Noise, Vibration and Dust Mitigation Strategy

133-139 Westbourne Grove & 2 Pembridge Villas, W11

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1.0 Corley +Woolley & ME Construction

1.1 Corley and Woolley have worked with Frontier Estates on many occasions and have been commissioned by them to provide expert advice in relation to the site management, construction sequencing and methodology, as well as the Construction Traffic Management Plan.

1.2 We have liaised with Michael Barclay Partnership in relation to the construction methodology/sequencing, as well as TTP in relation the Construction Traffic Management Plan. This document should be read in conjunction with these documents.

1.3 Corley and Woolley are proud to be experts in High End Residential, Hotels, Commercial Offices and the Retail sectors. Our commitment to quality, along with continued strategic and controlled growth, continues to be translated into a large number of satisfied clients and a high degree of repeat business.

1.4 We employ experienced and responsible contractors that have been involved with us or who have been recommended to us by our consultants. All are familiar with, and have worked on developments and operations of a similar nature.
2.0 Noise, Vibration and Dust Mitigation Strategy

2.1 Our aim is to promote at all times a culture of awareness on the Project, through team ownership and the determined commitment of individuals. Co-operation with local residents, businesses and RBKC will be crucial in order to ensure that the construction works satisfy all parties’ needs, and in order to ensure the project runs with minimal disruption to the day-to-day activities of those within the neighbourhood and also the construction programme.

2.2 Noisy working hours will be restricted to 08.00 hours to 18.00 hours Monday to Friday as set out in the RBKC code of Construction Practice.

2.3 Deliveries will be restricted to 9:30 hours to 16:30 hours Monday to Friday only as set out in the RBKC code of Construction Practice.

2.4 Work outside these hours will only be permitted via prior consultation and agreement with RKBC Environmental Officers.

2.5 All works on site to be in accordance with:

1. This project Construction Method Statement, Construction Traffic Management Plan, and Michael Barclay Partnerships Construction Methodology.

2. Royal Borough of Kensington and Chelsea Code of Practice

3. The Control of dust and emissions from construction & demolition, Mayor of London Best Practice Guidance

4. The project Good Neighbourhood Policy

5. The Considerate Constructors Code of Construction Practice

6. The Control of Pollution Act 1974

3.0 Contractor Key Requirements and Procedures

3.1 The contractor will be required to understand and comply with the construction stage control procedures including:

1. Waste management;
2. Water management & pollution control;
3. Contaminated land;
4. Noise, dust and vibration monitoring and control;
5. Ecological issues;
6. Incident procedures; and
7. Work force training and education.
8. Include within Health and Safety method statements:
9. Key environmental risks (in respect to scope of works);
10. Key controls and precautions; and  
11. Effective communication to workforce.

3.2 All Sub-Contractors will undertake best working practices, with particular regard to BS5228, in order to avoid exceeding noise or vibration limits, these practices will be detailed in bid returns, method statements, etc.

4.0 Noise and vibration level and monitoring  
4.1 The following processes have been identified as operations that may cause high levels of noise and vibration.
   - Demolition
   - Striking scaffold
   - Cutting, Grinding, Drilling and Sawing
   - Striking formwork
   - Unloading of materials
   - Loading of construction waste

4.2 The following actions must be taken to minimise the adverse impacts of the noise and vibration created during the construction works:
   1. Liaise with residents and local businesses to inform them of planned noisy works and set up a formal complaints procedure. This notification shall take place within 2 weeks but at least one week prior to works commencing.
   2. Carryout a full Acoustic Assessment prior to commencement of operations on site to establish a background noise level against which the predicted construction noise levels can be measured. The background noise assessment along with the predicted construction noise level must be submitted to the Local Borough Council for approval prior to commencement on site.
   3. Noise level monitoring should also be carried out at regular intervals during each task period on site.
   4. Schedule noisy activities according to the results of community liaison to give local residents and businesses some quiet times.
   5. Avoid scheduling deliveries and collections of materials or waste before 08:00.
   6. Coordination of delivery times and efficient traffic management to prevent queues of traffic forming close to the site.
   7. Ensuring all vehicles, plant and machinery used for the purpose of the works are fitted with effective exhaust silencers, are maintained in good effective working order and operated in such a manner as to minimise noise emissions according to the principles of BS 5228:2008 Vol I (noise) and Vol II (vibration).
8. Ensure that spares and consumables for the plant and vehicles, on site, are available at short notice in order to rectify breakdowns rapidly.

9. Ensure that all site operatives have been trained on BS 5228: 2009 and that evidence to this effect is maintained on site for inspection by the Local Authority.

10. Wherever practicable, utilise construction techniques that minimise the production of noise (e.g. the use of prefabricated materials)

11. Erection of acoustic site hoarding

12. Utilisation of a baffle system where practicable during noisy works (e.g. demolition) Any mobile screen shall have sufficient mass so as to be able to resist the passage of sound across the barrier and to be free of significant holes or gaps between or under any acoustic panels or board materials as far as is reasonably practicable.

13. Monitor and record the site noise levels at the boundaries to ensure that the noise levels of each activity do not exceed 3dB above the predicted noise levels that have been reported to the local community. Monitoring will be achieved through the use of electronic monitoring devices, permanently affixed 1m from the site boundary at 6 locations along the boundary of the site, as indicated in figure 2 below.

14. Noise monitoring will be undertaken using a combination of semi-permanent (continuous) and attended monitoring methods.

15. In the case that an operation on site exceeds the 3dB threshold for noise production, an alarm connected to the permanent noise monitoring equipment will be triggered and the operation will be suspended immediately. A solution must be found to reduce the noise levels produced before the operation in question can resume. This could be achieved through an alternative constructing method or through localised acoustic hoarding to the area.

16. Wherever practicable, plant and machinery should be electrically powered.

17. Machines and plant that are not in use very often should be powered down when not in operation.

18. Measured vibration levels shall be measured against the criteria in BS 5228: 2009

19. All works to operate within the limits of the Control of Noise and Pollution Act 1974 and RBKC
5.0 **Dust level and monitoring**

5.1 The following processes have been identified as potentially dust creating operations:

- Demolition
- Excavation
- Cutting, Grinding, Drilling and Sawing
- Cleaning

5.2 It is important to create a philosophy on site of prevention of dust in the first instance rather than containment or suppression of dust after it has been created. The following actions must be taken to minimise the amount of dust created and to minimise the adverse impacts of the dust created during the construction works:

1. Carry out a risk assessment in line with the Greater London Authority’s Control of Dust and Emissions Supplementary Planning Guidance.

2. Notify and liaise with the local community with regard to planned dusty works and set up a formal complaints procedure. This notification shall take place within 2 weeks but at least one week prior to works commencing.

3. Schedule potentially dusty works in accordance with liaison with the local community to minimise the risk of complaints.

4. Should a complaint be received in regard to the level of dust being created by the works, the operation in question will be suspended immediately. That operation shall not resume until the complaint has been fully satisfied or an alternative method has been approved that creates less dust.

5. Ensure that all site operatives have been trained on BS 5228: 2009 and that evidence to this effect is maintained on site for inspection by the Local Authority.

6. Prior to commencement of construction activity on site, establish that there is adequate hydration facilities on site to ensure that damping down of the whole site is practicable.

7. Damp down the site to ensure that any dust is minimised.

8. Any plant used on site should, where possible, be fitted with dust suppressant attachments. For example, any cutting equipment on site should be fitted with either a vacuum device or a constant water feed to suppress any dust created.

9. All site operatives will be trained to carry out operations on site in accordance with the Best Practice Guidance Note “Control of dust and emissions from construction and demolition”. The actions of the operatives on site will be monitored by the site team to ensure compliance with Best Practice Guidance Note.

10. Covering of baulk materials and ensuring that any stockpiles are kept below the height of the site hoarding and positioned with regard for the prevailing wind and proximity to the site boundary and proximity of neighbours.
11. Use of bagged or silo stored materials where practicable.

12. Erection of Monarflex dust protection to site hoarding and scaffolding to the building for the duration of the demolition and construction operation to contain any dust created on site.

13. Monitor and record dust levels. Should the amount of dust in the air recorded by the monitoring stations exceed safe levels the operation causing the dust must be suspended immediately. That operation shall not resume until an alternative solution that will create less dust has been agreed.

14. Ensure that plant and machinery used on site is well maintained to reduce exhaust emissions

15. Ensure that all vehicles leaving the site have been through the wheel wash and that loads are covered where spoil or demolition materials are being removed.

16. Keeping the loading drop heights of spoil into lorries as low as possible.

5.3 In addition to the above procedures, the following measures will be taken on site to further reduce any adverse impacts that the development will have on the environment and local amenity;

1. Ensure that all contaminates kept on site are safely stored and the necessary procedures put in place for leaks and spillages. (See Spillage Response and Control).

2. A waste management system will be in use on site to regulate and monitor the level of construction waste produced during the construction works.
6.0 **Vibration Level and Monitoring**

6.1 The following processes have been identified as operations that may cause vibrations

- Demolition
- Excavation
- Loading of materials

6.2 It is important to create a philosophy on site of prevention of vibration in the first instance rather than containment or suppression after it has been created. The following actions must be taken to minimise the amount of vibration created and to minimise the adverse impacts of the vibration created during the construction works.

1. Prior to the commencement of demolition/construction activity on site, a Schedule of Condition will be carried out on nearby properties.

2. The contractor shall ensure that all construction activities on site are carried out with regard to minimising vibrations caused.

3. Monitor and record the site vibration levels at the boundaries to ensure that the vibration levels of each activity do not exceed the predicted levels that have been reported to the local community. Monitoring will be achieved through the use of electronic monitoring devices, permanently affixed 1m from the site boundary at 6 locations along the boundary of the site.

4. Should a particular activity exceed the vibration levels specified in BS 5228 Part 2

5. Vibration, then the activity should be halted right away and a solution / alternative methodology identified and employed prior to recommencement of the particular task.
7.0 **Spillage Response and Control – Guidelines**

7.1 Personnel trained in the use of spillage control kits and clean-up operations will form a Spillage Response Team.

7.2 Should a spillage of a substance harmful to the environment occur anywhere on the site then the following action is to be taken:

1. Inform Project Office reception/security with details of location and substance.
2. Attempt to stop or minimise the amount of spillage, without endangerment.
3. Inform their supervisor and the Main Contractor.

7.3 The action of the Response Team will be as follows:

1. Assemble at the spillage area with appropriate clean-up equipment
2. Identify source of pollution and stop it
3. Remove and exclude persons from danger area where appropriate
4. Isolate sources of ignition
5. Avoid the spillage spreading by forming a temporary bund using the site spill kits or available material i.e. OPC, sand etc.
6. Prevent the spillage from entering the drainage system
7. Place all contaminated material into skips or sacks for appropriate disposal (as special waste)
8. Label containers with contents and store in compound for disposal
8.0 Conclusion

8.1 We have fully considered the measures required to manage the site and that key factors have been identified as determining the degree and type of mitigation required, in order to undertake the demolition and construction works on site.

Sections 2.0 and 3.0 define and set out the Hours of works, contractor responsibilities, obligations and strict adherence to the basic rules will facilitate and help to establish good relationships between all parties.

Our previous experience will ensure that the measures adopted are in accordance with current legislation and current guidelines. We believe this will, exceed the guidance set out in best practice.

Section 4.0 through 7.0 will ensure ongoing works are monitored rigorously for any operations which may have an adverse effect. Co-operation and communication with local residents is essential in cultivating a positive attitude in the community and helping the project along to conclusion.

Together with the measures adopted in the CTMP and Construction Methodology, we are confident that construction of the development will not unduly affect the adjoining residents and businesses.