Job Name: **12-14** Upton Lane

Job No: 0056

Note No:

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Subject: **Air Quality Dust Risk Assessment – Additional Information**

Item	Subject
1.	**Introduction** An Air Quality Dust Risk Assessment is undertaken for planning application16/03744/ful, CDMP condition 7). Further information has been requested by NC in terms of the individual level of risk for each of Demolition, Earthworks, Construction, Track out. This note provides the individual levels of risk to confirm the appropriate level of mitigation to employ in accordance with The Control of Dust and Emissions During Construction and Demolition SPG.
2.	**Assessment** This assessment was undertaken using a methodology that we have used for many projects, both inside and outside London. This judges the overall level of risk for the generation of dust from the site; which is either high, medium or low. Whilst the impact assessment can be split down into various categories, the recommended dust mitigation is simply taken from a list representing either high, medium or low mitigation; with mitigation from the highest risk category selected where there is uncertainty regarding the level of mitigation to employ. Overall, the assessment is one of exercising professional judgement, with the guidance provided to aid the assessment. The assessment considered that the risk of dust emissions was low as the project would involve the demolition and construction of structures located on three elevations, with less than 20,000 m^3 to be demolished or built. The study area was of medium sensitivity, due to 10-100 residential properties within 50 m and shops within 20 m. The CDMP also states that the site is to be fully scaffolded and wrapped with Acoustic Dust retaining monoflex, details attached
3.	**Demolition Emission Magnitude** Table 3.1: Criteria for Demolition Dust Emission Magnitude

Dust Emission Magnitude	Activity
Large	>50,000 m^3 building demolished, dusty material (i.e. concrete), on-site crushing/screening, demolition >20 m above ground level
Medium	20,000 – 50,000 m^3 building demolished, dusty material (i.e. concrete) 10 – 20 m above ground level
Small	<20,000 m^3 building demolished, non-dusty material, <10 m above ground level, work in winter

The project involves the demolition of a two-story masonry construction access from the rear of the site and there is no on-site crushing.

As the building to be demolished is a Two storey, then activities will be undertaken less than 10 m above ground level, the building to be demolished is less than 20,000 m^3 in volume and it is considered that the mitigation methods of scaffold and wrap will create a non-dusty rating. The overall demolition dust emission magnitude is therefore considered to be low.

4. **Earthworks**

Table 4.1: Criteria for Earthworks Dust Emission Magnitude

Dust Emission Magnitude	Activity
Large	>10,000 m^2 site area, dusty soil type (i.e. clay), >10 earth moving vehicles active simultaneously, >8 m high bunds formed, >100,000 tonnes material moved
Medium	2,500 – 10,000 m^2 site area, moderately dusty soil (i.e. silt), 5 – 10 earth moving vehicles active simultaneously, 4 m – 8 m high bunds, 20,000 -100,000 tonnes material moved
Small	<2,500 m^2 site area, non-dusty soil, <5 earth moving vehicles active simultaneously, <4 m high bunds, <10,000 tonnes material moved

As the site is a previously developed site in London, and is in a constrained location, there would not be extensive landscaping works involving moving large quantities of soil.

The basement site area is existing and excavated and therefore well below 2,500 m^2. The quantity of material excavated is less than 1,000 tonnes. Excavated mater will be continuously removed.

In accordance with the Ground Investigation report the material to be excavated includes made ground, and clay. Groundwater was been measured at depths of below the reduce dig. This indicates that whilst the excavated material is potentially dusty, the excavations are minimal, the dust emission magnitude for earthworks is considered to be small.

5. **Construction**

Table 5.1: Criteria for Construction Dust Emission Magnitude

Dust Emission Magnitude	Activity
Large	>100,000 m^3 building volume, piling, on site concrete batching, sandblasting
Medium	25,000 – 100,000 m^3 building volume, potentially dusty construction material, on site concrete batching

Small	<25,000 m^3 building volume, non-dusty material

The total building volume is approximately 20,000 m^3 and therefore within the small category. Concrete materials for the construction are brought to the site ready mixed and are therefore not dusty. The facing elevation of the building of the building will include BW and therefore non-dusty. Overall, the construction dust emission magnitude is considered to be low.

6. Track out

Table 6.1: Criteria for Track out Dust Emission Magnitude

Dust Emission Magnitude	Activity
Large	>50 HDVs out / day, dusty soil type (i.e. clay), >100 m unpaved roads
Medium	10 - 50 HDVs out / day, moderately dusty surface material, 50 – 100 m unpaved roads
Small	<10 HDVs out / day, non-dusty soil, < 50 m unpaved roads

The site access is via Tarmac roads into an already developed site, with much less than 5 m of unpaved roads. There will therefore be less than 10 HDVs per day leaving the site on unpaved ground, where they could accumulate mud and dirt that could be tracked out on the public highway. The track out dust emission magnitude is therefore considered to be small.

7. Site sensitivity

This dust risk assessment considered that the site sensitivity was medium due to the risk of dust soiling and the presence of highly sensitive receptors near the site. However, in addition to the mitigation measures of scaffold and wrap as stated in the CDMP the site is constrained by buildings on all sides and therefore the buildings will act as a natural shelter, reducing the risk of wind-blown dust.

In terms of human health impacts, the assessment considers the risk as would be low.

There are no ecological receptors that could be affected by dust emissions from the site.

8. Summary of Risk

The assessment takes into account the relative combination of emission magnitude and area sensitivity; the risk of each element is summarised in Table 8.1.

Table 8.1: Summary Dust Risk Assessment

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Track out
Dust Soiling	Low	Low	Low	Negligible
Human Health	Negligible	Negligible	Negligible	Negligible

In accordance with the risk assessment, mitigation techniques for a low risk site should be incorporated for demolition, earthworks and construction. Mitigation for a negligible risk site should be incorporated for track out.

9.	**Mitigation Techniques** In addition to the scaffold and full wrap. The dust mitigation measures that should be applied are summarized below. **Site Management** - Display the name and contact details of persons accountable on the site boundary; - Display the head or regional office information on the site boundary; - Record and respond to all dust and air quality pollutant emissions complaints; - Make a complaint log available to the local authority when asked; - 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; - Increase site inspection frequency during prolonged dry or windy conditions and when activities with high dust potential are being undertaken; and - 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. **Preparing and Maintaining the Site** - Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible; - Erect solid Scaffold and wrap as detailed to perimeter of site; - Fully enclosure 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 techniques; and - Remove potentially dusty materials from site as soon as possible. **Operating Vehicle/Machinery** - Ensure all on road vehicles comply with the London Low Emission Zone; - Ensure all non-road mobile machinery (NRMM) comply with the standards; - Ensure all vehicles switch off engines when stationary; - Avoid the use of diesel- or petrol-powered generators where possible;

- Implement a Travel Plan that supports and encourages sustainable travel (public transports, cycling, walking, and car-sharing).

Operations

- Only use cutting, grinding and sawing equipment with dust suppression equipment;
- Ensure an adequate supply of water on site for dust suppressant; (using recycled water where possible);
- Use enclosed chutes and conveyors and covered skips; and
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use water sprays on such equipment where appropriate.

Waste Management

- Reuse and recycle waste to reduce dust from waste materials; and
- Avoid bonfires and burning of waste materials on site.

Demolition

- Use of soft strip inside buildings before demolition;
- Ensure effective water suppression is used during demolition operations;
- Avoid explosive blasting; and
- Bag and remove any biological debris or damp down such material before demolition.

Construction

- Avoid scabbling (roughening of concrete surfaces) if possible; and
- 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.