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Air Quality Review and Assessment for Proposed Residential development on land between St Marks Lane and Robin Hood Street, Cheetham Hill, Manchester, M8 9JG.

Prepared for

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1. Introduction

1.1. Martin Environmental Solutions have been commissioned to carry out an assessment and consideration of the air quality and the potential impact from and on the proposed residential development on land between St Marks Lane and Robin Hood Street, Cheetham Manchester M8 9GH, planning application 136783/FO/2023.

Site Location and Context

1.2. Planning permission is being sought for the construction of nine residential units on the site and the location is shown in the attached aerial photograph in Figure 1 and an indicative layout in Figure 2.

1.3. The site is accessed via St Marks Lane to the north which runs off Cheetham Road/Bury Old Road to the east of the develop. This is a busy road, and the nearby junction forms part of the Greater Manchester declared AQMA, declared for the likely exceedance of the Nitrogen Dioxide objective value.

1.4. To the west is a disused former church with residential properties beyond and to the south. To the east and extending north and south along the main road is a busy high street. and beyond the road to the north and south of the site are existing residential properties.

1.5. The development has the potential to affect the air quality in the area due to the associated increased traffic movements and to be affected by existing poor air quality as such this an air quality assessment has been undertaken to assess the potential impact.

2. Policy and Guidance

Planning

2.1. The Government sets out its policy on air quality in relation to planning in the National Planning Policy Framework (NPPF), updated December 2024. The NPPF states that planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in the local area. The NPPF adds that planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.

2.2. Manchester City Council, as part of the wider Greater Manchester Authority has identified guidance for developers in relation to air quality and planning and have recently published the *"Greater Manchester Clean Air Plan 2024" and the "Manchester City Council Air Quality & Planning Technical Guidance, August 2022"* both documents point developers towards the Institute of Air Quality Management Guidance as a key document for undertaking air quality assessments.

2.3. The Institute of Air Quality Management '*Land-Use Planning & Development Control: Planning For Air Quality, January 2017*' guidance document identifies the importance of air quality within the planning system and suggests a suitable approach to the consideration and evaluation of air quality within the planning process.

2.4. The guidance suggests a staged approach, starting with the incorporation of good design within the proposed application, moving onto recommendations on criteria to trigger an air quality assessment.

2.5. Stage 1 criteria for proceeding to stage 2 are:

I. Ten or more residential units or a site area of more than 0.5ha

II. More than 1000m^2 of floor space, or a site greater than 1ha

Coupled with

III. Development has more than ten parking spaces

IV. The development will have a centralised energy facility or other centralised combustion process.

2.6. The next stage looks at indicative criteria for requiring an air quality assessment, Table 6.2 of the guidance. The table identifies indicative criteria for when to proceed to an Air Quality Assessment. The first line considers a change in LDV flows of more than 100 AADT within or adjacent to a declared AQMA and more than 500 elsewhere.

2.7. The determination on whether a simple or detailed assessment is then determined based on the existing situation, any predicted change in the location without the potential significance of the development.

Dust Nuisance

2.8. The main requirements with respect to dust control from industrial or trade premises not regulated under the Environmental Permitting (England and Wales) Regulations (2010) and subsequent amendments is provided in Section 79 of Part III of the Environmental Protection Act (1990).

2.9. The Act defines nuisance as:
"any dust, steam, smell or other effluvia arising on industrial trade or business premises and being prejudicial to health or a nuisance."

2.6. Enforcement of the Act, with regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990).

2.7. Via formal action the council can insist that there be no dust beyond the boundary of the works. The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to Best Practice Measures (BPM).

2.8. The Institute of Air Quality Management (IAQM) have produced guidance on the assessment of dust from construction activities; '*Guidance on the assessment of dust from demolition and construction January 2024 (Version 2.2), IAQM*'

3. Construction Impacts on Local Air Quality

3.1. During the construction phase, there will be a number of activities undertaken which have the potential to generate and/or re-suspend dust and PM_{10}/$PM_{2.5}$. Such activities include site clearance and preparation, storage of materials, laying of hard surfaces and landscaping.

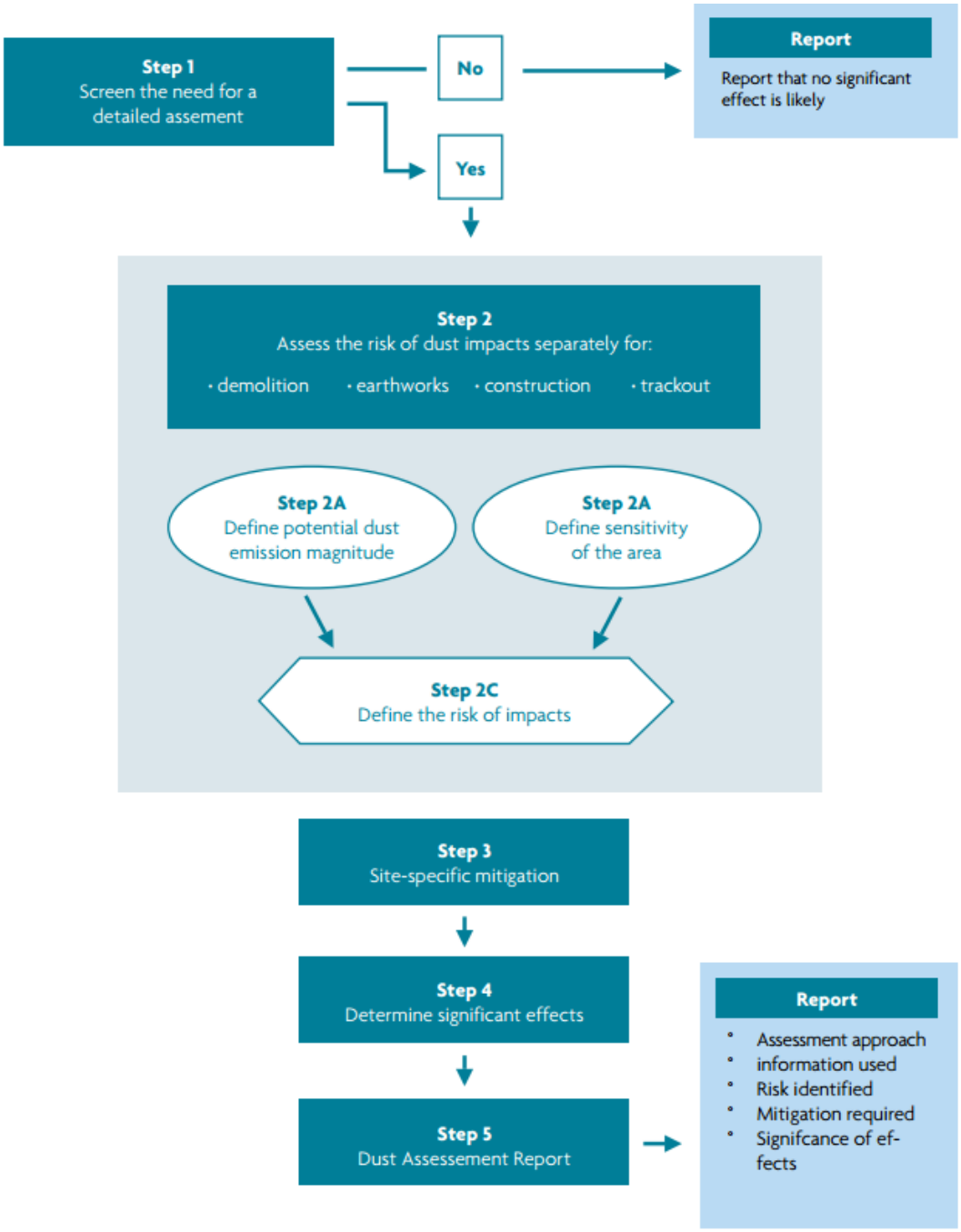
3.2. Dust comprises particles typically in the size range 10-75 micrometres in aerodynamic diameter and is created through the action of crushing and abrasive forces on materials. Due to its relatively large size dust is usually only resident in the air for a short period of time after initial release and falls out of suspension fairly quickly. Dust is therefore unlikely to cause long-term or wide spread changes to the air quality of the area; however, its deposition on property and cars can cause soiling and discoloration resulting in nuisance complaints from surrounding properties.

3.3. Small particles of dust are known as particulate matter (PM_{10}/$PM_{2.5}$) and are small enough to be drawn into the lungs of people during breathing, which may have adverse reactions to sensitive members of the public. As a result of the potential impacts on health objectives for PM_{10} have been defined in the Air Quality Strategy and Regulations.

3.4. There is also the potential for traffic associated with the construction activities on the site to have an effect on local pollution concentrations, in particular NO_x/NO_2 and PM_{10} levels. The potential for construction traffic emissions to be a significant issue will be dependent on existing and likely future concentrations in the vicinity of the proposed development and the anticipated magnitude of the construction traffic.

Assessment of Risk

3.5. The IAQM guidance 'Guidance on the assessment of dust from demolition and construction January 2024 (Version 2.2), IAQM' details a 5-stage process for assessing the impacts from the construction phase of the development, as depicted in the chart below:



3.6. The IAQM guidance considers the magnitude of potential dust emissions from four distinct activities during the construction phase. These are Demolition, Earthworks,

Construction and Trackout, and the magnitude is rated as either large, medium or small for each activity. There is no demolition works required for this site.

3.7. Sensitivity of the receptors is assessed based on the type of receptor, the number and distance from the site and for three different affects, dust soiling, human health impacts and ecology. In this case the receptors have been identified as having a low sensitivity, being industrial in nature, with the ecological receptor as low.

3.8. Four distances are recommended, <20m, <50m, <100m, and <350m.

3.9. The following tables are used within the guidance document to assess the sensitivity of the receptors to dust soiling, human health and ecology.

Table 2: Sensitivity of the Area to Dust Soiling Effects on People and Property [a] [b]

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)[c]			
		‹20	‹50	‹100	‹350
High	›100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	›1	Medium	Low	Low	Low
Low	›1	Low	Low	Low	Low

[a] The sensitivity of the area should be derived for each of the four activities: demolition, construction, earthworks and trackout. See **STEP 2B**, **Box 6** and **Box 9.**

[b] Estimate the total number of receptors within the stated distance. Only the *highest level* of area sensitivity from the table needs to be considered. For example, if there are 7 high sensitivity receptors ‹ 20m of the source and 95 high sensitivity receptors between 20 and 50 m, then the total of number of receptors ‹ 50 m is 102. The sensitivity of the area in this case would be high.

[c] For trackout, the distances should be measured from the side of the roads used by construction traffic. Without site-specific mitigation, trackout may occur from roads up to 500 m from large sites, 200 m from medium sites and 50 m from small sites, as measured from the site exit. The impact declines with distance from the site, and it is only necessary to consider trackout impacts up to 50m from the edge of the road.

Table 3: Sensitivity of the Area to Human Health Impacts [a b]

Receptor Sensitivity	Annual Mean PM_{10} concentration[c]	Number of Receptors	Distance from the Source (m)[c] <20	<50	<100	<250
High	>32 µg/m³ (>18 µg/m³ in Scotland)	>100	High	High	High	Medium
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	28-32 µg/m³ (16-18 µg/m³ in Scotland)	>100	High	High	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	24-28 µg/m³ (14-16 µg/m³ in Scotland)	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24 µg/m³ (<14 µg/m³ in Scotland)	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	>32 µg/m³ (>18 µg/m³ in Scotland)	>10	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	28-32 µg/m³ (16-18 µg/m³ in Scotland)	>10	Medium	Low	Low	Low
		1-10	Low	Low	Low	Low
	24-28 µg/m³ (14-16 µg/m³ in Scotland)	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
	<24 µg/m³ (<14 µg/m³ in Scotland)	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Low	-	≥1	Low	Low	Low	Low

Table 4: Sensitivity of the Area to Ecological Impacts [a b]

Receptor Sensitivity	Distance from the Source (m)[c] <20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

[a] The sensitivity of the area should be derived for each of the four activities: demolition, construction, earthworks and trackout and for each designated site. See **STEP 2B**, **Box 8** and **Box 9**.
[b] Only the highest level of area sensitivity from the table needs to be considered.
[c] For trackout, the distances should be measured from the side of the roads used by construction traffic. Without site-specific mitigation, trackout may occur from roads up to 500 m from large sites, 200 m from medium sites and 50 m from small sites, as measured from the site exit. The impact declines with distance from the site.

3.10. The guidance then considers the dust emission magnitude of the four activities and the sensitivity of the area for the 4 impact scenarios.

Table 6: Risk of Dust Impacts - Demolition

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Table 7: Risk of Dust Impacts - Earthworks

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 8: Risk of Dust Impacts - Construction

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 9: Risk of Dust Impacts - Trackout

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

3.11. It is considered that the main source of emissions during the construction phase of dust and PM_{10} will include:-

- Excavations and earthworks
- Use of haulage roads
- Transportation and storage of materials
- Materials handling
- Cut and processing materials
- Exhaust emissions from site off-road machinery
- Emissions from construction vehicles

3.12. The majority of releases are likely to occur during the 'working week' but there is some potential for releases to occur 24 hours a day from material storage and exposed soil unless these are suitably managed and controlled.

3.13. Properties most likely to be exposed to any dust or PM_{10} from the site are those located immediately adjoining the site to the west, along with those on the opposite side of the road to the north and south.

3.14. Given the current background pollutant levels and traffic flow in the area it is unlikely that the construction traffic will have anything other than a negligible impact on the NO_2 and PM_{10} levels at relevant receptors. Background levels from the latest DEFRA background maps (2021 maps) give the current 2025 PM_{10} levels at 8.42450912.92851µg/m^3 and NO_2 levels at 14.76005µg/m^3, falling in future years.

3.15. The nearest monitoring point to the development site has been identified to the northeast along Cheetham Road and at the junction with Bury Old Road and Crescent Road. Identified as diffusion tube ref Salford 86, the last published monitoring results covering the monitoring year 2024 identify the nitrogen dioxide level at 39µg/m^3, with the levels falling from previous years.

3.16. Nitrogen Dioxide concentrations have previously been shown to fall rapidly as the distance from the roadside increases. Defra have provided an excel model to calculate this decrease. The model has been used and indicates a level of 21. 4µg/m^3 at the site. However, the site is located 30m from the roadside and model has only been verified up to a distance of 20m. Even at a 20m distance the resulting nitrogen dioxide level is 23.2µg/m^3. Still significantly below the objective level of 40µg/m^3.

3.17. In addition, the buildings along Cheetham Road would act as a barrier to the pollution migrating towards the site, resulting in even lower levels.

Phase 1

3.18. As identified by the IAQM guidance document the development site is located within 20m of a suitable receptor, namely the residential properties to the northwest. Therefore, an assessment of the likely impact from the construction phase is required.

Phase 2

3.19. There are no demolition works to be undertaken as part of the development and so there is no potential for dust emissions from demolition work.

3.20. For the earthworks assessment, it is currently unknown exactly what level of earthworks will be undertaken, but this is likely to be small, given the size of the overall site (~800m^2) it has been placed into the small category for with less than 18,000m^3 of earth being moved.

3.21. For the construction phase the guidance indicates that the magnitude of potential dust emissions is small, (<12,000m^2).

3.22. Finally, for the potential dust emissions for 'trackout' the magnitude is small with less than 20 outward movements of HDV vehicles expected.

Table 7: Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	N/A
Earthworks	Small
Construction	Small
Trackout	Small

3.23. The receptor sensitivity of the area has been identified as detailed below given the number of nearby receptors.

3.24. The receptors are adjacent to the site. The background annual mean PM_{10} levels within the area are <24µg/m^3 (12.92851µg/m^3).

3.25. Based on the sensitivity tables within the guidance document for Dust Soiling, human health impacts and ecology the resulting sensitivity impacts of the development have been assessed as medium for dust soiling but low for human health and ecological sensitivity.

Potential Impact	Sensitivity of the Surrounding Area		
	Earthworks	Construction	Trackout
Dust Soiling	Med	Med	Med
Human Health	Low	Low	Low
Ecological	Low	Low	Low

3.26. Based on the above information in line with the IAQM guidance the impact risk of each of the activities has been assessed with a resulting medium impact risk for dust soiling. For human health and ecological impacts, the risk is low for each activity.

Table 8: Sensitivity of the surrounding area

Table 9: Impact risk of construction phase

Potential Impact	Risk		
	Earthworks	Construction	Trackout
Dust Soiling	Low risk	Low risk	Low risk
Human Health	Neg risk	Neg risk	Neg risk
Ecological	Neg risk	Neg risk	Neg risk

Phase 3

3.27. The impact risk associated with the development activities is generally considered to be low/negligible, however as good practice it is recommended that some basic mitigation measures are followed as part of the development. These have been identified from 'The Control of Dust and Emissions from Construction and demolition, Best Practice Guidance, London Councils 2006' and the IAQM guidance and are detailed in Appendix A.

3.28. Construction activities with the potential to generate emissions to the atmosphere require two levels of mitigation measures to be adopted. These are termed 'hard' and 'soft' measures. Hard measures include physical actions taken to prevent, suppress or contain emissions; soft measures include management and communication actions.

3.29. The most effective way to manage and prevent dust and PM_{10} generation and re-suspension during construction is through effective control of the potential source.

3.30. Appendix A details the mitigation measures identified as required to reduce the potential impact associated with the activities anticipated to take place during the construction phase of the development. If required these can be tailored once more specific information is available on the construction activities. This can be controlled by the imposition of a suitable condition on the planning permission for the proposed development.

4. Operational Phase

4.1. The proposed development consists nine residential apartments, consisting of eight two-bed and one one-bed units. Parking is to the be provided to the north of the site off St marks Lane and consists of nine parking spaces.

4.2. Figure 2 below provides an overview of the proposed development.

4.3. The IAQM guidance "*Land-Use Planning & Development Control: Planning For Air Quality, January 2017*" details and confirms the need to ensure development is constructed in a sustainable way adopting good design principles to help reduce emissions and contribute to better air quality.

4.4. As a consequence, and as detailed within the Manchester City Council guidance document the development has been designed to minimise emissions and to assist future residents to do the same. The site is located with a short walking distance of local shops, health care, schools and leisure facilities. The main road a few meters away has a number of public transport links with at least eight separate bus routes and the site is located half a mile from the nearest train station.

4.5. The IAQM guidance details a staged approach to the determination of whether an Air Quality assessment is required, chapter 6.

4.6. The first stage of this considers the size of the development and the potential traffic movements associated with it. If the development exceeds the stage 1 criteria, then you proceed to stage 2.

4.7. The stage 1 criteria are shown below, the proposed development consists of less than 10 residential units, 9 in total, and has less than 10 parking spaces, 9 in total. As such the guidance indicates that the criteria to proceed to stage 2 is not met and no further assessment of the impact from the development is required.

Criteria to Proceed to Stage 2

A. If any of the following apply:

- 10 or more residential units or a site area of more than 0.5ha
- more than 1,000 m² of floor space for all other uses or a site area greater than 1ha

B. Coupled with any of the following:

- the development has more than 10 parking spaces
- the development will have a centralised energy facility or other centralised combustion process

Note: Consideration should still be given to the potential impacts of neighbouring sources on the site, even if an assessment of impacts of the development on the surrounding area is screened out.

4.8. A consideration of the second stage of the assessment has also been made. This looks at the impacts from the development, and these are shown below. The criterion of interest with respect to this development is the increase in LDV traffic flows that will result.

The development will:	Indicative Criteria to Proceed to an Air Quality Assessment [a]
1. Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors. (LDV = cars and small vans <3.5t gross vehicle weight).	A change of LDV flows of: - more than 100 AADT within or adjacent to an AQMA - more than 500 AADT elsewhere.
2. Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors. (HDV = goods vehicles + buses >3.5t gross vehicle weight).	A change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.
3. Realign roads, i.e. changing the proximity of receptors to traffic lanes.	Where the change is 5m or more and the road is within an AQMA.
4. Introduce a new junction or remove an existing junction near to relevant receptors.	Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or roundabouts.
5. Introduce or change a bus station.	Where bus flows will change by: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.
6. Have an underground car park with extraction system.	The ventilation extract for the car park will be within 20 m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).
7. Have one or more substantial combustion processes, where there is a risk of impacts at relevant receptors. NB. this includes combustion plant associated with standby emergency generators (typically associated with centralised energy centres) and shipping.	Typically, any combustion plant where the single or combined NO_x emission rate is less than 5 mg/sec[a] is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion. In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates. Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable.

4.9. Traffic figures for the development and surrounding road-network have been obtained from the traffic consultants, Sanderson Associates, report submitted as part of the planning application. It has been confirmed that the AADT figure for the site is an additional 74 trips, all LDV's. Although given the facilities in the area this is considered to be an over estimation.

4.10. Details for the AADT flow along Cheetham Road have been identified from the Department of Transport counts at 13949 to the south[1] with 3% HDV traffic and the same to the north[2].

[1] https://roadtraffic.dft.gov.uk/manualcountpoints/27980
[2] https://roadtraffic.dft.gov.uk/manualcountpoints/74611

4.11. The proposed development will therefore make a negligible impact on the existing traffic flow.

4.12. The level of additional trips does not meet the criterion detailed in the guidance required to process to an air quality assessment.

Impact on the Development

4.13. The development location lies adjacent to a declared AQMA and as such it potentially introduces new receptors to an area of poor air quality. A further assessment of the impact of the existing air quality on the future occupants is therefore required.

4.14. The above confirms that the impact on the current air quality from the development is negligible, given the level of traffic to be generated by it and the current traffic levels on the surrounding road network. Therefore, there will be no deterioration of the air quality impact on the development.

4.15. The nearest council monitoring station is located to the northeast of the development site on the corner of the busy junction with Bury Old Road, Cheetham Road and Crescent Road. This monitoring location is situated 0.5m from the roadside has shown a reduction in pollutant levels over the recent years and the last published data covering the year 2024 identifies levels at 39.0µg/m^3, Appendix B.

4.16. It has long been understood that Nitrogen Dioxide levels fall rapidly as the distance from the source (traffic) increases. To this effect Defra have published the *NO_2 fall off with Distance* excel calculator to assist in determining this reduction.

4.17. The latest version of this model is V4.2 and this has been used to assess the likely concentrations at the development site. Resulting in a level of 21.4 µg/m^3 (Appendix C). It should be noted that the model has only been verified up to 20m and the site lies 30m from the roadside. However, even at a 20m distance the resulting figure is 23.2 µg/m^3, still well below the national objective figure of 40.0 µg/m^3.

4.18. In addition, the buildings along Cheetham Road will act as a barrier to prevent pollutants reaching the site, further lowering the impact on future occupants.

4.19. The existing air quality will not result in a significant adverse impact on the future occupants.

5 Mitigation Measures

5.1 To conclude the results of the assessment into the impact both on and from the local air quality have concluded that an air quality assessment would not be required in accordance with the IAQM and Greater Manchester Guidance, however to minimise the impact from the development it is recommended that some mitigation measures are included within the development.

5.2 These mitigation measures consist of measures for the construction phase of the development to minimise off the generation of dust and particulate on site and to reduce as far as practical any transfer off site. These measures are detailed within Appendix A.

5.3 For the operational phase of the development, it is considered appropriate to include the following measures to aid reduction of vehicle emissions from the development.

- electric vehicle charging points.
- A sustainable travel pack be provided to each property to advise and encourage the use of alternative modes of travel especially the suitable located public transport systems adjacent to the site, including details of local public transport options.

5.4 The measures will assist in reducing the use of private vehicles and help to low emissions from the site.

5.5 Current monitoring results in the area confirm that levels along the road side are below the national objective value, and these levels will reduce as the distance from the roadside increases. Current pollutant levels in the area will not result in a significant adverse impact on the future occupants of the development.

5.6 Furthermore; the accompanying acoustic report identifies the need for closed windows to ensure suitable internal sound levels at night along with an alternative ventilation system to ensure suitable background ventilation is achieved. Where practical a suitable system e.g. a Positive Input Ventilation (PIV) system can be combined with a particulate filter to reduce emissions further, e.g. Eurovent Atmos wall PIV unit.

5. Conclusion

5.1. An assessment of the impact of the proposed development on air quality has been undertaken in accordance with the Greater Manchester Air Quality guidance and the IAQM guidance documents.

5.2. The proposed development is located close to local amenities and adjacent to public transport networks providing easy opportunities for use of alternative travel options, minimising pollutant emissions.

5.3. The assessment indicates the development will have a negligible impact on local air quality, with a negligible impact on traffic flows from the development, while current monitored pollutant levels with the vicinity indicate that levels will be below the national objective value indicating no adverse impact on the development.

5.4. Mitigation measures have been suggested which will help to reduce any emissions further from the site. These include;

I. standard good practice controls around the construction phrase of the development,
II. provision of electric vehicle charging points within the development and
III. production of a sustainable travel pack for the future occupants detailing alterative travel options available to reduce the reliance on sole private vehicle travel.

5.5. As such the proposed development will meet the objectives of the National Planning Policy Framework in ensuring that no significant adverse impact. The development is therefore considered to be acceptable in terms of air quality impact.

Figure 1 – Aerial photograph



Figure 2 – Proposed layout plan



Appendix A – Construction Mitigation Measures

The set of mitigation measures considered appropriate for the development of the proposed site area are as follows:

Hard Measures:

Where reasonable, appropriate, and practicable the contactor should: -

Site Management

- Plan the site layout to locate machinery and dust-causing activities away from sensitive receptors.
- Use appropriate methods, such as the erection of hoardings or other barriers around dusty operations, to mitigate the spread of dust to any sensitive receptors.
- Provide hard standing areas for vehicles and regularly inspect and clean these areas
- No burning on site
- Consider weather conditions prior to potential dusty works. For example, if there are strong winds blowing towards residential properties, works may need to be postponed until more favourable conditions return.
- Consider the provision of wheel washing facilities to prevent material being carried off site on to the public highway.
- Ensure access to a good water supply

Construction Plant and Vehicles

- Operate construction plant in accordance with the manufacturer's written recommendations
- Switch off vehicles and plant when not in use
- Direct vehicle and plant exhausts away from the ground
- Enclose or shield plant likely to generate excessive quantities of dust
- Keep movements of construction traffic on site to a minimum
- Design site access points to avoid queuing of traffic
- Avoid the use of diesel or petrol-powered generators
- Keep roads and accesses clean
- Where available use ultra-low sulphur tax-exempt fuel for all non-road mobile machinery.
- No site run-off of water

Transportation, Storage and Handling of Materials

- Employ appropriate measures, such as covering materials
- Do not overload vehicles
- Keep stockpiles and mounds away from sensitive receptors and site them taking account of the predominant wind direction
- Ensure stockpiles are set at a suitable angle to avoid material slippage
- Cover or stabilise long-term stockpiles – grass long term earth bunding

- Store fine dry material inside or under cover
- Keep the number of handling operations for materials to a minimum
- Maintain and use appropriate watering and sprinkling facilities to reduce or prevent the escape of dust from the site.

Haulage Routes

- Agree haulage routes prior to commencement of the development
- Maintain the surface of all haulage routes on site, in such a condition so as to minimise dust generation. This will be more important in the early stages of the development as haulage routes are likely to be unmade. As the development progresses it is expected that routes will become hard surfaced.
- Inspect haulage routes periodically and repair as necessary to prevent dust generation, record inspections and outcomes.
- Impose and enforce appropriate speed limits on roads for safety reasons and for the purposes of suppressing dust emissions.
- Ensure vehicles entering and leaving the site are covered

Excavation and Earthworks

- Strip topsoil as close as reasonably practicable to the period of excavation or other earthworks to avoid or minimise dust generation
- Keep drop heights from excavators to a minimum
- Use appropriate methods to avoid dust emissions such as shielding or damping sprays
- Undertake soiling, seeding, planting, or sealing of completed earthworks as soon as reasonably practicable.
- Use water suppressant where applicable

Soft Measures

- Establish a clear protocol of communication with the local residents, and the local Environmental Health Department including readily displayed contact details.
- All complaints received should be logged and fully investigated. The contractor may wish to set up a website or newsletter to keep residents informed of activities on site.
- If very dusty works are unavoidable then residents (and the local Environmental Health Department) should be given prior notice.
- Carry out daily on-site and off-site inspections to monitor dust emissions.
- Develop a Dust Management Plan including the measures outlined here along with monitoring and checks carried out to ensure dust generation is minimised.
- Record any incidents of exceptional dust generation and the actions taken to resolve them.

- Consider holding regular liaison meetings with residents if dust or other emissions generate complaints.
- Plan works to avoid or reduce dust generation.
- Provide appropriate training to staff and sub-contracts on methods to avoid dust generation.

Appendix B – Nearby Monitoring Data

Site information

Tube reference

Salford 86

Local authority

Salford

Survey

Local Air Quality Management

Site ID

SA86NO

Site type

Kerbside

Location

53.512368, -2.2454712

Distance to relevant exposure

5m

Distance to kerb of nearest road

0.5m

Tube collated with continuous analyser

No

Height

2.5 m

In air quality management area

No

Latest air quality target (Below 40µg/m^{3*})

Target achieved

*For the purposes of Local Air Quality Management monitoring, the government classes annual average (mean) measurements of 40.0µg/m^3 and over to be above the legal limit.

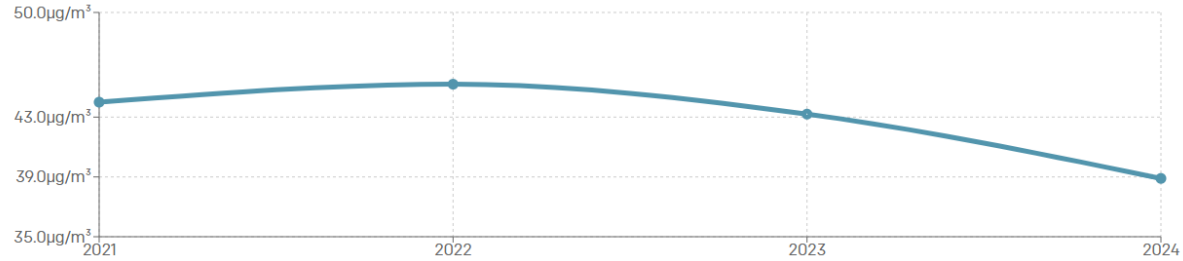
2024 air quality (µg/m^3)

38.9

2024 Data capture

93%

Measured annual average NO2 concentrations





Appendix C – NO_2 Fall-off with Distance Calculator

Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	0.5	metres
Step 2	How far from the KERB is your receptor (in metres)?	30	metres
Step 3	What is the local annual mean background NO_2 concentration (in µg/m^3)?	14.76005	µg/m^3
Step 4	What is your measured annual mean NO_2 concentration (in µg/m^3)?	39	µg/m^3
Result	The predicted annual mean NO_2 concentration (in µg/m^3) at your receptor	21.4	µg/m^3

Warning: your receptor is more than 20m further from the kerb than your monitor, treat result with caution

Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	0.5	metres
Step 2	How far from the KERB is your receptor (in metres)?	20	metres
Step 3	What is the local annual mean background NO_2 concentration (in µg/m^3)?	14.76005	µg/m^3
Step 4	What is your measured annual mean NO_2 concentration (in µg/m^3)?	39	µg/m^3
Result	The predicted annual mean NO_2 concentration (in µg/m^3) at your receptor	23.2	µg/m^3