

# Construction Management Plan

pro forma

## **Fine Arts College Belsize Park**

81 Belsize Park Gardens,

London,

NW3 4NJ.

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# Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
04/07/2024	Draft for Community Comments	Clive Graham Associates
15/07/2024	Draft for Community Comments	Clive Graham Associates

## 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.

CMP development sites will be inspected by Camden’s Site Planning Inspectors or nominated officers to assess compliance with the CMP. These inspections will be planned and unplanned site visits for the duration of the works. Developers/contractors are required to provide access to sites for inspection and cooperate fully throughout the inspection process ensuring compliance with the CMP.

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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 (CIA) 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 (editable pdf) can be found at

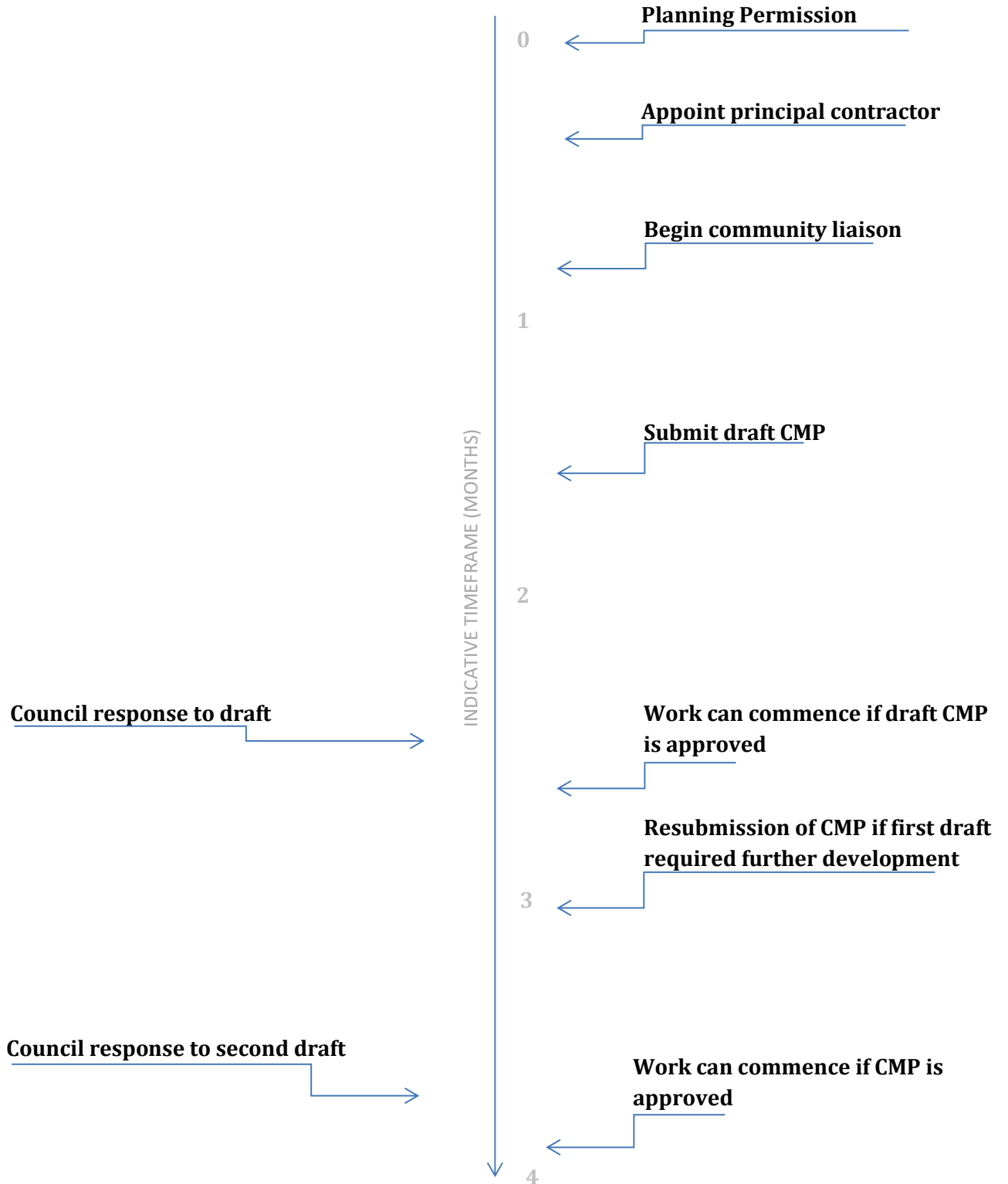
<https://www.camden.gov.uk/about-construction-management-plans>



# Timeframe

## COUNCIL ACTIONS

## DEVELOPER ACTIONS



# Contact

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

Address: 81 Belsize Park Gardens NW3 4NJ  
Planning reference number to which the CMP applies: 2023/3407/P

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

Name: Danny Graham  
Address: Clive Graham Associates Ltd. 3rd Floor, 8-11 St Johns Lane, London EC1M 4BF  
Email: Danny.Graham@clivegraham.com  
Phone: 07917 028 020

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: Alfonso Galindo  
Address: Clive Graham Associates Ltd. 3rd Floor, 8-11 St Johns Lane, London EC1M 4BF  
Email: alfonso.galindo@clivegraham.com  
Phone: 07909 251 607

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 the Community Investment Programme (CIP), please provide the contact details of the Camden officer responsible.

Name:	Alfonso Galindo
Address:	Clive Graham Associates Ltd. 3rd Floor, 8-11 St Johns Lane, London EC1M 4BF
Email:	alfonso.galindo@clivegraham.com
Phone:	07909 251 607

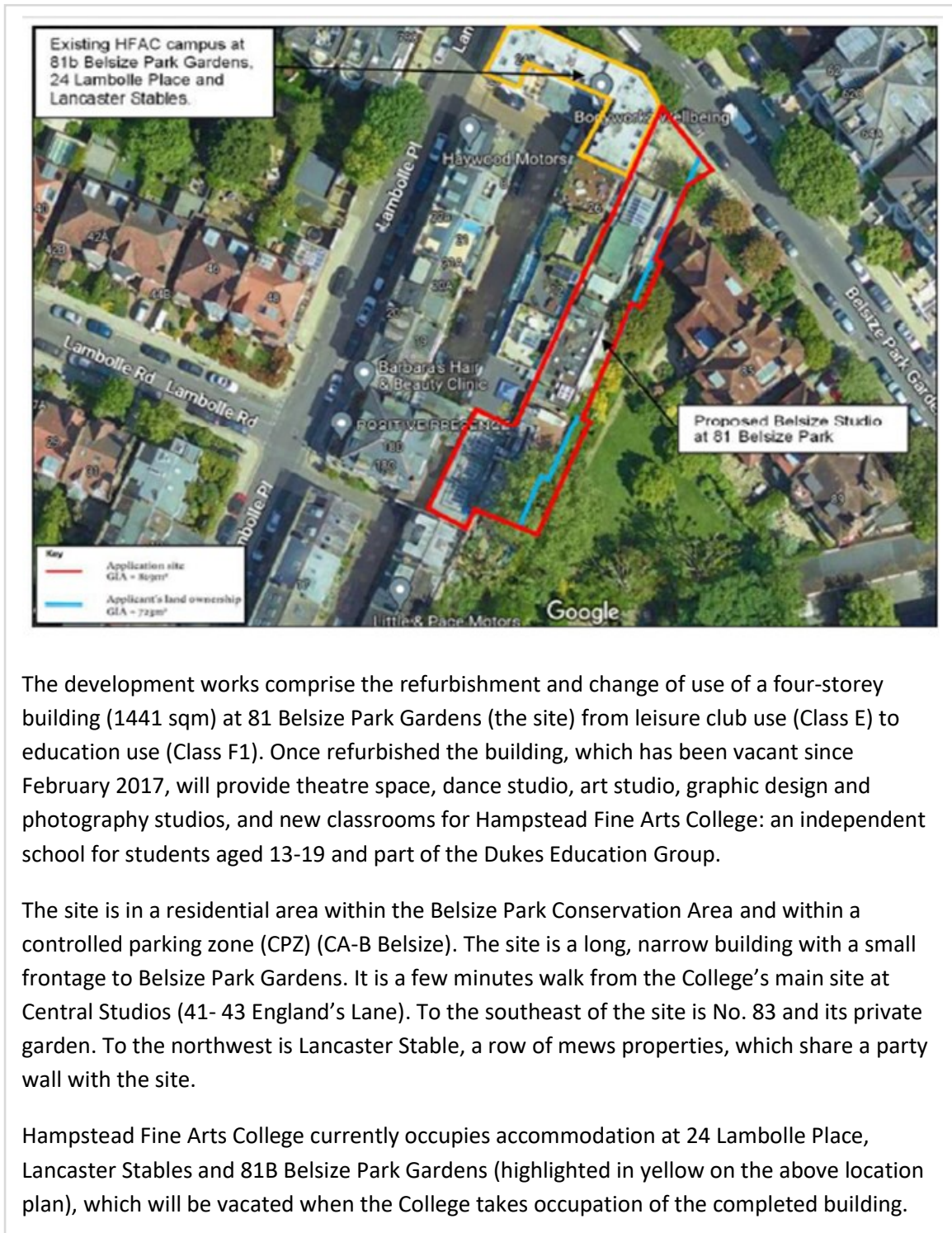
5. Please provide full contact details including the address where the main contractor accepts receipt of legal documents for the person responsible for the implementation of the CMP.

Name:	Danny Graham
Address:	Clive Graham Associates Ltd. 3rd Floor, 8-11 St Johns Lane, London EC1M 4BF
Email:	danny.graham@clivegraham.com
Phone:	07917028020



# 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. Please fill up [Cumulative Impact Area \(CIA\) checklist form](#) if site fall within the CIA zone (Central London)



The development works comprise the refurbishment and change of use of a four-storey building (1441 sqm) at 81 Belsize Park Gardens (the site) from leisure club use (Class E) to education use (Class F1). Once refurbished the building, which has been vacant since February 2017, will provide theatre space, dance studio, art studio, graphic design and photography studios, and new classrooms for Hampstead Fine Arts College: an independent school for students aged 13-19 and part of the Dukes Education Group.

The site is in a residential area within the Belsize Park Conservation Area and within a controlled parking zone (CPZ) (CA-B Belsize). The site is a long, narrow building with a small frontage to Belsize Park Gardens. It is a few minutes walk from the College's main site at Central Studios (41- 43 England's Lane). To the southeast of the site is No. 83 and its private garden. To the northwest is Lancaster Stable, a row of mews properties, which share a party wall with the site.

Hampstead Fine Arts College currently occupies accommodation at 24 Lambolle Place, Lancaster Stables and 81B Belsize Park Gardens (highlighted in yellow on the above location plan), which will be vacated when the College takes occupation of the completed building.

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

The site is largely 'landlocked', with the only access being from Belsize Park Gardens. There is a fire escape onto Lancaster Stables which is to be used in emergencies only and not for access. The site fire strategy is included in Appendix A.

All access to the construction site will be via the site entrance on Belsize Park Gardens. The existing 2.4m high hoarding with double access gates will remain in place to the front of the site with maintenance works carried out as needed to ensure that high appearance standards are maintained. The main site welfare and office accommodation will be established within the existing building. A plan of the site welfare and office accommodation set-up is included in Appendix A.

Enabling works are mainly focused along the boundary of the site with number 83 Belsize Park Gardens and include removal of vegetation and tree pruning and protection works, plus the removal of the roof to a single-storey walkway to enable the scaffold to be erected. The scaffold will be erected to the building frontage on Belsize Park Gardens and along the southeast side of the building close to the boundary with number 83. The scaffold will be sheeted and have a temporary roof tied back into the building and with temporary guttering. The site hoarding will be extended along the length of the scaffold. A hoist will be installed on the building frontage. Any remaining asbestos in the roof area will also be removed by a competent specialist, and in accordance with the relevant standards.

External structural works comprise alterations to the existing building envelope structure, removal and replacement of the party boundary wall between the site and 83 Belsize Park Gardens (subject to a Party Wall Agreement) introduction of new windows, render and Façade improvement works. At roof level works include the extension of existing building walls, new roof openings, new roof lights, new roof finishes (both green and PV panels) and installation of the new mechanical plant which will be acoustically shrouded to minimize noise transfer to the neighbouring roof terraces.

Internal structural works consist of internal alterations to the fabric of the building to allow for new stair and lift locations, and floor replacement.

Internal fit-out works include the installation of new MEP services throughout the building and new surface finishes. The internal space will be modernised and will house energy-efficient heating, lighting and finishing treatments that accommodate the needs of the Fine Arts College.

A more in-depth pictorial sequence of works is included in Appendix B.

8. Please provide the proposed start and end dates for each phase of construction as well as an overall programme timescale.

Overall target construction work duration: 10/24 - 08/25

Work phase durations

Site set up, enabling works, scaffold installation, and roof asbestos removal to take place prior to works commencing

Internal and external structural works, façade finishes, roof finishes, installation of new mechanical plant on the roof, scaffold striking: 10/24 - 06/25

Internal fit out works: 11/24 – 07/25

Landscaping, final external finishes, site demobilisation: 05/25 – 08/25

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

This is Camden's standard times. However, the times operated should be specific to the site and related to the type of work being carried out, and the proposed working hours will be considered on a case-by-case basis.

If the site is within the Cumulative Impact Area (CIA), then Saturday working is not permitted, unless agreed with Camden.

The site will be operating within Camden's standard working hours:

8.00am to 6pm on Monday to Friday

8.00am to 1.00pm on Saturdays

No working on Sundays or Public Holiday

# 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.

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## Cumulative impact

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

**The Council can advise on this if necessary.**

## 10. Sensitive/affected receptors

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

The nearest potential receptors likely to be affected by activities on-site are detailed below:

- Hampstead Fine Arts College 24 Lambolle Place, Lancaster Stables and 81B Belsize Park Gardens
- 83 Belsize Park Gardens (currently being redeveloped)
- Adjacent residential dwellings that bound the remaining site area.

## 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**. Please ensure that any changes to parking and loading on the public highway are reflected in the consultation. Please agree highways set up plans in advance with Camden if there is any uncertainty with this.

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 the draft CMP with local residents, businesses, local groups (e.g. residents/tenants and business associations) and Ward Councillors.

A public consultation event which local residents were invited to attend took place in April 2023 before the submission of the first draft of the CMP at the planning stage. Local residents and other stakeholders were invited to this, and details of the proposed development and proposed timetable were shared. There has also been a subsequent on-site meeting with residents to discuss the proposals. Engagement has continued with local residents and other stakeholders through meetings and email. There have been no material issues and several compliments have been received.

A letter is to be sent to the immediate neighbours surrounding and in front of the site to make them aware of the intention for works to commence later this year and to advise that a copy of the draft construction management plan which will be able to be viewed on the Hampstead Fine Arts College website at <https://www.hampsteadfinearts.com/>

## 12. Construction Working Group

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

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

A Construction Phase Working Group will be established no later than one month before site works commence in accordance with Section 106 clause 4.4 of the planning conditions.

The Project Manager will be responsible for community liaison: contact information will be provided to the community via an initial letter drop that will be carried out before works on site commence.

Details of the 24/7 contact arrangements for the community to submit any comments, compliments or complaints will be included in newsletters which will be issued fortnightly.

Additional letter drops will be carried out to provide those impacted by the works with advance notice of any potential disruptive activities and the measures that will be put in place to minimise the impacts.

Full contact details, newsletters and notices of disruptive activities will also be included on a community noticeboard displayed at the site entrance.

As per Section 106 clause 4.4.7(b), a website will be maintained to provide information about the progress of the construction works and the measures being taken to limit its impact on the amenity of the local community. This will be hosted by Hampstead Fine Arts College and be integrated into their current website.

## 13. Schemes

Please provide details of your Considerate Constructors Scheme (CCS) registration. Please note that Camden requires [CCS site registration](#) for the full duration of your project including additional [CLOCS visits](#) for the full duration of your project. Please provide the CCS site ID number that is specific to the above site. A company registration will not be accepted, the site must be registered with CCS.

Be advised that Camden is a Client Partner with the Considerate Constructors Scheme and has access to all CCS inspection and CLOCS monitoring reports undertaken by CCS.

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.

Registration of the site with the Considerate Constructors Scheme will take place once the contract has been formally awarded.

We can confirm that we have read and understood the Guide for Contractors Working in Camden and that we agree to abide by it.

#### 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.

A review of the planning portal was undertaken on 28/06/2024, with no major schemes proposed within the vicinity of the site.

Works on a minor scheme at 83 Belsize Park Gardens (planning reference 2023/1664/P), which is adjacent to the site, are currently underway. There has been direct liaison with the developers, which will continue throughout the Fine Arts College development works.

Planning permission was granted on the 15<sup>th</sup> May 2024 at 81b Belsize Park Gardens & 24 Lambolle Place for the "Change of Use of ground floor from college (Class F1) to 2 flats (1x 1-bed flat & 1x 2-bed flat) (Class C3) including installation of skylight to rear flat roof, insertion of 3 x windows to east elevation and alteration to south and west ground floor elevation (facing Lancaster Stables) to include inset windows with terraces, with metal screen, gate and planter in front." (ref. 2023/5139/P). The College currently occupy this building and will only vacate once construction works are completed and they can move into 81 Belsize Park Gardens. There will therefore be no crossover of development works, as this permission will only be implemented once the College vacate.

## 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 CLOCS monitoring visits through CCS and possibly council officers, to ensure compliance. Please refer to the CLOCS Standard when completing this section.

Please contact [CLOCS@camden.gov.uk](mailto:CLOCS@camden.gov.uk) for further advice or guidance on any aspect of this section.

Please note that this section may also be referred to as a Construction Logistics Plan in the context of the CLOCS Standard.



## CLOCS Contractual Considerations

15. Name of Principal contractor:

Clive Graham Associates

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

As the principal contractor, Clive Graham Associates will adhere to the CLOCS standard.

### Contracts

FORS Silver or Gold operators will be appointed where possible. FORS Bronze accreditation as a minimum will be a contractual requirement. Checks will be made using the FORS Online checker: [www.fors-online.org.uk/whos-on-board](http://www.fors-online.org.uk/whos-on-board)

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

Delivery route maps will be issued to all contractors and suppliers as part of the initial contract.

### Site checks and non-compliance

The CLOCS gate check poster will be displayed at the site entrance.

CLOCS checks (Vehicle Operator, Vehicle, Driver & Route) will be carried out and recorded using the CLOCS compliance check form or similar.

Where a non-compliance is identified the CLOCS Monitoring Process flow chart will be followed. It is expected that in all but the most serious of situations, the deliveries will be accepted once a driver non-conformance notification has been issued, with discussions subsequently had with the supplier (Level 2). In the most serious situation (Level 3), the delivery will be refused, the driver issued with a non-conformance and the CLOCS non-conformance report will be completed and closed out.

### Compliance Reporting

Compliance information will be reported monthly to the Client as part of the wider site reporting process. Information reported will include the number of vehicles in the last full calendar month, the number of vehicles checked, and the number of vehicles found to be compliant.

Note: no on-site ground condition assessment will be required as all vehicles will be unloaded from the highway.

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:

Confirmed.

Please contact [CLOCS@camden.gov.uk](mailto: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.

a. 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.

The HGV routing map is attached in Appendix A.

### Access

- All HGVs will approach the site from the southwest from A41 Finchley Road and A41 Adelaide Road (TLRN).
- HGVs will then travel eastbound on B509 Adelaide Road.
- HGVs will then turn northbound onto Primrose Hill.
- HGVs will continue onto Belsize Park Gardens until the designated loading and unloading area (parking bay suspension area).

### Egress

- HGVs will egress the loading/ unloading area on Belsize Park Gardens continuing west on Belsize Park Gardens.
- HGVs will then turn southeast onto Belsize Park, continuing onto Buckland Crescent.
- HGVs will turn south onto Cottage Crescent, continuing onto A41 Avenue Road, back onto TLRN.

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

The route map for deliveries will be included in all orders, therefore all companies will be aware of the route before attending the site. Any necessary deviation to the route will be advised to contractors and delivery companies promptly.

**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.

a. 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 estimated that there will be 6-10 vehicle movements per day during the enabling works and structural and external works construction period (August 2024 – February 2025). This number will reduce to approximately 3-5 deliveries per day during the remainder of the works (March 2025 – July 2025).

Vehicles will predominantly be a combination of rigid lorries, skip lorries and smaller transit vans. It is anticipated a mobile crane and a rigid lorry will be the largest vehicles required.

b. Please specify the permitted delivery times.

As there is a school adjacent to the site deliveries will be restricted to between 9.30 am and 3 pm on weekdays during term time.

At all other times, deliveries will be restricted to between 9.30 am to 4.30 pm on weekdays and between 8.00 am and 1 pm on Saturdays.

No deliveries will take place on Sundays or bank holidays.

c. 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.

No major development schemes are located within the vicinity of the site. See response to Question 14 for further information.

However, coordination of deliveries will be required with the developers of a minor scheme at 83 Belsize Park Gardens, which is an operational site adjacent to this site. There was ongoing direct liaison with the developers during phase 1 of this project, which will continue during this second phase.

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

Not applicable as there are not any constrained manoeuvres along the proposed route.

e. 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.

Due to the relatively low number of vehicle deliveries expected per day, it is not anticipated that the use of an offsite waiting area will be necessary. However, should it be identified during the detailed planning and coordination of the works that an off-site holding area is needed, this would be established on the B509 Adelaide Road as there are several stretches of suitable single yellow line areas.

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

Full-load deliveries will be prioritised.

Due to the relatively low number of vehicle deliveries expected per day, it is not anticipated that the use of a construction material consolidation centre will be necessary. Given the location of the site, delivery by water/rail has not been considered appropriate.

g. 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).

All deliveries over 3.5 tonnes will be booked 24 hours in advance, minimising the need for vehicles to have to wait to unload. Booking time slots will be made long enough to offload before the next vehicle is due.

All drivers will be requested to turn their engines off and not idle unless the vehicle needs to be running/idling: such as where a Hiab is required.

**20. Site entry/exit:** *“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 leave this section blank and refer to Q21. Where loading is to take place from a dedicated pit lane located on the public highway, please use this section to describe how vehicle entry/departure will be managed.

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 entry and exit points on a map or diagram. If this is attached, use the following space to reference its location in the appendices.

Not Applicable – no vehicles will be able to enter or exit the site.

b. Please describe how the entry and exit 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.

Not Applicable – no vehicle will be able to enter or exit the site.

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

Not Applicable – no vehicle will be able to enter or exit the site.

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.

Not Applicable - no vehicle will be able to enter or exit the site.

**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 on the public highway and it has been agreed with Camden that a dedicated pit lane is not viable/necessary. If loading is taking place on site, or in a dedicated pit lane, please skip this section.

a. Please provide the location where vehicles will stop to unload. 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.

All construction and delivery vehicles will load, unload and service on-street from Belsize Park Gardens as no vehicular access is provided to the site. Construction and delivery vehicles will access and leave the loading area in a forward gear. No reversing manoeuvres will be required, apart from for skip change operations.

A swept path analysis illustrating the largest construction vehicles expected to travel to and from the site is attached in Appendix A.

A site set-up plan is attached in Appendix A which illustrates the location of the parking suspensions required for construction vehicles to load and unload on-street from Belsize Park Gardens.

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. Please note that deliveries should pause where possible to allow passage to pedestrians.

Traffic marshals will be deployed along the site frontage on Belsize Park Gardens at the designated loading and unloading area. Traffic marshals will control the interface between the public highway and the site to ensure pedestrian, cyclist and motorist safety. Traffic marshals will be responsible for halting construction vehicle movements or construction workers transporting materials from delivery vehicles to the site to allow the public to pass safely. All Traffic marshals will give priority to pedestrians, cyclists and motor traffic when controlling this interface with delivery vehicle movements and unloading/loading operations.



## Site set up

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 Restrictions (TTRs) 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 four week period required for the application processing and statutory consultation as part of the TTR process. This is in addition to the CMP review period.

If the site is on or adjacent to the TLRN (red route), please provide details of preliminary discussions with Transport for London (TfL) in the relevant sections below. Please note that TfL are the highways authority for such routes and all permits will be issued by them.

Consultation with TfL will be necessary if the site requires the use of temporary signals on the Strategic Road Network (SRN), or impacts on bus movement, then TfL will need to be consulted.

Consultation with TfL will be necessary if the site directly conflicts with a bus lane or bus stop.

### **22. Site set-up and occupation of the public highway**

Please provide detail drawings of the site up on the public highway. This should be presented as 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 all relevant key dimensions. Please note that lighting column removal/relocation may be subject to UKPN lead times and is outside of our control. Any gantries will require a structural assessment and separate agreement with the structures team.

a. Please provide details of any measures and/or structures that need to be placed on the highway. This includes dedicated pit lanes, temporary vehicle access points/temporary enlargement of existing crossovers, occupied parking bays, hoarding lines, gantries, crane locations, crane oversail, scaffolding, scaffolding oversail, ramps, barriers etc. Please use this space to justify the use of the highway, and to state how the impacts have been minimised. Please provide drawings separately in the appendices and reference their location below. Please provide further details of any changes to parking and loading in section 23.

The site setup plan in Appendix A illustrates the amount of parking suspensions required to create an on-street loading and unloading area for delivery vehicles. This site is constrained, and no vehicular access can be provided to the site. The length of parking suspensions required has been minimised by allowing for one vehicle to load and unload on-street at any given time, whilst maintaining safety for all road users.

No other measures and/or structures need to be placed on the highway.

b. Please provide details and associated drawings/diagrams showing any temporary traffic management measures needed as part of the above site set up. Alternatively this can be shown as part of the above drawings if preferred. Please note that this must conform to the [Safety at Street Works and Road Works Code of Practice](#).

It is not anticipated that any temporary traffic management measures will be needed as part of the site set up. In the very unlikely event that it became apparent that traffic management would need to be installed, traffic management would be installed such that it conforms to the Safety at Street Works and Road works Code of Practice.

### **23. Parking bay suspensions and temporary traffic orders**

Parking bay suspensions should only be requested where absolutely necessary and these are allowed for a maximum period of 6 months only. Information regarding parking suspensions can be found [here](#). For periods greater than 6 months, or for any other changes to the parking/loading/restrictions on the highway, a [Temporary Traffic Restriction \(TTR\)](#) will be required for which there is a separate cost. Please note that any temporary changes to parking and loading to be delivered using a TTR need to be consulted upon as part of our legal obligations as a highways authority. Camden may require separate consultation to take place specifically around such changes if these have not been adequately reflected in any prior consultation as part of the CMP process.

A space cannot be suspended for convenience parking, a [trade permit](#) is available for trade vehicle parking. Building materials and equipment must not cause obstructions on the highway. Building materials may only be stored on the public highway if permitted by the Street Works team.

Please provide details of any proposed such changes on the public highway which are necessary to facilitate the construction works. Where these changes apply to parking bays, please specify the type of bays that are to be impacted and the anticipated timeframes.

27.5m of parking suspensions will be required during the entire construction phase. This is equivalent to the temporary loss of five parking spaces during construction. This is illustrated in the site setup plan attached in Appendix A It is anticipated restrictions will be in place throughout the entire construction phase and only apply during site operation hours. No overnight parking will be lost.

A TTR will be required to suspend parking on Belsize Park Gardens. An application will be submitted for the proposed parking suspensions in a timely manner.

#### **24. Motor vehicle/cyclist diversions/pedestrian diversions**

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

Please note that footway closures are not permitted unless there is no alternative. Footway access must be maintained using a gantry or temporary walkway in the carriageway unless this is not possible. Where this is not possible, safe crossing points must be provided to ensure that pedestrian access is maintained. Where formal or controlled crossing points are to be suspended, similar temporary facilities must be provided. Camden reserves the right to require temporary controlled crossing points in the event of any footway closures.

Please provide 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 and provide these in the appendices. Please use the following space to outline these changes to and to reference the location of any associated drawings in the appendices. Please show diversions and associated signage separately for pedestrians/cyclists/motor traffic.

No Motor vehicle, cyclist or pedestrian diversion routes will be required.

#### **25. 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.

Electrical Services install/connections are being carried out by the client and will be coordinated with the principal contractor upon award of contract. The electrical connection contractor will contact the National Grid.

Details of the planned cable route are included in Appendix C

# 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 operation and the construction methods used, and provide details of the times that each of these are due to be carried out.

The following activities are identified as having the potential to be noisy –

External works - Removal of the ground-level covered masonry walkway wall that extends along the boundary shared with 83 Belsize Park Road. Formation of new window openings. Minor roof modification works.

Internal works - Concrete base slab break-out of the existing swimming pool floor, lift pit, column bases and underpinning areas. Pocket cutting for new block and beam slabs.

It is anticipated that the above works will be carried out predominantly using handheld tools and handheld mechanical plant. Most noise from these operations will be generated in short bursts.

During the detailed task-specific risk assessment and method statement generation process, careful consideration will be given to equipment selection, working method, and noise-reducing mitigation measures that will be implemented to minimise the impact of the works. It is anticipated that all the above operations will be undertaken during standard site hours, with a reduced working window introduced where other mitigation measures are determined to be insufficient.

29. Please confirm when the most recent pre-construction noise survey was carried out and provide a copy. If a noise survey has not taken place, and it has been requested by the local authority, please indicate the date (before any works are being carried out) that the noise survey will be taking place and agree to provide a copy.

The most recent pre-construction noise survey was carried out on 9th August 2023 and is attached in Appendix D.

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

It is anticipated that the noise levels for most of the works will be well below 75 dba. It is not expected that any construction operation will exceed 85 dba at the site boundary level.

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.

Any temporary items of plant will be located away from site boundaries where possible. Noise from all items of site plant will be kept to a minimum with the best practice measures being implemented. Electrical construction plant will be used where possible. All other items such as compressors will be lined where possible with acoustic covers and mufflers used to reduce noise. Site plant or machines will not be left running when not in use.

Noise monitoring will be conducted in the site perimeter and working areas using a Precision GOLD N05CC monitor or equivalent. All noise level readings will be recorded on the company's standard noise monitoring record form. The maximum acceptable noise level during works is to be set at 75 dba: all levels above this shall be classed as noisy works. If this maximum noise level is found to be exceeded a risk assessment will be undertaken and necessary mitigating measures put in place before works continue.

Operations on site that are identified as being likely to generate potentially unacceptable levels of noise will be undertaken in a manner that minimises this nuisance. If it is impracticable to incorporate satisfactory measures to adequately suppress noise, then these elements of works will be undertaken during restricted working hours to minimise the impact on adjacent residents and the College.

Any excessively noisy works will be subject to comprehensive advance planning and all neighbours potentially likely to be affected will be informed by letter prior to works starting.

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

Project Managers and Site Managers hold current SMSTS certificates. Subcontractor supervisors are required to be SSSTS trained as a minimum. In addition, the workforce will be provided with noise awareness training via toolbox talks.

Copies of the Clive Graham Associates site management team's SMSTS certificates are included in Appendix E.

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 a focus on both preventative and reactive mitigation measures.

Full regard has been given to the recommendations in Appendix 7 of the Mayor of London's SPG on 'The Control of Dust and Emissions During Construction and Demolition' for low risk works.

The building will be surrounded by a sheeted scaffold with a temporary roof and a 2.4m high timber hoarding at ground level to minimise dust migration externally.

All dusty works will be monitored with a portable air tester both during dusty works and at irregular times throughout the day. All dust level readings will be recorded on the company's standard dust monitoring recording form. Any work would be stopped if the dust becomes airborne due to the planned suppression not working. (The acceptable level of dust with no health impact is 10mg per Cubic metre.)

Dust will be controlled using local dust extraction attached to the tools being used. Only competent/appropriately trained operatives will be permitted to operate the tools. All handheld cutting tools will be required to have dust bag attachments as a minimum. Damping down will be used when practicable to further reduce airborne dust particles. Covered skips used will be used where needed. In addition, for the roof works dust will be controlled using screens and an enclosed temporary roof.

The potential for migration dust will be assessed in the work risk assessments and method statements (RAMS) and appropriate controls put in place (use of dust masks including face testing, the use of M-class vacuums etc.).

The company works on the basis that standard eye protection should always be on every operative's person. Eye protection should be worn if any work is creating dust and projection debris in the area. This is highlighted within the RAMs for the works and emphasised in task briefings.

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.

No vehicular access is available to the site. It is therefore anticipated that construction vehicles will not spread dust or dirt onto the public highway.

35. For medium or high impact risk level sites, please provide details describing arrangements for monitoring of noise, vibration and dust levels, including instrumentation, locations of monitors and trigger levels where appropriate.

Not applicable: this site is not considered a 'high impact'. The project comprises of the change of use of an existing building and involves very limited demolition works. See 33 above.

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.**

An Air Quality Assessment was carried out in July 2023 and is included in Appendix F. The mitigation checklist is included in Appendix G.

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.)

Confirmed.

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

Note: **real-time dust (PM<sub>10</sub>) 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<sub>10</sub>) concentrations, any exceedances of the trigger levels, and an 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.**

This site is not considered a 'high impact'. The project comprises of the change of use of an existing building and involves very limited demolition works. The building is to be enclosed in a sheeted scaffold with a rigid roof and 2.4m hoarding at the ground level which will contain the dust resulting from the remaining minor demolition activities. In-situ dust level measurements using a hand-held monitoring device will be carried out throughout the works (see 31 and 33 above). As a result, real-time dust monitoring is not considered necessary.

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).

No rodent issues were identified during any site investigation works or site visits that have been conducted. Prior to construction works commencing, a check will be carried out by the site team to verify that there continue to be no issues.

A good standard of hygiene is to be maintained throughout the works, with bins to be stored with tight-fitting lids and all welfare refuse removed from the site promptly.

Should an issue be identified, a competent contractor will be employed to address the issue using treatments that are in line with the current HSE and British standards.

Details of any site inspections and copies of receipts, if work is undertaken, will be provided to the Council.

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

An asbestos refurbishment survey was carried out from 22nd to 27th November 2022. The full asbestos survey is attached in Appendix H. The highest level of risk identified in the report was Medium Risk: potential for asbestos fibre-release to occupiers.

Asbestos was found in the tank and boiler rooms and was presumed present in rooms 12 and 16. This asbestos has now been removed from the building's internal areas.

Asbestos was also identified in the November 2022 survey as being present in the roof area's external walls and insulating boards. The removal of this asbestos forms part of the work scope for this project. A further asbestos survey is due to be undertaken of the roof area in early September 2024 to fully confirm the remaining extent. All identified remaining asbestos in this area is due to be removed towards the latter part of September 2024.

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.

Clive Graham Associates champions the behavioural ethos that is integral to the Considerate Constructors Scheme Code of Considerate Practice. As part of this commitment, the following rules will be put in place:

- Expected workforce behaviour rules (no shouting, no swearing, show respect etc.) will be made clear at induction and the expectations reinforced using toolbox talks.
- Appearance rules will be established that include the requirement to remove PPE when leaving the site.
- When smoking or vaping all operatives will be required to use the designated smoking area that will be established in a discrete area within the site boundary.
- The workforce will not be permitted to congregate outside the site entrance.
- Any operative flouting the site rules will be given a warning and their employer notified. Should the offence continue, the operative will be removed from the site.

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](https://www.london.gov.uk/sites/default/files/nrmm_practical_guide_v4_sept20.pdf)

#### **From 1<sup>st</sup> 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 1<sup>st</sup> September 2020**

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

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

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

- a) Construction time period (mm/yy - mm/yy): 08/24 – 07/25
- b) Is the development within the CAZ? (Y/N): No
- c) Will the NRMM with net power between 37kW and 560kW meet the standards outlined above? (Y/N): Yes
- d) Please 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 the 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.

Clive Graham Associates operates a vehicle no idling policy. No idling reminder signage will be displayed at the site entrance.

## Mental Health Training

44. Poor mental health is inextricably linked to physical health, which in turn impacts performance and quality, and ultimately affects productivity, creativity and morale. Workers in the construction industry are six times more likely to take their own life than be killed in a fall from height.

We strongly recommend signing up to the “[Building Mental Health](#)” charter, an industry-wide framework and charter to tackle the poor mental health in the construction industry, or joining [Mates In Mind](#), which providing the skills, clarity and confidence to construction industry employers on how to raise awareness, improve understanding and address the stigma that surrounds mental health.

The Council can support by providing free Mental Health First Aid training, publicity resources and signposting to local support services.

Please state whether you are or will be signed up to the Building Mental Health charter (or similar scheme), and that and appropriate number of trained Mental Health First Aiders will be available on site.

Clive Graham Associates takes workforce mental health extremely seriously. We are currently working towards providing access to trained Mental Health First Aiders on all sites.

In addition, a range of mental health support information and details of support services via Clive Graham Associates independent Health and Safety consultants.

• 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:** .....

**Print Name:** .....

**Position:** .....

Please submit to: [planningobligations@camden.gov.uk](mailto:planningobligations@camden.gov.uk)

**End of form.**

V2.9

# Appendix A

## Site Plans

- Site Welfare and Office Accommodation Plan
- Fire Strategy Plan
- HGV Route Map Plan
- Site Set Up Plan with Parking Bay Suspension details
- Swept path analysis illustrating the largest construction vehicles expected to travel to and from the site

- Site Welfare and Office Accommodation Plan

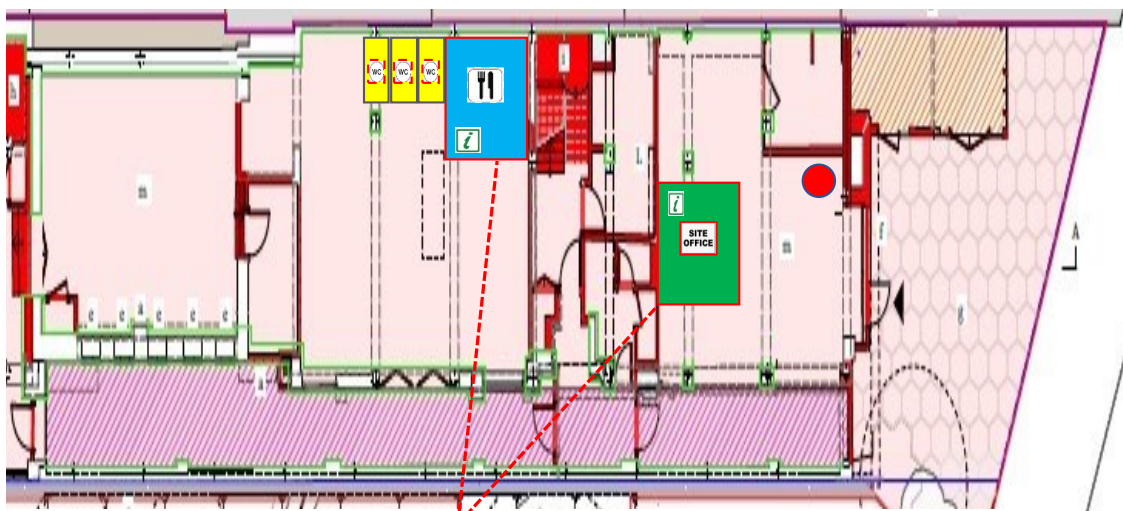
7: Health & Safety











**Welfare**

Our proposal is to be totally self-sufficient and standalone project. The area will be fully surveyed prior to the works and protected. We feel that the project would require of site office, welfare and WC facilities to meet the footfall number of the of the project that can be contained within the site entrance areas. There will be a requirement for a water and electrical supply to feed the site temps and canteen location. We have recognised and explored the option of a gantry and cabins to give maximum space internally but recognised that this will hinder the logistics movements to the roof.

To make our proposal work our site team will need to adapt through the changing environment of the project and move when need the welfare. We are used to being nomadic on welfare set up but feel the over proposal is the best location for this element of the project



	➤ Temporary site WC Portacabin		➤ Health & Safety Notice Board
	➤ Safe route student circulation around		➤ Restriction on food on site and to be consumed off site
	➤ Site Office		➤ Site Location
	➤ Signing in location		➤ Safe circulation for staff and the public

# Fire Strategy Plan

## 7: Health & Safety









### Fire Strategy Methods

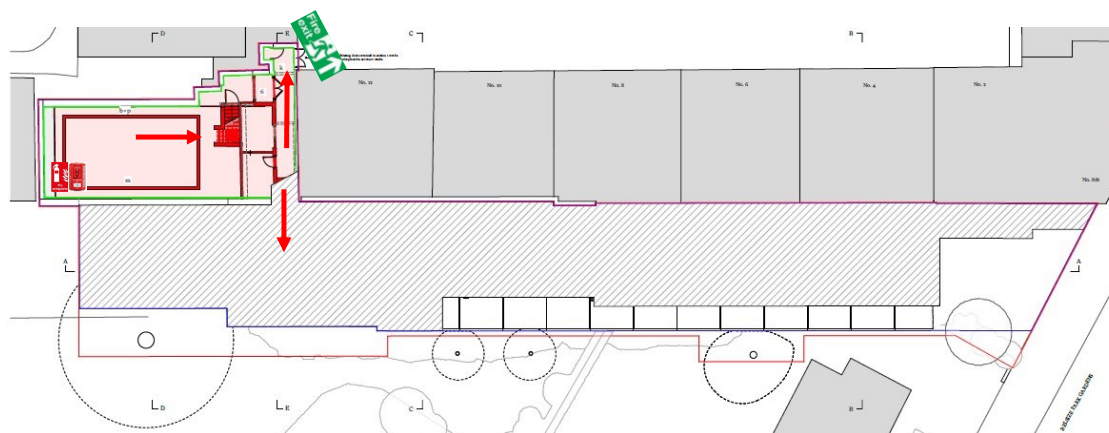
CGA are used to working in standalone buildings that have adjoining properties and our goal is not to effect surrounding areas. We note that due to the shape and length of the building there will be a need for the fire strategy to adapt to the ever-changing environment of the project as it evolves through the works.

During the Pre-Construction stages we would request a meeting with adjoining property owners to agree an acceptable method of escape that suits and not hinder the existing strategy into the mews. Our have proposal below is our interpretation of the preliminary strategy for strip out stage of the project, but it will need to be adapted through the ever-changing environments of the scheme. Our SHEQ Manager will work with the site team in ensuring that the building occupants have a safe method of exit in the event of an emergency. Our Site Manager will review and check all control methods installed daily to ensure nothing has changed and the exits remain unobstructed through the project duration.

### CONSIDERATION FOR FIRE STRATEGY

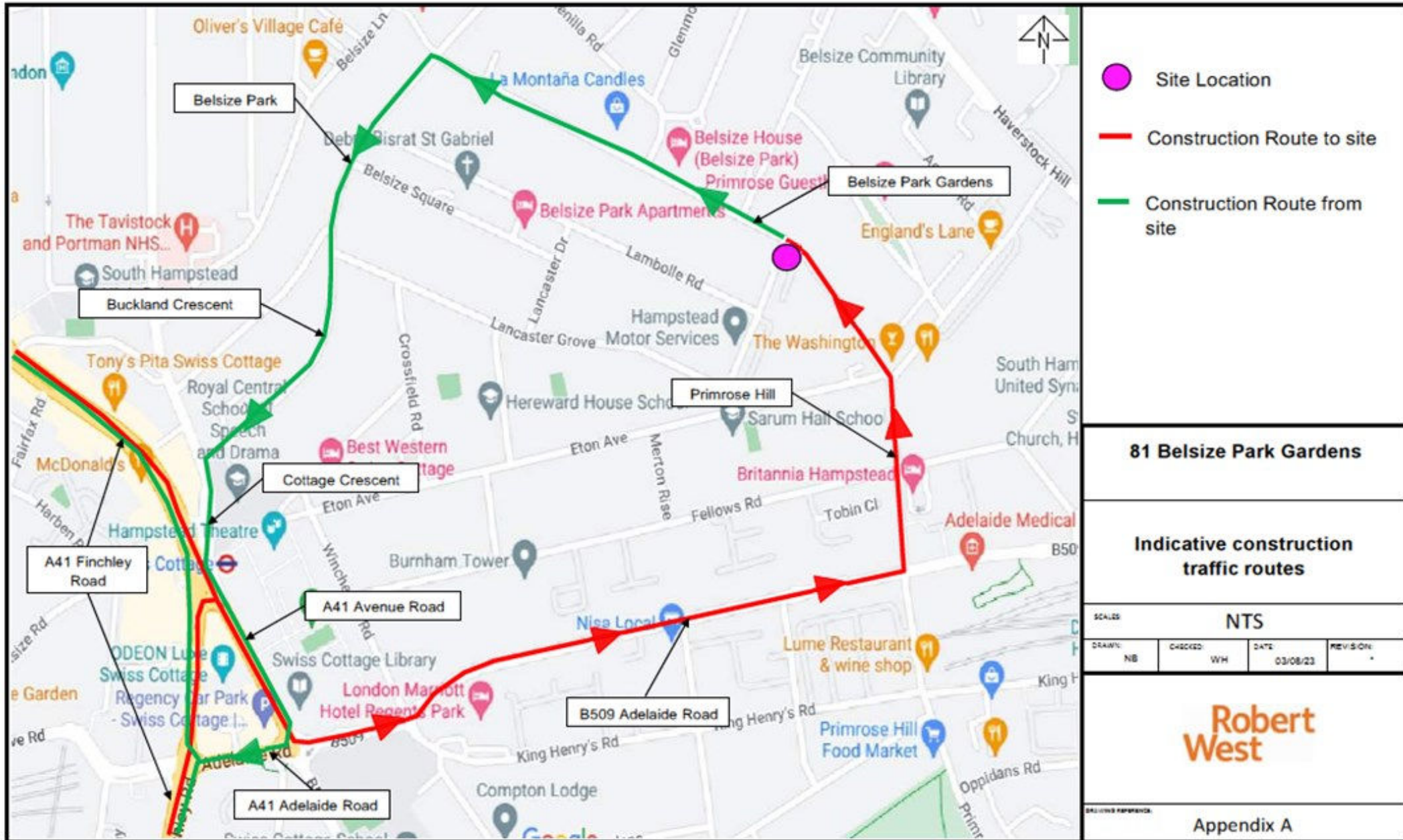
- ✓ Make provisions for building fire escapes
- ✓ CGA to populate a Temporary fire risk assessment
- ✓ Segregation as not to affect the site residents' properties
- ✓ Muster point location to be agreed as not to effect residents
- ✓ Fire point location evolve as and when site changes happen
- ✓ All fire strategy to be agreed
- ✓ Temporary fire alarm coverage

-  Fire exit
-  Fire extinguisher
-  Fire Claxton Point
-  Emergency fire exit route
-  Hygienic Hoarding
-  Physical Chapter 8 Barriers





HGV Route Map Plan



<p>● Site Location</p> <p>— Construction Route to site</p> <p>— Construction Route from site</p>									
<p><b>81 Belsize Park Gardens</b></p>									
<p><b>Indicative construction traffic routes</b></p>									
<p>SCALE: NTS</p>									
<table border="1"> <tr> <th>DRAWN</th> <th>CHECKED</th> <th>DATE</th> <th>REVISION</th> </tr> <tr> <td>NB</td> <td>WH</td> <td>03/08/23</td> <td></td> </tr> </table>	DRAWN	CHECKED	DATE	REVISION	NB	WH	03/08/23		
DRAWN	CHECKED	DATE	REVISION						
NB	WH	03/08/23							
<p><b>Robert West</b></p>									
<p>Appendix A</p>									

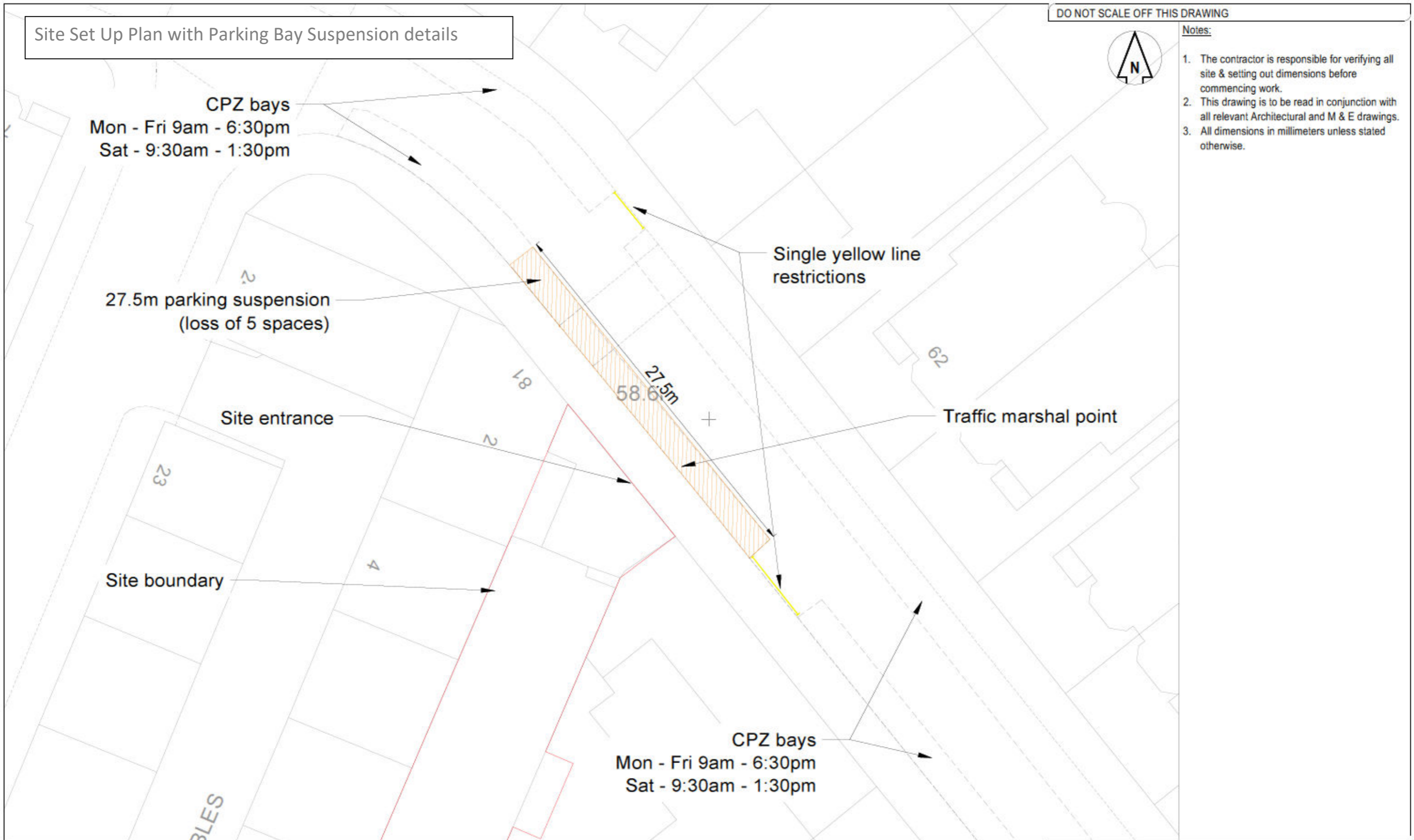
Site Set Up Plan with Parking Bay Suspension details

DO NOT SCALE OFF THIS DRAWING



Notes:

1. The contractor is responsible for verifying all site & setting out dimensions before commencing work.
2. This drawing is to be read in conjunction with all relevant Architectural and M & E drawings.
3. All dimensions in millimeters unless stated otherwise.



FOR INFORMATION

DUKES EDUCATION

**Robert West**

1 Park Garden  
London  
SE1 9ND  
0203 773 7880  
www.robertwest.co.uk

Project  
81 BELSIZE PARK GARDENS

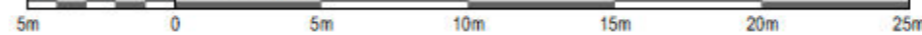
Drawing Title  
PARKING SUSPENSION  
SITE SETUP PLAN

RWCL Internal Register reference: 5907-001 Scales @ A3

5907-001-103-P02

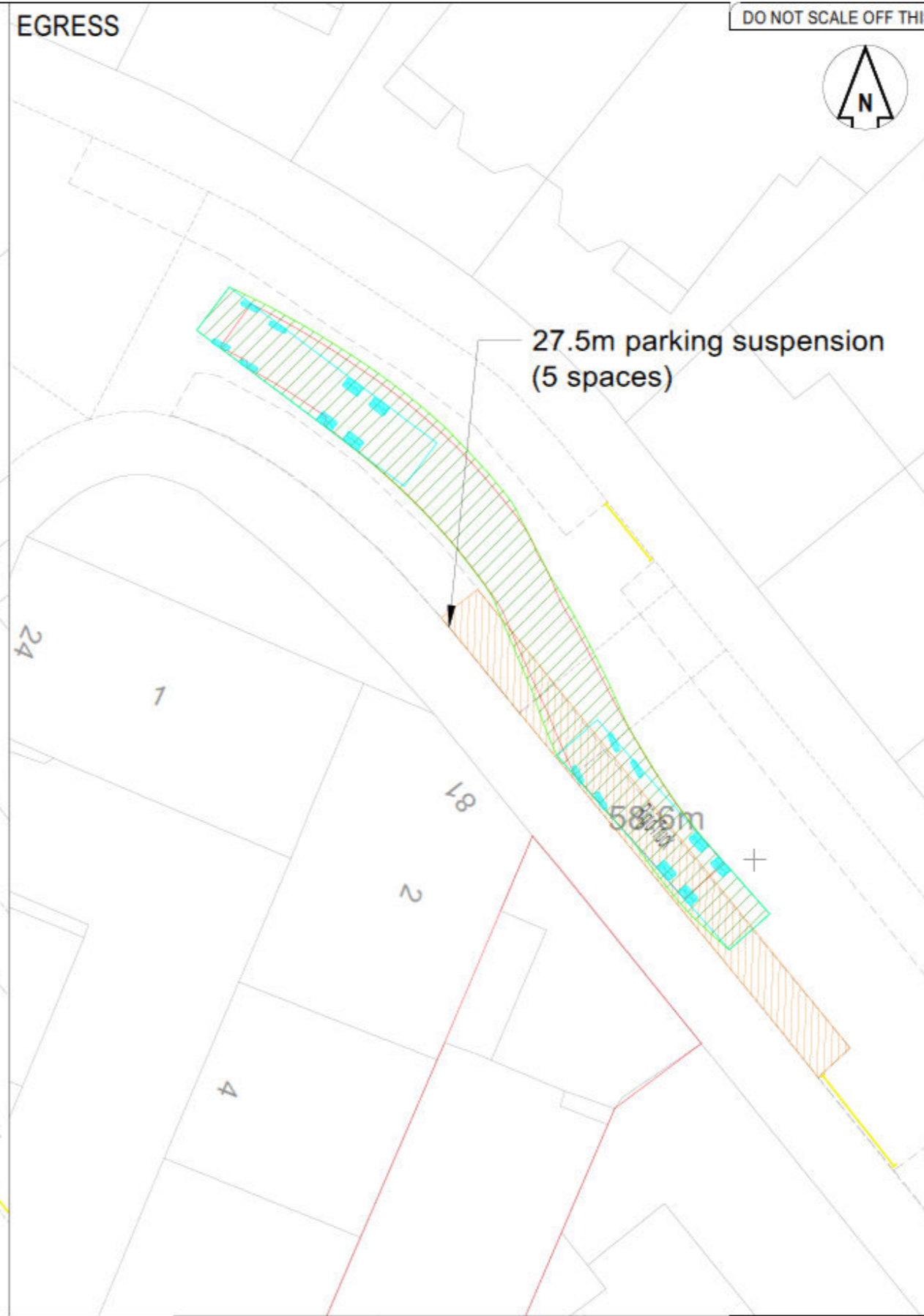
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Scale 1:250 @ A1 - 1:500 @ A3



Revision History

Rev	Comment	By	Chkd	Appr	Date
P01	FIRST ISSUE	AA	AG	AMI	23/02/2023
Current Revision					
P02	MINOR AMENDMENTS	NB	WH	SB	14/08/2023

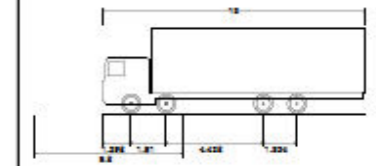


DO NOT SCALE OFF THIS DRAWING



Notes:

1. The contractor is responsible for verifying all site & setting out dimensions before commencing work.
2. This drawing is to be read in conjunction with all relevant Architectural and M & E drawings.
3. All dimensions in millimeters unless stated otherwise.



Rigid Truck	12.000m
Overall Length	2.900m
Overall Width	3.928m
Overall Body Height	0.412m
Min Body Ground Clearance	2.471m
Track Width	6.00s
Lock to lock time	11.900m
Kerb to Kerb Turning Radius	

**FOR INFORMATION**

**DUKES EDUCATION**

**Robert West**  
1 Park Garden  
London  
SE1 8ND  
0203 773 7880  
www.robertwest.co.uk

Project  
**81 BELSIZE PARK GARDENS**

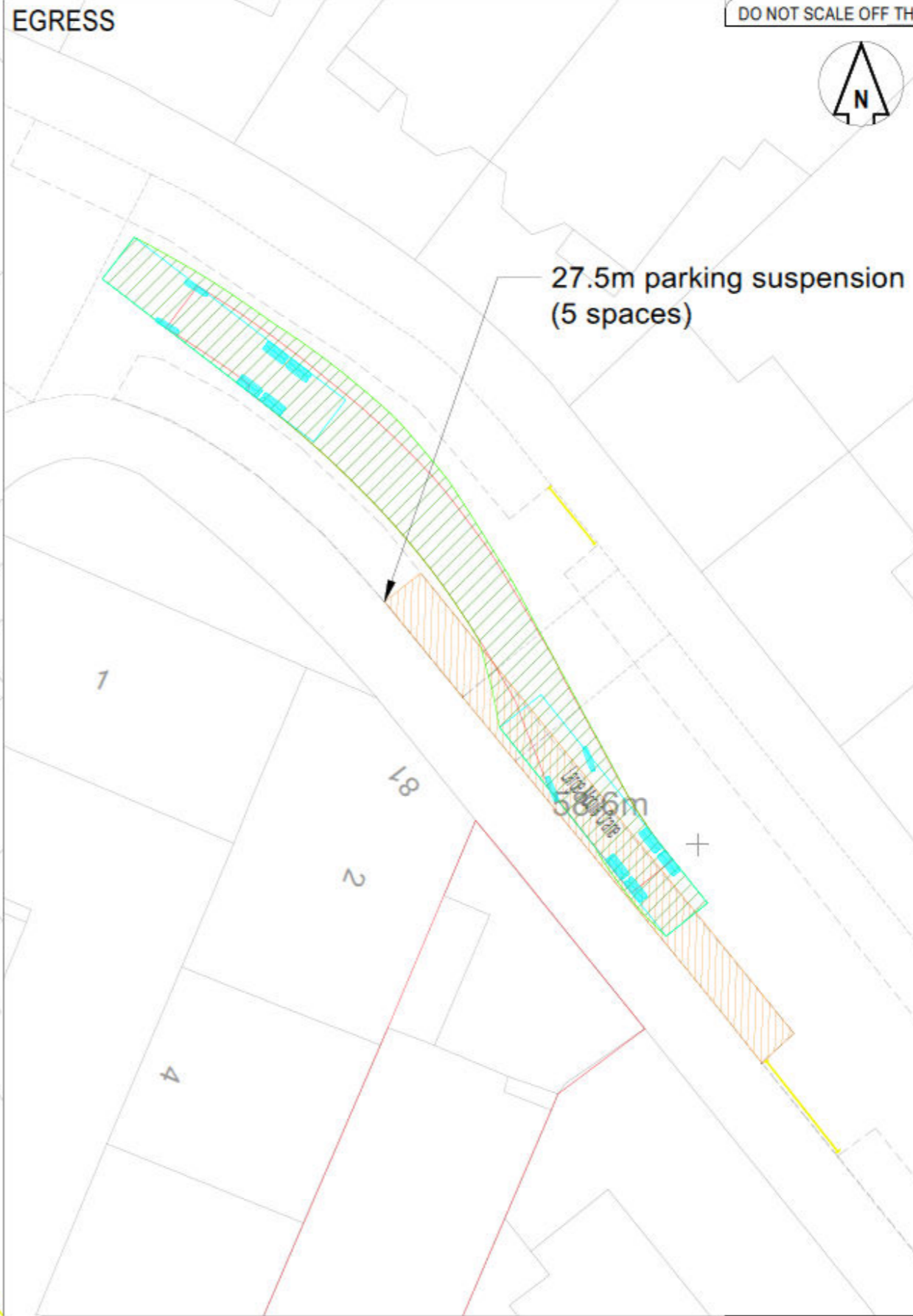
Drawing Title  
**SWEPT PATH ANALYSIS  
12M DELIVERY VEHICLE**

1:500  
Scales @ A3  
RWCL Internal Register reference: 5907-001  
5907-001-101-P02

Scale 1:250 @ A1 - 1:500 @ A3

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Revision History					
Rev	Comment	By	Chkd	Appr	Date
P01	FIRST ISSUE	AA	AG	AMI	27/02/2023
Current Revision					
P02	UPDATED TRACKING	NB	WH	SB	14/08/2023

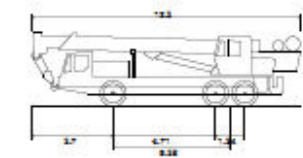


DO NOT SCALE OFF THIS DRAWING



**Notes:**

1. The contractor is responsible for verifying all site & setting out dimensions before commencing work.
2. This drawing is to be read in conjunction with all relevant Architectural and M & E drawings.
3. All dimensions in millimeters unless stated otherwise.



Large Mobile Crane	12.300m
Overall Length	2.430m
Overall Width	3.386m
Overall Body Height	0.590m
Min Body Ground Clearance	2.430m
Track Width	6.00s
Lock to lock time	10.000m
Kerb to Kerb Turning Radius	

**FOR INFORMATION**

**DUKES EDUCATION**

**Robert West**  
1 Park Garden  
London  
SE1 8ND  
t0203 773 7880  
www.robertwest.co.uk

Project  
**81 BELSIZE PARK GARDENS**

Drawing Title  
**SWEPT PATH ANALYSIS  
LARGE MOBILE CRANE**

RWCL Internal Register reference: 5907-001 Scales @ A3  
5907-001-102 -P02

1:500



Revision History					
Rev	Comment	By	Chkd	Appr	Date
P01	FIRST ISSUE	AA	AG	AMI	27/02/2023
Current Revision					
P02	UPDATED TRACKING	NB	WH	SB	14/08/2023

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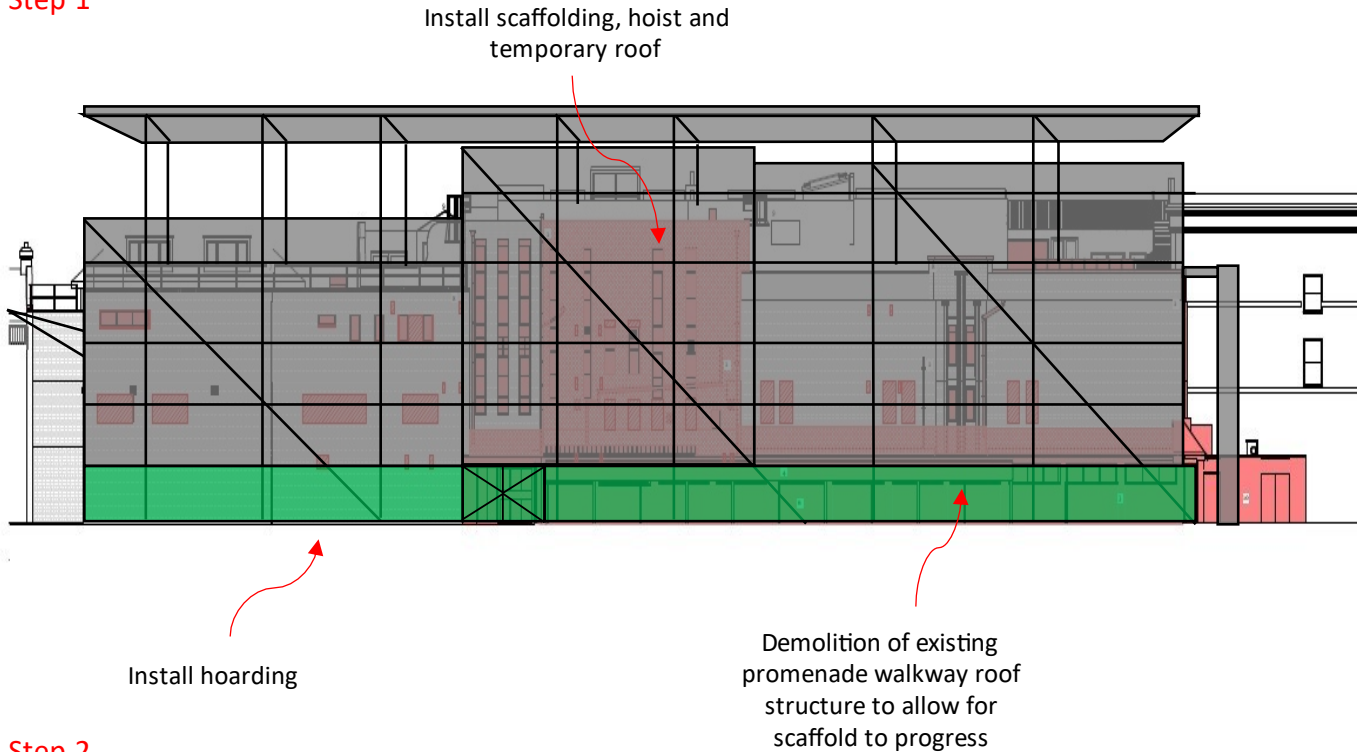
# Appendix B

## Sequence of Work

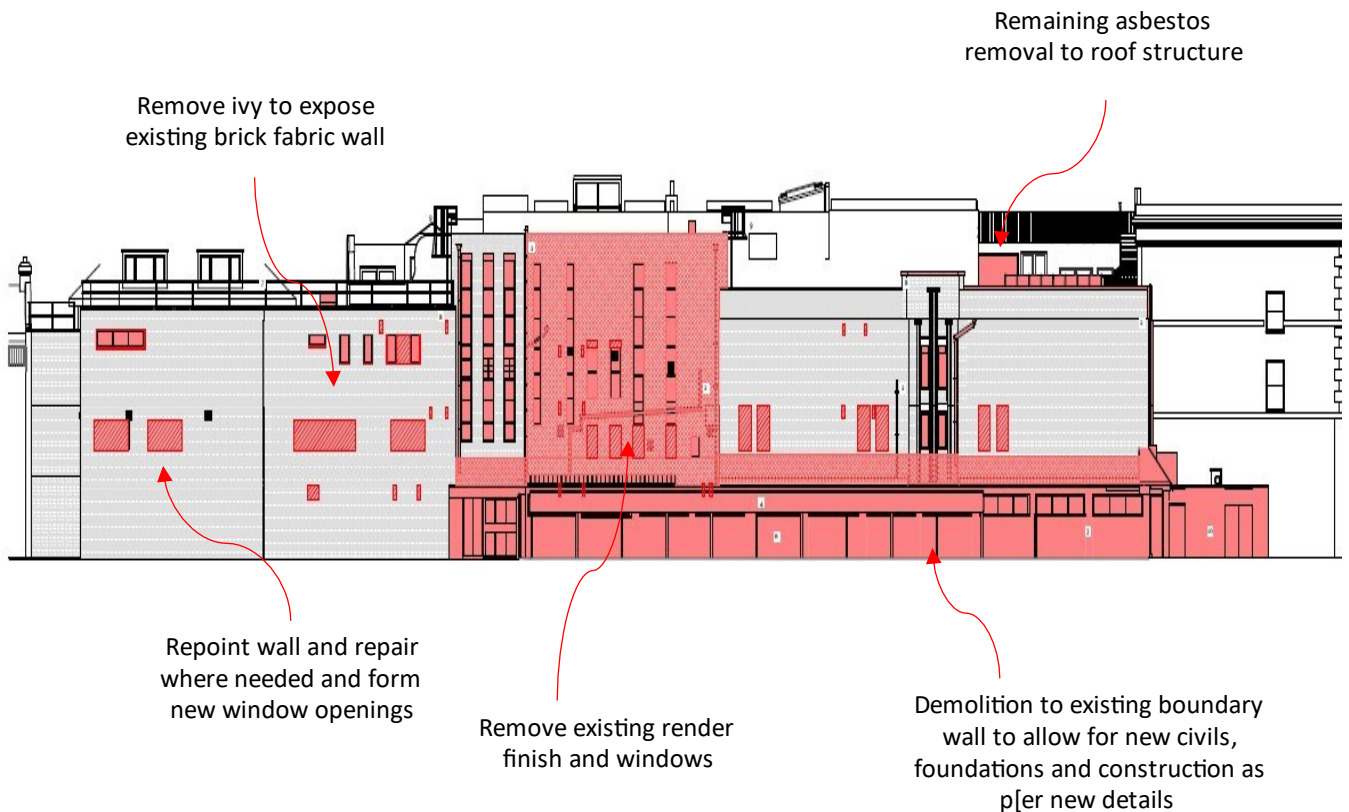
**Proposal Sequence**

The following indicative sequence is to reflect our tender programme and is subject to validations, inspections surveys and review of the areas on site. This could be subject to changes in stages and sequence should any site challenges arise. The site team will control and monitor the programme and propose the best sequence upon completion of any enabling works

**Step 1**

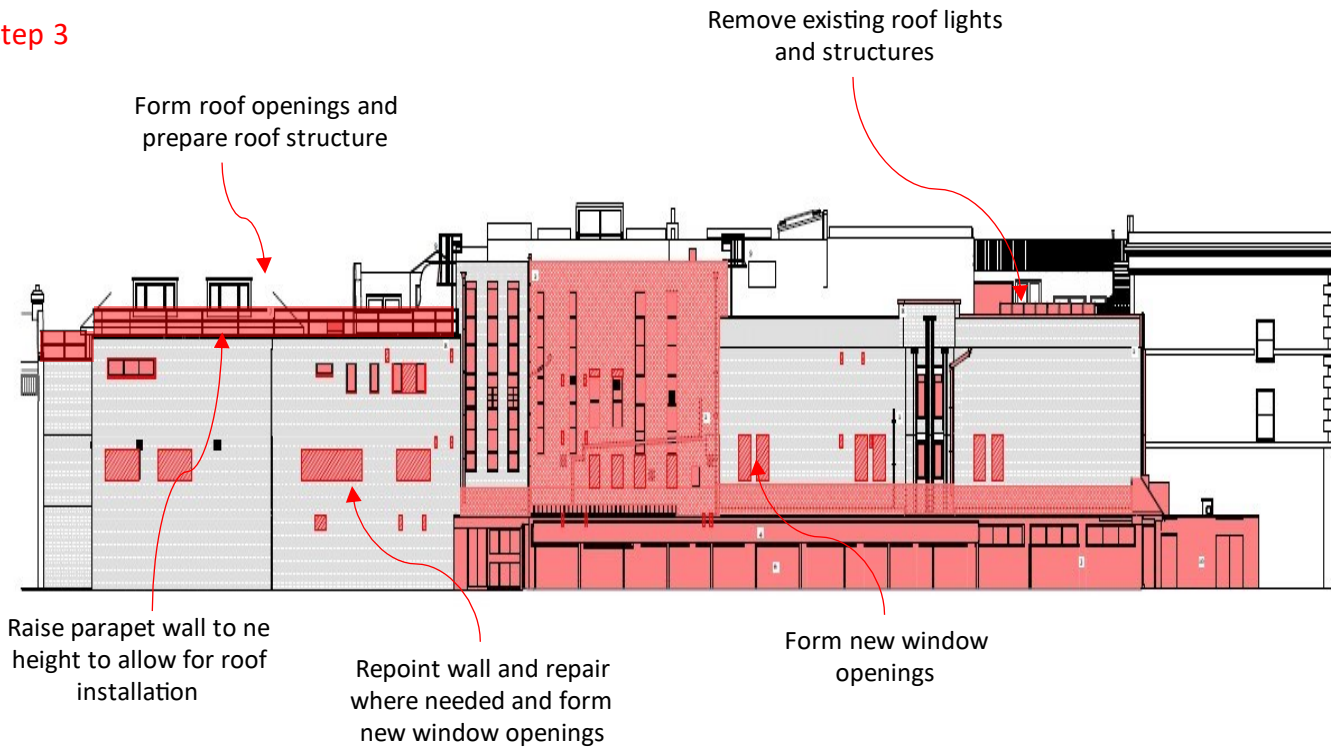


**Step 2**

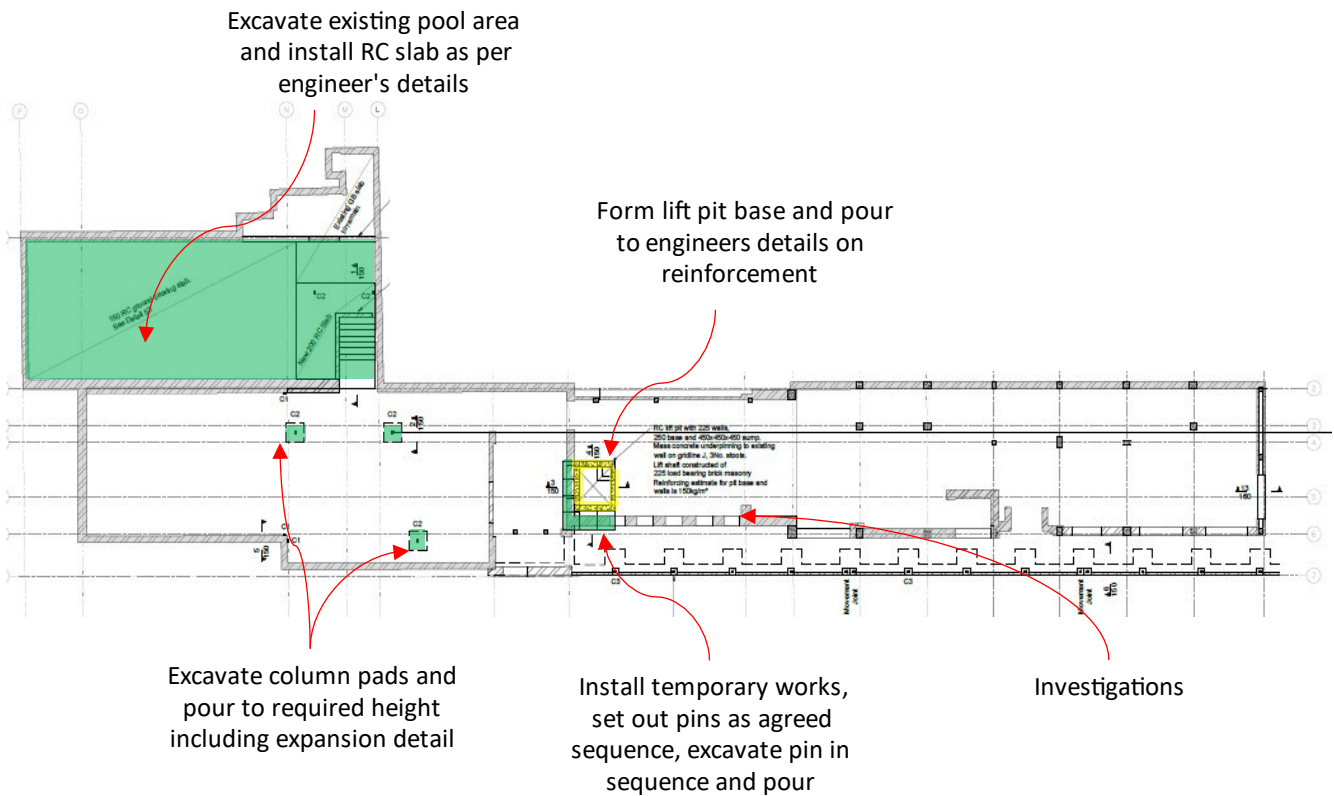


Proposal Sequence

Step 3

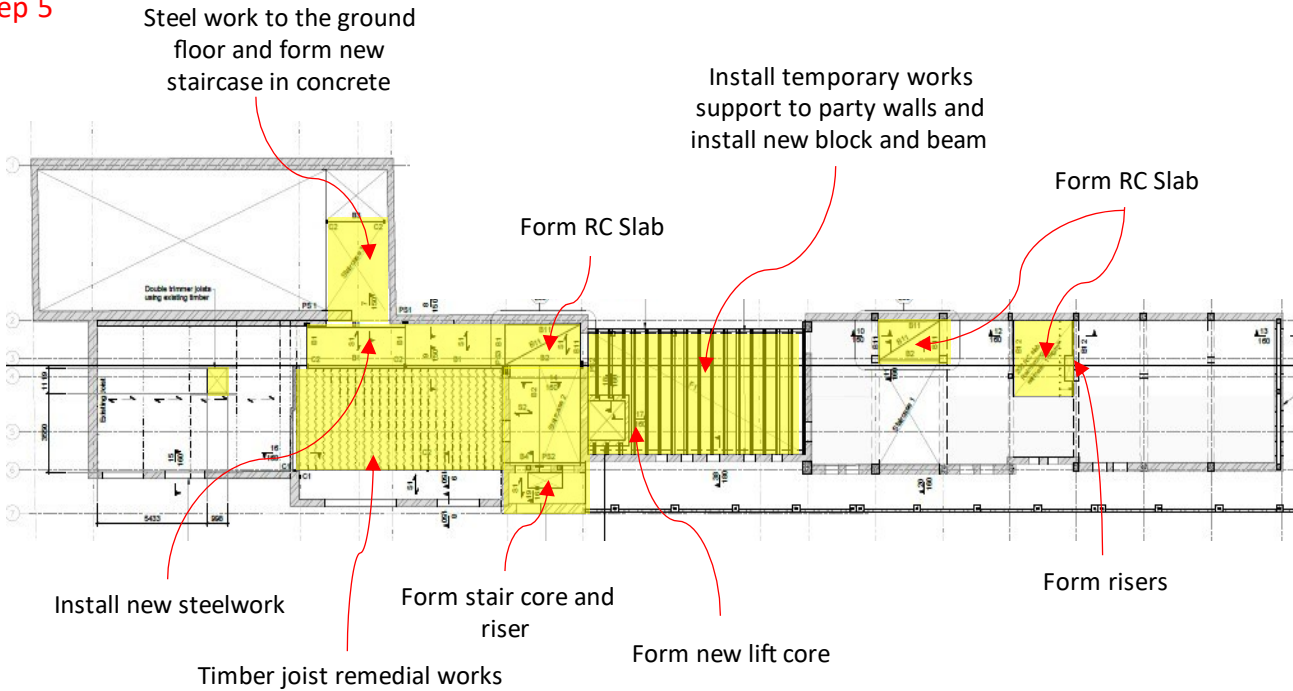


Step 4

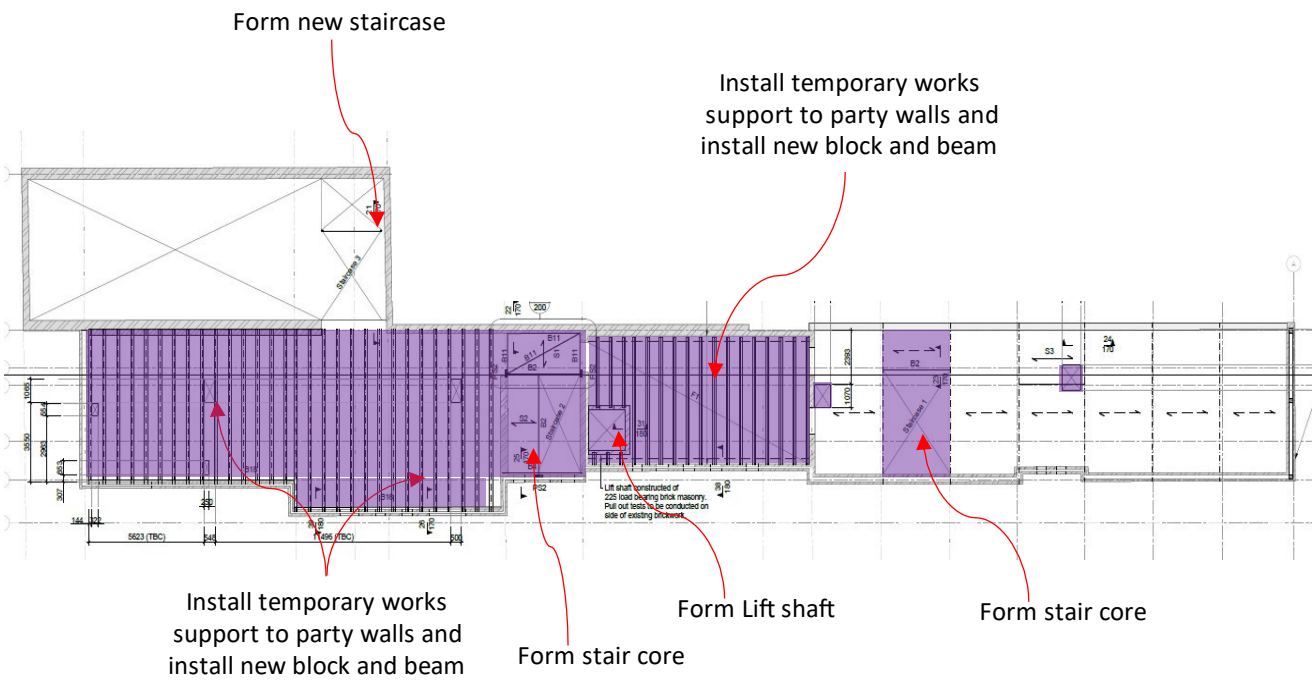


Proposal Sequence

Step 5



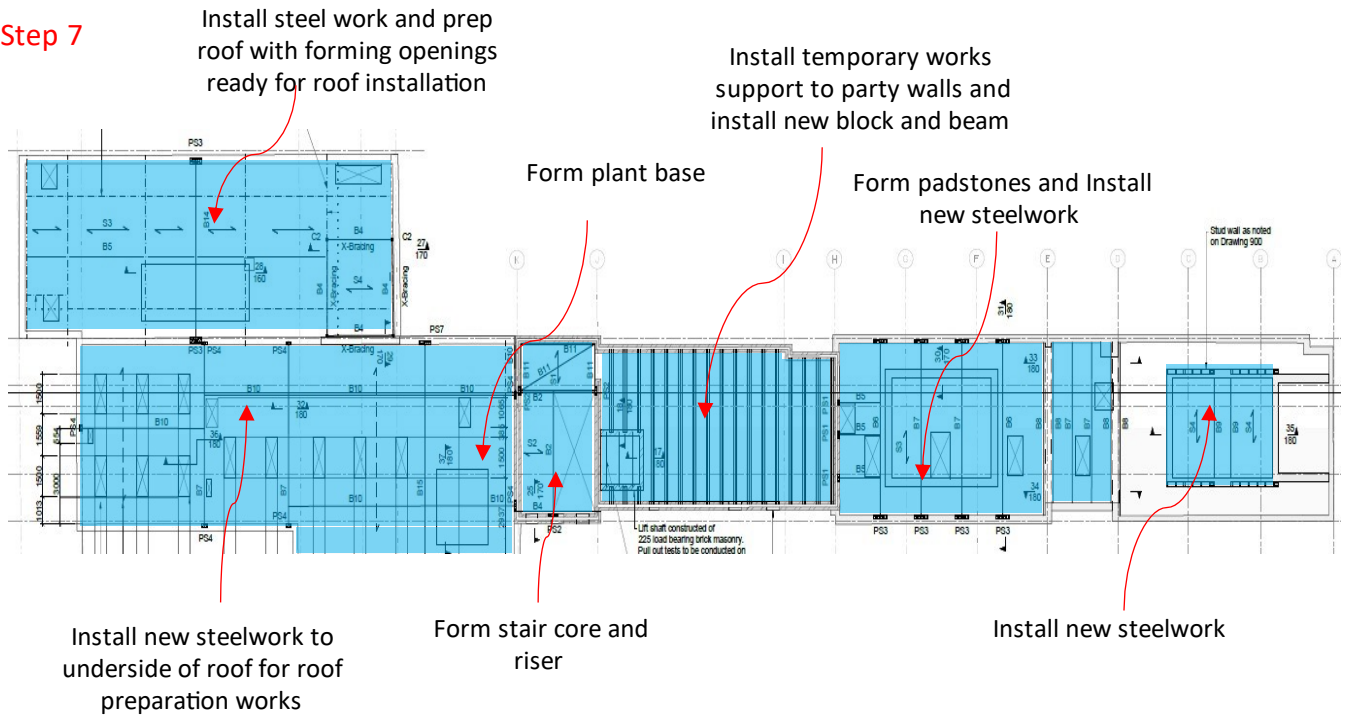
Step 6





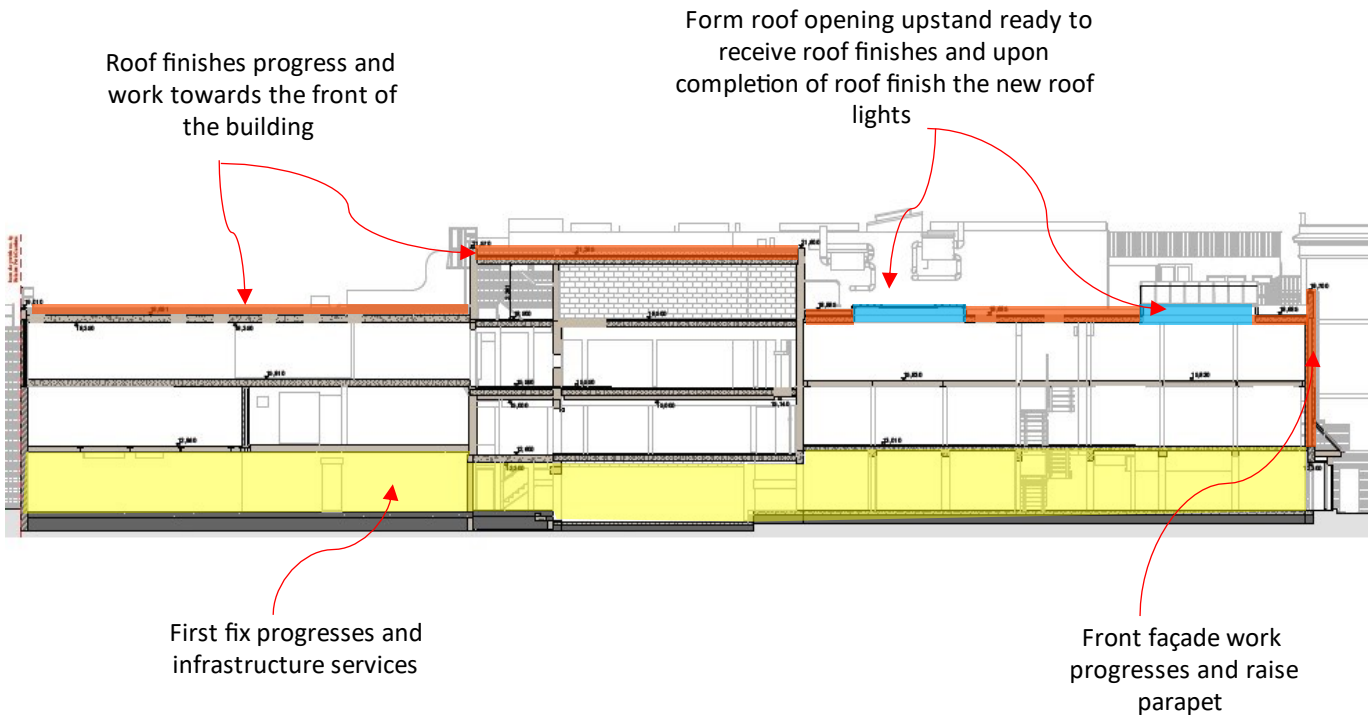
Proposal Sequence

Step 7



Sequence NOTE:  
Upon completion of internal structural works to the third floor the roof finishes will follow. this area will then become a permit to work area

Step 8

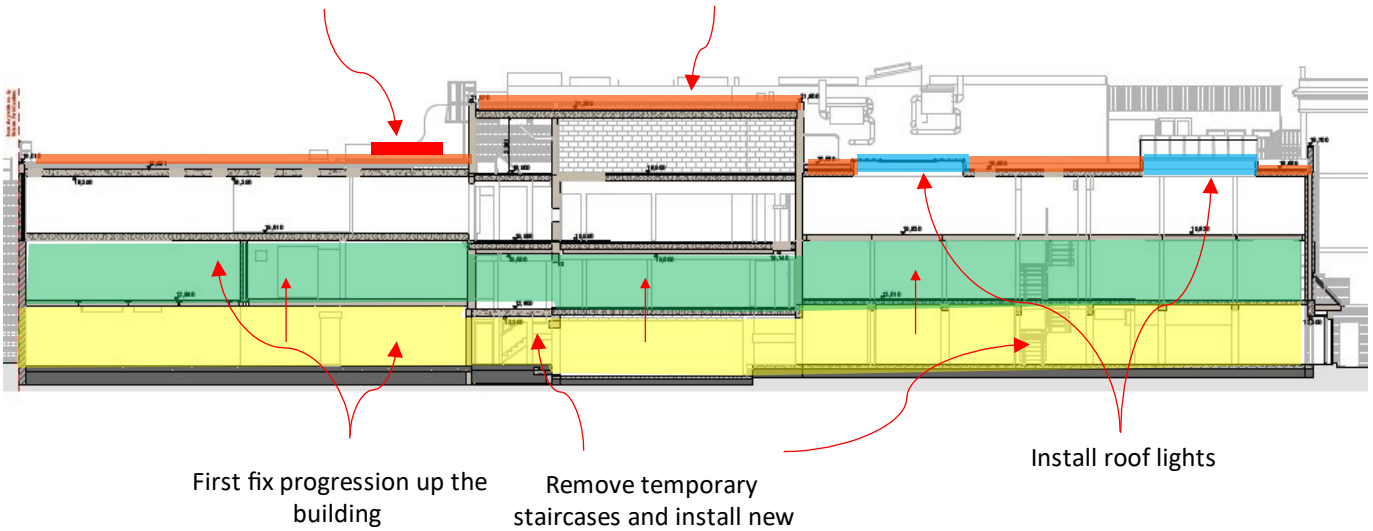


Proposal Sequence

Step 9

Protect roof and form plant bases ready to receive plant and infrastructure services

Run mechanical and electrical services across roof to riser locations to feed down to floor locations



First fix progression up the building

Remove temporary staircases and install new

Install roof lights

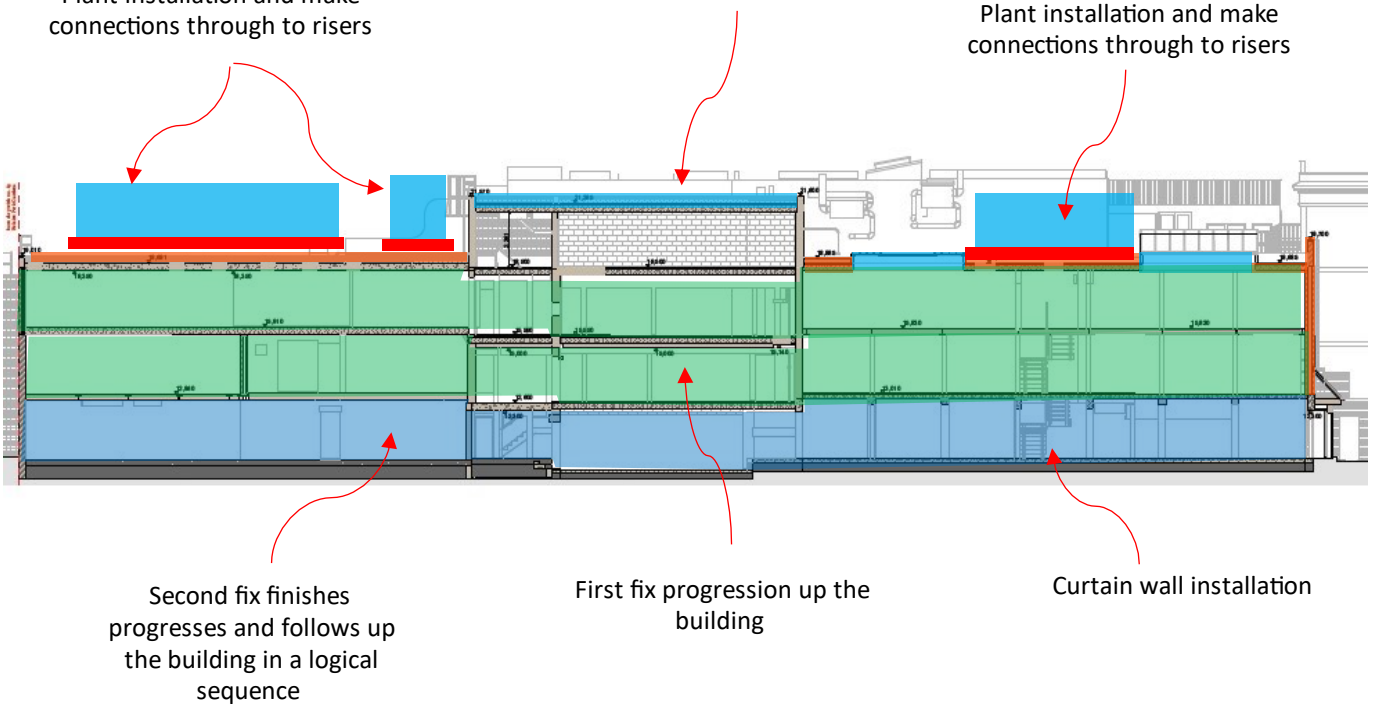
Sequence NOTE:  
Upon completion of the roof and façade work building at this point is watertight to allow for scaffold to be struck

Step 10

Plant installation and make connections through to risers

PV and living roof installation

Plant installation and make connections through to risers



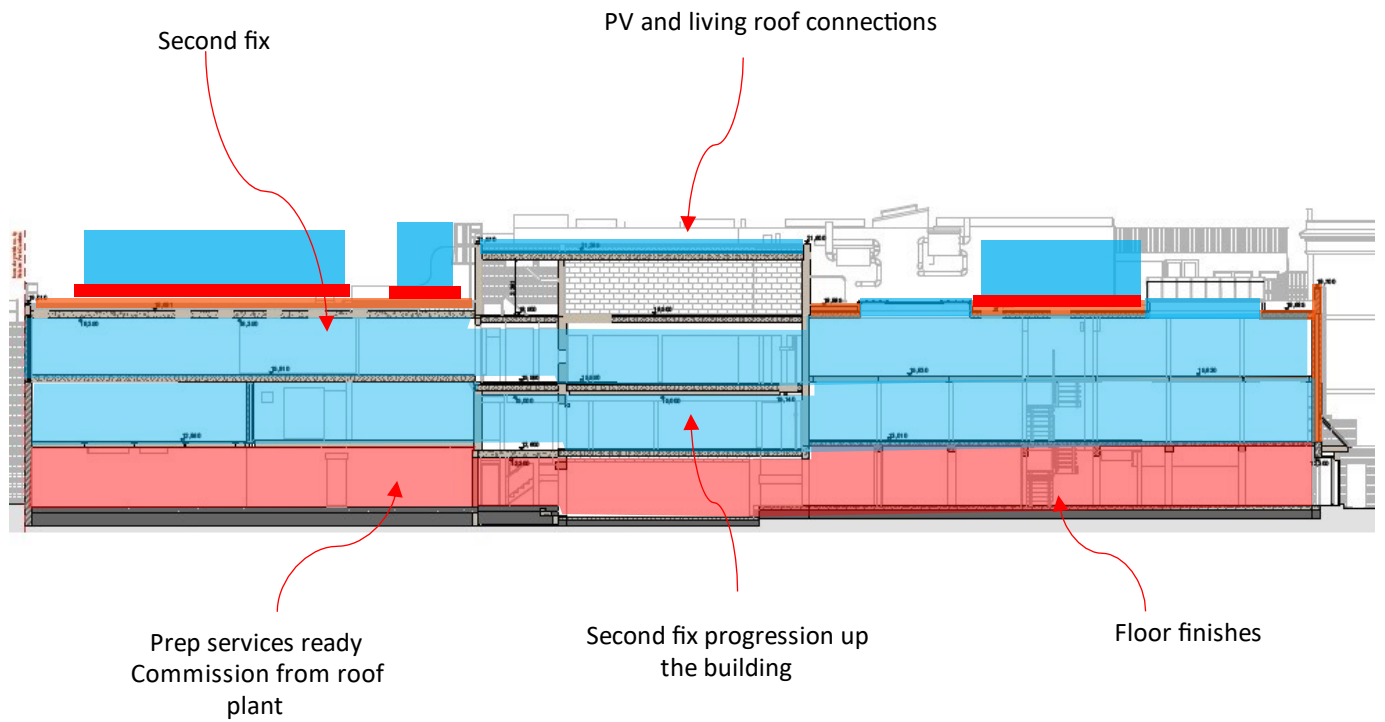
Second fix finishes progresses and follows up the building in a logical sequence

First fix progression up the building

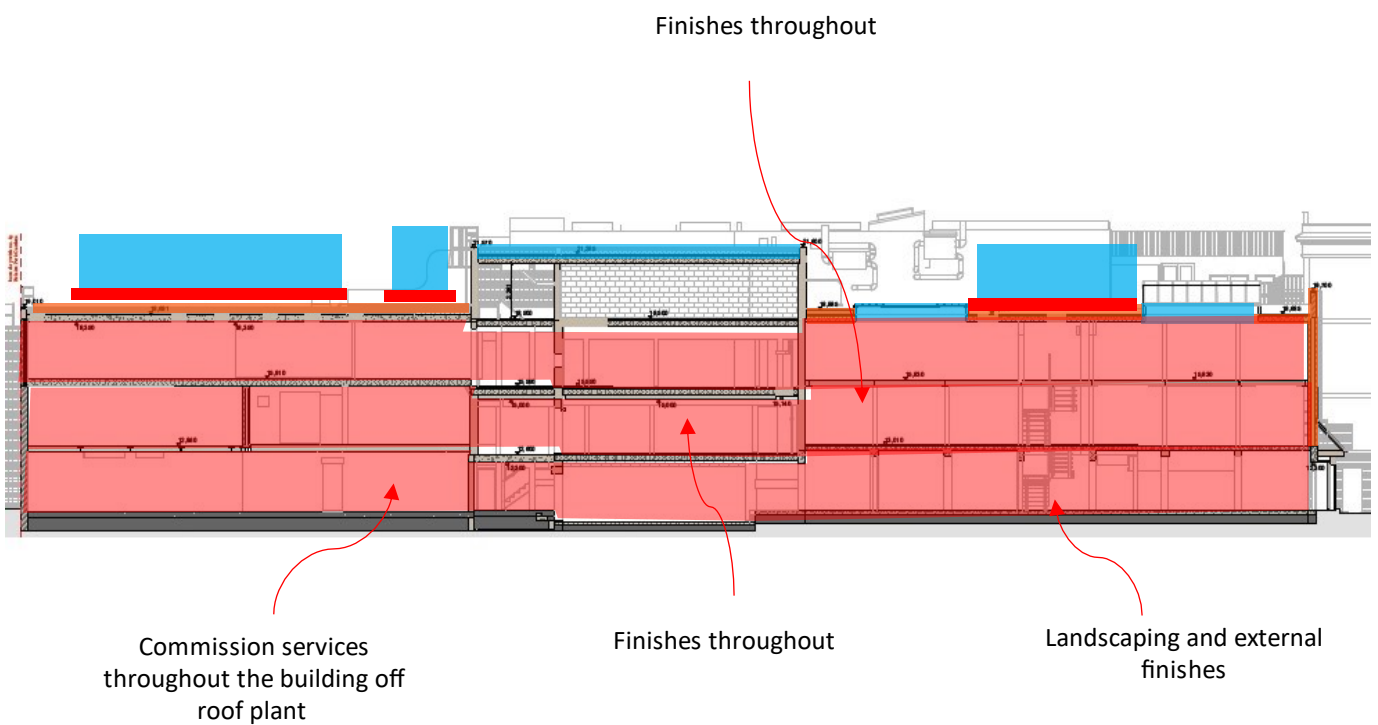
Curtain wall installation

Proposal Sequence

Step 11



Step 12



# Appendix C

## Services Connection Information

**Notes:**  
**GUIDANCE NOTES FOR CLIENT**  
 Client to ensure that NUG guidelines for separation of utility services are respected throughout the site. Cables to be laid as specified in the cross sections on this drawing.  
 Use of incorrect ducts or installation at incorrect depths or failure to install marker tape correctly will result in re-work at the client's cost.  
 Finished levels and kerb lines must be established before the installation of cables.

**Civil Works**  
 All on-site civil works including any cable containment, to be undertaken by the client in accordance with the design supplied by Power On. Power On will undertake all off-site excavation and reinstatement including closing joint holes at the point of connection.

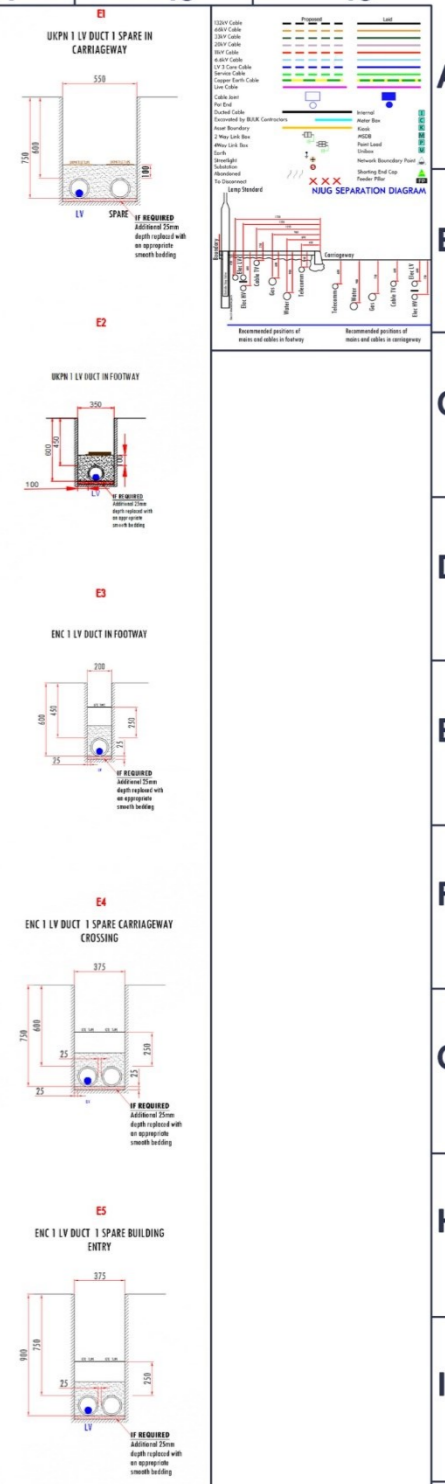
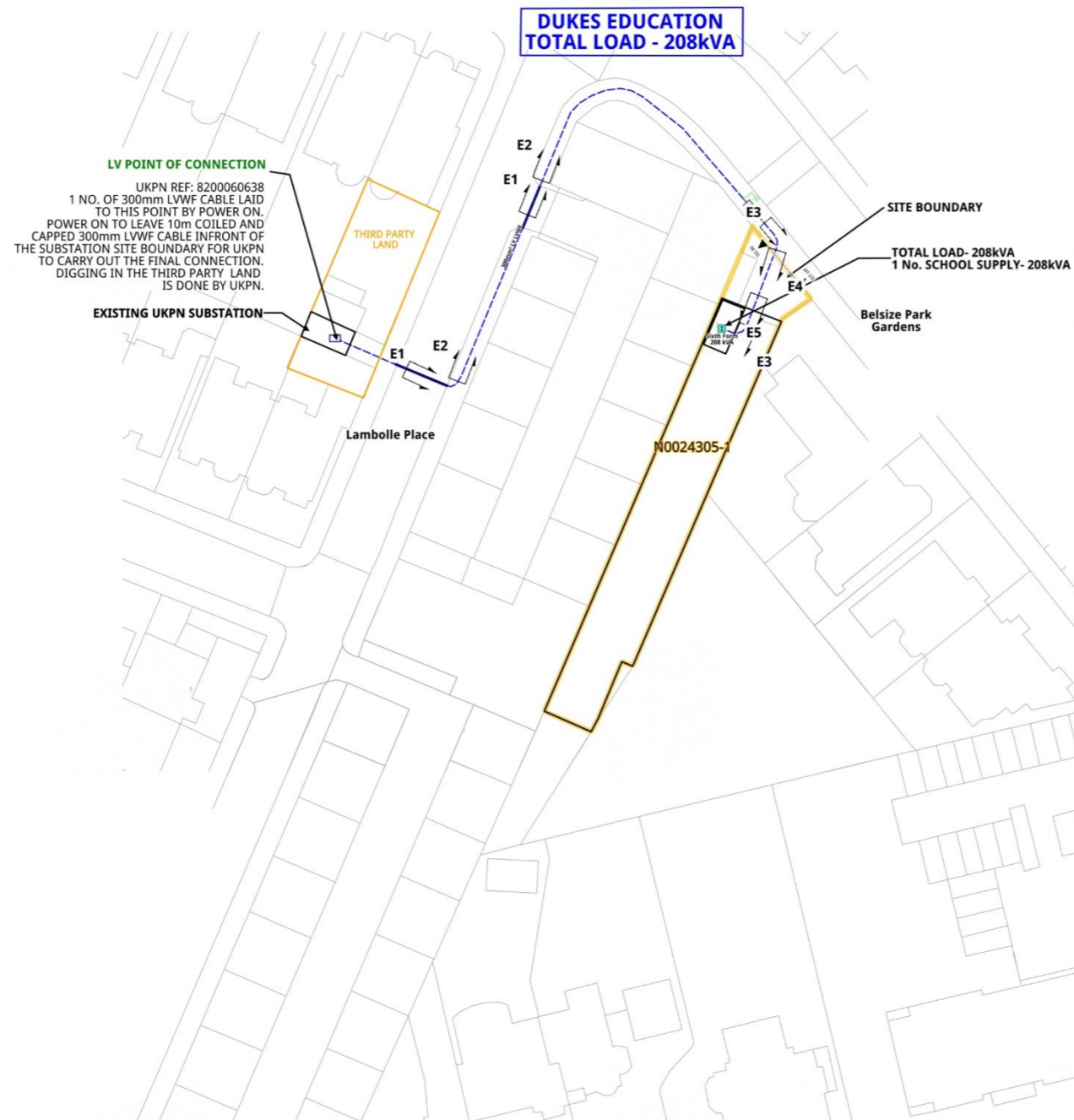
**NOTE:**  
 200mm Tile Tape  
 BACKFILL SPEC.:  
 HV and LV cables may only be laid on the bottom of the trench when it is smooth and free from loose or projecting stones, rubble, rock, etc. Where these conditions do not apply, an additional 25mm depth shall be excavated and replaced with an appropriate smooth bedding (e.g. sand).  
 The cables shall also be blinded with stone free soil, sand or ground crusher run limestone to a level of 100mm above top of the uppermost cable.  
 The blinding material must be hand rammed over and around the cables. Mechanical rammers must not be used for this purpose.

**ENC NOTES:**  
 LV cable ducts to be 125mm internal diameter black twin walled corrugated rigid-duct to ENATS 12-24 embossed "electric cable duct" on opposing sides.  
 All buried cables to be fully ducted along their entire length with marker tape cover.

**BACKFILL SPECIFICATION:**  
 Hatched area to be fine fill  
 Minimum of 25mm clearance required to consolidate ducts

MINIMUM BENDING RADII AND PULLING TENSIONS TO BE IN ACCORDANCE WITH THE DNO/IDNO REQUIREMENTS AS STATED IN THE G81 DOCUMENTATION

INFORMATION ONLY  
 NOT FOR CONSTRUCTION



01	ORIGINAL DESIGN	04-01-2024	VG	DR				
Rev	Amendment	Date	Drawn	Checked				
Drawing Title PLANT EQUIPMENT & CABLE ROUTE PLAN								
<b>POWER ON</b>								
All Utilities. One Provider								
FLETCHER HOUSE HENDRAVE CLONM COVENTRY, CV2 2JZ TELEPHONE: 0344222322								
E: 014941942   P: 0122794086   W: www.poweron.co.uk								
<table border="1"> <tr> <td>Project Name</td> <td>DUKES EDUCATION</td> </tr> <tr> <td>Site Address</td> <td>DUKES EDUCATION 11 BELSIZE PARK GARDENS, LONDON, SW3 4JH</td> </tr> </table>					Project Name	DUKES EDUCATION	Site Address	DUKES EDUCATION 11 BELSIZE PARK GARDENS, LONDON, SW3 4JH
Project Name	DUKES EDUCATION							
Site Address	DUKES EDUCATION 11 BELSIZE PARK GARDENS, LONDON, SW3 4JH							
<b>IF IN DOUBT - ASK</b>								
Design Engineer	JAMAN ALEH	Mobile	07485923923					
Project Manager	COLIN GANESH	Mobile	07485384459					
Scale	1:400	Original Size	A1	Sheet 1 of 1				
Block	N0024305-1	Drawing Number	P-0022794-DWG-010-REV0-PLAN					

Self-Approved  
 Date: 2023-12-21

# Appendix D

## Pre-construction Noise Impact Assessment

MAX FORDHAM

**81 Belsize Park  
Gardens**

**Noise Impact  
Assessment**

**Issue 04**

**11<sup>th</sup> August 2023**

**Max Fordham LLP**  
42/43 Gloucester Crescent  
London  
NW1 7PE

T 020 7267 5161

maxfordham.com

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Registered in England and Wales  
Number OC300026.

Registered office:  
42-43 Gloucester Crescent  
London NW1 7PE

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## ISSUE HISTORY

Issue	Date	Description
01	28/07/23	For comment
02	04/08/23	For issue
03	09/08/23	For issue
04	11/08/23	For issue



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## **1.0 INTRODUCTION**

Max Fordham LLP have been appointed to provide acoustics advice in relation to the proposed refurbishment of Belsize Park Gym, 81 Belsize Park Gardens. Max Fordham LLP are full members of the Association of Noise Consultants (ANC).

The site was previously in use as a gym including swimming pool, squash courts and dance studios. The proposal is for the existing building to be retained and converted to provide accommodation for Hampstead Fine Arts College. As part of the works, a selection of new plant equipment is to be installed on the roof. This noise impact assessment aims to assess the impact of this additional plant equipment, including the effect on the nearest identified noise sensitive receptors (NSRs).

In addition, the noise breakout from the activity of the school and the site suitability for education use will be assessed.

### **1.1 Site**

The location is bounded by residential premises to the north and residential gardens to the south as shown in Figure 1.



Figure 1: Proposed site location. Site boundary indicated approximately by red line.



- SOAEL – Significant Observed Adverse Effect Level: this is the level above which significant adverse effects on health and quality of life occur.

These categories are discussed further in the Planning Practice Guidance section below.

Response	Examples of outcomes	Increasing effect level	Action
<b>No Observed Effect Level</b>			
Not present	No Effect	No Observed Effect	No specific measures required
<b>No Observed Adverse Effect Level</b>			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
<b>Lowest Observed Adverse Effect Level</b>			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response 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. Affect the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
<b>Significant Adverse Effect Level</b>			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, 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.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate the effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

The NPSE acknowledges (paragraph 2.15) that it is not possible to have a single objective noise-based measure that is mandatory and applicable to all sources of noise in all situations.

### 2.1.3 Planning Practice Guidance (PPG – Noise)

The government's Planning Practice Guidance web pages provide advice on various issues, including noise (<https://www.gov.uk/guidance/noise--2>). The noise advice (March 2014, last update July 2019) states in the context of considering when noise is relevant to planning, "noise needs to be considered when new development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced)." (Paragraph: 001, Reference ID: 30-001-20190722, Revision date: 22-07-2019.)

The Planning Practice Guidance pages also include more explanation of the effect level categories noted above, providing an explanatory Noise Exposure Hierarchy Table, which explores how actions such as a requirement for noise mitigation, or prevention of a development, might be assessed with respect to whether noise levels are considered above the category thresholds. The Noise Exposure Hierarchy Table (Paragraph: 005, Reference ID: 30-005-20190722, Revision date: 22-07-2019) is reproduced here:

## **2.0 RELEVANT POLICY AND GUIDANCE**

### **2.1 National Planning Policy**

#### **2.1.1 National Planning Policy Framework**

Planning Policy Guidance Note 24 (PPG24), which was generally used for overall guidance to planners regarding environmental noise, particularly for residential sites, was replaced in March 2012 by the more general advice given in the National Planning Policy Framework (NPPF).

The NPPF (last updated July 2021) states in paragraph 174e), that planning policies and decisions should contribute to and enhance the natural and local environment by “preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.” Furthermore, it states in paragraphs 185 and 187 that planning policies and decisions should:

- mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life [paragraph 185 a)],
- identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason [paragraph 185 b)], and
- be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established [paragraph 187].

#### **2.1.2 Noise Policy Statement for England**

The NPPF document also refers to the Noise Policy Statement for England (March 2010). The Noise Policy Statement for England (NPSE) sets out (paragraph 1.6) the long term vision of Government noise policy: “Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.”

The NPSE also states: “Excessive noise can have wide-ranging impacts on the quality of human life, health (for example owing to annoyance or sleep disturbance) and use and enjoyment of areas of value such as quiet places and areas with high landscape quality.”

The NPSE also cites (in the Explanatory Note section) the following three aims:

- First aim of the NPSE: Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- Second aim of the NPSE: Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- Third aim of the NPSE: Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

The NPSE also states (paragraph 2.2) that “examples of noise management can be found in many areas including reducing noise source; the use of the land use and transport planning systems, compensation measures, the statutory nuisance and licensing regimes and other related legislation.”

The NPSE (in the Explanatory Note section) also introduces guidance to assist in defining the adverse impacts:

- NOEL – No Observed Effect Level: this is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to noise.
- LOAEL – Lowest Observed Adverse Effect Level: this is the level above which adverse effects on health and quality of life can be detected.

In summary, with respect to National Planning Policy, neither the Planning Practice Guidance pages, nor the National Planning Policy Framework or Noise Policy Statement for England documents, provide quantitative advice such as the use of absolute noise limits. Thus, authorities still generally interpret and express national and local non-quantitative policies by issuing quantitative noise-related planning conditions.

## 2.2 BS 4142:2014

BS 4142:2014+A1:2019 "Methods for Rating and Assessing Industrial and Commercial Sound" addresses the likelihood of adverse impact from noise generated by plant equipment. A noise rating is determined and compared with the existing local background sound level, and several cumulative acoustic feature corrections to the noise rating are available to apply where appropriate. For example, if the noise includes a distinguishable tone, impulse, intermittency, or other readily distinguishable sound characteristic.

BS 4142:2014 seeks to determine a "representative" background sound level, stating that "...the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods".

The assessment of the impact depends upon the margin by which the rating level of the specific sound source exceeds the background sound level but also promotes a consideration of the context in which the sound occurs when making an assessment. BS 4142:2014 states that an initial estimate of the impact of the specific sound is made by subtracting the measured background sound level from the rating level, while considering the following points:

- a) Typically, the greater this difference, the greater the magnitude of the impact.
- b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- d) The lower the rating level is, relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

Note then, a BS 4142:2014 assessment may deduce a low impact where the specific sound level is approaching the background sound level, and thus may conclude that the specific noise is acceptable.

## 2.3 Camden Local Plan (2017)

Policy A1 of the Camden Local Plan outlines how the council aims to protect quality of life and how development will consider, amongst other factors, noise and vibration levels. The local plan also states that the Council will require an acoustic report to accompany any development that is likely to generate noise. The general guidance is given in Policy A4:

*"We will not grant planning permission for:*

*a. development likely to generate unacceptable noise and vibration impacts; or*

*b. development sensitive to noise in locations which experience high levels of noise, unless appropriate attenuation measures can be provided and will not harm the continued operation of existing uses.*

*We will only grant permission for noise generating development, including any plant and machinery, if it can be operated without causing harm to amenity. We will also seek to minimise the impact on local amenity from deliveries and from the demolition and construction phases of development."*

**Table 1: BB93 Indoor Ambient Noise Level**

<b>Room Type</b>	<b>IANL (L<sub>Aeq,30min</sub> dB)</b>
<b>Music Teaching / Music Practice</b>	≤35
<b>Multipurpose space</b>	
<b>Drama Studio*</b>	
<b>General Teaching</b>	
<b>Art / Graphics / Photography Studios</b>	≤40
<b>Library / Study / Staff rooms / Offices / Medical Rooms</b>	
<b>Open plan resource areas / Common Room</b>	
<b>Corridors + Stairwells</b>	≤45
<b>Café / Gallery</b>	
<b>WCs / Changing Rooms / Kitchen</b>	≤50

\*Drama studio criteria is more onerous than dance studio

The character of the noise for any noise generating uses must be taken into consideration. As well as the general guidance, the following specific thresholds are set out for industrial and commercial noise sources – reproduced from Table C in Appendix 3.

Existing noise sensitive receptor	Assessment location	Design Period	LOAEL	LOAEL to SOAEL	SOAEL
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 57dB L <sub>Amax</sub>	'Rating level' between 9dB below and 5dB above background or noise events between 57dB and 88dB L <sub>Amax</sub>	'Rating level' greater than 5dB above background and/or events exceeding 88dB L <sub>Amax</sub>
<p><i>*10dB should be increase to 15dB if the noise contains audible tonal elements. However if it can demonstrated that there is no significant difference in the character of the residual background noise then this reduction may not be required.</i></p> <p><i>**Levels are given for dwellings, however, levels are use-specific and different levels will apply dependent on the use of the premises.</i></p>					

The LOAEL/SOAEL definitions correspond to those given in NPPF and PPG – Noise.

The following caveats should be noted:

- The council will take into account the likely times of occupation for types of development
- There are smaller pieces of equipment on commercial premises such as extract ventilation, air conditioning units and condensers, where achievement of the rating levels may not afford the necessary protection. In these cases, the Council will generally also require a NR specification of NR35 or below (based upon L<sub>eq,5mins</sub> at 1m from the façade of the NSR), where the noise sensitive premises is located in a quiet background area.

## 2.4 BB93: Acoustic Design of Schools - Performance Standards

For school complexes, Building Regulation E4 applies. Therefore, the design criteria for the project are the performance standards set out in Building Bulletin 93: Acoustic Design of Schools. This primarily covers sound insulation, internal ambient noise levels (including mechanical services noise) and room acoustics / reverberation control. New build standards have been applied.

With respect to site suitability for educational use, the indoor ambient noise level is applicable. The specific requirements for indoor ambient noise levels, as applied to key room types are listed in Table 1 where IANL is the "Indoor Ambient Noise Level". Up to a 5dB relaxation may be acceptable onsite for refurbished buildings. The building is not naturally ventilated and any derogation for this is not applicable.

### **3.0 ASSESSMENT CRITERIA**

#### **3.1 Plant Noise Emission Limits**

Camden Local Plan sets LOAEL as 10 dB below the representative background noise level at the nearest noise-sensitive receptor, with rating levels between 9dB below and 5dB above background being LOEL to SOAEL. It is proposed to adopt a target of 10dB below the representative background noise level outside windows and 5dB below the representative background noise level in the immediately adjacent roof gardens.

#### **3.2 Site Suitability for Educational Use**

Site suitability for educational use will be assessed based on achieving the internal ambient noise level criteria from BB93 for the relevant spaces. This is based on the new-build standards for mechanically ventilated spaces with up to 5dB relaxation being acceptable for refurbished buildings. These are reproduced in Table 2.

Table 2: BB93 Indoor Ambient Noise Level Criteria

Room Type	IANL ( $L_{Aeq,30min}$ dB)
Music Teaching / Music Practice	
Multipurpose space	≤35
Drama Studio*	
General Teaching	
Art / Graphics / Photography Studios	
Library / Study / Staff rooms / Offices / Medical Rooms	≤40
Open plan resource areas / Common Room	
Corridors + Stairwells	
Café / Gallery	≤45
WCs / Changing Rooms / Kitchen	≤50

#### **3.3 Noise Breakout from the Arts College**

The main sources of activity noise from within the proposed development activity in the multipurpose space and music rooms. These are buffered from the party wall by other spaces/circulation. The party wall has been tested between the existing building and 3 residential premises on Lancaster Stables. The measured sound insulation performance was  $D_{nT,w}+C_{tr}$  60-65dB. An additional wall lining along the party wall is proposed to further minimise any noise breakout. This should provide a very high level of sound insulation to the adjacent properties on Lancaster Stables.

Music noise breakout through the façade to the rear of the houses on Belsize Park gardens will be calculated and compared with the existing ambient noise level.



## 4.0 BASELINE NOISE CLIMATE

### 4.1 Methodology

A long-term unattended measurement on the roof of the existing building was taken between 11:45 on Monday 7<sup>th</sup> November and 14:15 on Sunday 13<sup>th</sup> November 2022 (approx. 146 hours). This is marked as LT1 on Figure 2. In addition, a 15-minute attended measurement was taken at street level at 11:00 on Monday 14<sup>th</sup> November at the location marked ST1 on Figure 2.

All measurements were taken at least 1.5m above ground/roof level and 3.5m from reflecting façades. Measurement procedures are in accordance with BS7445-1:2003.



Figure 2: Noise measurement locations

### 4.2 Equipment

The following equipment was used for the survey:

Item	Make	Type	Serial no.	Calibration Intervals	Last Calibrated	Next Due Calibration	Calibration Certificate Number
Class 1 sound level meter	Norsonic	140	1405942	2 years	26/02/21	26/02/23	U37205 U37206
Microphone preamplifier	Norsonic	1209	15804	2 years	26/02/21	26/02/23	U37205 U37206

Microphone	Norsonic	1225	208215	2 years	26/02/21	26/02/23	37204
Calibrator	Norsonic	1251	34059	1 year	17/12/21	17/12/22	U39785

### 4.3 Weather

For the majority of the unattended measurement period, windspeeds were recorded as 5 m/s or below. At the start of the measurement period, the windspeed exceeded this value, with a maximum of 8 m/s recorded at 00:00 on Tuesday 8<sup>th</sup> November. At this time there was also rain recorded, although it was dry throughout the rest of the measurement period. During the short-term attended measurement the weather was dry, and windspeeds did not exceed 5 m/s.

### 4.4 Noise Climate

The main source of noise at the two measurement locations was traffic noise from Belsize Park Gardens, including vans and motorbikes. Additionally, sirens could occasionally be heard passing along other nearby roads. On setup and collection of the survey, there was noise from tree cutting and other maintenance work along Belsize Park Gardens. Noise could also be heard from groups of pedestrians, particularly at ST1; however, this was considerably quieter than passing vehicles.

### 4.5 Results

A time-history of the key unattended noise parameters is given in Figure 3. A summary of the parameters to be used in this assessment are given in Table 3. The weekday daytime ambient noise level during the 0800-1800 hour period (times when nursery is occupied) is 49dBA.

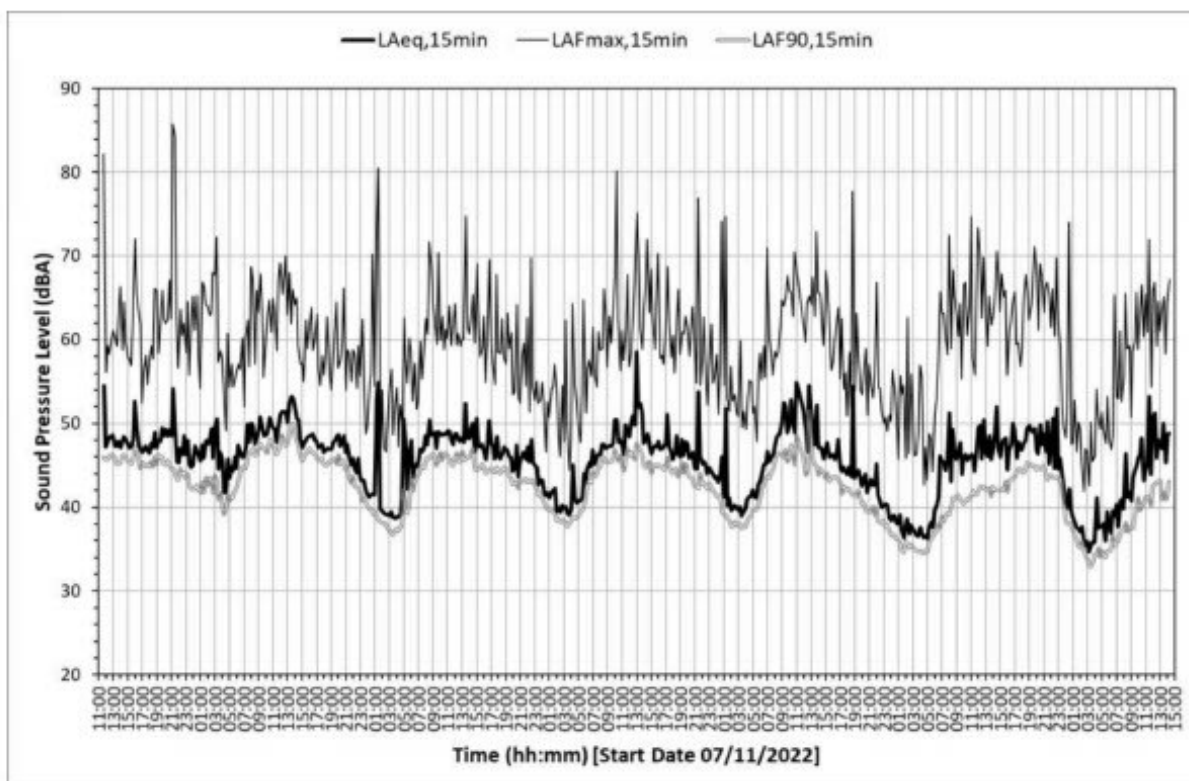


Figure 3: Unattended measurement results (L1) on 7<sup>th</sup>-13<sup>th</sup> November 2022

Table 3: Key unattended measurement results

Period	Mean ambient noise levels / dB $L_{Aeq,T}$	Representative* background noise levels / dB $L_{A90,15min}$	Maximum noise levels / dB $L_{AFmax,15min}$
Daytime (0700-2300 hours)	48	44	80
Night-time (2300-0700 hours)	43	38	81
* 40 <sup>th</sup> percentile			

The results for the spot measurement are given in Table 4.

Table 4: Attended measurement results

Location	Ambient noise level / dB $L_{Aeq,15min}$	Background noise level / dB $L_{A90,15min}$	Maximum noise level / dB $L_{AFmax,15min}$
S1	55	44	75

## 5.0 ASSESSMENT

### 5.1 Plant Noise Emission

Plant noise emission limits are set at 10 dB below the representative background noise level at the nearest noise-sensitive receptors and 5dB below the representative background noise level at gardens / roof terraces. This is based on the plant being non-tonal. If any plant is replaced with products containing tonal elements or feature characteristics, further penalties should be applied in accordance with BS4142:2014.

Period	Representative Background Noise Level / dB L <sub>A90</sub>	Plant noise rating limit at nearby windows / dB L <sub>A,r</sub>	Plant noise rating limit at roof gardens / dB L <sub>A,r</sub>
Day (07:00-23:00)	44	34	39
Night (23:00-07:00)	38	28	-

The proposed roofplant comprises 2 ASHPs (Clade Acer 75KW Ultra Low Noise) each with a sound pressure level of 33dBA at 1m. These are pre-packaged units with a high level of acoustic attenuation built-in and have been modelled as 2 horizontal area sources each with a sound power of 54.7dBA. The units are assessed as being operational in the day and night-time periods.

In addition, 7 no. MVHR units and 1 no. AHU are proposed on the roof as shown by the blue markers in Figure 5. The MVHR units comprise 4 no. XBC+65, 1 no. XBC+45, 1 no. XBC+10 and 1 no.XBC+15. The noise levels from the casing radiated, fresh air intake and discharge have considered for each unit running at 75% duty. The AHU has been modelled at the proposed design duty. Full sound power level data is given in Appendix 7.1 and 7.2. The MVHR/AHU units are not considered to be operational at night.



Figure 4: Proposed location of the 2No. ASHPs, and the nearest noise-sensitive receptors (NSRs)

Table 5: Predicted plant noise emission limits at the receptor

	Period	Plant noise rating limit / dBA	Predicted plant noise rating level / dBA	Criterion met?
Nearest roof gardens (NSR1)	Daytime (0700-2300)	39	30	Yes
Nearest window on Lancaster Stables (NSR2)	Daytime (0700-2300)	34	29	Yes
	Night-time (2300-0700)	28	25	Yes
Nearest window on Belsize Park Gardens (NSR3)	Daytime (0700-2300)	34	28	Yes
	Night-time (2300-0700)	28	24	Yes
Nearest window on No. 4 Lancaster Stables (NSR4)	Daytime (0700-2300)	34	32	Yes
	Night-time (2300-0700)	28	14	Yes

Should plant items change, the noise levels will need to be reviewed and appropriate mitigation selected to meet the criteria.

Providing the criteria are met, 'no observed adverse effect level' is predicted and therefore no significant impact is considered.

## 5.2 Site Suitability for Educational Use

The proposed ventilation strategy is for mechanical ventilation using MVHR with cooling provision. With the existing constructions (and new windows / glass blocks) combined with a mechanical ventilation strategy, it is considered that the BB93 internal ambient noise levels can be met. Thus, the site is considered suitable for educational use.

## 5.3 Noise Breakout from the Arts College

The rooms have been strategically orientated so as to keep music / drama activities away from the party wall with separating corridor elements in most locations acting as a 'buffer zone'. In addition, it is proposed to line the party wall with an independent lining comprising 2 layers of plasterboard to increase the sound insulation performance between the college and the adjacent mews houses. In the existing condition for noise levels up to 78dBA in the arts college, <15dBA (10dB below the measured ambient noise level) is predicted in an adjacent residential space. This will be further improved with the independent wall lining.

The music rooms do not have traditional windows to external, rather triple layer glass blocks. With this construction, the predicted noise levels at 1m from the façade of the residential properties opposite is predicted to be <45dBA. This is less than the prevailing daytime ambient noise climate of 48dBA. Although, it may be audible due to the tonal nature of music, it is not expected to cause significant disturbance.

## **6.0 CONCLUSION**

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A noise survey has been undertaken at the former gym Belsize Park Gardens. This has been used to assess the representative background noise levels and prevailing ambient noise levels.

Plant noise emission limits are set at 10dB below the representative background noise levels for the day and night-time periods. Thus, the plant noise rating limit is set at 34dB  $L_{Ar}$  and 28dB  $L_{Ar}$  in the day and night-time respectively. Noise levels at gardens, including rooftop terraces, have been limited to 5dB below the daytime ambient noise level (39dB  $L_{Ar}$ ). The proposed plant comprises 2 no. ASHPs, 7 no. MVHR units and 1 no. AHU on the roof of refurbished building. With the proposed induct attenuators to the AHU and MVHR units, the plant noise emission limits can be met. On this basis, no observed adverse effect level is predicted and therefore no significant impact.

The proposed Arts College building will be mechanically ventilated and design to meet the BB93 internal ambient noise level criteria. The site is, therefore, considered suitable for educational use.

Noise breakout through both through the party wall and to residential premises opposite. Mitigation has been introduced to minimise noise transfer to the adjacent properties – orientation of the rooms and party wall upgrades. The noise break-out from activity noise is considered to have no significant impact.

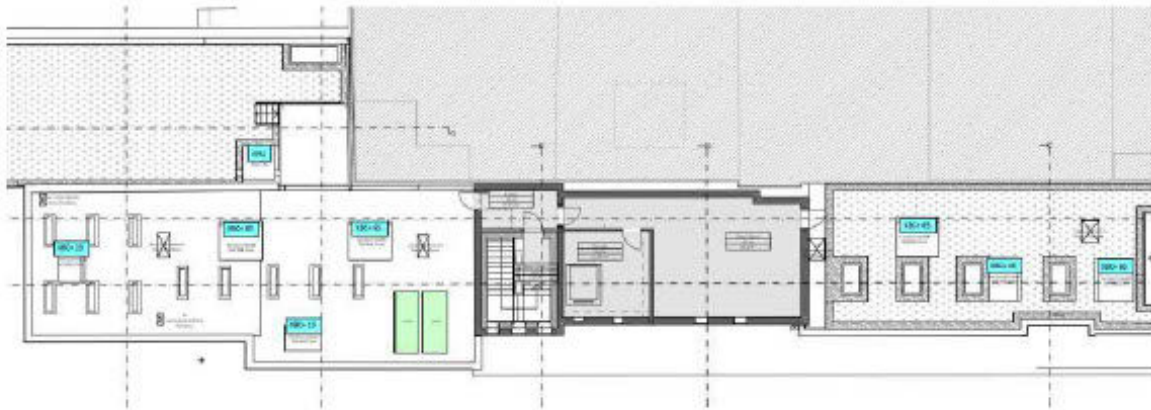


Figure 5: Proposed location of MVHR & AHU units (blue) and ASHPs (green)

In order to meet the criteria, induct attenuation has been allowed for on the MVHR intake / exhaust. The following insertion losses have been assumed:

Frequency / Hz	63	125	250	500	1k	2k	4k	8k
Fresh air intake attenuator insertion loss / dB	6	13	25	37	44	43	30	20
Exhaust attenuator insertion loss / dB	6	13	25	37	44	43	30	20

The following induct attenuation is assumed to the AHU fresh air intake and exhaust:

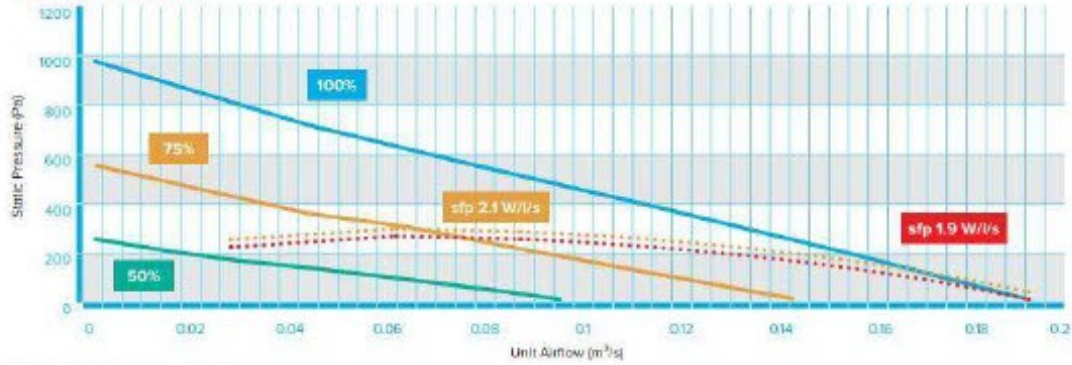
Frequency / Hz	63	125	250	500	1k	2k	4k	8k
Fresh air intake attenuator insertion loss / dB	6	9	19	38	43	35	24	20
Exhaust attenuator insertion loss / dB	6	9	19	38	43	35	24	20

The predicted noise levels at the receptors with the proposed ASHPs, MVHRs and AHU (including mitigation) is given in Table 5. No feature corrections for tonality / intermittency have been applied, as the noise associated with the type of plant being used is typically broadband with no strong tonal character; therefore, the rating level is the same as the specific level. The plant noise emission limits are met in all cases.

# XBOXER XBC+ 15

## PERFORMANCE & TECHNICAL INFORMATION

### PERFORMANCE CHART



### TECHNICAL INFORMATION

HEATER TYPE	VOLTAGE	PHASE	FREQUENCY	INPUT POWER (W)	FAN SPEED (rpm)	FLC (A)	SC (A)	MAX OPERATING TEMPERATURE (°C)	UNIT WEIGHT (kg)
UPHW	230	1	50	340	4000	2.8	2.8	40	187
Electric*	230	1	50	3340	4000	16	16	40	195
None	230	1	50	340	4000	2.8	2.8	40	183

Relevant to DC, ES, CO or AT control types. \*Includes 3kW electric heater

### SOUND DATA

FAN SPEED	SOUND POWER LEVELS (dB re 1 pW)	FREQUENCY (Hz)								SPHERICAL dBA @ 3m
		63	125	250	500	1K	2K	4K	8K	
100%	Inlet Intake	70	60	55	56	62	55	47	43	26
	Inlet Supply	75	72	65	66	66B	64	59	57	
	Inlet Discharge	75	73	65	67	68	65	60	58	
	Inlet Extract	69	59	55	55	61	55	45	41	
	Casing Radiated	61	57	42	43	41	37	34	23	
75%	Inlet Intake	64	54	49	50	56	49	41	37	20
	Inlet Supply	69	66	59	60	62	58	53	51	
	Inlet Discharge	69	67	59	61	62	59	54	52	
	Inlet Extract	63	53	49	49	55	49	39	35	
	Casing Radiated	55	55H	396	377	335	33H	28	<20	



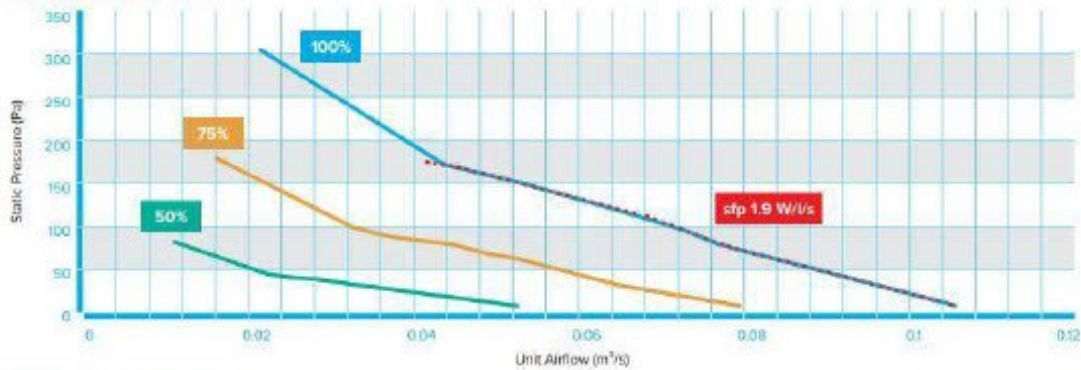
## 7.0 APPENDICES

### 7.1 Sound Power Data for MVHR Units

#### XBOXER XBC+ 10

#### PERFORMANCE & TECHNICAL INFORMATION

##### PERFORMANCE CHART



##### TECHNICAL INFORMATION

HEATER TYPE	VOLTAGE	PHASE	FREQUENCY	INPUT POWER (W)	FAN SPEED (rpm)	FLC (A)	SC (A)	MAX OPERATING TEMPERATURE (°C)	UNIT WEIGHT (kg)
LPHW	230	1	50	160	3200	1.5	1.5	40	347
Electric*	230	1	50	160	3200	9	9	40	155
None	230	1	50	160	3200	1.5	1.5	40	113

Relevant to BC, ES, CO or AT control types. \*Includes 1.5kW electric heater.

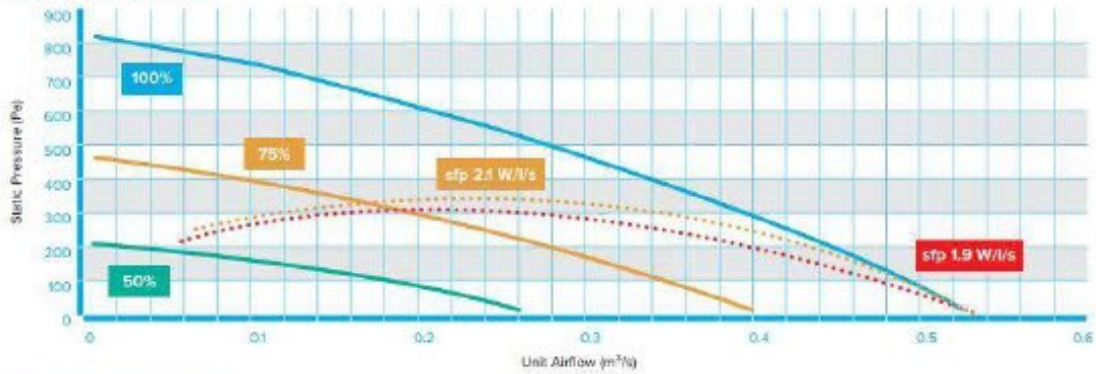
##### SOUND DATA

FAN SPEED	SOUND POWER LEVELS (dB re 1 µW)	FREQUENCY (Hz)								SPHERICAL dBA @ 3m
		63	125	250	500	1K	2K	4K	8K	
100%	Induct Intake	58	57	50	51	57	50	42	38	24
	Induct Supply	73	69	60	61	63	59	54	52	
	Induct Discharge	73	70	60	62	63	60	55	53	
	Induct Extract	67	56	50	50	56	50	54	36	
	Casing Radiated	59	55	40	41	39	35	32	21	
75%	Induct Intake	62	51	44	45	51	44	36	32	20
	Induct Supply	67	63	54	55	57	53	48	46	
	Induct Discharge	67	64	54	56	57	54	49	47	
	Induct Extract	61	50	44	44	50	44	34	30	
	Casing Radiated	53	49	34	35	33	29	26	<20	

# XBOXER XBC+ 45

## PERFORMANCE & TECHNICAL INFORMATION

### PERFORMANCE CHART



### TECHNICAL INFORMATION

HEATER TYPE	VOLTAGE	PHASE	FREQUENCY	INPUT POWER (W)	FAN SPEED (rpm)	FLC (A)	SC (A)	MAX OPERATING TEMPERATURE (°C)	UNIT WEIGHT (kg)
LPHW	230	1	50	1100	2400	6.9	6.9	40	291
Electric*	230	1	50	5600	2400	27	27	40	296
None	230	1	50	1100	2400	6.9	6.9	40	287

Relevant to BC, ES, CD or AT control types. \*Includes 4.5kW electric heater.

### SOUND DATA

FAN SPEED	SOUND POWER LEVELS (db re 1 pW)	FREQUENCY (Hz)								SPHERICAL dBA @ 3m
		63	125	250	500	1K	2K	4K	8K	
100%	Induct Intake	83	75	75	64	64	62	54	45	35
	Induct Supply	87	80	85	71	72	71	66	62	
	Induct Discharge	88	81	85	71	72	72	66	64	
	Induct Extract	84	75	76	63	64	63	53	44	
	Casing Radiated	74	65	62	47	45	44	40	29	
75%	Induct Intake	77	69	69	58	58	56	48	39	29
	Induct Supply	81	74	79	65	66	65	60	56	
	Induct Discharge	82	75	79	65	66	66	60	58	
	Induct Extract	78	69	70	57	58	57	47	38	
	Casing Radiated	68	59	56	41	39	38	34	23	



81 Belsize Park Gardens  
Noise Impact Assessment

# Appendix E

## SMSTS Certificates



# **GOLDCROSS**

## **TRAINING SERVICES**

*CERTIFICATE OF TRAINING ACHIEVEMENT*

This is to certify that

**DANIEL GRAHAM**

*successfully completed the following course of training*

## **Site Manager Safety Training Scheme (5 Day Course)**

*Completed on: 11-September-2020*

- **Goldcross Training Centre no**
- **19500**
- **Instructor Registration no**
- **5212700**



Signed:

**Valid until 30/09/2025**

**Instructor : Paul Nestor  
Tech IOSH, Nebosh, RSP**

**Please note this is a temporary certificate issued whilst CITB issue their original.**



# Site Safety Plus

To certify that

**Alfonso Galindo Martinez**

has successfully completed the following course

## Site Management Safety Training Scheme Refresher

For the Construction and Civil Engineering Industries

Course completion date: 17-12-2021

Certificate expiry date: 31-12-2026

To confirm the authenticity of this certificate please check the [CITB Construction Training Register \(CTR\)](#)



**Jonathan Chivers**  
*Director of Product Management*

Issued Date: 24/12/2021

1175649-22664-3-G

Registration No: 5570813



# Site Safety Plus

To certify that

**Tomas Vysniauskas**

has successfully completed the following course

## Site Management Safety Training Scheme Refresher

For the Construction and Civil Engineering Industries

Course completion date: 25-06-2023

Certificate expiry date: 30-06-2028

To confirm the authenticity of this certificate please check the [CITB Construction Training Register \(CTR\)](#)



**Jonathan Chivers**  
*Director of Product Management*

Issued Date: 03/07/2023

1414884-22664-8-G

Registration No: 3891861

# Appendix F

## Air Quality Assessment



**Air Quality Assessment**

81 Belsize Park Gardens, Camden

July 2023



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### Figures:

Figure 1: Site Location Plan

Figure 2: Construction Phase Receptors

Figure 3: LAEI NO<sub>2</sub> Concentration Contours (2019)

Figure 4: Wind Rose for London City Airport (2019)

### Appendices:

Appendix A: IAQM Recommended Mitigation Measures for Medium Risk Sites

# 1. Introduction

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## Background

- 1.1 Phlorum Limited has been commissioned by Dukes Education Group to undertake an Air Quality Assessment in support of a planning application for a property redevelopment located at 81 Belsize Park Gardens, Camden, London, NW3 4NJ. The National Grid Reference for the centre of the site is 527375, 184640. A site location plan is included in Figure 1.
- 1.2 The development proposes a change of building use from the existing leisure club use (Class E(d)) to education use (Class F1). The building is proposed to be used by the Fine Arts College, who are an existing education provider in Belsize Park. They are currently using leased accommodation in buildings adjacent to 81 Belsize Park Gardens. They will move out of this leased accommodation and will also have further space to grow the College. The College caters for children aged 13-19 years.
- 1.3 Land use in the vicinity of the site comprises primarily residential and commercial uses with greenspaces nearby. The proposed development is located south of Belsize Park Gardens and East of Lambolle Place, on the eastern side of the existing Fine Arts College site. Belsize Park underground station is located approximately 450m north of the site.
- 1.4 The main sources of air pollution in the vicinity of the site are vehicles travelling on the local road network, particularly the adjacent Belsize Park Gardens.
- 1.5 The Local Planning Authority, the London Borough of Camden (LBC), declared a borough-wide Air Quality Management Area (AQMA) in 2002 due to exceedances of the annual mean Air Quality Standard (AQS) for nitrogen dioxide (NO<sub>2</sub>) and the 24-hour mean AQS for particulate matter (PM<sub>10</sub>).
- 1.6 In addition to AQMAs, the Greater London Authority (GLA) have identified Air Quality Focus Areas (AQFAs) across the London boroughs. These are defined as locations in which the UK AQS for annual mean NO<sub>2</sub> has been exceeded with high levels of human exposure. There are currently eight AQFAs located within LBC, the closest of which, the Swiss Cottage AQFA, is located approximately 645m west of the site at its closest point.

## Scope of Assessment

- 1.7 This report assesses both the proposed development's sensitivity to, and impact on, local air quality, considering both the operational and construction phases, and recommending mitigation where necessary.

## 2. Policy Context

### The UK Air Quality Strategy

- 2.1 The UK Air Quality Strategy (UKAQS)<sup>1</sup> sets out air quality standard (AQS) concentrations for a number of key pollutants that are to be achieved at sensitive receptor locations across the UK by corresponding air quality objective (AQO) dates. The sensitive locations at which the standards and objectives apply are those where the population are reasonably expected to be exposed to said pollutants over the particular averaging period.
- 2.2 For those objectives to which an annual mean standard applies, the most common sensitive receptor locations used to compare concentrations against the standards are areas of residential housing. It is reasonable to expect that people living in their homes could be exposed to pollutants over such a period of time.
- 2.3 Schools and children’s playgrounds are also often used as sensitive locations for comparison with annual mean objectives due to the increased sensitivity of young people to the effects of pollution (regardless of whether or not their exposure to the pollution could be over an annual period). For shorter averaging periods of between 15 minutes, 1 hour or 1 day, the sensitive receptor location can be anywhere where the public could be exposed to the pollutant over these shorter periods of time. A summary of the AQS relevant to this assessment are included in Table 2.1, below.

**Table 2.1: UK Air Quality Standards and Objectives**

Pollutant	Averaging Period	Air quality standard ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Air quality objective
Nitrogen dioxide ( $\text{NO}_2$ )	1 hour	200	200 $\mu\text{g}\cdot\text{m}^{-3}$ not to be exceeded more than 18 times a year
	Annual	40	40 $\mu\text{g}\cdot\text{m}^{-3}$
Particulate Matter ( $\text{PM}_{10}$ )	24-hour	50	50 $\mu\text{g}\cdot\text{m}^{-3}$ not to be exceeded more than 35 times a year
	Annual	40	40 $\mu\text{g}\cdot\text{m}^{-3}$
Particulate Matter ( $\text{PM}_{2.5}$ )	Annual	20	20 $\mu\text{g}\cdot\text{m}^{-3}$

<sup>1</sup> Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volumes 1 and 2) July 2007.

- 2.4 The objectives adopted in the UK are based on the Air Quality (England) Regulations 2000<sup>2</sup>, as amended, for the purpose of Local Air Quality Management. These Air Quality Regulations have been adopted into UK law from the limit values required by European Union Daughter Directives on air quality.
- 2.5 The UKAQS for PM<sub>2.5</sub> was recently amended as part of The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020<sup>3</sup>.

## London Local Air Quality Management

- 2.6 The London Local Air Quality Management (LLAQM) framework<sup>4</sup> is the statutory process used by London authorities to review and improve air quality within their administrative boundaries. This framework was designed to specifically meet London's needs.
- 2.7 The LLAQM framework provides London-specific policy and technical guidance (LLAQM.PG(19)<sup>5</sup> and LLAQM.TG(19)<sup>6</sup>) for the London boroughs. Although both are largely based on the updated national Defra LAQM guidance (2022)<sup>7</sup>, they incorporate London-specific elements of the national LAQM system.
- 2.8 Obligations under the Environment Act 1995 require local authorities to declare an AQMA at sensitive receptor locations where an objective concentration has been predicted to be exceeded. In setting an AQMA, the local authority must then formulate an Air Quality Action Plan (AQAP) to seek to reduce pollution concentrations to values below the objective levels.
- 2.9 LBC recently updated their AQAP with the Camden Clean Air Action Plan 2023 - 2026<sup>8</sup>. The action plan sets out Camden's approach for improving air quality and protecting health from exposure to air pollution in Camden. This follows on from the previous Camden Clean Air Action Plan 2019-2022.
- 2.10 The Greater London Authority (GLA) has designated eight Air Quality Focus Areas (AQFAs) within LBC. An AQFA is a location that has been identified by the GLA as having both high levels of NO<sub>2</sub> and significant human exposure. The development site is situated approximately 645m east of the AQFA which spans an area centred on the A41 Finchley Road from South Hampstead to Finchley Road Station.

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2 The Air Quality (England) (Amendment) Regulations 2002 - Statutory Instrument 2002 No.3043.

3 The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020.

4 London Local Air Quality Management (LLAQM) Framework, [www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-london-Boroughs](http://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-london-Boroughs)

5 Mayor of London. (2019). *London Local Air Quality Management (LLAQM) Policy Guidance 2019 (LLAQM.PG(19))*.

6 Mayor of London. (2019). *London Local Air Quality Management (LLAQM) Technical Guidance 2019 (LLAQM.TG(19))*.

7 Department for Environment Food & Rural Affairs. (2022). *Local Air Quality Management Technical Guidance (TG22)*.

8 London Borough of Camden. (2022). *Camden Clean Air Action Plan 2023-2026*.

- 2.11 The Mayor of London is developing the London Clean Air Action Plan. As part of this process, in addition to the existing Low Emission Zone (LEZ), the central London Ultra-Low Emission Zone (ULEZ) was enforced on 8<sup>th</sup> of April 2019. The ULEZ was extended to the boundary of the North and South Circular roads on 25<sup>th</sup> October 2021. The development site is located within the current boundary of the ULEZ.

## National Planning Policy Framework

- 2.12 The National Planning Policy Framework (NPPF)<sup>9</sup>, which was updated in July 2021, sets out the Government's planning policy for England. At its heart is an intention to promote more sustainable development. A core principle in the NPPF that relates to air quality effects from development is that planning should "contribute to conserve and enhance the natural and local environment". In achieving this, it states in paragraph 174 that:

*"Planning policies and decisions should contribute to and enhance the natural and local environment by: [...]"*

*preventing new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability [...]"*

- 2.13 With regard to assessing cumulative effects the NPPF states the following at paragraph 185:

*"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."*

- 2.14 Regarding compliance with relevant limit values and national objectives for pollutants the NPPF, paragraph 186 states:

*"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality*

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<sup>9</sup> Ministry of Housing, Communities and Local Government. (2021). National Planning Policy Framework.

*Management Areas and Clean Air Zones is consistent with the local air quality action plan.”*

- 2.15 The NPPF offers a broad framework but does not afford a detailed methodology for assessments. Specific guidance for air quality continues to be provided by organisations such as the Department for Environment, Food and Rural Affairs (Defra), Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM).

## National Planning Practice Guidance

- 2.16 Reference ID 32 (Air Quality) of the National Planning Practice Guidance (PPG)<sup>10</sup>, which was updated in July 2021, provides guiding principles on how planning can take account of the impact of new development on air quality. The PPG summarises the importance of air quality in planning and the key legislation relating to it.
- 2.17 As well as describing the importance of International, National and Local Policies (detailed elsewhere in this report), it summarises the key sources of air quality information. It also explains when air quality is likely to be relevant to a planning decision, stating:

*“Considerations that may be relevant to determining a planning application include whether the development would:*

- Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the proposed development or further afield. This could be through the provision of electric vehicle charging infrastructure; altering the level of traffic congestion; significantly changing traffic volumes, vehicle speeds or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; could add to turnover in a large car park; or involve construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;*
- Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; biomass boilers or biomass-fuelled Combined Heat and Power plant; centralised boilers or plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area; or extraction systems (including chimneys) which require approval or permits under pollution control legislation;*

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<sup>10</sup> Planning Practice Guidance (PPG) 32. (Updated July 2021). Air Quality. <http://planningguidance.planningportal.gov.uk/blog/guidance/air-quality/>.

- *Expose people to harmful concentrations of air pollutants, including dust. This could be by building new homes, schools, workplaces or other development in places with poor air quality;*
- *Give rise to potentially unacceptable impacts (such as dust) during construction for nearby sensitive locations;*
- *Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value.”*

2.18 Details are also provided of what should be included within an air quality assessment. Key considerations include:

- Baseline local air quality;
- Whether the proposed development could significantly affect local air quality during construction/operation; and
- Whether the development is likely to expose more people to poor air quality.

2.19 Examples of potential air quality mitigation measures are also provided in the PPG.

## London Specific Planning Policy

2.20 The Mayor’s Environment Strategy was published in 2018 and sets out the measures the Greater London Authority (GLA) are taking to improve air quality. The Environment Strategy is supported by the London Plan 2021<sup>11</sup> which was published in March 2021.

2.21 Policy SI1 ‘Improving air quality’ of the London Plan states that:

*“To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:*

*1) Development proposals should not:*

- a) lead to further deterioration of existing poor air quality*
- b) create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits*
- c) create unacceptable risk of high levels of exposure to poor air quality.”*

*2. In order to meet the requirements in Part 1, as a minimum:*

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<sup>11</sup> Greater London Authority. (2021). *The London Plan: The Spatial Development Strategy for Greater London*. [Adopted March 2021].

*a) development proposals must be at least Air Quality Neutral*

*b) development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures*

*c) major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1*

*d) development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to air quality, such as children or older people should demonstrate that design measures have been used to minimise exposure [...]*

*In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.*

*Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development."*

## Non-Road Mobile Machinery

2.22 It must be ensured that all Non-Road Mobile Machinery (NRMM) operating on site comply with London's current and future policy for NRMM. The current London Policy for NRMM<sup>12</sup> states the following:

*"From 1<sup>st</sup> September 2020 NRMM on all sites within Greater London is required to meet emission Stage IIB as a minimum; and NRMM on all sites within either the Central Activities Zone (CAZ) or Opportunity Areas (OAs) are required to meet emissions Stage IV as a minimum".*

2.23 The development site is not located within London's Central Activity Zone (CAZ), nor is it located within an Opportunity Area (OA) and is therefore bound by the emission requirements of the NRMM policy for Greater London.

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12 Greater London Authority. (2022). *Non-Road Mobile Machinery Practical Guide*. Available at: [https://www.london.gov.uk/sites/default/files/nrmm\\_practical\\_guide\\_april\\_2022\\_web.pdf](https://www.london.gov.uk/sites/default/files/nrmm_practical_guide_april_2022_web.pdf)



- 2.24 Therefore, any NRMM operating on site should meet Stage IIB of EU Directive 97/68/EC as a minimum. Furthermore, all constant speed engines such as those typically found in generators will be required to meet Stage V.

## Local Planning Policy

- 2.25 LBC have adopted a number of planning documents that combine to form the development plan for Camden. The *Camden Local Plan*<sup>13</sup>, adopted in July 2017 is LBC's key document in Camden's development plan. The Local Plan sets out a vision for the borough and implements policies to steer development in the borough towards this vision.
- 2.26 The *Camden Local Plan* details a number of policies with relevance to air quality in the borough, including Policy A1 *Managing the Impact of Development* which states that:

*"The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity.*

*We will:*

- a. seek to ensure that the amenity of communities, occupiers and neighbours is protected;*
- b. seek to ensure development contributes towards strong and successful communities by balancing the needs of development with the needs and characteristics of local areas and communities;*
- c. resist development that fails to adequately assess and address transport impacts affecting communities, occupiers, neighbours and the existing transport network; and*
- d. require mitigation measures where necessary.*

*The factors we will consider include: [...]*

- h. transport impacts, including the use of Transport Assessments, Travel Plans and Delivery and Servicing Management Plans;*
- i. impacts of the construction phase, including the use of Construction Management Plans; [...]*
- k. odour, fumes and dust; [...]"*

- 2.27 The Local Plan also details Policy CC4: Air Quality, which states the following:

*"The Council will ensure that the impact of development on air quality is mitigated and ensure that exposure to poor air quality is reduced in the borough.*

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<sup>13</sup> London Borough of Camden. (2017). *Camden Local Plan*. [Adopted 2017].

*The Council will take into account the impact of air quality when assessing development proposals, through the consideration of both the exposure of occupants to air pollution and the effect of the development on air quality. Consideration must be taken to the actions identified in the Council's Air Quality Action Plan.*

*Air Quality Assessments (AQAs) are required where development is likely to expose residents to high levels of air pollution. Where the AQA shows that a development would cause harm to air quality, the Council will not grant planning permission unless measures are adopted to mitigate the impact. Similarly, developments that introduce sensitive receptors (i.e. housing, schools) in locations of poor air quality will not be acceptable unless designed to mitigate the impact.*

*Development that involves significant demolition, construction or earthworks will also be required to assess the risk of dust emissions and impacts in an AQA and include appropriate mitigation measures to be secured in a Construction Management Plan."*

- 2.28 Other Local Plan policies of relevance to air quality include policies 'CC1 Climate change mitigation', 'CC2 Adapting to climate change', and policies T1 to T4 which guide transportation in the borough.
- 2.29 LBC's Camden Planning Guidance (CPG)<sup>14</sup> on Air Quality was published in January 2021 with the intention to support policies detailed in the Local Plan, and in particular policy 'CC4 Air Quality'. The document provides guidance on the Council's requirements for an air quality assessment.

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<sup>14</sup> London Borough of Camden. (2021). *Camden Planning Guidance Air Quality*.

## 3. Assessment Methodology

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### Guidance

- 3.1 Defra's Local Air Quality Management Technical Guidance (LAQM.TG(22))<sup>7</sup> and London Local Air Quality Management Technical Guidance (LLAQM.TG(19))<sup>8</sup> were followed in carrying out the assessment.
- 3.2 Guidance from the Greater London Authority's *The Control of Dust and Emissions During Construction and Demolition*<sup>15</sup> was used in assessing construction phase impacts of the proposed development, in conjunction with the Institute of Air Quality Management's (IAQM) *Guidance on the Assessment of Dust from Demolition and Construction*<sup>16</sup>. The GLA guidance is considered to be best practice guidance for the UK and details a number of mitigation measures that should be adopted to minimise adverse impacts from dusts and fine particles.
- 3.3 The latest EPUK & IAQM guidance on *Planning for Air Quality*<sup>17</sup> was also referred to throughout the assessment.
- 3.4 Finally, newly adopted Air Quality Neutral guidance<sup>18</sup> by the GLA has been followed while undertaking the air quality neutral assessment. Updated air quality neutral benchmarks are available in the Air Quality Neutral: Update to Benchmarks document<sup>19</sup>. The previous Air Quality Neutral Planning Support Update<sup>20</sup>, which supports the GLA Sustainable Design and Construction SPG, has also been given due consideration.

### Baseline Conditions

- 3.5 Baseline air quality conditions in the vicinity of the site are established through the compilation and review of appropriately sourced background concentration estimates and local monitoring data.

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15 Greater London Authority. (2014). *The Control of Dust and Emissions During Construction and Demolition*.

16 IAQM. (2014). *Guidance on the assessment of dust from demolition and construction*.

17 EPUK & IAQM. (2017). *Land-Use Planning & Development Control: Planning for Air Quality*.

18 Greater London Authority. (2023). *Air Quality Neutral London Plan Guidance*.

19 Greater London Authority/AQC. (2020). *Air Quality Neutral: Update to Benchmarks*.

[https://www.london.gov.uk/sites/default/files/aqn\\_update\\_to\\_benchmarks\\_report.pdf](https://www.london.gov.uk/sites/default/files/aqn_update_to_benchmarks_report.pdf)

20 Greater London Authority/AQC. (2014). *Air Quality Neutral Planning Support Update: GLA 80371*

<https://www.aqiconsultants.co.uk/CMSPages/GetFile.aspx?guid=226d8d5e-d7e9-40e1-bf0d-85c4554496da>

- 3.6 Defra provides estimated background concentrations of the UKAQS pollutants at the UK Air Information Resource (UK-AIR) website<sup>21</sup>. These estimates are produced using detailed modelling tools and are presented as concentrations at central 1 km<sup>2</sup> National Grid square locations across the UK. At the time of writing, the most recent background maps were from August 2020 and based on monitoring data from 2018.
- 3.7 Being background concentrations, the UK-AIR data are intended to represent a homogenous mixture of all emissions sources within the general area of a particular grid square location. Concentrations of pollutants at various sensitive receptor locations can, therefore, be calculated by modelling the emissions from a nearby pollution source, such as a busy road, and then adding this to the appropriate UK-AIR background datum.
- 3.8 The London Atmospheric Emissions Inventory<sup>22</sup> (LAEI) provides modelled ground level concentrations of key pollutants at 20m grid resolution across Greater London. Concentration estimates for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are included for the year 2019. LAEI data within the vicinity of the site have been reviewed.
- 3.9 Local pollutant monitoring networks are considered an appropriate source of data for the purposes of establishing baseline air quality in the vicinity of the development site. The most recent available local pollutant monitoring data from LBC's *Air Quality Annual Status Report for 2021*<sup>23</sup> have been reviewed and referenced to establish baseline air quality.

## Construction Phase Assessment

- 3.10 The construction phase of the proposed development will involve a number of activities that could potentially produce polluting emissions to air. Predominantly, these will be emissions of dust. However, they could also include releases of odours and/or more harmful gases and particles.
- 3.11 Both the GLA<sup>15</sup> and IAQM<sup>16</sup> guidance to assess the impacts of construction on human and ecological receptors have been followed in undertaking this air quality assessment.
- 3.12 The guidance suggests that where a receptor is located within 350m (50m for statutory ecological receptors) of a site boundary and/or 50m of a route used by construction vehicles, up to 500m from the site entrance, a dust assessment should be undertaken. High sensitivity receptors are considered particularly sensitive when located within 20m of a works area. Figure 2 shows receptors that could be sensitive to dust that are located within 350m of the boundaries of the site.

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21 Defra: UK-AIR. [www.uk-air.defra.gov.uk](http://www.uk-air.defra.gov.uk)

22 London Atmospheric Emissions Inventory. (2021.) <https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-laei-2019>

23 London Borough of Camden. (2022). *Air Quality Annual Status Report for 2021*.

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21 Defra: UK-AIR. [www.uk-air.defra.gov.uk](http://www.uk-air.defra.gov.uk)

22 London Atmospheric Emissions Inventory. (2021.) <https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-laei-2019>

23 London Borough of Camden. (2022). *Air Quality Annual Status Report for 2021*.

- 3.13 The Multi Agency Geographic Information for the Countryside (MAGIC) website<sup>24</sup>, which incorporates Natural England's interactive maps, has been reviewed to identify whether statutory ecological receptors are situated within 50m of the site boundary, or within 50m of any routes to be used by construction vehicles on the public highway.

### Construction Significance

- 3.14 Both the GLA and IAQM guidance suggest that Demolition, Earthworks, Construction and Trackout should all be assessed individually to determine the overall significance of the construction phase.
- 3.15 The first step in assessing the risk of impacts is to define the potential dust emission magnitude. This can be considered '*Negligible*', '*Small*', '*Medium*' or '*Large*' for each of the construction stages. Whilst the GLA and IAQM provide examples of criteria that may be used to assess these magnitudes, the vast number of potential variables mean that every site is different and therefore professional judgement must be applied by what the GLA and IAQM refer to as a "technically competent assessor". The construction phase assessment therefore relies on the experience of the appraiser.
- 3.16 As such, attempts to define precisely what constitutes a *Negligible*, *Small*, *Medium* or *Large* dust emission magnitude should be treated with caution. Factors such as the scale of the work, both in terms of size and time, the construction materials and the plant to be used must be considered.
- 3.17 The second step is to define the sensitivity of the area around the construction site. As stated in the IAQM guidance:

*"the sensitivity of the area takes into account a number of factors:*

- the specific sensitivities of receptors in the area;*
- the proximity and number of those receptors;*
- in the case of PM<sub>10</sub>, the local background concentrations; and*
- site-specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust."*

- 3.18 Based on these factors, the area is categorised as being of '*Low*', '*Medium*' or '*High*' sensitivity.

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<sup>24</sup> Natural England and MAGIC Partnership Organisations. Multi Agency Geographic Information for the Countryside. <https://magic.defra.gov.uk/magicmap.aspx> [Accessed March 2023].

- 3.19 When dust emission magnitudes for each stage and the sensitivity of the area have been defined, the risk of dust impacts can be determined. The GLA's SPG provides a risk of impacts matrix for each construction stage. The overall significance for the construction phase can then be judged from the stages assessed. Again, this is subject to professional judgement.
- 3.20 Combustion exhaust gases from diesel-powered plant and construction vehicles accessing the site will also be released. However, the volumes and periods over which these releases will occur are unlikely to result in any long-term impacts on local air quality and therefore this has been scoped out of the assessment.

## Operational Phase

### Road Transport Sources

- 3.21 Vehicle emissions will arise from the combustion of fossil fuels in vehicle engines and their subsequent release to atmosphere via tailpipe exhausts. The most significant pollutants released by cars and other vehicles are oxides of nitrogen ( $\text{NO}_2/\text{NO}_x$ ) and particulate matter ( $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ ). Releases of carbon monoxide (CO) and some volatile hydrocarbons (e.g. benzene and 1,3-butadiene) are of less significance and are not assessed further in this report.
- 3.22 As it is elevated annual mean concentrations of  $\text{NO}_2$  and  $\text{PM}_{10}$  that have resulted in the declaration of most AQMAs across the UK, these are the pollutants of most concern and they have therefore been the focus of this air quality assessment.  $\text{PM}_{2.5}$ , which is another fraction of particulate matter, has also been considered.
- 3.23 The latest EPUK & IAQM planning guidance<sup>17</sup> provides indicative thresholds for changes in traffic flows which would require a detailed, dispersion modelling air quality assessment. When within an AQMA, these are a change in 24-hour annual average daily traffic flows (AADT) exceeding 100 light-duty vehicles (LDVs) and/or 25 heavy-duty vehicles (HDVs). Changes below these thresholds can be reasonably considered to have an insignificant impact on local air quality.
- 3.24 Full justification behind the screening assessment of air quality related impacts on existing receptors in the local area has been provided in Section 6 of this report.

## Air Quality Neutral Assessment

- 3.25 For some time, the standard approach for air quality assessments was to predict the change in pollution concentrations through the use of a screening or detailed dispersion model and, where the potential for a significant impact was identified, recommend mitigation measures so that the significance of effect can be kept to an acceptable level. However, this type of assessment does little to consider the overall emissions from a development and its contribution to broader background concentrations, which can gradually increase due to incremental changes from successive developments, particularly in a large city such as London.

- 3.26 As a result of these effects, an air quality neutral policy was included in the London Plan. It aims to ensure that developments are air quality neutral or better, particularly in areas where any AQs are being breached.
- 3.27 Since the publication of the London Plan, there has been considerable debate as to how the concept should be assessed and implemented. The Air Quality Neutral Planning Support Update<sup>20</sup> was produced in order to further develop the policy and discuss assessment options. The two principal options for the application of the policy were to compare the emissions of a proposed development with the site's previous use, or to establish benchmarks for acceptable emissions for particular planning uses. A combination of these two approaches would also be possible.
- 3.28 It was decided that a purely benchmarking route should be taken, rather than working on a site-by-site basis, as it would provide a means of ensuring that developments across London as a whole remain air quality neutral. It also allows for the development of long-derelict sites and does not permit large pollution-headroom for former industrial sites, which would be a key problem with the alternative method. The guidance provides building emissions benchmarks for NO<sub>x</sub> and also states that PM<sub>10</sub> benchmarking need not be considered where natural gas is the only fuel used on site.
- 3.29 It was also concluded that emissions from buildings and transport should be treated separately, with the intent that each should attain air quality neutrality.
- 3.30 The Air Quality Neutral Planning Support Update, published by the Greater London Authority, and the Sustainable Design and Construction SPG, which supports the London Plan, state that air quality neutral policy applies to all major developments in Greater London.
- 3.31 An Air Quality Neutral Assessment has been undertaken and is presented in Section 7 of this report. The development is also assessed against the newly drafted Air Quality Neutral London Plan guidance<sup>18</sup> provided by the GLA.



## 4. Baseline Conditions

- 4.1 This chapter is intended to establish prevailing air quality conditions in the vicinity of the development site.

### UK-AIR Background Pollution

- 4.2 The UK-AIR<sup>21</sup> predicted background concentrations for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> for 2019 to 2024 are presented in Table 4.1. These data were taken from the central grid square location closest to the application site (i.e. grid reference: 527500, 184500).

**Table 4.1: 2019 to 2024 Background Concentrations of Pollutants at the Site**

Pollutant	Predicted background concentration (µg.m <sup>-3</sup> )						Averaging Period	AQS concentration (µg.m <sup>-3</sup> )
	2019	2020	2021	2022	2023	2024		
NO <sub>2</sub>	27.4	25.9	25.2	24.5	23.9	23.3	annual mean	40
PM <sub>10</sub>	18.3	17.8	17.6	17.4	17.2	17.0	annual mean	40
PM <sub>2.5</sub>	11.8	11.5	11.4	11.2	11.1	10.9	annual mean	20

- 4.3 The data in Table 4.1 show that annual mean background concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> in the vicinity of the application site between 2019 and 2024 are predicted to be well below their respective AQSS.
- 4.4 The data show that in 2022, annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations are predicted to be below their respective AQSS by 38.8%, 56.5% and 44.0% respectively. As such, annual mean background pollutant concentrations are likely to be well below their respective AQSS at, and within the vicinity of, the development site.
- 4.5 Concentrations of all pollutants are predicted to decline each year. These reductions are principally due to the forecast effect of the roll out of cleaner vehicles, but also due to local, London UK national and international efforts to reduce emissions across all sectors.

### London Atmospheric Emissions Inventory

- 4.6 LAEI modelled annual mean pollution concentrations<sup>22</sup> of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> for 2019 are presented in Table 4.2. These data were taken from a central grid square location on the eastern edge of the site boundary (i.e. National Grid Reference: 527380, 184640).

**Table 4.2: LAEI (2019) Modelled Annual Mean Concentrations**

LAEI Grid Square		Pollutant	Modelled Concentration ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Averaging Period	Air quality standard concentration ( $\mu\text{g}\cdot\text{m}^{-3}$ )
X	Y		2019		
527380	184640	NO <sub>2</sub>	31.3	annual mean	40
		PM <sub>10</sub>	17.0	annual mean	40
		PM <sub>2.5</sub>	11.1	annual mean	20

- 4.7 The data in Table 4.2 show that, based on 2019 data, modelled annual mean concentrations of NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are expected to be below their long-term AQSs by at least 21.8%, 57.5% and 44.5%, respectively. Therefore, concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are predicted to be well below their relevant AQSs at the development site.

## Local Sources of Monitoring Data

- 4.8 Air quality monitoring is considered an appropriate source of data for the purposes of describing baseline air quality. At the time of writing, the most recent ASR<sup>23</sup> released by LBC included local pollutant monitoring data from 2021.
- 4.9 However, due to the uncertainty surrounding impacts associated with COVID-19 on emissions and subsequent levels of pollution across the UK, this baseline review has focused on the year 2019, which is considered to be the most recent 'normal' year for which baseline conditions can be established.

### Automatic Monitoring

- 4.10 LBC undertook automatic (continuous) pollutant monitoring of NO<sub>2</sub> at four sites within the borough in 2021. The most recent available NO<sub>2</sub> monitoring data from these monitoring stations are included in Table 4.3 below.

**Table 4.3: NO<sub>2</sub> Monitoring Data from LBC Automatic Monitoring Stations**

Monitor	Type	Distance from the Site (km)	Annual mean NO <sub>2</sub> concentration ( $\mu\text{g}\cdot\text{m}^{-3}$ )			
			2018	2019	2020	2021
CD1	K	0.8	<b>54.0</b>	<b>43.0</b>	33.0	<b>44.0</b>
CD010	R	1.6	-	-	-	30.0
CD9	R	3.2	<b>82.0</b>	<b>70.0</b>	<b>43.0</b>	<b>48.0</b>
BL0	UB	3.8	36.0	32.0	28.0	27.0

Note: "R" = Roadside; "UB" = Urban background; "K" = Kerbside "**Bold**" denotes exceedance of the annual mean AQS. "Underline" denotes indicative exceedance of the hourly mean AQS.

- 4.11 The data in Table 4.3 show that automatic monitoring stations positioned at roadside and kerbside locations within the borough often exceeded the 40  $\mu\text{g.m}^{-3}$  AQS between 2018 and 2021. However, no exceedances were recorded at the monitor positioned in an urban background location.
- 4.12 The closest automatic monitoring station to the site, monitor CD1, is positioned kerbside at A41 Finchley Road, and recorded exceedances of the 40  $\mu\text{g.m}^{-3}$  AQS between 2018 and 2021. In 2019 this monitor recorded an annual mean  $\text{NO}_2$  concentration of 43  $\mu\text{g.m}^{-3}$ ; above the AQS by 7.5%. In 2020, this monitoring station recorded an  $\text{NO}_2$  concentration below the 40  $\mu\text{g.m}^{-3}$  AQS by 17.5%, representing a large decrease in concentrations relative to 2019, which is likely to be partly due to the impacts of COVID-19.  $\text{NO}_2$  concentrations recorded at monitor CD1 are not considered to be representative of likely concentrations across the site, due to the monitor's kerbside location adjacent to an A-road whereas the development site is distanced much further from local major pollution sources.
- 4.13 LBC undertook automatic monitoring of  $\text{NO}_2$  at one automatic monitoring station set in an urban background location between 2018 to 2021. Urban background monitor BL0 is located in Russel Square Gardens, approximately 3.8km south-east of the development site. This monitor recorded annual mean  $\text{NO}_2$  concentrations consistently below the 40  $\mu\text{g.m}^{-3}$  AQS between 2018 and 2021 and showed improvements in background  $\text{NO}_2$  concentrations across the monitoring period. In 2019, this monitor recorded background  $\text{NO}_2$  concentrations below the 40  $\mu\text{g.m}^{-3}$  AQS by 20%. Due to its urban background location, this monitor is likely to be most representative of background conditions at the development site.
- 4.14 LBC also undertook automatic monitoring of  $\text{PM}_{10}$  at four sites within the borough. The most recent available  $\text{PM}_{10}$  monitoring data from LBC automatic monitoring stations are included in Table 4.4, below.

**Table 4.4:  $\text{PM}_{10}$  Monitoring Data from LBC Automatic Monitoring Stations**

Monitor	Type	Distance from the Site (km)	Annual mean $\text{PM}_{10}$ concentration ( $\mu\text{g.m}^{-3}$ )			
			2018	2019	2020	2021
CD1	K	0.8	21.0	19.0	16.0	16.0
KGX	UB / I	2.8	15.0	15.0	13.0	13.0
CD9	R	3.2	21.0	22.0	18.0	19.0
BL0	UB	3.8	17.0	18.0	16.0	16.0

Note: Note: "R" = Roadside; "K" = Kerbside; "UB" = Urban background; "I" = Industrial.

- 4.15 The data in Table 4.4 show that annual mean  $\text{PM}_{10}$  concentrations were consistently below the 40  $\mu\text{g.m}^{-3}$  AQS at all LBC automatic monitoring stations throughout the 2018 to 2021 monitoring period.
- 4.16 The closest automatic monitoring station recording  $\text{PM}_{10}$  to the site again is CD1, as described above. In 2019, CD1 recorded an annual mean  $\text{PM}_{10}$  concentration of 19.0  $\mu\text{g.m}^{-3}$ ; below the 40  $\mu\text{g.m}^{-3}$  AQS by 52.5%.

- 4.17 The closest automatic monitor set in an urban background location again is monitor BL0. In 2019, BL0 recorded an annual mean PM<sub>10</sub> concentration of 18.0 µg.m<sup>-3</sup>; below the 40 µg.m<sup>-3</sup> AQS by 55%.
- 4.18 The highest annual mean PM<sub>10</sub> concentration recorded for all LBH automatic monitoring stations in 2019 was 22.0 µg.m<sup>-3</sup> at CD9, located roadside at the A501 Euston Road. This concentration is below the 40 µg.m<sup>-3</sup> AQS for PM<sub>10</sub> by 45%. However, given the proximity of this monitor to an A-road, monitored concentrations are not considered to be representative of conditions at the development site.
- 4.19 LBC also undertook automatic monitoring of PM<sub>2.5</sub> at three locations within the borough. The most recent available data for these monitoring stations are included in Table 4.5, below.

**Table 4.5: PM<sub>2.5</sub> Monitoring Data from LBC Automatic Monitoring Stations**

Monitor	Type	Distance from the Site (km)	Annual mean PM <sub>2.5</sub> concentration (µg.m <sup>-3</sup> )			
			2018	2019	2020	2021
CD1	K	0.8	11.0	11.0	10.0	9.0
CD9	R	3.2	15.0	14.0	11.0	11.0
BL0	UB	3.8	10.0	11.0	9.0	9.0

Note: "K" = Kerbside; "R" = Roadside; "UB" = Urban background.

- 4.20 The data in Table 4.5 show that annual mean PM<sub>2.5</sub> concentrations were consistently well below 20 µg.m<sup>-3</sup> AQS at all LBC automatic monitoring stations throughout the 2018 to 2021 monitoring period.
- 4.21 The closest automatic monitoring station for PM<sub>2.5</sub> to the site is again CD1 with the closest monitor set in an urban background location being monitor BL0. Both monitors recorded an annual mean PM<sub>2.5</sub> concentration of 11.0 µg.m<sup>-3</sup> in 2019; below the 20 µg.m<sup>-3</sup> AQS by 45%.

#### **Non-Automatic Monitoring**

- 4.22 LBC operate an extensive, non-automatic NO<sub>2</sub> diffusion tube monitoring network comprising 40 sites deployed in strategic locations across the borough. The most recent available monitoring data for diffusion tubes located within 2km of the site are included in Table 4.6, below.

**Table 4.6: NO<sub>2</sub> Monitoring data from LBC Diffusion Tubes**

Monitor	Type	Distance from the Site (km)	Annual mean NO <sub>2</sub> concentration (µg.m <sup>-3</sup> )			
			2018	2019	2020	2021
CTLEN1	R	0.7	-	33.1	23.5	21.2
CA15	K	0.8	<b><u>62.3</u></b>	<b>50.9</b>	-	-
CA17	R	0.9	<b>48.1</b>	<b>43.5</b>	34.5	30.0
CTLEN2	R	1.2	-	31.7	24.9	20.8
CTLEN3	R	1.3	-	31.8	26.1	20.9
CTLEN13	R	1.4	-	28.1	22.1	18.2
CTLEN8	R	1.4	-	<b>41.5</b>	33.1	26.6
CA7	UB	1.4	22.1	23.3	18.7	15.4
CTLEN7	R	1.5	-	38.7	29.9	25.9

Note: "K" = Kerbside, "UB" = Urban Background, "R" = Roadside. **Bold** denotes exceedance of the annual mean AQS. Underline denotes indicative exceedance of the hourly mean AQS.

- 4.23 The data in Table 4.6 show that since 2020 the 40 µg.m<sup>-3</sup> annual mean AQS for NO<sub>2</sub> has not been exceeded at any diffusion tube within 2km of the site. However, exceedances of the AQS were recorded at some roadside and kerbside monitoring sites between 2018 and 2019.
- 4.24 Diffusion tube CTLEN1 is the closest diffusion tube to the site, located 1.5m from the kerb of the A502 Haverstock Hill, approximately 0.7km east of the site. Annual mean NO<sub>2</sub> concentrations recorded at this diffusion tube have remained well below the 40 µg.m<sup>-3</sup> AQS since monitoring began in 2019. Despite its roadside location this monitor recorded an annual mean NO<sub>2</sub> concentration of 33.1 µg.m<sup>-3</sup> in 2019; below the 40 µg.m<sup>-3</sup> AQS by 17.3%.
- 4.25 Diffusion tube CA15 recorded the highest NO<sub>2</sub> concentration in 2019 (50.9 µg.m<sup>-3</sup>); above the 40 µg.m<sup>-3</sup> AQS by 27.3%. This diffusion tube is co-located with automatic monitor CD1 and is positioned kerbside at the A41 Finchley Road. Given the proximity of this monitor to the nearby A41, monitored pollutant concentrations are not considered to be representative of likely baseline conditions in the vicinity of the development site.
- 4.26 The closest diffusion tube to the site set in an urban background location is tube CA7 located approximately 1.4km from the site in a residential area at Frogmal Way. In 2019, this diffusion tube recorded an annual mean NO<sub>2</sub> concentration of 23.3 µg.m<sup>-3</sup>; below the 40 µg.m<sup>-3</sup> AQS by 41.8 %.

## 5. Construction Phase Impacts

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- 5.1 The construction phase of the proposed development will involve a number of activities that could produce polluting emissions to air. Predominantly, these will be emissions of dust.
- 5.2 The estimates for the dust emission magnitude for demolition, earthworks, construction and trackout below are based on the professional experience of Phlorum's consultants, information provided by the client and Google Earth imagery.

### Dust Emission Magnitude

#### Demolition

- 5.3 The total building volume to be demolished on site is approximately 137m<sup>3</sup>, although the existing building will be retained, and demolition works will be limited to internal works and works to alter the façade of the building including the introduction of additional window openings and works to the roof. Therefore, demolition works fall into the *Small* dust emission category for demolition with reference to the IAQM guidance<sup>16</sup>.
- 5.4 All buildings where demolition work will occur are expected to be less than 10m in height, falling into the IAQMs *Small* dust emission category, and no mobile crushing equipment is expected on site.
- 5.5 Based on the expected volume and height of the buildings being demolished, the overall dust emission magnitude from the demolition phase is considered *Small* with reference to the IAQM guidance.

#### Earthworks

- 5.6 The total area of the site is approximately 736m<sup>2</sup>, which falls within the IAQM's *Small* dust emission magnitude category for earthworks.
- 5.7 It is anticipated that less than 20,000 tonnes of earth will be moved on site and this work is expected to be carried out by fewer than 5 heavy earth moving vehicles at any one time. No bunds are expected to be formed on site. Therefore, falling within the IAQM's *Small* dust emission magnitude category.
- 5.8 An asbestos survey has been commissioned and asbestos has been found within the building. The potential health effects from the release of contaminated dusts are not considered by this report, and should be dealt with by a separate, specialist asbestos risk assessment.
- 5.9 Therefore, the overall dust emission magnitude for the earthworks phase is considered to be *Small* with reference to the IAQM guidance.

### Construction

- 5.10 During construction, activities that have the potential to cause emissions of dust may include concrete batching sandblasting and piling. Localised use of cement powder and general handling of construction materials also have the potential to generate dust emissions, as does the effect of wind-blow from stockpiles of friable materials. The primary construction materials and methods to be used are currently unknown.
- 5.11 The total volume of all buildings to be constructed on site is anticipated to be less than 25,000m<sup>3</sup>, falling within the IAQM's *Small* dust emission magnitude category for construction.
- 5.12 Therefore, based on the expected volume of buildings proposed, the overall dust emission magnitude for the construction phase is considered to be *Small*.

### Trackout

- 5.13 Construction traffic, when travelling over soiled road surfaces, has the potential to generate dust emissions and to also add soil to the local road network. During dry weather, soiled roads can lead to dust being emitted due to physical and turbulent effects of vehicles. The site will likely be accessed via Belsize Park Gardens road, and there will be no use of unpaved road surfaces by vehicles accessing the site during construction.
- 5.14 It is anticipated that fewer than 10 HDVs would access the site per day during the construction phase, falling within the IAQM *Small* dust emission magnitude category.
- 5.15 Given that no unpaved road surfaces will be used during construction, the overall dust emission magnitude for the trackout is considered to be *Small* with reference to the IAQM guidance<sup>16</sup>.

### Emission Magnitude Summary

- 5.16 A summary of the dust emission magnitude as a result of the activities of Demolition, Earthworks, Construction and Trackout as specified in the IAQM guidance, and discussed above, are listed in Table 5.1 below.

**Table 5.1: Dust Emission Magnitude for the construction activities, based on the IAQM's guidance.**

Activity	Dust Emission Magnitude
Demolition	Small
Earthworks	Small
Construction	Small
Trackout	Small

## Sensitivity of the Area

- 5.17 Having established the emission magnitudes for each phase above, the sensitivity of the area must be considered to establish the significance of effects. The effect of dust emissions depends on the sensitivity of each receptor.
- 5.18 High sensitivity human receptors include residential dwellings, schools, and hospitals, but can include locations such as car showrooms when considering the impacts of dust soiling.
- 5.19 The impacts of dust emissions from the sources discussed above have the potential to cause an annoyance to human receptors living in the local area. Within distances of 20m of the site boundary there is a high risk of dust impacts, regardless of the prevailing wind direction. Up to 100m from the construction site, there may still be a high risk, particularly if the receptor is downwind of the dust source.
- 5.20 With the exponential decline in dust concentrations with distance from dust generating activities, it is considered that for receptors more than 350m from the site boundary, the risk is *Negligible*. Furthermore, the risks at over 100m only have the potential to be significant in certain weather conditions, e.g. downwind of the source during dry periods.
- 5.21 The approximate number of high sensitivity human receptors in the vicinity of the site is detailed in Table 5.2 below.

**Table 5.2: Approximate number of High Sensitivity Receptors close to the site.**

Distance to site (m)	Approximate number of receptors	Receptor Details
<20	>100	Residential Dwellings, Fine Arts College
<50	>150	Residential Dwellings, Fine Arts College
<100	>250	Residential Dwellings, Fine Arts College
<350	>1,000	Residential Dwellings, Fine Arts College, Sarum Hall School, Rathmore House Assisted Living

- 5.22 Figure 4 shows that the predominant wind direction at the closest relevant meteorological station at London City Airport (2019) is from the south-west. As demonstrated in Table 5.2, there are more than 100 high sensitivity receptors within 20m of the site. Therefore, regardless of the prevailing wind direction the sensitivity of the area to dust soiling impacts can be defined as *High*.



- 5.23 Both UK-AIR predicted annual mean concentrations and LAEI modelled pollutant concentrations of PM<sub>10</sub> are below 24 µg.m<sup>-3</sup> at the site, as well as concentrations recorded at LBC urban background automatic monitoring stations in the surrounding area. This indicates that annual mean PM<sub>10</sub> concentrations are likely to be below the respective AQs at the site and adjacent uses. Taking into consideration the number of sensitive receptors in close proximity to the site, the sensitivity of the area to human health impacts is defined as *Medium*.
- 5.24 Review of the MAGIC website<sup>24</sup>, which incorporates Natural England’s interactive maps, has identified statutory ecological receptors within 50m of the site, or 50m of roads to be used by construction traffic. The closest statutory ecological site is the Adelaide Local Nature Reserve (LNR), located approximately 350m south-east of the site. Therefore, based on distance alone, the construction phase of the proposed development can be considered to have a *Negligible* impact on local designated ecological sites.
- 5.25 The development site is located with the Belsize Park Conservation Area. Therefore, guidance provided in the *Belsize Conservation Area Statement*<sup>25</sup> specific to the demolition phase of the project should be adhered to.

## Risk of Impacts

- 5.26 Having established the potential dust emission magnitudes and sensitivity of the area, the risk of impacts can be determined in accordance with the IAQM guidance. These are summarised in Table 5.3.

**Table 5.3: Summary of Impact Risk by Construction Stage based on the IAQM’s dust guidance.**

Stage	Impact Risk		
	Nuisance Dust	Ecology	PM <sub>10</sub> Health Effects
Demolition	Medium	Negligible	Low
Earthworks	Low	Negligible	Low
Construction	Low	Negligible	Low
Trackout	Low	Negligible	Negligible

- 5.27 Overall, the proposed development is considered to present a *Medium Risk* for nuisance dust soiling effects, a *Low Risk* for PM<sub>10</sub> health effects, and to be *Negligible* for ecological impacts, in the absence of mitigation.

<sup>25</sup> Conservation & Urban Design Team, London Borough of Camden. (2003). *Belsize Conservation Area Statement*.

## Site Specific Mitigation

- 5.28 The GLA guidance<sup>15</sup> suggests a number of mitigation measures that should be adopted in order to minimise impacts from dusts and fine particles. Appropriate measures that could be included during construction of the proposed development include:
- ideally cutting, grinding and sawing should not be conducted on-site and pre-fabricated material and modules should be brought in where possible;
  - where such work must take place, water suppression should be used to reduce the amount of dust generated;
  - skips, chutes and conveyors should be completely covered and, if necessary, enclosed to ensure that dust does not escape;
  - no burning of any materials should be permitted on site;
  - any excess material should be reused or recycled on-site in accordance with appropriate legislation;
  - developers should produce a waste or recycling plan;
  - following earthworks, exposed areas and soil stockpiles should be re-vegetated to stabilise surfaces, or otherwise covered with hessian or mulches;
  - stockpiles should be stored in enclosed or bunded containers or silos and kept damp where necessary;
  - hard surfaces should be used for haul routes where possible;
  - haul routes should be swept/washed regularly;
  - vehicle wheels should be washed on leaving the site;
  - all vehicles carrying dusty materials should be securely covered; and
  - delivery areas, stockpiles and particularly dusty items of construction plant should be kept as far away from neighbouring properties as possible.
- 5.29 In addition, the IAQM lists recommended mitigation measures for *Low*, *Medium* and *High* dust impact risk sites. The highly recommended mitigation measures for *Medium Risk* sites are included in Appendix A of this report.
- 5.30 Where dust generation cannot be avoided in areas close to neighbouring properties, additional mitigation measures should be put in place, such as: windbreaks, sprinklers, and/or time/weather condition limits on the operation of some items of plant or the carrying out of activities that are likely to generate a particularly significant amount of dust.

## Residual Effects

- 5.31 After the implementation of the mitigation measures listed above and in Appendix A, the significance of each phase of the construction programme will be reduced and the residual significance of impact for the construction phase is expected to be *Negligible*.

## 6. Operational Phase

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### Impacts on Local Air Quality

- 6.1 The latest EPUK & IAQM planning guidance<sup>17</sup> provides indicative thresholds for changes in traffic flows which would require a detailed air quality assessment when within an AQMA. This is a change in 24-hour AADT flows of more than 100 LDVs and/or 25 HDVs. Changes below these thresholds can be reasonably considered to have an insignificant impact on local air quality. The site is located within the borough-wide Camden AQMA.
- 6.2 The site's existing use includes leisure club use (Class E(d)), with a change of use proposed to education use (Class F1).
- 6.3 Information provided by Robert West, the transport consultants for the project, indicate that the development is predicted to generate a net increase in 24-hour AADT of 17 LDV and 1 HDV.
- 6.4 Therefore, the proposed development is not expected to increase 24-hour AADT flows on any single road link within the Camden AQMA by more than 100 LDVs or 25 HDVs, and as such, it can be reasonably assumed that the operation of the proposed development would have an insignificant impact on local air quality.

### Site Suitability

- 6.5 LAQM.TG(22)<sup>7</sup> (Tables 7-7 and 7-8) sets out the classification of monitoring locations and where these are in relation to sources of pollution. The guidance states that an urban background location is, as follows:

*"An urban location distanced from sources and therefore broadly representative of city-wide background conditions, e.g. urban residential areas."*

- 6.6 The AEA *Diffusion Tube for Ambient NO<sub>2</sub> Monitoring: Practical Guide*<sup>26</sup> (AEA guidance) provides further detailed definitions which help to classify urban background sites. Specifically, Section 3.2.2 states that, where a site meets the following criteria, it can be reasonably defined as being set in an urban background location, away from adverse impacts associated with emissions from road sources:

- ➊ >50m from any major source of NO<sub>2</sub> (e.g. multi-storey car parks)
- ➋ >30m from any very busy road (>30,000 vehicles per day);
- ➌ >20m from any busy road (10,000 – 30,000 vehicles per day);
- ➍ >10m from any main road; and

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<sup>26</sup> AEA Energy and Environment. (2008). *Diffusion Tubes for Ambient NO<sub>2</sub> Monitoring: Practical Guidance for Laboratories and Users*.

- >5m from locations where vehicles may stop with their engines idling.
- 6.7 The primary sources of air pollution within the vicinity of the site are vehicles travelling on the nearby local road network including on Belsize Park Gardens to the north, Eton Avenue to the south and Lambolle Place to the west. All three roads are not considered to be main roads and can reasonably be classed as locations where vehicles may stop with their engines idling, with regards to the AEA guidance<sup>26</sup>.
- 6.8 As sensitive uses proposed at the development site are distanced over 5m from Belsize Park Gardens, 70m from Eton Avenue and 27m from Lambolle Place, all proposed sensitive uses can be considered to be set in an urban background location with reference to the AEA guidance. Following LAQM.TG(22) guidance, it is expected that pollutant concentrations across these areas are likely to be similar to those identified at urban background sites within the local area, which are well below the relevant AQSs.
- 6.9 UK-AIR background concentrations as well as local pollutant monitoring data from representative urban background monitors within LBC's authoritative boundaries, including automatic monitor BL0 and diffusion tube CA7, indicate that NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations across the development site are likely to be well below their relevant AQSs, and are expected to decrease further in future years.
- 6.10 All sensitive uses proposed at the new college building will be set behind existing buildings including the current Fine Arts College building to the west and residential buildings to the east, helping to provide a barrier from nearby sources of pollution.
- 6.11 2019 LAEI modelled pollution concentrations<sup>22</sup> for NO<sub>2</sub> across the development site are displayed in Figure 3. Figure 3 shows that modelled NO<sub>2</sub> concentrations in 2019 across the development site are between 31 and 32 µg.m<sup>-3</sup>. Therefore, modelled NO<sub>2</sub> concentrations across the site are at least 20% below the annual mean 40 µg.m<sup>-3</sup> AQS.
- 6.12 Therefore, the site is anticipated to be suitable, in air quality terms, for its proposed end use, and no further assessment of site suitability is required.

## 7. Air Quality Neutral Assessment

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- 7.1 The Air Quality Neutral Assessment (AQNA) compares the expected emissions from both traffic generation and building emissions with benchmarked emissions for particular land use classes derived from the Air Quality Neutral Guidance<sup>18</sup>.
- 7.2 The development comprises land-use class F1 for education use for which Transport Emission Benchmarks (TEBs) and Building Emission Benchmarks (BEBs) are available<sup>19</sup>.

### Transport Emissions

- 7.3 The proposed development will include no general parking and is therefore considered 'car free' as defined in the London Plan<sup>11</sup> Policy T6 *Car parking*.
- 7.4 Therefore, following Policy 4.1 *Calculating the TEB* of the London Plan air quality neutral guidance<sup>18</sup> for 'car-free' developments which states:

*"4.1.2 Where major developments meet the definition of 'car-free', they can be assumed to meet the TEB[...]"*

- 7.5 It is expected that the proposed development would achieve air quality neutrality with respect to transport emissions.

### Building Emissions

- 7.6 The proposed development does not include any new sources of on-site combustion and will adopt an all-electric energy strategy that is expected to utilise Air Source Heat Pumps (ASHP) and Photovoltaic Arrays (PV).
- 7.7 Therefore, the proposed development is not expected to generate building emissions of NO<sub>x</sub> or PM<sub>10</sub> and so it is anticipated that the proposed development will achieve Air Quality Neutrality with respect to building emissions.

### Mitigation

- 7.1 Mitigation measures that have already been proposed for this development include:
- Implementation of a Travel Plan, including mechanisms to discourage high emission vehicle use and encourage uptake of low emissions technologies;
  - A welcome pack available to all new occupants to encourage the use of sustainable transport modes;
  - Provision of cycle storage;
  - Use of Air Source Heat Pumps (ASHP) and Photovoltaic Arrays (PV) to meet heating and energy demands; and

- Air handling equipment will utilise predominantly Mechanical Ventilation with Heat Recovery (MVHR).

## 8. Discussion

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### Construction Phase Impacts

- 8.1 The construction phase of the development could give rise to emissions which could cause dust soiling effects on adjacent uses. Following the IAQM guidance, the construction phase of the development can be considered to be *Medium Risk* for nuisance dust impacts, *Low Risk* for PM<sub>10</sub> health effects, and to be *Negligible* for ecology, in the absence of mitigation.
- 8.2 Following the implementation of the mitigation measures provided in Appendix A and listed in Section 5.28, emissions from the construction programme will be reduced and the residual significance of impact for the construction phase is expected to be reduced to *Negligible*, thus complying with the requirements of the NPPF<sup>9</sup>.

### Operational Phase Impacts

- 8.3 The need for a detailed pollutant dispersion modelling assessment of the proposed development's sensitivity to local air quality has been screened out using Defra and AEA guidance, along with a review of local pollutant monitoring data. This was primarily due to the site's end use being distanced away from nearby sources of pollution, including Belsize Park Gardens road, and the proposed college building being set behind existing buildings including the current Fine Arts college building to the west and residential buildings to the east. Furthermore, background concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are anticipated to be well below their respective AQs in the surrounding area. Therefore, the site is considered to be suitable, in air quality terms, for the proposed end use, and no further assessment of site suitability is considered necessary.
- 8.4 The proposed development is not expected to generate volumes of traffic in exceedance of the indicative screening thresholds prescribed by the EPUK & IAQM planning guidance. Therefore, the need to undertake a detailed dispersion modelling assessment of the proposed development's impact on local air quality has been screened out with reference to the EPUK & IAQM guidance. Therefore, it can be reasonably assumed that the operation of the proposed development would have an insignificant impact on local air quality.

### Air Quality Neutral Assessment

- 8.5 The proposed development is considered to be 'car-free'.



- 8.6 The proposed development will utilise an all-electric energy strategy with the proposed use of ASHPs and photovoltaic arrays, and as such, the proposed development is not expected to generate building emissions of NO<sub>x</sub> or PM<sub>10</sub>.
- 8.7 Therefore, the proposed development is expected to achieve air quality neutrality with regard to both transport and building emissions.

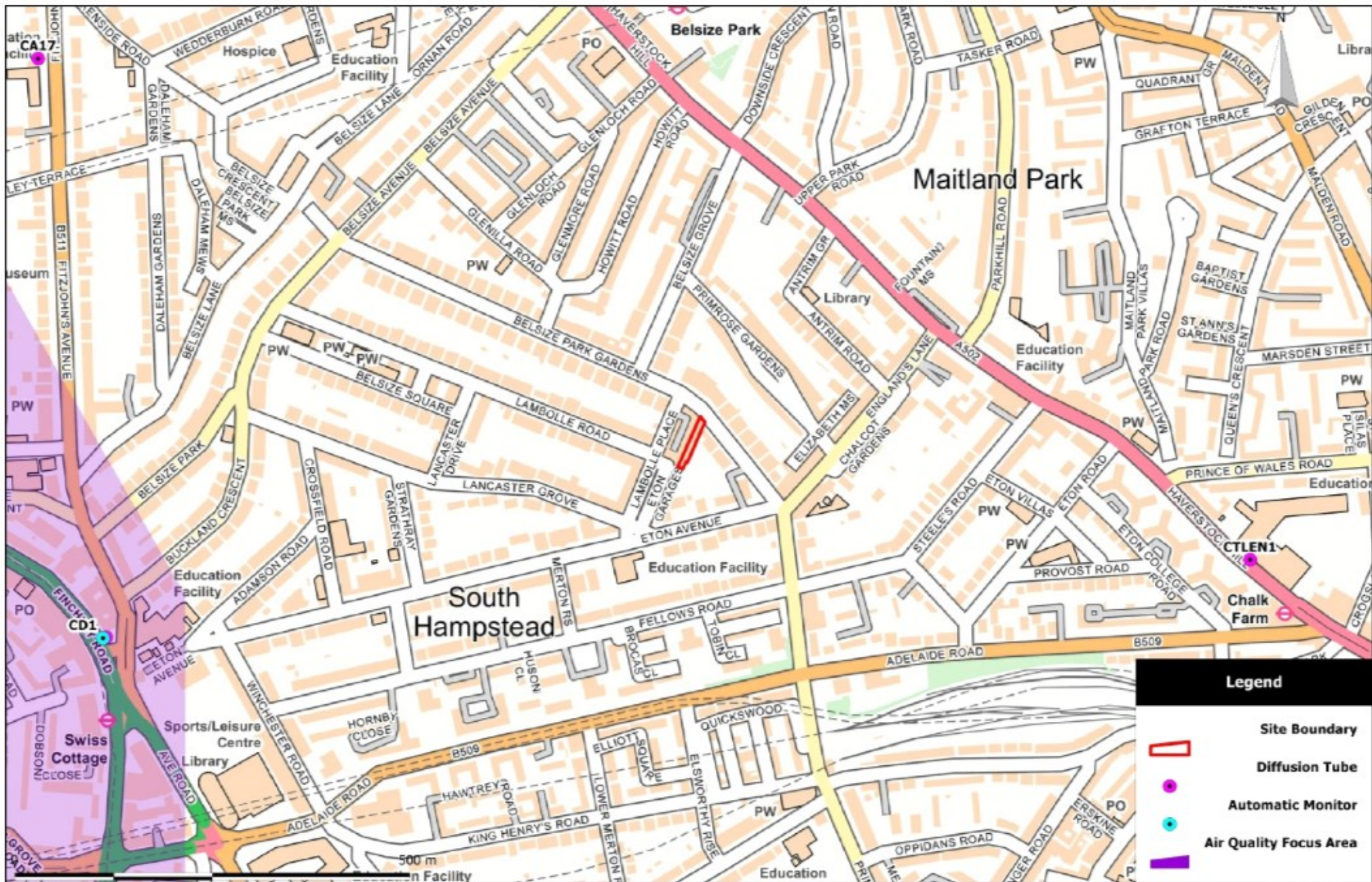
## 9. Conclusions

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- 9.1 Dukes Education Group commissioned Phlorum Limited to undertake an Air Quality Assessment in support of a planning application for a property redevelopment located at 81 Belsize Park Gardens, Camden, London, NW3 4NJ. The proposal comprises a change of building use from the existing leisure club use (Class E(d)) to education use (Class F1). The building is proposed to be used by the Fine Arts College that caters for children aged 13- 19 years.
- 9.2 Local air quality monitoring data, London Atmospheric Emissions Inventory modelled pollutant concentrations and UK Air Information Resource background concentrations indicate that whilst air quality within the local area can sometimes be poor at roadside and kerbside locations, background pollutant concentrations in the vicinity of the site are likely to be well below the relevant UK Air Quality Standard concentrations.
- 9.3 The construction phase of the development could give rise to emissions which could cause dust soiling effects on adjacent uses. However, by adopting appropriate mitigation measures to reduce emissions and their potential impact, there should be no significant residual effects, thus complying with the requirements of the National Planning Policy Framework.
- 9.4 The operation of the proposed development is not expected to significantly impact on local air quality, nor is it anticipated to introduce new sensitive receptors into an area of existing poor air quality. Furthermore, the proposed development is anticipated to be air quality neutral in relation to both building and transport emissions.
- 9.5 As such, the proposed development is expected to comply with all relevant local and national air quality policy. Air quality should not, therefore, pose any significant obstacles to the planning process.

## Figures and Appendices

## Figure 1: Site Location Plan



**Legend**

-  Site Boundary
-  Diffusion Tube
-  Automatic Monitor
-  Air Quality Focus Area

Figure 1: Site Location Plan

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## Figure 2: Construction Phase Receptors

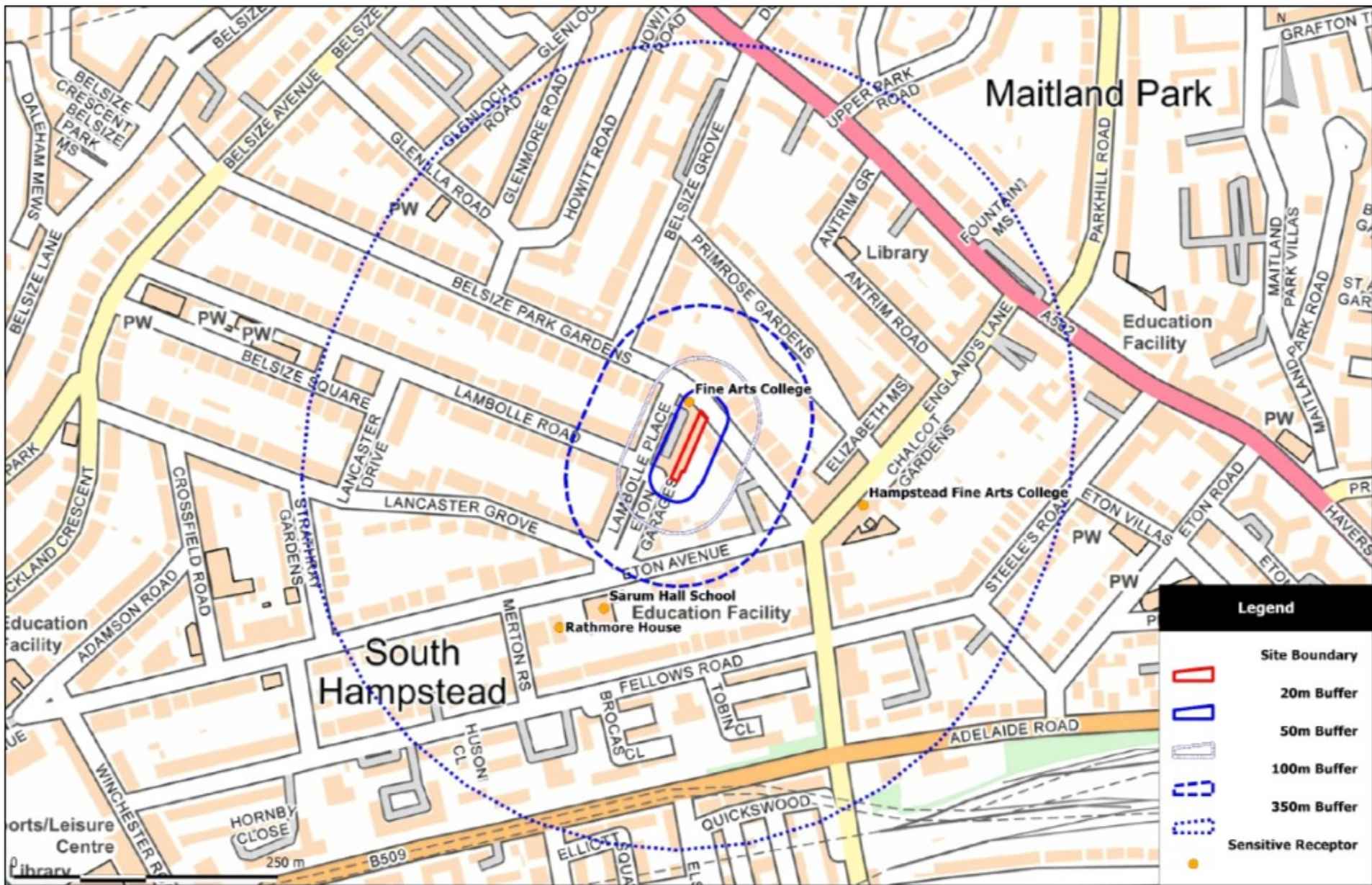


Figure 2: Construction Phase Receptors

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Figure 3: LAEI NO<sub>2</sub> Concentration Contours (2019)





Figure 3: LAEI NO2 Concentration Contours (2019)

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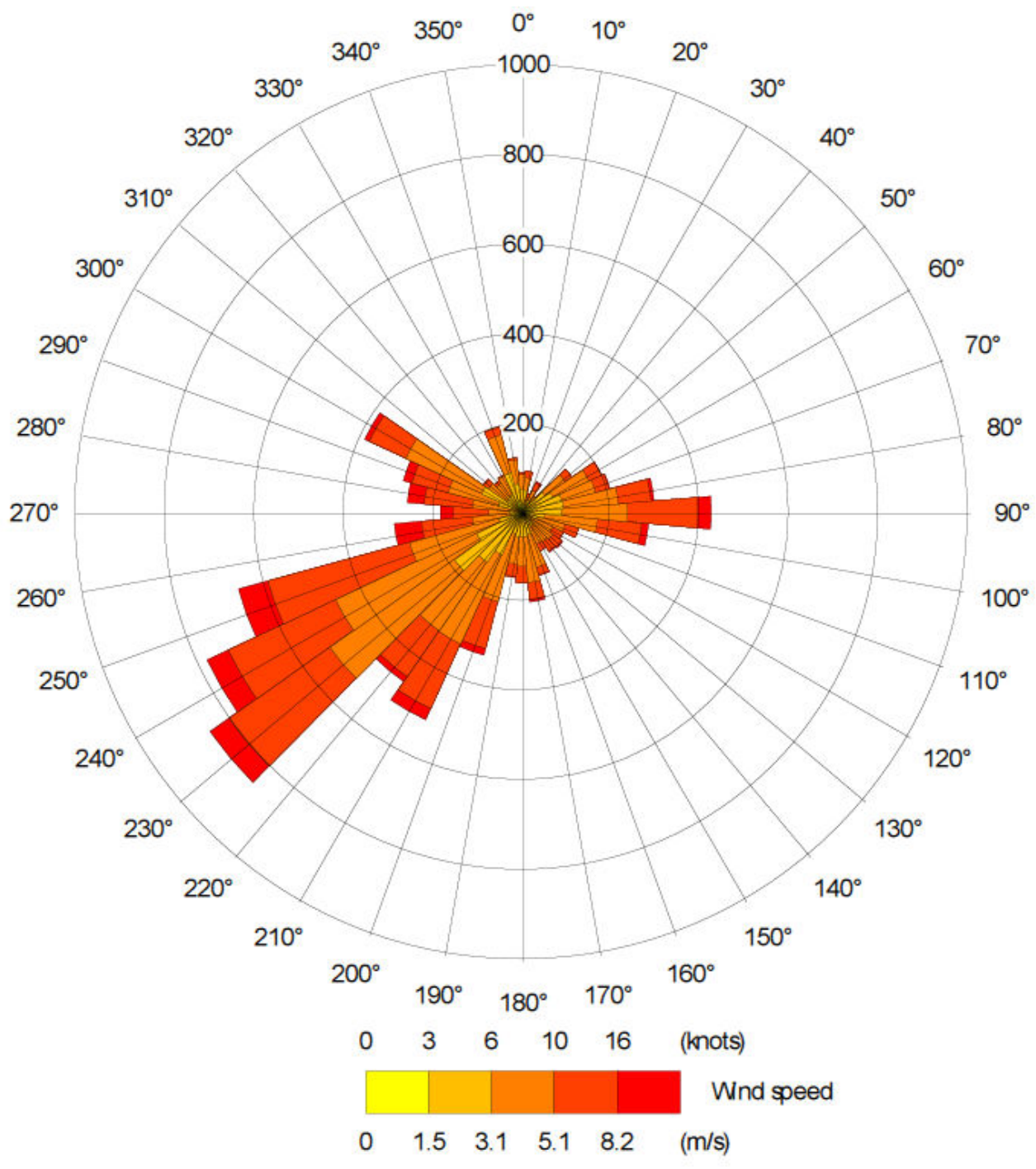
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Figure 4: Wind Rose for London City Airport (2019)



## Appendix A: IAQM Highly Recommended Mitigation Measures for Medium Risk Sites

## **Appendix A: IAQM Highly Recommended Mitigation Measures for sites with a Medium Risk of Dust Impacts**

Please refer to the IAQM's construction dust guidance<sup>16</sup> and *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites (2018)*<sup>27</sup> for further, "desirable", mitigation measures.

### **Communications**

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this Appendix. The DMP may include monitoring of dust deposition, dust flux, real-time PM<sub>10</sub> continuous monitoring and/or visual inspections.

### **Site Management**

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exception incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.

### **Monitoring**

- Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real-time PM<sub>10</sub> continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by the IAQM<sup>16</sup> on *monitoring during demolition, earthworks and construction*.

### **Preparing and Maintaining the Site**

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<sup>27</sup> Institute of Air Quality Management. (2018). *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*. [https://iaqm.co.uk/text/guidance/guidance\\_monitoring\\_dust\\_2018.pdf](https://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf)

- ✔ Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible.
- ✔ Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- ✔ Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- ✔ Avoid site runoff of water or mud.
- ✔ Keep site fencing, barriers and scaffolding clean using wet methods.
- ✔ Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on site cover as described below.
- ✔ Cover, seed or fence stockpiles to prevent wind whipping.

#### **Operating Vehicles & Sustainable Travel**

- ✔ Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London NRMM standards, where applicable.
- ✔ Ensure all vehicles switch off engines when stationary – no idling vehicles.
- ✔ Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
- ✔ Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.

#### **Operations**

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

#### **Waste Management**

- ✔ Avoid bonfires and burning of waste materials.

#### **Demolition**

- ✔ Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.

- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.

#### **Construction**

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

#### **Trackout**

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site log book.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10m from receptors where possible.

## Phlorum Limited

### Head Office & Registered Office:

Unit 12  
Hunns Mere Way  
Woodingdean  
Brighton  
East Sussex  
BN2 6AH  
T: 01273 307 167

### Northern Office:

Ground Floor  
Adamson House  
Towers Business Park  
Wilmslow Road  
Didsbury  
Manchester  
M20 2YY  
T: 0161 955 4250

### Western Office:

One Caspian Point  
Pierhead Street  
Cardiff Bay  
Cardiff  
CF10 4DQ  
T: 029 2092 0820

[info@phlorum.com](mailto:info@phlorum.com)  
[www.phlorum.com](http://www.phlorum.com)

Registered in England & Wales. Reg No. 4967256



# Appendix G

## Mitigation Measures Checklist

APPENDIX 7 AIR QUALITY CONTROL

81 Belsize Park Gardens

MEASURES RELEVANT FOR DEMOLITION, EARTHWORKS, CONSTRUCTION AND TRACK-OUT

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK
<b>Site management</b>			
Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	✓	XX	XX
Develop a Dust Management Plan.	✓	XX	XX
Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.	XX ✓	XX	XX
Display the head or regional office contact information.	XX ✓	XX	XX
Record and respond to all dust and air quality pollutant emissions complaints.	XX ✓	XX	XX
Make a complaints log available to the local authority when asked.	XX ✓	XX	XX
Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.	XX ✓	XX	XX
Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.	XX ✓	XX	XX
Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.	XX ✓	XX	XX

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK
Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.	N/A		XX
<b>Preparing and maintaining the site</b>			
Plan site layout: machinery and dust causing activities should be located away from receptors.	XX ✓	XX	XX
Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.	XX ✓	XX	XX
Fully enclosure site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	X ✓	XX	XX
Install green walls, screens or other green infrastructure to minimise the impact of dust and pollution.	N/A	X	X
Avoid site runoff of water or mud.	XX ✓	XX	XX
Keep site fencing, barriers and scaffolding clean using wet methods.	X ✓	XX	XX
Remove materials from site as soon as possible.	X ✓	XX	XX
Cover, seed or fence stockpiles to prevent wind whipping.	N/A	XX	XX
Carry out regular dust soiling checks of buildings within 100m of site boundary and cleaning to be provided if necessary.	✓	X	XX
Provide showers and ensure a change of shoes and clothes are required before going off-site to reduce transport of dust.	N/A		X
Agree monitoring locations with the Local Authority.	N/A	XX	XX
Where possible, commence baseline monitoring at least three months before phase begins.	N/A	XX	XX

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK
Put in place real-time dust and air quality pollutant monitors across the site and ensure they are checked regularly.	N/A	XX	XX
<b>Operating vehicle/machinery and sustainable travel</b>			
Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.	XX ✓	XX	XX
Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.	XX ✓	XX	XX
Ensure all vehicles switch off engines when stationary – no idling vehicles.	XX ✓	XX	XX
Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.	XX ✓	XX	XX
Impose and signpost a maximum-speed-limit of 10mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).	X N/A	X	XX
Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.	✓	XX	XX
Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).	XX ✓	XX	XX
<b>Operations</b>			
Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.	XX ✓	XX	XX

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK
Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).	XX ✓	XX	XX
Use enclosed chutes, conveyors and covered skips.	XX ✓	XX	XX
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	XX N/A	XX	XX
Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	✓	XX	XX
<b>Waste management</b>			
Reuse and recycle waste to reduce dust from waste materials	XX ✓	XX	XX
Avoid bonfires and burning of waste materials.	XX ✓	XX	XX

#### MEASURES SPECIFIC TO DEMOLITION

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK
Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).	X ✓	X	XX
Ensure water suppression is used during demolition operations.	XX ✓	XX	XX
Avoid explosive blasting, using appropriate manual or mechanical alternatives.	XX ✓	XX	XX
Bag and remove any biological debris or damp down such material before demolition.	XX ✓	XX	XX

**MEASURES SPECIFIC TO EARTHWORKS**

<b>MITIGATION MEASURE</b>	<b>LOW RISK</b>	<b>MEDIUM RISK</b>	<b>HIGH RISK</b>
Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces.	N/A	X	XX
Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil.	N/A	X	XX
Only remove secure covers in small areas during work and not all at once.	N/A	X	XX

**MEASURES SPECIFIC TO CONSTRUCTION**

<b>MITIGATION MEASURE</b>	<b>LOW RISK</b>	<b>MEDIUM RISK</b>	<b>HIGH RISK</b>
Avoid scabbling (roughening of concrete surfaces) if possible	X ✓	X	XX
Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place	X ✓	XX	XX
Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	N/A	X	XX
For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.	✓	X	X

**MEASURES SPECIFIC TO TRACKOUT**

<b>MITIGATION MEASURE</b>	<b>LOW RISK</b>	<b>MEDIUM RISK</b>	<b>HIGH RISK</b>
Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.	X N/A	XX	XX
Avoid dry sweeping of large areas.	X ✓	XX	XX
Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.	X ✓	XX	XX
Record all inspections of haul routes and any subsequent action in a site log book.	N/A	XX	XX
Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems and regularly cleaned.	N/A	XX	XX
Inspect haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;	N/A	XX	XX
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	X N/A	XX	XX
Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	N/A	XX	XX
Access gates to be located at least 10m from receptors where possible.	N/A	XX	XX
Apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site	N/A	X	XX

XX Highly Recommended

X Desirable

# Appendix H

**Asbestos Survey** \* Please note that the asbestos to the Tank Room, Boiler Room and Rooms 12 and 16 have already been removed.



**Asbestos Survey Report  
Refurbishment Survey**

81 Belsize Park Gardens, Belsize Park, London,  
NW3 4NJ



FRANKHAM RMS



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**Frankham Risk Management Services Ltd**

Irene House  
Five Arches Business Park  
Maidstone Road  
Sidcup  
Kent DA14 5AE

REPORT DATE – 7 Dec 2022  
BATCH REF – J029186  
PROJECT NUMBER – 803609  
Template: SRR 200120 V18



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## CONTROL PAGE (General Site Information part 1)

<b>Client:</b>	<b>Dukes Education Group</b>
<b>Client Address:</b>	<b>14-16 Waterloo Place, London, SW1Y 4AR</b>
<b>Site Addresses:</b>	<b>81 Belsize Park Gardens, Belsize Park, London, NW3 4NJ</b>
<b>Carried out by:</b>	<b>Frankham Risk Management Services</b> Irene House Five Arches Business Park Maidstone Road Sidcup Kent DA14 5AE <b>Tel: 020 8309 7777</b>
<b>Date(s) of Survey:</b>	<b>22 Nov 2022 to 27 Nov 2022</b>
<b>Date(s) of Analysis:</b>	<b>28 Nov 2022</b>
<b>Lead Surveyor(s):</b>	<b>Billy Hipgrave</b>
<b>Assistant Surveyor(s):</b>	<b>Luke Bracher, Luke Mason</b>
<b>Survey Method Used:</b>	<b>HSG 264 and FRMS Standard Operating Procedures</b>
<b>Type of Survey Undertaken:</b>	<b>Refurbishment Survey</b>
<b>Variations from method:</b>	<b>N/A</b>
<b>Agreed exclusions and inaccessible areas:</b>	<b>Refer to Section 1 – Scope of works and General Site Information (Part 2)</b>
<b>Technical Review by:</b>	<b>Adam Hunt</b>
<b>Technical Review carried out on:</b>	<b>7 Dec 2022</b>
<b>Signed off by Technical Reviewer:</b>	
<b>Authorised by Lead Surveyor:</b>	
<b>Date of Authorisation:</b>	<b>7 Dec 2022</b>

## Executive Summary

Frankham Risk Management Services Ltd (FRMS) was instructed by Damian Quinn on behalf of Dukes Education Group to provide a 'Refurbishment' asbestos survey of 81 Belsize Park Gardens, Belsize Park, London as per the client instruction.

The reason for the refurbishment survey was due to a forthcoming intrusive structural investigation of the property and removal of M&E. A refurbishment has been carried out to all areas in line with these planned works.

The site was visited during 22 Nov 2022 to 27 Nov 2022

**The visit identified that asbestos was present in the areas surveyed. Caveats and limitations must be referred to.**

The detailed findings of the surveys are presented in section 5.

**The following asbestos-containing material was identified.**

Floor Level	Location Item Position & Description	Level of Identification	Asbestos Identification	Risk Category	Recommendation
Roof Void	Tank room - Walls and associated debris - Insulating board	Sampled	Chrysotile + Amosite	B	Remove
Roof Void	Boiler room - Internal lining to walls - Insulating board	Not sampled. Refer to other sample	Chrysotile + Amosite	B	Remove
Roof Void	Roof - External walls - Insulating board	Not sampled. Refer to other sample	Chrysotile + Amosite	B	Remove
Ground Floor	Room 12 - Boiler - Textile internals	Presumed	Chrysotile	C	Remove if affected by the works
Ground Floor	Room 16 - Intake box - Textile internals	Presumed	Chrysotile	C	Remove if affected by the works
Ground Floor	Room 16 - Safe - Textile internals	Presumed	Chrysotile	C	Remove if affected by the works
Roof Void	Tank room - Within electrical boxes - Flashgards	Presumed	Chrysotile	D	Remove if affected by the works

**The following areas could not be accessed or limited access was gained.**

Floor Level	Location Item Position & Description	Comments
External	Side & Rear aspects - No Access	Unable to access due to close proximity of adjacent housing.
Ground Floor	Floor ducts throughout - No Access	Unable to access. Specialist lifting equipment required.
Ground Floor	Room 17All areas - Limited Access	Limited access due to storage
Roof Void	RoofLimited access All areas - Limited Access	Due to roof flooded - Health and safety risk

Any area not accessed or inspected must be presumed to contain asbestos, unless there is strong evidence that it does not. Caveats and limitations in this report must be referred to.

**The highest level of risk at the property is:**

**MEDIUM RISK (B) 7 - 9 points**

This category indicates that there is a potential for asbestos fibre-release to occupiers. As Refurbishment is proposed, the removal of the asbestos will be required. In the interim, the area should be made safe.

## 1) Introduction

Frankham Risk Management Services Ltd (FRMS) was instructed by Damian Quinn on behalf of Dukes Education Group to provide a 'Refurbishment' asbestos survey of 81 Belsize Park Gardens, Belsize Park, London as per the client instruction.

The reason for the refurbishment survey was due to a forthcoming intrusive structural investigation of the property and removal of M&E. A refurbishment has been carried out to all areas in line with these planned works.

- **'Refurbishment Survey'**

A **refurbishment survey** survey is defined by the HSE publication 'Asbestos: The survey guide' (HSG 264). Its purpose is to locate and describe, as far as reasonably practicable, all ACMs in the area where the refurbishment work will take place.

A **refurbishment survey** is needed before any refurbishment work is carried out. The survey will be fully intrusive and involve destructive inspection, as necessary, to gain access to all areas, including those that may be difficult to reach. A refurbishment survey may also be required in other circumstances, eg when more intrusive maintenance and repair work will be carried out or for plant removal or dismantling.

A **refurbishment survey** includes an assessment of the condition of the various ACMs (Material Assessment) and their ability to release fibres into the air if they are disturbed. The material assessment will give a good initial guide to the priority for managing ACMs as it will identify the materials which will most readily release airborne fibres if they are disturbed. The survey involves sampling and analysis to confirm the presence or absence of ACMs.

The survey was carried out in normal working hours. Disturbance to occupiers or residents was minimised as far as practical. Any occupation of a building may have restricted the survey in terms of access and sampling strategy.

This survey has been commissioned by Dukes Education Group and is protected by copyright law.

The building is used as Commercial property of Traditional brick construction and was built in the Circa 1970s.

## Scope of Works and General Site Information (Part 2)

The following represents the agreed scope of works and overall survey methodology adopted. Where whole rooms or areas have not been accessed – these will have been listed specifically within the survey register. If any maintenance works are to be undertaken within the areas not accessed then a further survey or risk assessment should be carried out prior to the works.

Agreed Checklist Item	FRMS or Client comments / details / variations
Inspection and sampling procedures <b>may</b> involve significant intrusion and disturbance to building surfaces. The survey team will only make superficial repairs and cannot be liable for preserving decoration or previous appearance. The client will make the surveyor aware of any areas where care of decorative finishes and fittings is required.	
Access <b>is</b> made to all risers/voids which are accessed through T-handle budget lock keys, splined, a full-set of FB keys or any key sets made available by the client. Such keys are carried by Surveyors at all times. Any such areas not accessed due to a lack of keys other than those stated above shall be re-surveyed at an additional cost.	
Representative access <b>is</b> made beneath paint and wallpaper finishes.	
Access <b>is</b> gained to at least <b>3m</b> in height from ground or flat level where safe to do so. The client must make FRMS aware of any areas above this height, so that, if necessary access equipment can be arranged. (An additional fee may-be applicable).	
Access <b>is</b> gained to all known voids, risers and false-work.	
Mechanical and electrical plant, lifts, and confined spaces if present should be made known to FRMS. Where additional access arrangements are required; such as electrical engineers, lift engineers, ancillary lighting or working at height / confined space equipment, further costs are required following assessment of needs and agreement with the client.	
Access <b>is not</b> made to flues, ventilation ducts, concealed voids, chimneys or any similarly enclosed areas, where access would require the use of specialist equipment or tools (and has not been provided by the client or made known to FRMS in advance).	
Access <b>is</b> made into floor ducts which require specialist lifting equipment, if provided by the client or made known to FRMS in advance.	
Intrusive access <b>is not</b> made within concrete unless specifically requested by the client (additional costs will need to be agreed for core sampling of any slab present).	
Representative access <b>is</b> made within floor-voids.	
Examination <b>is not</b> carried out above, beyond or beneath asbestos containing, or potentially asbestos containing materials unless previously made known to FRMS and specifically agreed.	
Pipe-work (surfaces) concealed by overlying non-asbestos insulation <b>is</b> inspected in representative areas.	
Glazing sheets / roof-lights etc <b>are not</b> broken out for safety reasons. There remains a possibility of asbestos rope/beading in the construction.	
Fire doors <b>are</b> examined intrusively, but this may inhibit fire compartmentation. Should the client prefer that this is not carried out – then FRMS should be notified.	

Agreed Checklist Item	FRMS or Client comments / details / variations
A full inspection of voids located above suspended ceilings tiles <b>is</b> carried out - provided that the ceiling tiles are not constructed of asbestos.	
Forced entry is made to locked areas unless specifically requested otherwise. Forced entry may cause damage to door/door frame structure and or security issues.	
Representative access <b>is</b> made within internal and external door frames and window frames for possible packing material, unless specifically requested otherwise. This may cause damage to door/door frame structure and or security issues.	
Lofts <b>are</b> accessed as far as reasonably practicable. If walkways are not provided or there are physical size restrictions – this may hinder the accessibility of all parts of the loft.	

#### General notes and comments

- A representation of all materials suspected of containing asbestos will be sampled in accordance with our documented in-house methods, Asbestos: The analysts' guide for sampling, analysis and clearance procedures and HSG 264. Analysis of samples was conducted by a UKAS accredited organisation certified to ISO17025.
- The survey will be conducted according to the criteria laid down in HSG 264 as well as our documented standard operating procedures.
- Occupation of the building may restrict the survey in terms of access or sampling strategy.
- If plans are not provided prior to the commencement of the surveys – then FRMS cannot be held responsible for areas not surveyed due to a lack of knowledge of their presence, or for asbestos installations not identified, where the provision of suitable, accurate plans would have aided their identification.
- Reference will be made to Asbestos Insulating Board or Asbestos Cement based upon asbestos content and visual appearance only. Water absorption testing on materials will not have been carried out unless stated to the contrary elsewhere within the report.
- If any high-risk materials are identified on site, the Surveyor will notify the client or client's representative prior to leaving site.
- Where the size, use or nature of the site is different from the information provided by the client, FRMS reserves the right to abort the survey and review and provide alternative quotation and proposals.
- Any areas or elements of the site which are physically or practicably inaccessible to the survey team must be presumed to contain asbestos.
- Analysis under Polarised Light Microscopy (PLM) of textured coating samples may not in all cases identify asbestos due to the non homogeneous nature of asbestos within such coatings. This can lead to a large difference in the probability of positively identifying asbestos within any sample collected.
- This survey does not constitute a contaminated land investigation. The survey itself is based on the assumption that the land is not contaminated.
- Dust or debris samples from areas where contamination is suspected, may have been taken. Unless specifically instructed, random dust sampling will not be carried out.
- Material extents are approximations only, assigned by the surveyor at the time of the survey and may be for specific, visible sections of asbestos and may not be for the complete amount.
- Where access to a room/area is not made or is restricted this will be specifically recorded in the final report and survey register.
- Where high level access equipment has not been provided visual observations and any presumed items of asbestos will be recorded on the survey register.
- Unless specifically requested and identified within the report, no responsibility can be accepted by FRMS Ltd, for non-systematic use of asbestos, stored or portable items of asbestos within the property.



- This survey has not extended to those areas where obtaining a sample would have caused excessive damage to the building, risk the safety of our Surveyors or where access could not be gained.
- If pipes or ducting pass through floors or walls there is a chance that asbestos has been used as an insulating material within cavities.
- Digital photographs are taken of every sampled item. Presumed or strongly presumed items will be photographed by exception.
- Plaster has been known to have been mixed with various products, including asbestos. Sampling of plasters applied to walls, ceilings and structure is not carried out routinely.
- Identification and sampling of materials beneath textured coating is restricted to the specific location of the textured coating sample point. Asbestos may also be present in paint with no apparent textured appearance. Random sampling of such paint is not carried out.
- It should be noted that this report is not intended as a scope of works for asbestos removal.

## 2) Methodology - Sampling and Assessment

### 2.1) SAMPLING:

The levels of identification of samples recorded within the survey are as follows:

- 1) Sample (**BS..../No.**) physically taken on site by the Surveyor and analysed by the laboratory.
- 2) Visually similar to a material that has been sampled as part of the survey and identified as asbestos. The sample in this case will be assigned as being 'Strongly Presumed' asbestos. (**AS/BS..../No.**)
- 3) 'Presumed' (**No.**) to be asbestos. If the ACM could not be sampled due to:
  - excessive height (such as soffits),
  - was located in an occupied area, or
  - located in an area whereby sampling may have presented a risk to the Surveyor

**AND** that no similar material had been sampled; then this level of identification will have been used.
- 4) 'Previously Identified' (**No.**) as asbestos. This will normally be because an ACM has previously been sampled and identified as asbestos. The samples will have been taken and analysed in accordance with the relevant standards prevalent at that time. Reducing the need for repeat samples in this manner will have been agreed with the client in advance. FRMS cannot verify the accuracy of any of the samples *previously* taken and analysed by a third party.

### 2.2) ASSESSMENTS:

Two types of assessments may be carried out, a Material Assessment and a Priority Assessment

The material assessment identifies the high-risk materials, that is, those which will most readily release airborne fibres if disturbed (if any). All A.C.M's have been given a risk rating based solely on the material assessment - however it should be remembered that if the building is due for Refurbishment, all asbestos materials will need to be removed.

- *More information on assessments can be found within section 3 of this report.*

## 2.3) RECOMMENDATIONS:

The recommendations given within this report are categorised as follows:

Normally, unless ACMs are to remain, for refurbishment surveys a recommendation of **REMOVE** will be given. The other recommendations and comments are provided for reference purposes only.

### MANAGE

Where asbestos is left in-situ **there is a duty to formulate and implement a management plan** to help prevent accidental damage occurring and to help prevent accidental exposure.

The basic requirements of this policy are (from HSG 264 and HSG227):

- Keep and maintain an up-to-date record of the location, condition, maintenance and removal of all asbestos containing materials
- Maintain it in a good state of repair and regularly monitor the condition
- Inform anyone who is likely to disturb it about the location and condition of the material
- Have arrangements and procedures in place, so that work which may disturb the materials complies with the Control of Asbestos Regulations 2012
- Review the plan at regular intervals

*If not already provided, FRMS Ltd can provide Priority Assessments for each ACM and a suitable Management Plan to accompany any asbestos register / survey on request or review any existing management plan for completeness, validity and accordance to current legislation. Please note where priority risk assessments (PRA's) have been undertaken as part of an inspection, this falls outside the scope of our UKAS accreditation.*

### Monitoring

Regulation 4 of CAR 2012 requires the regular checking and recording of the condition of ACM's. The time period between checks will vary depending on the type of ACM, its location and the activities in the area concerned, but should not be more than 12 months. Monitoring would involve a visual inspection, looking for signs of disturbance, scratches, broken edges, cracked or peeling paint and debris. When condition changes, the material assessment should be re-evaluated and a new recommendation for remedial action may be applicable. A competent person should be assigned to carry out these checks and record the results. Depending on the size of the organisation and for financial reasons, these works can often be conducted in-house and possibly as part of other day-to day care-taking / maintenance procedures.

*FRMS can assist in training internal staff to carry out re-inspection or provide a competitive quotation for these works on request.*

## Labelling

A decision is required on whether to label ACM's. **This may have been carried out as part of the scope of these works.** The decision will depend on the confidence in the administration of the asbestos management system and whether communication with workers and contractors coming to work on site is effective. There may also be issues regarding the spoiling of decorative features such as in residential property. Labelling ACM's should not be the only control measure; however it is an effective method of preventing exposure to building occupants (and in particular; maintenance workers). If, for any reason, management procedures fail, it may act as an effective last barrier to uncontrolled damage to the ACM. It should be ensured that the label can clearly be seen and that the adhesion to the backing material will be sufficient.

It may not *always* be practical to label all ACM's; for example high level items such as roof sheets, flue cowls and soffits or items such as compressed asbestos gaskets to pipe flanges, textured coating (artex) and floor tiles. Liaison should be made with residents when residential surveys have been planned or carried out with regards to the use of labels.



*FRMS Ltd can provide labels or a labelling service on request if this service has not been carried out as part of the survey*

### • ENCAPSULATE & MANAGE

When this recommendation has been given, the ACM is raw and needs encapsulating with a suitable sealant, (normally painting) or the existing sealant or covering has deteriorated and the installation requires either a complete or partial re-encapsulation.

It may-be possible for minor works to be conducted in accordance with '**Asbestos Essentials Task Manual - HSG 210**'. This guidance sets out safe-systems of works for certain types of minor works involving asbestos.

### **General points to note on all works with asbestos:**

In general, it should be ensured that whoever is employed to carry out the works that the following is in place or available:

- A written plan of works and risk assessment specific to the task;
- Adequate Personal Protective Equipment / Respiratory Protective Equipment;
- Adequate and certified equipment is used;
- Supervision and Training is present /has been conducted and it is specific to the task being undertaken;
- Suitable insurance is in place;
- Appropriate arrangements for waste disposal have been made;
- A statement is made on completion of the works.

All work with asbestos (in the work-place) is covered by the Control of Asbestos Regulations 2012. Works with asbestos insulating board, insulation or coating are normally subject to additional requirements as laid down with these regulations. **Such work can normally only be undertaken by contractors licensed by the Health and Safety Executive.**

### Sealants

The following points on sealant materials used in the encapsulation/repair of an installation should be noted:

- The sealant must be adequately fire-rated / resistant to any generated heat.
- The sealant must not cause delamination of the product because of the weight increase.
- The sealant must be suitable for the type of ACM involved; for example (inter-alia) elastomeric paint may be required for insulating board, or an alkali-resistant sealant for asbestos cement. Instructions from the sealant manufacturer should in all cases be referred to.

**Sealing or painting of damaged insulating board, insulation or coatings should in nearly all cases be undertaken by a licensed contractor and is likely to be subject to a 14 day notification to the HSE, (as per the Control of Asbestos Regulations 2012).**

- **REMOVE**

Where an ACM is:

- damaged,
- in a location where it may be vulnerable to damage or
- will be disturbed in forthcoming refurbishment / maintenance works

Then a recommendation for removal has been made.

### General points to note on all works with asbestos:

- Most asbestos removal work will require a contractor holding a licence from HSE;
- All work with sprayed asbestos coatings and asbestos lagging and most work with asbestos insulation and asbestos insulating board (AIB) requires a licence;
- You will need to identify if your work needs a licensed contractor;
- If the work is not licensable, you will need to decide if the work needs to be notified
- If a licence is not required, you can do maintenance work on or around ACMs with the in place – information on this is available from the HSE website;
- Some non-licensed work also has additional requirements, known as notifiable non-licensed work. Such requirements include notification of work, medical surveillance and record keeping – information on this is available from the HSE website.

**Where asbestos debris has been identified, access to these areas should be restricted until such remedial works have been undertaken. If access is required then a further assessment should be undertaken to ascertain the potential for exposure.**

- **SPECIFIC**

Specific recommendations may include:

- repair,
- erecting a physical barrier to prevent the accidental disturbance of the ACM, or
- enclosing the ACM with an airtight barrier.

The following points on enclosing an ACM should be noted:

- 1) Any barriers / enclosing material must be adequately fire-rated / resistant to any generated heat.
- 2) An assessment should be made whether access is required to the enclosure for maintenance or repairs.

Other **general points**, as detailed in the Encapsulation and Manage section, are also pertinent.

**If the ACM is asbestos insulation, asbestos coating or asbestos insulation board, and the enclosure of it is likely to cause disturbance, then the work should in nearly all cases be undertaken by a licensed contractor and is likely to be subject to a 14 day notification to the HSE, (as per the Control of Asbestos Regulations 2012).**

#### Presumed items of asbestos

If a presumed asbestos item is in *good condition (and sealed)*, it will normally be prudent to manage the item as asbestos rather than undergo the additional cost of sampling.

Where a presumed asbestos item is in *poor condition (and/or un-sealed) and requires attention*, it may often be prudent to undergo the additional cost of sampling the item first, to ensure that it does contain asbestos, prior to undergoing removal/remediation works.

Please note that should the Recommendations highlighted anywhere within this report not prove practical to the Client - then FRMS may be able to provide suitable alternatives.

### 3) Methodology –Material & Priority Assessment,Score Interpretation and Risk Evaluation

#### A) Material assessment algorithm

Sample Variable	Score	Examples of Score Variables
<b>Product Type</b> (or debris from product)	1	Asbestos-reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement etc).
	2	Asbestos Insulating Boards, millboards, other low-density insulating boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.
	3	Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.
<b>Extent of Damage or Deterioration (Condition)</b>	0	Good condition: no visible damage
	1	Low damage; a few scratches or surface marks; broken edges on boards, tiles etc.
	2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres.
	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris.
<b>Surface Treatment</b>	0	Composite materials containing asbestos reinforced plastics, resins, vinyl tiles.
	1	Enclosed sprays and lagging, AIB (with exposed face painted or encapsulated), asbestos cement sheets etc.
	2	Unsealed AIB, or encapsulated lagging and sprays.
	3	Unsealed lagging and sprays.
<b>Asbestos Type</b>	1	Chrysotile
	2	Amphibole asbestos excluding crocidolite
	3	Crocidolite

A.C.Ms have been priority assessed as part of this survey. The assessment template has been included for reference purposes only. An assessment in this manner does not specifically form an intrinsic part of an HSG 264 compliant survey and is not normally required for any Refurbishment survey.

**Irrespective of the material risk rating, if any activity will disturb the asbestos, then safe working procedures will be required to be put into place in-line with the Control of Asbestos Regulations 2012.**

**References:**

- *A comprehensive guide to Managing Asbestos in premises HSG227, HSE Books 2002*
- *Asbestos: The survey guide HSG 264, HSE Books 2010*



## B) Material Score Interpretation

<b>Cumulative Score</b>	
<b>10 - 12</b>	This is allocated to those items with a high potential to release fibres, for example - badly damaged pipe insulation or insulating board.
<b>7 - 9</b>	This is allocated to those items with a medium potential to release fibres, for example - insulating board with medium damage.
<b>5 - 6</b>	This is allocated to those items with a low potential to release fibres, for example - asbestos corrugated sheeting.
<b>1 - 4</b>	This is allocated to those items with a very low potential to release fibres, for example - floor tiles, plastic or bitumen products or textured coating in good condition.

## D) Risk Evaluation Definitions

### **HIGH RISK (A) 10 points or more**

This is the highest level category and warrants urgent action because the asbestos is likely to be damaged, friable and may be in a position likely to cause an exposure to occupiers. In most cases it will be necessary to prevent access or occupation with immediate effect. If access to the area is required in the future, then plans should be made for remediation. As Refurbishment is proposed, the removal of the asbestos will be required. In the interim, the area should be made safe.

### **MEDIUM RISK (B) 7 - 9 points**

This category indicates that there is a potential for asbestos fibre-release to occupiers. As Refurbishment is proposed, the removal of the asbestos will be required. In the interim, the area should be made safe.

### **LOW RISK (C) 5 - 6 points**

This category indicates that there is a low risk from the material or/and there is a low possibility of accessing the asbestos. As Refurbishment is proposed, the removal of the asbestos will be required. In the interim, the area should be made safe.

### **VERY LOW RISK (D) 1 - 4 points**

This category indicates that there is a very low risk from the asbestos. As Refurbishment is proposed, the removal of the asbestos will be required. In the interim, the area should be made safe.

### **NO RISK (N/A) 0 points.**

No action necessary - no asbestos was found.

#### 4) Glossary of Terms






<b>Asbestos</b>	<p>The name given to a group of naturally occurring fibrous silicate minerals commonly found in rocks world-wide.</p> <ul style="list-style-type: none"> <li>• The fibres are flexible and mechanically strong, have high tensile strength and chemical, electrical and heat resistance.</li> <li>• Asbestos was commonly used raw (e.g. textiles and insulation) or combined with other materials (boards, asbestos cement, etc).</li> <li>• The three most common forms of asbestos are:           <ul style="list-style-type: none"> <li>• <b>Amosite</b> Brown asbestos</li> <li>• <b>Chrysotile</b> White asbestos</li> <li>• <b>Crocidolite</b> Blue asbestos</li> </ul> </li> </ul>
<b>Asbestos – Loose Insulation</b>	<ul style="list-style-type: none"> <li>• Bulk loose fill, bulk fibre-filled mattresses, quilts and blankets used for loft insulation, thermal and acoustic insulation.</li> <li>• Bulk loose fill now rarely found but may be encountered unexpectedly, or during DIY.</li> <li>• Usually contains Crocidolite and / or Chrysotile.</li> <li>• Easily damaged, giving rise to high levels of airborne fibres.</li> </ul>
<b>Asbestos – Sprayed Coatings</b>	<ul style="list-style-type: none"> <li>• Coatings applied wet or dry as thermal and anti-condensation insulation to the underside of roofs / ceilings. Acoustic insulation in theatres, fire protection on frame structures.</li> <li>• Used up to 1974.</li> <li>• Typically contains 55-85% asbestos with Portland cement binder. Crocidolite major type used until 1962. Mixture of asbestos types until mid-1971.</li> <li>• Usually easily damaged, giving rise to high levels of airborne fibres.</li> </ul>
<b>Asbestos – Thermal Insulation</b>	<ul style="list-style-type: none"> <li>• Hand-applied thermal lagging, pipe and boiler lagging, pre-formed pipe sections (sectional lagging), slabs, blocks. Also tape, rope, corrugated paper, quilts, felts and blankets. Used for thermal insulation of pipes, boilers, calorifiers, vessels, etc.</li> <li>• All types of asbestos are common. Asbestos content between 6-85%. Crocidolite used until 1970. Amosite was phased out during 1970s. Ad hoc mixtures hand-applied to pipework joints and bends. Sectional content of 85% magnesia, 15% Amosite.</li> <li>• Blankets, papers, ropes, etc usually 100% Chrysotile.</li> <li>• Thermal insulation often encapsulated or enclosed.</li> <li>• Ease of fibre release dependant upon type and surface treatment.</li> </ul>
<b>Asbestos Insulating Board (AIB)</b>	<ul style="list-style-type: none"> <li>• Board commonly used for fire protection, thermal and acoustic insulation, resistance to moisture movement and general building.</li> <li>• Used extensively between the 1950's to 1970's in all types of buildings.</li> <li>• This typically contains approximately 15-40% asbestos, in a mix of Portland cement or hydrated lime and silica. Amosite and Chrysotile are common within this type of board.</li> <li>• AIB is easily damaged. Disturbance leads to significant fibre release.</li> <li>• Also commonly used as fillets or cores in composite products, eg. fire doors, raised floors.</li> </ul>






<b>Asbestos – Millboard</b>	<ul style="list-style-type: none"> <li>• Board commonly used for general heat insulation and fire protection.</li> <li>• Crocidolite use between 1896-1965. Asbestos content 37-97%, usually Chrysotile, with matrix of clay and starch.</li> <li>• Low density, brittle and liable to abrasion.</li> </ul>
<b>Asbestos – Paper, Felt &amp; Cardboard</b>	<ul style="list-style-type: none"> <li>• Used for electrical/heat insulation of electrical equipment, wiring and plant. Insulation and acoustic lining in air conditioning systems. Often also used as reinforcement/lining.</li> <li>• Paper commonly 100% Chrysotile. Can be found beneath MMMF pipework insulation.</li> <li>• If not encapsulated or bonded then easily damaged and gives fibre release.</li> </ul>
<b>Asbestos – Textiles</b>	<p>Ropes &amp; Yarns:</p> <ul style="list-style-type: none"> <li>• Pipe lagging, jointing / packing; heat and fire resistant boiler and oven flue seals. Plait or braiding to electrical cables.</li> <li>• Crocidolite/Chrysotile common - fibre length and flexibility. Chrysotile alone post 1970.</li> <li>• Woven products generally have good integrity unless abraded, cut or exposed.</li> </ul> <p>Cloth:</p> <ul style="list-style-type: none"> <li>• Thermal insulation and lagging (see above). Also protective clothing.</li> <li>• All types of asbestos have been used. Since mid-1960s mainly Chrysotile.</li> <li>• Asbestos content up to 100%.</li> </ul> <p>Gaskets and washers:</p> <ul style="list-style-type: none"> <li>• Utilised in domestic to industrial / chemical plant.</li> <li>• Content varies, though usually approx 90%.</li> <li>• Crocidolite (acid resistant) or Chrysotile (alkali resistant).</li> </ul> <p>Strings:</p> <ul style="list-style-type: none"> <li>• Used for sealing hot water radiators. Also found to tie on MMMF pipework insulation.</li> <li>• Asbestos content up to 100%.</li> </ul>
<b>Asbestos – Friction Products</b>	<ul style="list-style-type: none"> <li>• Resin-based materials used in transport, machinery and lifts contain 30-70% Chrysotile. Used up to November 1999. Low friability, dust may build up with friction debris.</li> <li>• Drive belts / conveyor belts found in engines and conveyors. Formed of Chrysotile textiles encapsulated in rubber. Low friability, except when worn to expose textile.</li> </ul>
<b>Asbestos Cement (AC)</b>	<ul style="list-style-type: none"> <li>• Asbestos fibre added to hydrated Portland cement. Asbestos cement products take the form of profiled sheets, semi-compressed flat sheet and partition board, fully compressed flat sheet and pre-formed moulded products.</li> <li>• Used extensively between approximately 1945 to 1999 in all types of buildings, as a host of products in numerous locations.</li> <li>• Asbestos cement typically contains 10-15% asbestos. Although all three main asbestos types have been used in the manufacture of asbestos cement, Chrysotile is the most common form.</li> <li>• Potential for fibre release increases with level of abrasive disturbance.</li> </ul>






<p><b>Asbestos – Other Products and Composites</b></p>	<p><b>Textured Coatings:</b></p> <ul style="list-style-type: none"> <li>• Decorative coating on walls and ceilings.</li> <li>• Asbestos content 3-5% Chrysotile. Chrysotile used up to 1984.</li> <li>• Matrix of material means asbestos fibres are well contained. Fibre release occurs when coating is sanded or scraped.</li> </ul> <p><b>Bitumen Products:</b></p> <ul style="list-style-type: none"> <li>• Roofing felts, damp proof course, mastics and adhesives, etc.</li> <li>• Chrysotile fibre or asbestos paper in bitumen matrix usually 8% Chrysotile. Adhesives may contain a few percent Chrysotile. All used up to 1992.</li> <li>• Fibre release unlikely during normal use.</li> </ul> <p><b>Flooring:</b></p> <ul style="list-style-type: none"> <li>• Thermoplastic floor tiles – up to 25% asbestos.</li> <li>• PVC vinyl floor tiles and unbacked PVC flooring – 7% Chrysotile.</li> <li>• Asbestos paper-backed PVC floors – 100% Chrysotile paper backing used until 1992.</li> <li>• Magnesium oxychloride (2% asbestos) flooring also used.</li> <li>• Fibre release unlikely unless cut.</li> </ul> <p><b>Reinforced PVC, plastic and resin composites:</b></p> <ul style="list-style-type: none"> <li>• Panels, cladding, toilet cisterns, seats, banisters, window sills, machinery brakes and clutches.</li> <li>• Asbestos content 1-10% Chrysotile. Amosite also used.</li> <li>• Fibre release unlikely until damaged / abraded.</li> </ul>
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**5) Survey Results at: 81 Belsize Park Gardens, Belsize Park, London, NW3 4NJ**






**A) Survey Register, Rooms Inspected and Access Limitations: (For assessment explanation please see Section 4)**






Floor Level	Location Item Position & Description	Survey Date	Item Reference	Material Assessment				Mean Assessment Total	Level of Identification	Asbestos Identification	Extent	Comments	Recommendations	Risk Category	Photograph
				Product Type	Damage Deterioration	Surface Treatment	Asbestos Type								
Roof Void	Roof Void - Tank room (1) - Walls and associated debris - Insulating board	22/11/2022	AH000743_1	2	3	2	2	9	Sampled	Chrysotile + Amosite	50m <sup>2</sup>	Timber ceiling Polystyrene insulation timber joists fibreglass water tanks concrete floor	Remove	B	
Roof Void	Roof Void - Tank room (1) - Within electrical boxes - Flashguards	22/11/2022	2	2	0	1	4	Presumed	Chrysotile	1m <sup>2</sup>	Timber ceiling Polystyrene insulation timber joists fibreglass water tanks concrete floor	Remove if affected by the works	D		
Roof Void	Roof Void - Boiler room (2) - Internal lining to walls - Insulating board	22/11/2022	As /AH000743_3	2	1	2	7	Not sampled. Refer to other sample	Chrysotile + Amosite	20m <sup>2</sup>	Timber ceiling plasterboard suspended ceiling plasterboard walls mmmf insulation to metal pipework concrete floor	Remove	B		
Roof Void	Roof Void - Roof (3) - External walls - Insulating board	22/11/2022	As /AH000743_4	2	1	2	7	Not sampled. Refer to other sample	Chrysotile + Amosite	50m <sup>2</sup>	Modern felt to flat roof metal ducting with mmmf insulation modern plant and equipment modern skylights	Remove	B		
Roof Void	Roof Void - Roof (3) - All areas - Limited access	22/11/2022	5	0	0	0	0	Inaccessible (Presumed)	No Access	0	Modern felt to flat roof metal ducting with mmmf insulation modern plant and equipment modern skylights Due to roof flooded - Health and safety risk	Further Investigation Required Prior to Works	N/A		






Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Concrete ceiling masonry and plasterboard walls timber flooring to concrete floor	Concrete ceiling masonry and plasterboard walls timber flooring to concrete floor	Concrete ceiling masonry and plasterboard walls timber flooring to concrete floor rubber stair nosing	Solid ceiling above suspended plasterboard. Solid walls and floor. Timber boxing	Solid ceiling above suspended plasterboard. Solid walls and floor. Timber boxing
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	6	7	8	9	10
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Third Floor - Room 1 (1) - No suspect materials found	Third Floor - Room 2 (2) - No suspect materials found	Third Floor - Stairwell (3) - No suspect materials found	Second Floor - Room 1 (1) - No suspect materials found	Second Floor - Room 2 (2) - No suspect materials found
Floor Level	Third Floor	Third Floor	Third Floor	Second Floor	Second Floor






Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid ceiling above suspended plasterboard. Solid walls and floor. Timber boxing	Solid ceiling. Solid and plaster walls. Timber to solid floor.	Solid ceiling above timber panels. Solid and plaster walls. Solid floor.	Solid ceiling. Timber and plaster walls. Solid floor	Solid ceiling above suspended ceiling tiles. Solid and plaster walls. Solid floor
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	11	12	13	14	15
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Second Floor - Stairwell 1 (3) - No suspect materials found	Second Floor - Room 3 (4) - No suspect materials found	Second Floor - Room 4 (5) - No suspect materials found	Second Floor - Room 5 (6) - No suspect materials found	Second Floor - Room 6 (7) - No suspect materials found
Floor Level	Second Floor	Second Floor	Second Floor	Second Floor	Second Floor













Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid ceiling above suspended ceiling tiles. Solid and plaster walls. Solid floor	Solid ceiling above suspended ceiling tiles. Solid and plaster walls. Solid floor	Solid ceiling. Solid and plaster walls. Solid floor.	Solid ceiling. Solid and plaster walls. Laminate to solid floor.	Solid ceiling. Solid and plaster walls. Laminate to solid floor.
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total					
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	16	17	18	19	20
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Second Floor - Room 7 (8) - No suspect materials found	Second Floor - Room 8 (9) - No suspect materials found	Second Floor - Room 9 (10) - No suspect materials found	Second Floor - Room 10 (11) - No suspect materials found	Second Floor - Room 11 (12) - No suspect materials found
Floor Level	Second Floor	Second Floor	Second Floor	Second Floor	Second Floor






Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid ceiling, Solid and plaster walls, Solid floor.	Solid ceiling above suspended plasterboard, Solid walls and floor, Timber boxing	Concrete ceiling masonry and plasterboard walls timber flooring to concrete floor	Solid above suspended ceiling tiles, Solid and plaster walls, Modern vinyl, to solid floor, Timber panels	Solid above suspended ceiling tiles, Solid and plaster walls, Modern vinyl, to solid floor, Timber panels
Extent			120m <sup>3</sup>		
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification			Sampled		
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	21	22	AH000744_23	24	25
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Second Floor - Stairwell 2 (13) - No suspect materials found	First Floor - Stairwell 1 (2) - No suspect materials found	First Floor - Room 1 (1) - Beneath flooring - Bitumen adhesive	First Floor - Room 2 (3) - No suspect materials found	First Floor - Room 3 (4) - No suspect materials found
Floor Level	Second Floor	First Floor	First Floor	First Floor	First Floor






Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid ceiling above timber panels. Solid and plaster walls. Modern vinyl to soffit floor.	Solid ceiling walls and floor	Solid ceiling above timber. Solid and plaster walls. Metal ducting. Timber panels.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Laminate to solid floor.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Laminate to solid floor.
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	26	27	28	29	30
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	First Floor - Room 4 (5) - No suspect materials found	First Floor - Room 5 (6) - No suspect materials found	First Floor - Room 6 (7) - No suspect materials found	First Floor - Room 7 (8) - No suspect materials found	First Floor - Room 8 (9) - No suspect materials found
Floor Level	First Floor	First Floor	First Floor	First Floor	First Floor

Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid to plaster above suspended ceiling tiles. Solid and plaster. Laminate to solid floor.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Laminate to solid floor.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Laminate to solid floor.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Laminate to solid floor.	Plasterboard above suspended ceiling tiles. Solid and plaster wall. Foam matting to solid floor.
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	31	32	33	34	35
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	First Floor - Room 9 (10) - No suspect materials found	First Floor - Room 10 (11) - No suspect materials found	First Floor - Room 11 (12) - No suspect materials found	First Floor - Room 12 (13) - No suspect materials found	Ground Floor - Room 1 (1) - No suspect materials found
Floor Level	First Floor	First Floor	First Floor	First Floor	Ground Floor



Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid to plaster above suspended ceiling tiles. Solid and plaster. Modern vinyl to solid floor.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Modern vinyl to solid floor.	Solid to plaster ceiling . Solid and plaster. Modern vinyl to solid floor.	Solid to plaster above suspended plasterboard ceiling. Solid and plaster. Modern vinyl to solid floor.	Solid to plaster ceiling. Solid and plaster. Modern vinyl to solid floor.
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	36	37	38	39	40
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Ground Floor - Room 2 (2) - No suspect materials found	Ground Floor - Room 3 (3) - No suspect materials found	Ground Floor - Room 4 (4) - No suspect materials found	Ground Floor - Room 5 (5) - No suspect materials found	Ground Floor - Stairwell 1 (6) - No suspect materials found
Floor Level	Ground Floor	Ground Floor	Ground Floor	Ground Floor	Ground Floor

Photograph					
Risk Category	N/A	N/A	N/A	N/A	N/A
Recommendations	No Action Required	No Action Required	No Action Required	No Action Required	No Action Required
Comments	Solid to plaster above suspended plasterboard ceiling. Solid and plaster. Modern vinyl to solid floor.	Solid to plaster above suspended ceiling tiles. Solid and plaster. Modern vinyl to solid floor.	Solid to plaster ceiling. Solid and plaster. Modern vinyl to solid floor.	Solid ceiling, walls and floor.	Solid ceiling, walls and floor. Timber boxing.
Extent					
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Level of Identification					
Mean Assessment Total	0	0	0	0	0
Material Assessment	Asbestos Type	0	0	0	0
	Surface Treatment	0	0	0	0
	Damage Deterioration	0	0	0	0
	Product Type	0	0	0	0
Item Reference	41	42	43	44	45
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Ground Floor - Room 6 (7) - No suspect materials found	Ground Floor - Room 7 (8) - No suspect materials found	Ground Floor - Stairwell 2 (9) - No suspect materials found	Ground Floor - Room 8 (10) - No suspect materials found	Ground Floor - Room 9 (11) - No suspect materials found
Floor Level	Ground Floor	Ground Floor	Ground Floor	Ground Floor	Ground Floor

Photograph					
Risk Category	N/A	N/A	C	N/A	N/A
Recommendations	No Action Required	No Action Required	Remove if affected by the works	No Action Required	No Action Required
Comments	Timber ceiling above UPVC panelling. Solid walls. Ceramic to solid floor	Timber above plaster ceiling. Solid walls and floor. Non suspect pipework	Timber above plaster ceiling. Solid walls and floor. Presumed due to equipment being potentially live.	Solid above plaster ceiling. Solid and plaster walls. Ceramic tiles to solid floor. Modern electrics	Solid above plaster ceiling. Solid and plaster walls. Ceramic tiles to solid floor.
Extent			1 no.		
Asbestos Identification	No Asbestos Detected	No Asbestos Detected	Chrysotile	No Asbestos Detected	No Asbestos Detected
Level of Identification			Presumed		
Mean Assessment Total	0	0	6	0	0
Material Assessment	Asbestos Type	0	1	0	0
	Surface Treatment	0	2	0	0
	Damage Deterioration	0	1	0	0
	Product Type	0	2	0	0
Item Reference	46	47	48	49	50
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Ground Floor - Room 10 (12) - No suspect materials found	Ground Floor - Room 11 (13) - No suspect materials found	Ground Floor - Room 12 (14) - Boiler - Textile Internals	Ground Floor - Room 13 (15) - No suspect materials found	Ground Floor - Room 14 (16) - No suspect materials found
Floor Level	Ground Floor	Ground Floor	Ground Floor	Ground Floor	Ground Floor

Photograph					
Risk Category	N/A	C	C	N/A	N/A
Recommendations	No Action Required	Remove if affected by the works	Remove if affected by the works	Further Investigation Required Prior to Works	Further Investigation Required
Comments	Solid above polystyrene ceiling tiles. Solid and plaster walls. Solid floor.	Solid above polystyrene ceiling tiles. Solid and plaster walls. Solid floor. Presumed - Unable to inspect internally.	Solid above polystyrene ceiling tiles. Solid and plaster walls. Solid floor. Presumed due to live electrics	Unable to access. Specialist lifting equipment required.	Timber ceiling. Solid and timber walls. Solid floor. Limited access due to storage
Extent		1	1 no.		
Asbestos Identification	No Asbestos Detected	Chrysotile	Chrysotile	No Access	No Access
Level of Identification		Presumed	Presumed	Inaccessible (Presumed)	Inaccessible (Presumed)
Mean Assessment Total	0	5	6	0	0
Material Assessment	Asbestos Type	0	1	0	0
	Surface Treatment	0	1	0	0
	Damage Deterioration	0	1	2	0
	Product Type	0	1	1	0
Item Reference	51	52	53	54	55
Survey Date	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Location Item Position & Description	Ground Floor - Room 15 (17) - No suspect materials found	Ground Floor - Room 16 (18) - Safe - Textile internals	Ground Floor - Room 16 (18) - Intake box - Textile internals	Ground Floor - Floor ducts throughout (19) - Inaccessible	Ground Floor - Room 17 (20) - All areas
Floor Level	Ground Floor	Ground Floor	Ground Floor	Ground Floor	Ground Floor



Photograph		
Risk Category	N/A	N/A
Recommendations	No Action Required	Further Investigation Required Prior to Works
Comments	Brick built. UPVC rainwater goods. Timber boxing. Non suspect roof tiles	Unable to access due to close proximity of adjacent housing.
Extent		
Asbestos Identification	No Asbestos Detected	No Access
Level of Identification		Inaccessible (Presumed)
Mean Assessment Total	0	0
Material Assessment	Asbestos Type	0
	Surface Treatment	0
	Damage Deterioration	0
	Product Type	0
Item Reference	56	57
Survey Date	22/11/2022	22/11/2022
Location Item Position & Description	External - Front external (1) - No suspect materials found	External - Side & Rear aspects (2) - Inaccessible
Floor Level	External	External

## **B) Certificate of Analysis**



**CERTIFICATE FOR IDENTIFICATION OF ASBESTOS FIBRES**

STANDARD   
 PREMIUM   
 EMERGENCY

Client:	FRANKHAM CONSULTANCY GROUP	Analysis Report No.	SCO/22/5424	
Address:	THIRD FLOOR BAIRD HOUSE, 15-17 ST CROSS STREET LONDON, EC1N 8UW	Report Date.	28/11/22	
Attention:	TECHNICAL MANAGER	Site Ref No.	N/A	
Site Address:	61 BELSIZE GARDENS NW3 4NJ	Page No:	1	Of 1
Date sample taken:	22/11/22	No. of Samples:	2	
Date sample received:	28/11/22	Obtained:	DELIVERED	
Date of Analysis:	28/11/22			

Samples of material, referenced below, have been examined to determine the presence of asbestos fibres, using Scopes Asbestos Analysis "in house" method of transmitted/polarised light microscopy and centre stop dispersion staining, based on HSE's HSG248.  
 If samples have been DELIVERED the site address and actual sample location is as given by the client at the time of delivery. Scopes Asbestos Analysis Services Limited are not responsible for the accuracy or competence of the sampling by third parties. Under these circumstances Scopes Asbestos Analysis Services Limited cannot be held responsible for the interpretation of the results shown. Results relate only to the items tested.

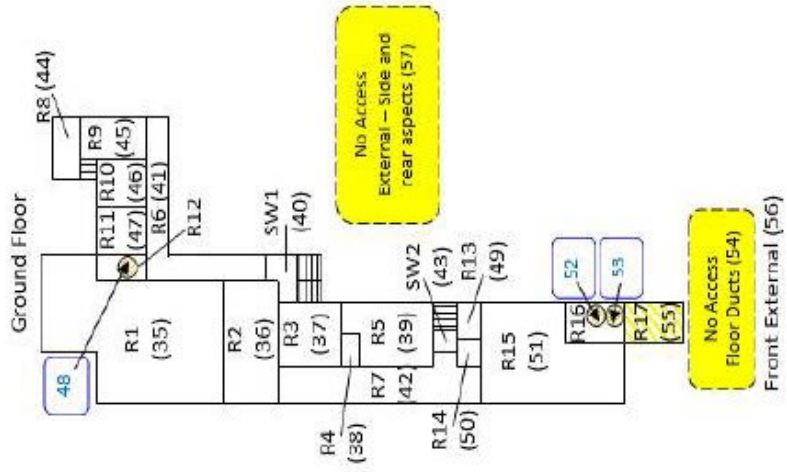
SCOPES SAMPLE No.	CLIENT SAMPLE No.	Sample Location	Fibre Type Detected
1	AH000743	ROOF VOID - TANK ROOM (1) - WALLS AND ASSOCIATED DEBRIS - INSULATING BOARD	AMOSITE/ CHRYSOTILE
2	AH000744	FIRST FLOOR - ROOM 1 (1) - BENEATH FLOORING - BITUMEN ADHESIVE	NADIS

KEY: NADIS – No Asbestos Detected in Sample

Note: All samples will be retained for a minimum of six months. Reports & Records are retained for a minimum of 5 years.  
 Note: This Certificate for Identification of Asbestos Fibres shall not be reproduced except in full without the written approval of the Laboratory.  
 Note: All Analysis is performed in House on the registered premises (below).  
 Note: Where an 'A' appears at the end of the analysis report number this means an amendment has been made to the original report. Information that has been amended will be marked with an \*

Analysed by:	S GIDDINGS	Authorised signatory:	
		Print name:	C.BOLTON – DEPUTY Q.C.M

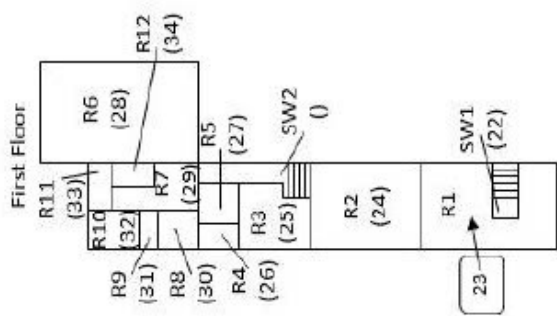
**BULK 001-VER 8 14-JUN-22-QCM**



Asbestos Key	
Product Type 1: Reinforced Composite, Textured Coating, Mastic, Vinyl Tiles etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework
Product Type 2: Insulating Board, Textiles, Gaskets, Paper & Felt etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework
Product Type 3: Thermal Insulation, Spray Lagging, Loose Asbestos, etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework

Drawing Key	
Out of scope	Negative Sample 1
No Access	Positive Sample 2
Limited Access	Presumed Item 3
L	Loft Hatch
lift	Stairs



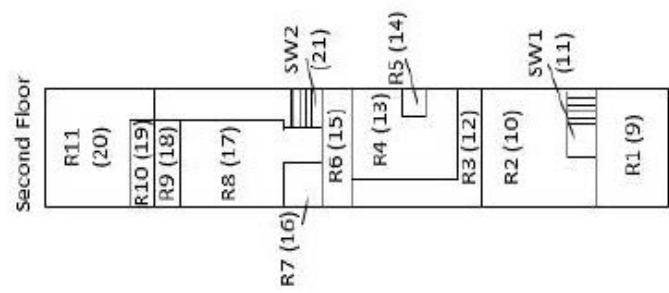
**Asbestos Key**

Product Type 1: Reinforced Composite, Textured Coating, Mastic, Vinyl Tiles etc.	Ceiling/Floor
Product Type 2: Insulating Board, Textiles, Gaskets, Paper & Felt etc.	Individual Item
Product Type 3: Thermal Insulation, Spray Lagging, Loose Asbestos, etc.	Walls/ Panel/ Pipework

**Drawing Key**

Out of Scope	Negative Sample	1	Loft Hatch
No Access	Positive Sample	2	Stairs
Limited Access	Presumed Item	3	
Lift			

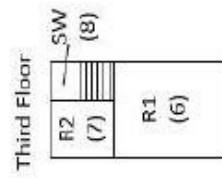


**Asbestos Key**

	Ceiling/ Floor Reinforced Composite
	Individual Item Textured Ceiling, Mastic, Vinyl Tiles etc.
	Ceiling/ Floor Insulating Board, Textiles, Gaskets, Paper & felt etc.
	Individual Item Thermal Insulation, Spray Lagging, Loose Asbestos, etc.
	Placemat
	Ceiling/ Floor Individual Item
	Individual Item Wall/ Panel/ Pipework

**Drawing Key**

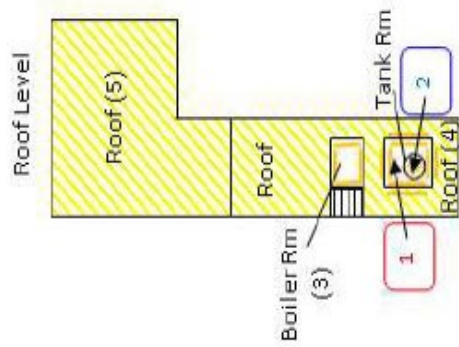
	Out of Scope		Negative Sample 1
	No Access		Positive Sample 2
	Limited Access		Presumed Item 3
	Lift		Loft Hatch
			Stairs



Asbestos Key	
Product Type 1: Reinforced Composite, Textured Coating, Mastic, Vinyl Tiles etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework
Product Type 2: Insulating Board, Textiles, Gaskets, Paper & felt etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework
Product Type 3: Thermal Insulation, Spray Lagging, Loose Asbestos, etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework

Drawing Key	
Out of scope	Negative Sample 1
No Access	Positive Sample 2
Limited Access	Presumed Item 3
Lift	Loft Hatch
	Stairs



Asbestos Key	
Product Type 1: Reinforced Composite, Textured Coating, Mastic, Vinyl Tiles etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework
Product Type 2: Insulating Board, Textiles, Gaskets, Paper & Felt etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework
Product Type 3: Thermal Insulation, Spray Lagging, Loose Asbestos, etc.	Ceiling/ Floor Individual Item Walls/ Panel/ Pipework

Drawing Key	
Out of scope	Negative Sample 1
No Access	Positive Sample 2
Limited Access	Presumed Item 3
Lift	Loft Hatch
	Stairs



## 6) Conclusions

The following asbestos-containing material was identified, however please also refer to the survey caveats and limitations and also any areas of no access:

Floor Level	Location Item Position & Description	Level of Identification	Asbestos Identification	Risk Category	Recommendation
Roof Void	Tank room - Walls and associated debris - Insulating board	Sampled	Chrysotile + Amosite	B	Remove
Roof Void	Boiler room - Internal lining to walls - Insulating board	Not sampled. Refer to other sample	Chrysotile + Amosite	B	Remove
Roof Void	Roof - External walls - Insulating board	Not sampled. Refer to other sample	Chrysotile + Amosite	B	Remove
Ground Floor	Room 12 - Boiler - Textile internals	Presumed	Chrysotile	C	Remove if affected by the works
Ground Floor	Room 16 - Intake box - Textile internals	Presumed	Chrysotile	C	Remove if affected by the works
Ground Floor	Room 16 - Safe - Textile internals	Presumed	Chrysotile	C	Remove if affected by the works
Roof Void	Tank room - Within electrical boxes - Flashgards	Presumed	Chrysotile	D	Remove if affected by the works