs) are required to meet at least Emission Stage IV.

4.2.2 All developments must register their site, on or prior to commencement, on the Mayor of London NRMM Register here: <https://www.london.gov.uk/what-we-do/environment/pollutionand-air-quality/nrmm>. Machine details must also be uploaded to this register, prior to or upon their arrival.

4.2.3 Compliance with these standards is the responsibility of the Principal Contractor.

4.2.4 Compliant equipment is not always readily available. In certain cases older fleet can be retrofitted with additional exhaust filters to bring them into compliance. Any retrofitted emission abatement systems must have appropriate approval from the Energy Savings Trust and reduce both NOx and PM emissions to the required levels where possible. A full list of approved products is available here: <https://energysavingtrust.org.uk/service/non-road-mobile-machinery>.

4.2.5 Where compliant equipment or retrofit are not possible, exemptions can be applied for through the NRMM Register. Exemption applications will often be required to include a written statement from the supplier detailing the reasons why compliant machinery cannot be provided. It is the suppliers responsibility to provide this justification, and the Principal Contractors responsibility to apply for the exemption.

4.2.6 Generators are only manufactured at Emission Stages II, IIIA and V. To be compliant with the NRMM Low Emission Zone you must therefore ask your suppliers for Stage V when bringing a generator to site. If you are unable to source a Stage V generator or equivalent retrofit, written justification must be provided by the supplier detailing the reasons why these options were not possible. If a Stage V generator is possible, it must be used. Cost is not an accepted justification for an exemption except in exceptional circumstances.

4.2.7 Exemptions are not guaranteed. Submitted evidence is reviewed on a case by case basis taking into account the nature of the request and supply at the time of the exemption request. It is advisable to check availability of compliant equipment with several suppliers.

18. Arboricultural Considerations

We are committed to successfully implementing arboricultural considerations on our site in accordance with British Standard 5837:2012. To ensure the health and vitality of the existing trees during the design, demolition, and construction phases, we will implement a comprehensive set of measures to protect their root systems. Our commitment includes, but is not limited to, the following.

Tree Protection Fencing:

We will install sturdy tree protection fencing around each tree to create distinct Tree Protection Areas (TPAs) and prevent encroachment during construction.

Signage:

Clear and visible signage will be installed on the tree protection fencing to communicate the designated construction-free zones and highlight the importance of tree preservation.

Ground Protection:

Measures such as protective mats or boards will be used to reduce soil compaction and disturbance around the trees' critical root zones.

Excavation Techniques:

To minimise the impact on tree roots, hand excavation or non-mechanical methods will be used in Root Protection Areas (RPAs).

Mulching:

We will use organic mulch in the TPAs to retain soil moisture, regulate soil temperature, and provide essential nutrients to the tree roots.

Avoidance of Soil Storage:

Strict adherence to guidelines prohibiting the storage of construction materials or soil within TPAs to avoid further compaction and root disturbance.

Construction platforms:

Elevated construction platforms or walkways will be designed and used with the goal of minimising soil compaction and tree root damage.

Utility Protection:

Protective measures will be put in place to protect tree roots during utility installation or maintenance, such as gas, water and electrical lines.

Topsoil Management:

Procedures will be developed for the careful removal, storage, and replacement of topsoil in order to preserve the soil quality around the trees.

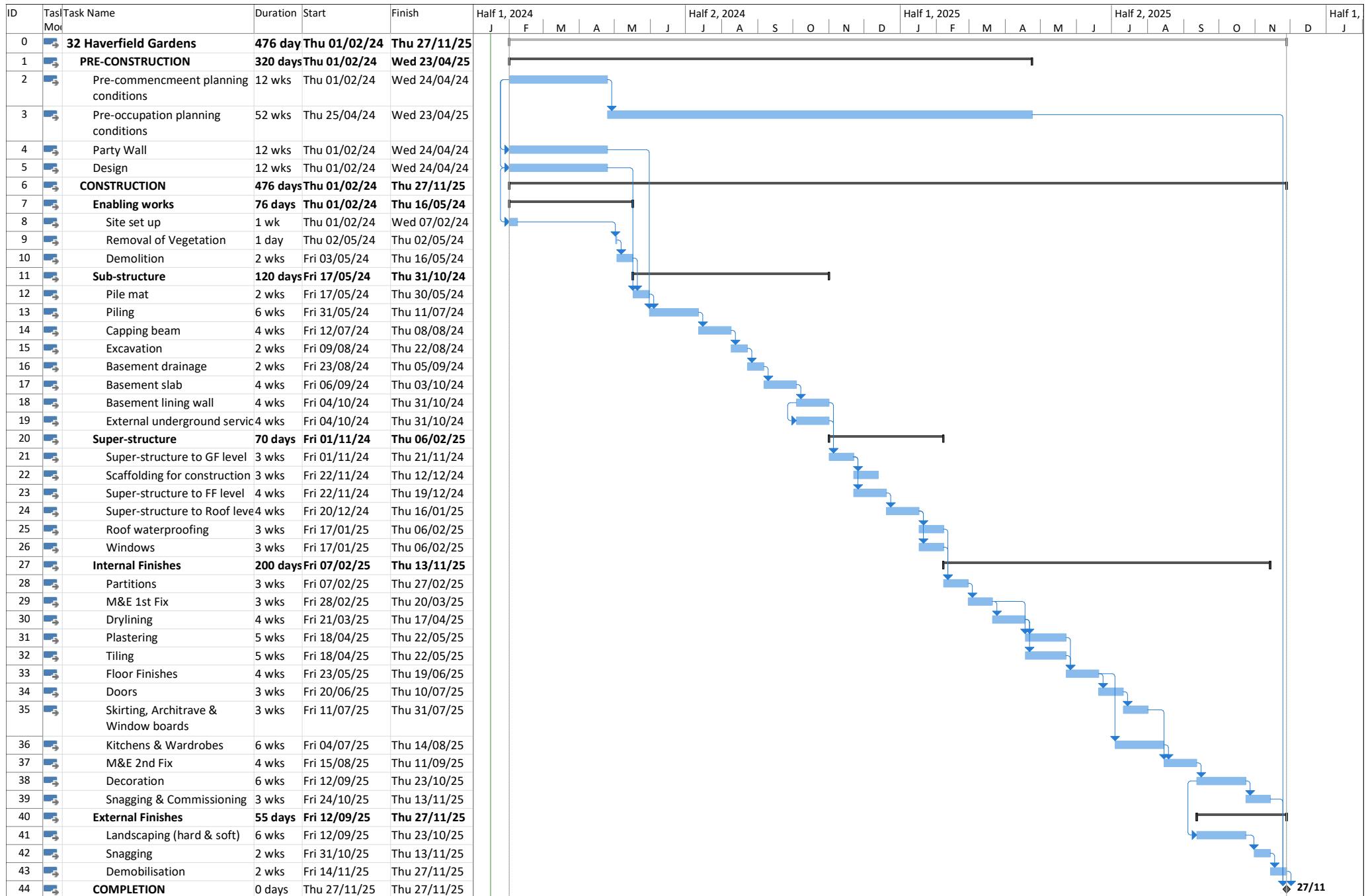
Construction Exclusion Zones:

A clearly marked construction exclusion zone will be established and strictly enforced to prevent heavy machinery and equipment from entering areas designated for tree protection.

Our commitment extends beyond the construction phase and includes post-construction activities. We will monitor soil compaction, establish a watering schedule during and after construction, and conduct regular post-construction inspections. Qualified arborists will be appointed to provide selective and selective pruning as needed, ensuring the continued health of the retained trees.

This commitment illustrates our dedication to environmental sustainability and responsible construction practices. We will encourage open communication and collaboration among all project stakeholders to ensure the successful implementation of these measures and the preservation of our site's valuable trees.

Appendix A – Programme



Appendix B – Swept Path Analysis



Notes

1. Contractors must verify all dimensions on site before commencing any work on shop drawings.
2. Do not scale from this drawing Kisiel Group copyright

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CODE	SUITABILITY DESCRIPTION
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Kisiel Group

PROJECT
32 Haverfield Gardens, Kew,
TW9 3DD

DRAWING TITLE

Swept path analysis (4.5T Light Van)

DRAWING NUMBER

PROJECT NUMBER - ORIGINATOR - ZONE - LEVEL - TYPE - DISCIPLINE - NUMBER

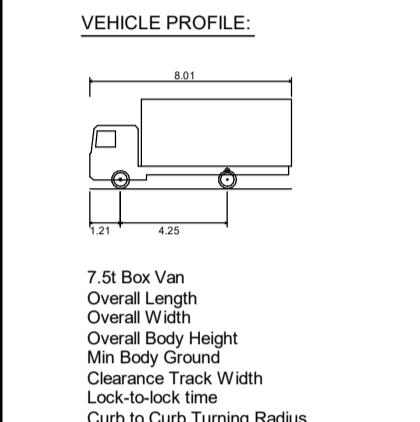
3265 - KIS - 1-5 - 0 - D - A - 0003	REV
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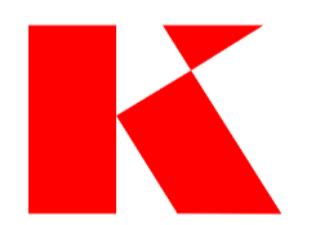
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PROJECT
32 Haverfield Gardens, Kew,
TW9 3DD
Project number
3265

DRAWING TITLE
Swept path analysis (7.5T Box Van)

Scale (@ A1) As indicated	Drawn by Author	Checked by Checker	Date 06/02/24
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DRAWING NUMBER
PROJECT NUMBER - ORIGINATOR - ZONE - LEVEL - TYPE - DISCIPLINE - NUMBER

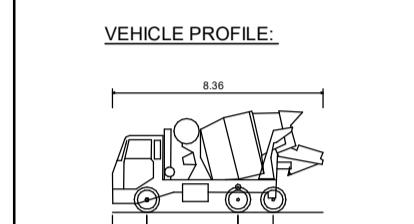
3265 - KIS - 1-5 - 0 - D - A - 0003-1



Notes

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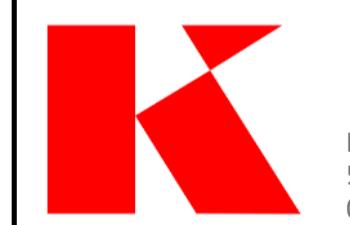
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Concrete Mixer	
Overall Length	8.360m
Overall Width	2.390m
Overall Body Height	4.027m
Min Body Ground	0.358m
Clearance Track Width	2.413m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	8.210m

CODE	SUITABILITY DESCRIPTION
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Project number
3265

DRAWING TITLE

Swept path analysis (Concrete mixer)

As indicated	Author	Checker	06/02/24
DRAWING NUMBER <small>PROJECT NUMBER, ORIGINATOR, ZONE, LEVEL, TYPE, DISCIPLINE, NUMBER</small>			

PROJECT NUMBER ORIGINATOR ZONE LEVEL TYPE DISCIPLINE NUMBER

Appendix C - Site Set Up



Notes

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PROJECT
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DRAWING TITLE

Site plan

DRAWING NUMBER
PROJECT NUMBER - ORIGINATOR - ZONE - LEVEL - TYPE - DISCIPLINE - NUMBER

09-02-2024 21:32:32