Draft Construction Management Plan
13 Netherall Gardens,
London NW3 5RN

Camden

Contents

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
19/08/2020	*1st Draft*	*Melanie de Wet*

Additional sheets

Please note – the review process will be quicker if these are submitted as Word documents or searchable PDFs.

Date	Version	Produced by

Introduction

The purpose of the **Construction Management Plan (CMP)** is to help developers to minimise construction impacts and relates to all construction activity both on and off site that impacts on the wider environment.

It is intended to be a live document whereby different stages will be completed and submitted for application as the development progresses.

The completed and signed CMP must address the way in which any impacts associated with the proposed works, and any cumulative impacts of other nearby construction sites, will be mitigated and managed. The level of detail required in a CMP will depend on the scale and nature of development. Further policy guidance is set out in Camden Planning Guidance **(CPG)** 6: Amenity and **(CPG)** 8: Planning Obligations.

This CMP follows the best practice guidelines as described in the Construction Logistics and Community Safety (**CLOCS**) Standard and the Guide for Contractors Working in Camden.

Camden charges a fee for the review and ongoing monitoring of CMPs. This is calculated on an individual basis according to the predicted officer time required to manage this process for a given site.

The approved contents of this CMP must be complied with unless otherwise agreed with the Council in writing. The project manager shall work with the Council to review this CMP if problems arise during construction. Any future revised plan must also be approved by the Council and complied with thereafter.

It should be noted that any agreed CMP does not prejudice or override the need to obtain any separate consents or approvals such as road closures or hoarding licences.

If your scheme involves any demolition, you need to make an application to the Council's Building Control Service. Please complete the "**Demolition Notice.**"

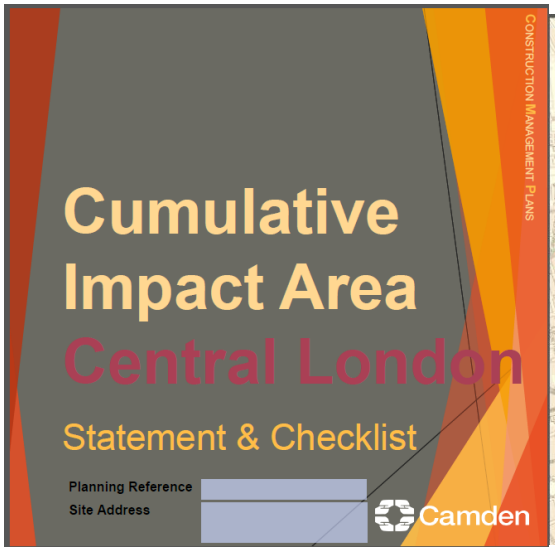
Please complete the questions below with additional sheets, drawings and plans as required. The boxes will expand to accommodate the information provided, so please provide as much information as is necessary. It is preferable if this document, and all additional documents, are completed electronically and submitted as Word files to allow comments to be easily documented. These should be clearly referenced/linked to from the CMP. Please only provide the information requested that is relevant to a particular section.

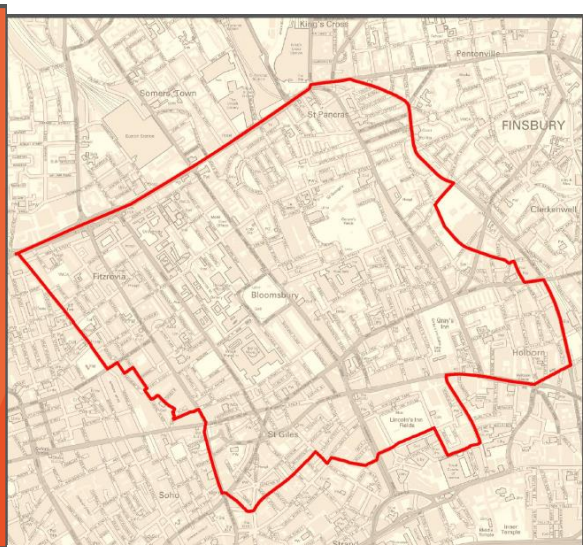
(Note the term 'vehicles' used in this document refers to all vehicles associated with the implementation of the development, e.g. demolition, site clearance, delivery of plant & materials, construction etc).

Revisions to this document may take place periodically.

IMPORTANT NOTICE: If your site falls within a Cumulative Impact Area *(as of 03/02/2020 to 03/08/2020 there is only one established CIA for the Central London area)* you are required to complete the CIA Checklist and circulate as an appendix to the CMP and included as part of any public consultation – a CMP submission will not be accepted until evidence of this has been supplied.

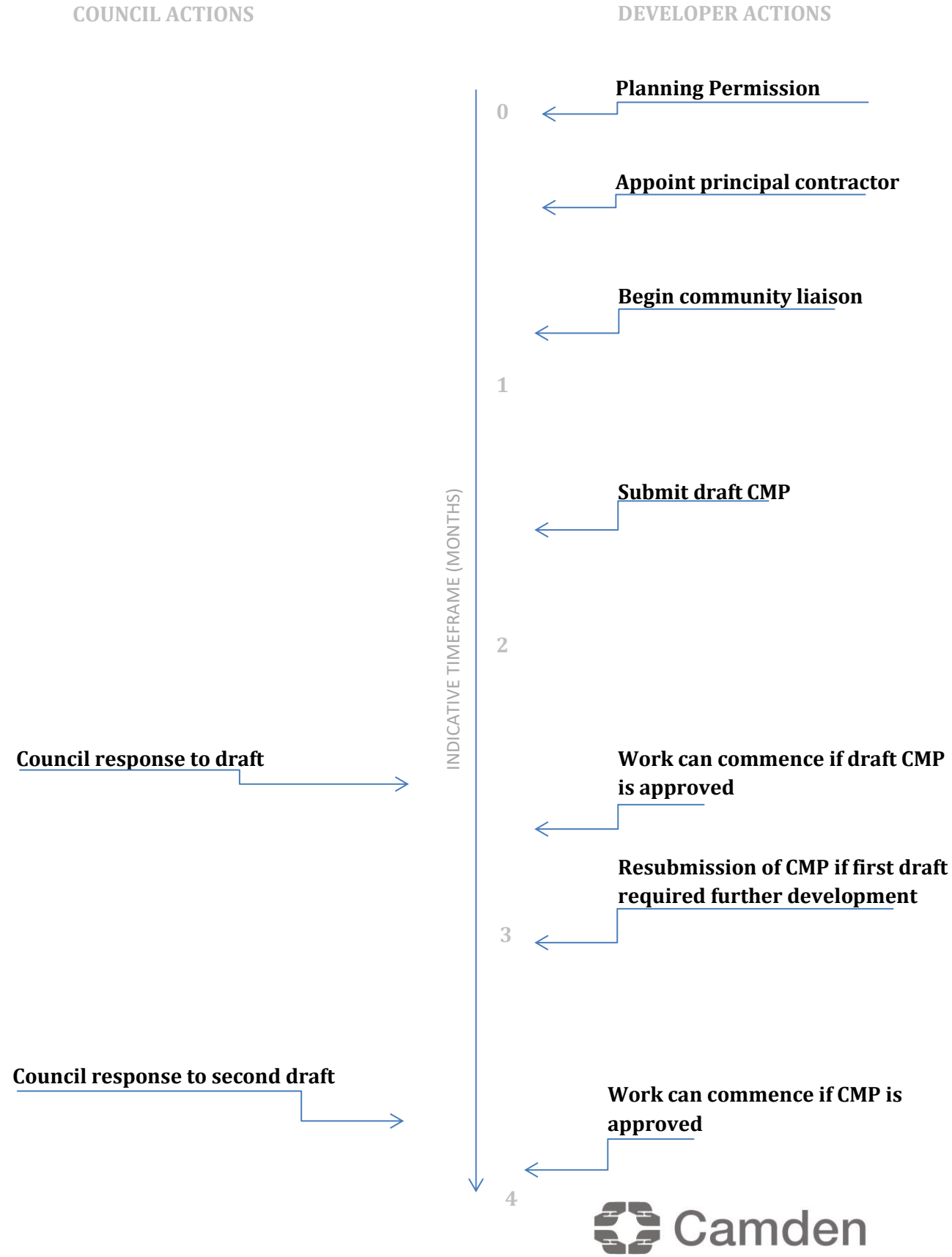
The CIA Checklist can be found at https://www.camden.gov.uk/about-construction-management-plans#sumf





Camden

Timeframe


COUNCIL ACTIONS
DEVELOPER ACTIONS
Planning Permission
0
Appoint principal contractor
Begin community liaison
1
Submit draft CMP
INDICATIVE TIMEFRAME (MONTHS)
2
Council response to draft
Work can commence if draft CMP is approved
Resubmission of CMP if first draft required further development
3
Council response to second draft
Work can commence if CMP is approved
4

Contact

1. Please provide the full postal address of the site and the planning reference relating to the construction works.

Address: 13 Netherhall Gardens,

London

NW3 5RN

Planning reference number to which the CMP applies will be added in due course.

2. Please provide contact details for the person responsible for submitting the CMP.

Melanie de Wet, Associate Director, Elliott Wood

3. Please provide full contact details of the site project manager responsible for day-to-day management of the works and dealing with any complaints from local residents and businesses.

The site project manager responsible for day-to-day management of the works is currently unknown but will be provided in due course.

4. Please provide full contact details of the person responsible for community liaison and dealing with any complaints from local residents and businesses if different from question 3. In the case of Community Investment Programme (CIP), please provide contact details of the Camden officer responsible.

We will add the details of the person responsible for community liaison once agreed.

5. Please provide full contact details including the address where the main contractor accepts receipt of legal documents for the person responsible for the implementation of the CMP.

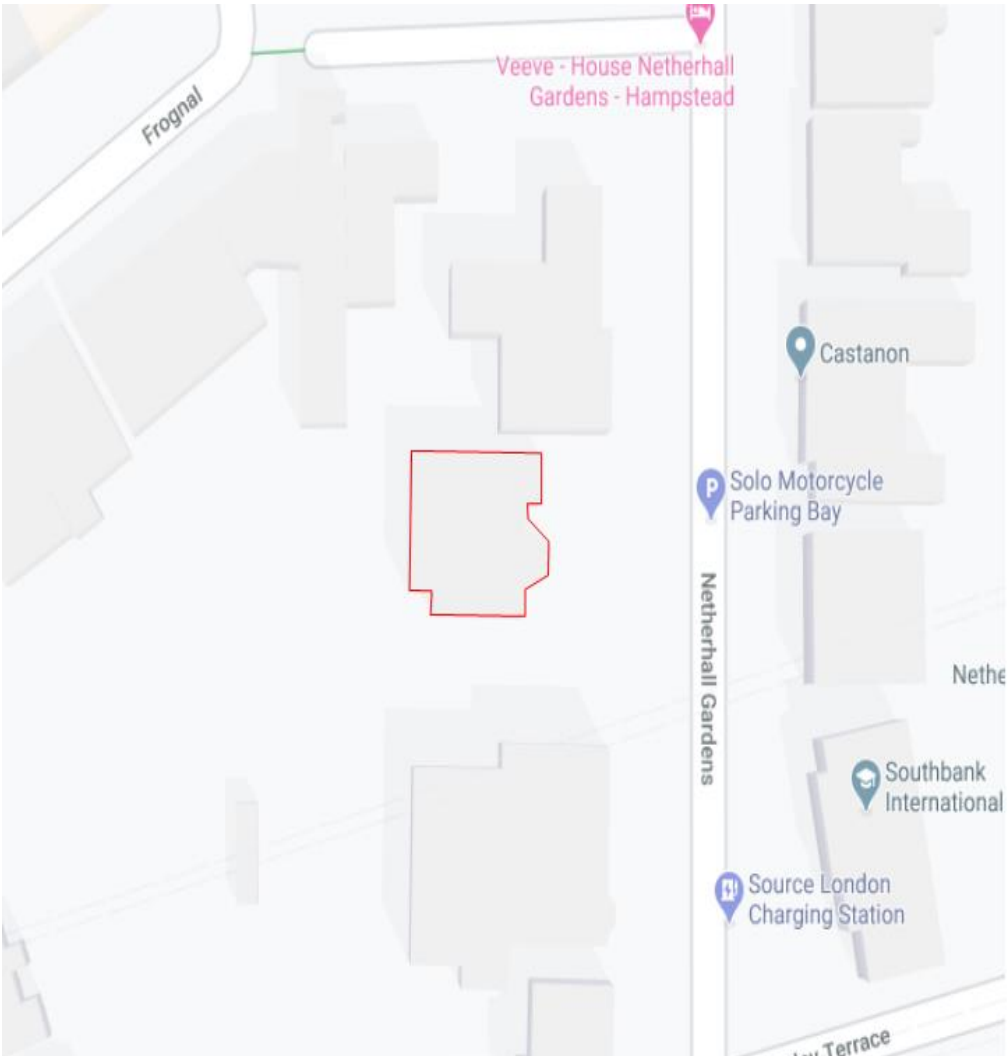
The site project manager responsible for day-to-day management of the works is currently not known but will be provided in due course.

Site

6. Please provide a site location plan and a brief description of the site, surrounding area and development proposals for which the CMP applies.

This document has been prepared by the Elliott Wood Partnership Limited under the instruction of our client Re – Creo to produce a Construction Management Plan (CMP) for the proposed residential development at 13 Netherall Gardens, London, NW3 5RN. See Site Location plan below.

The development is located on the west side of Netherall Gardens, in the London Borough of Camden, at OS grid reference 526348E:184988N. It is within a predominantly residential area and has existing residential properties or their gardens on three sides. Netherhall Gardens itself runs along the east boundary. The development site is approximately 0.13 hectares



Current

The Site is located at 13 Netherhall Gardens in Hampstead and comprises an existing 19th Century residential building, which is known as Elm Tree House. The immediate area is residential in character, with substantial Victorian houses and some modern buildings.

To the south of the Site is Samara Mansions, which is a new-build four-storey building comprising residential flats that was completed in 2013. Samara Mansions also fronts onto Netherhall Gardens, with soft landscaped communal open space located to the rear of the building.

To the north of the Site is Imperial Towers, which is a residential building ranging in height from five to six storeys. Imperial Towers sits at a ground level, which is approximately 3.5 metres below the existing ground level along the northern boundary of the Site. Imperial Towers comprises 21 no. residential units. Imperial Towers may be accessed from its northern boundary along Netherhall Gardens or from its western boundary along Netherhall Way.

Also located to the north of the Site, and to the west of Imperial Towers, is a smaller three-storey residential block, which comprises 22 – 27 Netherhall Way. To the northwest of the Site is a residential block, which is known as 10-12 Frognall. The building fronts onto public highway referred to as Frognall and comprises 15 no. residential units. The rear gardens of 10-12 Frognall run adjacent to the western boundary of the Site and sit at lower level to the existing ground level of the Site.

Elm Tree House can be described as a three-storey building when viewed from the front of the Site, with additional residential accommodation at roof level and a lower ground floor level which opens onto the garden to the rear of the property. The building is set back from the street frontage at Netherhall Gardens and the front façade of the building sits behind the building line of the neighbouring buildings at Samara Mansions and Imperial Towers.

The Site, as located within the red line boundary for this application comprises an area of 0.13 hectares. The existing building comprises a gross internal floorspace of 896 sqm. The existing building contains 8 no. flats and is a single planning unit with a use class of C3. The lower ground floor level, which forms part of this application, comprises a single residential flat.

The Site is characterised by a sloped gradient that drops away towards the north-west (rear boundary) of the Site. This means that the existing lower ground floor level opens onto ground level at the rear of the building and sits at a level that is at least a full storey higher than the ground floor of Imperial Towers to the north.

Elm Tree House is in significant state of decline, both internally and externally, with a number of structural defects evident in the brickwork. The building is currently in a dangerous state and an Improvement Notice was issued. The building requires extensive works to return it to a habitable state.

The Site includes a communal garden which is currently in a derelict and overgrown state and requires a significant level of enhancement to enable it to function as useable open space. Within the rear garden, there is an old air raid shelter from the Second World War.

Development Proposals

The proposed development comprises the extension and reconfiguration of the lower ground floor, the construction of a new basement level, external soft landscaping and planting, and associated works.

The proposed development relates to the existing lower ground floor which would be extended and the construction of a new basement level. The development would comprise 4 no. residential flats (Use Class C3). Given that the existing lower ground floor level currently comprises 1 no. flat, the proposed development would represent a net increase of 3 no. flats within the building. The 4 no. flats would include the following mix:

- ***1 no. one-bedroom unit;***
- ***2 no. two-bedroom units;***
- ***1 no. three-bedroom unit.***

It is proposed to extend the footprint of the lower ground floor level to the east and south in order to optimise the use of the building and provide an additional residential unit and cycle parking. The extension will allow for an increase in the size of the existing one-bedroom flat to provide an additional two bedrooms, thereby creating a three-bedroom flat. A one-bedroom flat is also proposed within the extended area to the south. It is proposed to construct a basement level comprising 2 no. residential flats, consisting of 1 no. three-bedroom unit and 1 no. two-bedroom unit.

The proposed basement level flats will be provided with private outdoor amenity space in the form of large terraces with a separating wall to safeguard privacy. Beyond the terraces to the west, the Site will be landscaped incorporate significant planting. It is proposed that the western portion of the Site will function as communal open space for Elm Tree House.

The existing site already includes surface car parking on the eastern and southern sides of the existing building, with the 10 no. spaces serving the 8 no. flats in the existing building. No additional parking is proposed for the lower ground and basement extensions.

The CMP has been produced in line with the Camden Borough Council guidance on the production of Construction Management Plans and, indeed this document follows the borough's pro forma for the development of all CMPs.

7. Please provide a very brief description of the construction works including the size and nature of the development and details of the main issues and challenges (e.g. narrow streets, close proximity to residential dwellings etc).

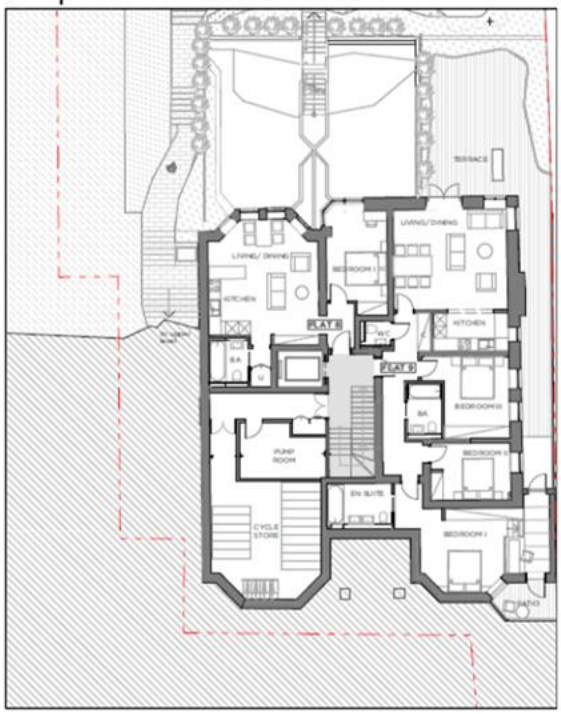
The development site comprises of an area of approximately 0.13 hectares. The proposed works involve underpinning the existing five storey building and creating a lower ground floor towards the front of the building and forming a new single storey basement and terrace towards the rear. There will be a number of internal alterations to the existing house and some structural repair in areas where the existing building has fallen into dis-repair over a period of time.

The lower ground floor level will be extended to the east and south. The existing one-bed unit will be extended to provide a three-bedroom flat and the extension to the south will house a new one-bedroom unit. The lower ground floor extension also includes the construction of a secure cycle storage area within the building which will provide a total of 20 no. cycle parking spaces. A proposed new basement level is also proposed comprising 2 no. residential flats, both of which would be two-bedroom units. Both flats will have private terraces. The proposed lower ground floor and basement levels are shown below.

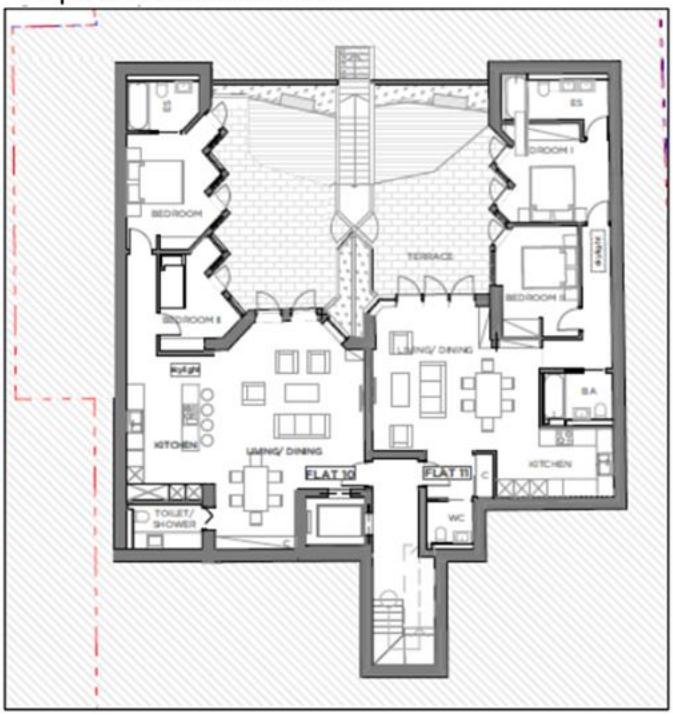
One of the main challenges for construction is the access route to the site, along local residential streets and passing a number of schools. Construction traffic will be managed to avoid school drop-off and collection times and adhere to restrictions on local roads. Restriction turning space on site will require on-street car parking to be temporary

There is a TPO that needs to be avoided and car parking on site to be retained. The car parking will not be in use during construction, thus will be used for construction vehicle access. The existing crossovers will however need to be widened to accommodate construction vehicles.

Proposed Lower Ground Level



Proposed Basement Level



8. Please provide the proposed start and end dates for each phase of construction as well as an overall programme timescale. (A Gantt chart with key tasks, durations and milestones would be ideal).

Work on proposed development will start following grant of planning permission (estimated to be spring 2022) and be undertaken in three consecutive phases:

Site Setup and demolition – Duration 6 weeks

Substructure and superstructure works – Duration 26 weeks

Fit out and external works – Duration 26 weeks

We will provide a more detailed programme once planning permission is secured and a Principal Contractor is appointed but the construction programme is estimated to be approximately 58 weeks.

9. Please confirm the standard working hours for the site, noting that the standard working hours for construction sites in Camden are as follows:

- 8.00am to 6pm on Monday to Friday
- 8.00am to 1.00pm on Saturdays
- No working on Sundays or Public Holidays

Standard working hours for the site are in line with the standard working hours for construction sites in Camden.

Community Liaison

A neighbourhood consultation process must have been undertaken prior to submission of the CMP first draft.

This consultation must relate to construction impacts and should take place following the granting of planning permission in the lead up to the submission of the CMP. A consultation process specifically relating to construction impacts must take place regardless of any prior consultations relating to planning matters. This consultation must include all of those individuals that stand to be affected by the proposed construction works. These individuals should be provided with a copy of the draft CMP, or a link to an online document. They should be given adequate time with which to respond to the draft CMP, and any subsequent amended drafts. Contact details which include a phone number and email address of the site manager should also be provided.

Significant time savings can be made by running an effective neighbourhood consultation process. This must be undertaken in the spirit of cooperation rather than one that is dictatorial and unsympathetic to the wellbeing of local residents and businesses.

These are most effective when initiated as early as possible and conducted in a manner that involves the local community. Involving locals in the discussion and decision-making process helps with their understanding of what is being proposed in terms of the development process. **The consultation and discussion process should have already started, with the results incorporated into the CMP first draft submitted to the Council for discussion and sign off.** This communication should then be ongoing during the works, with neighbours and any community liaison groups being regularly updated with programmed works and any changes that may occur due to unforeseen circumstances through newsletters, emails and meetings.

Please note that for larger sites, details of a construction working group may be required as a separate S106 obligation. If this is necessary, it will be set out in the S106 Agreement as a separate requirement on the developer.

Cumulative impact

Sites located within high concentrations of construction activity that will attract large numbers of vehicle movements and/or generate significant sustained noise levels should consider establishing contact with other sites in the vicinity in order to manage these impacts.

The Council can advise on this if necessary.

10. Sensitive/affected receptors

Please identify the nearest potential receptors (dwellings, business, etc.) likely to be affected by the activities on site (i.e. noise, vibration, dust, fumes, lighting etc.).

The neighbouring residential properties at 11 and 17 Netherhall Gardens will be the nearest effected properties with regards to noise, vibration, dust and lighting. The residential property of number 15 Netherall Gardens, directly opposite the site, will primarily be impacted by the noise and construction traffic movements. Every effort will be made to minimise the impact of construction at the site on neighbouring properties.

11. Consultation

The Council expects meaningful consultation. For large sites, this may mean two or more meetings with local residents **prior to submission of the first draft CMP**.

Evidence of who was consulted, how the consultation was conducted, and a summary of the comments received in response to the consultation should be included. Details of meetings including minutes, lists of attendees etc. should be appended.

In response to the comments received, the CMP should then be amended where appropriate and, where not appropriate, a reason given. The revised CMP should also include a list of all the comments received. Developers are advised to check proposed approaches to consultation with the Council before carrying them out. If your site is on the boundary between boroughs, then we would recommend contacting the relevant neighbouring planning authority.

Please provide details of consultation of draft CMP with local residents, businesses, local groups (e.g. residents/tenants and business associations) and Ward Councillors.

The appointed Project Manager, once appointed, will act as a point of contact between residents and the local council so that in the event of issues / concerns arising during the construction process, action can be taken as quickly as possible.

We will adopt a policy of open and honest communication. Before the works commence on site a Newsletter will be delivered to the local businesses and residents surrounding the site. A pre-start meeting with local residents, schools and businesses will be arranged and will give people the opportunity to raise concerns.

A copy of this CMP will be made available on request.

Regular updates to local residents will be issued.

Information boards will be displayed on the site hoarding which will highlight the key personnel on site including their contact details.

12. Construction Working Group

For particularly sensitive/contentious sites, or sites located in areas where there are high levels of construction activity, it may be necessary to set up a construction working group.

If so, please provide details of the group that will be set up, the contact details of the person responsible for community liaison and how this will be advertised to the local community, and how the community will be updated on the upcoming works i.e. in the form of a newsletter/letter drop, or weekly drop in sessions for residents.

A construction working group will be set up to liaise with local residents and Camden Borough Council.

The appointed Project Manager, once appointed, will act as a point of contact in the event of issues / concerns arising during the construction process.

The appointed Project Manager from the Principal Contractor will ensure that local residents and businesses are informed in advance of works taking place and answer any queries or concerns related to the works. They will inform them of any expected temporary or permanent disruptions, noisy or dusty working and will explain the measures being taken to mitigate the impact of these works.

13. Schemes

Please provide details of your Considerate Constructors Scheme (CCS) registration. Please note that Camden requires enhanced CCS registration that includes CLOCS monitoring. Please provide a CCS registration number that is specific to the above site.

Contractors will also be required to follow the Guide for Contractors Working in Camden. Please confirm that you have read and understood this, and that you agree to abide by it.

The contractors will be registered with the Considerate Constructors Scheme. However, they will also be required to confirm that they have read and understood the above guide.

We will provide photographic evidence of registration details in due course as proof of this.

14. Neighbouring sites

Please provide a plan of existing or anticipated construction sites in the local area and please state how your CMP takes into consideration and mitigates the cumulative impacts of construction in the vicinity of the site. The council can advise on this if necessary.

We are not aware of any existing or anticipated construction sites that would compromise the works at 13 Netherall Gardens, London, NW3 5RN.

Transport

This section must be completed in conjunction with your principal contractor. If one is not yet assigned, please leave the relevant sections blank until such time when one has been appointed.

Camden is a CLOCS Champion, and is committed to maximising road safety for Vulnerable Road Users (VRUs) as well as minimising negative environmental impacts created by motorised road traffic. As such, all vehicles and their drivers servicing construction sites within the borough are bound by the conditions laid out in the CLOCS Standard.

This section requires details of the way in which you intend to manage traffic servicing your site, including your road safety obligations with regard to VRU safety. It is your responsibility to ensure that your principal contractor is fully compliant with the terms laid out in the CLOCS Standard. It is your principal contractor's responsibility to ensure that all contractors and sub-contractors attending site are compliant with the terms laid out in the CLOCS Standard.

Checks of the proposed measures will be carried out by CCS monitors as part of your enhanced CCS site registration, and possibly council officers, to ensure compliance. Please refer to the CLOCS Standard when completing this section.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

CLOCS Contractual Considerations

15. Name of Principal contractor:

To be confirmed once appointed

16. Please submit the proposed method for checking operational, vehicle and driver compliance with the CLOCS Standard throughout the duration of the contract (please refer to our CLOCS Overview document and Q18 example response).

The requirement to abide by the CLOCS Standard will be included in all contracts with contractors and suppliers.

All vehicles arriving at the site will be FORS registered and will adhere to the CLOCS standard. All Delivery companies will complete Camden's self-assessment form.

Contracts FORS Bronze accreditation as a minimum will be a contractual requirement, FORS Silver or Gold operators will be appointed, where possible.

Where FORS Bronze operators are appointed, written assurance will be sought from contractors that all vehicles over 3.5t are equipped with additional safety equipment (as per CLOCS Standard P13), and that all drivers servicing the site will have undertaken approved additional training.

CLOCS Compliance will be included as a contractual requirement. Checks will be made against the FORS database of trained drivers and accredited companies as outlined in the CLOCS Standard Managing Supplier Compliance guide. These will be carried out as per a risk scale based on that outlined in the CLOCS Managing Supplier Compliance guide. Site checks of FORS ID numbers will form part of the periodic checks and will be carried out as per an appropriate risk scale Random spot checks will be carried out by site staff on vehicles and drivers servicing the site at a frequency based on the afore mentioned risk scale.

These will include evidence of further training, license checks, evidence of routing information, and checks of vehicle safety equipment. Results from these checks will be logged and retained and enforced upon accordingly. Where the contractors own vehicles and drivers are used the above approach will be modified accordingly. Collision reporting data will be requested from operators and acted upon when necessary.

We will provide details of a risk assessed vehicle route to all contractors and drivers. We will regularly check that this is being used.

We will ask contractors and any other service suppliers to use these routes at all times unless unavoidable diversions occur, and we will provide regular reminders to this affect.

17. Please confirm that you as the client/developer and your principal contractor have read and understood the CLOCS Standard and included it in your contracts.

I confirm that I have included the requirement to abide by the CLOCS Standard in my contracts to my contractors and suppliers:

We can confirm that the developer has read and understood the CLOCS standards. The Principal Contractor, once appointed, will be required to read and confirm understanding of the CLOCS standards.

We can also confirm that the requirement to abide by the CLOCS Standard has been included in all contracts with the contractors and suppliers.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Site Traffic

Sections below shown in blue directly reference the CLOCS Standard requirements. The CLOCS Standard should be read in conjunction with this section.

18. Traffic routing: *"Clients shall ensure that a suitable, risk assessed vehicle route to the site is specified and that the route is communicated to all contractors and drivers. Clients shall make contractors and any other service suppliers aware that they are to use these routes at all times unless unavoidable diversions occur."* (P19, 3.4.5)

Routes should be carefully considered and risk assessed, taking into account the need to avoid where possible any major cycle routes and trip generators such as schools, offices, stations, public buildings, museums etc.

Consideration should also be given to weight restrictions, low bridges and cumulative impacts of construction (including neighbouring construction sites) on the public highway network. The route(s) to and from the site should be suitable for the size of vehicles that are to be used.

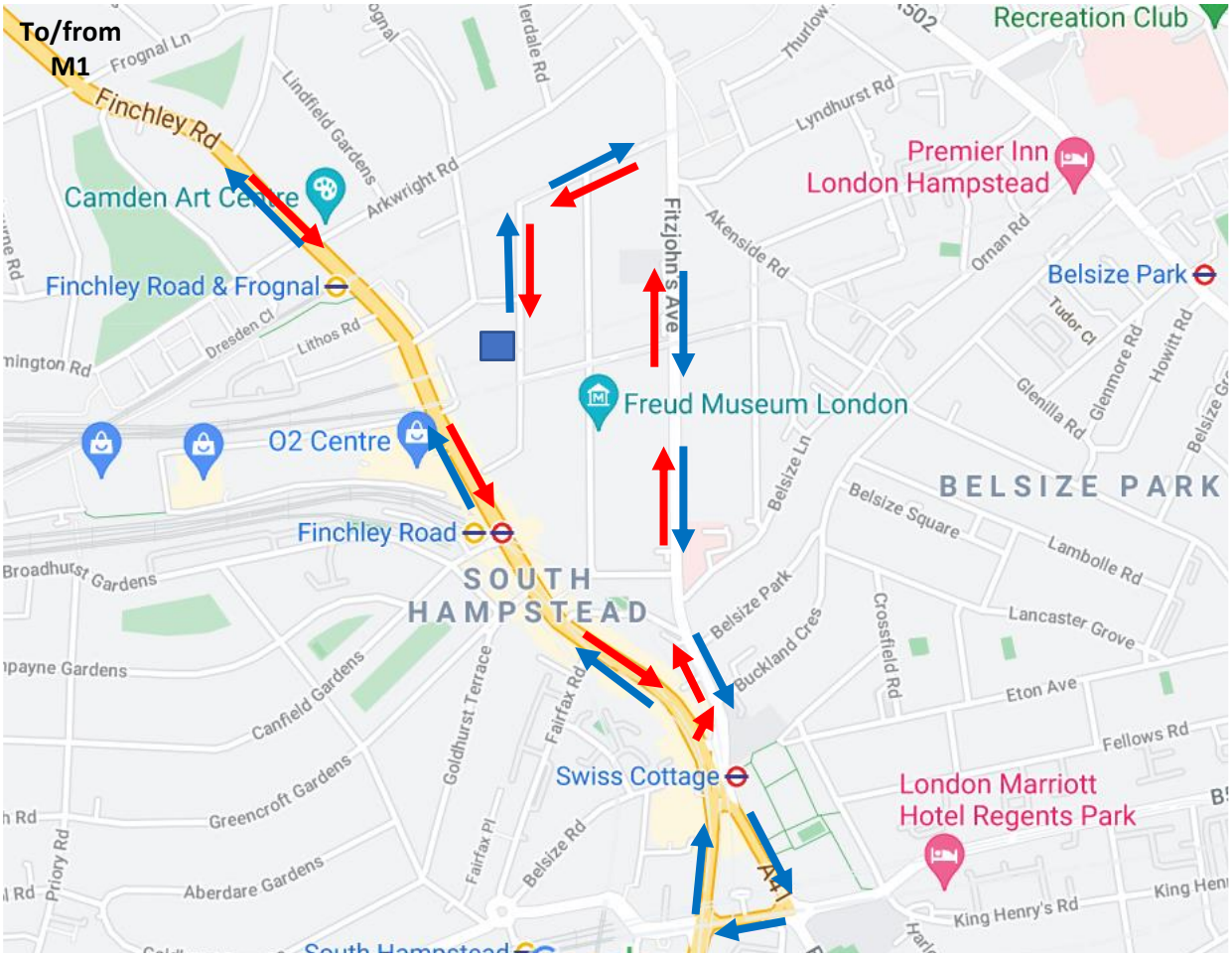
Please show vehicle approach and departure routes between the site and the Transport for London Road Network (TLRN). Please note that routes may differ for articulated and rigid HGVs.

Routes should be shown clearly on a map, with approach and departure routes clearly marked. If this is attached, use the following space to reference its location in the appendices.

We recommend that all traffic comes off the A41 Finchley Road and turns north onto the B511 College Crescent at Swiss Cottage Station, which then becomes Fitzjohn's Avenue. Construction traffic can then use Netherhall Gardens to access/egress the sit. Construction vehicles will turn round at the site and return to the A41 in the opposite direction. The A41 forms part of the Transport for London Road Network (TRLRN) and is part of the strategic highway which connects central London to the south via the A1 and via the M1 to the north.

The roads off the A41 are largely residential roads with some schools. They are all approximately 7m wide with parking.

Please see the suggested construction access/egress route below for agreement:



b. Please confirm how contractors and delivery companies will be made aware of the route (to and from the site) and of any on-site restrictions, prior to undertaking journeys.

The route for deliveries will be sent to all companies before they are due to arrive.

Furthermore, the contractor will display access routes on-site by the site gates. 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 at their weekly or fortnightly meetings and must book delivery slots with our traffic controller. "Just in Time" scheduling of deliveries, where possible, will minimise storage capacity required, double handling and congestion around the site. Restricted delivery times based around the local school times will be discussed and detailed with all suppliers and contractors.

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 to particular trades. Detailed plans of the site will be drawn up outlining areas available for moving and storing materials during the various stages of the contract.

19. Control of site traffic, particularly at peak hours: *"Clients shall consider other options to plan and control vehicles and reduce peak hour deliveries"* (P20, 3.4.6)

Construction vehicle movements should be restricted to the hours of 9.30am to 4.30pm on weekdays and between 8.00am and 1.00pm on Saturdays. If there is a school in the vicinity of the site or on the proposed access and/or egress routes, then deliveries must be restricted to the hours of 9.30am and 3pm on weekdays during term time.

Vehicles may be permitted to arrive at site at 8.00am if they can be accommodated on site. Where this is the case they must then wait with their engines switched off.

A delivery plan should ensure that deliveries arrive at the correct part of site at the correct time. Instructions explaining such a plan should be sent to all suppliers and contractors**.**

Please provide details of the types of vehicles required to service the site and the approximate number of deliveries per day for each vehicle type during the various phases of the project.

For Example:
32t Tipper: 10 deliveries/day during first 4 weeks
Skip loader: 2 deliveries/week during first 10 weeks
Artic: plant and tower crane delivery at start of project, 1 delivery/day during main construction phase project
18t flatbed: 2 deliveries/week for duration of project
3.5t van: 2 deliveries/day for duration of project

b. Cumulative affects of construction traffic servicing multiple sites should be minimised

An estimate of the construction vehicles per construction phase will be provided by the principal contractor once appointed. It is however anticipated that the following construction vehicles will access the site:

- ***32t Tipper***
- ***Skip loader***
- ***Cement mixer***
- ***18t flatbed truck***
- ***3.5t vans***

Netherhall Gardens and the roads leading to the site are predominantly residential roads which are approximately 7 metres wide outside the site. The contractor will provide trained and qualified traffic marshals, zig zag barrier will be deployed to protect pedestrian and cyclist when vehicles are being directed by the traffic marshals.

Contractors and suppliers are required to notify the Site Logistics Co-ordinator to agree delivery dates and times based around the peak time restrictions such as school pick up and drop off times.

Due to the extent of works it is envisaged the most essential vehicles will be concrete lorries during large concrete pour and 32t Tippers (muck away lorries) during the bulk excavation. The latter will be naturally restricted due to the turn round times of early loading and the journey to and from the selected landfill site. Any abnormal loads to be delivered will be notified in advance to the Local Authorities.

Suppliers and subcontractors will be notified in advance of the desired location for delivery. Specific traffic maps and rules indicating the required traffic route with peak delivery restriction times clearly printed on the maps, these will be included in all subcontractors and suppliers orders. All site traffic will be directed to Site entrance by use of directional signage and a qualified traffic marshal.

We currently envisage construction traffic to access and egress the site between 9.30am - 3.00pm Monday to Friday to avoid school hours during terms times and 8.00am-1.00pm on Saturdays. During school holidays construction vehicles will access the site between 9.30am and 4.30pm and 8.00am-1.00pm on Saturdays. The times will be monitored, and adjustments made, if required.

All deliveries will be allocated delivery time slots of 1 hour. All deliveries to site will be scheduled by the Site Logistics Co-ordinator and any unscheduled or non-agreed deliveries will be turned away. Site management will take necessary action against any defaulting contractors or suppliers to ensure corrective action plans are put in place and implemented to ensure there is no further default.

b. where possible. Please provide details of other developments in the local area or on the route that might require deliveries coordination between two or more sites. This is particularly relevant for sites in very constrained locations.

We are not aware of any existing or anticipated construction sites that would compromise the works at 13 Netherall Gardens, London, NW3 5RN. Camden Council are to advise if they are aware of any construction sites near the site. No co-ordination is therefore necessary, but should we become aware of any then we would work with the contractors at those developments, as appropriate.

c. Please provide swept path analyses for constrained manoeuvres along the proposed route.

We are not proposing a route that requires any constrained manoeuvres. However, we have provided swept path analysis for the larger vehicles at the site. This includes a 32t Tipper and concrete mixer. Please refer to the attached swept path analysis at Appendix 1.

d. Consideration should be given to the location of any necessary holding areas/waiting points for sites that can only accommodate one vehicle at a time/sites that are expected to receive large numbers of deliveries. Vehicles must not queue or circulate on the public highway. Whilst deliveries should be given set times to arrive, dwell and depart, no undue time pressures should be placed upon the driver at any time.

Please identify the locations of any off-site holding areas or waiting points. This can be a section of single yellow line that will allow the vehicle to wait to phone the site to check that the delivery can be accommodated.

Please refer to question 24 if any parking bay suspensions will be required to provide a holding area.

It is anticipated that a holding area will not be required. Vehicles to site will be scheduled by the Contractor to avoid large numbers of vehicles arriving at the same time. If vehicles are required to wait then this will be in a holding area outside the Borough.

e. Delivery numbers should be minimised where possible. Please investigate the use of construction material consolidation centres, and/or delivery by water/rail if appropriate.

We will ensure that deliveries are minimised as far as reasonably practical. A central hub will be set up for the delivery of materials in advance of a forward journey to the site. A fleet of further larger vehicles will then transport the materials to the site thereby reducing the number of site visits during any one day.

This will reduce the overall amount of CO2 emissions locally and also reduces the amount of vehicles arriving at the site ensuring the safety of, and disruption to, road users is kept to a minimum.

f. Emissions from engine idling should be minimised where possible. Please provide details of measures that will be taken to reduce delivery vehicle engine idling, both on and off site (this does not apply to concrete mixers).

The contractor and his subcontractor will adopt 'green fleet' management practises in the operation of the site construction plant and the road licenced vehicles servicing the site.

All equipment and vehicles will comply with Euro 6 emissions regulations.

Contractors will be required to prove that they are taking measures to further reduce the carbon emissions of any vehicles coming to the development and will be expected to adopt the practises of the Safe Fuel-Efficient Driving Scheme (SAFED).

20. Site access and egress: "*Clients shall ensure that access to and egress from the site is appropriately managed, clearly marked, understood and clear of obstacles."* (P18, 3.4.3)

This section is only relevant where vehicles will be entering the site. Where vehicles are to load from the highway, please skip this section and refer to Q23.

Vehicles entering and leaving the site should be carefully managed, using gates that are clearly marked and free from obstacles. Traffic marshals must ensure the safe passage of all traffic on the public highway, in particular pedestrians and cyclists, when vehicles are entering and leaving site, particularly if reversing.

Traffic marshals, or site staff acting as traffic marshals, should hold the relevant qualifications required for directing large vehicles when reversing. Marshals should be equipped with 'STOP – WORKS' signs (<u>not</u> STOP/GO signs) if control of traffic on the public highway is required. Marshals should have radio contact with one another where necessary.

a. Please detail the proposed site access and egress points on a map or diagram. If this is attached, use the following space to reference its location in the appendices.

All traffic will enter and exit the site at the front of the property from Netherhall Gardens. Swept path analysis of a concrete mixer and 32t Tipper are provided at Appendix 1.

Two options to access and egress the site are provided. The 32t Tipper would be required to reverse into the site using either the northern or southern gate for muck away during the basement construction. Egress would be in a forward gear. Suitably trained Traffic Marshalls will control access and egress movements to/from the site.

The cement mixer and smaller vehicles would be able to access and egress the site using the northern and southern entrance or from either access (details to be agreed with Camden Council and the Principal Contractor). Access to the site will require local widening works at the site access(es) to accommodate the large vehicles. The turning manoeuvres to and from the site will require on-street car parking fronting the site to be suspended.

b. Please describe how the access and egress arrangements for construction vehicles in and out of the site will be managed, including the number and location of traffic marshals where applicable. If this is shown in an attached drawing, use the following space to reference its location in the appendices.

All traffic will be managed by a Logistics Manager and full time Traffic Marshalls.

The vehicles will access and egress the site via the existing crossovers (details to be agreed once Principal Contractor appointed). Folding delivery gates will be opened across the entrances to the site such that gates do not open across the public footpath. They will be opened only when a delivery vehicle is entering or leaving the site and will be monitored on a full time basis by the Traffic Marshalls.

c. Please provide swept path drawings for vehicles accessing/egressing the site if necessary. If these are attached, use the following space to reference their location in the appendices.

Please refer to swept path analysis sketches in Appendix 1.

d. Provision of wheel washing facilities should be considered if necessary. If so, please provide details of how this will be managed, and any run-off controlled. Please note that wheel washing should only be used where strictly necessary, and that a clean, stable surface for loading should be used where possible.

Vehicle wheel washing facilities in the form of a jet wash will be kept on site. The surface at the front of the existing property will provide hard standing for the vehicles so wheel washing should not be necessary for the larger delivery vehicles. Forklifts, dumper trucks and piling rigs will be off loaded on this hard standing and move around the site as necessary. Consequently, the wheel washing facility will only be used when absolutely necessary and is more of a precaution than regular use.

Part of the role of the Traffic Marshals will be to maintain a clean and presentable loading area, footpath and nearby road at all times.

In the event of any unforeseen circumstances a road sweeper will be available if required at an hour's notice.

21. Vehicle loading and unloading: *"Clients shall ensure that vehicles are loaded and unloaded on-site as far as is practicable."* (P19, 3.4.4)

This section is only relevant if loading/unloading is due to take place off-site on the public highway. If loading is taking place on site, please skip this section.

a. please provide details of the parking and loading arrangements for construction vehicles with regard to servicing and deliveries associated with the site (e.g. delivery of materials and plant, removal of excavated material). This is required as a scaled site plan, showing all points of access and where materials, skips and plant will be stored, and how vehicles will access and egress the site. If this is attached, use the following space to reference its location in the appendices. Please outline in question 24 if any parking bay suspensions will be required.

Refer to the sketch in Appendix 2 for the loading and unloading proposals. Vehicles will arrive at the loading area within the boundary of the site in a forward gear under the guidance of a Traffic Marshal.

The vehicles will then leave the site in a forward gear via the second exit from the site under the guidance of the Traffic Marshal.

b. Where necessary, Traffic Marshalls must ensure the safe passage of pedestrians, cyclists and motor traffic in the street when vehicles are being loaded or unloaded. Please provide detail of the way in which marshals will assist with this process, if this differs from detail provided in Q20 b.

All deliveries and waste collections will take place between 9.30am and 3pm in order to avoid peak hours.

In general, all deliveries will be restricted to take place within 10-15 minutes time slots and waste collections within approximately 30 minutes.

Traffic management will consist of temporary signs and cones as appropriate to warn pedestrians and passing traffic of operations within the site. A Traffic Marshal will be appointed and be responsible for the safe loading and unloading of deliveries on and off the site.

Street Works

Full justification must be provided for proposed use of the public highway to facilitate works. Camden expects all options to minimise the impact on the public highway to have been fully considered prior to the submission of any proposal to occupy the highway for vehicle pit lanes, materials unloading/crane pick points, site welfare etc.

Please note that Temporary Traffic Orders (TTOs) and hoarding/scaffolding licenses may be applied for prior to CMP submission but won't be granted until the CMP is signed-off.

Please note that there is a two week period required for the statutory consultation process to take place as part of a TTO.

If the site is on or adjacent to the TLRN, please provide details of preliminary discussions with Transport for London in the relevant sections below.

If the site conflicts with a bus lane or bus stop, please provide details of preliminary discussions with Transport for London in the relevant sections below.

22. Site set-up

Please provide a scaled plan detailing the local highway network layout in the vicinity of the site. This should include details of on-street parking bay locations, cycle lanes, footway extents, relevant street furniture, and proposed site access locations. If these are attached, use the following space to reference their location in the appendices.

Please refer to the sketch in Appendix 2.

23. Parking bay suspensions and temporary traffic orders

Parking bay suspensions should only be requested where necessary and these are permitted for a maximum of 6 months only. For exclusive access longer than 6 months, you will be required to obtain a Temporary Traffic Order (TTO) for which there is a separate cost.

Please provide details of any proposed parking bay suspensions and/or TTO's which would be required to facilitate the construction - include details of the expected duration in

months/weeks. Building materials and equipment must not cause obstructions on the highway as per your CCS obligations unless the requisite permissions are secured.

Information regarding parking suspensions can be found here.

Suspension of the parking bays fronting the site is required for 3-6 months (to be confirmed by Principal Contractor once appointed). Please see Appendix 1 and 2 for details.

All footpaths and walkways surrounding the perimeter of the site boundary will remain open during construction, except for any such emergency requiring the full evacuation from site unless alternative arrangements have been agreed with the LBCC Highways Department.

All site hoardings will be within the site boundary and will not impede on the established footpaths. All access gates will be locked with either chains/padlocks or biometric fingerprint access.

Full direction signage will be used on the external face of the hoarding. Barriers will be used when vehicles are accessing the entry and exit gates.

24. Occupation of the public highway

Please note that use of the public highway for storage, site accommodation or welfare facilities is at the discretion of the Council and is generally not permitted. If you propose such use you must supply full justification, setting out why it is impossible to allocate space on-site. We prefer not to close footways but if this is unavoidable, you should submit a scaled plan of the proposed diversion route showing key dimensions.

a. Please provide justification of proposed occupation of the public highway.

No public highway will be used for storage.

b. Please provide accurate scaled drawings of any highway works necessary to enable construction to take place (e.g. construction of temporary vehicular accesses, removal of street furniture etc). If these are attached, use the following space to reference their location in the appendices.

Requirement for construction of temporary crossovers and temporary suspension of a parking bay - please refer to Appendix 2.

25. Motor vehicle and/or cyclist diversions

Where applicable, please supply details of any diversion, disruption or other anticipated use of the public highway during the construction period. Please show locations of diversion

signs on drawings or diagrams. If these are attached, use the following space to reference their location in the appendices.

None required.

26. Scaffolding, hoarding, and associated pedestrian diversions

Pedestrians safety must be maintained if diversions are put in place. Vulnerable footway users should also be considered. These include wheelchair users, the elderly, those with walking difficulties, young children, those with prams, the blind and partially sighted. Appropriate ramps must be used if cables, hoses, etc. are run across the footway.

Any work above ground floor level may require a covered walkway adjacent to the site. A licence must be obtained for scaffolding and gantries. The adjoining public highway must be kept clean and free from obstructions, and hoarding should not restrict access to adjoining properties, including fire escape routes. Lighting and signage should be used on temporary structures/skips/hoardings etc.

A secure hoarding will generally be required at the site boundary with a lockable access.

a. Where applicable, please provide details of any hoarding and/or scaffolding that intrudes onto the public highway, describing how pedestrian safety will be maintained through the diversion, including any proposed alternative routes. Please provide detailed, scale drawings that show hoarding lines, gantries, crane locations, scaffolding, pedestrian routes, parking bay suspensions, remaining road width for vehicle movements, temporary vehicular accesses, ramps, barriers, signage, lighting etc. If these are attached, use the following space to reference their location in the appendices.

Site security is of the upmost importance not only to secure materials on the site but to ensure that no unauthorised persons enter the site.

To this end construction materials will be stored within the site boundaries. The hoarded enclosure will provide a secure locked gate and materials kept within this area will be kept to a minimum.

All site activities are to be contained within the hoarding line and a comprehensive traffic management plan will be implemented to ensure no disruption is caused to traffic or pedestrians on the adjoining roads or walkways. Specific loading and unloading areas have been designated inside the site boundary, and a Traffic Marshal will be permanently present at different stages of the job (as required).

b. Please provide details of any other temporary structures which would overhang/oversail the public highway (e.g. scaffolding, gantries, cranes etc.) If these are attached, use the following space to reference their location in the appendices.

No structures will overhang the public highway.

27. Services

Please indicate if any changes to services are proposed to be carried out that would be linked to the site during the works (i.e. connections to public utilities and/or statutory undertakers' plant). Larger developments may require new utility services. If so, a strategy and programme for coordinating the connection of services will be required. If new utility services are required, please confirm which utility companies have been contacted (e.g. Thames Water, National Grid, EDF Energy, BT etc.) You must explore options for the utility companies to share the same excavations and traffic management proposals. Please supply details of your discussions.

Discussions are ongoing with regard to utilities connections. We will be ensuring that wherever possible companies share the same excavations and that they are aware of the traffic management proposals.

Please find attached in Appendix 3 Mendick Warings preliminary services spec.

There will be the following new service connections:

1. ***New mains water services shall be provided to the development***
2. ***A new three phase electricity supply is required to the building***
3. ***New BT/Virgin Media incoming lines will be required***

Environment

To answer these sections please refer to the relevant sections of **Camden's Minimum Requirements for Building Construction (CMRBC).**

28. Please list all noisy operations and the construction method used, and provide details of the times that each of these are due to be carried out.

No works will commence prior to 8am and all works will cease by 6pm Monday to Friday and by 1pm on Saturdays.

The noisy operations that will be necessary for this development will not take place outside of the working hours agreed – in line with Camden Council's guidelines.

8.00am to 6pm on Monday to Friday

8.00am to 1.00pm on Saturdays

No working on Sundays or Public Holidays

Quiet periods during the working days will be established with neighbours and local residents during consultation with these parties.

Where there is significant noise, control measures will be identified, implemented and monitored as per the guidance for employers on the Control of Noise at Work Regulations 2005.

All possible steps will be taken to reduce the noise levels to acceptable levels.

Details of noisy operations will be included by the Principal Contractor once appointed.

29. Please confirm when the most recent noise survey was carried out (before any works were carried out) and provide a copy. If a noise survey has not taken place please indicate the date (before any works are being carried out) that the noise survey will be taking place, and agree to provide a copy.

We will undertake a noise survey prior to any works taking place on site (date to be confirmed following grant of planning permission and appointment of the Principal Contractor) and provide Camden Council with the results and all follow up survey results which will be taken regularly.

30. Please provide predictions for noise and vibration levels throughout the proposed works.

The Principal Contractor, once appointed, will provide estimates of noise and vibration levels.

We will follow HSE guidelines on the noise and vibration exposure limits and ensure that the higher action values are not exceeded. Control measures will be used throughout the duration of the project to minimise the noise and vibration levels emitted. Levels will be monitored, recorded and reviewed on a regular basis.

31. Please provide details describing mitigation measures to be incorporated during the construction/demolition works to prevent noise and vibration disturbances from the activities on the site, including the actions to be taken in cases where these exceed the predicted levels.

Once predicted levels for noise and vibration are known, mitigation measures will be incorporated during the construction works to prevent disturbances from the activities on the site, including the actions to be taken in cases where these exceed the predicted levels.

Below are some measures which will be implemented on site to control noise levels.

Control at source:

- ***noise emissions limits for equipment brought to site.***
- ***retrofitting controls to plant and machinery and using silencers on machinery.***
- ***use of acoustic and echo screens.***
- ***Administrative and legislative control, good community relations and a complaint contact line will be available and posted at all times***
- ***Control of working hours particularly when using percussive instruments,***
- ***Control of delivery areas and times,***
- ***Careful choice of compound location,***
- ***Physically screening of the site,***
- ***Noise Monitoring, to check compliance with noise level limits, cessation of works until alternative method is found.***
- ***Many of the activities which generate noise can be mitigated to some degree by careful preparation of machinery and use of tools. This may best be addressed by tool box talks and site inductions.***

If noise or vibration levels reach higher action levels then immediate action will be taken based on statutory requirements, HSE guidance and industry best practise.

See Appendix 4 for further details.

32. Please provide evidence that staff have been trained on BS 5228:2009

All staff will be trained on BS 5228:2009.

We will provide evidence of training certificates following appointment of the Principal Contractor and as soon as we have confirmed which staff will be on site.

33. Please provide details on how dust nuisance arising from dusty activities, on site, will be prevented.

Use of hoarding around the entire perimeter of the site to assist in the screening of dust generation from low-level sources.

Off-site pre-fabrication to be used, where practical.

Loading and unloading of vehicles, dismantling of site equipment such as equipment or materials around site will be conducted in such a manner as to minimise noise generation. Where practical these will be conducted away from noise sensitive areas.

Deviation from approved method statements to be permitted only with prior approval from the Main Contractor and other relevant parties.

The contractor will carry out regular brushing and water spraying of heavily used site hard surfaces and access points.

Vehicles transporting materials capable of generating dust to and from site to be suitably sheeted on each journey to prevent release of materials and particulate matter.

Burning of wastes or unwanted materials will not be permitted on-site.

Dust complaints reported by neighbours will be immediately investigated by the contractor.

34. Please provide details describing how any significant amounts of dirt or dust that may be spread onto the public highway will be prevented and/or cleaned.

During the enabling and demolition period all vehicles will be cleaned thoroughly by a wheel wash and jet wash prior to leaving site, when required a road sweeper will be used.

Once the groundworks and RC frame works commence the vehicle movements will increase so a dedicated wheel wash will dislodge dust and mud.

Road sweepers will be used on very wet days to clear any debris that have been transferred onto the highway.

35. Please provide details describing arrangements for monitoring of noise, vibration and dust levels.

Nosie, vibration and dust levels will be addressed through.

- ***Prevention***
- ***Suppression***
- ***Containment***

***Contractors will monitor and manage air quality in accordance with current best practise guidance (Mayor of London Control of Dust and Emissions during Construction and Demolition SPG)*; with the aim to reduce emissions of dust, PM_{10} and $PM_{2.5}$ from construction and demolition activities.**

Monitoring locations and positions and the justifications will be checked and approved by Camden's Air Quality Team before any work begins.

Vibration, Noise and dust monitors will be deployed on site throughout the duration of the works and frequent readings will be taken and recorded. Results will be analysed and appropriate action taken where necessary in reasonable time scales.

See Appendix 5 for further details.

36. Please confirm that a Risk Assessment has been undertaken at planning application stage in line with the GLA policy. The Control of Dust and Emissions During Demolition and Construction 2104 (SPG), that the risk level that has been identified, and that the appropriate measures within the GLA mitigation measures checklist have been applied. Please attach the risk assessment and mitigation checklist as an appendix.

A risk assessment will be undertaken at planning application stage in line with the GLA's Control of Dust and Emissions Supplementary Planning Guidance.

A mobile crusher will be used for crushing demolition material the permit for these works will be sought prior to the delivery of the mobile crusher.

Diesel generator will not be used, and mains power will be used, where practicable.

No bonfires will be allowed onsite at any time.

37. Please confirm that all of the GLA's 'highly recommended' measures from the SPG document relative to the level of risk identified in question 36 have been addressed by completing the GLA mitigation measures checklist.

All Supplementary Planning Guidance will be followed throughout the duration of the project.

38. If the site is a 'High Risk Site', 4 real time dust monitors will be required. If the site is a 'Medium Risk Site', 2 real time dust monitors will be required. The risk assessment must take account of proximity to sensitive receptors (e.g. schools, care homes etc), as detailed in the SPG. Please confirm the location, number and specification of the monitors in line with the SPG and confirm that these will be installed 3 months prior to the commencement of works, and that real time data and quarterly reports will be provided to the Council detailing any exceedances of the threshold and measures that were implemented to address these.

Four real time dust monitors will be deployed if required within the given time frame above and all subsequent reports will be issued to the council detailing any exceedances of the thresholds. Remedial measures will then be identified and action taken, if appropriate.

39. Please provide details about how rodents, including rats, will be prevented from spreading out from the site. You are required to provide information about site inspections carried out and present copies of receipts (if work undertaken).

Prior to the site clearance, a rodent/vermin control firm (A member of the NPTA National Pest Technicians Association or BPCA (British Pest Control Association) will be instructed to check the presence of rodents, including rats. We will provide information and results of the site inspections to the council. If there is evidence of rodents following the survey, a procedure will be started to prevent the rodents from spreading out from the site.

40. Please confirm when an asbestos survey was carried out at the site and include the key findings.

Prior to the site clearance, an asbestos survey will be carried out to check the presence of any notifiable asbestos or hazardous materials.

Key findings will be shared with the council. If there is evidence of asbestos, it will be removed by specialists.

41. Complaints often arise from the conduct of builders in an area. Please confirm steps being taken to minimise this e.g. provision of a suitable smoking area, tackling bad language and unnecessary shouting.

The contractor will be asked to police a respectful behaviour policy of builders towards the neighbourhood they work in. There will be a zero-tolerance policy for any anti-social behaviour including bad language, unnecessary shouting, loud music and smoking outside of designated area.

The Contractor will be a member of the Considerate Contractors Scheme and as such will implement measures to prevent anti-social behaviour such as described. These measures will include, but not be limited to, on-site training, indoor welfare facilities and rules focusing on personal appearance and conduct.

42. If you will be using non-road mobile machinery (NRMM) on site with net power between 37kW and 560kW it will be required to meet the standards set out below. The standards are applicable to both variable and constant speed engines and apply for both PM and NOx emissions.

From 1st September 2015

(i) Major Development Sites – NRMM used on the site of any major development will be required to meet Stage IIIA of EU Directive 97/68/EC

(ii) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IIIB of EU Directive 97/68/EC

From 1st September 2020

(iii) Any development site - NRMM used on any site within Greater London will be required to meet Stage IIIB of EU Directive 97/68/EC

(iv) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IV of EU Directive 97/68/EC

Please provide evidence demonstrating the above requirements will be met by answering the following questions:

a) Construction time period (mm/yy - mm/yy): ***Approx. 58 months starting spring 2022 (exact date to be confirmed once planning permission granted)***

b) Is the development within the CAZ? (Y/N): ***No***

c) Will the NRMM with net power between 37kW and 560kW meet the standards outlined above? (Y/N): **Yes**

d) Please provide evidence to demonstrate that all relevant machinery will be registered on the NRMM Register, including the site name under which it has been registered: ***The machinery on site and will be registered by the Primary Contractor prior to commencement.***

e) Please confirm that an inventory of all NRMM will be kept on site and that all machinery will be regularly serviced and service logs kept on site for inspection: ***Yes***

f) Please confirm that records will be kept on site which details proof of emission limits, including legible photographs of individual engine plates for all equipment, and that this documentation will be made available to local authority officers as required: ***Yes***

SYMBOL IS FOR INTERNAL USE

Agreement

The agreed contents of this Construction Management Plan must be complied with unless otherwise agreed in writing by the Council. This may require the CMP to be revised by the Developer and reapproved by the Council. The project manager shall work with the Council to review this Construction Management Plan if problems arise in relation to the construction of the development. Any future revised plan must be approved by the Council in writing and complied with thereafter.

It should be noted that any agreed Construction Management Plan does not prejudice further agreements that may be required such as road closures or hoarding licences.

Signed: ……

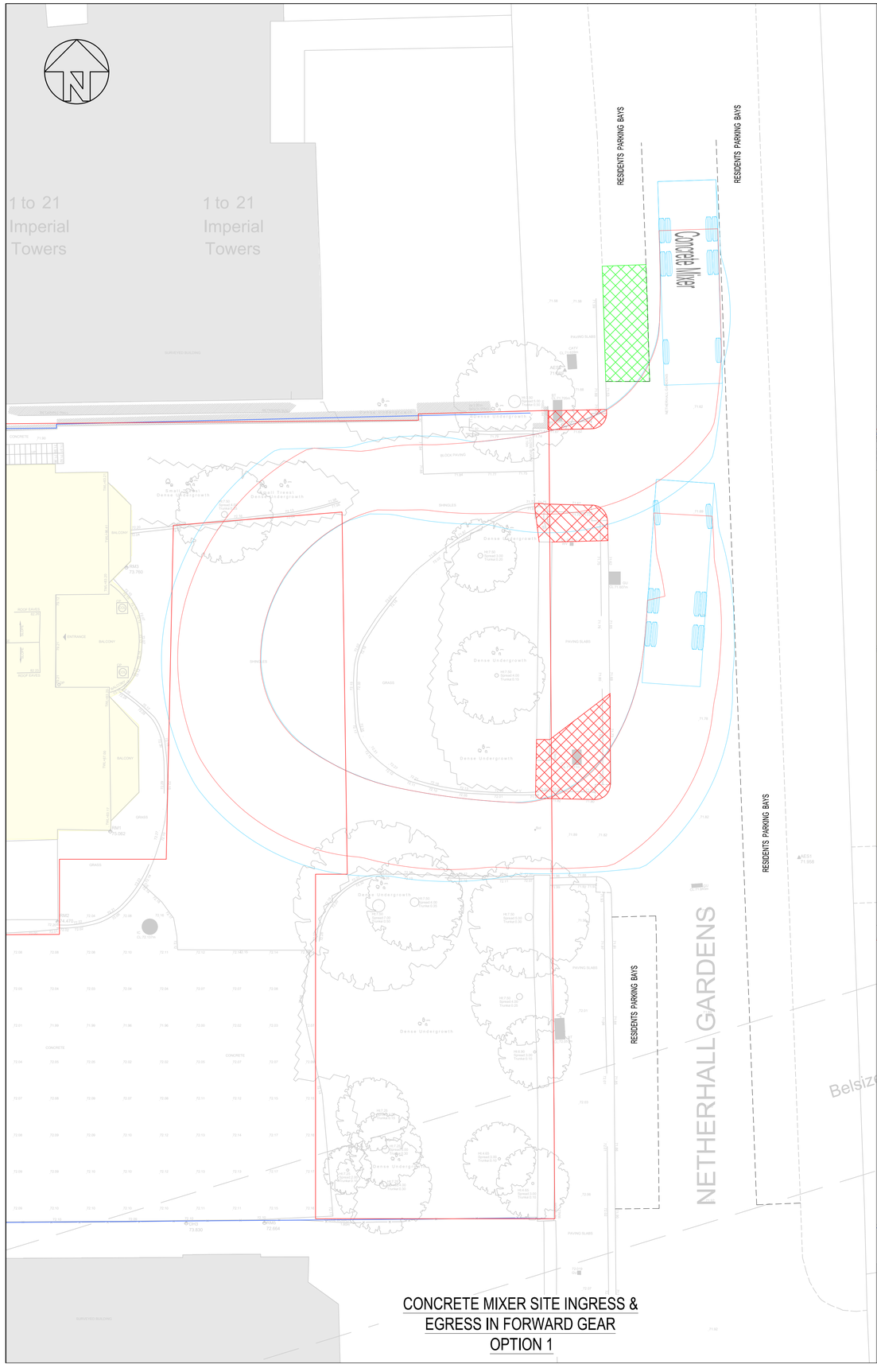
Date: 19/08/2021

Print Name: Melanie de Wet

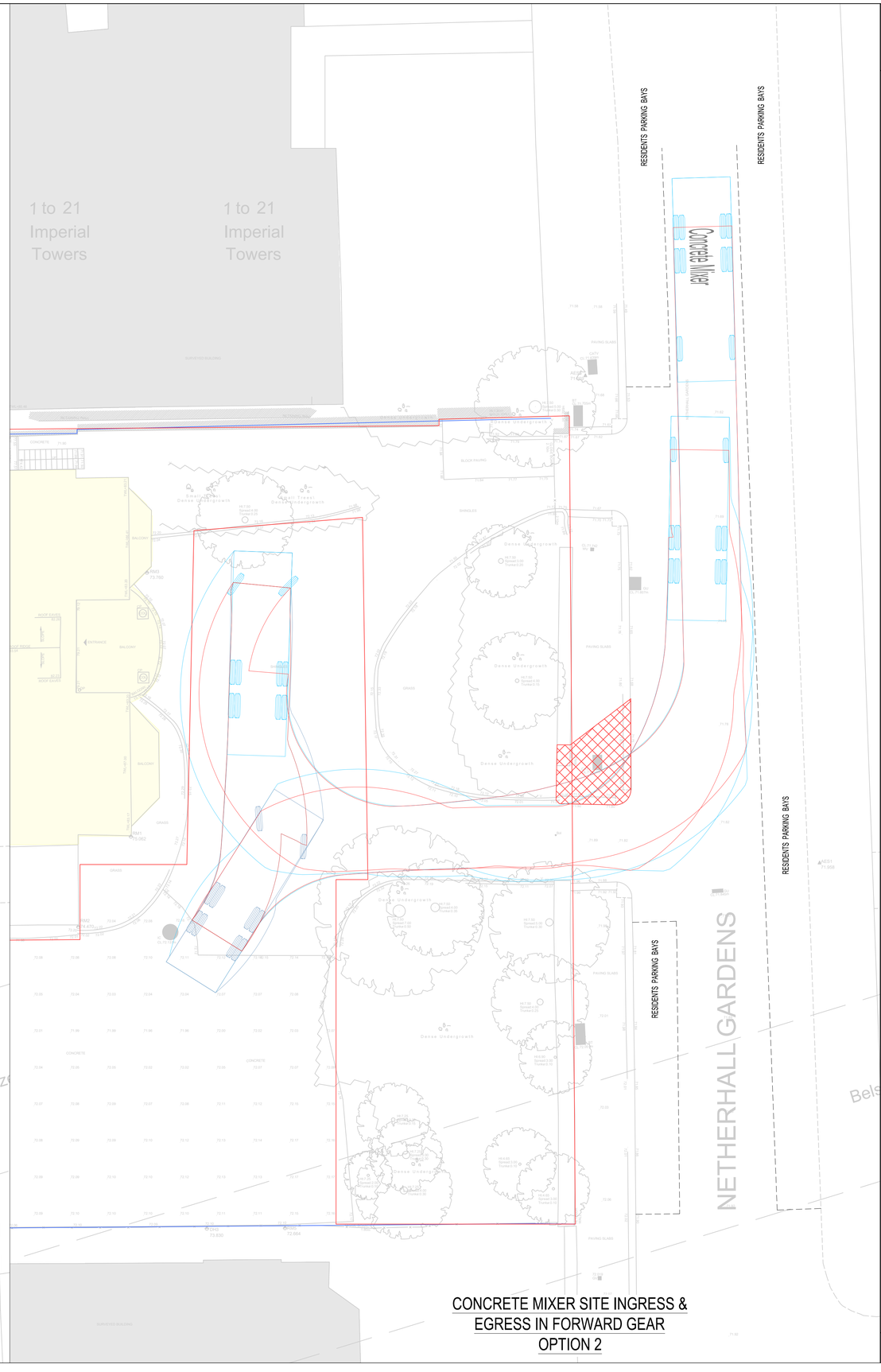
Position: Associate Director, Elliott Wood

Please submit to: planningobligations@camden.gov.uk

Appendix 1



CONCRETE MIXER SITE INGRESS & EGRESS IN FORWARD GEAR OPTION 1



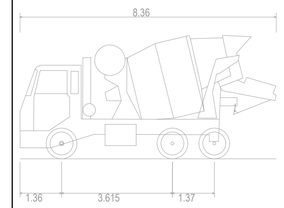
CONCRETE MIXER SITE INGRESS & EGRESS IN FORWARD GEAR OPTION 2

This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

Do not scale from this drawing.

LEGEND

- Vehicle body outline
- Vehicle Wheels
- Temporary Crossover required to widen existing Crossover
- Temporary parking bay suspension
- Application Boundary
- Site Boundary



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

NOT FOR CONSTRUCTION

rev	date	by	chk	description
P1	20.08.21	HHu	MDW	Issued for information

elliottwood engineering a better society

Elliott Wood Partnership Ltd
Central London • Wimbledon • Nottingham
Consulting Structural and Civil Engineers
(020) 7499 5888 • elliottwood.co.uk

Project

13 Netherhall Gardens
NW3 5RN
London

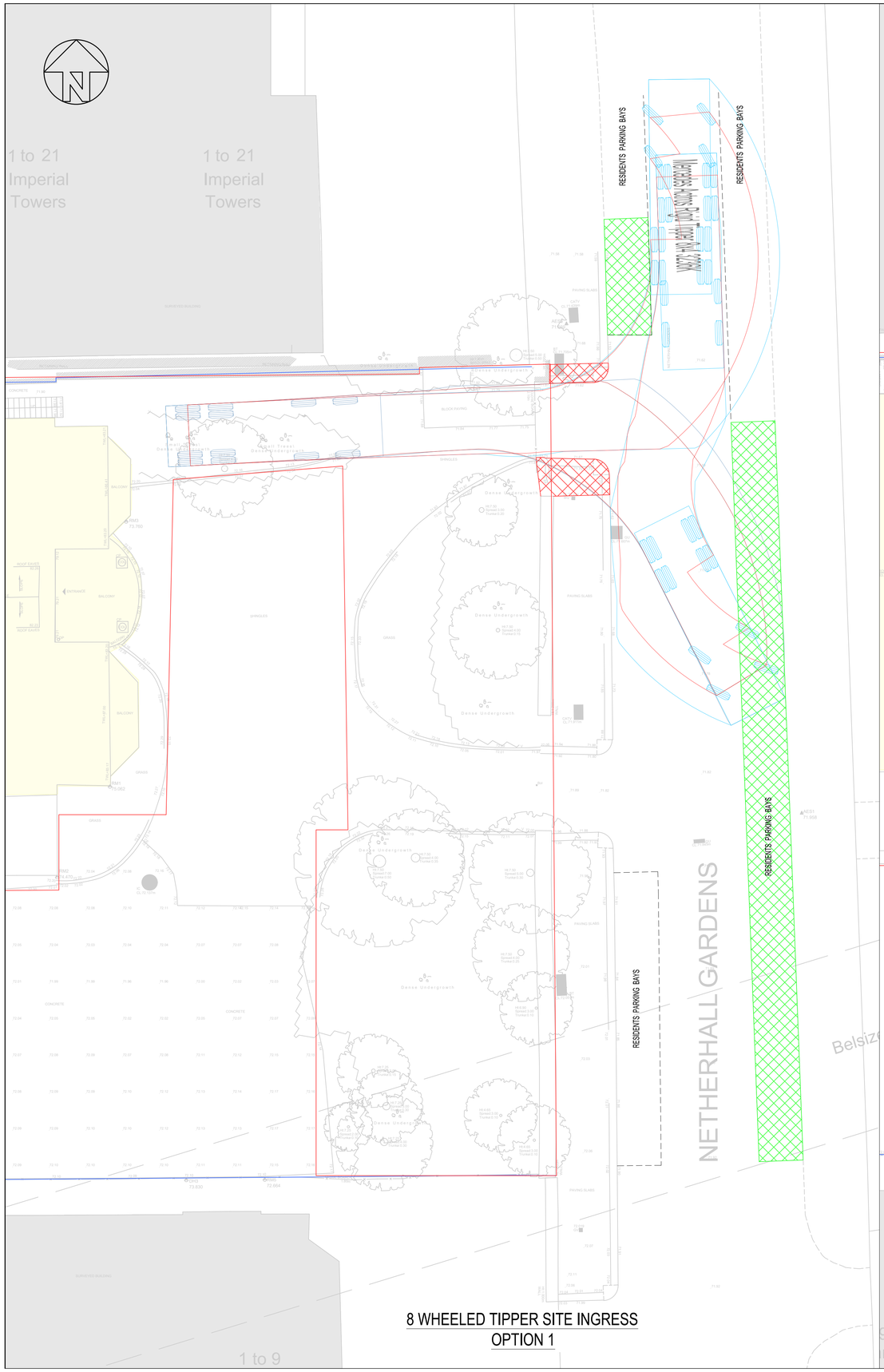
Drawing title

Swept Path Analysis
Concrete Mixer

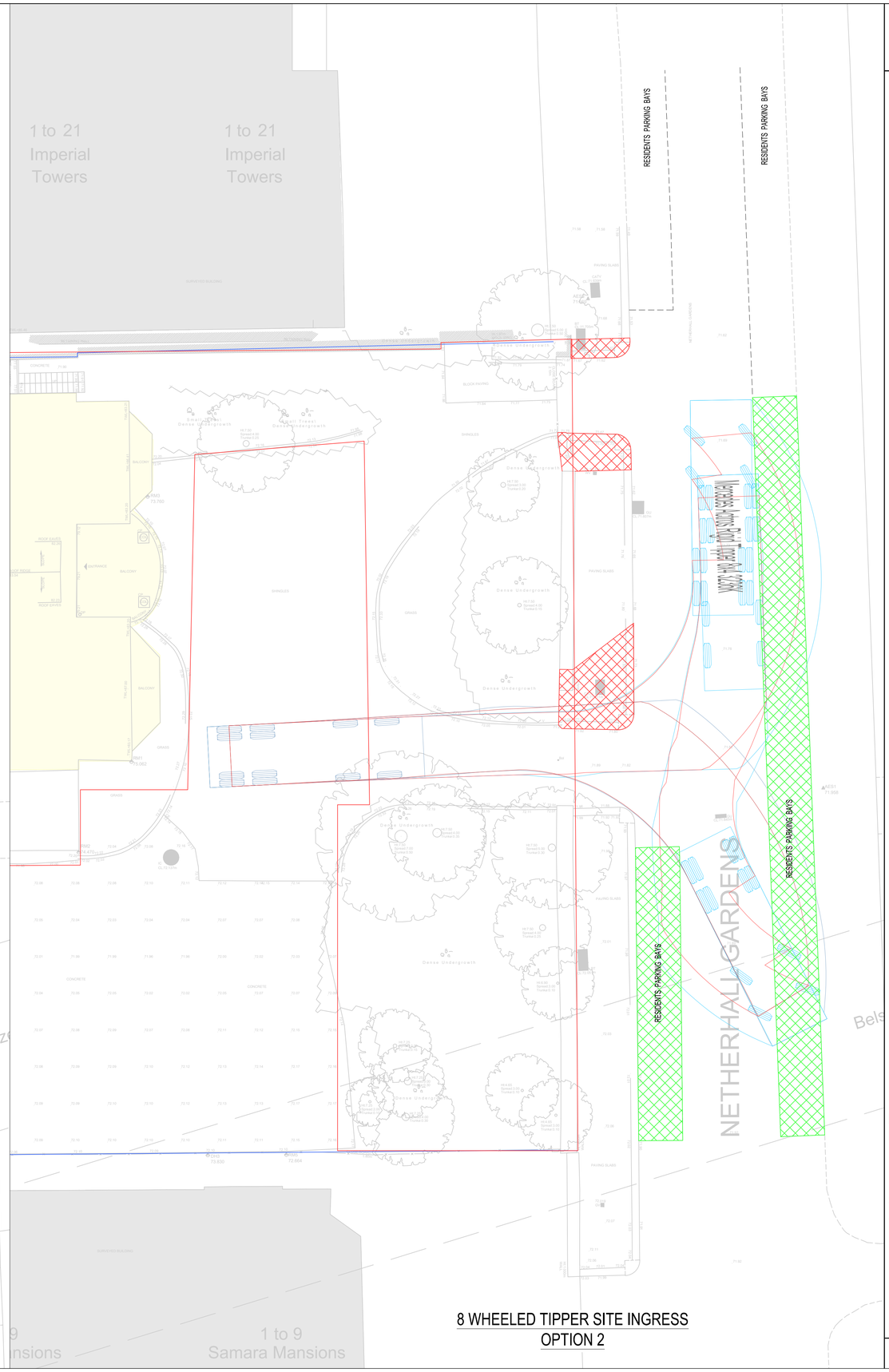
Scale (s)	Date	Drawn
1:100@ A1; 1:200@ A3	August 2021	HHu

Drawing status	Status	Revision
Preliminary	S2	P1

Project no.	Originator	Zone	Level	Type	Role	drg no.
2180456	EWP	ZZ	XX	DR	C	6002



8 WHEELED TIPPER SITE INGRESS
OPTION 1



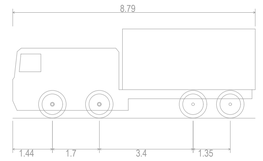
8 WHEELED TIPPER SITE INGRESS
OPTION 2

This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

Do not scale from this drawing.

LEGEND

- Vehicle body outline
- Vehicle Wheels
- Temporary Crossover required to widen existing Crossover
- Temporary parking bay suspension
- Application Boundary
- Site Boundary



Mercedes Actros Rigid Tipper 8x4 3236K

Overall Length	8.790m
Overall Width	2.490m
Overall Body Height	3.233m
Min Body Ground Clearance	0.280m
Track Width	2.490m
Lock to lock time	5.00s
Wall to Wall Turning Radius	10.750m

NOT FOR CONSTRUCTION

rev	date	by	chk	description
P1	20.08.21	HHu	MDW	Issued for information

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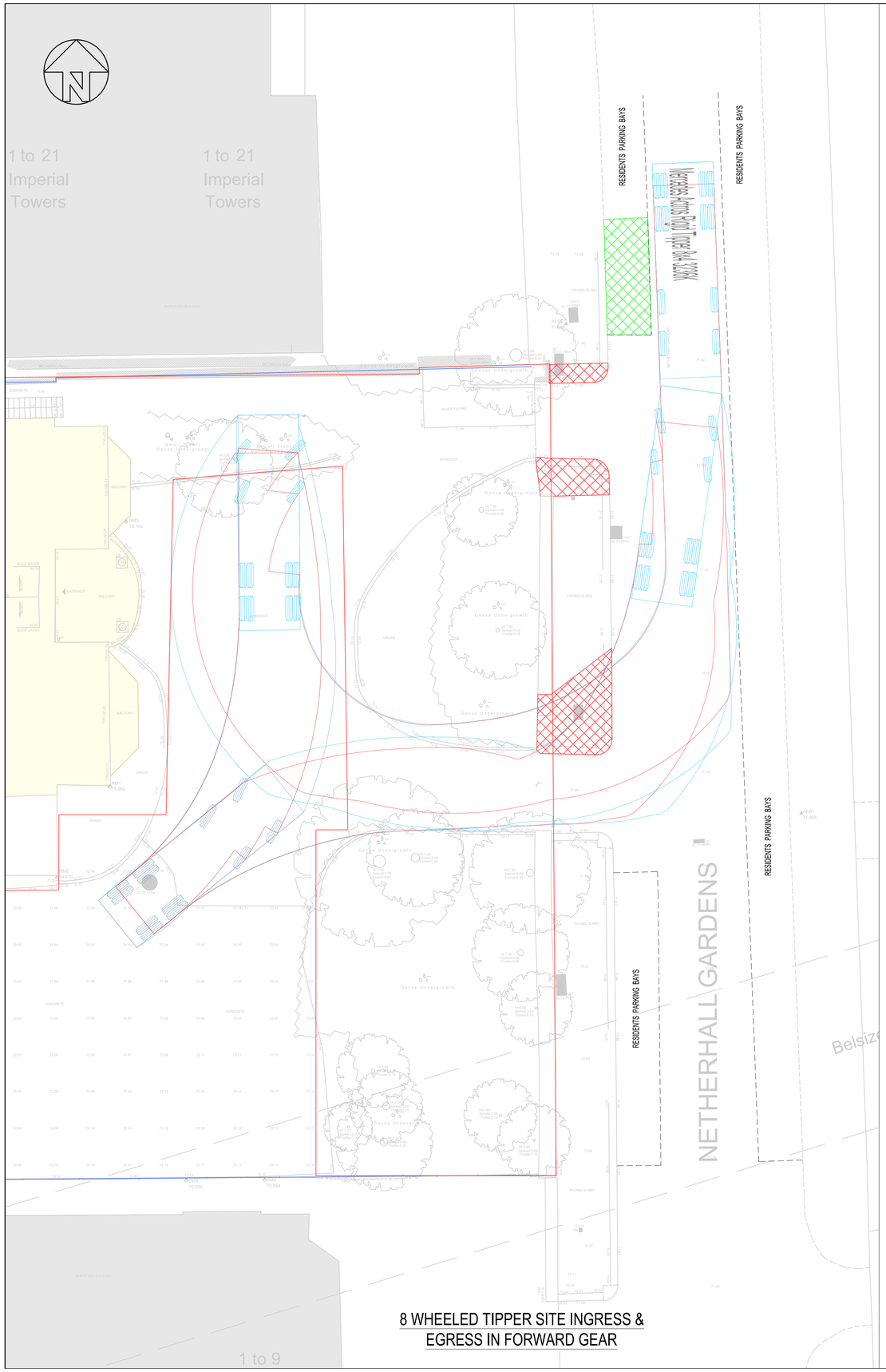
Project
13 Netherhall Gardens
NW3 5RN
London

Drawing title
Swept Path Analysis
8 Wheeled Tipper

Scale (s)	Date	Drawn
1:100@ A1; 1:200@ A3	August 2021	HHu

Drawing status	Status	Revision
Preliminary	S2	P1

Project no.	Originator	Zone	Level	Type	Role	drg no.
2180456	EWP	ZZ	XX	DR	C	6003



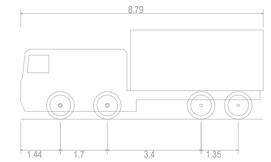
8 WHEELED TIPPER SITE INGRESS & EGRESS IN FORWARD GEAR

This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

Do not scale from this drawing.

LEGEND

- Vehicle body outline
- Vehicle Wheels
- Temporary Crossover required to widen existing Crossover
- Temporary parking bay suspension
- Application Boundary
- Site Boundary



Mercedes Actros Rigid Tipper 8x4 3236K

Overall Length	8.790m
Overall Width	2.490m
Overall Body Height	3.233m
Min Body Ground Clearance	0.280m
Track Width	2.490m
Lock to lock time	5.00s
Wall to Wall Turning Radius	10.750m

NOT FOR CONSTRUCTION

rev	date	by	chk	description
P1	20.08.21	HHu	MDW	Issued for information

elliottwood engineering a better society

Elliott Wood Partnership Ltd
Central London • Wimbledon • Nottingham
Consulting Structural and Civil Engineers
(020) 7499 5888 • elliottwood.co.uk

Project

13 Netherhall Gardens
NW3 5RN
London

Drawing title

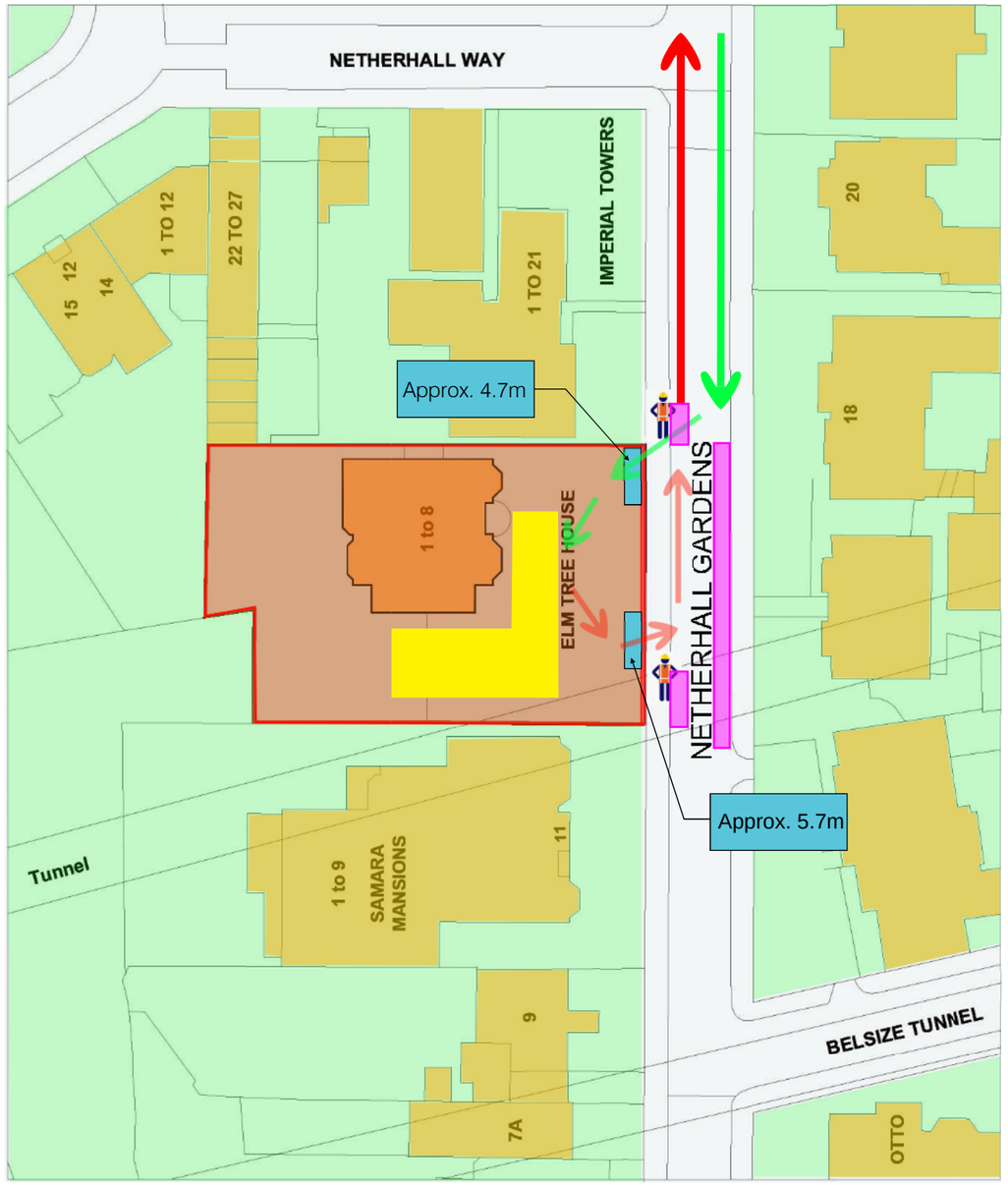
Swept Path Analysis
8 Wheeled Tipper

Scale (s)	Date	Drawn
1:100@ A1; 1:200@ A3	August 2021	HHu

Drawing status	Status	Revision
Preliminary	S2	P1

Project no.	Originator	Zone	Level	Type	Role	drg no.
2180456	EWP	ZZ	XX	DR	C	6004

Appendix 2



Legend:

- Traffice route to site
- Traffice route from site
- Access Gates
- Loading/Storage
- Traffic Marshal
- Parking Suspensions

This drawing is to be read in conjunction with all relevant architects, engineers and specialist drawings and specifications.

Do not scale from this drawing.

rev	date	by	chk	description
P2	19/08/21	HHu	MDW	PRELIMINARY
P1	04/05/20	SLE	GP	PRELIMINARY

sketch title

Loading & Unloading Plan

SKETCH

scale (s)	date	drawn
1:500 at A3	MAY 2020	SLe

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project

13 Netherhall Gardens,
NW3 5RN
London

drawing status	status	revision
Preliminary	S2	P2

project no.	originator	zone	level	type	role	drg no.
2180456	EW	00	XX	SK	S	5001

Appendix 3

PRELIMINARY SPECIFICATION

Mechanical & Electrical Services

For

Re-creo Ltd

At

13 Netherhall Garden,
Hampstead,
London, NW3

Mendick Waring Ltd.
Building Services Consulting Engineers
Edelman House
1238 High Road
Whetstone
London N20 0LH

Ref: J2629/FT/Preliminary
Revision – P1
March 2020

MECHANICAL SERVICES BRIEF

INCOMING SERVICES

Gas

No Gas service provisions required

Water

New mains water services shall be provided to the development. The Incomming mains supply shall serve the residential cold water break tank entering at lower ground floor level into the plantroom.

The water meter will be located within the footpath of Netherhall Gardens.

ABOVE GROUND DRAINAGE INSTALLATION

Soil and Waste Pipework

Generally the soil and waste pipework from sanitary fittings is to be arranged to run concealed within the building and shall be carried out in an acoustic uPVC material.

Soil and vent stacks within the building shall be insulated with a minimum 25mm sound insulation and enclosed within builder's work ducts with a minimum 2 no. layers of plasterboards to reduce noise transmission further.

WATER SERVICES INSTALLATION

Scope

The water services installation shall comprise the connection of the new mains water supply to the lower ground floor level plant room, to serve a cold-water booster pump set, complete with break tank, supplying pressurised mains water to each apartment.

In each apartment it will serve all cold water outlets and Altherma Geo Water to Water Heat Pump Unit which serves all hot water outlets.

Water Pressures

The hot and cold water systems shall be pressurised by means of a water booster pump set, with electronic variable speed pumps, to achieve a minimum of 4.0 bar pressure at the shower heads throughout the property.

Water Softener & Filtration

Conditioned water will be provided via an electromagnetic valve such as HydroMAG or similar. The water is not chemically modified in any way therefore can be circulated throughout the development to all hot and cold water outlets.

Water Storage

Storage capacity shall be designed to ensure sufficient cold and hot water capacity to meet peak simultaneous demands and usage patterns.

The Altherma3 Geo, as typically manufactured by Daikin is inclusive of a 180 liter built in hot water cylinder.

Hot Water System

Hot water shall be provided by means of a high pressure hot water storage cylinder within each apartment, 3.5bar rated, capable of recovering within 30 minutes. Plenty of capacity is required to ensure constant hot water.

The hot water system shall incorporate a pumped secondary return circuit to all hot water outlets. This is to ensure that hot water is available at all outlets without delays.

Water Features

A cold water services shall be provided to a water feature at the rear of the garden.

External Watering Points

Mains water is required to the kitchen sink only.

Allowance shall be made for an external bib tap for each of the rear garden at lower ground floor level.

HEATING SERVICES INSTALLATION

Scope

The heating system shall be based on a low pressure hot water (LPHW), central heating installation from the communal Air Source Heat Pumps (ASHP), typically as manufactured by Daikin, from their 'Altherma' range.

The development which comprises of the refurbishment of the existing building and new build block will be served by independent communal Air Source Heat Pumps (2No. Independent ASHP Condenser Arrangements).

The location is to be determined based on spatial requirements, both of the below option are to be explored Precise location to be confirmed.

1. ASHP Condenser buried below ground within a purpose made enclosure
2. ASHP Condensers at ground floor level within and external purpose made enclosure

Acoustic treatment of the condensing unit enclosure may be required, as part of the planning requirement.

Underfloor heating shall installed throughout each apartment, the heating system shall be a fully pumped and sealed system with automatic controls.

Internal Temperatures

The heating system shall maintain a minimum internal design temperature of 21 degC at an external design temperature of -4 degC, but have the capacity to achieve room temperatures of 23 degC to 25 degC if required.

Heat Emitters

LPHW under-floor heating will be provided in each room, throughout all apartments.

Bathrooms shall have electric under-floor heating.

Towel Rail Circuit

Bathroom and wet rooms will be provided with an electrically heated towel rail.

COMFORT COOLING INSTALLATION

The provision for a chilled water (cooling only) comfort cooling system to serve all habitable rooms within each apartment shall be provided served by the communal Air Source Heat Pumps (ASHP) and Altherma 3 Geo within each apartment, typically as manufactured by Daikin, from their 'Altherma' range.

The indoor fan coil unit (concealed type) shall be located within the principle rooms only and concealed within the ceiling void/joinery.

The route for installation of pipework and electrical containments shall also be indicated on the layouts.

Internal Temperatures

The cooling system shall maintain an average internal design temperature between 18-22 degC an external design temperature of 35 degC.

HEATING / COOLING CONTROLS

A 'user friendly' heating controls system will be provided to offer individual room by room (and floor by floor) thermostatic control. The hot water circuit and towel rail circuit will have separate timed control.

Areas where under-floor heating is installed will have individual digital room thermostats.

We are proposing a networked central system such as 'Heatmiser', allowing provision for retro-fitting equipment to enable remote internet access to the heating control system if the occupant requires.

The fan coil units within all habitable rooms shall be independently controlled by a local controlled and have the option for remote access and control.

Final location of all controllers to be determined and agreed with the architect.

BUILDING MANAGEMENT SYSTEM (BMS)

A controller will be located within the mechanical plantroom and integrated into the BMS control panel.

Remote internet access to the Air Source Heat Pump system will be provided. Controls will be integrated with the BMS system.

VENTILATION INSTALLATION

Each apartment will be provided with a cMEV (central mechanical extract ventilation) system to serve all wet rooms to comply with the Building Regulations.

In the case of the kitchen cooker hood these shall be directly to atmosphere (terminate within the manufacturers approved grille on the external façade).

Kitchen extract hoods shall be as specified by the kitchen specialist.

ELECTRICAL SERVICES BRIEF

INCOMING SERVICES

Electricity

A new three phase electricity supply is required to the building. The new electricity supply will have sufficient capacity to cater for 17No. new apartments and landlord's provision, lift, electric car charging points and communal ASHP condensers/system.

The location of the incoming electricity supply and meters will be within a plantroom at lower ground floor level.

Associate services shall be provided to automated parcel collection enclosure such as Amazon Locker or similar.

BT/Virgin Media

New incoming lines will be required. BT intake and equipment shall be located in the electrical intake room located at ground floor level.

The BT cables will be ducted underground from the street into the intake room. Distribution up through the building will be through the electrical riser and into each apartment within the ceiling void.

LOW VOLTAGE SERVICES DISTRIBUTION

Each unit shall have its own consumer unit installed internally. Precise location to be confirmed.

The consumer unit will supply all electrical requirements within each unit, to include lighting, power, mechanical equipment, heated towel rail and smoke alarms. Spare capacity will be provided for future use.

LIGHTING INSTALLATION

Generally, the ability to control and set lighting modes/ scenes form a centralized lighting control is to be the main theme throughout the apartment, incorporating a certain level of system integration with other services (to be confirmed with AV specialist).

A specialist is to provide a centralised lighting control system, such as RAKO (or similar).

Lighting layouts are to be produced by the lighting designer/ architect, with technical back up by MWL.

External lighting to include subtle lighting to front and rear garden areas, in conjunction with the architect, with technical back-up by MWL.

SMALL POWER INSTALLATION

Apartments

Wall mounted 13 amp socket outlets will be provided throughout the property. Some floor mounted outlets will be required.

The kitchen sinks will be provided with a spur for the installation or future installation of an InSinkErator or similar waste disposal.

The small power services layouts are to be produced by the architect, with technical back-up by MWL.

Communal Area

Allow for 1No. 13 amp lockable cleaner's socket outlet within the communal corridor/hallway.

ACCESSORY OUTLET PLATES

The finishes to low level accessories (13 amp socket outlets, 5amp lighting outlets, TV oulets, voice/data outlets, etc) will be flat metal plates, (finish to be confirmed)

The finishes for lighting switches/ keypads throughout will be flat metal plates, (finish to be confirmed).

Architect to confirm final finishes selection.

FIRE DETECTION SYSTEM

Apartments

A full coverage fire detection system will be provided throughout with automatic smoke or heat detectors in all rooms to ensure LD2 compliance.

The fire detection system shall be hardwired heat and smoke detectors with integral battery back-up.

Communal Area

A full coverage smoke detection system will be provided throughout the communal areas interlinked with the fire alarm panel ground floor entrance level and automatic opening smoke clearance vents to ensure compliance with the fire strategy report.

The smoke detection system within the communal area and lift lobby shall be commissioned to ensure the lift goes to ground floor level when activated via a relay.

The fire strategy report will define the details of the fire alarm system requirements for bith apartments and communal areas.

AUDIO VISUAL

TV/FM/Sat required throughout the property. Sky + and Sky HD to be allowed for throughout.

Voice/data infrastructure to be included with Wi-Fi provision.

A centralised music system such as Sonos or similar will provided within the apartment. The system is to be integrated with the lighting control system.

SECURITY

Intruder Detection Alarm

An extensive intruder detection system to be provided throughout the communal area and apartment, to include door and window contacts (Lower ground & ground floor level only), Passive Infra-Red (PIR) detectors, sounders and keypads.

The system will be monitored and connected to BT Redcare.

Door Entry Installation

Apartment

A video door entry system to be provided for the property, with the door entry panel linked to white plastic monitor within each unit. Electromagnetic door release should also be provided.

The video door entry panel at ground floor level main entrance and residents shall be via individual fobs, fob reader is to be integral to the video door entry panel *(emergency access by destruction).*

Apartment doors to have knocker for guest entry once within the building

CCTV System

A full external CCTV installation is required. Discreet cameras will be provided to view all communal/main areas of the development (external).

MWL to propose camera locations and specialist to further develop the design.

LIGHTNING PROTECTION

Provide surge protection to the incoming electricity supply.

Appendix 4

Appendix 4

13 Netherhall Gardens, London, NW3 5RN
A copy of this document shall be made available to the appointed Building Contractors and their sub-contractors

LBC LEGAL DUTIES and EXPECTATIONS REGARDING BUILDING CONSTRUCTION/DECONSTRUCTION SITES

Addendum to CMR - CMP WORKING FRAMEWORK
Site: *13 Netherhall Gardens, London, NW3 5RN*
Planning number:
Date: 19/08/2021
Revision: 1

This document is part of a site-specific CMP framework, in which the Developer and the Principal Contractor agree to ensure that environmental impacts from the construction of the proposed impacts do not give rise to significant adverse effects on health and quality of life.

The Developer and the Principal Contractor agree to provide the council the necessary information to demonstrate the implementation of best practice and compliance with the relevant legal and contractual requirements.

1. TIME FOR NOISY OPERATIONS

Construction activities and ancillary works which are audible at the site boundary shall normally be carried out between the following hours:

- Mondays to Fridays 08.00 -18.00
- Saturdays 08.00 - 13.00

Where noise or vibration from the construction of the proposed development exceed the significant observed adverse effect levels or at the reasonable request of the council, works shall take place on a 2 hours on/off basis. For example:

- ON - Monday to Friday 08:00 - 10:00, 12:00 - 14:00 & 16:00 - 18:00
- ON - Saturdays 11:00 - 13:00.

2. NOISE AND VIBRATION CONTROL

The contractor shall undertake a detailed construction noise assessment and produce a comprehensive noise and vibration strategy, which shall include the following:

(ii) baseline noise and vibration surveys (where required)

(iii) construction method statement identifying the rationale for the work

(iv) worksite layout plans

(v) methodology used to predict construction noise

(vi) Equipment schedule showing the number, type and make of Equipment used for each stage of the construction

(vii) Assessment of significance using the +SdBA change method in line with BS5228:2009+A1:2014

(viii) On-site and off-site mitigation measures

(ix) Structure borne noise risk assessment (if applicable). This assessment shall include details of proposed on-site noise and off-site mitigation measures and proposals to provide some form of respite to residential and non-residential receptors.

(x) Noise and vibration monitoring proposal

(xi) A noise and vibration trigger action plan setting out the steps to be taken in the event that predicted and proposed trigger action levels, are exceeded.

(xii) Noise reports should be sent to Camden's pollution team at pollutionduty@camden.gov.uk

3. CONTROL OF VISIBLE DUST AND ITS MONITORING

- Prevention
- Suppression
- Containment

4. MEETING AIR QUALITY CRITERIA (NON-VISIBLE DUST) AND ITS MONITORING

Air Quality Requirements

Contractors are required to monitor and manage air quality in accordance with current best practice guidance (Mayor of London Control of Dust and Emissions During Construction and Demolition SPG), measuring for PMIO using real-time analysers which have MCERTS 'indicative' or an equivalent certification for accuracy/precision.

If the site's air quality assessment finds dust risk level to be 'medium', two monitors are required. If the risk level is 'high', four monitors are required.

If the risk level is 'high', four monitors are required.

Monitoring should start at least three months prior to commencement of works on site, and must continue until practical completion, i.e. real-time dust monitoring is required for all phases of development, therefore the developer must ensure that dust monitoring is passed between demolition and construction contractors etc.

Monitoring locations/positions and the justification for these must be checked with and approved by Camden's air quality team: AirQuality@camden.gov.uk.

Real-time monitoring should be supplemented with visual and qualitative monitoring of construction dust.

Trigger Values	Amber Alert 15 mins Average	Red Alert 15 mins Average
	150µg/m3	250µg/m3

AMBER ALERT. 'amber' trigger level (at which point the cause of the dust should be immediately investigated and remedial action taken to mitigate it)

RED ALERT. If this level is reached, works on site must be stopped until conditions improve.

YOUR ATTENTION IS DRAWN TO THE FOLLOWING:

(i) Taking into account the baseline monitoring conditions, repeated exceedances of the upper trigger level may lead ultimately to the Council moving to halt works on site.
(ii) Monthly AQ summary reports should be sent to Camden's air quality team at AirQuality@camden.gov.uk, and these should note (at the very least) the current positions of the monitors (including photographs), the number of trigger level exceedances, data coverage, and narrative on site works and remedial dust mitigation measures applied.
(iii) The AQ reports should also be made publicly available, either by hosting online or by posting the data summaries on the site hoarding.
(iv) Automated trigger level exceedance alert emails should also go to the above email address as well as to the developer/contractor on-site representative/s for managing air quality. Failure to provide data or to manage air quality may lead to an injunction.

5. RODENT CONTROL

- Before any works ascertain the presence of rats and mice and how they will be destroyed if found on site.

- Monitoring programme

GENERAL AGREED UNDERSTANDINGS.

(a) London Borough of Camden under the Control of Pollution Act 1974, Environmental Protection Act 1990 and Prevention of Damage by Pest Act 1949, has the legal duty to protect from the effects of noise (including vibration), statutory nuisances and pest prevention from rodents to those who are living in the proximity of the proposed works.
(b) The Council expect to receive no valid complaints during the entire duration of the proposed works to be undertaken at, 81 Avenue Road, London NW8 6JD.
(c) The CMP shall be a living document to be reviewed/modified as soon as problems arise or at the reasonable request of the council.
(d) A proactive approach towards the management of environmental impacts will be incorporated and enforced throughout the duration of the project.

Noise and Vibration

(a) All reasonable steps shall be implemented in the design and construction of the proposed development so that noise and vibration from the construction do not give rise to significant adverse effects on health and quality of life.
(b) Where noise or vibration from construction exceeds the defined significant observed adverse effect levels or at the reasonable request of the council, some form of respite shall be offered.
(c) Best practicable means (BPM), as defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990, shall be applied during all construction works to minimise noise {including vibration) at neighbouring residential properties and other sensitive receptors.
(d) Consideration will be given to the recommendations contained within BS5228:2009+A1:2014, approved by the Secretary of State as the Code of Practice for noise and vibration control on construction and open sites.

Dust

(i) No demolition works shall be commenced without an adequate water supply to cover the working areas.

13 Netherhall Gardens, London, NW3 5RN
A copy of this document shall be made available to the appointed Building Contractors and their sub-contractors

Pests

(ii) At all times the site shall be kept free, so far as is reasonably practicable, from rats and mice. (Prevention of Damage by Pests Act 1949, part 'H' of the Building Regulations {Drainage & Waste Disposal)).

Community liaison

(i) A programme of community liaison will be carried out, including regular engagement meetings, notification of works and details of the complaints process.

Applicant: NB By signing this form you are confirming you are a person whose signature is recognised by your company.

Signed: _____
PAUL WHITLEY, DIRECTOR
RE-CREO NETHERHALL GARDENS LTD.

Date: _____
23/08/21

Note: This agreement shall be binding on, and ensure to the benefit of, the parties to this agreement and their respective personal representatives, successors and permitted assigns, and references to any party shall include that party's personal representatives, successors and permitted assigns.

Appendix 5

Appendix 5 - Construction Methods of Working

(a) Noise/vibration reducing methodologies incorporated during the main stages of the project

Demolition

Prior to demolition works commencing a scaffold will be erected around accessible elevations. The scaffolding will be clad in monarflex or shrink wrap which will help reduce both the noise and dust emissions from the project particularly from the rear elevation where the majority of the external demolition is taking place.

Each area of demolition / wall(s) will be surveyed separately and a temporary structure design obtained where applicable showing all supports and props required to support the main structure whilst the walls and floors are removed.

It is worth noting that the majority of the demolition and refurbishment takes place within the existing structure which in itself will inhibit noise and dust from emanating out of the existing building.

Existing floors will be supported during all demolition works by the use of beams and props. Crash decks will be used when dropping ceilings and roofs to prevent the materials dropping great heights, which in turn reduce the noise emissions. These crash decks will be regularly cleared by hand onto the floors and taken away from the working area.

The crash decks will also be used on high walls again to prevent debris dropping great heights. Sections of walls and floors are to be broken into manageable sizes as they are removed while selecting power tools with the lowest dB emissions in favour of more powerful noisy breakers. A drop shaft is to be formed internally, the perimeter scaffold is sheeted and water suppression shall be used to prevent dust spreading beyond the boundary of the site.

Where steels have to be removed the preferred method will be burning using oxy-propane by competent personnel. The steels will be supported during burning to avoid any loud crashing on landing and instead will be lowered to ground using certified lifting equipment when burning is complete.

Should instances arise where heavy plant and machinery is to be used such as Brokk's and excavators with breaking attachments to remove reinforced concrete slabs, noise reduction techniques will be implemented as follows:

- All hired plant will not be older than 6 months old
- All generators will be super silenced and will also have Echo Sound Barriers erected around the perimeter to encapsulate the sound
- Similarly, Brokk's and excavators with breaking attachments will have a sound barrier exclusion zone in the form of Echo Barrier H2 acoustic noise absorbent system (as shown in picture below), which is proven to reduce noise emissions up to and above 20dB

Please note that equipment that breaks concrete by bending rather than by percussion or such other equipment as approved by the Council will be used as far as is reasonably practicable.

- All breaking attachments will be new and inspected regularly to ensure that there is no delay in the duration of demolition works

Debris removed from walls and building will be loaded directly into wait and load lorries, or skips. Some of the building materials will also be crushed on site to form a Piling mat which will minimise the amount of waste generated and in turn minimise waste transfer movements. Dust will be controlled by wetting down all demolition materials during the demolition activity and during the removal. Both unattended and handheld dust and noise monitors will be used on site and all readings will be recorded and notifications sent via email and text where accepted noise levels are breached and methods of works and tool selection will be re-visited and changed where necessary.

Installation of Piles

Contiguous piles will be installed by non-vibrational rotary bored piling techniques. Spoil will be transported by the excavator to road vehicles for disposal.

Rotary piling is where the piling rig is equipped with a telescopic arm or bar known as a Kelly bar which slides vertically and holds a short length of auger or a digging bucket on the end of it. When the auger or bucket is rotated it excavates the ground. The bar is then retracted, the rig slewed, and the excavated material ejected by spinning the Kelly and tool rapidly.

A reinforcement cage is then placed in the hole and the pile concreted using tremie techniques. This is a very simple method of piling and has a big advantage over CFA, in that the size and depth range is greater and a number of piles can be drilled in advance of concreting.

Works will be carried out using the following 2 machines:

- Klemm 702-02 Piling Rig
- Unwins Kitten Piling Rig

A primary advantage of rotary piling is that there can be a gap between the drilling of the holes and the concrete therefore unlike Secant Wall Piling, a pump and agitator are NOT required on site to provide a continuous supply for the whole pile to prevent delays from concrete wagon deliveries, so noise levels associated with a concrete pump and agitator re eliminated and noise levels overall are reduced as a result.

Capping Beam Construction

Following the breaking of the piles any remaining hard surfaces will be saw cut. Breaking will be carried out using compressor and breakers. Excavation will be carried out using a 360excavator and will be to pile cap and beam line in one (to prevent access issues later). After excavation has been completed the pile cut off level will be marked and saw cut to a depth of 25mm. (Shallow enough to ensure that the reinforcement within is not cut).

Reinforcement will be fixed in place for the pile caps and the beams ensuring that the correct concrete cover is achieved, this will be checked by the Contractors engineer before continuing. Elliott Wood Partnership also have a monitoring role as part of their appointment.

Carpenters working under the direction of the Contractors engineer will erect the shutters to the latest construction drawings and specification. Concrete will be directly from the ready mixed truck either by the machine bucket or by a concrete pump. Concrete will be placed at a controlled rate to ensure that the reinforcement is not dislodged from its correct position. When the concrete arrives, the engineer must check to ensure that it is the correct mix and that it is within the specification for workability. Concrete cubes must be taken in accordance with the specification. Concrete will be compacted using vibrating pokers.

All concrete pours will be undertaken by an experienced concrete gang and all structural concrete will be compacted using a vibrating poker, tamped off level. Level will be controlled using a rotating laser or a level marked onto the shutter. Once the concrete has cured sufficiently the shutters will be struck and removed.

Bulk Excavation

The excavation will predominately require the use of a 5 ton excavator, with the level reduced the first set of temporary props will be installed. The excavation will continue to formation level installing temporary lateral propping as required by the temporary/enabling works designer.

In order to carry out construction of basement a bulk excavation must be carried out which includes the following: Separate work area, Mobilise plant/labour. Excavate arising's, Remove from site.

Lorries are to be managed to ensure that they do not stack up during the works. This is to be managed by the Logistics Manager and Traffic marshals. 2 no Traffic marshals will direct traffic / pedestrians as vehicles access / depart site, 1no to stop the pedestrians and the other to direct the vehicle.

Prior to the commencement of works a Permit to dig will be issued by the Contractor and the operatives carrying out the works will be briefed in the conditions of the permit. Only when a permit has been issued will the works commence. Drawings showing the positions of all known services in the area will be issued and will be actioned by the Contractor. All known services will be marked onto ground by the Contractors engineer.

A CAT scan will be carried out over the area of the intended excavation before any excavation is commenced and any services found will be marked directly with spray paint or by offsets where this is more appropriate.

All operatives using the cable avoidance tool must have undergone the underground services training as a minimum Cat & Generator competency certificates will be held on site. When the CAT scan has been carried out and has not located any underground services, and the record drawings do not indicate the possibility of underground services, excavation will proceed under the direction of a banksman using a mechanical excavator. Should, for whatever reasons, the Permit holder leave the works area, all excavations must be halted until the permit holder's return.

Where necessary but not envisaged, all hard break will be broken using hand held pneumatic breakers powered by the compressor by operatives wearing the correct PPE and after the CAT scan has been completed or an excavator mounted hydraulic pecker, the arisings from the hard break will be taken to a stock pile and removed at a later date to a licensed tip.

The area of excavation will be set out by the Contractor's engineer in conjunction using a rotary laser level to maintain the required level. Every 360° machine will be under the direction of a banks man who will monitor the depth of dig and also all loading operations. All excavated spoil will be loaded into a dumper or directly into a muck away lorry and removing it away from the excavated area.

Waste transfer notes will be issued by the waste carrier and all waste removed from site with be logged for the duration of the project. All waste carriers licences will be held on site together with Permits for End Destination Tip.

The banksman will continually scan the ground in front of the excavator using the CAT for any unknown underground services.

Once the formation layer has been achieved and checked by the engineers it will be surcharged by a final 150mm layer and compacted to protect the formation from following works prior to the final works being carried out. A level survey will be carried out by the Contractor on the completion of the bulk excavation works.

Deep excavation signs will be erected in all areas of excavation throughout the works. All plant and equipment will be filled from the double skinned diesel bowser and a spill kit will be always available on site. No edges of excavation will be left overnight where someone may fall into an open excavation. All perimeters of the excavation areas are to be battered to prevent collapse and falls. Pedestrian barriers will be erected where required to prevent other operatives walking into excavation areas; signage will also direct other site users to safe walkways across the site.

All dumper drivers will get off the dumper when being loaded and the engine will be turned off and the keys removed from the ignition. Designated routes will be agreed to the agreed stockpile, site operatives and members of public will be separated from this route by pedestrian barriers.

Substructure (Basement slabs and drainage)

Below ground drainage will be installed including manholes, gullies and pumping stations before blinding and the main concrete pours take place. Concrete will be poured to fill the basement floor evenly over the rebar which may be required to be cut to size.

Following excavation the Contractor will place and test all drainage, manholes, chambers and tanks including air tests and backfill. All plant and equipment used in these works will be supplied with the relevant certification, all hired in plant will not be older than six months and will be inspected and maintained daily on site.

Drainage operations will be controlled with a permit to work system; a permit to dig will be in place and signed by all involved in the works. A CAT scan will be carried out over the area of excavation before any excavation is commenced and any services found will be marked and identified.

Excavations will be dug using a 360 excavator operated by a trained certified (CPCS) operator. The excavator will work under the direction of a banksman. The excavation arisings from this operation will be loaded onto a conveyor which will discharge directly into a muck away vehicle situated in the loading bay outside of the property.

Once the excavation has been completed to the specified formation manholes or cast iron inspection chambers will be installed or constructed. The manhole base will be constructed using ready mix concrete delivered to site in small mixer lorries. This concrete will be placed either by a concrete pump or by the excavator bucket. Any build-up of dust and fumes will be combated using forced air ventilation via an air blower / extractor fan.

Following inspection and approval of the manhole the benching can be constructed. The benching pipe surround will be constructed of ready-mix concrete in accordance with the specification topped with granolithic screed hand mixed on site.

The foul and surface water pump chambers will be of GRP construction as per the engineer's specification. The chambers will be lowered into the basement using a hoist under the direction of a certified slinger signaller. The excavation of the chamber will be carried out ensuring that the correct concrete surround can be placed prior to backfill. Once the chamber has been constructed and all drainage runs connected to the tanks and tested, the tanks will be surrounded with concrete to the specified level.

Concrete shall be compacted to the specification by use of a vibrating poker to ensure adequate compaction is achieved.

All pipes will be set from the lowest manhole back up the run. The pipe level will be set using a pipe laser set up by the site engineer. Where necessary, pipes will be cut on the side of the trench using an electric angle grinder. The pipes will be bedded in accordance with the specification and air tested before covering with surround material. The bedding and surround material will be placed using the excavator. Once the pipes are laid and tested the upper manholes will be constructed.

Underpinning

The underpinning is predominantly to support the internal walls in order to create the new basement under the existing house. They will be reinforced concrete underpins.

The underpins will be dug by hand and each individual excavation will be shored as it descends.

All underpinning will be carried out in accordance with the Engineers drawings and specifications. It will be dug in maximum one metre wide hit and miss sequence and using a conventional five or six sequence system. The underpinning will be completed in two or even three vertical stages depending on its height and will be kept short of the underside of the existing footings by approximately 100mm. It will then be well rammed with 1:3 dry pack. Arisings will be removed as noted above.

Basement Slabs

Following completion of the basement excavation and the placement of the underground cast iron drainage the insitu reinforced concrete basement slab will be constructed to the latest construction drawings and specifications. Removal of all selected waste will be via the loading area in either skips or waste away vehicles.

All excavation works will be controlled by a permit to dig system, all operatives involved in the works will sign the permit and conform to its requirements. All plant and equipment used in these works will be supplied with the relevant certification, all hired in plant will not be older than six months and will be inspected and maintained daily on site.

Upon completion of reducing basement dig formation, the slab area will receive blinding. The blinding level will be surveyed while being installed / upon completion of installation. Reinforcement will be delivered to site and unloaded and stored in the designated reinforcement storage area, all reinforcement will be delivered prefabricated and cut to the required length to eliminate/reduce cutting on site and unnecessary noise.

Reinforcement shall be lifted in accordance with an approved lifting plan and lifted into the basement area by the hoist into the position where it is to be used. Steel fixing shall commence systematically with the bottom mat laid out first. Any cutting that is required on site will be carried by using electric angle grinders instead of petrol saws.

As fixing of reinforcement progresses carpenters shall follow behind fixing the edge kicker around the perimeter of the slab. Once the kicker shutters and steel fixing is complete the slab shall be blown out and cleaned. The slab shall then be checked for approval before placing concrete. A mobile pump and lines will be utilised to place concrete and be operated by a certified operator.

Concrete will be placed systematically and levelled progressively. Concrete pokers are to be used to ensure proper compaction. Laser levels or screed rails are to be used to ensure the concrete is spread to the correct level. The concrete shall be floated off using hand/easy floats. Concrete shall be called in just under the nearest load to minimise wastage and reduce the number of waste vehicles visiting site. Any remaining concrete shall be discharged in a controlled manner into a sheeted covered skip for recycling.

Superstructure (Vertical elements and RC frame

Concrete ground floor slab will be formed. Concrete will be poured to fill the floor evenly over the rebar which may be required to be cut to size. All RC vertical elements will be constructed to the required construction drawings and specifications.

All plant and equipment used in these works will be supplied with the relevant certification, all hired in plant will not be older than six months and will be inspected and maintained daily on site. All loads will be slung by a qualified slinger signaller. All communications during these works will be carried out with the use of two-way radios (where necessary) to prevent shouting and creation of unnecessary noise.

The site engineer will set out the lines of the lining walls once the basement slab has been completed and then all vertical walls as the works progress. The top surface will be keyed by wire brushing the green concrete or by scabbling the hardened concrete. Waterproofing and water bar shall be installed as per specification and standard details. Steel fixers will place and tie wall steel. The rebar for the walls will be fixed from basement level using an alloy tower or low-level podium if it is beyond reach from the slab. Formwork designs shall be obtained and approved by the project manager / temporary works co-ordinator.

The walls will be constructed conventionally in timber or with Peri Trio system formwork panels preassembled on site and lifted into position by hoist and lifting beam, using proprietary lifting clamps and chains. The panels will be propped, through ties fitted and access platform for pouring set up either using Ally towers or conventional scaffold, erected by a competent scaffolder.

A permit to load shall be in place prior to any fixing or reinforcement or placement of concrete.

Concrete will be poured from a static concrete pump with operatives working from either an Ally tower or conventional scaffold, erected by a competent scaffolder. Concrete will be placed at a controlled rate to ensure that the concrete pressure does not exceed the shutter design. Concrete will be compacted using high frequency electrically driven vibrating pokers, and all concrete pours will be undertaken by an experienced concrete gang. Once the concrete has cured sufficiently (the next day) the shutters will be struck and removed.

Concrete Pours

Concrete will be delivered to site in concrete wagons approved under Construction Management Plan for this project. This will generally be a in ready mix lorries (e.g. 6m3 26 tonne lorry) and traffic marshal will direct lorries into designated loading area. Due to the fact that non vibrational augured piling is the chosen method of piling a concrete pump and agitator are not required for the supply of concrete to these works and concrete will be supplied direct from concrete wagon.

For other areas of work as the project progresses and due to space limitations and restrictions a concrete pump and agitator will have to be used. This will involve the supply of a mobile concrete pump, agitator and concrete lines to complete the placing of the concrete. A certified pump operator will operate the pump and a linesman will be in assistance to lay and manage the concrete pump delivery lines the makeup of the lines will be a mixture of flexible hose and steel hose, the lines man will be in attendance throughout the concrete pour to ensure that any changes or rectifications to the lines are carried out at once.

The concrete pump will be sited outside the building in an agreed location and under relevant licences where applicable. An exclusion zone will be set up around the concrete pump in the form of Heras fence panels which will have Echo Barrier H2 acoustic noise absorbent system attached. This will ensure that the noise levels are greatly reduced throughout the duration of concrete pumping works. Once all the concrete has been placed the lines will be blown clean into designated area, the lines will be broken down and removed where they will be properly cleaned.

Building Envelope and Fit Out

A scaffolding will be erected around the existing properties. The scaffold will incorporate a loading gantry with lifting beams to the designated loading bays.

The scaffolding which will be clad in monaflex sheeting or equivalent will ensure that all envelope works are carried out safely and the monarlfex sheeting or similar will prevent the escape of dust and debris and will aid noise reduction.

All materials associated with the fit out will be delivered to site to designated loading bays and unloaded using the scaffold lifting beams. The protective gantry will ensure that pedestrians can pass safely by the works area and will not be affected by the lifting operations.

All waste arising from the fit-out works will be either lowered internally between floors and loaded directly into waste skips or will be lowered using lifting hoists.

All lifting operations will be undertaken by trained competent personnel.

(b) Prevention of Dust formation and air quality

We will ensure that the Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance July 2014 is adhered to.

Specifically, procedures will be implemented to ensure that the air quality will be maintained throughout all stages of the construction work at the above project and carbon emissions are minimised as much as possible when using plant and machinery and receiving deliveries as well as removing waste and spoil from site.

Records will be kept recording all vehicle movements to and from site as well insisting that all vehicles are of a standard that produce low emissions.

Air quality monitoring will be undertaken from day one on site and records kept and issued to confirm the standard achieved (a trigger action level for PM10 concentrations of 200ug/m3 (15 minutes average) shall be used to identify incidences of elevated dust emissions at the site boundary. The project shall comply with the trigger action throughout the demolition, substructure and superstructure phases of this project.

The site is of a size where construction plant will be used on a daily basis for excavation and demolition but is not of a size that large plant and equipment will be constantly running and tracking across the site moving and placing spoil, waste and other materials.

The following **best practicable means (BPM)** shall be implemented as a minimum throughout the development of the project:

- Machinery, fuel chemical storage and dust generating activities will not be located or undertaken close to boundaries and sensitive receptors where possible.
- The erection of barriers will be carried out around all dusty activities where possible and buildings that are to be demolished will have a full scaffold screen with sheeting and water used as a dust suppression.
- Hand held approved air quality monitors will be used 3 times every day (first thing in the morning, lunch time and prior to works completion for the day) they will also be used if the need arises to check the air quality for any given reason. The location positions will be agreed and maintained.
- Inventory and timetable of all dust generating activities will be maintained and air quality results recorded, maintained and issued to the local authority at agreed periods.
- Regular tool box talks, inductions and site briefings will be given to the work force relating to carbon emissions and air quality.
- The site is not large enough to imposed speed limits and all vehicles will be under the control of a banks man.
- During dry weather water suppression will be used on all hard standings access and exit routes to reduce the generation of dust.
- Where water used for dust suppression cannot be re-used a discharge licence will be obtained from Thames Water and the water will be disposed of through a settlement tank as per the Thames Water guidelines and licence requirements.
- No dust generating activities will be carried out in high winds or on days where suppression methods may fail.
- A designated person will be appointed as the regular monitor of air quality on a daily basis on this site using a hand held monitor and will check against the site action levels and limits.
- The trigger action level on this site will be 200 ug/m3 over 15 minutes.
- An on site alert system will be established that will be sent to the site team and The Contractor head office by email, specifying details of an alerts which could also be sent to the council on request.
- An electronic report will be sent to the council's air quality officer every 3 months as required.
- The council will be notified of any changes of the location and operation of dust PM10 monitoring instrumentation. A 24 hour phone / email hotline will be set up so that residents can complain about high dust or PM10 levels directly to the developer, also the environmental teams contact numbers will be displayed on the site hoarding.
- All vehicles will be inspected prior to leaving site ensuring that the load is correctly covered and the wheels and underside of the vehicle is clean.
- A jet wash will be available on site at all times.
- The loading of lorries will be carried out with the minimum / lowest drop height.
- All information relating to vehicles entering / leaving site will be recorded and logged.
- Any stock piles of materials will be damped down and covered.
- Skips will be enclosed or covered at all times.
- All excess materials will be used elsewhere on site or other sites, sent to transfer stations or recycling or sent back to the supplier for restacking.
- All construction vehicles delivering to site shall comply with the Euro 4 emissions standard and low emission fuels are to be used.
- No vehicles will be allowed to idle unnecessarily when on site, engines are to be turned off at all times when the vehicle is standing.

- All vehicles visiting site must hold current MOT certificates and this will be part of any order issued.
- Only low emission plant fitted with catalysts, diesel particulates filters or similar devices shall be used on this site. The Contractor do not own any of its own plant or equipment and all such items are hired in new or nearly new from a national supplier to ensure all equipment is in good condition and is certificated. (no repairs are carried out on site all plant and equipment is exchanged).
- A TBS electric supply will be established prior to works commencing so it is not expected that petrol or diesel generators will be used.
- Only ultra-low sulphur diesel will be used on this project and will be delivered to site directly from the supplier and placed into double bunded bowsers that will be located in a specific area with drip trays and spill kits.

The Contractor will ensure that all companies delivering to this site are accredited by FORS or will abide by the FORS minimum standards in the first instance whilst they apply for the FORS accreditation.

The Contractor will also commit to adopt green fleet management practices that will result in a 10% reduction in tail-pipe CO^2 emissions over the duration of the construction phase of the project.

The Contractor will also ensure that its subcontractors issue waste, CO^2 and energy statistics each month.

Appendix A6: Proposed Steps to Minimise Noise and Vibration

General Noise and Vibration Control Measures

Site Personnel

All operatives on site will be trained to ensure that noise minimisation is implemented at all times. Operatives will also be trained in line with the Best Practicable Means (BPM), as defined in Section 72 of the Control of Pollution Act 1974). Works will be checked regularly by site management to ensure that BPM are being undertaken and where necessary corrective actions implemented.

Employees must show consideration to the sensitive receptors, including residential neighbours, and must not generate unnecessary noise when walking to and from the site, or when leaving from, and arriving, at work.

Community Engagement

- Details of the site personnel responsible for noise and vibration, the head office, the duration of the project and site working hours, will be displayed on the site boundary;
- Letter drops to neighbouring residents before work begins giving the information identified in Table 1 of the CoCP;
- Website with site information and contact email address will be provided;
- Liaison with neighbouring construction sites to co-ordinate works as far as practicable, particularly off-site vehicle movements, to avoid waiting vehicles;
- Establish contact with the relevant residents' association, meetings with residents at appropriate intervals, minutes of meeting and agreed actions circulated to residents;
- Site will keep an observations, investigations and complaints log, to be made available to Council on request; and
- All complaints will be responded to.

Plant Choice and Management

- Choice of methodology/technique for operations (including site layout) will be considered in order to eliminate or reduce emissions at sensitive locations;
- Fixed items of construction plant will be electrically powered where practicable in preference to diesel or petrol driven;
- Noisy plant will be kept as far away as possible from sensitive areas;
- Each item of plant used will comply with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/United Kingdom Statutory Instrument (SI) 2001/1701 where reasonably available;
- Equipment will be well-maintained and will be used in the mode of operation that minimises noise;
- Plant which is classified as 'high impact activities' in the CoCP will be limited to working between the hours set out in a Section 61 agreement such as 09:00 – 12:00 hrs & 14:00 – 17:30 hrs Monday to Friday; and
- A temporary builder's power supply will be applied for in advance if no existing supply is available.

Vehicles

- Equipment will be shut down when not in use or throttled down to a minimum during waiting periods;
- Vehicles shall not wait or queue on the public highway with engines running (unless the engine is required to power the operation of the vehicle e.g. concrete wagon);
- Deliveries will be co-ordinated to prevent vehicles queuing outside site; and
- Where possible and safe the vehicle reversing alarms will be switched off and banksman will be used to guide the vehicles to the site.

Site Specific Noise and Vibration Control Measures

- Where breakers are required, multiple breakers will be employed such that the usage period is reduced;
- Where percussive breaking techniques are required, concrete slabs will be cut where possible, to isolate the slab, thus reducing the transmission of vibration; Where powered tools are required they are to be screened as far as reasonably practicable to reduce potential impact;
- Compressors and generators will be isolated from the floor where reasonably practicable;
- Spoil is to be transported into tipper lorries. Vehicles being loaded are to sit with their engines off to minimise noise emitted;
- Spoil will be loaded into lorries in a such a manner as to minimise impact noise;
- Where possible softer materials (such as soils) will be loaded into lorries first to form a cushioning barrier to rubble and other hard materials to reduce impact noise;
- Concrete pumps will be located so as to minimise potential adverse effects at sensitive receptor locations, whilst taking into account logistical restrictions;
- Static dewatering plant will be located in semi-permanent enclosures;
- Inspections to be carried out during works to ensure the condition of surrounding buildings is not impaired;
- Where practicable, non-percussive pile reduction techniques will be used to control disturbance.
- Percussive breaking techniques shall not be used to break or otherwise reduce concrete unless it is not technically feasible to avoid the use of breakers. Alternative quieter methods, such as the use of hydraulic crackers or splitters shall be used where it is practical to do so.
- Where possible, prefabricate materials so as to avoid fabrication on site such as cutting of metal and other materials.
- Where practical, replace power generation plant with fixed electrical power.
- Where practical, substitute all plant powered by engines with electrically powered plant.
- Localised enclosures will be utilised to enclose any noisy items of plant, such as concrete pumps and hand held equipment such as cutters and grinders. Where acoustic screening or enclosures are used, such screening should provide effective acoustic attenuation as shown and should have a similar level of sound transmission performance as the mobile screen described in British Standard BS5228-1:2009+A1:2014 and BS5228-2:2009+A1:2014 ‘Noise and Vibration Control on Construction and Open Sites’. In particular, any screens shall have sufficient mass so as to be able to resist the passage of sound across the barrier and to be free of significant holes or gaps between or under any acoustic panels or board materials as far as reasonably practical.
- Where possible the use of alarms will be avoided altogether. Banksmen to control the movement of vehicles to and from and within the site. Where this is not possible for safety reasons, replace tonal alarms with visual alarms. If it is not practical to avoid audible alarms, all such alarms must be broad band noise alarms.
- Care will be taken when loading or unloading vehicles or dismantling scaffolding or moving materials to reduce impact noise. Loading or unloading bays will be housed in suitable acoustic enclosures.

Monitoring Regime

As part of the overall management of noise and vibration effects, an appropriate programme to monitor ambient noise and vibration levels will be devised prior to the commencement of construction and demolition works.

The purpose of the environmental monitoring is to enable on-going and proactive management of noise and vibration effects to comply with the principles BPM and the limits agreed with the Noise and Nuisance Team.

Monitoring Locations

Continuous unattended noise and vibration monitoring is proposed to be undertaken at suitable locations around the site to be agreed with the Noise and Nuisance Team at Council. It is proposed to monitor noise and vibration on the party walls of adjoining properties, subject to access, as

presented below in Figure 3.1. Additionally, it is proposed to undertake unattended noise monitoring at the commencement of potentially disturbing activities such as demolition and excavation at locations marked in green as presented below in Figure below.

Attended and unattended measurements will be used to validate calculated construction noise levels.
Monitoring Duration

Based on the construction programme and risk assessments that have been undertaken and this document, it is proposed that noise and vibration monitoring as defined above continue through phases of work where High Impact Activities are identified.
Suitability

The monitoring proposal will be subject to agreement with Council's Noise and Nuisance Team and other stakeholders.

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On-going review of monitoring locations should be undertaken throughout the duration of the project in response to periods of intense construction work or following receipt of concerns raised by nearby receptor occupants.
Reporting

Monitoring data will be communicated in a monthly report containing presentation of the continuous monitoring data, with assessment against any relevant Site Action Levels including the cause and times that any exceedances occurred and the action taken to stop the exceedance and prevent reoccurrence.

A copy will be issued to Council's Noise and Nuisance Team on request.
In addition to monthly reports, monitoring data will be remotely accessible to enable on-demand interrogation; however, this will only be possible if the site conditions allow a suitable signal to be achieved. Furthermore, instant email alerts will be sent to relevant site personnel when Site Action Levels are exceeded. System checks will be competed on the first working day of the week to ensure the monitors are functioning correctly and logging data.

Site Action Levels

Noise Limits

Working Hours 08:00-18:00 Monday to Friday
08:00 – 13:00 Saturdays by arrangement only.
(No basement works to be undertaken)

Time Base (t) 1 hour

First Action Level 70dB LAeq T

Second Action Level 75dB LAeq T

The noise will be recorded on unattended noise monitors and the action levels will be incorporated into the monitoring system for the project duration. In the event that the limits are breached an automatic alert will be sent to relevant personnel and the works will be reviewed immediately. Reports will be available on request including attended noise monitoring which will be carried out periodically.

Vibration Limits

The typical vibration monitoring approach is for displacement monitoring to be undertaken independently by consultant engineer.

Action Trigger Level Action

Amber

3.0 mms-1

If the Amber trigger level is reached the engineers will attend site to inspect the area locally for signs of new defects such as hairline cracking.

If no new defects are reported then work can proceed. Should new defects be visible then the contractor should stop works in these areas and the defects should be recorded with photos and distributed to the project and checking engineers for comment.

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The contractor should await instructions prior to proceeding in the associated area.

Red

5.0 mms-1

If the Red trigger level is reached the contractor is to stop works putting in place any measures to prevent further movement.

The project and temporary works engineers are to be informed and proposals put forward to limit further movements during the construction.

Monitoring is to be undertaken weekly during the structural/basement works. Results shall be sent directly to the adjoining surveyors/checking engineers.