MANCHESTER
CITY COUNCIL

Air Quality & Planning
Technical Guidance

August 2022

Environmental Protection
Environmental Health
Neighbourhoods Directorate
Manchester City Council

Contents

Service Aim

The Our Manchester Strategy 2016-2025 sets out the future Manchester our whole city is building together. We aim to be in the top-flight of world class cities with a dynamic economy and highly skilled people; well-connected, addressing climate change, feeling safe and living well.

The Council has recently reset its priorities up to 2025, refocusing on the challenges – putting equality, inclusion and sustainability centre stage, with a renewed focus on young people, our economy, health, housing, environment and infrastructure.

Through each priority runs Manchester's commitment to build a fairer city for everyone who lives, works, volunteers, studies or plays here:

- Thriving and sustainable – vibrant with a cutting-edge economy
- Highly Skilled – work ready, well-educated people
- Progressive and equitable – so people can thrive, with better joined up support and services
- Liveable and zero carbon – safe, enjoyable neighbourhoods with affordable housing, zero carbon by 2038 using green growth and design, energy and more climate resilience
- Connected – more walking, cycling and green transport, and accessible digital technology used by and working for everyone.

The guidance aims to provide help and advice in relation to air quality in a planning context to encourage good practice and mitigation of impacts. It outlines what is expected in relation to current guidance and policy with the aspiration that new developments achieve the highest possible standards without compromising the health and well-being of people that live and work within the City of Manchester.

Applicants, developers and air quality consultants are advised to read this document prior to submitting a planning application.

1. Introduction

Air quality has a significant impact on public health, both in terms of mortality and on people's quality of life. It is therefore important that action is taken to minimise the impacts of air pollution.

Local planning decisions have an important role to play since they can significantly affect local air quality through their design, location and management of emissions, whether this be through the sources of emissions or their receptors.

This technical guidance is focused on reducing air pollution from road transport as the major source of emissions in Manchester. Other development-related sources are only covered briefly in this document.

The guidance seeks to support the planning system in lowering transport emissions and improving local air quality. The approach set out within this document is based on that provided by Environmental Protection UK and the Institute of Air Quality Management[1].

Sites and developments that fall under other regulatory regimes, including Integrated Pollution Prevention and Control (IPPC), Local Authority Pollution Prevention and Control (LAPPC), waste management licensing, and Environmental Impact Assessment (EIA) regulations, may require alternative or additional assessments relating to air quality.

This document provides guidance that is not exhaustive; if you have any questions or wish to discuss the requirements of a specific air quality assessment, please contact the Environmental Protection team by registering your enquiry at:

www.manchester.gov.uk

[1] http://iaqm.co.uk/guidance

2. Background

Manchester City Council (MCC) recognise the significant negative health and well-being impacts of poor air quality. Not only early and excess deaths, but also impacts from cradle to grave in prenatal and perinatal thriving, birth weight, physical and mental degradation, and lifelong susceptibility to poor health outcomes.

The main pollutants of concern are nitrogen dioxide (NO_2) and particulate matter PM_{10} and $PM_{2.5}$. The exceedance of NO_2 air quality objectives and elevated levels of particulate pollution in areas of Manchester are a significant health concern and concentrations of these pollutants, and their associated health impacts, therefore need to be reduced.

Once emitted into the atmosphere, pollutants are carried and dispersed with air movement and may be subject to chemical change. Controlling concentrations either within pollution hotspots or across a wider area must take such atmospheric processes into account. This means that action is needed not only in the specific locations where the most harm occurs, but also more widely across the district, region and further afield in the United Kingdom and continental Europe.

Road transport is the major source of NO_2 emissions in Manchester, however other development-related sources include gas or biomass boilers and combined heat and power (CHP) plant, which are dealt with in section 3 of this document. Domestic solid fuel burning is the major source of $PM_{2.5}$ in the UK[2], but a consideration of this source is outside the scope of this guidance.

2.1. Air Quality & Planning

New development can pose the following concerns in relation to air quality:

- Emissions that arise from construction and use of a site, which add cumulatively to existing pollution levels locally, across the district and beyond.
- Harm to individuals arising as a result of introducing new exposure to air pollutants through their occupation of the development.

2.2. Role of the Environmental Protection Team

The Environmental Protection team (EP) are consulted by the Planning department on applications for new developments within Manchester's district.

EP consider a number of environmental issues, including air quality, before making a recommendation to the Planning department. Typically, this recommendation is that the application either be approved, approved subject to appropriate conditions, or refused.

The recommendations made by EP are not binding on the Planning department, who will consider all relevant issues concerning a planning application, but air quality is a material planning consideration that must be taken into account in the decision-making process.

[2] https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-particulate-matter-pm10-and-pm25

In addition to making recommendations to the Planning department, EP can provide advice to applicants and their consultants prior to the submission of a planning application and/or the preparation of an air quality assessment.

EP are also consulted on chimney stack heights as they must ensure that emissions from chimneys, together with any associated arrestment plant of large boilers and furnaces, are dispersed effectively into the atmosphere and do not create the potential for health impacts or cause a nuisance.

2.3. National Policy & Guidance

Local authorities have a statutory duty to work towards compliance with the health-based Air Quality Objectives for key pollutants in the National Air Quality Regulations[3]. Public Health managers also have responsibilities to respond to air quality impacts detailed under the Public Health Outcomes Framework[4].

Local planning decisions have an important role to play in achieving these outcomes since they can significantly affect local air quality through the design and location of emissions sources and receptors. The National Planning Policy Framework (NPPF)[5] provides guidance on how planning can take account of the impact of new development in air quality, and specifically requires that development should:

- Exploit opportunities for sustainable transport modes;
- Incorporate facilities for charging plug-in and other ultra-low emission vehicles;
- Not cause unacceptable impacts on air quality;
- Contribute towards compliance with relevant limit values and national air quality objectives;
- Properly consider the impact on Air Quality Management Areas (AQMA) and Air Quality Action Plans (AQAP); and
- Consider the cumulative impacts of air quality.

The Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK) also provide guidance for the consideration of air quality within the land-use planning and development control processes[6], and this is discussed in section 3 below.

2.4. Local Policy

The Manchester Core Strategy (2012), makes reference to air quality throughout the document and includes a specific policy, EN 16 ‘Air Quality’, which states the following:

“The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester’s principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant. When assessing the appropriateness of locations for new

[3] https://uk-air.defra.gov.uk/air-pollution/uk-eu-policy-context
[4] https://www.gov.uk/government/collections/public-health-outcomes-framework
[5] https://www.gov.uk/government/publications/national-planning-policy-framework--2
[6] https://iaqm.co.uk/guidance/

development the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas."

The Core Strategy goes further in stating that:

"Whilst this policy seeks to improve air quality within Manchester's AQMA it also applies across the District in order to assist air quality across Manchester remaining at acceptable levels. It should be noted that other policies within the Core Strategy will guide the location of development in order to reduce the need for private transport and encourage the use of decentralised and renewable energy and green infrastructure to reduce both emissions and their impact still further."

Policy DM 1 'Development Management' also includes a reference to air quality, stating that all development should have regard to effects on amenity, including air quality.

2.5. Local Air Quality

For the purpose of improving air quality and health impacts in Manchester, this guidance is concerned with achieving and maintaining compliance with air quality objectives, and with improving air quality further, particularly with respect to particulate matter concentrations.

Nitrogen Dioxide (NO_2)

NO_2 is the only pollutant for which Manchester currently exceeds legal limits. MCC designated the city centre and main arterial routes as an AQMA in 2001 due to the likelihood of annual average concentrations of NO_2 exceeding national air quality objectives. There have been subsequent revisions to the AQMA, and its extent was most recently refined in 2016 and consolidated into the Greater Manchester (GM) AQMA.

The part of the AQMA that covers Manchester's district is shown in Appendix I.

Following the declaration of the AQMA, an AQAP was produced to address the identified elevated NO_2 concentrations, and the most recent version issued by Transport for Greater Manchester (TfGM) and the GM local authorities in 2016[7]. The AQAP includes measures concerning Development Control and Planning Regulation, which are further explained in section 3.

Particulate Matter (PM_{10} and $PM_{2.5}$)

Whilst levels of PM_{10} in Manchester do not breach national air quality objectives and, although there is currently no regulatory standard applied to $PM_{2.5}$ for local authorities in England, it is acknowledged that fine particulate matter has a significant impact on health across the district, including attributable deaths from exposure to man-made pollution.

As a member of the World Health Organisation (WHO), Climate and Clean Air Coalition, and UN Environment-led 'BreatheLife' cities network, the GM Combined Authority (GMCA) including MCC has pledged to achieve the 2005 WHO air quality guideline for $PM_{2.5}$ of 10 $\mu g/m^3$ (micrograms per cubic metre) by 2030[8].

[7] https://cleanairgm.com/technical-documents
[8] https://breathelife2030.org/breathelifecity/greater-manchester/

3. Guidance

The AQAP includes a measure for GM councils to adopt best practice guidance regarding the assessment and mitigation of emissions from demolition and construction sites, and development planning, as issued by IAQM and EPUK.

MCC has adopted these approaches, and the following sections provide further details and guidance for each area of work.

3.1. Construction & Demolition

Harmful emissions contributing to decreased air quality in our local areas are produced during the demolition and construction phases of development. The main air quality impacts arising from these activities are:

1. Dust deposition resulting in the soiling of surfaces;
2. Visible dust plumes, which are evidence of dust emissions;
3. Elevated PM_{10} concentrations as a result of dust generating activities on site;
4. The transport of dust and dirt from the construction/demolition site onto the public road network, where it can be re-suspended by vehicles using the roads; and
5. An increase in concentrations of airborne particles and NO_2 due to exhaust emissions from diesel powered vehicles and equipment used on site (Non-Road Mobile Machinery - NRMM) and vehicles accessing the site.

MCC, along with the other GM councils, recommends the use of construction guidance produced by the IAQM[9], for construction and demolition air quality impact assessments. The guidance recommends an approach that the developer or their consultants should take in producing a satisfactory report for the local planning authority in order to determine what, if any, mitigation measures are required. The subsequent risk assessment process should involve the outlining of impacts for four delineated activities (demolition; earthworks; construction; and trackout) with reference to the scale and nature of the works, and the sensitivity of the area.

Appendix II provides a detailed summary of the IAQM construction guidance.

In addition to the IAQM guidance, MCC recommends that NRMM used on the site of any major development within Manchester city centre for the purpose of construction or demolition works should meet Stage IV of EU directive 97/68/EC, and Stage IIIA as a minimum.

3.2. Development Planning

In applying for planning permissions, developers will need to consider any air quality impacts the operational phase of the development may create, including the cumulative impacts of other committed developments. Impacts may include pollutant emissions from additional vehicle movements generated by the proposed development, substantial combustion processes, or from gas-fired boilers, CHP plant and solid biomass boilers.

[9] https://iaqm.co.uk/guidance/

The following issues should be considered:

- Compliance with air quality target values, long-term objectives and relevant limit values for concentrations of key air pollutants;
- Whether the development will materially affect any air quality action plan or strategy;
- Overall changes in air quality as a result of a proposed development; and
- Whether the development will introduce new relevant exposure into an area of existing poor air quality.

MCC, along with the other GM councils, recommends that the planning guidance produced by IAQM/EPUK[10] is used by developers when preparing relevant submissions to the local planning authority. The guidance outlines good design and best practice principles relevant for developments of a scale that pose potential risks to local air quality, as well as providing requirements for undertaking an air quality impact/exposure assessment and applying suitable mitigation measures where necessary. The recommended procedures include screening the development in order to determine the level of assessment required, and the use of Defra's 'damage cost' calculations (for additional pollutant population exposure emissions costs) for major developments and/or where there may be a cumulative impact.

Appendix III provides a detailed summary of the IAQM/EPUK planning guidance. In addition to the GMCA pledge regarding $PM_{2.5}$ levels, the 2005 WHO recommended limit for $PM_{2.5}$ is likely to be a legal requirement by the end of 2022. Developers should take this into consideration, seek to reduce contributions of this pollutant by the proposed development, and include the pollutant in air quality impact assessments as good practice. Due to limited monitoring data currently available at a local level, this may only be possible by comparisons with national background concentration datasets and qualitative assessment. It should also be noted that mitigation measures for NO_2 are likely to be of benefit in addressing $PM_{2.5}$ emissions from construction and operational phases.

3.3. Electric Vehicle Charging Guidance

Increasingly, providing electric vehicle charging (EVC) infrastructure is considered an effective measure to mitigate local air quality impacts from road vehicle journeys created by proposed development. MCC encourages developers or their representatives to demonstrate that consideration of providing EVC infrastructure commensurate with the development's scale and MCC's best practice recommendations has taken place at the planning application stage.

MCC's EVC recommendations have been developed from the IAQM/EPUK planning guidance referenced above, and in consultation with the Energy Saving Trust and TfGM Planning Task & Finish Group.

Appendix IV contains a summary of MCC's recommended best practice EVC measures.

Developers should also be aware of the minimum requirements of Building Regulation Approved Document S: infrastructure for charging electric vehicles.

[10] https://iaqm.co.uk/guidance/

3.4. Chimney Heights

Minimum heights are required for chimneys or stacks to ensure adequate dispersion. Under the Clean Air Act 1993, chimney height approval by the local authority is required for commercial furnaces if they:

- burn pulverised fuel;
- burn at a rate of 45.4 kg or more per hour any other solid matter;
- burn at a rate equivalent to 366.4 kilowatts or more of any liquid or gaseous matter.

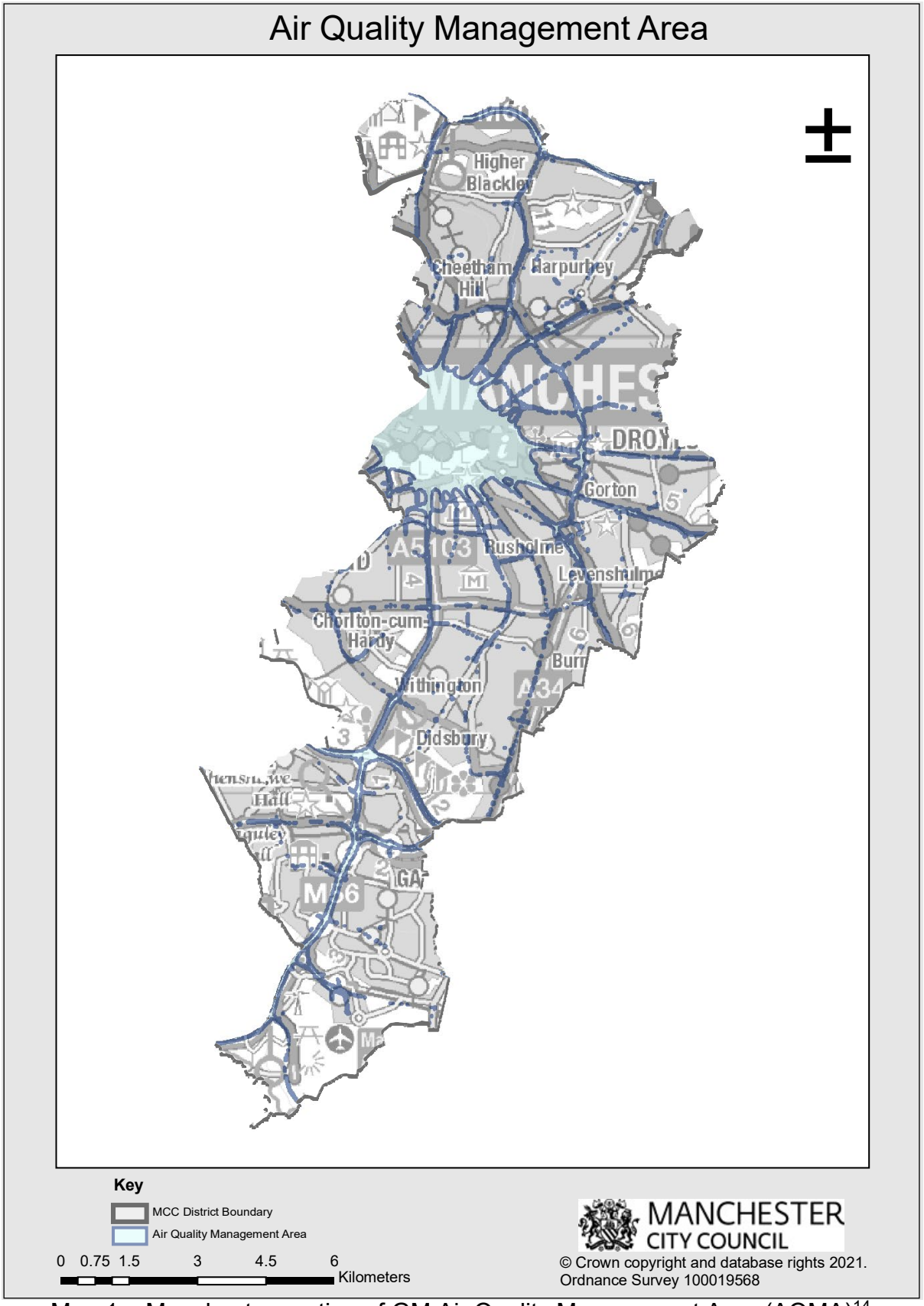
It is an offence to operate a furnace meeting any of the above conditions if the chimney height has not been approved, or if any conditions of the approval have not been complied with.

Minimum chimney heights would normally be determined by an assessment using the HMIP 1993 'Guidelines on Discharge Stack Heights for Polluting Emission, Technical Guidance Note D1 (Dispersion)' adapted to modern air quality standards[11], or the Environment Agency's H1 risk assessment tool[12]. The IAQM/EPUK planning guidance referred to in section 3.2 above also provides further information on stack heights.

If a commercial furnace and chimney is proposed, the guidance referred to above should be reviewed, and an application form requested via MCC's chimney height approval webpage[13].

[11] https://laqm.defra.gov.uk/laqm-faqs/faq89.html
[12] https://www.gov.uk/government/collections/risk-assessments-for-specific-activities-environmental-permits
[13] https://secure.manchester.gov.uk/info/200075/pollution/5705/chimney_height_approval

APPENDIX I



Map 1 – Manchester section of GM Air Quality Management Area (AQMA)[14]

[14] https://uk-air.defra.gov.uk/aqma/maps/

APPENDIX II

Summary of Guidance On The Assessment Of Dust From Demolition And Construction - February 2014 (v1.1)
Institute of Air Quality Management
https://iaqm.co.uk/guidance/

Potential Impacts: The main air quality impacts that may arise during demolition and construction activities are:

1. dust deposition, resulting in the soiling of surfaces;
2. visible dust plumes, which are evidence of dust emissions;
3. elevated PM_{10} concentrations, as a result of dust generating activities on site (most of this will be in the coarse ($PM_{2.5-10}$) fraction); and
4. an increase in concentrations of airborne particles and nitrogen dioxide due to exhaust emissions from diesel powered vehicles and equipment used on site (non-road mobile machinery) and vehicles accessing the site.

Exhaust emissions from on-site plant: Non-road mobile machinery (NRMM) and site traffic are unlikely to significantly impact local air quality. For site plant and on-site traffic, consideration should be given to the number of plant/vehicles and their operating hours and locations to assess whether a significant effect is likely to occur.

Site traffic on the public highway: If this cannot be scoped out (for example by using the EPUK's criteria), then it should be assessed using the same methodology and significance criteria as operational traffic impacts.

Receptors: Include humans, some sensitive premises/operations, ecological.

Risk of Dust Emissions: The risk of emissions is related to:

- activities being undertaken (demolition, number of vehicles and plant etc.)
- duration of these activities
- size of the site
- meteorological conditions (wind speed, direction and rainfall)
- proximity of receptors to the activities
- adequacy of the mitigation measures applied to reduce or eliminate dust
- sensitivity of the receptors to dust

Assessment Procedure: Activities on construction sites are divided into four types to reflect their different potential impacts:

- demolition
- earthworks
- construction
- trackout

The assessment methodology considers three dust impacts:

- annoyance due to dust soiling
- the risk of health effects due to an increase in exposure to PM_{10}
- harm to ecological receptors

The assessment is used to define appropriate mitigation measures to ensure that there will be no significant effect.

STEP 1: Screen the requirement for a more detailed assessment. No further assessment is required if there are no receptors within a certain distance of the works (350m for human receptor).

STEP 2: Assess the risk of dust impacts. This is done separately for each of the four activities (demolition; earthworks; construction; and trackout) and takes account of:

- the scale and nature of the works, which determines the potential dust emission magnitude (**STEP 2A**); and
- the sensitivity of the area (**STEP 2B**).

These factors are combined in **STEP 2C** to give the risk of dust impacts. Risks are described in terms of there being a low, medium or high risk of dust impacts for each of the four activities. Where there are low, medium or high risks then site-specific mitigation will be required.

STEP 3: Determine the site-specific mitigation for each of the four potential activities in **STEP 2.** This will be based on the risk of dust impacts identified in **STEP 2**.

STEP 4: Examine the residual effects, determine whether these are significant.

STEP 5: Prepare the dust assessment report; provide sufficient information for a third party to determine how the emission magnitude and sensitivity of the area, and hence the risk, have been determined. This text could be accompanied by Tables 1, 5 and 10 from the guidance to show the dust emission magnitude, the sensitivity of the area and the risk of impacts without mitigation. Detail the site-specific mitigation required to ensure there is no significant effect, and state why particular choices have been made.

Examples of Mitigation Measures (risk-dependent, refer to tables in guidance (p.24 onwards)):

Communications:

- Stakeholder communications plan
- Display site and office air quality contact details

Dust Management:

- Dust Management Plan (DMP), may include monitoring
- Site Management, including complaints and liaison with other nearby high risk sites

Site preparation & maintenance:

- Site layout: locate machinery and dust causing activities away from receptors
- Screens or barriers around site or dusty activities
- Avoid site runoff of water or mud
- Remove/cover/seed/fence dust causing materials

Operating vehicle/machinery and sustainable travel:

- Maintain NRMM to relevant standards
- No idling vehicles
- Mains electricity or battery powered equipment instead of diesel/petrol generators
- Maximum speed limit on unsurfaced areas

- Sustainable delivery of goods and materials
- Travel Plan for site operatives

Operations:

- Dust suppression on equipment
- Water supply for dust suppression, non-potable where possible
- Covered chutes/conveyors/skips
- Minimise drop heights and use fine water sprays
- Ensure equipment is readily available on site to clean dry spillages

Waste management:

- No bonfires or burning waste.

Demolition-specific measures:

- Internal strip before demolition
- Water suppression during demolition
- Avoid explosive blasting
- Bag and remove any biological debris / damp down before demolition

Earthworks-specific measures:

- Re-vegetate earthworks, stockpiles etc to stabilise as soon as practicable
- Store sand etc in bunds and do not allow to dry out
- Deliveries of bulk cement etc in enclosed tankers, store in silos with emission control systems
- Store smaller supplies of fine powder materials appropriately to prevent dust

Trackout-specific measures:

- Water-assisted dust sweepers on access and local roads where necessary
- Avoid dry sweeping of large areas
- Cover vehicles entering and leaving site
- Inspect on-site haul routes and repair surfaces - record in site log book
- Install hard surfaced haul routes and damp down
- Install wheel wash system and ensure adequate area hard surfaced road between the facility and site exit
- Locate access gates at least 10 m from receptors where possible

APPENDIX III

Summary of Land-Use Planning & Development Control: Planning For Air Quality

January 2017

Environmental Protection UK and the Institute of Air Quality Management

https://iaqm.co.uk/guidance/

Approach to Reducing Emissions and Impacts: Consider "major" developments (T&CP Act[15]) including developments where:

- The number of dwellings is 10 or above;
- The residential development is carried out on a site of more than 0.5ha where the number of dwellings is unknown;
- The provision of more than 1000 m^2 commercial floorspace; or
- Development carried out on land of 1ha or more.

Also consider developments which introduce new exposure into an area of existing poor air quality (e.g. an AQMA).

Good practice principles should be applied to all the above developments. These cover both emissions and exposure, and address both the design and operational phases.

Examples:

Design phase:

- New developments should not compromise the Council's Air Quality Action Plan.
- New developments should not create a new "street canyon" or inhibit effective dispersion.
- Delivering sustainable development should be the key theme of any application.
- New development should be designed to minimise public exposure to pollution sources.

Operational phase:

- EV chargepoints.
- Travel plan.
- Gas boilers/CHP plant to meet minimum standards.
- A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum standards.

Offsetting Emissions based on the "damage cost approach" used by Defra:

- Identify additional trip rates and average distance travelled.
- Calculate additional emissions of NO_x and PM_{10} from EFT.
- Calculate emissions over 5 years.
- Use HM Treasury and Defra IGCB damage cost approach to provide a valuation of the excess emissions.
- Financial commitment required for offsetting emission reductions / planning gain.
- Examples of contributions to:
    - Car clubs
    - Low emission vehicle refuelling infrastructure
    - Uptake of low emission vehicles
    - Low emission public transport options

[15] https://www.legislation.gov.uk/uksi/2015/595/pdfs/uksi_20150595_en.pdf

    - Cycling and walking infrastructure
- Measures to offset emissions may also be applied as post assessment mitigation.

Undertaking an Air Quality Assessment

Stage 1 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.

The criteria in Table 6.2 below provide specific guidance for when an air quality assessment is likely to be required:

Table 6.2: Indicative criteria for requiring an air quality assessment

The development will:	Indicative Criteria to Proceed to an Air Quality Assessment [a]
1. Pause 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. Pause 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.

Source: IAQM/EPUK

Where an air quality assessment is identified as being required, then this may take the form of either a Simple Assessment or a Detailed Assessment:

- **Simple Assessment:** Relies on already published information and without quantification of impacts. Used where it will clearly suffice for the purposes of reaching a conclusion on the significance of effects on local air quality.
- **Detailed Assessment:** Completed with the aid of a predictive technique, such as a dispersion model.

Assessment methodology should be agreed with the local authority and include 3 basic steps:

i. Assess the existing air quality in the study area (existing baseline);
ii. Predict the future air quality without the development in place (future baseline which may or may not include the contribution of committed development);
iii. Predict the future air quality with the development in place (with development).

The possibility of cumulative impacts should also be considered, and most assessments are carried out for the first year of the proposed development's use as this will generally represent the worst-case scenario. In some cases it may be appropriate to carry out air quality monitoring.

Assessment report should contain the following:

a. Relevant details of the proposed development.
b. The policy context for the assessment.
c. Description of the relevant air quality standards and objectives.
d. The basis for determining significance of effects arising from the impacts.
e. Details of the assessment methods.
f. Model verification.
g. Identification of sensitive locations.
h. Description of baseline conditions.
i. Assessment of impacts.
j. Description of construction phase impacts.
k. Cumulative impacts and effects.
l. Mitigation measures. **Even where the effect is judged to be insignificant, consideration should be given to the application of good design and good practice measures.**
m. Summary of the assessment results.

The suggested framework for describing impacts on air quality is set out in Table 6.3 below and the guidance document includes explanatory notes for its use:

Table 6.3: Impact descriptors for individual receptors.

Long term average Concentration at receptor in assessment year	% Change in concentration relative to Air Quality Assessment Level (AQAL)			
	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Source: IAQM/EPUK

Table 6.3 is only designed to be used with annual mean concentrations, however the guidance explains how the objective value for the daily mean PM_{10} concentration can be translated into an equivalent annual mean value for the AQAL.

Assessing Significance
Impacts on air quality will have an effect on human health that can be judged as 'significant' or 'not significant'. An impact is the change in the concentration of an air pollutant, as experienced by a receptor. This may have an effect on the health of a human receptor, and the significance of this effect requires judgement. The assessor will need to consider the number of people exposed to impacts in the various different categories of severity, in order to reach a conclusion on the significance of effect. Where the baseline concentrations are close to the objective value at a receptor, but not exceeding it, a case may be made for the development's predicted contribution being significant.

Disputes between the air quality assessor and the local authority's air quality specialist may arise where impacts are not unequivocally 'not significant'. Such disputes may be dealt with by the planning committee and/or a planning inspector following a planning appeal. A significant air quality effect is not, of itself, a reason for refusal of a planning application.

Occupational exposure
For people working at new developments in a situation where the air quality is such that an air quality objective at the building façade is not met, the effect on workers cannot necessarily be judged as significant as occupational exposure standards are different, although any assessment may wish to draw attention to the undesirability of the exposure.

Mitigating Impacts
The type of measures proposed to reduce air quality impacts will depend on the nature and scale of the proposed development, for example:

- Small number of new residential units in an area of high pollutant concentrations: examine design and ventilation arrangements.
- Larger development with greater impact on air quality: wider measures, e.g. improvements in the emissions from public transport, funding for traffic management measures.
- Large industrial developments subject to control under the Environmental Permitting Regulations: conform to best practice within the relevant sector. Increasing stack height may be one option for reducing impacts at specific receptors. For smaller developments with combustion sources, optimise the stack location and height such that dispersion is enhanced.

Even where developments are proposed outside of AQMAs, and where pollutant concentrations are predicted to be below the objectives/limit values, the proposed development should incorporate good design principles and best practice measures.

APPENDIX IV

Electric Vehicle Charging - MCC Best Practice Recommendations

Electric Vehicle (EV) chargepoints and infrastructure are recommended for the following applications:

- 1 or more residential units with any parking spaces.
- Non-residential development with any parking spaces.

EV charging recommendations:

- Residential:
    - On-site/allocated parking: 1 EV chargepoint (minimum 7kW*) for each dwelling.
    - Unallocated parking: minimum 20% EV (minimum 7kW*) chargepoints, and cable routes for all other spaces.

- Non-residential:
    - 10 or less parking spaces: minimum 1 EV chargepoint, and cable routes for all staff spaces.
    - 11 or more parking spaces: minimum 20% EV chargepoints, and cable routes for all staff spaces.
    - Charging units dependent on end-use as follows:
        - Minimum 7kW*: offices, hotels, nursing homes, sheltered accommodation, industrial units, retail units.
        - Minimum 22kW*: supermarkets etc.
        - Minimum 50kW*: service stations etc.

*Mode 3, 7kW (32A) single phase, or 22kW (32A) three phase, and for 50kW Mode 4 rapid charging may be required. See British Standard BS EN 61851-1:2019[16].

Other considerations required by the Local Planning Authority may include:

- Chargepoint type and speed
- Electrical and safety standards
- Back office functionality
- Data security
- Interoperability/compatibility
- Smart charging (where appropriate)
- Load management
- Anti-collision barriers

[16] https://www.gov.uk/government/publications/electric-vehicle-homecharge-scheme-minimum-technical-specification/electric-vehicle-homecharge-scheme-minimum-technical-specification