Construction/ Demolition Management Plan

pro forma

Contents

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
13th June 2022	00	Tom Price
14th June 2022	01	Tom Price
17th June 2022	02	Tom Price
17th June 2022	03	Tom Price

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

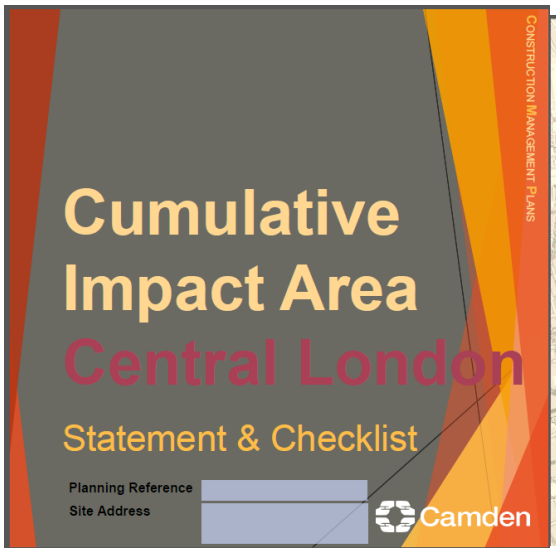
completed electronically and submitted as Word files to allow comments to be easily documented. These should be clearly referenced/linked to from the CMP. Please only provide the information requested that is relevant to a particular section.

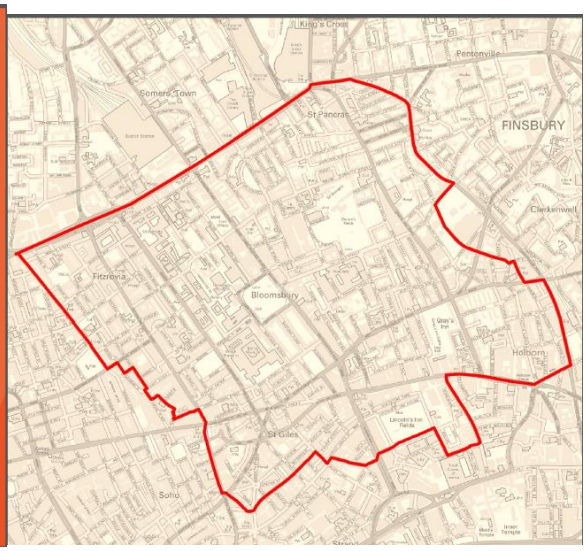
(Note the term 'vehicles' used in this document refers to all vehicles associated with the implementation of the development, e.g. demolition, site clearance, delivery of plant & materials, construction etc.)

Revisions to this document may take place periodically.

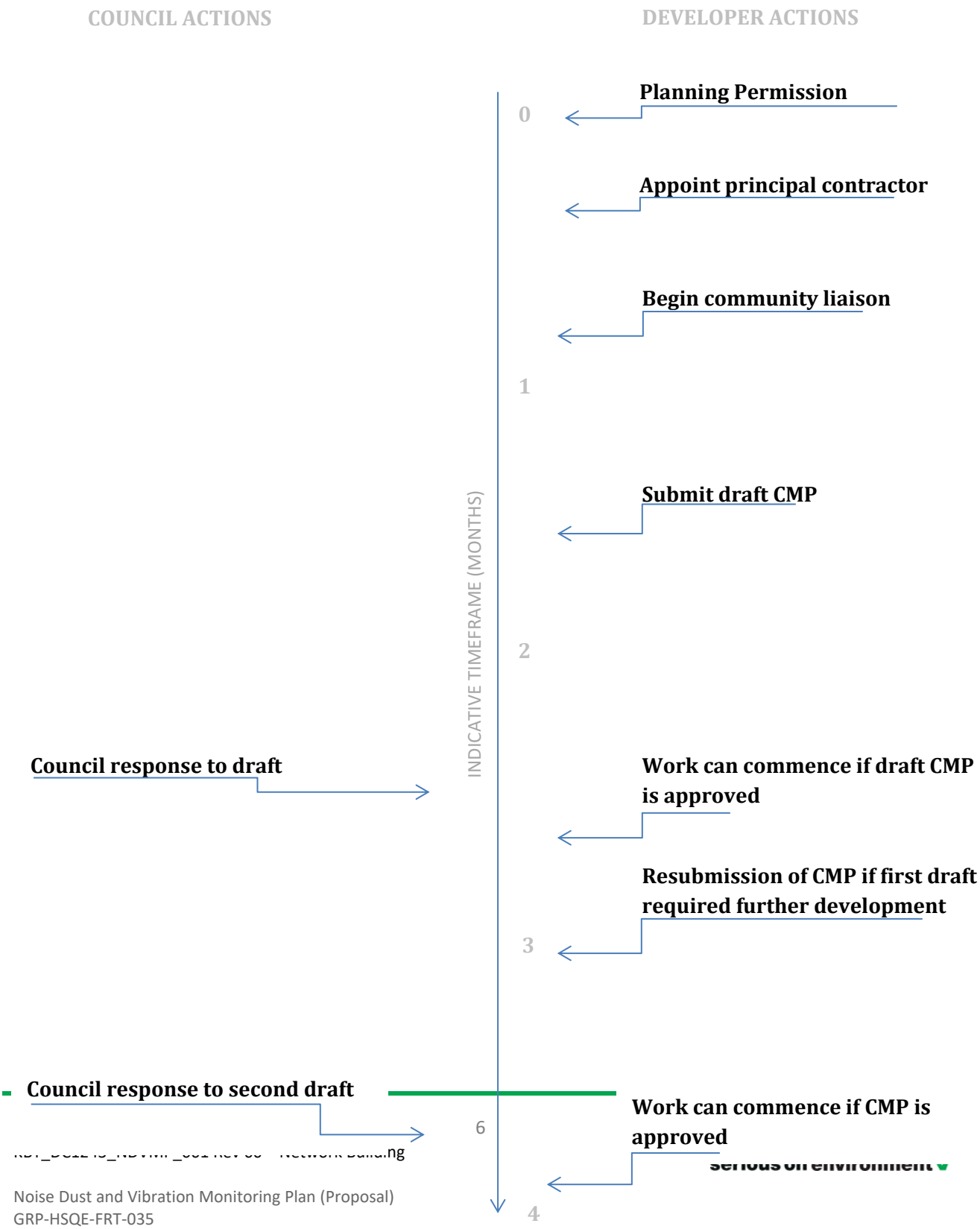
IMPORTANT NOTICE: If your site falls within a Cumulative Impact Area *(as of 03/02/2020 to 03/08/2020 there is only one established CIA for the Central London area)* you are required to complete the CIA Checklist and circulate as an appendix to the CMP and included as part of any public consultation – 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





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
6
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: Network Building, 95-100 Tottenham Court Road, London, W1T 4TP

Planning reference number to which the CMP applies: 2020/5624/P

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

Name: Tom Price

Address: Keltbray Holdings Ltd St Andrew's House, Portsmouth Road, Esher, Surrey, KT10 9TA

Email: tom.price@keltbray.com

Phone: 07701 387 051

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 Webb
Address:	
Email:	martin.webb@keltbray.com
Phone:	07711 898 627

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: See Question 3

Address:

Email:

Phone:

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: Paul Deacy

Address: Keltbray Holdings Ltd St Andrew's House, Portsmouth Road, Esher, Surrey, KT10 9TA

Email: paul.deacy@keltbray.com

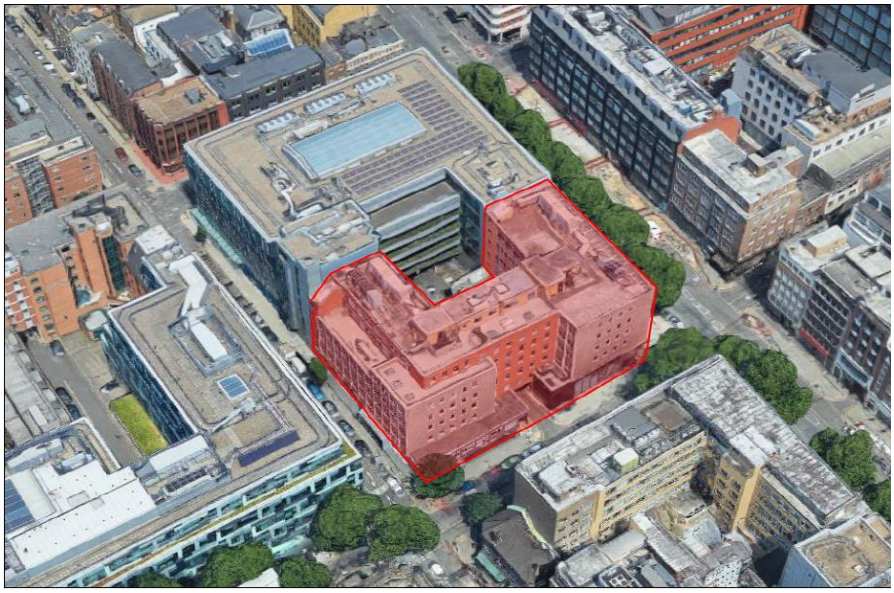
Phone: 020 7643 1000

Site

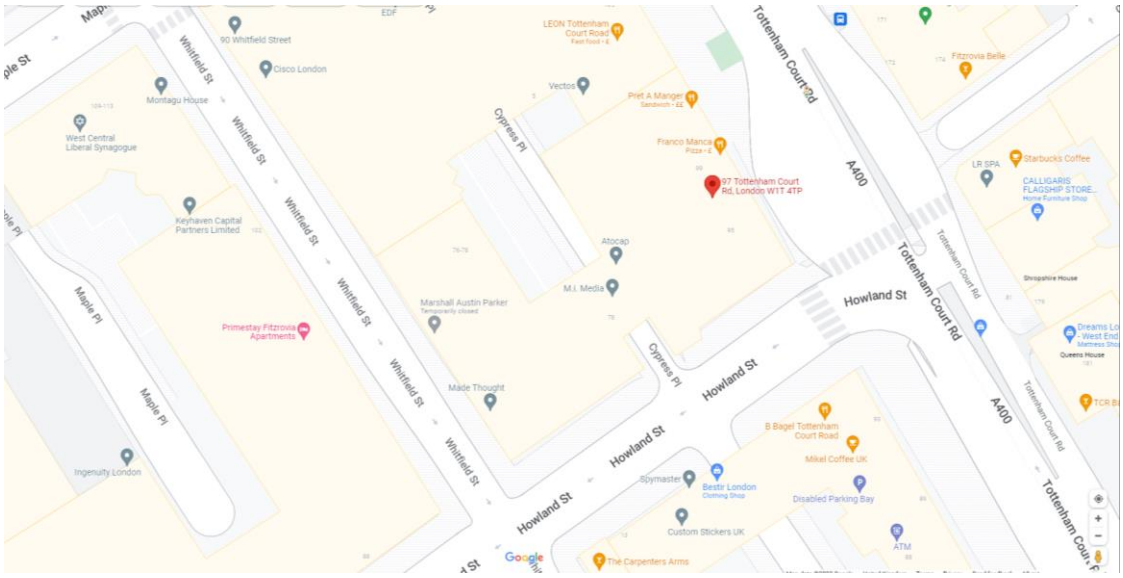
6. Please provide a site location plan and a brief description of the site, surrounding area and development proposals for which the CMP applies.

Site Address & Description: The site is located at 95-100 Tottenham Court Road, London, W1T 4TP. To the West of the building is Whitfield Street which has a wide pavement and a one-way road with access from the North with the exception of cyclists. There is currently residential parking adjacent to the building on Whitfield Street. South of the building is Howland Street which also has a wide pavement and a one-way road with access from the East, including a cycle lane. Tottenham Court Road is situated to the East which has heavy vehicle / cycle traffic and a wide pedestrian footway housing mature trees to the side of the building. Intersecting the site is Cypress Place where discussions are ongoing with London Borough of Camden (LBC) to get it 'stopped up'.

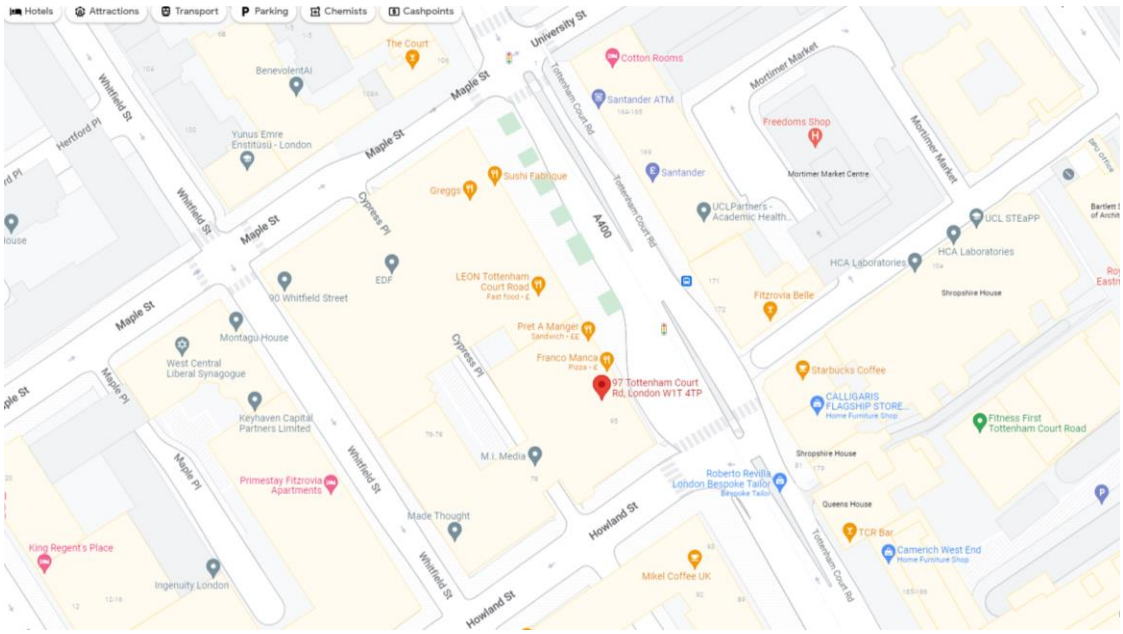
Figure 1 below – Location of Network Building



Location Plan below:



Location Plan below:



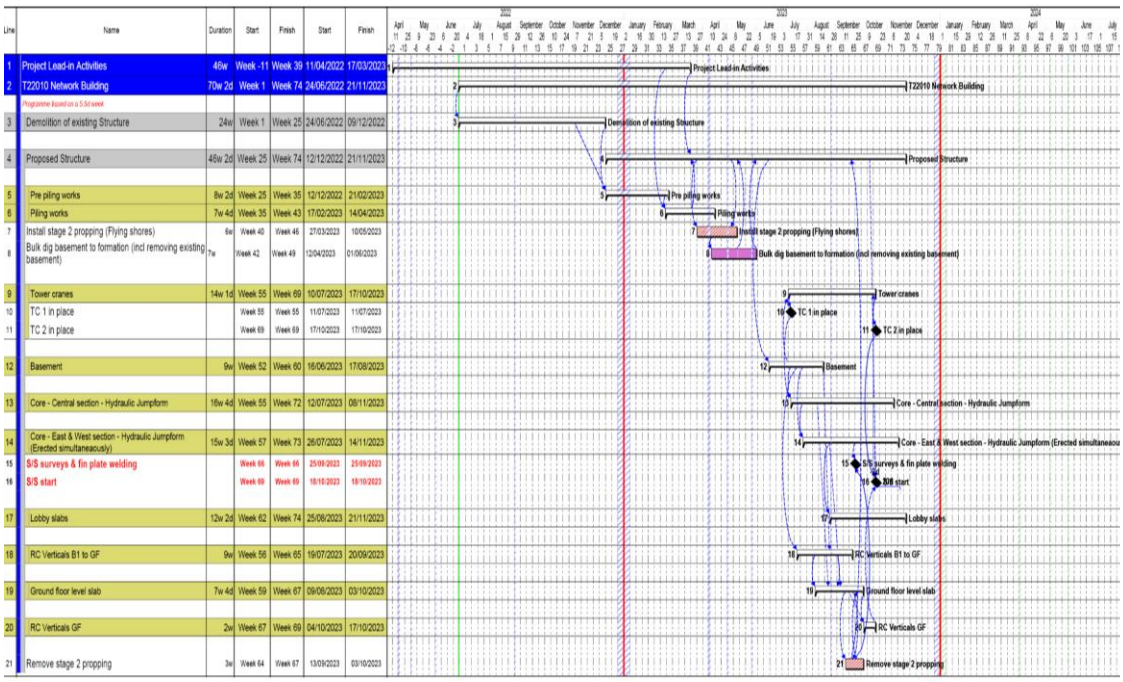
7. Please provide a very brief description of the construction works including the size and nature of the development and details of the main issues and challenges (e.g. narrow streets, close proximity to residential dwellings etc.).

Description of Construction Works: The redevelopment of the site is to provide a new high-quality office led building with retail space on the ground floor fronting Tottenham Court Road.

The construction will involve demolition and new construction that will present challenges in terms of limited space on site and the close proximeity of commercial neighbours. Issues of particular signficance will be the proposed closure of part of Whitfield Street, crane locations, access for large items of plant and machinery, prevention of nuisance due to noise, vibration, dust etc, and the location of welfare and site offices.

This version of the CMP is to cover the demolition phase of works only which is up to Christmas 2022. An addendum will be submitted for approval by Camden before the next phase of works can commence in the new year.

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).



Line	Name	Duration	Start	Finish	Start	Finish
1	Project Lead-in Activities	46w	Week -11	Week 39	11/04/2022	17/03/2023
2	T22010 Network Building	70w 2d	Week 1	Week 74	24/06/2022	21/11/2023
	Programme based on a 5.5d week					
3	Demolition of existing Structure	24w	Week 1	Week 25	24/06/2022	09/12/2022
4	Proposed Structure	46w 2d	Week 25	Week 74	12/12/2022	21/11/2023
5	Pre piling works	8w 2d	Week 25	Week 35	12/12/2022	21/02/2023
6	Piling works	7w 4d	Week 35	Week 43	17/02/2023	14/04/2023
7	Install stage 2 propping (Flying shores)	6w	Week 40	Week 46	27/03/2023	10/05/2023
8	Bulk dig basement to formation (incl removing existing basement)	7w	Week 42	Week 49	12/04/2023	01/06/2023
9	Tower cranes	14w 1d	Week 55	Week 69	10/07/2023	17/10/2023
10	TC 1 in place		Week 55	Week 55	11/07/2023	11/07/2023
11	TC 2 in place		Week 69	Week 69	17/10/2023	17/10/2023
12	Basement	9w	Week 52	Week 60	16/06/2023	17/08/2023
13	Core - Central section - Hydraulic Jumpform	16w 4d	Week 55	Week 72	12/07/2023	08/11/2023
14	Core - East & West section - Hydraulic Jumpform (Erected simultaneously)	15w 3d	Week 57	Week 73	26/07/2023	14/11/2023
15	S/S surveys & fin plate welding		Week 66	Week 66	25/09/2023	25/09/2023
16	S/S start		Week 69	Week 69	18/10/2023	18/10/2023
17	Lobby slabs	12w 2d	Week 62	Week 74	25/08/2023	21/11/2023
18	RC Verticals B1 to GF	9w	Week 56	Week 65	19/07/2023	20/09/2023
19	Ground floor level slab	7w 4d	Week 59	Week 67	09/08/2023	03/10/2023
20	RC Verticals GF	2w	Week 67	Week 69	04/10/2023	17/10/2023
21	Remove stage 2 propping	3w	Week 64	Week 67	13/09/2023	03/10/2023

Key programme dates:

- Commence demolition works – June 2022
- Commence construction works – January 2023
- Complete RC Core – November 2023

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

Camden's standard working hours will be adhered to, as set out above.

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.).

- '90 Whitfield Street' office tenants & landlord, Whitfield Street/Maple Street/Tottenham Court Road elevations
- Primestay Fitzrovia Apartments, Whitfield Street
- Montagu House, Whitfield Street
- The Carpenters Arms, Howland Street
- Various retail & foot outlets Tottenham Court Road; Leon, Itsu, Rush Hair, Greggs

11. Consultation

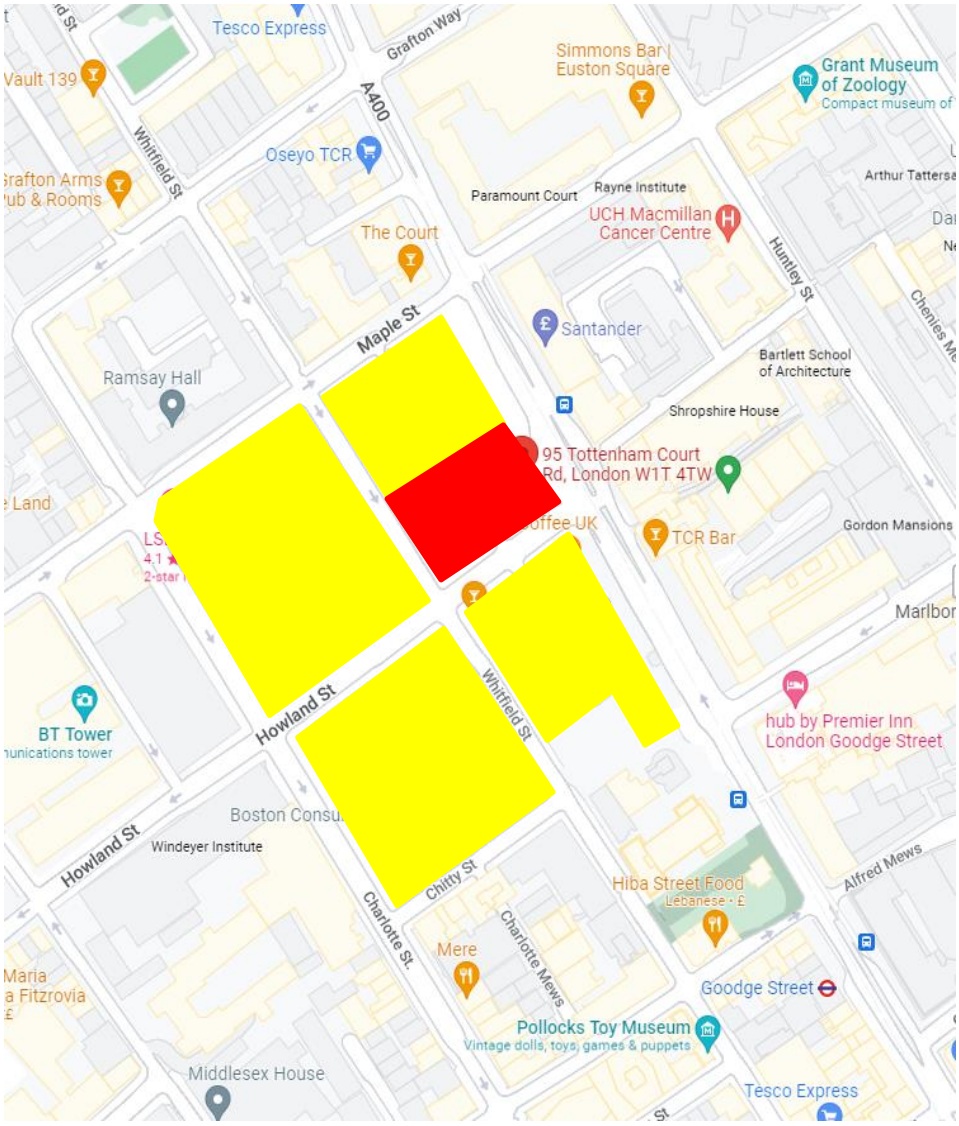
The Council expects meaningful consultation. For large sites, this may mean two or more meetings with local residents **prior to submission of the first draft CMP**.

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 below catchment area plan illustrates the range of residential addresses and business, in context of the site, that will be approached as part of the consultation process for the proposed works.



As part of the consultation works to-date; we have presented the planned works to the landlord and tenants of 90 Whitfield Street. On Wednesday 15th June, we are going to approach the neighbours in the area highlighted in yellow above to talk through the planned works. We will share proof of these consultations before Friday 17th June.

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.

Following an initial discussion with Camden we don't believe this is necessary, but if it is then we are happy to be part of a Working Group.

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.

This is acknowledged and agreed. The CCS Registration to be provided once application has been made

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.

It is apparent that there are no major works proposed nearby, however if coordination is required with other sites then we will engage with them. The planning portal will be regularly review, prior to and throughout the programme of works, in order for suitable mitigation measures to be implemented if / when necessary. Our CMP will be updated if required.

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:

Keltbray

16. Please submit the proposed method for checking operational, vehicle and driver compliance with the CLOCS Standard throughout the duration of the contract.

Keltbray are a CLOCS Champion Member.

All our own fleet operates to FORS Gold standard, and our supply chain operates to FORS Silver standard (CLOCS Standard).

Vehicle checklists in line with CLOCS Standards will be in use by our traffic marshalls with all vehicles checked prior to coming onto site.

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:

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.

Please refer to Appendix A which shows:

- Approach and departure routes into Cypress Place
- Approach and departure routes into Whitfield Street

We have explored the potential for vehicles to enter forwards onto Howland Street and then departing forwards onto Maple Street from Cypress Place. From the consultation undertaken with 90 Whitfield Street and their building managers, this is not their preference and they have informed the occupiers that the construction site and the loading bay area will be kept separate. This is their preference from both a logistical and pedestrian/cycle safety perspective. Our vehicles therefore will be turning around, within the courtyard of Cypress Place and exiting back out onto Howland Street.

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.

Suppliers and delivery companies will be made aware of the agreed access and egress routes, site restrictions in terms of time limits, maximum vehicle width, length and height, site contact details and any relevant information which we may impact the drivers and other road users. This will be regularly reviewed and monitored to ensure compliance.

Owing to the central London location there are multiple buildings, however these are not deemed to be sensitive. There are no stations, museums or sensitive public buildings on the routes to/from the site along the TLRN.

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

It is anticipated the site will receive a maximum of 60 deliveries per day, Monday to Friday during the substructure and superstructure works.

Over the various stages of the project, deliveries are anticipated as per the below:

Demolition Weeks 1-12

- 4 x 32t tippers per day
- ~~1 x artic load per day~~
- 1 x 18t flatbed per day
- 2 x vans per day

Demolition Weeks 13-24

- 20 x 32t tippers per day
- ~~1 x artic load per day~~
- 1 x 18t flatbed per day
- 2 x vans per day

Groundworks & Piling Weeks 25-51

- 40 x 32t tippers per day
- ~~1 x artic load per day~~
- 6 x concrete wagons per day
- 2 x 18t flatbed per day
- 2 x vans per day

Basement & Core Weeks 52-74

- 3 x artic loads per day
- 20 x concrete wagons per day
- 2 x 18t flatbed per day
- 2 x vans per day

Allocated time slots will be given 48 hours before planned delivery. All construction delivery movements will be controlled via a 'booking in' system.

During the demolition phase the maximum number of vehicles entering/exiting Cypress Place will be 2 between 8am – 9am.

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

There is a project at 247 Tottenham Court Road, which is sufficiently far away from The Network Building at 95-100 Tottenham Court Road to cause an impact. Apart from that, we are unaware of other construction sites in the immediate vicinity.

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

Not applicable at this stage, we can provide if required

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.

We are able to make use of a holding area in Smithfield Market for our tipper wagons. There will also be an opportunity to hold a small numbers of vehicles within our pit lane along Whitfield Street when that is in place.

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.

- The possible use of consolidation centres has been reviewed but at this stage there is no requirement.
- Unfortunately delivery by water / rail is not realistic due to the sites location

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).

Instructions will be issued to all contractors and subcontractors setting out the requirements they must abide by throughout their contract. This will include instructions to ensure that vehicles are not idling for any material length of time i.e. engines must be switched off when vehicles are stationary.

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 (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 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.

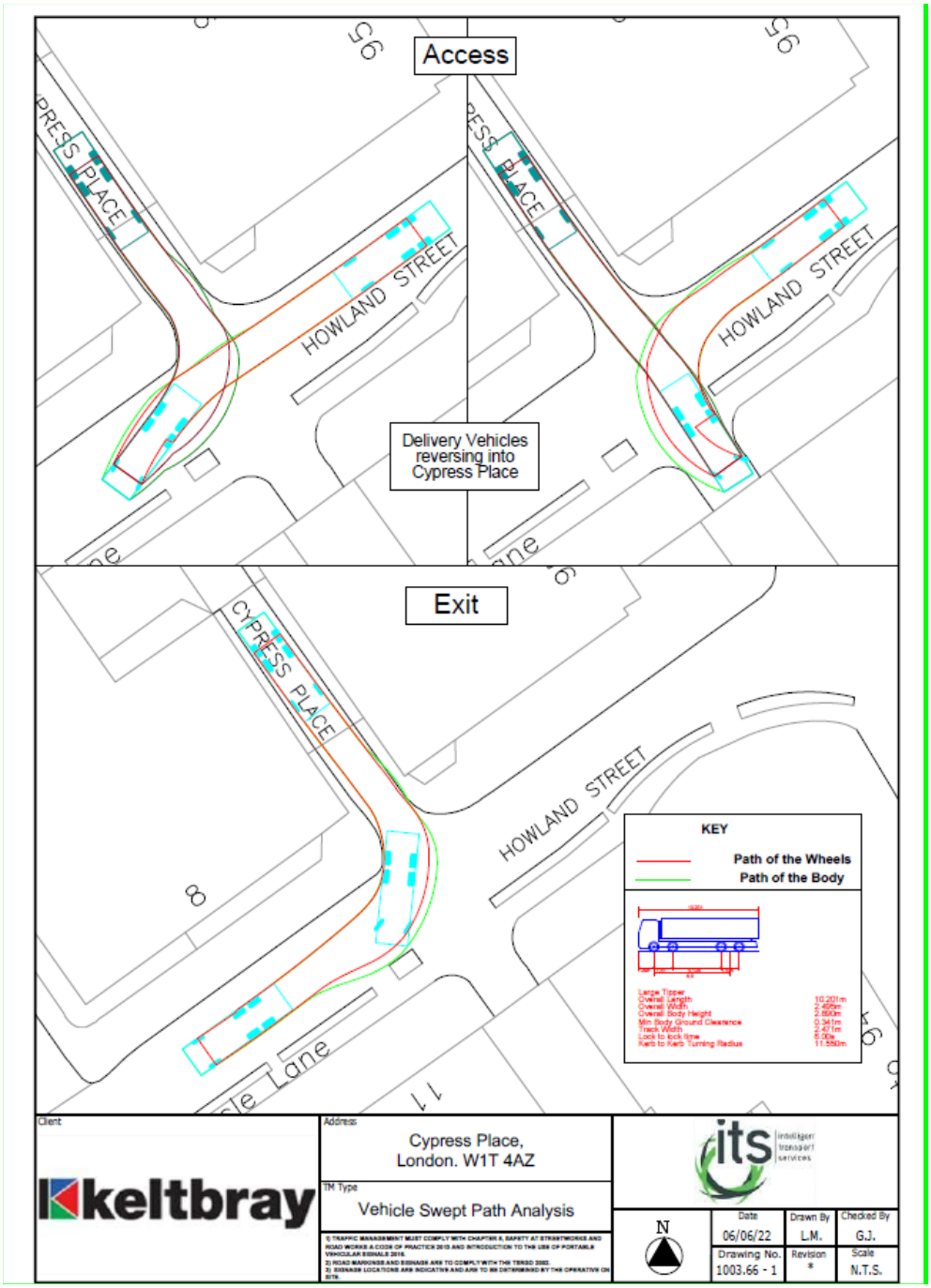
Vehicles will enter site during the demolition and substructure phases, and access will be provided through Cypress Place off Howland Street and a new gate/crossover location along Whitfield Street. See site arrangement plan in Appendix A.

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.

Traffic marshalls will be provided to stop cyclists and bank the vehicles out during all vehicle movements. We will have 3 traffic marshalls in place (2 to stop the cyclists and 1 to bank the vehicle).

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.

See below entry/exit to Cypress Place of 8 wheel tipper:



We have carried out a trial run with our own tipper wagons with success.

This will be kept under review and revisited if deemed an issue by Camden.

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.

A powered jet wash facility will be in use at Cypress Place and gate along Whitfield Street, and will be supported with road sweepers.

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.

For this phase of works vehicles will loaded/unloaded within the Cypress Place courtyard. The only other vehicles will be scaffolding rigid lorries which will be unloaded/loaded within the suspended parking bays along Whitfield Street.

For the following phase (post-Christmas 2022) a separate addendum will be submitted for approval to Camden prior to the works commencing.

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.

Vehicles will access the pit lane via Maple Street and egress westbound on Howland Street to the southeast. Traffic marshals will be placed at the entry and exit of the pit lane, along with at the Maple Street/Whitfield Street and the Whitfield Street/Howland Street junctions to ensure vehicles are guided safely into and from these junctions.

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.

See Existing Highway Arrangement Plan in Appendix C

Please note that cabins on TCR are planned to be installed in November 2022 as shown in Appendix B.

Along Whitfield Street the hoarding will be set back 450mm from the edge of the kerb. Our vehicle gates will have to be stepped back from the hoarding line at the entrance to Cypress Place to enable our vehicles to get in and out smoothly, however at night time we can heras fence this off so no recess exists. During the day this will be fully marshalled by our traffic marshalls.

23. Parking bay suspensions and temporary traffic orders

Parking bay suspensions should only be requested where absolutely 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.

See logistics phasing plans in Appendix B

The parking bays for the substation don't need to be suspended until at least Week 18 (November 2022). This will be picked up with the main TTR for Whitfield Street and second phase of works, and kept separate to the Cypress Place TTR that has already been submitted.

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.

The build form of the existing and proposed buildings takes up the entirety of the site, therefore prevents site accommodation from being located on site from early on in the demolition programme. Site accommodation/welfare will be located along Howland Street & Whitfield Street along the site frontage on the footpath behind the perimeter hoarding. Storage of materials will be accommodated on site.

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.

1 x tree along Whitfield Street, and 1 x tree along Howland Street along the site frontage need to be removed.

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.

Pedestrian disruption will occur on Whitfield Street, with the closure of the eastern footway. Pedestrians wishing to travel between Maple Street and Howland Street north/southbound will be required to travel via the western footway or via the Tottenham Court Road footways.

Pedestrian disruption will occur on Howland Street, with the closure of the northern footway. Pedestrians wishing to travel between Whitfield Street and Tottenham Court Road east/westbound along Howland Street will be required to travel via the southern footway.

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.

The site hoarding is illustrated within the site Construction Arrangement Plan at Appendix B. This will require the closure of the eastern footway on Whitfield Street and the northern footway on Howland Street. Along Tottenham Court Road the hoarding will be 3m off the building line leaving more than 2.5m for the public.

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.

The perimeter of the building will have scaffolding around it to act as full protection to the public during the demolition phase.

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.

The UKPN Substation is being relocated from within the existing basement to Howland Street. See Appendix B Logistics Plans

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.

See Appendix D – Noise Vibration Dust Management Plan

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.

Please refer to Appendix E for background noise survey undertaken by Hann Tucker in August 2020.

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

See Appendix D – Noise Vibration Dust Management Plan

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.

See Appendix D – Noise Vibration Dust Management Plan

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

See Appendix D – Noise Vibration Dust Management Plan

33. Please provide specific details on how air pollution and dust nuisance arising from dusty activities on site will be prevented. This should be relevant and proportionate to activities due to take place, with focus on both preventative and reactive mitigation measures.

See Appendix D – Noise Vibration Dust Management Plan

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.

See Appendix D – Noise Vibration Dust Management Plan

35. Please provide details describing arrangements for monitoring of noise, vibration and dust levels, including instrumentation, locations of monitors and trigger levels where appropriate.

See Appendix D – Noise Vibration Dust Management Plan

36. Please confirm that an Air Quality Assessment and/or Dust 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 2014 (SPG) (document access at bottom of webpage), and that the summary dust impact risk level (without mitigation) has been identified. The risk assessment must take account of proximity to all human receptors and sensitive receptors (e.g. schools, care homes etc.), as detailed in the SPG. **Please attach the risk assessment and mitigation checklist as an appendix**.

See Appendix D – Noise Vibration Dust Management Plan

37. Please confirm that all of the GLA's 'highly recommended' measures from the SPG document relative to the level of dust impact risk identified in question 36 have been addressed by completing the GLA mitigation measures checklist. (See Appendix 7 of the SPG document.)

See Appendix D – Noise Vibration Dust Management Plan

38. Please confirm the number of real-time dust monitors to be used on-site.

Note: **real-time dust (PM_{10}) monitoring with MCERTS 'Indicative' monitoring equipment will be required for all sites with a high OR medium dust impact risk level**. If the site is a 'high impact' site, 4 real time dust monitors will be required. If the site is a 'medium impact' site', 2 real time dust monitors will be required.

The dust monitoring must be in accordance with the SPG and IAQM guidance, and **the proposed dust monitoring regime (including number of monitors, locations, equipment specification, and trigger levels) must be submitted to the Council for approval**. Dust monitoring is required for the entire duration of the development and must be in place and operational **at least three months prior to the commencement of works on-site**. Monthly dust monitoring reports must be provided to the Council detailing activities during each monthly period, dust mitigation measures in place, monitoring data coverage, graphs of measured dust (PM_{10}) concentrations, any exceedances of the trigger levels, and explanation on the causes of any and all exceedances in addition to additional mitigation measures implemented to rectify these.

In accordance with Camden's Clean Air Action Plan, the monthly dust monitoring reports must also be made readily available and accessible online to members of the public soon after publication. Information on how to access the monthly dust monitoring reports should be advertised to the local community (e.g. presented on the site boundaries in full public view).

Inadequate dust monitoring or reporting, or failure to limit trigger level exceedances, will be indicative of poor air quality and dust management and will lead to enforcement action.

See Appendix D – Noise Vibration Dust Management Plan

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).

We will have pest control measures in place to prevent rodents spreading out from the site. We will monitor these on a regular basis and re-bait regularly.

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

Asbestos has been identified during the scope of this inspection, in the form of Gaskets within the Boiler Room & Old Oil Store, the Gas Meter Room and the Sprinkler Cupboard and Car Park. Asbestos has also been presumed to exist in the form of Rope Flash Guards and Rope Brake Pads within Lift Motor 1 & 2 and Rope Seals to the External Roof.

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.

In the event of a complaint from a neighbour, a member of the public or Camden Pollution Control Team in relation to any site activity, it will be recorded in a designated logbook, stating the nature of the complaint, the cause and, where appropriate, the remedial action taken.

Should complaints about odour, noise, dust or vibration be received, they will be addressed directly by ourselves as Principal Contractor to enable results at the time of the complaint to be reviewed, and where appropriate immediate actions employed to rectify the problem. Where a valid grievance is raised, measures will be put in place where practicable to avoid recurrence of the complaint.

We will provide regular updates to the client with regard to complaints received and subsequent resolutions.

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. See the Mayor of London webpage 'Non-Road Mobile Machinery (NRMM)' for more information, a map of the Central Activity Zone, and for links to the NRMM Register and the NRMM Practical guide (V4): https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/nrmm

Direct link to NRMM Practical Guide (V4):
https://www.london.gov.uk/sites/default/files/nrmm_practical_guide_v4_sept20.pdf

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 06/22 - 11/23:

b) Is the development within the CAZ? Yes

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

d) Please confirm that all relevant machinery will be registered on the NRMM Register, including the site name under which it has been registered: Yes

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

43. Vehicle engine idling (leaving engines running whilst parked or not in traffic) produces avoidable air pollution and can damage the health of drivers and local communities. Camden Council and City of London Corporation lead the London **Idling Action Project** to educate drivers about the health

impacts of air pollution and the importance of switching off engines as a simple action to help protect the health of all Londoners.

Idling Action calls for businesses and fleet operators to take the **Engines Off pledge** to reduce emissions and improve air quality by asking fleet drivers, employees and subcontractors to avoid idling their engines wherever possible. Free driver training materials are available from the website: https://idlingaction.london/business/

Please provide details about how you will reduce avoidable air pollution from engine idling, including whether your organisation has committed to the Engines Off pledge and the number of staff or subcontractors who have been provided with free training materials.

Keltbray was one of the first companies to successfully pass a number of certified external audits for compliance with the Non-Road Mobile Machinery (NRMM) Low Emission Zone requirements in London. These requirements aim to improve air quality by reducing key pollutants, such as Nitrogen Oxides and Particulate Matter from burning fuel such as diesel, petrol and natural gas. Throughout the development of the NRMM regulations Keltbray has been heavily involved with the policy makers, regulators and the supply chain. This has allowed us to fully understand the requirements and also what equipment can achieve these requirements. All plant bigger than 37kW will be Stage IV, compliant with the NRMM requirements.

Reducing idling of on-site plant is an industry wide problem, therefore we created a fuel saving tournament initiative which rewards drivers for reducing their idling.
The tournament involved challenging our drivers to reduce the idling time and each driver per project who reduced this the most was awarded a voucher on a monthly basis.
The implementation of the fuel saving tournament across the Keltbray Group:

- reduced our idling by 38%
- saved 15,000 litres of fuel
- led to 5000 hours not spent idling
- generated emissions savings of 37,000 kgCO2e
- National Silver Award from the Green Apple Organisation

We will apply this initiative to reduce carbon emissions at The Network Building.

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: .....17th June 2022.....

Print Name: .....TOM PRICE.....

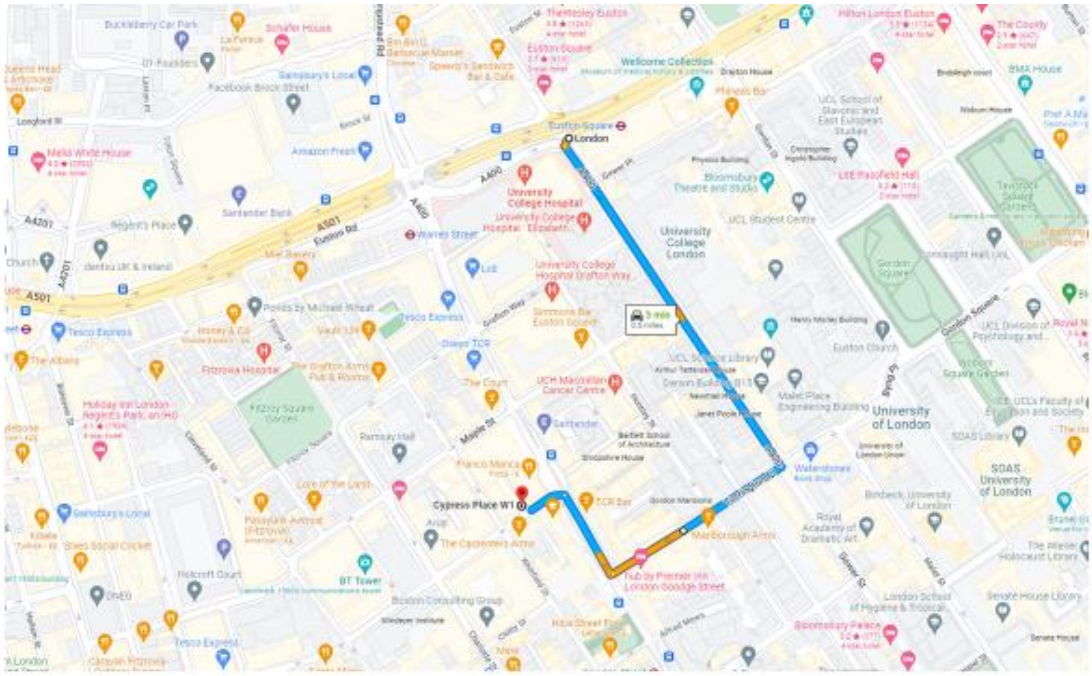
Position: .....PROJECT DIRECTOR.....

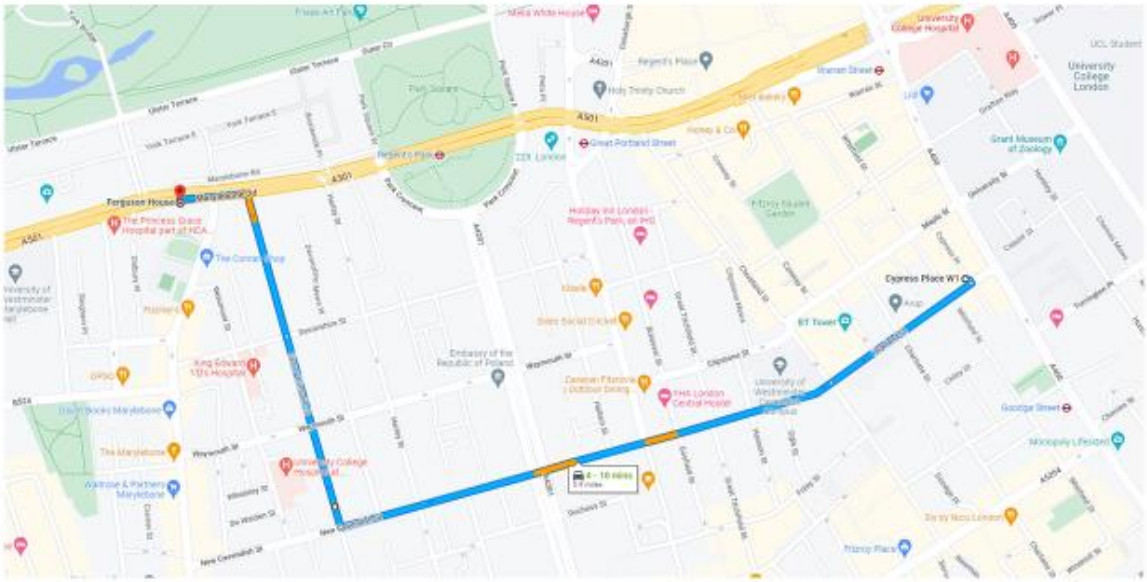
Please submit to: planningobligations@camden.gov.uk

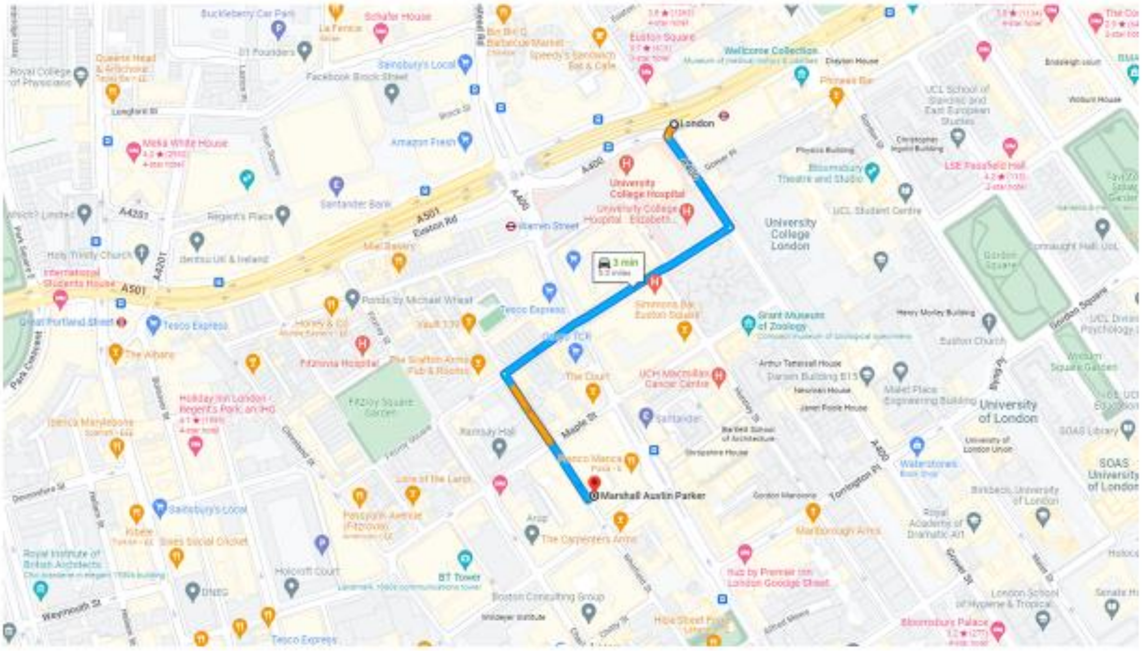
End of form.

V2.7

Appendix A – Entry & Departure Routes



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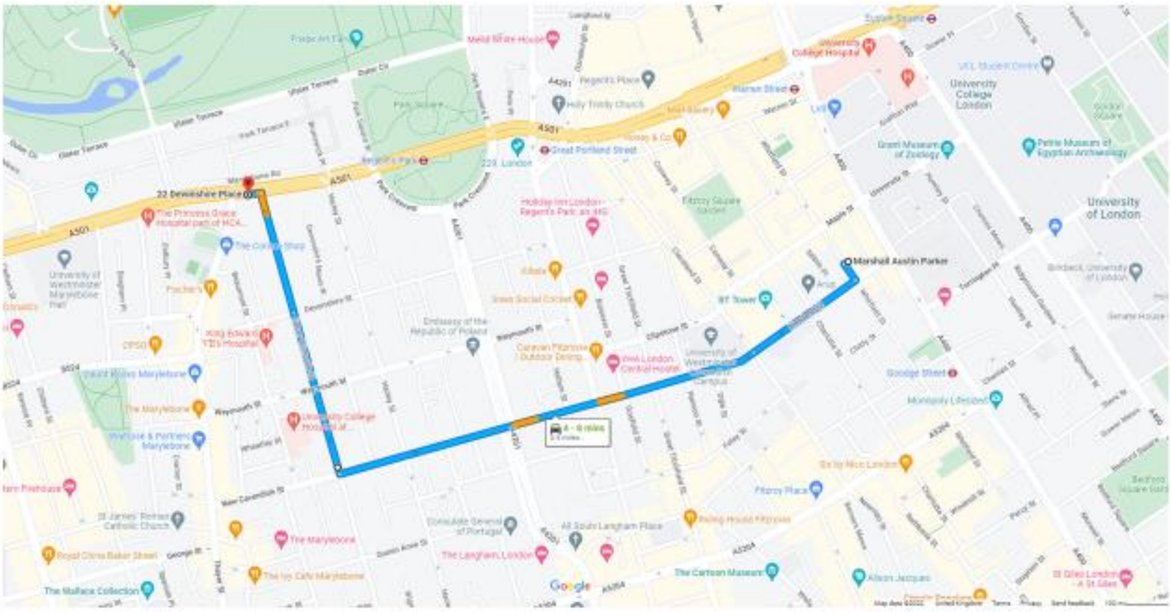
University of London
Euston Square
Wellcome Collection
Fitzroy Square Garden
BT Tower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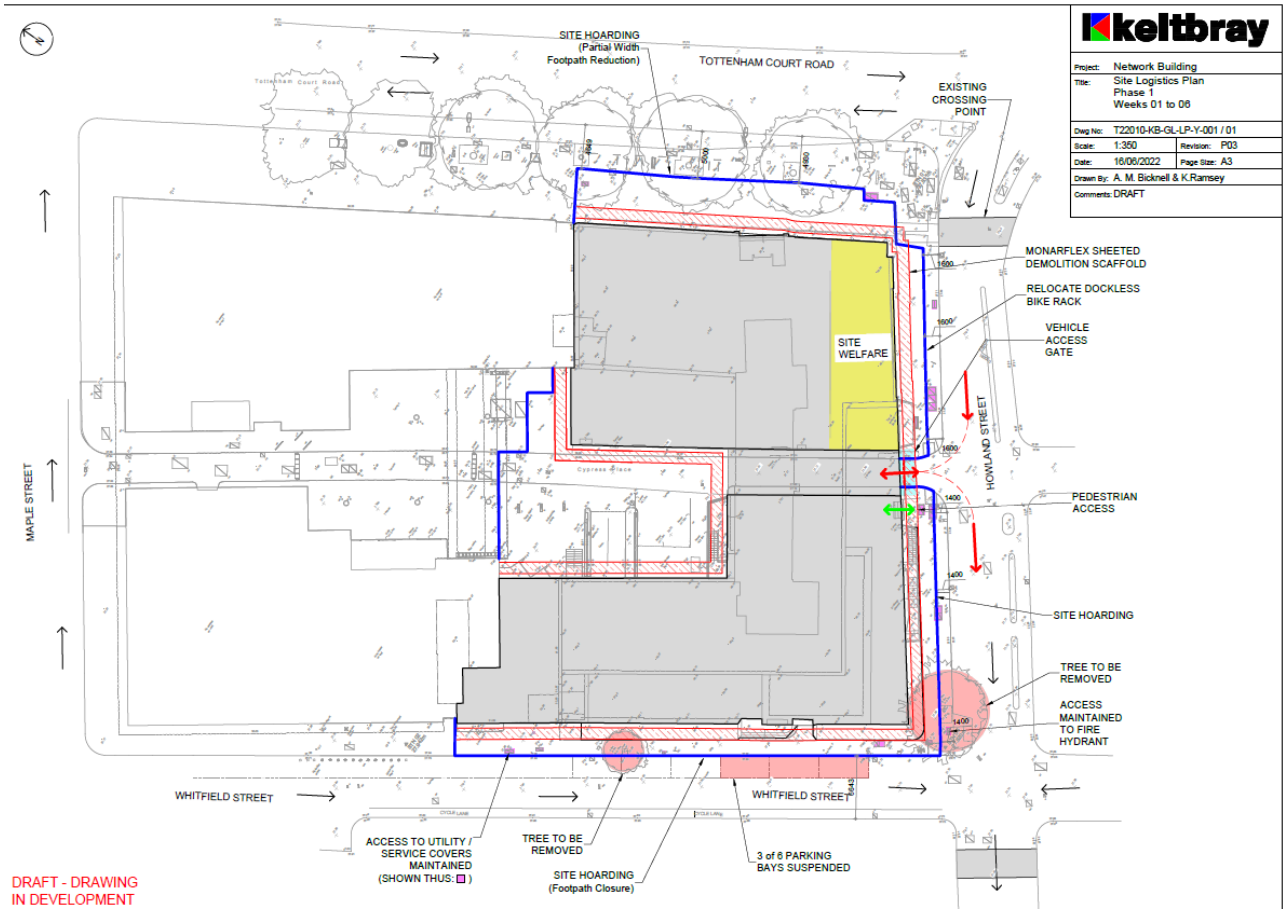
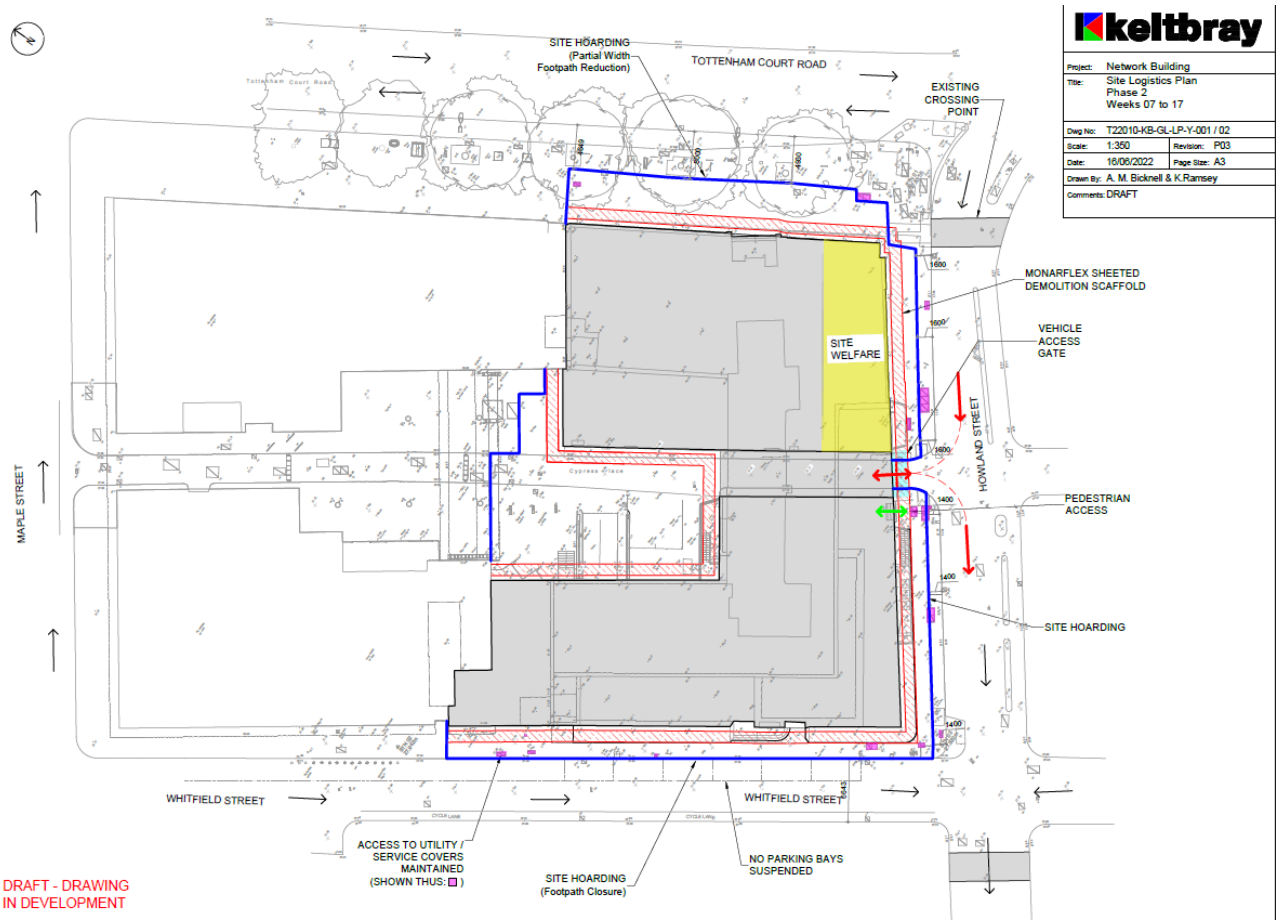
Marshall Austin Parker
University College London
University of London
Fitzroy Square Garden
BT Tower

Appendix B – Logistics Plans

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Scale: 1:350
Revision: P03
Date: 16/06/2022
Page Size: A3
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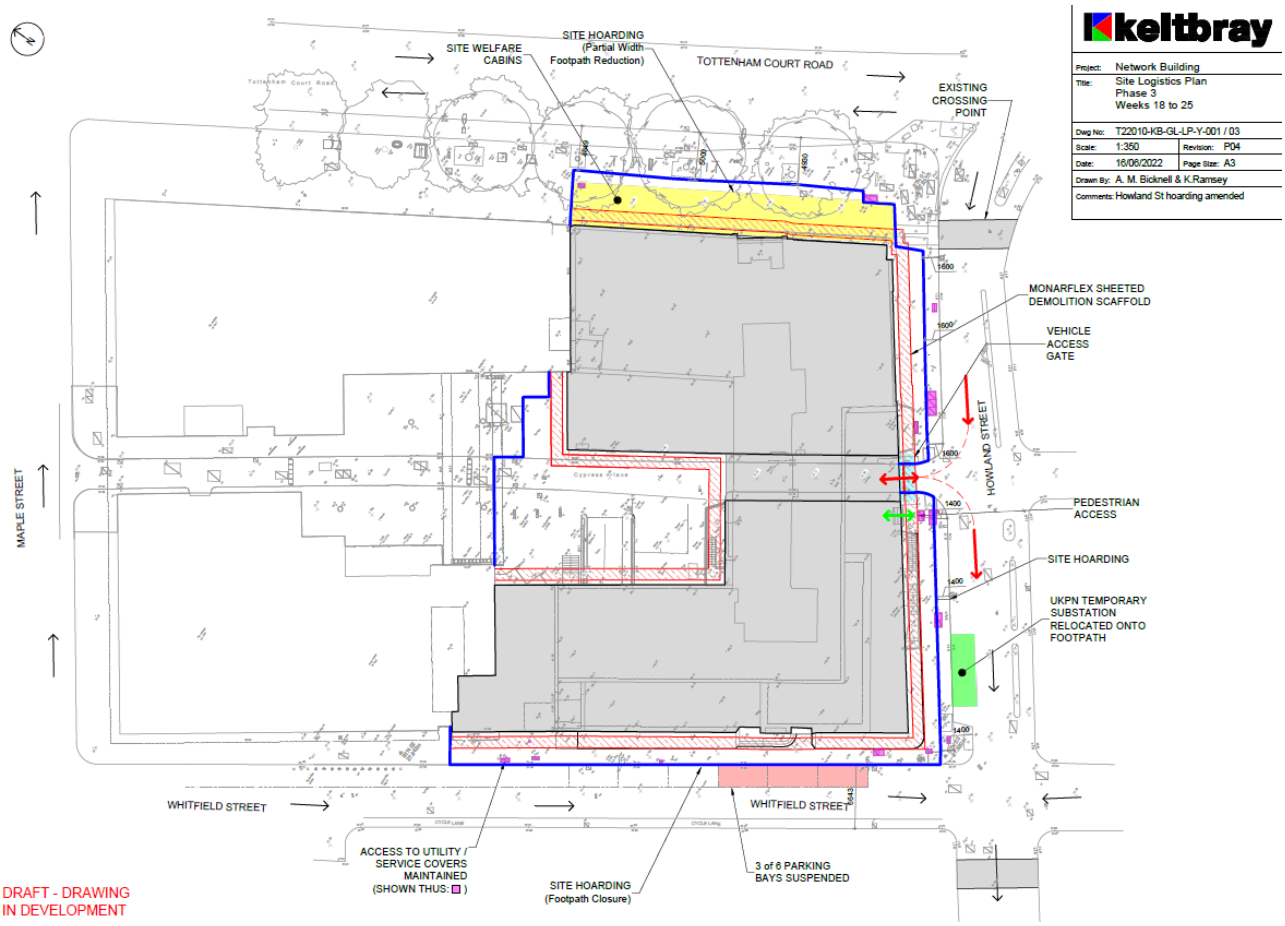
Comments: DRAFT
SITE HOARDING (Partial Width Footpath Reduction)
TOTTENHAM COURT ROAD
EXISTING CROSSING POINT
MONARFLEX SHEETED DEMOLITION SCAFFOLD
VEHICLE ACCESS GATE
SITE WELFARE
HOWLAND STREET
PEDESTRIAN ACCESS
SITE HOARDING
MAPLE STREET
WHITFIELD STREET
WHITFIELD STREET
ACCESS TO UTILITY / SERVICE COVERS MAINTAINED (SHOWN THUS:)
SITE HOARDING (Footpath Closure)
NO PARKING BAYS SUSPENDED
DRAFT - DRAWING IN DEVELOPMENT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SITE HOARDING (Partial Width Footpath Reduction)
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VEHICLE ACCESS GATE
HOWLAND STREET
PEDESTRIAN ACCESS
SITE HOARDING
UKPN TEMPORARY SUBSTATION RELOCATED ONTO FOOTPATH
MAPLE STREET
WHITFIELD STREET
WHITFIELD STREET
ACCESS TO UTILITY / SERVICE COVERS MAINTAINED (SHOWN THUS:)
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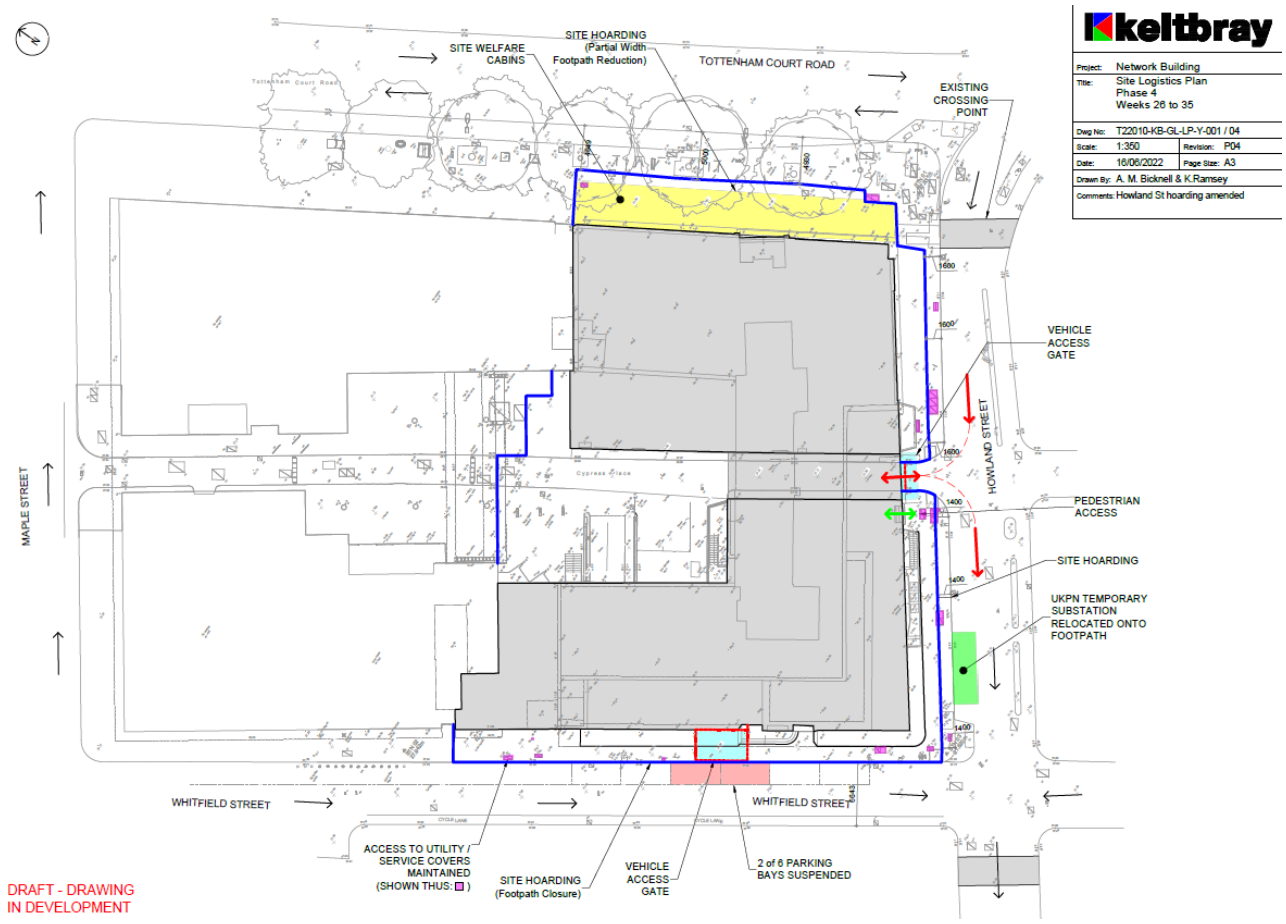
Date: 16/06/2022
Page Size: A3
Drawn By: A. M. Bicknell & K.Ramsey
Comments: Howland St hoarding amended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Phase 4
Weeks 26 to 35
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Comments: Howland St hoarding amended
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SITE HOARDING (Partial Width Footpath Reduction)
TOTTENHAM COURT ROAD
EXISTING CROSSING POINT
VEHICLE ACCESS GATE
HOWLAND STREET
PEDESTRIAN ACCESS
SITE HOARDING
UKPN TEMPORARY SUBSTATION RELOCATED ONTO FOOTPATH
MAPLE STREET
WHITFIELD STREET
WHITFIELD STREET
ACCESS TO UTILITY / SERVICE COVERS MAINTAINED (SHOWN THUS:)
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VEHICLE ACCESS GATE
2 of 6 PARKING BAYS SUSPENDED
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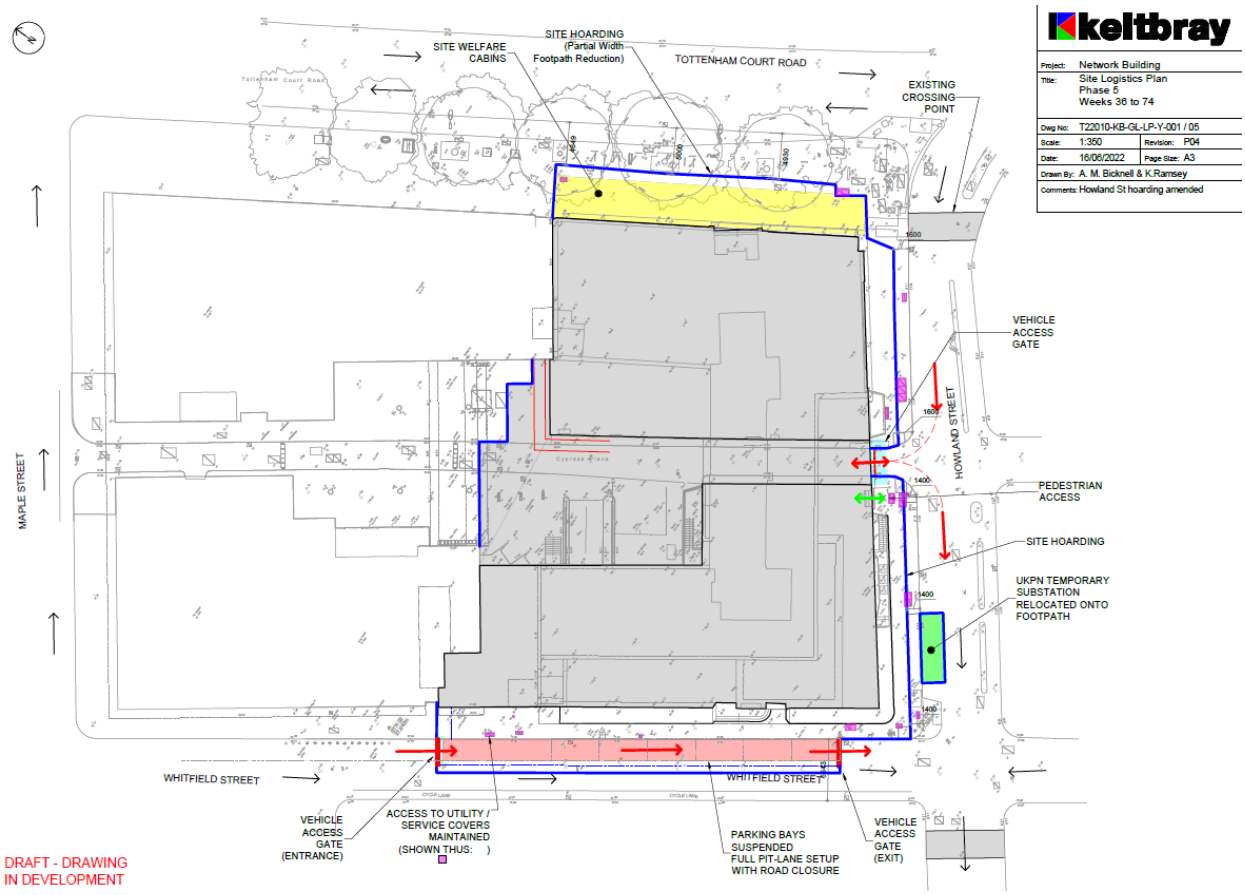
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Drawn By: A. M. Bicknell & K.Ramsey
Comments: Howland St hoarding amended
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SITE HOARDING (Partial Width Footpath Reduction)
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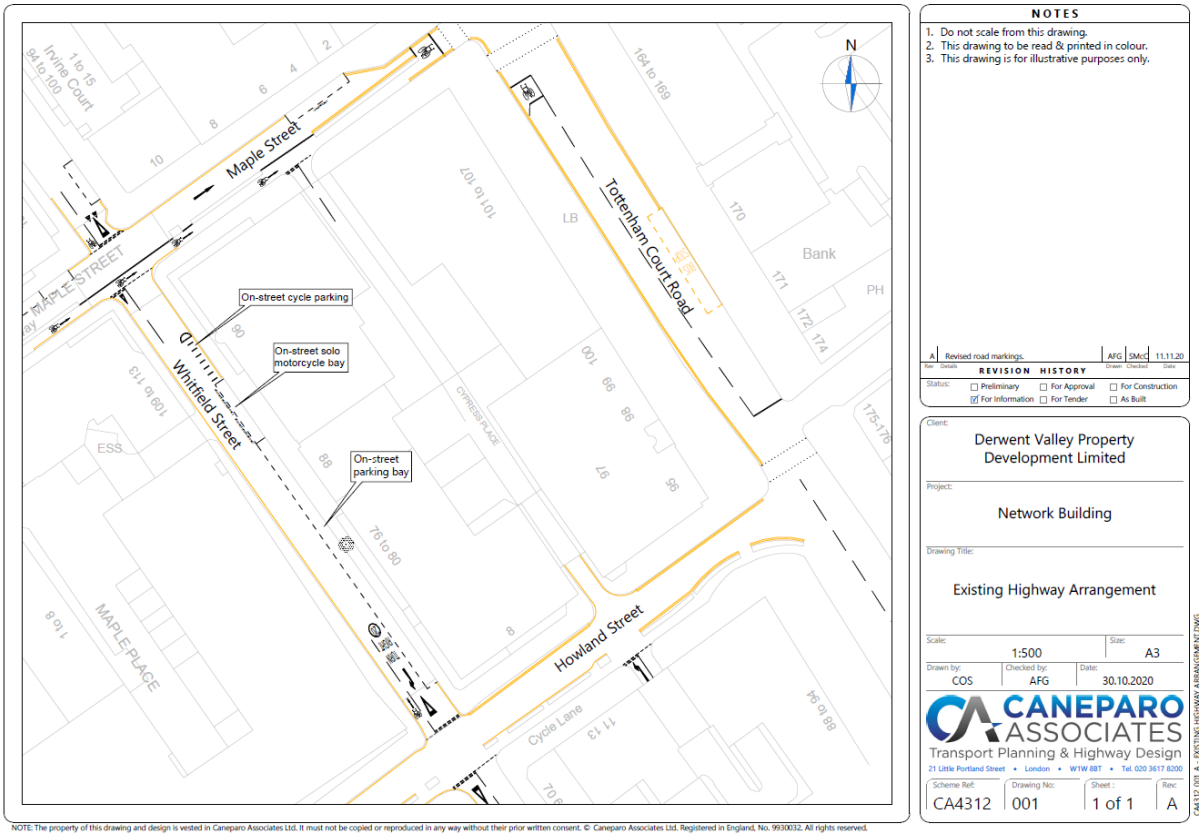
VEHICLE ACCESS GATE
HOWLAND STREET
PEDESTRIAN ACCESS
SITE HOARDING
UKPN TEMPORARY SUBSTATION RELOCATED ONTO FOOTPATH
MAPLE STREET
WHITFIELD STREET
WHITFIELD STREET
VEHICLE ACCESS GATE (ENTRANCE)
ACCESS TO UTILITY / SERVICE COVERS MAINTAINED (SHOWN THUS:)
PARKING BAYS SUSPENDED FULL PIT-LANE SETUP WITH ROAD CLOSURE
VEHICLE ACCESS GATE (EXIT)
DRAFT - DRAWING IN DEVELOPMENT

Appendix C – Existing Highway Arrangement



Appendix D – Noise Vibration Dust Management Plan

Noise, Dust & Vibration Monitoring Plan (Proposal)

Network Building Project

Revision History				
Document No.	**Revision No.**	**Issue Date**	**Author**	**Description of Modifications**
KBY_ DC1243 _NDVMP_001	00	19.05.2022	Kathy Johnston	DRAFT

	Print Name	Position	Signature	Issued to:
Author	Kathy Johnston	Environmental Advisor	*Kathy Johnston*	Environmental Manager

Checked by	Kiro Tamer	Environmental Manger	*Kiro Tamer*	Project Management
Approved by		Project Manager		Client

Sign off by Project Manager	Print Name	Signature	Date
			19.05.2022

Contents

Abbreviations

Abbreviations	The abbreviations listed below apply to this document:
Ambient Noise	Noise in a given situation at a given time, usually composed of sound from many sources near and far, but excluding site noise
Background Noise	Background noise or ambient noise is any sound other than the sound being monitored (i.e. construction sound). Background noise is a form of noise pollution or interference, and is an important concept in setting the correct noise levels.
Noise Sensitive Premises (NSPs)	Any occupied premises outside a site used as a dwelling (including gardens), places of worship, educational establishment, hospital or similar institution, or any other property likely to be adversely affected by an increase in noise level.
dB (A)	A-weighted decibels are an expression of the relative loudness of sounds in air as perceived by the human ear.
EA	Environment Agency
EHO	Environmental Health Officer
EMP	Environmental Management Plan
EMS	Environmental Management System to EN ISO 14001
Environmental aspect	Element of an organisations activities or products or services that can interact with the environment
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisations environmental aspects
SAC	Special Area for Conservation

Section 60 notice	Issued under the Control of Pollution Act 1974 to control noise pollution and nuisance. If issued the conditions must be complied with until revoked or successfully appealed against
Section 61 consent	Issued under the Control of Pollution Act 1974 to permit noise on site.
Sustainable development	"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (from the Bruntland Report).
LA	Local Authority (Camden Council)
CoCP	Code of Construction Practice
CoPA	Control of Pollution Act 1974
BPM	Best Practicable Means

1.0 Introduction

Site Location

The site is located at 95-100 Tottenham Court Road, London, W1T 4TW. To the West of the building is Whitfield Street which has a wide pavement and a one-way road with access from the North with the exception of cyclists. There is currently residential parking adjacent to the building on Whitefield Street. South of the building is Howland Street which also has a wide pavement and a one-way road with access from the East, including a cycle lane. Tottenham Court Road is situated to the East which has heavy vehicle / cycle traffic and a wide pedestrian footway housing mature trees to the side of the building. Intersecting the site is Cypress Place.

Description of the Project

The project consists of the demolition of two existing buildings located on the corner of Tottenham Court Road and along Howland Street. The redevelopment of the site is to provide a new high-quality office led building with retail space on the ground floor fronting Tottenham Court Road.

The proposed office accommodation has generous floor-to-ceiling heights, fully openable window vents allowing natural ventilation and efficient /discreet mechanical services to obtain excellent overall environmental performance. The project has been split into two separate contract phases. Demolition and Basement Box works involve the disconnecting existing services, internal building strip out, hard demolition and removal of the existing buildings including temporary party wall and basement perimeter temporary support works plus basement box and core to roof level.

Scope of works:

- Structural demolition of existing 7 storey office block
- Ground works
- Piling
- Basement Box
- Concrete Core

Programme:

- Start date: 24th June 2022
- End date: 15th November 2023
- Number of weeks: 74 weeks

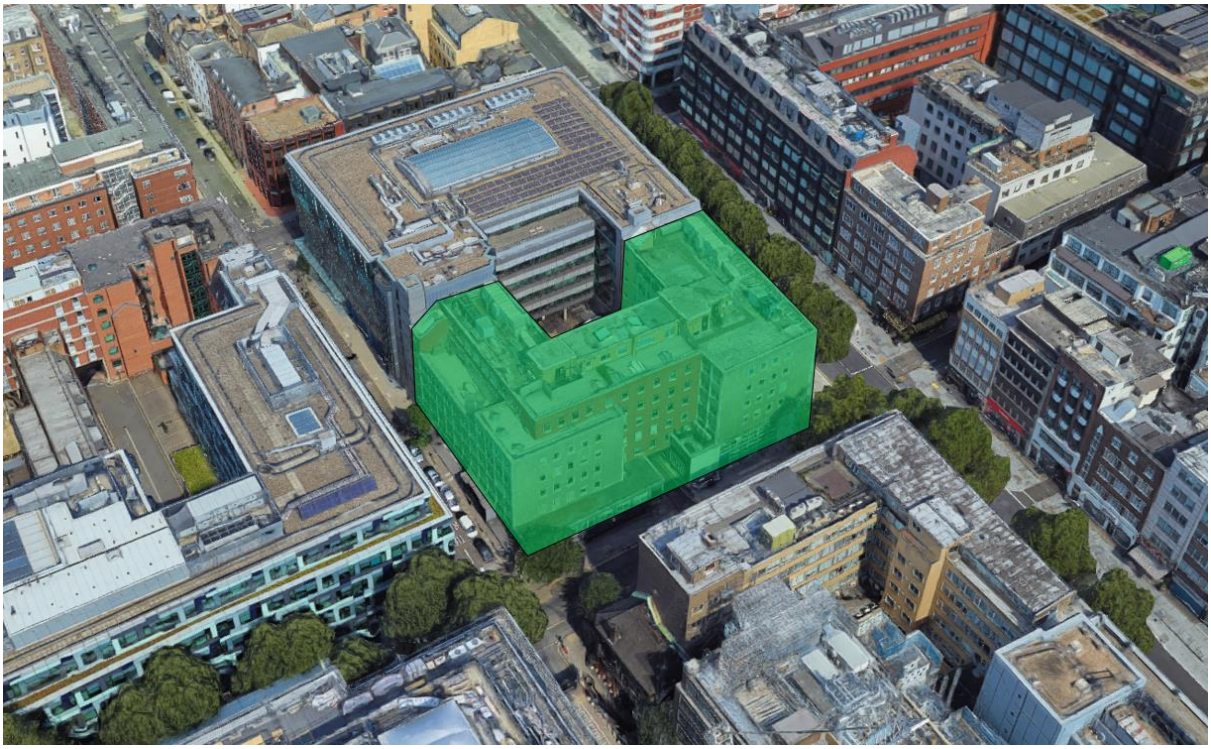


Figure 1 – Network Building project (highlighted in green)

1.1. Sensitive Receptors

The sensitive receptors have been identified and presented below.

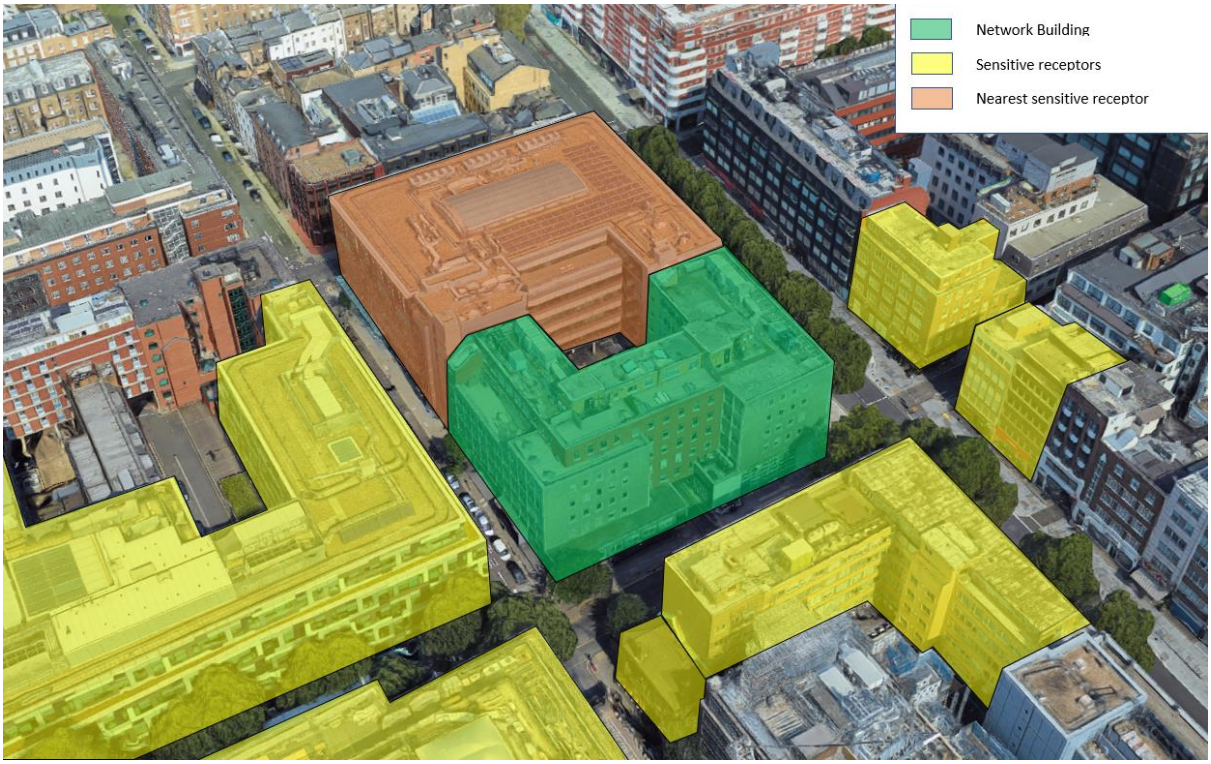


Figure 2 – Project location and sensitive receptors

Nearest receptor:

- 5 Cypress Pl

Sensitive receptors:

- 171 - 172 Tottenham Court Rd
- 175 - 177 Tottenham Court Rd
- 94 Tottenham Court Rd
- 13 Howland St
- 89 Whitfield St
- 84 Whitfield St

Based on the construction noise, dust and vibration levels, mitigation measures will be planned and implemented, not only to minimise the effects on the surrounding buildings, but also to reduce the risk of environmental nuisance on the adjacent neighbours.

The objectives of the "continuous-automated" environmental monitoring for noise, dust and vibration are:

- Enable and assist client and project delivery team in evaluating the efficiency of mitigation measures by implementing BPM (Best Practicable Means)
- To enable an understanding on how the measured levels are compared with agreed criteria values and how they are communicated
- Document and continually report on monitoring requirements, both for demonstrating

compliance on a regular basis, and in response to recorded exceedance or complaint.

2.0 Implementation

This document has been produced in compliance with Camden's Minimum Requirements.

This document describes the proposed methodology for gathering, interpreting, and communicating environmental monitoring data to ensure the client and project specific environmental objectives are achieved and maintained.

2.1 Responsibilities

Project Environmental Manager (EM)

The Environmental Manager is responsible for producing and communicating this procedure to the project management team as well as ensuring that designated personnel prepares and issues monitoring reports to the client and Local Authority as agreed.

Environmental Auditor (EA)

The environmental auditor will be appointed by the EM and will carry out regular periodic audits to ensure compliance with this procedure, Environmental Management Plan and other relevant documents.

Environmental Monitoring Coordinator (EMC)

Responsible for ensuring that equipment for monitoring noise, vibration and dust are serviced and calibrated in accordance with BS EN 61672-3: 2013 specification and the manufacturer's recommendations, and will be collecting data and filling in the relevant forms and reports for analysis and submittal to client and Local Authority.

Project Manager (PM)

The Project Manager is responsible for assisting the client communication and liaison team, for organising communications with adjacent neighbours and with the Local Authority with regard to noise, dust and vibration.

The PM will ensure that an Incident/Complaint Notification report is completed and issued to the client and other parties at earliest possible time.

Acoustic Consultant (AC)

Hann Tucker have been appointed to carry out the environmental monitoring and reporting.

3.0 Equipment Used for Environmental Monitoring and Reporting

3.1 Noise

Class 1 sound level meters providing simultaneous, remote monitoring of noise are proposed to be used. Local email and SMS alerts can be transmitted to the site management team whenever noise trigger/action limits are reached or exceeded.

Noise monitoring is proposed at 3 fixed locations around the site as shown in Appendix A1.

The data logging equipment is durable and installed within weather protected cases which come with weather and wind protected microphones.

All results are recorded (LAeq in dB units) by data logging equipment within each unit, which are fed directly to the web interface in real time. Email alerting can be set up to notify site management of an exceedance of agreed threshold levels as stated in the Section 61 application.

3.2 Vibration

For measuring vibration, continuous-automated systems measuring PPV (Peak Particle Velocity) or similar meters are proposed to be used. The Vibration Meters are to be designated for use in construction and demolition site works.

Vibration monitoring is proposed at 3 fixed locations around the site as shown in Appendix A1.

These units shall be able to record continuous monitoring of construction/demolition vibration. The measurement period will be user-selectable and the dominant frequency component is recorded for each period PPV. Measurements can be taken continuously or only during user-specified periods and/or only above a user-specified vibration level. See example presented in Appendix C.

The monitors log vibration readings directly to a web interface in real time similar to the noise readings.

3.3 Dust (Air Quality)

Air quality will be monitored using equipment capable of notifying exceedance events in real time. The units will establish PM10 and other variables. Air quality monitoring will be carried out using monitors which have been issued with MCERTS and are able to measure PM10 as minimum. See example presented in Appendix D.

Dust monitoring is proposed at 3 fixed locations around the site as shown in Appendix A1.

These units monitor dust (PM10) levels in accordance with the guidelines given in the '*Guidance on Monitoring in the Vicinity of Demolition and Construction Sites'* Published by IAQM in October 2018. The dust monitors measure PM10 1 Hour mean average and will have email alerts established to notify of exceedance events for the Trigger and Action levels.

3.4 HT Cloud Environmental Monitoring Website

The HT Cloud system incorporates web-based monitoring of all the sensors that have been integrated in to the platform, and display all environmental monitoring data.

4.0 Calibration

The manufacturers' instructions that accompany measuring instruments should be followed strictly and every precaution will be taken before use to ensure that the instruments are accurately calibrated. BS5228-1:2009+A1:2014 recommends that instruments are tested for conformity periodically in accordance with BS EN 61672-3:2013 – this standard is the one for Lab Calibration.

In addition to the field calibration above, accredited laboratory calibration of SLMs and calibrators will be carried out periodically.

5.0 Indicative Trigger Levels

The trigger levels are site specific and will be in line with Local Authority agreements and as outlined in the Section 61 Consent. When the monitors detect elevated readings (over the agreed limits) it will send an automated alert (i.e. email alert) to the project team and environmental manager so that they can take appropriate action to investigate and mitigate the impact, enabling an instant response to a potential problem.

When the results of the noise monitoring indicates that the combined demolition noise levels (predicted and baseline levels) are exceeded by +3 dB, an investigation will be initiated into the possible causes.

The categories for monitoring and reporting amber and red level responses are outlined in table 1 below:

Status	Description	Action

Green	All monitoring data is within acceptable levels	• No action required • Continuation of demolition activity • Continuation of monitoring
Amber Level	Measured Noise, Vibration and Dust levels Alert - indicating exceedance of this threshold	• Text message alert showing amber level exceedance • Project Manager to undertake visual inspection of site activities and ensure that best practice measures are in place; • Project delivery team will implement additional practicable measures where these are identified including re-sequencing of activities. • Continuation of demolition activities and continue noise monitoring
Red Level	Measured Noise, Vibration and Dust levels Alert - indicating exceedance of this threshold	• Text message alert showing red level exceedance to be sent to Project Manager and site team, notifying them of the exceedance. EHO to be notified. • Contractor to stop works and review the best practice measures in place and implement additional mitigation measures where practicable; including shortening the daily duration of the noisy activities. • Environmental Advisor will download and analyse the data and look at possible trends, relationships and correlate the Alert with work activities on site. • Project Manager to undertake visual survey to check best practice measures are in place for the work activities • Agree with EHO and implement remediation techniques (prepare method statements if required) • Environmental Manager to complete a pollution incident report log and provide instruction to re-start works only on implementation of practicable mitigation methods identified

Table 1 – Trigger Action Plan

6.0 Baseline Noise, Dust and Vibration Monitoring

A baseline monitoring for noise, dust and vibration will be undertaken at Network Building prior to commencement of noisy demolition operations. It is proposed that the same locations and monitoring units that are to be used for the continuous-automated monitoring will be utilised for collecting the baseline data.

A period of four weeks is a recommended minimum baseline monitoring period.

7.0 Predicted Noise Levels

Predicted noise levels will be presented in the Section 61 application (KBY_DC1243_S61_001-DRAFT), as period LAeqT10 hour levels at the nearest sensitive buildings where the proposed monitoring units will be positioned.

8.0 Sensitive receptors

The map in Appendix A shows the nearest sensitive receptors adjacent to Network Building project.

9.0 Best Practicable Means

It is anticipated that noise, dust and vibration levels resulting from work activities may be noticeable. We will liaise as soon as possible with Camden Council EHO, and an application for Section 61 consent will be submitted to cover the works taking place at Network Building.

Keltbray actively invests in the use of quieter machines, and the best location for static plant and equipment to minimise noise. We aim to meet with the client and Local Authority Environmental Health Officers to discuss works and means of further noise reduction in the event there is concern that noise will reach unreasonable levels.

The project delivery team, via the client will actively communicate with neighbours in writing, regarding the work taking place when noise levels are expected to be significant. A copy of letters will be sent to Environmental Health Officers and other stakeholders.

9.1 Mitigation measures for noise and vibration

Noise and vibration monitoring and mitigation measures will be as agreed with the Camden Council EHO. Keltbray will use the following noise and vibration mitigation measures at this project, to ensure the minimum adverse impact on the neighbours surrounding the site:

- Arrange main electricity supply as early as possible to avoid generator use;
- Avoid percussive techniques if alternatives are available;
- Stationary plant such as temporary generators will be located as far as practicably away from the nearest sensitive receptor;
- Plant will be used in accordance with the manufacturers' recommendations;
- Plant such as mobile cranes which may be used intermittently will be shut down between work periods or throttled down to a minimum;
- Acoustic covers to engines will be kept closed when engines are in use;
- Appropriate screens or enclosures will be provided where required;
- Continuous monitoring will be undertaken thought the works, breaking and other noisy operations will be monitored closely to ensure compliance with S61 consent conditions;
- Site personnel will be instructed in environmental matters and BPM to reduce noise and vibration;
- They will be informed in the site induction into the surrounding environment;
- Loading of material into vehicles within designated bays only;
- Sensitive location of drop zones and loading areas and arrange full loads where possible at off-peak times;
- All deliveries to be scheduled to occur during daytime hours only and engines to be switched off when waiting;
- All plant to comply with relevant national or international standards, directives and recommendations including NRMM;
- Operations to be in accordance with Section 61;
- For necessary works to be carried outside agreed hours, optimise sequencing to minimise duration, seek dispensation or variation from the Local Authority and inform neighbours as early as possible.

Figure 3: Acoustic Barriers

9.2 Dust and Air Quality

Keltbray will use dust mitigation measures, to ensure the minimum adverse impact on the neighbours surrounding the site. These measures will include a number of approaches and working practices.

Figure 4: Scaffold with acoustic screens

Handling and storage areas will be sited as far away as is reasonably and practically possible from public areas. Handling and storage areas will be actively managed and fine, dry material will be stored inside enclosed shield/coverings or within a central storage areas.

Any storage areas that are not enclosed will be covered / sheeted. Prolonged storage of debris on site will be avoided. Vehicles carrying dusty materials into or out of the site shall be sheeted down to prevent any escape of materials.

Figure 5: Road sweeper tours around site and perimeter during working hours

Figure 6: Sheeting of spoil heaps

Demolition works will be carried out in such a way as to limit dust by employing Best Practicable Means.

The storage and handling of materials can be a significant dust emission source. The adoption of appropriate dust control measures will greatly reduce dust emissions from these sources and ensure that any adverse effects are reduced or eliminated.

Handling and storage areas will be sited as far away as is reasonably and practically possible from public areas, actively managed and fine, dry material will be stored inside enclosed shield/coverings or within central storage areas. Any storage areas that are not enclosed will be covered / sheeted. Prolonged storage of debris on site will be avoided. Vehicles carrying dusty materials into or out of the site shall be sheeted down to prevent any escape of materials.

Keltbray will take all practicable steps to minimise the risk of air pollution. Road vehicle exhaust emissions are the main source of air pollution in the UK, and the main pollutants are nitrogen dioxide (NO2) and small particles known as PM10. Plant and equipment is serviced regularly to ensure good working order, all plant to comply with NRMM regulations.

Figure 7: Dust suppression using dust suppressing water machines

9.3 *Mitigation measures for Dust and Air Quality*

Plant and vehicle movements can be a significant source of dust and air quality; Dust and emissions from works will be controlled through careful pre-project planning and effective site management. The following control measures and good management practices will be employed:

- Site plant and equipment will be kept in good repair and maintained in accordance with the manufacturers specifications. Allowing for economic constraints, the plant will be selected on the basis of which has the least potential for dust;
- Plant will not be left running when not in use;
- Plant with dust arrestment equipment will be used where practical;
- Enclosures will be erected around major plant items as appropriate and where practical;
- Wheel washing facilities on site to prevent any mud from demolition and associated works being transported on to adjacent public roads;
- Regular cleaning of hard surfaced site entrance roads;
- Ensuring that dusty materials are transported appropriately (e.g. sheeting of vehicles carrying spoil and other dusty materials)
- Confinement of vehicles to designated haul routes within the site;
- Restricting vehicle speeds on haul roads and other unsurfaced areas on the site;
- Hoarding and gates to prevent dust breakout;
- Burning materials on site will be prohibited;
- Loading and unloading will only be permitted in designated areas;
- Provision of water sprays and wind/dust fences where possible, particularly in dust sensitive locations;
- Stockpiles of granular material will be sheeted and/or treated using automatic water suppressors to prevent dust raising that may cause risk to health or nuisance to the public;
- No engine idling of road vehicles, small plant or generators;
- Delivery of materials and other equipment kept to a minimum;
- Recording Monthly CO2 emission generated by site activities, waste removal and associated works;
- Use of new, modern efficient plant and machinery;
- Plant fitted with dust particle filters (DPFs);
- Plant and equipment is serviced regularly to ensure good working order, all plant to comply with NRMM regulations.

Dust control will be best achieved at source, and if possible activities will be carried out in a manner so as to preclude dust generation.

Dust levels will be controlled and, if required, consent sought from the relevant local authority under the Control of Pollution Act 1974, Environmental Protection Act 1990 and local policy guidelines such as the Mayors SPG, to ensure that the Development is operated in a way which is not detrimental to the amenity of local residents.

If dust is generated, steps will initially be taken to protect workers in the vicinity who shall, as a minimum, be issued with dust masks. Dust suppression measures will be carried out to ensure that dust nuisance affecting neighbouring properties is minimised.

9.4 *Site Personnel Briefings*

Operatives will to be briefed on the requirements to keep noise, dust and vibration to a minimum in their induction training and through method statement briefings.

To ensure that environmental standards are maintained, Keltbray considers it necessary that all personnel working on the site are aware of company and their personal environmental responsibilities.

Keltbray will aim to keep levels of noise, dust and vibration to a minimum from its activities on the site by ensuring that:

- Subcontractors are aware of and comply with the requirements of the this document and the full terms and conditions described in EMP;
- Resources (personnel and financial) are available to meet the environmental management requirements for this project;
- Corrective actions are implemented without undue delay and investigations carried out;
- Records and other relevant documentation are maintained;
- Continuous communication is kept with the adjacent occupiers and the local authority;
- Complaints and queries are to be addressed as soon as it is practicable.
- Exclusion zones will be established if noise levels are perceived to be high, operatives will be provided with appropriate ear defenders.

10.0 Record Keeping and Reporting

All data from monitoring activities will be recorded and communicated on an agreed monthly reporting period. Monitoring data will be saved in electronic format and file name referenced in the relevant monitoring reports.

10.1 Regular Reporting

The results of the environmental monitoring will be reported on a monthly basis to recipients identified in the table below, unless agreed and instructed otherwise by the client. These can be cross referenced against site activities as detailed in site diary records from Keltbray, should this be deemed necessary.

The graphs provided in the monitoring report will show both the trigger and actions levels and measurement data taken during working and non-working hours. Where monitoring values have exceeded trigger levels, a brief description of the reason(s) for this will be provided, together with any available mitigation taken to prevent recurrence.

10.2 Incident / Exceedance Response Procedure

Where a complaint is received via the client, local authority or directly from Keltbray project team, a brief response will be forwarded to the parties listed on the email communication as to the nature of the complaint and the likely cause of the complaint. This response will contain the time and date of the event, as well as the possible causes including photos where appropriate.

The Project Manager will ensure monitoring data is analysed by authorised personnel, site activities at the time are reviewed and investigated, and when practicable additional mitigations are identified they are implemented at earliest opportunity.

Keltbray project team will prepare a detailed report if required detailing the results of investigations along with the corrective actions taken where applicable.

An example of the Trigger / Incident / Complaint Form is attached in Appendix E.

10.3 Notification Parties

Name	Company	Role	Email	Phone
	Keltbray	Project Manager		
	Keltbray	Site Manager		
	Keltbray	Environmental Manager		
Kathy Johnston	Keltbray	Monitoring Manager	kathryn.johnston@keltbray.com	07711 898611

11.0 Quality Assurance

Regular audits will be undertaken to ensure that monitoring and reporting is carried out in accordance with this procedure. Records of calibration and monitoring activities will be maintained in electronic format and are subject to document control as per project procedures agreed and approved by Client.

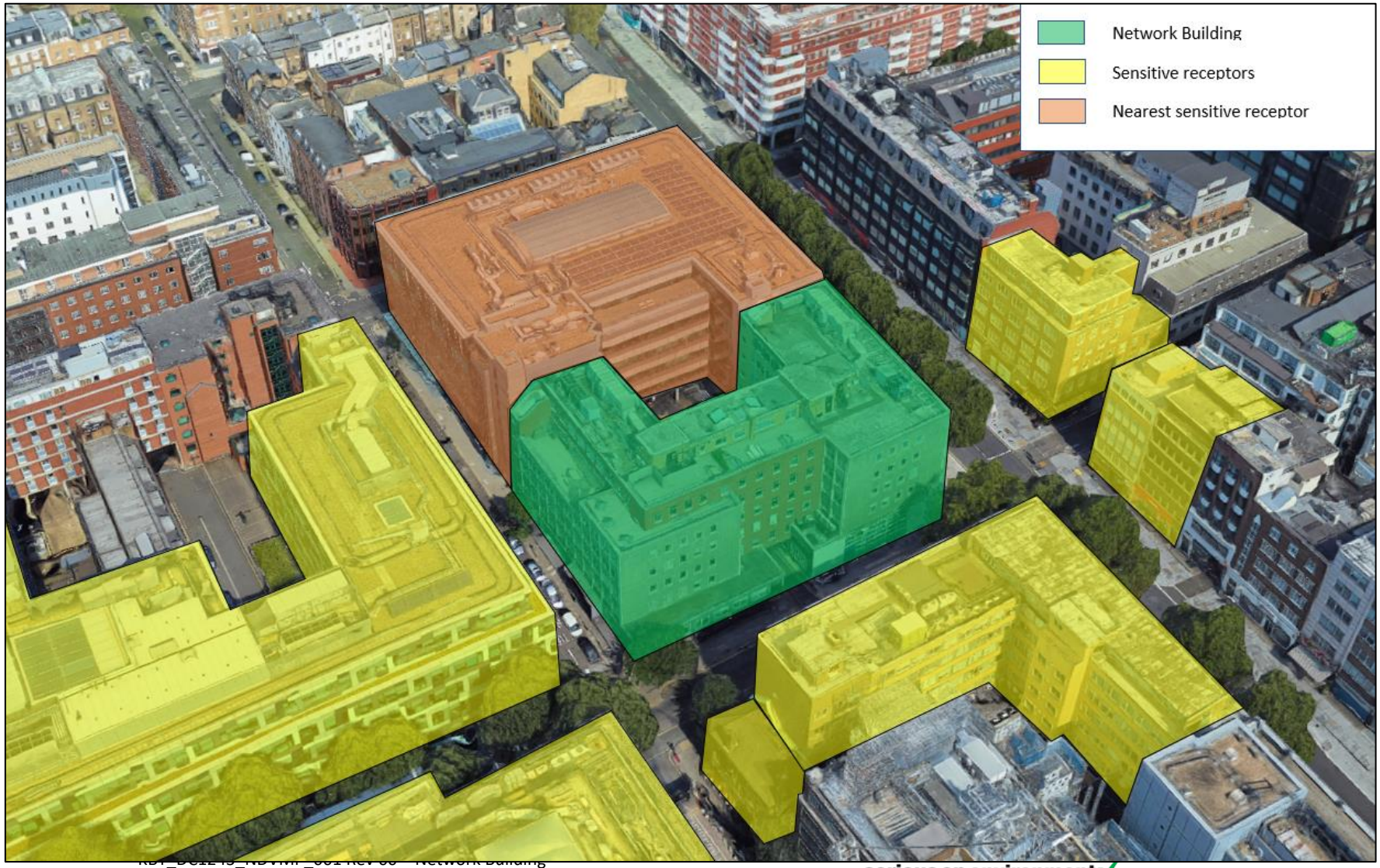
12.0 Audit

This plan will be audited and reviewed periodically as part as the quality audit programme.

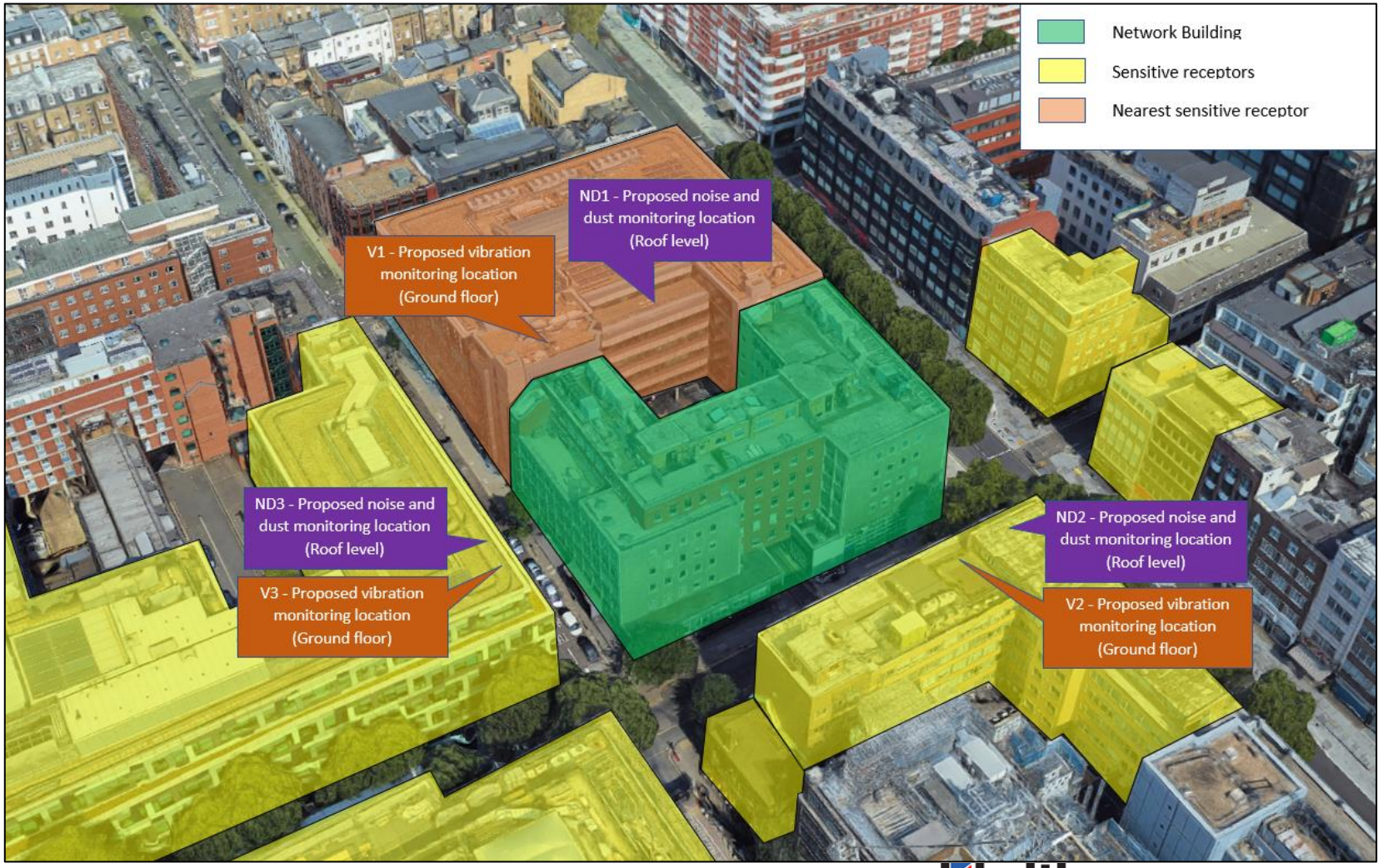
Non-conformances will be corrected immediately followed by a management review meeting. A copy of all audits carried out on the site will be filed in accordance with quality management system requirements.

13.0 Appendices

13.1 Appendix A – Indicative sensitive receptor map


Network Building
Sensitive receptors
Nearest sensitive receptor

13.2 Appendix A1 – Proposed NDV monitoring stations


Network Building
Sensitive receptors
Nearest sensitive receptor
ND1 - Proposed noise and dust monitoring location (Roof level)
V1 - Proposed vibration monitoring location (Ground floor)
ND3 - Proposed noise and dust monitoring location (Roof level)
V3 - Proposed vibration monitoring location (Ground floor)
ND2 - Proposed noise and dust monitoring location (Roof level)
V2 - Proposed vibration monitoring location (Ground floor)

13.3 Appendix B – A sample of noise monitoring equipment


svan net
SV 307
All in One
Noise Monitoring Station
MICROPHONE LIFETIME WARRANTY
INTELLECTUAL PROPERTY
PATENTED MICROPHONE
SVANTEK
monitoring systems

13.4 Appendix C – Sample of Mobile Vibration monitoring equipment

Sigicom

INFRA C22

COMPLETE WIRELESS VIBRATION MONITOR FOR THE INFRA SYSTEM

GPS

INFRA C22
Wireless Triaxial Vibration Monitor

The INFRA system is used to monitor construction activities, blasting, train traffic, road traffic, vibration in buildings etc.

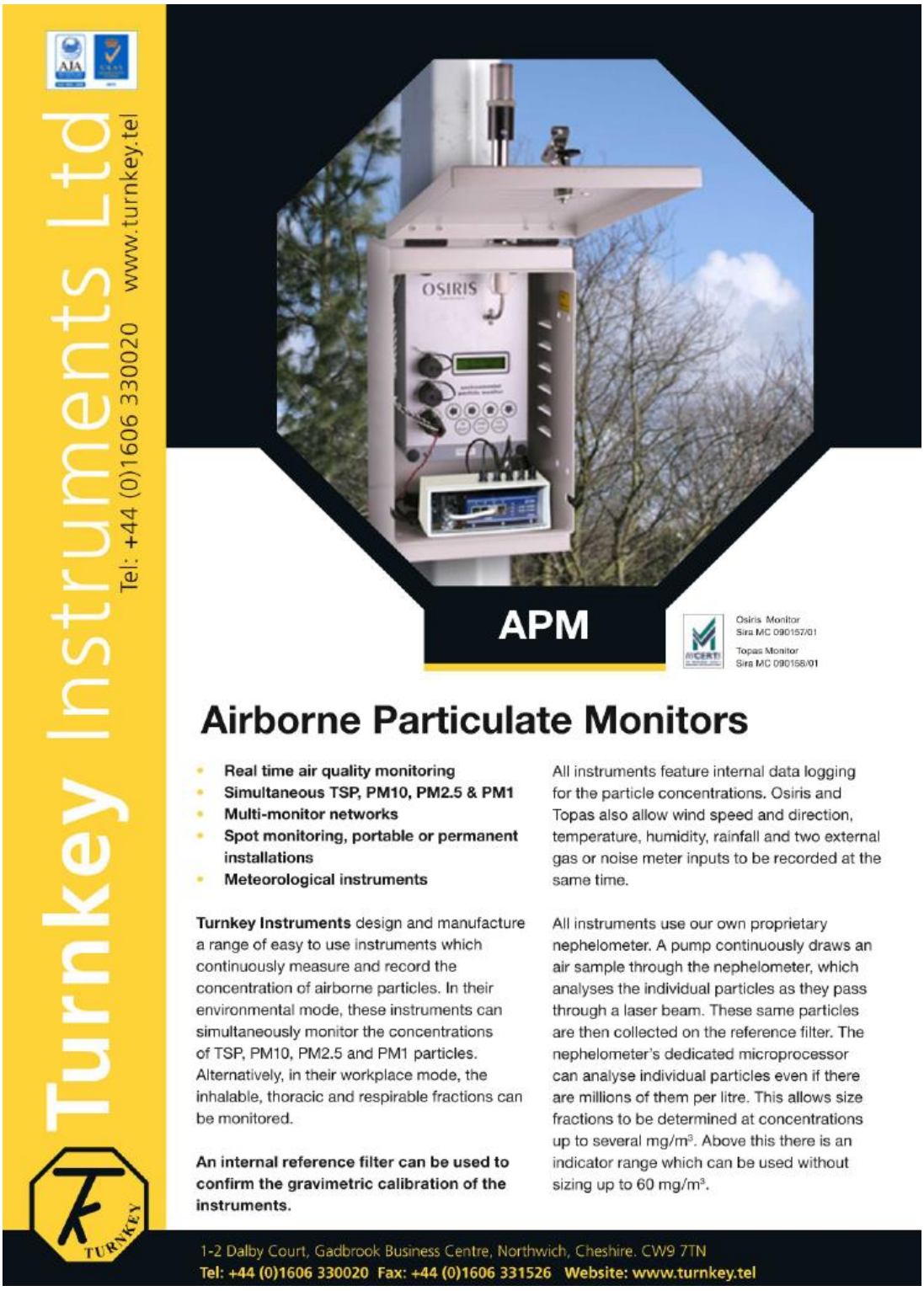
- All-in-one datalogger and vibration sensor
- Up to 4 month of continuous monitoring on internal rechargable batteries
- Built-in 4G modem
- Micro-SD memory card
- Simultaneous bar graph and waveform registration
- Weather proof
- Digital signal processing
- Post-processing, presentation and remote management in INFRA Net
- Multi button keypad
- GPS

INFRA C22 measures according to the following national and international standards:

DIN 4150-3 Anlage	1 – 315 Hz	NS 8141:2013 Byggverk	3 – 400 Hz
DIN 4150-2 KB RMS	1 – 80 Hz[1] 125ms	NS 8141:2001 Byggverk	5 – 300 Hz
ISEE Seismograph	2 – 250 Hz	NS 8176 Komfort, RMS 1s	1 – 80 Hz[1]
AS 2187.2-2006	2 – 250 Hz	SS 4604861 Komfort, RMS 1s	1 – 80 Hz[1]
Arrêté de 1994 (explosif)	1 – 150 Hz	SS 4604861 Komfort, RMS 1s	1 – 80 Hz[6]
Circulaire ICPE de 1986	1 – 150 Hz	OfM 9/1997 dB	1 – 80 Hz[6]
Référentiel SNCF - IN 1226	1 – 150 Hz	ÖNORM S 9020	1 – 315 Hz
SBR-A	1 – 100 Hz	ÖNORM S 9012 RMS 1s	1 – 80 Hz[5]
SBR-B, RMS 125 ms	1 – 80 Hz[1]	ISO 10816-2 RMS 1s	5 – 500 Hz[3] 125ms
Toronto bylaw 514	1 – 100 Hz	ISO 2631-2 RMS 1s	1 – 80 Hz[1]
Toronto bylaw 514	2 – 250 Hz	ANSI S2.71 RMS 1s	1 – 80 Hz[1]
Turkey Mining and Quarry	2 – 250 Hz	NCh 3577	1 – 315 Hz
BS 7385	1 – 300 Hz	Geophone	5 – 500 Hz
SN 640 312a	5 – 150 Hz	PN-B-02170	1 – 100 Hz[4]
Acceleration	5 – 300 Hz	PN-B-02170	1 – 100 Hz[2]
SS 4604866 Spräng	5 – 300 Hz	FTA (VdB)	1 – 80 Hz[7]
SS 025211 Schakt	5 – 150 Hz	BS 6841 (VDV)	
SS 025211 Schakt	2 – 150 Hz		

[1]20 mm/s, [2]25 mm/s, [3]200 mm/s, [4]250 mm/s, [5]700 mm/s², [6]50-117 dB, [7]50-118 dB

13.5 Appendix D – Proposed Dust (PM10) monitoring equipment to be used



13.6 Appendix E –Trigger / Incident Complaint Form

Trigger / Incident / Complaints					
Trigger/Incident/Complaint Reference No :	001	**Date:**		**Time:**	

YES/NO	**Noise:**	
	Logger Location:	
	First Action Level: dB	
	Second Action Level: dB	
	Level of Exceedance:	
YES/NO	**Dust:**	
	Logger Location:	
	First Action Level: mg/m^3	
	Second Action Level: mg/m^3	
	Level of Exceedance:	
YES/NO	**Vibration:**	
	Logger Location:	
	First Action Level: PPV mm/s	
	Second Action Level: PPV mm/s	
	Level of Exceedance:	

Complaints Notification					
Contract/Project Name: **Network Building**				Contract/Project Number: **DC1243**	
Date:		Time:		Received by:	
Complainants Name:				Telephone Number:	
Complainants Address:				Weather Conditions:	

Type of Complaint (Tick Appropriate Box)							
Noise	**X**	Dust		Highways		Vibration	
Other (Specify)							

Description of works:

Action Taken:

Site Assistance/Advice Requested?	(If Yes Who?)	

Is the Complaint considered:	Justified		Unsubstantiated		Unfounded	

Signed:		Print Name:		Date:	

Copy to:	Operations Director		HEO:		Client:	

Appendix E – Background Noise Survey

Network Building

London

Environmental Noise Survey

Report

27891/ENS1

3 August 2020

For:
Blackburn & Co
No.1 Clink Street

London
SE1 9DG

Hann Tucker Associates

Consultants in Acoustics Noise & Vibration

Head Office: Duke House, 1-2 Duke Street, Woking, Surrey, GU21 5BA (t) +44 (0) 1483 770 595

Manchester Office: First Floor, 346 Deansgate, Manchester, M3 4LY (t) +44 (0) 161 832 7041

(w) hanntucker.co.uk (e) enquiries@hanntucker.co.uk

Hann Tucker Associates

Environmental Noise Survey Report 27891/ENS1

Document Control

Rev	Date	Comment	Prepared by	Authorised by
0	03/08/2020	-		
			James Hardacre Technical Assistant	Andrew Fermer Director

Hann Tucker Associates

Environmental Noise Survey Report 27891/ENS1

Contents

Attachments

1.0 *Introduction*

Hann Tucker Associates have been appointed to undertake an unmanned environmental noise survey at the Network Building, London, in order to identify existing environmental noise levels around the proposed development site.

2.0 *Objectives*

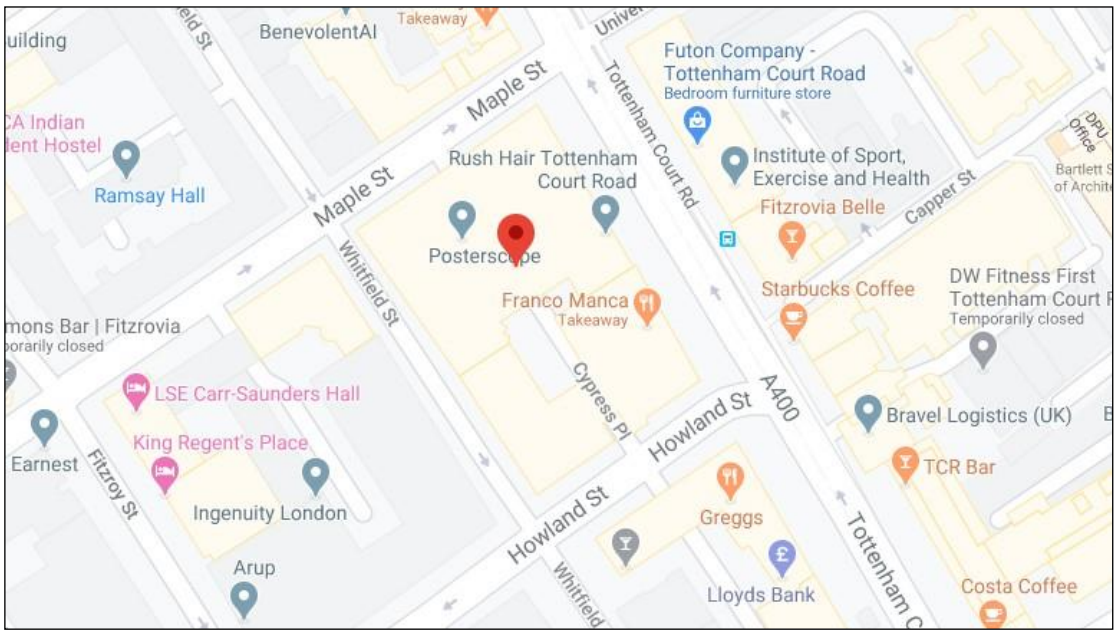
To establish by means of a detailed 24 hour survey the existing L_{Amax}; L_{A10}; L_{Aeq} and L_{A90} environmental road, rail and air traffic noise levels at up to 2 (two) "secure" on-site positions, using fully computerised unmanned monitoring equipment.

To present our methodology and results in a full technical report

3.0 *Site Description*

3.1 Location

The site is located at Network House on Whitfield street in London. The location is shown in the Location Map below.



Location Map (Map data © Google 2020)

The site falls within the jurisdiction of Camden Council.

3.2 Description

The site is a ground plus 5 storey commercial building.

The site boundary is neighboured by Tottenham Court Road to the north east, Howland street to the south east, Whitfield street to the south west and Maple street to the north west. The surrounding area is characterised by commercial uses.

The site is shown in the Site Plan below.

Site Plan (Imagery ©2020 Bluesky, CNES/Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2020)

4.0 Acoustic Terminology

For an explanation of the acoustic terminology used in this report please refer to Appendix A enclosed.

5.0 Methodology

The survey was undertaken by James Hardacre.

5.1 Procedure

Fully automated environmental noise monitoring was undertaken from approximately 13:30 hours on 14 July 2020 to 12:15 hours on 17 July 2020.

During the periods we were on site the wind conditions were calm. The sky was generally overcast. We understand that generally throughout the survey period the weather conditions were similar to those observed during the site visits. These conditions are considered suitable for obtaining representative measurement results.

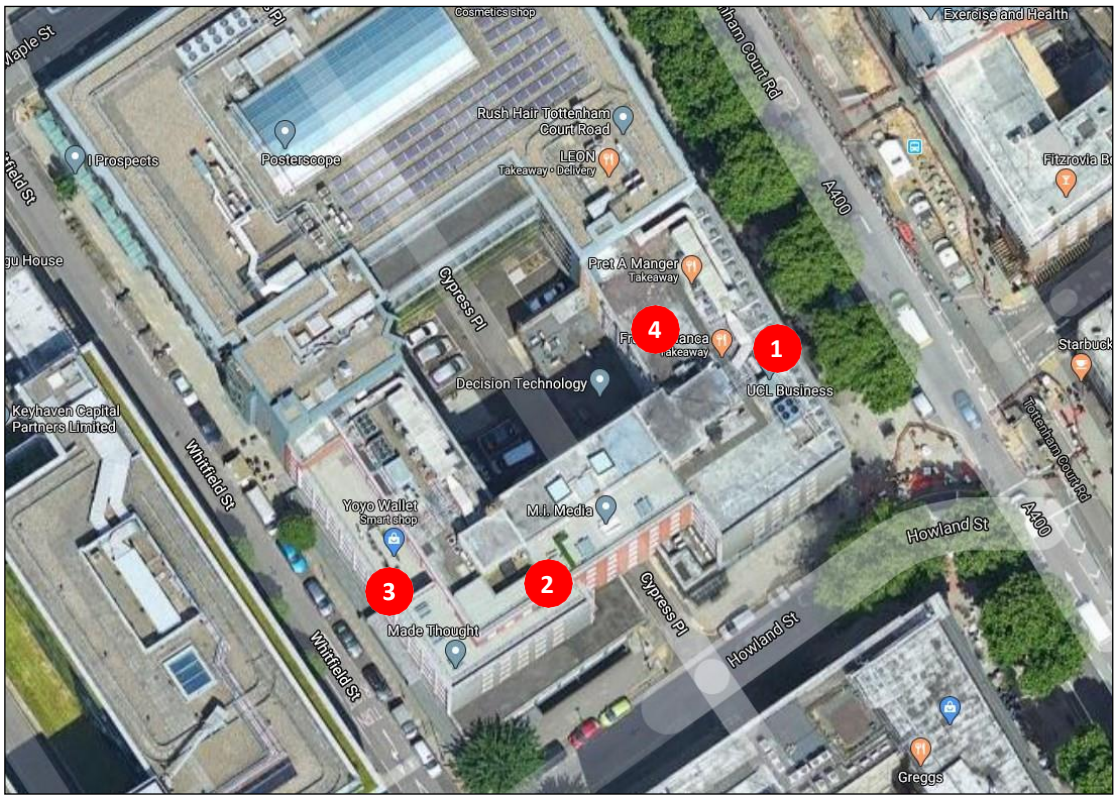
Measurements were taken continuously of the A-weighted (dBA) L_{90}, L_{eq} and L_{max} sound pressure levels over 15 minute periods.

5.2 Measurement Positions

The noise level measurements were undertaken at 4 positions as described in the table below.

Position No	Description
1	The microphone was placed at roof level in the free-field on the north-eastern facade of the site. The microphone was attached to a pole and positioned 3 metres above roof level and at least 25m above ground level.
2	The microphone was placed at roof level in the free field on the south-eastern facade of the site. The microphone was attached to a pole and positioned 3 metres above roof level and at least 25m above ground level.
3	The microphone was placed at roof level in the free field on the south-western facade of the site. The microphone was attached to a pole and positioned 3 metres above roof level and at least 25m above ground level.
4	The microphone was placed at roof level in the free field on the north-western facade of the site. The microphone was attached to a pole and positioned 3 metres above roof level and at least 25m above ground level.

The positions are shown on the plan below.



Plan Showing Unmanned Measurement Positions (Imagery ©2020 Bluesky, CNES/Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2020)

5.3 Instrumentation

The instrumentation used during the survey is presented in the table below:

Description	Manufacturer	Type	Serial Number	Calibration
Position 1 & 4 Type 1 ½" Condenser Microphone	PCB	377B02	135744	Calibration on 20/01/2020
Position 1 & 4 Preamp	PCB	PRM902	4812	Calibration on 21/01/2020
Position 1 & 4 Type 1 Data Logging Sound Level Meter	Larson Davis	824	3700	Calibration on 21/01/2020
Position 2 & 3 Type 1 ½" Condenser Microphone	PCB	377B02	133362	Calibration on 13/09/2019
Position 2 & 3 Preamp	Larson Davis	PRM902	3318	Calibration on 13/09/2019

Position 2 & 3 Type 1 Data Logging Sound Level Meter	Larson Davis	824	3699	Calibration on 13/09/2019

Each sound level meter, including the extension cable, was calibrated prior to and on completion of the surveys. No significant changes were found to have occurred (no more than

0.1 dB).

Each sound level meter was located in an environmental case with the microphone connected to the sound level meter via an extension cable. Each microphone was fitted with a windshield.

6.0 Results

The results have been plotted on Time History Graphs 27891/TH1.1 to 27891/TH1.4 enclosed presenting the 15 minute A-weighted (dBA) L_{90}, L_{eq} and L_{max} levels at each measurement position throughout the duration of the survey.

6.1 Lowest Measured L_{90} Noise Levels

The following table presents the lowest measured L_{A90} background noise levels during the survey:

Position	Lowest Measured L_{A90} Background Noise Level (dB re 2 x 10^{-5} Pa)	
	Daytime (07:00 – 23:00) Hours	Night-Time (23:00 – 07:00) Hours
1	49	47
2	47	45
3	52	52
4	50	49

6.2 Modal Average Measured L_{90} Noise Levels

The following table presents the modal average measured L_{A90} background noise levels during the survey:

Position	Modal Average Measured L_{A90} Background Noise Level (dB re 2 x 10^{-5} Pa)	
	Daytime (07:00 – 23:00) Hours	Night-Time (23:00 – 07:00) Hours
1	57	48
2	53	46
3	55	52
4	51	50

6.3 Measured L_{eq} Noise Levels

The measured daytime $L_{Aeq(16\text{-}hour)}$ and night-time $L_{Aeq(8\text{-}hour)}$ noise levels for each position are presented in the table below.

Position	Measured $L_{Aeq,T}$ Noise Level (dB re 2 x 10^{-5} Pa)	
	Daytime (07:00 – 23:00) Hours, $L_{Aeq,16hr}$	Night-Time (23:00 – 07:00) Hours, $L_{Aeq,8hr}$
1	59	52
2	58	52
3	60	55
4	54	52

7.0 Discussion Of Noise Climate

Due to the nature of the survey, i.e. unmanned, it is not possible to accurately describe the dominant noise sources, or specific noise events throughout the entire survey period. However at the beginning and end of the survey period the dominant noise sources were noted to be road traffic from the road network.

8.0 Conclusions

A detailed 24 hour survey has been carried out and the existing L_{Amax}; L_{Aeq} and L_{A90} environmental road, rail and air traffic noise levels at 4 “secure” on-site position have been established, by means of fully computerised unmanned monitoring equipment.

Plant noise emission criteria have been recommended based on the results of the noise survey and with reference to the Local Authority’s requirements.

9.0 Local Authority Requirements

The site lies within London Borough of Camden’s jurisdiction. Their advice regarding criteria for atmospheric noise emissions from building service plant is contained within their Local Plan, version June 2017 as follows:

Industrial and Commercial Noise Sources

A relevant standard or guidance document should be referenced when determining values for LOAEL and SOAEL for non-anonymous noise. Where appropriate and within the scope of the document it is expected that British Standard 4142:2014 'Methods for rating and assessing industrial and commercial sound' (BS 4142) will be used. For such cases a 'Rating Level' of 10 dB below background (15dB if tonal components are present) should be considered as the design criterion).

Table C: Noise levels applicable to proposed industrial and commercial developments (including plant and machinery)

Existing Noise sensitive receptor	Assessment Location	Design Period	LOAEL (Green)	LOAEL to SOAEL (Amber)	SOAL (Red)
Dwellings**	Garden used for main amenity (free field) and Outside living or dining or bedroom window (façade)	Day	'Rating level' 10dB* below background	'Rating level' between 9dB below and 5dB above background	'Rating level' greater than 5dB above background
Dwellings**	Outside bedroom window (façade)	Night	'Rating level' 10dB* below background and no events exceeding 57dBL_{Amax}	'Rating level' between 9dB below and 5dB above background or noise events between 57dB and 88dB L_{Amax}	'Rating level' greater than 5dB above background and/or events exceeding 88dBL_{Amax}

*10dB should be increased to 15dB if the noise contains audible tonal elements. (day and night). However, if it can be demonstrated that there is no significant difference in the character of the residual background noise and the specific noise from the proposed development then this reduction may not be required. In addition, a frequency analysis (to include, the use of Noise Rating (NR) curves or other criteria curves) for the assessment of tonal or low frequency noise may be required.

**levels given are for dwellings, however, levels are use specific and different levels will apply dependent on the use of the premises.

The periods in Table C correspond to 0700 hours to 2300 hours for the day and 2300 hours to 0700 hours for the night. The Council will take into account the likely times of occupation for types of development and will be amended according to the times of operation of the establishment under consideration.

There are certain smaller pieces of equipment on commercial premises, such as extract ventilation, air conditioning units and condensers, where achievement of the rating levels (ordinarily determined by a BS:4142 assessment) may not afford the necessary protection. In these cases, the Council will generally also require a NR curve specification of NR35 or below, dependant on the room (based upon measured or predicted Leq,5mins noise levels in octave bands) 1 metre from the façade of affected premises, where the noise sensitive premise is located in a quiet background area.

On 26 June 2016 London Borough of Camden sent us an email confirming the following windows should be considered noise sensitive, *"housing, schools, hospitals, offices, workshops"*.

10.0 Relevant Planning Policies and Guidance

10.1 Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) was published in March 2010. The NPSE is the overarching statement of noise policy for England and applies to all forms of noise other than occupational noise, setting out the long term vision of Government noise policy which is to:

"Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development."

That vision is supported by the following aims which are reflected in three of the four aims for planning policies and decisions in paragraph 123 of the NPPF (see paragraph 8.2 (b) below):

"Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life."*

The Explanatory Note to the NPSE has three concepts for the assessment of noise in this country:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.

LOAEL – Lowest Observable Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

None of these three levels are defined numerically and for the SOAEL the NPSE makes it clear that the noise level is likely to vary depending upon the noise source, the receptor and the time of day/day of the week, etc. The need for more research to investigate what may represent an SOAEL for noise is acknowledge in the NPSE and the NPSE asserts that not stating specific SOAEL levels provides policy flexibility in the period until there is further evidence and

guidance.

The NPSE concludes by explaining in a little more detail how the LOAEL and SOAEL relate to the three aims listed in paragraph (b) above. It starts with the aim of avoiding significant adverse effects on health and quality of life, then addresses the situation where the noise impact falls between the LOAEL and the SOAEL when *"all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development."* The final aim envisages pro-active management of noise to improve health and quality of life, again taking into account the guiding principles of sustainable development which include the need to minimise travel distance between housing and employment uses in an area.

10.2 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) was published in March 2012 and replaced the previous national planning guidance document Planning Policy Guidance 24: *Planning and Noise* (PPG24).

The main reference to noise within the NPPF is at paragraph 123, reproduced below:

> *"123. Planning policies and decisions should aim to:*
>
> - *Avoid noise from giving rise to significant adverse impacts[27] on health and quality of life as a result of new development;*
> - *Mitigate and reduce to a minimum other adverse impacts[27] on health and quality of life arising from noise from new development, including through the use of conditions;*
> - *Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established;[28] and*
> - *Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."*

The reference numbers 27 and 28 point respectively to the Explanatory Note to the NPSE and the provisions of the Environmental Protection Act 1990 *"and other relevant law".*

The spirit of the Localism Act and the NPPF would suggest that of the guidelines cited, it is guidelines adopted as policy by the Local Planning Authority (if such exist) that should prevail, at least until the Government publishes relevant technical guidance under the NPPF.

10.3 Planning Practice Guidance on Noise

Planning Practice Guidance (PPG) under the NPPF has been published by the Government as a web based resource at http://planningguidance.planningportal.gov.uk/blog/guidance/. This includes specific guidance on Noise although, like the NPPF and NPSE the PPG does not provide any quantitative advice. It seeks to illustrate a range of effect levels in terms of examples of outcomes as set out in the following table:

Perception	Examples of Outcomes	Increasing effect level	Action
Not noticeable	No effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.		
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.		Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable hard, e.g. auditory and non-auditory.		Prevent

10.4 World Health Organisation Guidelines on Community Noise

BS8233:2014 is based upon the current World Health Organisation (WHO) guidance "*Guidelines on Community Noise".* A summary of the noise guidelines relevant to the proposed development is presented in the table below.

Residential Environment	Critical Health Effect(s)	L_{Aeq}	L_{AFmax}	Time Base
Outdoor living area	Serious annoyance, daytime and evening	55	-	07:00-23:00
	Moderate annoyance, daytime and evening	50	-	07:00-23:00
Dwelling, indoors	Speech intelligibility and moderate annoyance, daytime and evening	35	-	07:00-23:00
Inside bedrooms	Sleep disturbance, night-time	30	45	23:00-07:00
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	60	23:00-07:00

These WHO guidelines are based, in almost all cases, on the lower threshold below which the occurrence rates of any particular effect can be assumed to be negligible.

The internal and external noise level criteria presented in BS8233:2014 for residential dwelling are generally consistent with the WHO guidelines, although some differences are apparent. For instance the WHO guidelines refer to research that suggests *"For a good sleep, it is believed that indoor sound pressure levels should not exceed approximately 45 dB L_{AFmax} more than 10- 15 times per night."* (Vallet & Vernet, 1991). The current version of BS8233 does not identify a specific L_{AFmax} level although it suggests that a guideline value may be set using that parameter depending on the character and number of individual noise events per night.

11.0 *Plant Noise Emission Criteria*

On the basis of the aforementioned acoustic standards and guidance, together with the results of the environmental noise survey, we propose that the following plant noise emission criteria be achieved at in the nearest garden 'used for main amenity' or at 1 metre from the nearest living room, dining room, or bedroom in the daytime, and at 1 metre from the nearest bedroom window at night-time with all plant operating simultaneously.

Position	Plant Noise Emission Criteria (dB re $2x10^{-5}$ Pa)	
	Daytime (07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)
1	39dBA / NR35*	37dBA / NR35*
2	37dBA / NR35*	35dBA / NR35*
3	42dBA / NR35*	42dBA / NR35*
4	40dBA / NR35*	39dBA / NR35*

*NR35 criterion applies to 'smaller pieces of equipment on commercial premises, such as extract ventilation, air conditioning units, and condensers….where noise sensitive premises are located in a quiet background area' as per Camden's Local Plan.

If plant contains tonal or impulsive characteristics the external design criteria should be reduced by 5dBA.

The above criteria are based on a level of 10dB below background in order to fall into Camden's 'Green' criteria for **dwellings**. Whilst we understand that Camden considers other uses noise sensitive, the Local plan states that the criteria is use dependent but does not define criteria that correspond to 'Green', 'Amber', or 'Red' for these other uses. We request that Camden clarify their policy in this respect. The criteria could be relaxed by 5dB in line with the 'Amber' criteria in Camden's Local Plan, which may be acceptable to Camden depending on 'the context of other merits of the development'.

It should be noted that the above are subject to the final approval of the Local Authority.

Appendix A

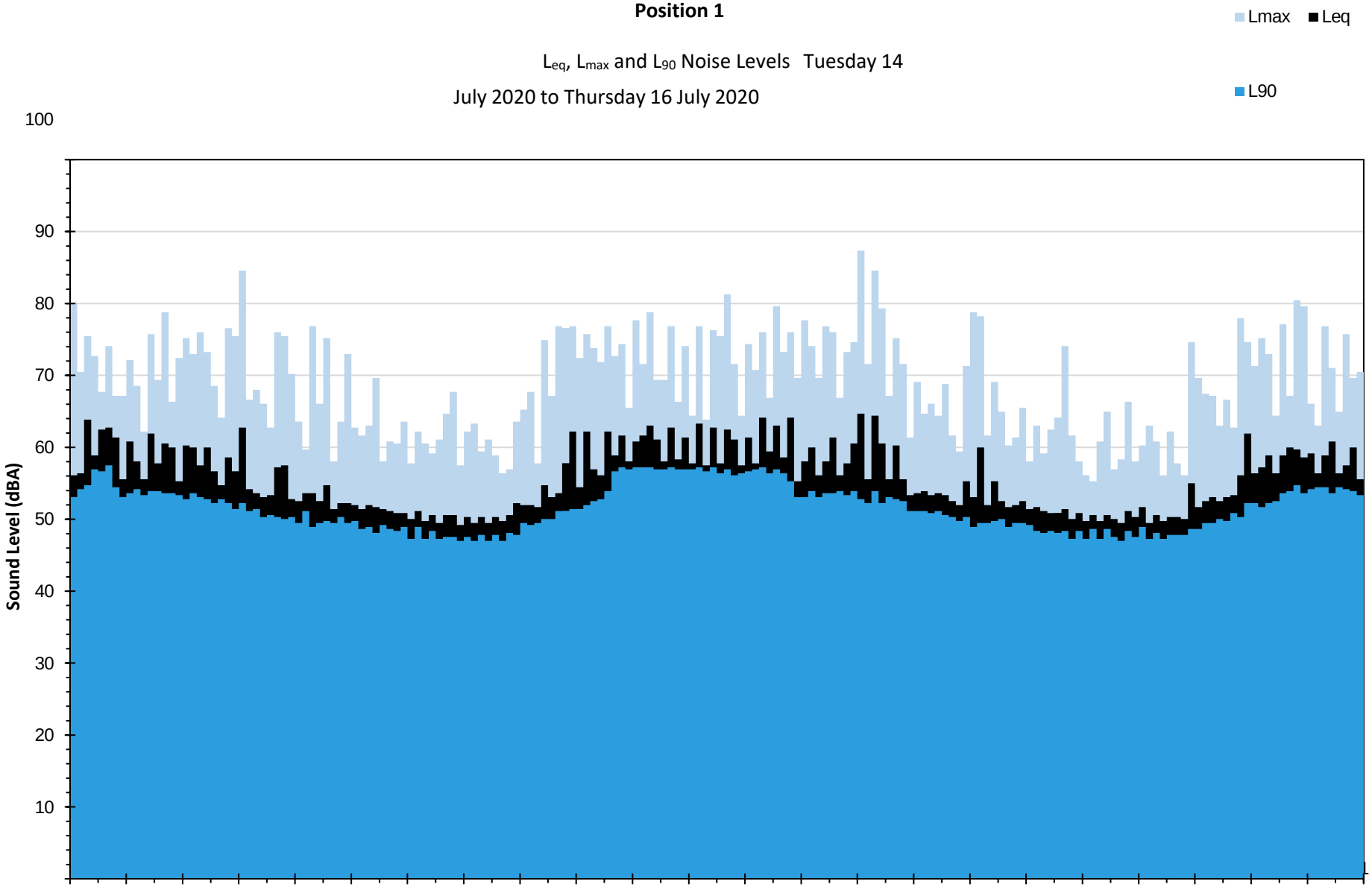
The acoustic terms used in this report are defined as follows:

dB	Decibel - Used as a measurement of sound level. Decibels are not an absolute unit of measurement but an expression of ratio between two quantities expressed in logarithmic form. The relationships between Decibel levels do not work in the same way that non- logarithmic (linear) numbers work (e.g. 30dB + 30dB = 33dB, not 60dB).
dBA	The human ear is more susceptible to mid-frequency noise than the high and low frequencies. The 'A'-weighting scale approximates this response and allows sound levels to be expressed as an overall single figure value in dBA. The $_A$ subscript is applied to an acoustical parameter to indicate the stated noise level is A-weighted It should be noted that levels in dBA do not have a linear relationship to each other; for similar noises, a change in noise level of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is just perceptible.
$L_{90,T}$	L_{90} is the noise level exceeded for 90% of the period *T* (i.e. the quietest 10% of the measurement) and is often used to describe the background noise level.
$L_{eq,T}$	$L_{eq,T}$ is the equivalent continuous sound pressure level. It is an average of the total sound energy measured over a specified time period, *T*.
L_{max}	L_{max} is the maximum sound pressure level recorded over the period stated. L_{max} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the L_{eq} noise level.
L_p	Sound Pressure Level (SPL) is the sound pressure relative to a standard reference pressure of 2 x 10^{-5} Pa. This level varies for a given source according to a number of factors (including but not limited to: distance from the source; positioning; screening and meteorological effects).
L_w	Sound Power Level (SWL) is the total amount of sound energy inherent in a particular sound source, independent of its environment. It is a logarithmic measure of the sound power in comparison to a specified reference level (usually 10^{-12} W).

Network Building

Position 1

L_{eq}, L_{max} and L_{90} Noise Levels Tuesday 14 July 2020 to Thursday 16 July 2020



0
13:30
Tuesday
14/07/2020

01:30
Wednesday
15/07/2020

13:30
Wednesday
15/07/2020

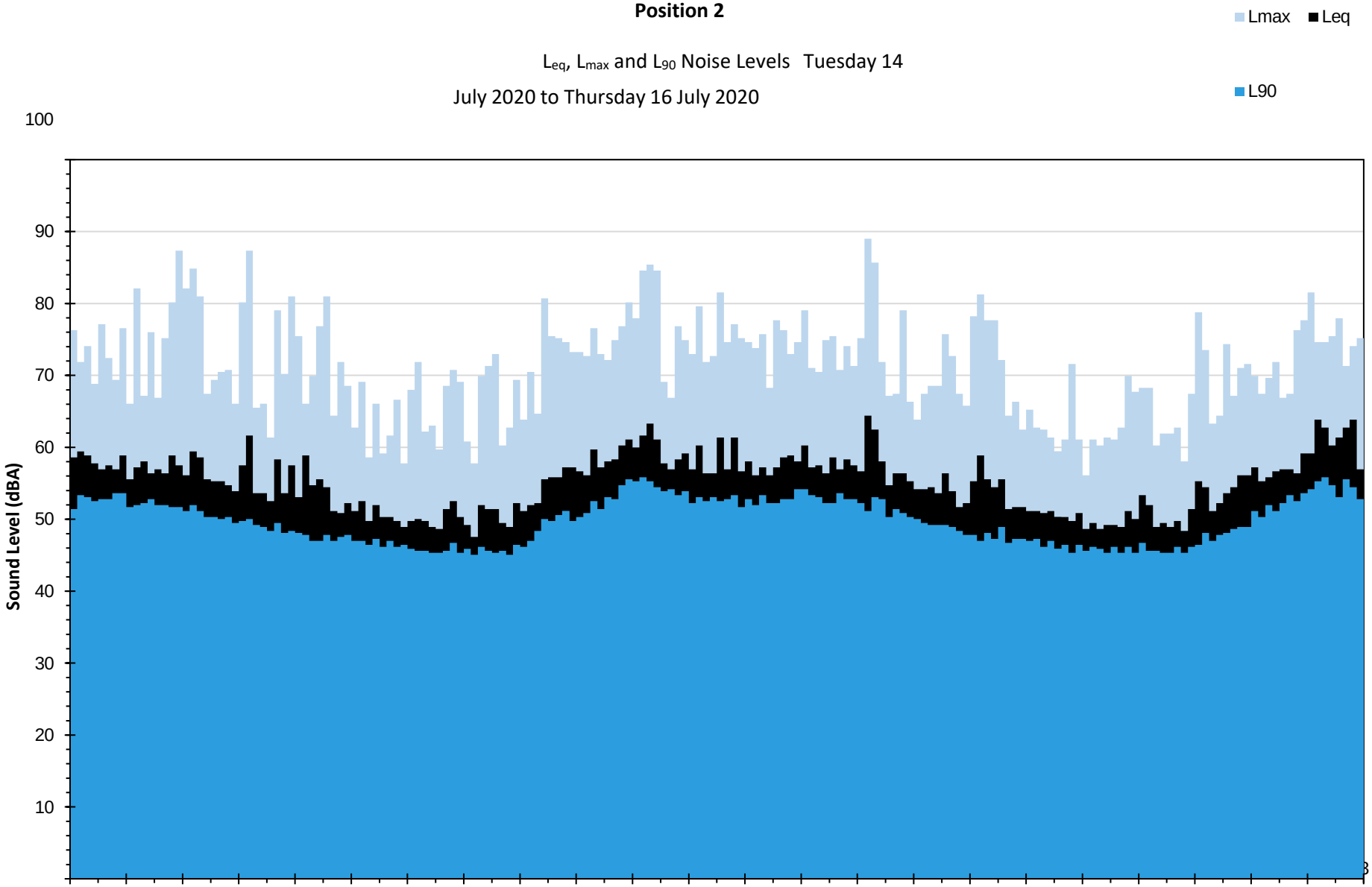
01:30
Thursday
16/07/2020

Date and Time

Network Building

Position 2

L_{eq}, L_{max} and L_{90} Noise Levels Tuesday 14 July 2020 to Thursday 16 July 2020



0
13:30
Tuesday
14/07/2020

01:30
Wednesday
15/07/2020

13:30
Wednesday
15/07/2020

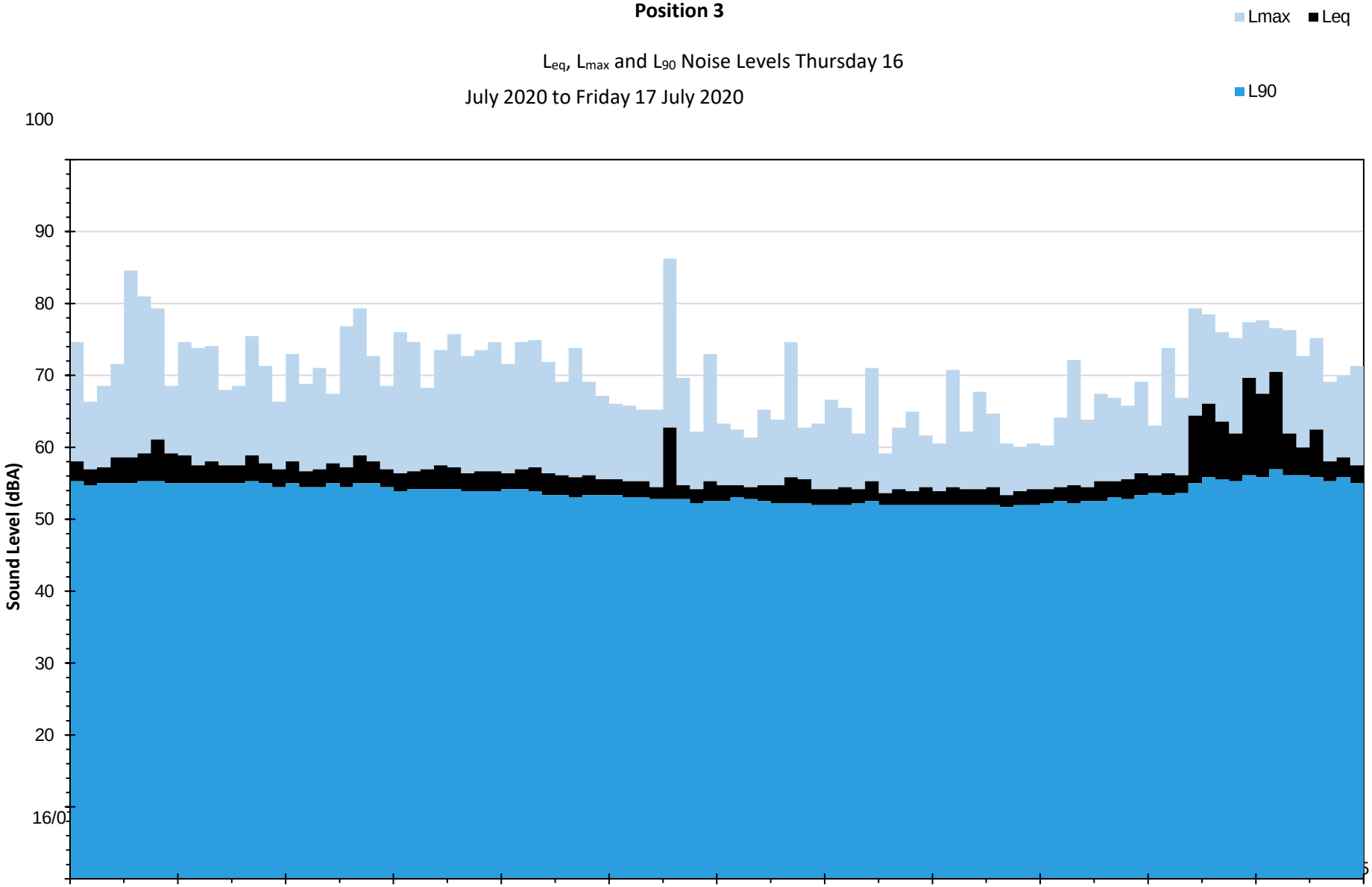
01:30
Thursday
16/07/2020

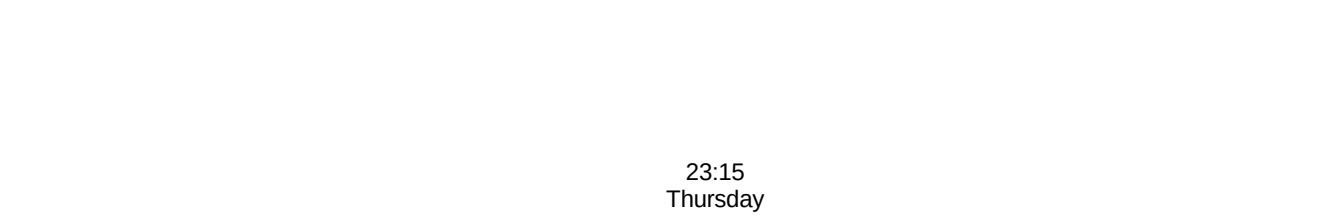
Date and Time

Network Building

Position 3

L_{eq}, L_{max} and L_{90} Noise Levels Thursday 16 July 2020 to Friday 17 July 2020

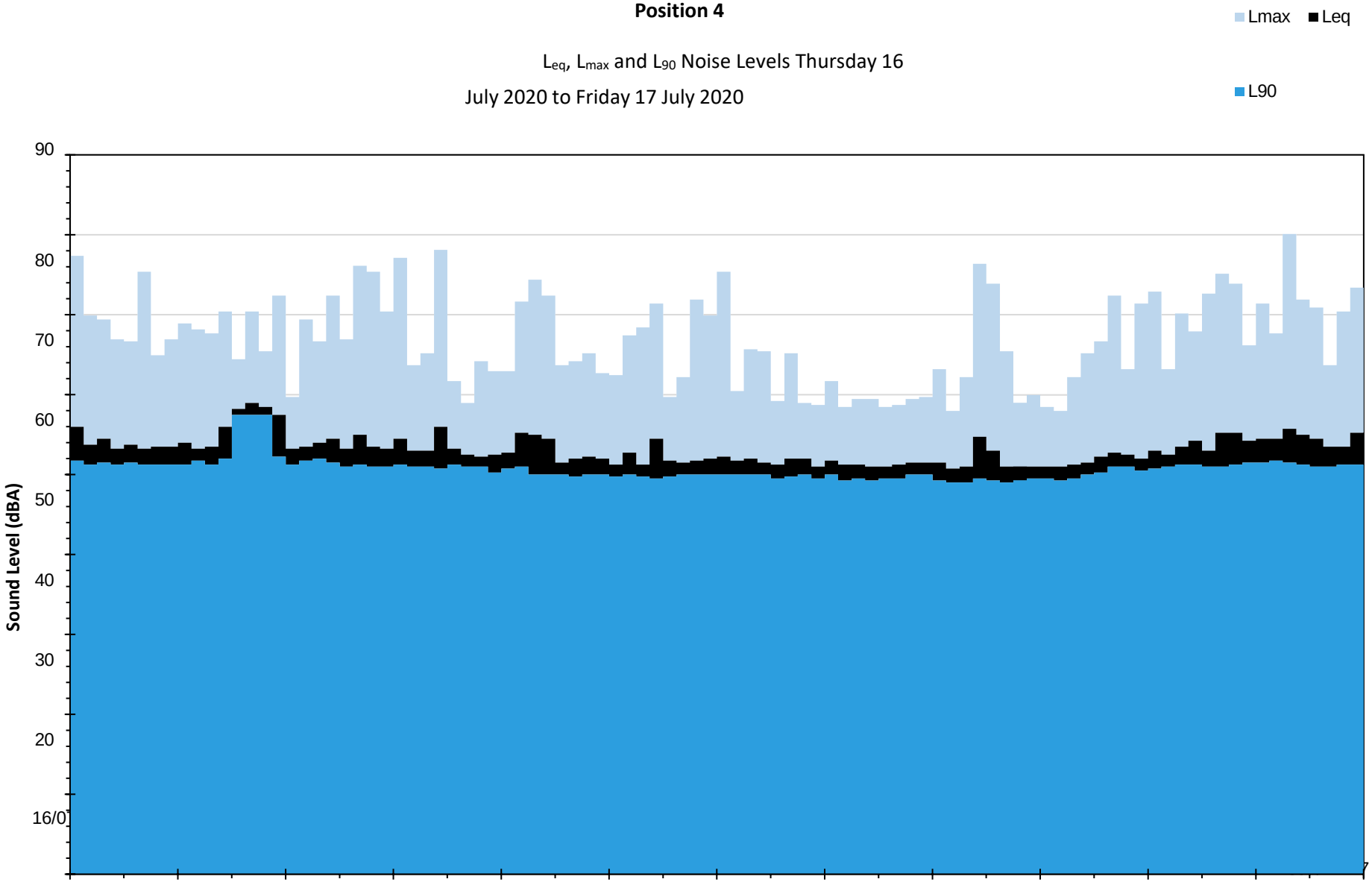



10
0
11:15
Thursday
23:15
Thursday
16/07/2020
16/07/2020
Date and Time

Network Building

Position 4

L_{eq}, L_{max} and L_{90} Noise Levels Thursday 16 July 2020 to Friday 17 July 2020



10

16/07/2020

16/07/2020

Date and Time

Appendix F – Hoarding Chamfer Mark Up