Construction Management Plan

pro forma v2.2

Camden

Contents

Camden

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
14.07.17	A	Martin Shotton
11.09.17	B	Martin Shotton
02.10.17	C	Martin Shotton
05.10.17	D	Martin Shotton
17.11.17	E	Martin Shotton Contract dates amended

Additional sheets

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

Date	Version	Produced by
11.09.17	Appendix A	Swept Path Drawings
11.09.17	Appendix B	Acoustic Plan by Clement Acoustics
02.10.17	Appendix C	Consultation
05.10.17	Appendix D	Eradication of Rats

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Introduction

The purpose of the **Construction Management Plan (CMP)** is to help developers to minimise construction impacts, and relates to both on site activity and the transport arrangements for vehicles servicing the site.

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 kind 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 Transport for London's (TfL's Standard for Construction Logistics and Community Safety (**CLOCS**) scheme) and Camden's Minimum Requirements for Building Construction (**CMRBC**).

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 in relation to the construction of the development. 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 for 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 notify that council when you intend to start work on site. Please also notify the council when works are approximately **3 months from completion.**

(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.

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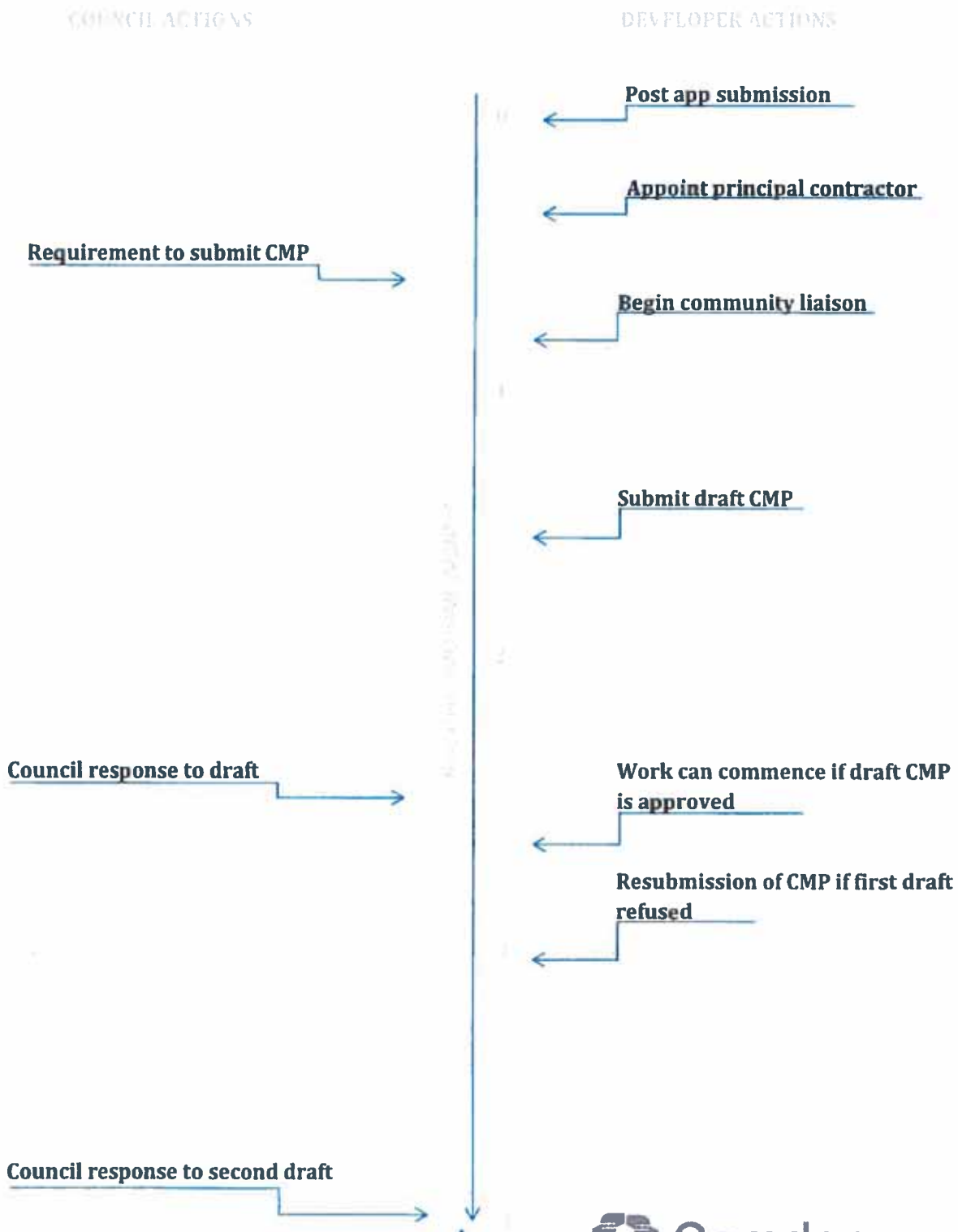
Timeframe


COUNCIL ACTIONS
DEVELOPER ACTIONS
Post app submission
Appoint principal contractor
Requirement to submit CMP
Begin community liaison
Submit draft CMP
Council response to draft
Work can commence if draft CMP is approved
Resubmission of CMP if first draft refused
Council response to second draft

Contact

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

Address: 10-11 Kings Mews London WC1N 2ES

Planning application reference:

2012/631/P

Type of CMP – Section106

Condition discharge

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

Name: Martin Shotton

Address: James Taylor House St Albans Road East

Hatfield AL10 0HE

Email: mshotton@jamestaylorconstruction.com

Phone: +44(0) 1707 244040

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.

Name: Martin Shotton

Address: As Q3

Email: mshotton@jamestaylorconstruction.com

Phone: +44(0) 1707 244040

Camden

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.

Name: Martin Shotton

Address: Site Office)

10-11 Kings Mews

Email: mshotton@jamestaylorconstruction.com

Phone: +44(0) 1707 244040

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.

Name: Name: Martin Shotton

Address: James Taylor House St Albans Road East

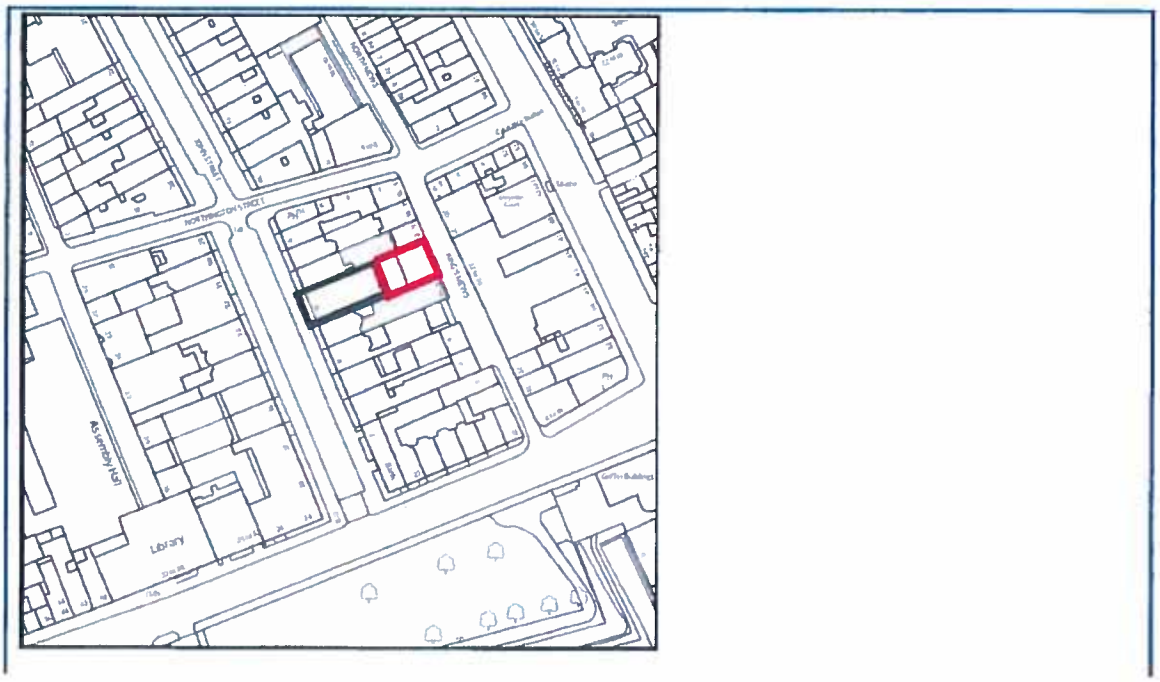
Hatfield AL10 0HE

Email: mshotton@jamestaylorconstruction.com

Phone: +44(0) 1707 244040

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.



10-11 Kings Mews Holborn London
WC1N 2ES

The building is within a mixed residential and commercial area at Kings Mews.

The surrounding area to the site includes a Public House, offices a car garage and residential properties to the front, side and rear. Due to the style of property, and the build up of the surrounding area, the site will be accessed from the rear via Kings Mews.

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 works will comprise of additional underpinning and foundations being installed within the existing building's footprint.

Subsequent works will include installing a new steel frame within the building and following refurbishment of all floor levels to the agreed specification provided by James Taylor Construction and Clients requirement.

The main issues for addressing through the works are:

- Enclosed site and access from Kings Mews
- Consideration of plant and material movement
- Enclosed site and noise / disturbance to residents in Kings Mews
- Additional construction activities and developments during the works

8. 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.).

Activity	Impact	Affecting
Demolition of rear extension and facade	Noise Vibration Dust Fumes	Occupants at Kings Mews and surrounding areas
Site Access and entry	Vehicles Loading / Unloading Movement of materials	Occupants at Kings Mews
Full property refurbishment	Noise Dust Vibration Fumes	Occupants at Kings Mews and surrounding areas

9. 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 and proposed site access locations.

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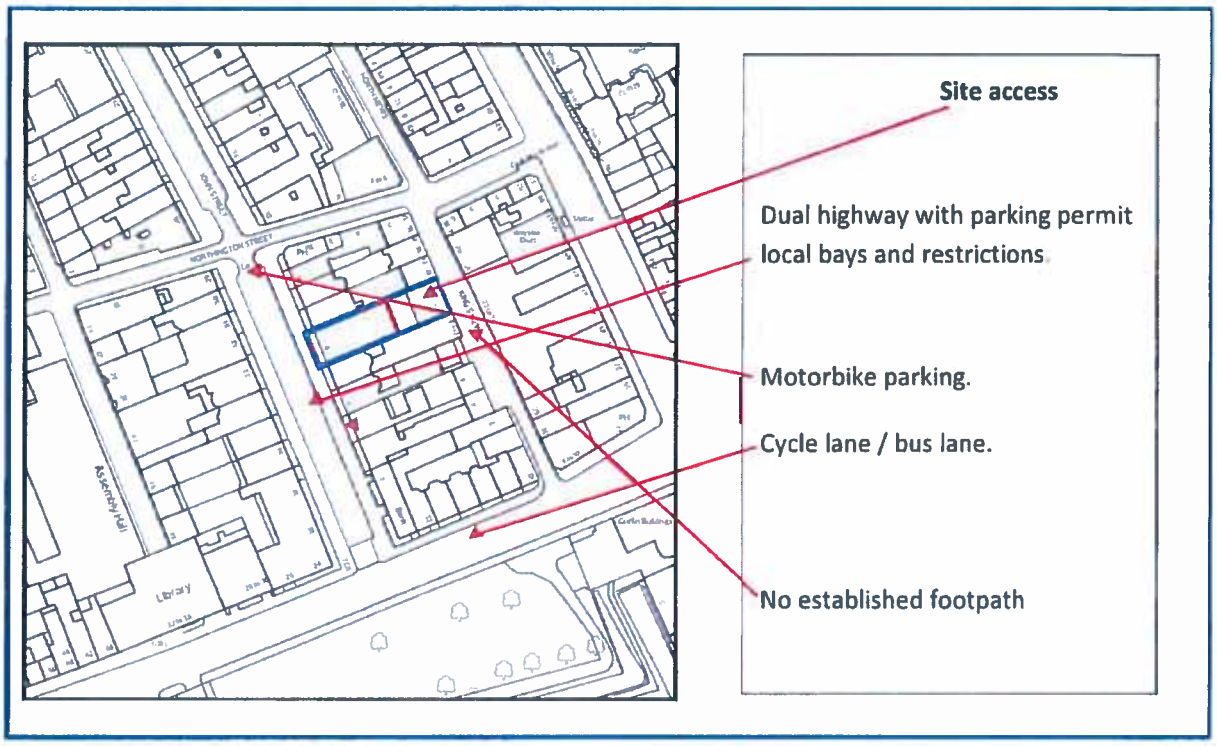


10. Please provide the proposed start and end dates for each phase of construction as well as an overall programme timescale. (A Gantt chart with key tasks, durations and milestones would be ideal).

10-11 Kings Mews	9.10.17 Start	9.10.18 Completion
Site set out (Hording, scaffolding, site office)	Week 1	Week 2
Demolitions, alterations and Site preparation	Week 2	Week 5
Temporary work - steels	Week 3	Week 5
Installation of Metal Framing as per SE specification	Week 5	Week 8
Drainage -	Week 6	Week 7
Roofing	Week 7	Week 8
Application for Main services	Week 9	Week 9
Rear elevation brickwork	Week 9	Week 15
Timber framing and drylining	Week 10	Week 12
Windows, Doors and glazing	Week 12	Week 15
Sanitary fitting order	Week 12	Week 12
Plumbing and electrical first fix	Week 12	Week 15
Border, Plaster and Render	Week 12	Week 17
Delivery tiles, marble, kitchen...	Week 20	Week 22
Stone & ceramic tiling	Week 22	Week 27
Plumbing and electrical second fix	Week 27	Week 29
Ironmongery	Week 30	Week 30
Joinery work	Week 30	Week 35
Floor Finishes	Week 35	Week 39
Fittings	Week 39	Week 41
Equipment	Week 41	Week 41
Front door, front lightwell - railing	Week 41	Week 42
Decoration	Week 35	Week 42
Snagging and cleaning	Week 42	Week 43
Cleaning, site demobilisation	Week 43	Week 52

11. 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

Monday to Friday 8.00 to 18.00

Saturday 8.00 to 13.00

12. 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.

In accordance with initial survey of the building, the mains water supply is anticipated to be upgraded. Full confirmation is due from initial enquiries from Thames Water. On-going correspondence is taking place with Thames Water to finalise the requirements.

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.

13. 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.

A consultation letter has been issued to residents and businesses in the area

James TaylorConstruction through its company procedures initiates consultation with occupants affected by works to limit disturbance and provide communication routes to deal with concerns or complaints. Additional notices are displayed at the site entrance with site contact details for further communication routes with local residents. Consultation will to be undertaken with the occupiers and residents of King's Mews (between and Northington Street and Theobalds Road) and Ward Councillors. Including guidance on Camden website at the hyperlink below:

http://www.camden.gov.uk/ccm/content/environment/planning-and-built-environment/two/planning-applications/making-an-application/supporting-documentation/construction-management-plans.en

All feedback from local occupants and further concerns are recorded on site to ensure any complaints are dealt with within a professional and courteous timescale.

see Appendix C for details of the letter and consultation

14. Construction Working Group

Please provide details of community liaison proposals including any Construction Working Group that will be set up, addressing the concerns of the community affected by the works, the way in which the contact details of the person responsible for community liaison 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.

Community liaison will be formed by the following:

It is not yet clear if a construction working group needs to be formed. This will become apparent once CMP consultation has been undertaken

If it is required, community liaison will be formed by the following:

- Neighbourhood consultation letter including site contact details
- Establish meeting with local residents to consult on construction work and agree noisy works hours
- Monitor works and establish log book for complaints and incidents to remediate

15. Schemes

Please provide details of your 'Considerate Constructors Scheme' registration, and details of any other similar relevant schemes as appropriate. Contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

James Taylor will register the site with the Considerate Contractors Scheme referring to the CCS website https://www.ccscheme.org.uk/

James Taylor Construction do not own or operate control over any fleet of vehicles that are construction heavy goods vehicles that are significant in impact to road safety.

James Taylor Construction raise awareness of road safety issues for contractors and employees through training and induction to the site traffic management plan.

James Taylor Construction will request sub-contractor goods vehicle operators confirm they are compliant with FORS, Van Excellence or other FORS-equivalent standards on appointment. Any further measures that can be introduced for the site traffic management from CLOCS standards will be done for the benefit of the operations undertaken.

In addition contractors and sub-contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

16. 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.

Currently there is one other refurbishment project underway on John St and one on Kings Mews of similar scope in construction refurbishment and impact to immediate neighbouring properties.

As advised by Camden that there are various approved developments currently under construction or about to commence construction on the section of King's Mews between Northington Street and Theobalds Road. It is noted that contractors will be required to work together to minimise the cumulative impacts of 2 or more developments being constructed concurrently. Contact is Shahida Sanessie in the Infrastructure and Growth Team for further details.

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 the council to ensure compliance. Please refer to the CLOCS Standard when completing this section. Guidance material which details CLOCS requirements can be accessed here, details of the monitoring process are available here.

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

Please refer to the CLOCS Overview and Monitoring Overview documents referenced above which give a breakdown of requirements.

CLOCS Contractual Considerations

17. Name of Principal contractor:

Dropbox Ltd.

18. 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).

Traffic Routing. 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, public buildings, museums etc. Where appropopriate, on routes that use high risk junctions (ie those that attract high volumes of cycle traffic) installing Trixi mirrors to aid driver visibility should be considered. Consideration should alcs be given to weight restrictions, low bridges and cumulative impacts of construction (including construction sites) on the public highway network. The route(s) to and from site should be suitable for the size of vehicles that are to be used. This should be communicated to all contractors and subcontractors servicing the site and not deviated from unless avoidable

19. 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. Please sign-up to join the CLOCS Community to receive up to date information on the standard by expressing an interest online.

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

Dropbox Ltd confirm the above

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

Site Traffic

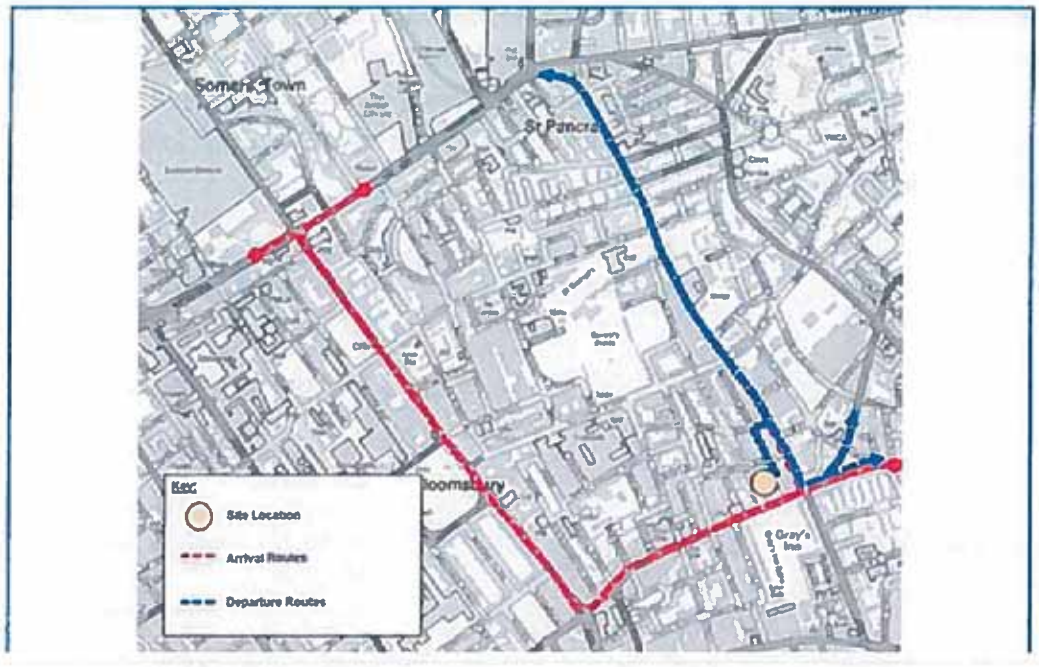
Sections below shown in blue directly reference the CLOCS Standard requirements. The CLOCS Standard should be read in conjunction with this section.

20. 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, public buildings, museums etc. Where appropriate, on routes that use high risk junctions (i.e. those that attract high volumes of cycling traffic) installing Trixi mirrors to aid driver visibility should be considered.

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.

a. Please indicate routes on a drawing or diagram showing the public highway network in the vicinity of the site including details of how vehicles will be routed to the Transport for London Road Network (TLRN) on approach and departure from the site.



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

The intended preferred route for all construction vehicles accessing and egressing King's Mews is via Northington Street to allow for access to the rear of the building via Kings Mews, where they will access the site off Kings Mews

21. 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 are generally acceptable between 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 between 9.30am and 3pm on weekdays during term time. (Refer to the ***Guide for Contractors Working in Camden***).

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. Consideration should be given to the location of any necessary holding areas for large sites with high volumes of traffic. Vehicles must not wait 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.

a. Please provide details of the typical sizes of all vehicles and the approximate frequency and times of day when they will need access to the site, for each phase of construction. You should estimate the average daily number of vehicles during each major phase of the work, including their dwell time at the site. High numbers of vehicles per day and/or long dwell times may require vehicle holding procedures.

Vehicle Type	Gross Weight / Size	Frequency
Small 2-Axle Vehicles	3.5 ton / 6m L	Lightweight for general use, deliveries/ materials removal of equipment. Trades delivery of equipment. Averaging 2 daily throughout works. 15 minutes dwell time only.
Bigger 2-Axle Vehicles	3.5 ton / 10m L	Waste removal on weight and load. Demolition – 4 daily over two weeks. One hour dwell time.
HGV 3-Axle Vehicles	20 ton / 12.5m L	Concrete delivery plant. One drop off One pick up only. One hour dwell time. Mobile crane

Construction vehicle movements will be scheduled to avoid peak periods.

b. Please provide details of other developments in the local area or on the route.

Currently there are various approved developments currently under construction or about to commence construction on the section of King's Mews between Northington Street and Theobalds Road.

c. Please outline the system that is to be used to ensure that the correct vehicle attends the correct part of site at the correct time.

The intended preferred route for all construction vehicles accessing and egressing King's Mews is via Northington Street to allow for access to the rear of the building via Kings Mews, where they will access the site off Kings Mews.

All vehicles approaching the building will phone in advance to notify the site managers who will operate as Banksmen and Marshall Traffic.

All contractors, suppliers and delivery vehicles are informed of the site access and delivery arrangements on at initial procurement stages.

d. Please identify the locations of any off-site holding areas (an appropriate location outside the borough may need to be identified, particularly if a large number of delivery vehicles are expected) and any measures that will be taken to ensure the prompt admission of vehicles to site in light of time required for any vehicle/driver compliance checks. Please refer to question 24 if any parking bay suspensions will be required for the holding area.

Adequate site access is provided directly into site loading area via Kings Mews at the rear of site. There is no requirement for parking bay suspensions or temporary traffic management orders under these refurbishment works.

e. Please provide details of any other measures designed to reduce the impact of associated traffic (such as the use of construction material consolidation centres).

Access to the site for all vehicles will be via Northington Street from the north.

Due to the frequency of vehicles and sizes we see no overt disruption to the local area or impact on the public highway network.

22. 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)

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 (not 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 access and egress routes to and from the site

The access/egress for construction vehicles on site will be from Kings Mews and all parties will be required to give a notice period of 48 hours prior to arrival/departure. All vehicular movement accessing/egressing the site will be monitored and controlled by the site manager and qualified banksmen. They will be responsible for the coordination and control of all aspects of material deliveries and movement.

Under the Considerate Constructers Scheme prior notice to visitors will be given issuing instruction that no parking facilities are available on site and that parking restrictions are in place in the immediate surrounding site zone.

b. Please describe how the access and egress arrangements for construction vehicles will be managed.

Under the Considerate Constructers Scheme prior notice to visitors will be given issuing instruction that no parking facilities are available on site and that parking restrictions are in place in the immediate surrounding site zone. Banksmen and/or traffic marshals will be employed as required during traffic movements to ensure cyclist and pedestrian safety.

c. Please provide swept path drawings for any tight manoeuvres on vehicle routes to and from the site including proposed access and egress arrangements at the site boundary (if necessary).

Appendix A contains swept path drawings

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.

The access/egress for construction vehicles on site will be from Kings Mews and all parties will be required to give a notice period of 48 hours prior to arrival/departure. All vehicular movement accessing/egressing the site will be monitored and controlled by the site manager and qualified banksmen. They will be responsible for the coordination and control of all aspects of material deliveries and movement.

Under the Considerate Constructers Scheme prior notice to visitors will be given issuing instruction that no parking facilities are available on site and that parking restrictions are in place in the immediate surrounding site zone.

b. Please describe how the access and egress arrangements for construction vehicles will be managed.

Under the Considerate Constructers Scheme prior notice to visitors will be given issuing instruction that no parking facilities are available on site and that parking restrictions are in place in the immediate surrounding site zone. Banksmen and/or traffic marshals will be employed as required during traffic movements to ensure cyclist and pedestrian safety.

c. Please provide swept path drawings for any tight manoeuvres on vehicle routes to and from the site including proposed access and egress arrangements at the site boundary (if necessary).

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.

To reduce dust and dirt on the public highway to a minimum we will allow for regular cleaning and wheel washing facilities on site compound exit. These are to be used on any vehicle that visits or leave site in order to minimalize the debris in Kings Mews and the surrounding roads. Wheel washing facilities are to discharge into the existing mains sewer via the drainage in Kings Mews subject to any planning concerns. Where necessary road sweepers will control excess debris. A 2.4metre site hoarding at site entrance and enclosed party walls at site will also reduce the amount of dust/debris dispersing onto the street.

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

If this is not possible, 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 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 loading is to take place off site, please identify where this is due to take place and outline the measures you will take to ensure that loading/unloading is carried out safely. Please outline in question 24 if any parking bay suspensions will be required.

There are no highway works or works affecting public highways through these refurbishment works. Site set up is the site will be located within the boundary of the development as follows.

Highway interventions

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.

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.

24. Parking bay suspensions and temporary traffic orders

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

Please provide details of any proposed parking bay suspensions and TTO's which would be required to facilitate construction. **Building materials and equipment must not cause obstructions on the highway as per your Considerate Contractors obligations unless the requisite permissions are secured.**

Information regarding parking suspensions can be found here.

Not Applicable

25. Scaled drawings of highway works

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. You must submit a detailed (to-scale) plan showing the impact on the public highway that includes the extent of any hoarding, pedestrian routes, parking bay suspensions and remaining road width for vehicle movements. 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 accurate scaled drawings of any highway works necessary to enable construction to take place (e.g. construction of temporary vehicular accesses).

Not applicable

b. Please provide details of all safety signage, barriers and accessibility measures such as ramps and lighting etc.

Hoarding for the works will be established at the boundary onto Kings Mews. The hoarding will not occupy the public highway but will conform to Camden hoarding specification for robustness, durability and lighting where this affects public highway.

26. Diversions

Where applicable, please supply details of any diversion, disruption or other anticipated use of the public highway during the construction period (alternatively a plan may be submitted).

Not applicable

27. VRU and pedestrian diversions, scaffolding and hoarding

Pedestrians and/or cyclist 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 ramping 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. 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. Please provide details describing how pedestrian and cyclist safety will be maintained, including any proposed alternative routes (if necessary), and any Traffic Marshall arrangements.

Not Applicable

b. Please provide details of any temporary structures which would overhang the public highway (e.g. scaffolding, gantries, cranes etc.) and details of hoarding requirements or any other occupation of the public highway.

There are no requirements for temporary structures including scaffolding, gantries or cranes that will overhang the public highway at this time of construction planning.

During planning stages the requirement for temporary structures will be reviewed to address any highway licensing requirements. In the event such licenses are required this will be consulted with and applied for immediately to www.camden.gov.uk/buildinglicences

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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.

This phase of works and following construction works will follow the noisy operations times agreed from initial con- sultation with neighbouring properties and occupants prior to commencement.

Current allowance under Camden working Hours:

Monday to Friday only: 08.00 to 18.00

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.

The Construction Noise, Vibration and Dust Management Plan by Clement Acoustics is contained in Appendix B

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

The full list of equipment and methodology of the demolition contractor is provided which indicates the maximum equipment dB levels of 103dB dependant on acoustics of the building and reinforcement within the building structure.

The diamond blade produces around 103dB but again is dependable on the acoustics of the building and also the amount of reinforcement within the wall structure but as the drilling this is not a percussion process so will not reverberate around the building.

On similar sites records working to two hour maximum noisy works the predicted impact would be from the following works to be undertaken:

Site preparation works - 60-90 dB

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.

Working hours of noisy works to be within LA working hours and agreed noisy times. Minimum conditions to be expected of two hours on and two hours off.

Site noise monitoring records to be kept with register of complaints for reference at all times of works.

Experience from similar sites has shown that by implementing the following measures will serve to reduce noise and vibration levels to the most practical levels considering the deconstruction and demolition works.

- Phasing the works to maximise the benefit from perimeter structures;
- Any compressors brought on to site to be silenced or sound reduced models fitted with acoustic enclosures;
- All pneumatic tools should to be fitted with silencers or mufflers;
- Deliveries should programme to arrive during daytime hours only.
- Care to be taken when unloading vehicles to minimise disturbance to local residents. Delivery vehicles to be prohibited from waiting at site with their engines running;
- All plant items to be properly maintained and operated according the manufacturers' recommendations in such a manner as to avoid causing excessive noise. All plant to be sited so that the noise impact at nearby noise-sensitive properties is minimised;
- Hoarding, screens or barriers to be erected as necessary to shield particularly noisy activities; and
- Problems concerning noise from construction works to be avoided by taking a considerate and neighbourly approach to relations with local residents. Works should not be undertaken outside of the hours agreed with the local authority.

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

All direct staff are trained internally in accordance with BS5228, COP for noise and vibration control on construction and open sites with direct reference to Regulation 8 of the Control of Vibration at Work Regulations 2005 for employee health.

All sub-contractors are to provide evidence of their own training in respect of CoVaWR, with particular attention to (HAV), (WBV), assessment and management of reducing exposure limits.

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

The contractor will use the principles of:

- Prevention
- Suppression
- Containment

in order to contain the risk of nuisance caused by the escape of visible dust, particles and other emissions
The contractor will identify dusty operations planned on site and form strategies to suppress the emission of dust and creation of nuisance. The contractor will put in place and maintain effective suppression techniques. These techniques will be planned in advance to ensure the correct supplies of water etc. are in the correct locations. Before the dusty activities begin
Where there is evidence of airborne dust from the building activities the site, the contractor will make their own inspection and assessment, where necessary undertake ambient monitoring with the aim of identifying those operations giving rise to the dust. Once the source of the emission is known,
Effective preventative maintenance will be employed on all aspects of construction/demolition works including all plant, vehicles, buildings and the equipment concerned with the control of emissions to air
The contractor will ensure that they maintain management, supervision and training for process operations; proper use of effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air; and spares and consumables will be kept at hand in order to rectify breakdowns rapidly.

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.

To reduce dust and dirt on the public highway to a minimum we will allow for regular cleaning and wheel washing facilities on site compound exit. These are to be used on any vehicle that visits or leave site in order to minimalize the debris in Kings Mews and the surrounding roads. Wheel washing facilities are to discharge into the existing mains sewer via the drainage in Kings Mews subject to any planning concerns. Where necessary road sweepers will control excess debris. A 2.4metre site hoarding at site entrance and enclosed party walls at site will also reduce the amount of dust/debris dispersing onto the street.

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

Working hours of noisy works to be within LA working hours and agreed noisy times. Minimum conditions to be expected of two hours on and two hours off. Site noise records to be kept with register of complaints for reference at all times of works.

Site dB apps are used as part of internal site management systems including distance from operation, party wall and site boundary. Site manager recording are for noisy works only and during the confirmed noisy hour working with LA and party wall surveyor's requirements.

During working hours under planning conditions noise monitoring will reduce as works progress to internal fit out within an enclosed working environment. All complaints will automatically be reviewed against site records with any exceedances fully investigated to further improve on noise and vibration mitigation measures. All incidents recorded within the site incident logbook at the site office.

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.

Under the GLA BPG on *"control of dust emissions from construction and demolition"* the following assessment has been made.

Size of Site	Number of Properties	Potential Sensitive Receptors	Construction Impact
859.1 sqM	One residential unit.	Kings Mews Residents Local up to 20M	Removal of debris / waste Storage of material Prolonged period of works 1 year Weather Conditions Site vehicles
Assessment Site Score		**Low Risk**	

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.

It is confirmed that all of the GLA's 'highly recommended' measures from the SPG document relative to the level of risk identified in question 36 (low Risk) have been addressed by completing the GLA mitigation measures checklist.

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.

Not applicable to these works.

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).

See Appendix D

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

No asbestos is present on the site if found asbestos to be removed by licensed contractors under Client instruction.

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.

Site inductions and tool box talks will be given to all personnel prior to the commencement of works which will be monitored and reviewed during the construction process. Zero tolerance will be applied to bad language, shouting and unsuitable behaviour. Action will be taken for breaching the site rules. A designated smoking area will be provided as part of the project management plan

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):

b) Is the development within the CAZ? (Y/N):

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

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:

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:

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:

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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.

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately 3 months from completion.

Signed: PP JR

Date: .. 17.11.17

Print Name: ..MARTIN SMOTTON.....

Position: ....OPERATIONS DIRECTOR

Please submit to: planningobligations@camden.gov.uk

End of form.

Camden

Appendix A

Includes:

- CTMP_100 Site Plan
- CTMP_101 Concrete Delivery
- CTMP_102 Scaffold Delivery
- CTMP_103 Spoil Removal
- CTMP_104 Concrete Truck Swept Path
- CTMP_105 Lorry Swept Path
- CTMP_106 Arriving Vehicles
- CTMP_107 Departing Vehicles

GENERAL NOTES

DO NOT SCALE FROM THIS DRAWING

ALL DIMENSIONS MUST BE CHECKED ON SITE AND ANY DISCREPANCIES VERIFIED WITH THE ARCHITECT

CLIENT

JOB TITLE
KING'S MEWS
LONDON
WC1

DRAWING TITLE
MULTI- SITE
SET UP DRAWING

SCALE	DATE
1:200@A3	09.16

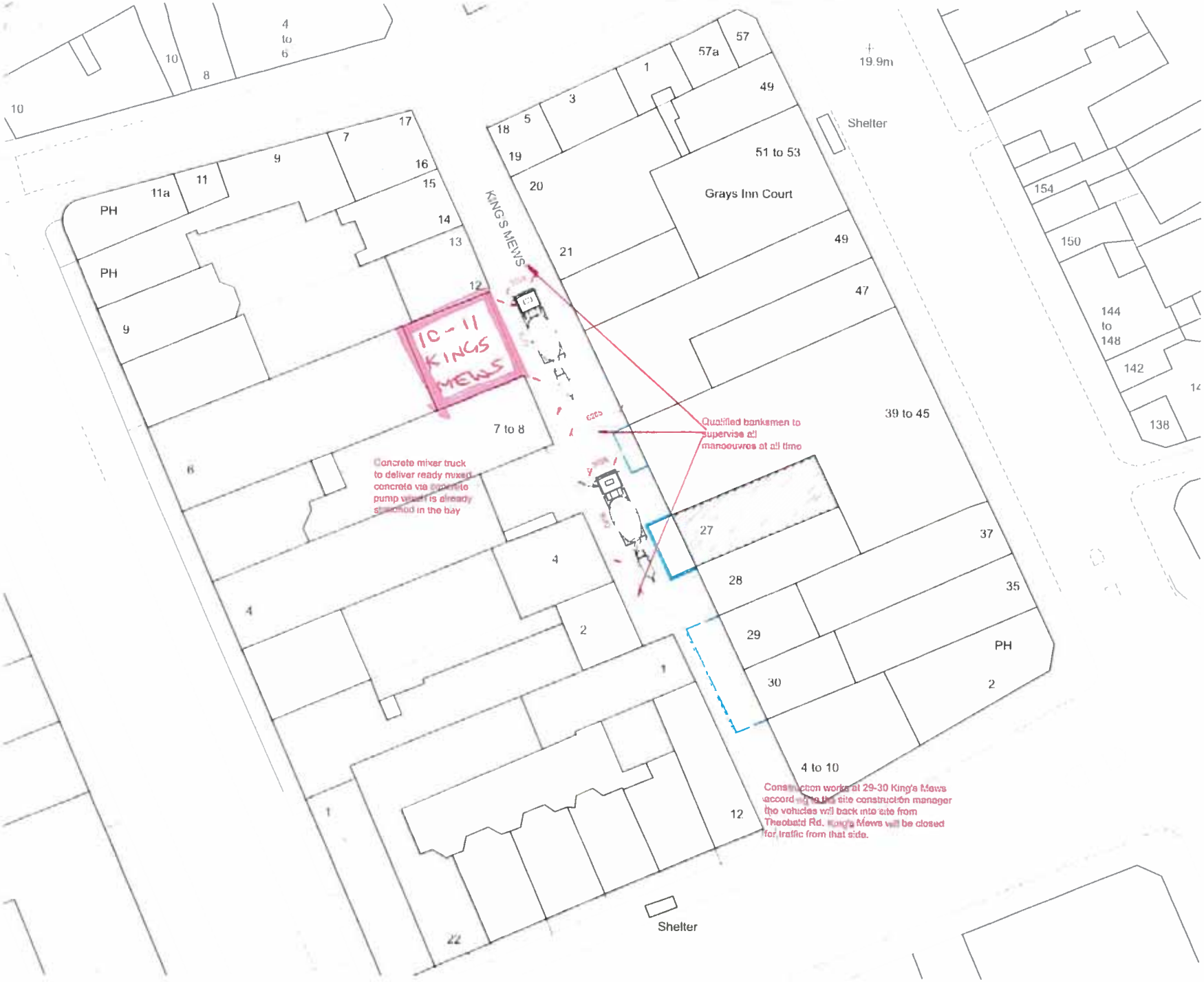
FT ARCHITECTS LTD

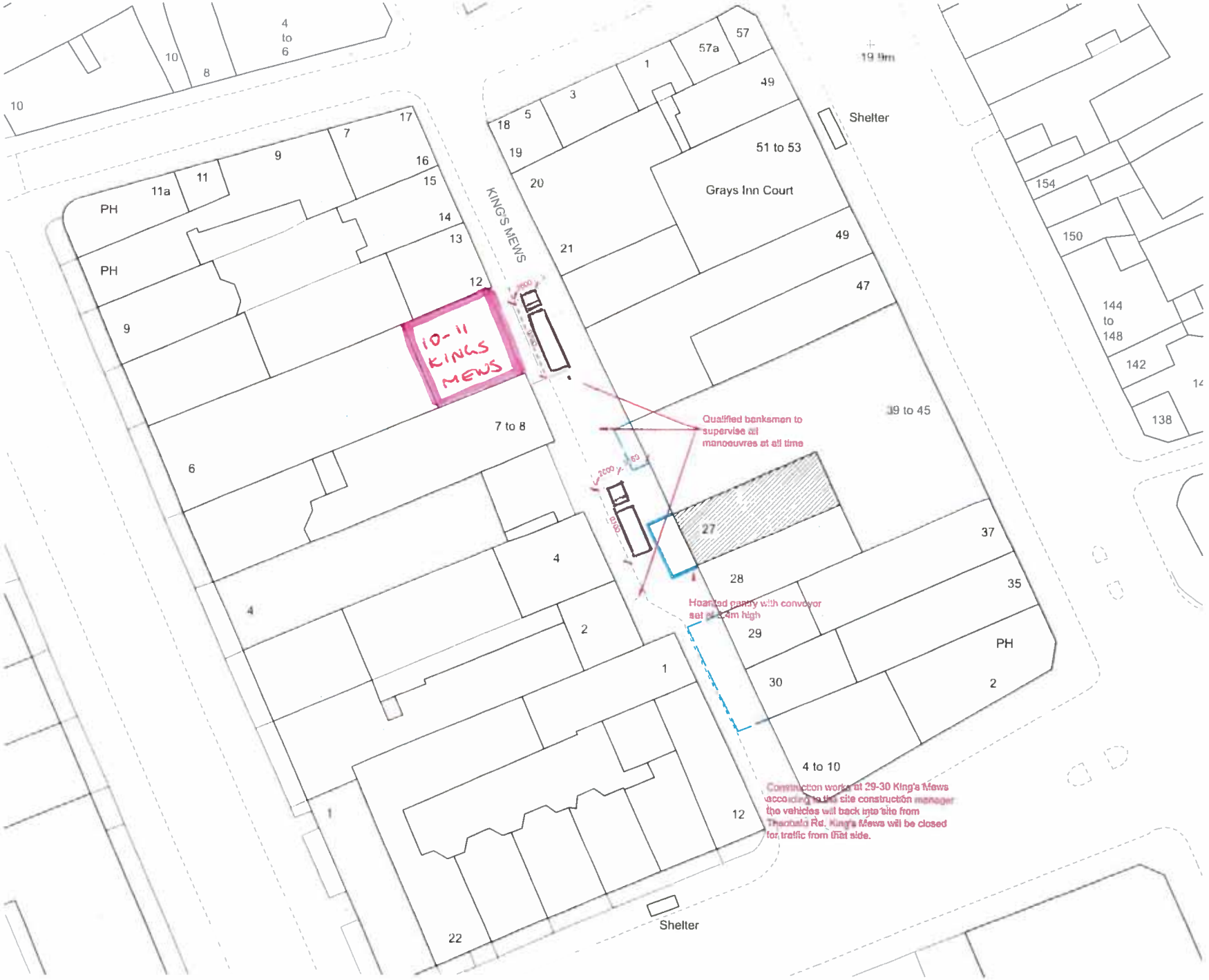
Hamilton House
Mabledon Place
Bloomsbury
WC1H 9BB

020 7554 0868

www.ftarchitects.co.uk

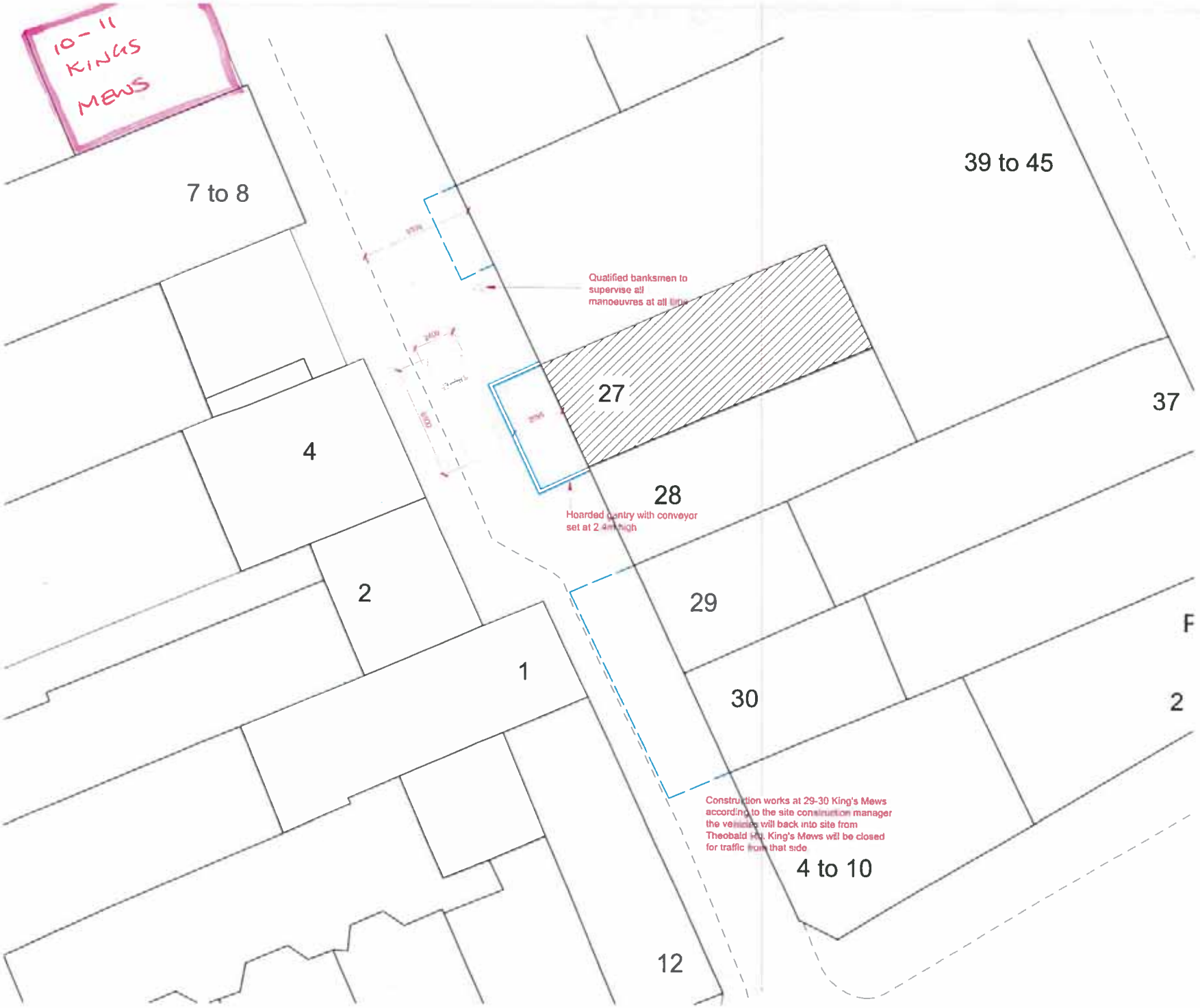
DRAWING No	REVISION
CTMP_102	


10 - 11 KINGS MEWS
KING'S MEWS
Grays Inn Court
Shelter
Shelter
19.9m
Qualified banksmen to supervise all manoeuvres at all time
Concrete mixer truck to deliver ready mixed concrete via concrete pump vessel is already stationed in the bay
Construction works at 29-30 King's Mews accord to the site construction manager the vehicles will back into site from Theobald Rd. King's Mews will be closed for traffic from that side.
PH
PH
4 to 10
7 to 8
39 to 45
51 to 53
144 to 148
REVISIONS



REVISIONS

PRE TENDER



REVISIONS.

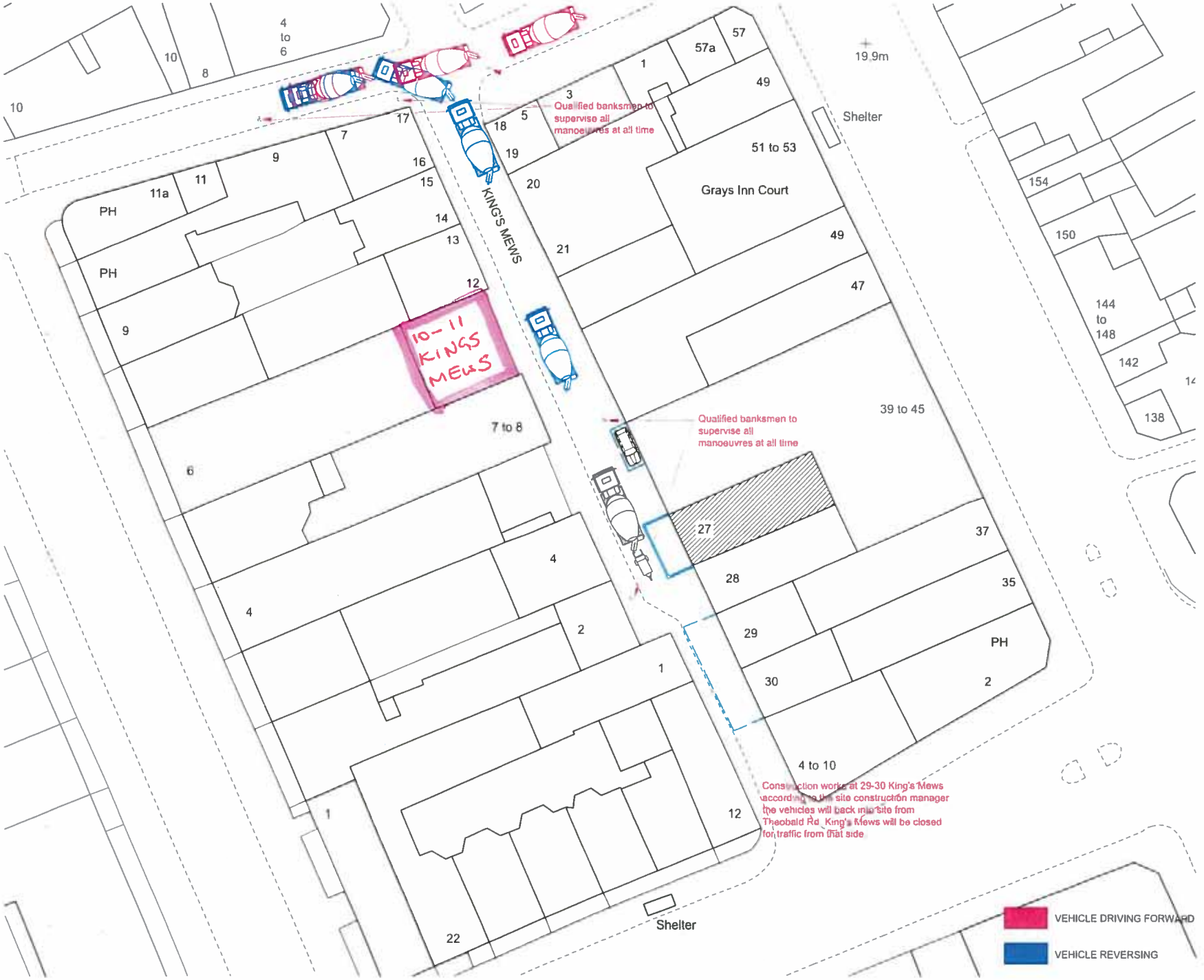
PRE TENDER

27 Kings Mews
London W1N

CMP
Spoil removal

116 A1503 00

NICO WARR ARCHITECTS



REVISIONS

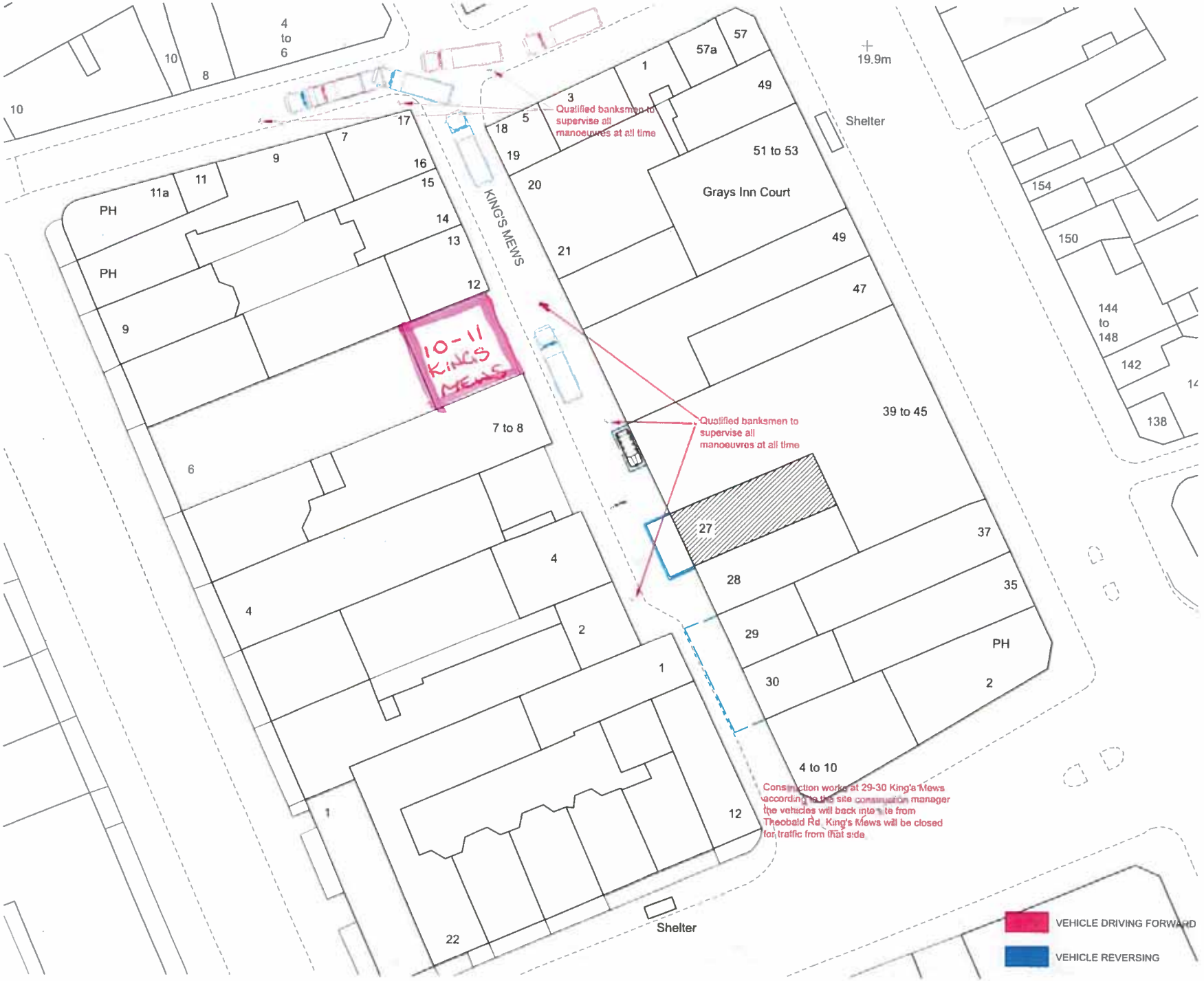
PRE TENDER

27 King's Mews
London WC1N

CMP
Concrete truck maneuvering

A1504 00

NICO WARR ARCHITECTS



REVISIONS

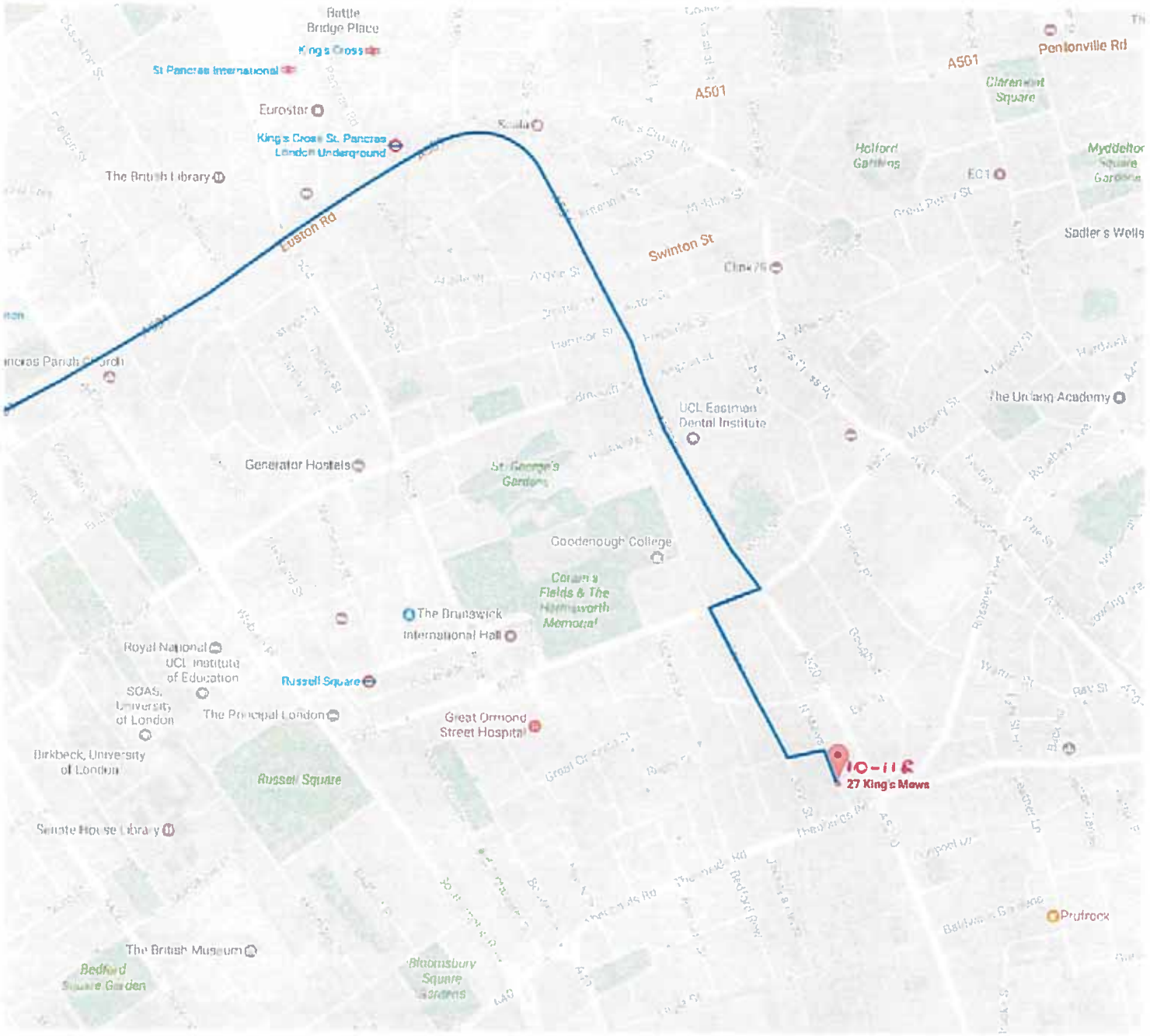
PRE TENDER

27 King's Mews
London WC1N

CMP
Lorry manoeuvring

116 A1505 00

NICO WARR ARCHITECTS



REVISIONS

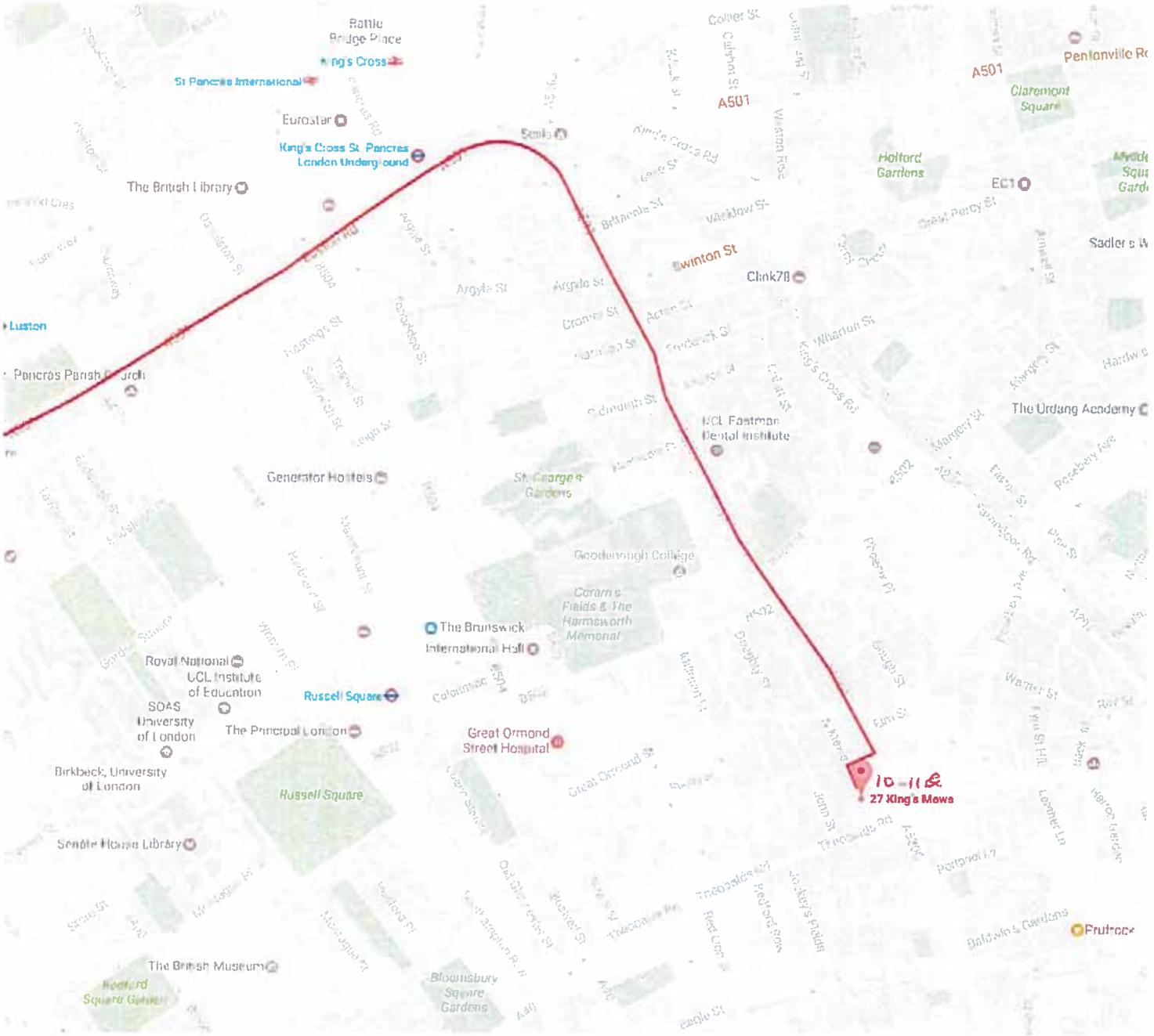
PRE TENDER

27 King's Mews
London WC1N

CMP
Arriving vehicles

Job A1507 00

NICO WARR ARCHITECTS



REVISIONS:

PRE TENDER

27 King's Mews
London WC1N

CMP
Departing vehicles

06 A1506 00

NICO WARR—ARCHITECTS

Appendix B

Includes:

- Acoustic Report

202 Uxbridge Road
London
W12 7JP

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info@clementacoustics.co.uk

10-11 Kings Mews, London

Construction Noise, Vibration and Dust Management Plan

12764-CNMP-01

7 September 2017

Issued For:

Drop Box Basements
56 Great Western Studios
65 Alfred Road
London
W2 5EU

committed to CSCS Platinum award

CONTENTS

LIST OF ATTACHEMENTS

12764-SP1	Indicative Site Plan
12764-TH1	Environmental Noise Time History
12764-VIB1	Environmental Vibration Time History
12764-CNS1	Construction Noise Schedule
Appendix A	Glossary of Acoustic Terminology

1.0 INTRODUCTION

Clement Acoustics Ltd has been instructed by Drop Box Basements to produce a construction impact assessment for the proposed development of the residential dwelling at 10-11 Kings Mews, London. The property falls within the London Borough of Camden.

The works site is relatively small and includes construction works to form a residential dwelling with a basement. This document aims to assess the impacts arising from the proposed works at nearby sensitive receivers and provides an action and management plan to mitigate any identified impact.

2.0 SITE LOCATION

The site address is a currently a plot of land that will form a terrace mews property. It is bound by residential properties on John Street to the West, and residential properties on Kings Mews to the North, East and South.

The most affected noise and vibration sensitive premises have been identified in the attached indicative site plan, 12764-SP1.

3.0 ENVIRONMENTAL NOISE AND VIBRATION SURVEY

3.1 Procedure

Measurements were undertaken as shown on indicative site drawing 12764-SP1. An automated unmanned survey was undertaken at a nearby property on Kings Mews. This survey location obtained noise and vibration levels from the King's Mews Road. Manual measurements were also taken at rear of the site.

Weather conditions were generally dry with periods of light winds for both the automated and manned survey, therefore suitable for the measurement of environmental noise.

The measurement procedure generally complied with BS7445:1991. *Description and measurement of environmental noise, Part 2- Acquisition of data pertinent to land use.*

3.2 Automated Unmanned Environmental Noise Survey

The microphone was installed on the front façade of 26 Kings Mews approximately 3m above ground level and approximately 1 m from the façade. A façade correction was applied. An Accelerometer was also installed to a party wall at 26 Kings mews via adhesive. This was at ground floor level.

Continuous automated monitoring was undertaken for the duration of the survey between 12 January 2017 and 17 January 2017.

Background noise levels at the monitoring positions consisted of road traffic noise as well as construction noise during installation and collection of equipment.

3.3 Manual Measurements

Manual measurements were undertaken at 10-11 Kings Mews in the location shown on indicative site plan 12764-SP1 in order verify the existing survey.

Measurements were taken in a free field position with the closest façade being greater than 3.5 m away. The sound level meter was mounted on a tri-pod approximately 1.5 m above ground level.

The noise levels were mostly dominated by construction noise during the course of the survey.

3.4 Equipment

The equipment calibration was verified before and after use and no abnormalities were observed.

The equipment used was as follows.

- 1 No. 01dB Solo Class 1 Sound Level Meter
- 1 No. Svantek Type 958 Class 1 Sound Level Meter
- Norsonic Type 1251 Class 1 Calibrator
- Cirrus CRL 511E Class 1 Calibrator

4.0 EXISTING AMBIENT NOISE AND VIBRATION LEVELS

The measured noise levels are shown as a time history in time history 12764-TH1-3, with ambient and background noise levels summarised in Table 3.1.

	Average ambient noise level $L_{Aeq\ T}$ dB(A)	Minimum background noise level
	Unmanned Measurement (Position 1)	
Daytime (07:00 - 23:00)	64dB(A)	44dB(A)
Night-time (23:00 - 07:00)	53dB(A)	41dB(A)
Operating Hours (08:00 – 18:00)	66dB(A)	46dB(A)
	Manual Measurement	
Measurement Period (16:00 – 16:15)	58dB(A)	47dB(A)

Table 4.1: Baseline Ambient Noise Levels

The measured vibration levels are shown in vibration time history 12764-VIB1. The measured vibration was typically below 0.5mm/s PPV during the course of the survey.

5.0 ACTIVITIES ASSESSED

It is understood that the following activities and equipment, in Table 5.1, will need to be assessed with regards to noise impact to nearby sensitive premises.

Activity	Works	Period	
		From	Till
Front Works			
Site Prepatation and enabling works	Makita Combi Drill	04/09/2017	15/09/2017
Underpinning/bulk excavation	1.5T Excavator	18/09/2017	02/02/2018
Slab breakout cose to perimeter walls	Heavy duty breaker	19/09/2017	28/09/2017
Rubbish Collection	Grab Lorry 17T	27/09/2017	29/09//2017
Underpinning	Medium Breaker	29/09/2017	02/02/2018
Underpinning	9'' angle grinder	18/09/2017	02/02/2018
Underpinning	Conveyor drive unit	18/09/2017	02/02/2018
Underpinning	Makita Combi Drill	18/09/2017	09/03/2018
Structural concrete pours	Concrete mixer with pump	19/02/2018	09/03/2018
Bulk Excavation	Grab Lorry 17T	02/10/2017	02/02/2018
Steel installation	9'' angle grinder	26/02/2018	09/03/2018
Rear Works			
Site Preparation and Enabling Works	Makita Combi Drill	04/09/2017	15/09/2017
Slab breakout close to perimeter walls	Heavy duty breaker	19/09/2017	28/09/2017
Underpinning/Bulk excavation	1,5T Excavator	18/09/2017	02/02/2018
Underpinning	Conveyor drive unit	18/09/2017	02/02/2018
Underpinning	Medium duty beaker	29/09/2017	02/02/2018
Underpinning	9" angle grinder	18/09/2017	02/02/2018
Underpinning	Makita Combi Drill	18/09/2017	09/03/2018
Steel installation	9" Grinder	26/02/2018	09/03/2018

Table 5.1 Period of Site Activities and equipment

6.0 HOURS OF WORK

Normal permitted hours for noisy work in the Borough are Monday to Friday 08:00 to 18:00. Noisy works are not permitted on Sundays or Public Holidays or outside the periods above if they will be audible at the site boundary.

The duration of works is from March 2017 to June 2017 as indicated in Table 5.1.

7.0 NOISE ASSESSMENT CRITERIA

It is proposed that the limiting levels should be set as follows:

BS 5228: 2009 Code of Practice for noise and vibration on Construction and Open Sites – Part 1: Noise references the Department of Environment (DoE) Advisory Leaflet (AL) 72 (1976) 'Noise Control on Building Sites', gives advice on the maximum levels of construction site noise at residential locations during daytime hours based on levels associated with speech interference. This publication states that during daytime hours (08:00 hours to 18:00 hours) the L_{Aeq} noise level at the building façade should not exceed:

- 75 dBA in urban areas near to main roads in heavy industrial areas; or
- 70 dBA in rural, suburban and urban areas away from main road traffic and industrial noise.

Given the location of the site, within a busy part of London in close proximity to Theobalds Road and Grays Inn Road, we suggest a value of 75dB $L_{Aeq\ (10hour)}$ be adopted as an appropriate assessment criterion. It should be noted that this criterion is not proposed as an absolute limit for construction noise; rather, it should be considered as a level against which to assess the significance of noise impacts associated with demolition and construction activities.

Draft 'Guidelines for Noise Impact Assessments', published by the Institute of Acoustics and Institute of Environmental Management and Assessment (IEMA), gives guidance on describing the impact of noise based on the change in noise level as follows:

- Negligible: Assessment criterion is exceeded by 0 to 3 dBA;
- Minor adverse: Assessment criterion is exceeded by 3 to 5 dBA;
- Moderate adverse: Assessment criterion is exceeded by 5 to 10 dBA; and
- Substantial adverse: Assessment criterion is exceeded by over 10 dBA.

8.0 NOISE IMPACT ASSESSMENT

Although this development is not a major project in its footprint and duration, it is located in close proximity to residential receptors.

8.1 Source Noise Levels

Source noise levels for the various items of machinery involved in the demolition and construction processes have been derived from historic data and levels stated in BS 5228-Part1: 2009 *Code of practice for noise and vibration on construction and open sites: Noise*. Where possible manufacturer measured noise levels have been used.

Assumed levels and percentage on-time are indicated in attached Construction Noise Schedule 12764-CNS1.

Worst case noise levels have been predicted at the nearest noise sensitive premises. 7-8 Kings Mews, London has been assessed due to excavation and construction works at the front of 10-11 Kings Mews, London. In addition to this 25 Kings Mews has also been assessed as a noise sensitive receiver. The residential dwellings at John Street, London have been assessed due to excavation and construction works at the rear of 10-11 Kings Mews London.

Due to the numerous locations of work activities, the 'average' distance from the centre of the front or rear site has been used in our calculations. This will likely provide representative $L_{Aeq\ (10\ hour)}$ noise levels.

Further screening has been assumed for certain items of plant. Details of screening attenuation assumed in our calculations is indicated in our attached Construction Noise Schedule 12764-CNS1.

8.2 7-8 Kings Mew, London - Receiver Noise Levels

Predicted construction noise levels have been calculated in full accordance with BS5228:2009 and are presented in Appendix B.

Worst case predicted noise levels at the nearest noise sensitive receptors are indicated in Table 8.1 below. Screening has been taken in to account as there is no line of sight from the building site to the residential receiver. The Receiver was noted to be a distance of 8 m away to the centre of the site.

Activity	Period		Predicted Noise Level LAeq:10hours
Front Facade			
Site Preparation and Enabling Works	04/09/2017	15/09/2017	75 dB
Underpinning/ Bulk Excavation / Slab Breakout	18/09/2017	28/09/2017	75 dB
Underpinning / Bulk Excavation / Rubbish Collection	27/09/2017	29/09/2017	74 dB
Underpinning / bulk excavation	30/09/2017	02/02/2018	72 dB
Underpinning	02/02/2018	19/02/2018	62 dB
Underpinning/ Structural concrete pours/ steel installation	19/02/2018	09/03/2018	71 dB
Rear Façade			
Site Preparation and Enabling Works	04/09/2017	15/09/2017	75 dB
Underpinning/ Bulk Excavation / Slab Breakout	18/09/2017	28/09/2017	75 dB
Underpinning / Bulk Excavation / Rubbish Collection	27/09/2017	29/09/2017	74 dB
Underpinning / bulk excavation	30/09/2017	02/02/2018	71 dB
Underpinning	02/02/2018	19/02/2018	64 dB
Underpinning/ Structural concrete pours/ steel installation	19/02/2018	09/03/2018	70 dB

Table 8.1: 7-8 Kings Mews, London - Worst Case Receiver Noise Levels

8.3 26 Kings Mew, London - Receiver Noise Levels

Predicted construction noise levels have been calculated in full accordance with BS5228:2009.

Worst case predicted noise levels at the nearest noise sensitive receptors are indicated in Table 8.2 below. The Receiver was noted to be a distance of 14 m to the centre of the site.

Activity	Period		Predicted Noise Level LAeq:10hours
Front Facade			
Site Preparation and Enabling Works	04/09/2017	15/09/2017	75 dB
Underpinning/ Bulk Excavation / Slab Breakout	18/09/2017	28/09/2017	72 dB
Underpinning / Bulk Excavation / Rubbish Collection	27/09/2017	29/09/2017	75dB
Underpinning / bulk excavation	30/09/2017	02/02/2018	72dB
Underpinning	02/02/2018	19/02/2018	62 dB
Underpinning/ Structural concrete pours/ steel installation	19/02/2018	09/03/2018	74dB

Table 8.2: 26 Kings Mews, London - Worst Case Receiver Noise Levels

8.4 John Street, London - Receiver Noise Levels

Predicted construction noise levels have been calculated in full accordance with BS 5228: 2009.

Predicted noise levels at the noise sensitive receptors to the rear of the development are indicated in Table 8.3 below. The Receiver was noted to be a distance of 20 m to the centre of the site.

Activity	Period		Predicted Noise Level LAeq:10hours
Rear Facade			
Site Preparation and Enabling Works	04/09/2017	15/09/2017	72 dB
Underpinning/ Bulk Excavation / Slab Breakout	18/09/2017	28/09/2017	70 dB
Underpinning / Bulk Excavation / Rubbish Collection	27/09/2017	29/09/2017	71 dB
Underpinning / bulk excavation	30/09/2017	02/02/2018	68 dB
Underpinning	02/02/2018	19/02/2018	61 dB
Underpinning/ Structural concrete pours/ steel installation	19/02/2018	09/03/2018	67 dB

Table 8.3: John Street, London - Worst Case Receiver Noise Levels

9.0 VIBRATION LEVELS

Vibration levels will significantly diminish with distance and geographical attenuation. It is recommended that vibration levels are monitored during excavation/construction.

BS 5228-Part2: 2009 *Code of practice for noise and vibration on construction and open sites: Vibration* provides criteria for cosmetic damage, as reproduced in Table 8.3 below.

Line (see Figure B.1)	Type of building	Peak component particle velocity in frequency range of predominant pulse	
		4 Hz to 15 Hz	15 Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	50 mm/s at 4 Hz and above
2	Unreinforced or light framed structures Residential or light commercial buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

NOTE 1 Values referred to are at the base of the building.

NOTE 2 For line 2, at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded.

Table 8.3: BS 5228-9: 2009 Cosmetic Damage Limits for Vibration

BS 5228-Part2: 2009 also explains: 'The guide values [in the above table] relate predominately to transient vibration which does not give rise to resonant responses in structures, and to low-rise buildings. Where the dynamic loading caused by continuous vibration is such as to give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values [in the above table] might need to be reduced by up to 50%.

10.0 MANAGEMENT PLAN

This section aims to highlights the appropriate mitigation measures that will be undertaken to minimise noise impacts.

This will be presented in accordance with best practice documents in order to ensure that any potential adverse noise impacts relating to demolition and construction activities are minimised.

10.1 Control of Noise at Source

Controlling noise at source is by far the most effective means of minimising any impact on nearby noise sensitive receivers.

Plant and machinery to be used on site must be selected carefully in order to minimise noise emission levels. Where there are multiple options for the same operations, the quieter unit shall be selected.

Any manufacturer recommended noise and vibration attenuation measures should also be used due to the nature of the site location relative to nearby noise sensitive receivers.

Finally, noise and vibration generating equipment should only be operational when necessary and switched off when not in use so as to minimise the accumulation of various noise sources on site.

10.2 Control of Noise Spread

British Standard 5228: 2009 provides detailed advice on methods for minimising nuisance from construction noise. This can take the form of a reduction in the source noise level and the control of noise spread and. In order to comply with specified noise criteria, the constrictors should comply with the recommendations in BS 5228: 2009.

10.3 Construction Traffic

The arrival of delivery vehicles must be properly co-ordinated so only one vehicle is present at a time with a maximum 30 minute stay, and there will be no holding areas permitted.

Vehicles should not be idling unnecessarily and adequate signage must be in place to remind drivers of their responsibility to minimise noise levels as far as practicable.

10.4 Site Hoarding

It is recommended that site hoarding is used at the front of the development in order to screen the nearby receivers. Although such a barrier will provide some level of noise attenuation for ground floor receivers, it is unlikely to have a major beneficial effect to receivers above first floor level due to the proximity of nearby noise sensitive receivers to the site.

10.5 Localised Screening

Additional localised screening should be provided when necessary in order to provide line-of-site screening from the following items of plant:

- Heavy Duty Breaker
- 9" Angle Grinder

10.6 Proposed Steps to Minimise Noise and Vibration

General

- Best practice, as defined in Section 72 of the Control of Pollution Act 1974, in relation to noise and vibration mitigation shall be used at all times during construction.
- Equipment is to be hired from reputable companies who can supply new well maintained plant.
- Unnecessary revving of engines and motor driven tools is to be avoided.
- Vehicles and plant are to be switched off when not in use.
- Rubber lined chutes and dumpers will be used wherever practicable.
- Drop heights are to be minimised.
- Site vehicles are to be fitted with broadband white noise reversing alarms wherever practicable.
- All movement of plant and vehicles onto and around the site is to take place within permitted working hours.
- Erect solid screens or barriers around the site boundary and use acoustic fencing panels wherever noisy work is taking place.

Plant machinery and equipment.

- The quietest available equipment and methods will be used in conjunction with noise barriers and all practicable mitigation measures.
- The use of percussive breaking equipment will be avoided wherever practicable.
- Noise generating fixed plant shall be located as far from sensitive premises as possible.
- Mechanical generators shall be avoided wherever practicable.
- Electricity driven plant and equipment will be used in favour of diesel or petrol driven plant and equipment wherever practicable.
- Care is to be taken to always select the quietest available equipment, wherever practicable, and to keep that equipment well maintained in accordance with manufacturer's instructions.
- All equipment covered by European Directive 2000/14/EC on the noise emission in the environment by equipment for outdoors is to bear the CE marking and the indication of the guaranteed sound power level (and to be accompanied by an EC declaration of conformity).

- Any equipment not covered by the EU Directive should comply with the generic plant noise emissions in Annex C of BS 5228 and should be properly silenced and maintained in accordance with manufacturers' instructions.
- Plant and equipment in frequent use should be replaced every three years to ensure that noise levels are minimised by using the most efficient and well maintained machinery.

Key construction processes and equipment

- Wherever practicable non-percussive techniques are to be used. Equipment that demolishes structures by crushing, bending, shearing, cutting or hydraulic splitting are to be used wherever practicable. Wherever practicable building elements are to be detached from a structure and lowered to the ground.
- Wherever practicable floor slabs will be broken up using non-percussive techniques and wherever practicable slabs are to be levered from their position and removed from site for breaking up/crushing elsewhere. Where this is not possible slabs are to be cut and separated around their perimeter to isolate the slab from the rest of the structure before breaking up.
- Where percussive breakers are to be used, multiple breakers are to be employed where practicable to minimise the time taken to break up concrete and floor slabs.
- The contractor is to communicate with neighbours to ensure that they are well informed about timing and to minimise disturbance as far as practicable.
- Wherever practicable non-percussive pile reduction techniques are to be utilised.
- Excavation plant will be switched off when not in use and will be subject to regular maintenance and checks and servicing.
- Spoil conveyors will be electrically powered with drive motors located as far from neighbouring properties as practicable and sound insulated. All conveyors must have a service contract to ensure regular maintenance and replacement of worn parts.
- Concrete pours are to take place only within permitted hours. Careful planning will be necessary by the contractor and design team to ensure that the volume of pours make this possible and that sufficient contingency is allowed for potential delays on any given day.
- Steelwork fabrication and cutting is to take place off site wherever practicable. Where this is not practicable cutting and fabricating is to take place within a mobile acoustic enclosure.

- Electrical generators and air compressors are not to be used during construction unless unavoidable. Where unavoidable these are to be located within the site itself and acoustically screened from neighbouring properties.
- A temporary builder's power supply is to be used from the outset to avoid the need for generators.
- Where generators or compressors must be used the contractor will demonstrate that they are the quietest available super or ultra-silent units incorporating sound attenuating acoustic enclosures or other sound reduction techniques.
- Generators and compressors must be switched off when there is no demand on site.
- Where appropriate generators and compressors must be isolated from adjacent structures to avoid transfer of noise and vibration to adjoining properties.

10.7 Proposed Steps to Minimise Dust

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken. Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on or off site and the action taken to resolve the situation in the log book.
- Hold regular liaison meetings with other high-risk construction sites within 500 m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.

Preparing and maintaining the site

- Plan site layout so that machinery and dust causing activities are located away from receptors as far as is possible. Use intelligent screening where possible
- Erect solid screens or barriers around the site boundary.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers clean.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on site then re-cover.
- Depending on the duration that stockpiles will be present and their size, cover, fence or water to prevent wind whipping.

Operating vehicle/machinery and sustainable travel

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone, where applicable.
- Ensure all vehicles switch off engines when stationary.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable staff travel {public transport, cycling, walking and car-sharing).

Operations

- Use only cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. Suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible.
- Use enclosed chutes, conveyors and covered skips where practicable.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste management

- Use only registered waste carriers to take waste off site.
- Avoid bonfires and burning of waste materials.

Measures specific to demolition

- Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).
- Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.

Measures specific to construction

- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

10.8 Publicity and Communication

Good public relations and extensive consultations with local authorities are of paramount importance to minimise the impact of construction work. In particular, local residents will need to be advised that any higher levels of noise will only be for a short period of time and that publicised works schedules will be adhered to.

Careful consideration should be given to occupiers of adjoining properties.

10.9 Noise Monitoring

In order to meet appropriate noise levels, it is recommended that noise monitoring is carried out for the duration of noisy works with Class 1 integrating logging sound level monitors. The monitors will be installed and calibration verified (before and after) with a Class 1 acoustic calibrator. The instrumentation will have been fully calibrated by the manufacturer, or other approved body, as required by the relevant British Standard, with current calibration certificates available. The meters will be set to measure and store samples of various acoustic

parameters such as L_{Aeq}, L_{A90}, L_{A10} and L_{Amax}. Data would be downloaded remotely on a regular basis.

It is proposed that the meters are configured to log continuous 1-hour samples of noise throughout the working day, which will be used to calculate a 10-hour (daily) L_{Aeq}. Monitoring Locations, daily limits and hourly action levels will be agreed with the Council prior to the works.

10.10 Vibration Monitoring

It is recommended that vibration monitoring is undertaken for the duration of the works, measuring the peak particle velocity [ppv]. The instrumentation will have been fully calibrated by the manufacturer, or other approved body with current calibration certificates available. Data would be downloaded remotely on a regular basis.

It is proposed that the meters are configured to log continuous 5 minute samples of maximum PPV levels throughout the working day. Monitoring Locations, daily limits and hourly action levels will be agreed with the Council prior to the works.

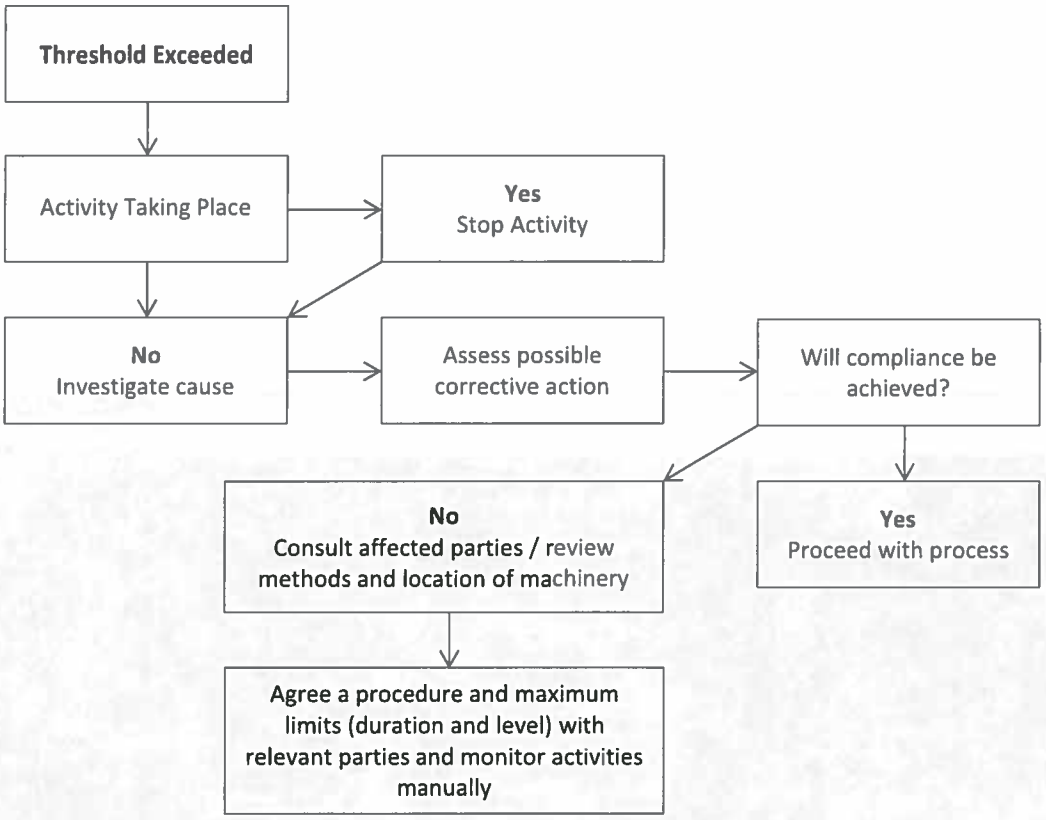
10.11 Noise and Vibration Monitoring Alert Systems

In order to ensure that the site manager and relevant parties are made aware of noise limits being exceeded at a specific monitoring location at any time during the works, we recommend that the following alert systems are implemented:

- SMS alert sent to a mobile telephone number (site manager) as soon as the threshold is exceeded. The text message would contain information on the noise level which triggered the alert.
- Email alert sent to an email address as soon as the threshold is exceeded. The email would contain information on the noise level which triggered the alert.

10.12 Incident Procedure

Should the noise criteria agreed with the Local Authority be exceeded during the demolition and construction programme, the following procedure should be followed:



Any exceedances caused and the subsequent action taken should be recorded in a table as follows:

Date	Time	Findings of Investigation and Action Taken

10.13 Complaints Procedure

All Complaints to be investigated immediately by site manager for investigation and follow up.

Any complaints should be logged as follows:

Date of receipt	Time of receipt	Contact details of complainant	Description of complaint	Date of investigation	Findings of investigation and actions taken

12764-SP1 Indicative site plan indicating noise and vibration monitoring positions and nearest noise sensitive receivers

Date: 07 September 2017

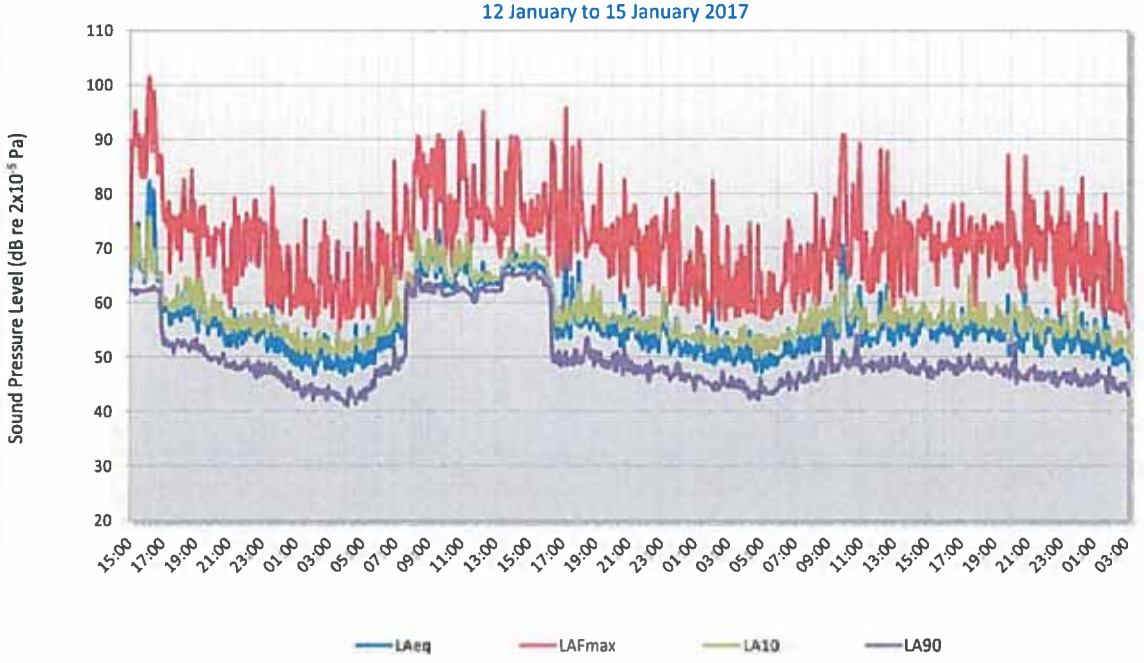
clement acoustics

27 Kings Mews, London

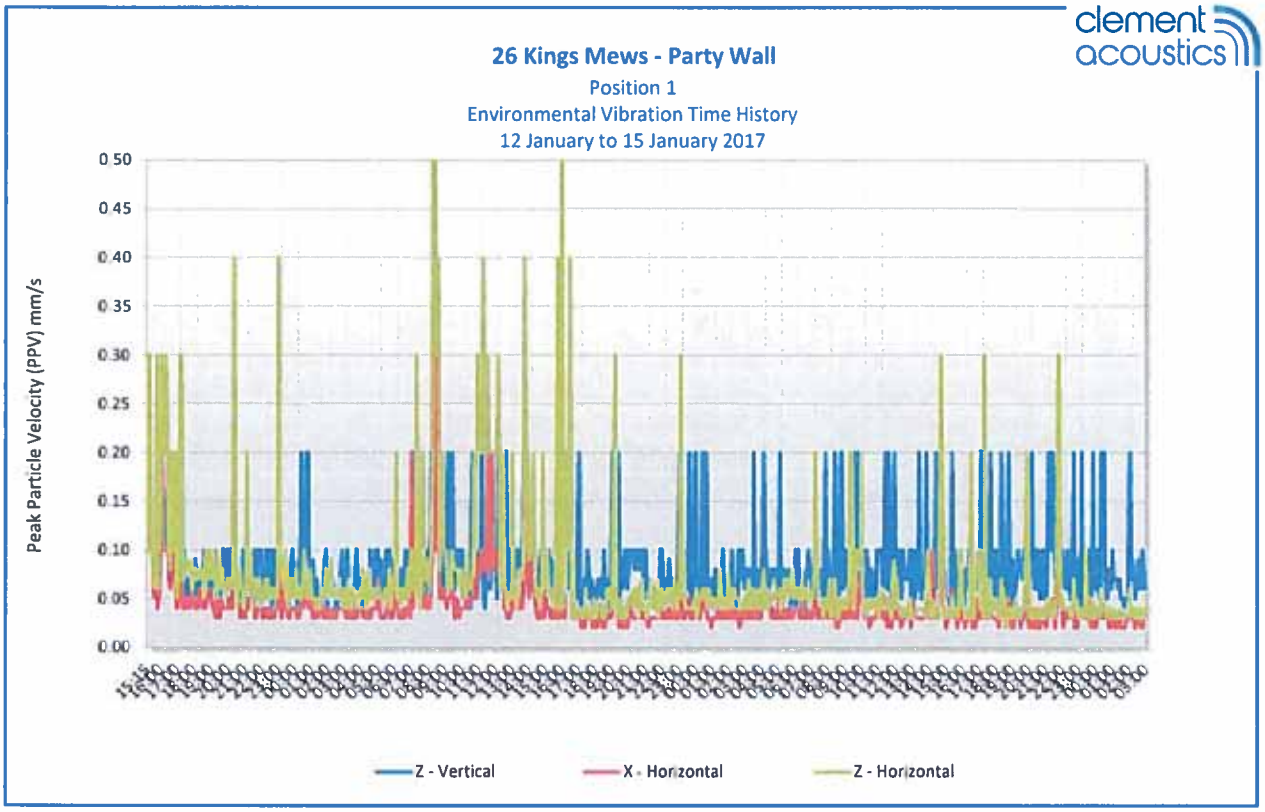
Position 1

Environmental Noise Time History

12 January to 15 January 2017



12764-TH1


26 Kings Mews - Party Wall
Position 1
Environmental Vibration Time History
12 January to 15 January 2017
Peak Particle Velocity (PPV) mm/s
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Z - Vertical
X - Horizontal
Z - Horizontal

12048-VIB1

Construction Noise Schedue For Front of Site

12764

10-11 Kings Mews, London

Activity	Plant/Equipment	No	% on time	Start Date	Finish Date
Site Prepatation and enabling works	Makita Combi Drill	2	50	04/09/2017	15/09/2017
Underpinning/bulk excavation	1.5T Excavator	1	80	18/09/2017	02/02/2018
Slab breakout cose to perimeter walls	Heavy duty breaker	2	15	19/09/2017	28/09/2017
Rubbish Collection	Grab Lorry 17T	1	10	27/09/2017	29/09/2017
Underpinning	Medium Breaker	2	20	29/09/2017	02/02/2018
Underpinning	9" angle grinder	1	15	18/09/2017	02/02/2018
Underpinning	Conveyor drive unit	1	20	18/09/2017	02/02/2018
Underpinning	Makita Combi Drill	2	10	18/09/2017	09/03/2018
Structural concrete pours	Concrete mixer with pump	1	15	19/02/2018	09/03/2018
Bulk Excavation	Grab Lorry 17T	1	20	02/10/2017	02/02/2018
Steel installation	9" angle grinder	1	10	26/02/2018	09/03/2018

Construction Noise Schedue For Rear of Site

Activity	Plant/Equipment	No(1)	% on time	Start Date	Finish Date
Site Preparation and Enabling Works	Makita Combi Drill	2	50	04/09/2017	15/09/2017
Slab breakout close to perimeter walls	Heavy duty breaker	2	20	19/09/2017	28/09/2017
Underpinning/Bulk excavation	1,5T Excavator	1	80	18/09/2017	02/02/2018
Underpinning	Conveyor drive unit	1	40	18/09/2017	02/02/2018
Underpinning	Medium duty beaker	2	30	29/09/2017	02/02/2018
Underpinning	9" angle grinder	1	15	18/09/2017	02/02/2018
Underpinning	Makita Combi Drill	2	15	18/09/2017	09/03/2018
Steel installation	9" Grinder	1	15	26/02/2018	09/03/2018

APPENDIX A

GLOSSARY OF ACOUSTIC TERMINOLOGY

dB(A)

The human ear is less sensitive to low (below 125Hz) and high (above 16kHz) frequency sounds. A sound level meter duplicates the ear's variable sensitivity to sound of different frequencies. This is achieved by building a filter into the instrument with a similar frequency response to that of the ear. This is called an A-weighting filter. Measurements of sound made with this filter are called A-weighted sound level measurements and the unit is dB(A).

L_{eq}

The sound from noise sources often fluctuates widely during a given period of time. An average value can be measured, the equivalent sound pressure level L_{eq}. The L_{eq} is the equivalent sound level which would deliver the same sound energy as the actual fluctuating sound measured in the same time period.

L_{10}

This is the level exceeded for not more than 10% of the time. This parameter is often used as a "not to exceed" criterion for noise

L_{90}

This is the level exceeded for not more than 90% of the time. This parameter is often used as a descriptor of "background noise" for environmental impact studies.

L_{max}

This is the maximum sound pressure level that has been measured over a period.

Octave Bands

In order to completely determine the composition of a sound it is necessary to determine the sound level at each frequency individually. Usually, values are stated in octave bands. The audible frequency region is divided into 10 such octave bands whose centre frequencies are defined in accordance with international standards.

Addition of noise from several sources

Noise from different sound sources combines to produce a sound level higher than that from any individual source. Two equally intense sound sources operating together produce a sound level which is 3dB higher than one alone and 10 sources produce a 10dB higher sound level.

Attenuation by distance

Sound which propagates from a point source in free air attenuates by 6dB for each doubling of distance from the noise source. Sound energy from line sources (e.g. stream of cars) drops off by 3dB for each doubling of distance.

Subjective impression of noise

Sound intensity is not perceived directly at the ear; rather it is transferred by the complex hearing mechanism to the brain where acoustic sensations can be interpreted as loudness. This makes hearing perception highly individualised. Sensitivity to noise also depends on frequency content, time of occurrence, duration of sound and psychological factors such as emotion and expectations. The following table is a reasonable guide to help explain increases or decreases in sound levels for many acoustic scenarios.

Change in sound level (dB)	Change in perceived loudness
1	Imperceptible
3	Just barely perceptible
6	Clearly noticeable
10	About twice as loud
20	About 4 times as loud

Barriers

Outdoor barriers can be used to reduce environmental noises, such as traffic noise. The effectiveness of barriers is dependent on factors such as its distance from the noise source and the receiver, its height and its construction.

Reverberation control

When sound falls on the surfaces of a room, part of its energy is absorbed and part is reflected back into the room. The amount of reflected sound defines the reverberation of a room, a characteristic that is critical for spaces of different uses as it can affect the quality of audio signals such as speech or music. Excess reverberation in a room can be controlled by the effective use of sound-absorbing treatment on the surfaces, such as fibrous ceiling boards, curtains and carpets.