

Environmental Monitoring Plan – 150 Holborn

Site Plan

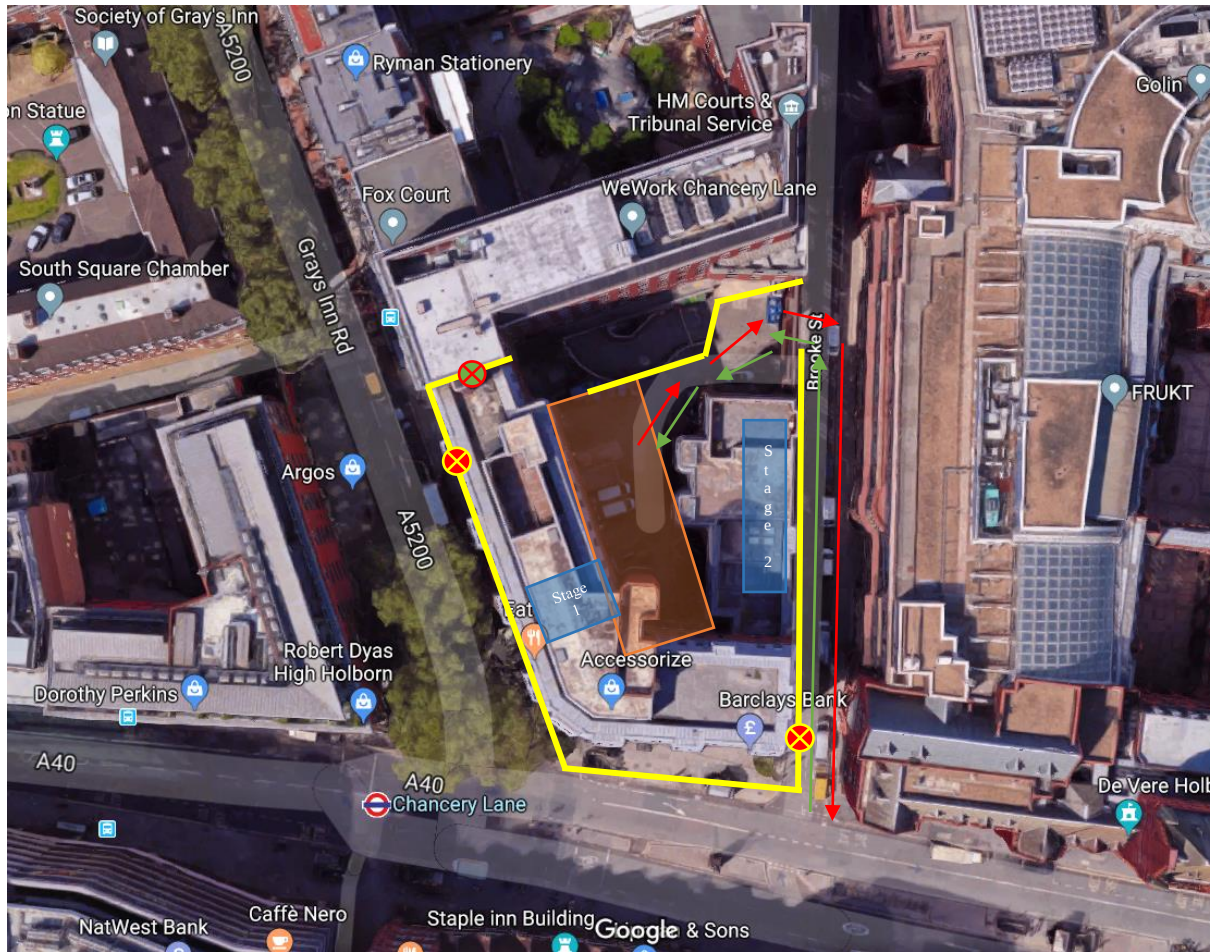


Figure 1. Site map and monitor locations

Key

- | | |
|---|---|
|  Loading/Unloading area |  Noise/Dust Monitor Location |
|  Welfare (Stage 1 and Stage 2) |  Vibration Monitor Location |
|  Access to site | |
|  Egress from site | |
|  Site outline | |
|  Internal hoarding | |

Monitoring

Continuous noise, dust and vibration monitoring will be installed on site and reported monthly. These units will include trigger levels that will alert the site Project Manager who can control accordingly.

Actions to be taken following Site Action Level Exceedance:

Amber Exceedance:

Where an Amber exceedance occurs due to site activity, the site manager will monitor site emissions relevant to the alert and where necessary review methods of working. The site manager will also assess whether remaining work could continue to exceed the Amber threshold and if so, modify working methods, where practicable.

Red Exceedance

Where a Red exceedance occurs due to site activity, the site manager will stop the relevant activity whilst alternative construction methodology options are investigated, and where practicable adopted. If effective remedial action is not obvious, the site will consider an alternative technique or additional mitigation measures.

Complaints

Where a complaint is received, an investigation will be undertaken to establish whether the vibration is due to site activity. Where this is established, the site manager will adopt the process set out above for the receipt of an Amber exceedance. Where a complaint is received, details of the complaint, details of the exceedance, the source and remedial action taken will be logged

Noise

Sound levels will be continuously measured on the site boundary at the locations show on Figure 1. Sound levels will be monitored according to the methods set out in Appendix B of BS 5228: Part 1. All measurements should be made on a sound level meter complying with BS EN 61672-1:2013 Electroacoustics – Sound Level Meters Part 1 – Specifications.

The following noise levels will be applied to the works as per the Technical Guidance for Construction – 2016.

Parameter :	TRIGGER (AMBER)	ACTION (RED)
Noise level :	75 dB(A) L_{aeq} 5min (short term) 70 dB(A) L_{aeq} 10hr (08:00-18:00)	80 dB(A) L_{aeq} 5min (short term) 75 dB(A) L_{aeq} 10hr (08:00-18:00)

Vibration

Vibration affecting occupied buildings will not exceed levels that are likely to give rise to damage to the building or discomfort to the occupants of the building. Vibration affecting unoccupied buildings will not exceed levels that are likely to give rise to damage to the building. Appropriate limits will be set in terms of Peak Particle Velocity (PPV). These will be monitored continuously and controls set in place for the trigger action levels.

The following vibration levels will be applied to the works as per the Technical Guidance for Construction – 2016.

- 1mm/sPPV at occupied residential and educational buildings
- 3mm/sPPV at occupied commercial premises where work is not of an especially vibration sensitive nature or for potentially vulnerable unoccupied buildings
- 5mm/sPPV at other unoccupied buildings

Dust

Dust units will be set in place in the locations shown in Figure 1. These will monitor continuously and will follow the IAQM's recommended site action levels shown below;

PM10 CONCENTRATIONS – Continuous monitoring		
Parameter	TRIGGER (AMBER)	ACTION (RED)
Environmental Dust Units - PM ₁₀	200µg/m ³ 15 min	250µg/m ³ 15min
DUST DEPOSITION – Batch Monitoring		
○ Frisbee-type Deposition Gauges: 200 mg/m ² /day, averaged over a 4-week period		
○ Glass Slide Deposit Gauges: 25 soiling units (SU) per week, measured as a running 4-week average		
○ Sticky Pads: 2-5% EAC/day, measured over a 1-week period		

Air Quality Control Measures

To ensure the previously described impacts are minimised the following control measures will be implemented during the demolition project:

- Those demolition work areas generating dust will be liberally damped down by the controlled use of fire hose supplied fine water sprays
- All demolition waste lorries will be sheeted over prior to leaving site
- Any demolition waste stockpiles will be damped down during any dry dusty days
- Where required site routes around the demolition areas and traffic routes that become dusty will be damped down by water sprays supplied from towed water bowsers.
- Wheel washing facilities will be fitted by the site exit to reduce the dirt and dust from leaving site.
- Demolition works will be completed whilst enclosed in scaffolding and monarflex sheeting to minimise any particulate emissions.
- All site plant and waste collection lorries engines will be maintained in a fully serviced condition to ensure there are no smoke emitting exhaust pipes
- To minimise the emission of exhaust particulates all site plant will operate on Low Sulphur diesel fuel, and all diesel-powered road vehicles and waste lorries will be required to provide

confirmation of the use of commercially available Low Sulphur diesel and be fitted with catalytic converters and are fitted with Euro Group classification diesel engines

- The movement of all commercial vehicles particularly waste lorries to and from the site will be pre- planned to prevent unnecessary vehicle movements
- All contained refrigerant gases or other hazardous substances having an adverse impact will be removed by a specialist licensed sub-contractor for disposal in accordance with the hazardous waste regulations, at no time will venting to atmosphere of such materials be allowed
- At no time will substances or chemicals be used on site which are likely to produce offensive odours
- At no time will the burning of any demolition materials be allowed on site
- All Fibrous asbestos containing materials will be removed under fully controlled conditions within constructed containments by a licensed asbestos removal contractor
- All Firmly Bonded asbestos containing materials including asbestos cement products will be removed in accordance with the HSE Asbestos Essentials Tasks Manual. The Asbestos Cement Sheet removal will also be in accordance with HSE Guidance HSG 189/2 Working with Asbestos Cement

All works will be carried out under the 'The Control Of Dust And Emissions During Construction And Demolition - Supplementary Planning Guidance'.

To establish any potential asbestos fibres in air release during the asbestos removal works a UKAS accredited laboratory will be employed to carry out regular spot check background and personnel asbestos fibre in air monitoring with all readings recorded.

All asbestos containing materials will be removed in accordance with developed Method Statements and Risk Assessments.

Noise Control Measures

To ensure the previously described impacts are kept to a minimum the following control measures will be implemented for the duration of the project:

- Demolition works will be undertaken by plant using 'quiet' hydraulic powered demolition pulverising attachments as far as reasonable practical, thus minimising the use of percussive impact breakers
- To lessen noise migration from the site the site boundary will be enclosed by 2.4metre high erected hoarding installed by the John F Hunt. Additional noise barrier will be utilised if required.
- Each section of the project will be planned to ensure all noisy working requirements are identified along with the timescales so such information can be advised to all concerned parties. There will be no site working during any anti-social hours
- The use of fully serviced plant with fully operational exhaust systems
- Ensuring all plant engine covers are kept closed at all times
- All site plant not in use will be shut down and not left idling on site
- All provided site generator plant will be of the new 'whisper' operational type

- The shouting out of instructions on site will be strictly forbidden, all site management and supervisors will be issued with site communication radios
- There will be no noisy working during any 'anti-social' hours or hours determined by the contract or in liaison with the London Borough of Camden
- The playing of radios etc on site will be strictly forbidden at all times
- The sounding of vehicle hooters on site or in any adjacent street will be strictly forbidden at all times
- No commercial vehicles will be allowed to park in the adjacent streets waiting for access to the site, particularly with engines left 'ticking over'
- Where possible all site plant will be effectively silenced and located in such areas of the site so as to cause the minimum amount of noise migration to areas beyond the site boundary.
- Maximum noise generation levels will be determined for each major item of plant from such information as supplied by manufacturers or company noise monitoring records. This will enable the potential level of noise generation to be anticipated.
- A full noise level management programme will be developed in liaison with the London Borough of Camden
- Where appropriate to minimise noise emissions from within the building work areas all glazing will remain in place for as long as possible
- There will be no site activities or plant engines started or lorry movements to and from the site made before 8am and not after 6pm
- All plant deliveries and collections plus all waste management requirements will be coordinated to ensure the noise impact from all such vehicle's movements on the community is kept to a minimum and is within agreed times. This will be particularly relevant to the unloading and collection heavy plant.

Vibration Control Measures

To ensure these impacts are kept to a minimum, the following control measures will be implemented for the duration of this demolition project:

- Prior to the demolition commencing, where required debris pads can be constructed around the work areas to enable rubble to drop onto the pad, and not onto any slab which will act as a conductor of vibration to many adjacent areas.
- Where achievable all operating demolition plant e.g. excavators will operate standing on constructed debris pads
- No demolition materials will be allowed to fall from any height which may result in the generation of vibration
- All waste lorries will be loaded by excavators operated by competent plant operators with the debris placed into the vehicle and not dropped in

If required vibration monitoring will be implemented by the employed environmental consultants on selected adjacent properties, to establish any potential risk, particularly prior to, during and after demolition. The Site Demolition Manager will monitor the general day-by-day vibration caused by the works.

To determine any potential adverse effect of any generated vibration on structures where required prior to the demolition project commencing a Structural Condition Survey will be undertaken by appointed engineers on all adjacent buildings particularly those which have been identified as listed.

Then on completion of the project a Post Demolition Structural Condition Survey will be undertaken on the same properties to identify any structural defects, which may have occurred.