Rotherham local plan

Air Quality and Emissions Supplementary Planning Document

Adopted June 2020

www.rotherham.gov.uk

Rotherham Metropolitan Borough Council

Appendices

Maps, Tables, Figures and Boxes

Introduction

This Supplementary Planning Document aims to assist in reducing emissions to air in Rotherham. It is aimed at helping the Local Planning Authority deliver national air quality objectives and policy set out in the Local Plan.

1 The spatial planning system has an important role to play in improving air quality and reducing exposure to air pollution. Whilst planning policy cannot solve immediate air quality issues, it has a role to play so that any likely scheme impacts are reasonably mitigated and future scheme occupants are able to make sustainable vehicle choices.

2 New developments have the potential to affect air quality and local planning policy will play a significant role in ensuring that development schemes are designed to be sustainable. This guidance has been developed to:

- Provide a framework for assessing air quality which includes the quantification of impacts, formulation of damage costs and identification of potential mitigation measures to be implemented to negate the impacts.
- Tackle cumulative impact.
- Provide clarity and consistency of the process to developers, planners and local communities.

3 This technical guidance[1] deals primarily with those pollutants regulated under the local air quality management (LAQM) regime and the impact of traffic emissions, although the increasing use of biomass boilers is now becoming an important local planning issue. The assessment and control of dust impacts during demolition and construction is also considered, as dusts contribute to airborne particulate matter, as well as being dust soiling. Greenhouse gas emissions are not addressed explicitly, as they are covered by other initiatives, but synergies exist between measures to minimise climate change and local air quality impacts.

4 The guidance provides a template for integrating air quality considerations into land-use planning and development management policies that can influence the reduction of road transport emissions. It forms part of Rotherham MBC's Air Quality Action Plan.

5 The air quality assessment process follows a three stage process:

- Stage 1: Determining the classification of the development proposal;
- Stage 2: Assessing and quantifying the impact on local air quality;
- Stage 3: Determining the level of a mitigation required by the proposal to meet Local Plan requirements.

---

1 Acknowledgements: West and South Yorkshire Councils

Status

6 This Supplementary Planning Document (SPD) has been prepared in line with national planning policy and relevant legislation and regulations. The National Planning Policy Framework (NPPF) identifies that SPD add further detail and guidance to the policies in the development plan. They are capable of being a material consideration in planning decisions.

7 As required by The Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended) consultation on a draft of this SPD took place between 07 October and 4 November 2019. The accompanying Consultation Statement sets out further detail on this consultation, including who was consulted, a summary of the main issues raised and how these have been addressed in the SPD. It also contains an adoption statement, confirming that this SPD was adopted by Rotherham Council on xxxxx.

Planning Recommendation

8 The impact on air quality is a material planning consideration in the determination of a planning application. Each decision must be a balance of all material considerations depending upon the individual merits and circumstances. The weight to be given to the impact on air quality in the consideration of a planning application and the acceptability of proposed mitigation measures lies with the Local Planning Authority. Any agreed measures will be taken forward by condition where possible, or through the use of Section 106 or 278 agreements.

Planning Policy

National planning policy

9 National planning policy is now set by the National Planning Policy Framework (NPPF.) [2] The NPPF places a general presumption in favour of sustainable development, stressing the importance of local development plans. Chapter 15 deals with conserving and enhancing the natural environment. Paragraph 170 identifies that planning decisons should contribute to and enhance the natural and local environment by preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality.

10 It goes on to state (paragraph 180) that:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development..."

11 It then further states in terms of air quality influence, that:

Paragraph 110 - *"applications for development should:*

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations".

Paragraph 170 – *"Planning policies and decisions should contribute to and enhance the natural and local environment by:*

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air quality".

Paragraph 181 – *"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic*

2 http://planningguidance.planningportal.gov.uk/

approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan".

12 To support the NPPF, the Government has produced Planning Practice Guidance (PPG), including guidance relating to air quality [3].Paragraph 8 of this Planning Policy Guidance (reference ID: 32-008-20191101), deals specifically with mitigating air quality impact and states:

"Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact. ***It is important that local planning authorities work with applicants to consider appropriate mitigation so as to ensure new development is appropriate for its location and unacceptable risks are prevented****. Planning conditions and obligations can be used to secure mitigation where the relevant tests are met."* (Bold and underline emphasis added.)

13 In terms of air quality impacts a good basic design will reduce the need for mitigation. A basic design is expected to deliver:

- No additional exposure to increased air pollution for existing or future occupants;
- A location that maximises the use of sustainable transport, that:
    - reduces the number and distance of trips;
    - shifts the journeys to alternative, less polluting modes, and;
    - provides for improved technology and efficiencies.
- Greenspace and people priority wherever practicable.

14 Examples of mitigation include:

- maintaining adequate separation distances between sources of air pollution and receptors;
- using green infrastructure, in particular trees, where this can create a barrier or maintain separation between sources of pollution and receptors;
- appropriate means of filtration and ventilation;
- including infrastructure to promote modes of transport with a low impact on air quality (such as electric vehicle charging points);
- controlling dust and emissions from construction, operation and demolition; and
- contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development.

3 https://www.gov.uk/guidance/air-quality--3

Local planning policy

15 Rotherham's Local Plan consists of the Core Strategy (adopted in September 2014) and the Sites and Policies Document (adopted in June 2018), alongside the Barnsley, Doncaster and Rotherham Joint Waste Plan (adopted in March 2012). These are available from our website[4].

16 The Local Plan identifies land areas for future development and includes a number of strategic and development policies relating to local air quality management that will fulfil the National Planning Policy Framework sustainable development criteria. This technical guidance supports the implementation of the strategic and development policy framework. It provides additional detail to, and should be read in conjunction with, the following policies:

Policy CS 27 Community Health and Safety	which supports development contributing to a healthy and safe environment and minimises health inequalities, seeks to reduce pollution and does not result in pollution or hazards which may prejudice the health and safety of communities or their environments.
Policy CS 28 Sustainable Design	which indicates that development should protect or contribute to securing a healthy and safe environment, including addressing any specific risks to health or safety from the local environment.
Policy CS 30 Low Carbon & Renewable Energy	which sets out how developments should seek to reduce carbon dioxide emissions.
Policy SP 52 Pollution Control	which sets out policy relevant to development proposals that are likely to cause pollution, or be exposed to pollution, and establishes that mitigation measures will minimise potential impacts to levels that protect health, environmental quality and amenity.
Policy SP 55 Design Principles	which indicates that all forms of development are required to be of high quality and create decent living and working environments.
Policy SP 57 Sustainable Construction	which indicates that development will need to be designed to withstand and adapt to the predicted impacts of climate change.

4 https://www.rotherham.gov.uk/localplan

Local air quality management

17 The Environment Act 1995 established a local air quality management regime. It requires local authorities to review and assess ambient air quality in their areas against health based standards for a number of specific pollutants prescribed in the Air Quality Regulations 2000 and Air Quality (Amendment) Regulations 2002. If there is a risk that levels of air pollution in any part of the authority's area will be higher than the prescribed objectives, the authority is required to designate an Air Quality Management Area (AQMA), which covers the area of exceedance. It is then required to produce an Action Plan which sets out the measures it intends to take in pursuit of the objectives.

18 It is not necessarily the case that a proposed development in an area of poor air quality will have a negative impact. However, it is important to recognise when such development might introduce additional people into an area of poor air quality. The declaration of an AQMA does not mean that there will be no new development within that area. Rather, it means that greater weight must be given to the consideration of air quality impacts and their mitigation.

19 In addition, the boundary of an AQMA does not necessarily define the limit of the area of poor air quality. The only constraint on the boundary definition is that it should be at least as large as the area of exceedance of the national air quality pollutant, where there is relevant exposure of the public.

20 The fact that a development is within or close to an AQMA does not mean that it is necessarily affecting an area of exceedance of the objective, or that it is being affected by air pollution that exceeds the objective. On the other hand, a development could introduce new exposure into an area of poor air quality, which has not been identified and declared as an AQMA, as previously there was no relevant exposure.

Clean Air Zones

21 The UK Government named Sheffield and Rotherham as one of many areas in England which contain locations where the annual average concentrations of Nitrogen Dioxide (NO_2) exceed statutory limits.

22 Rotherham MBC was mandated by the Government in 2017 to work in partnership with Sheffield City Council to implement a Clean Air Zone. If a proposed development is likely to impact on the air quality in any of Rotherham's National exceedance areas, particular emphasis on mitigation measures by the developer will be required to ensure there will be no adverse impacts on air quality.

23 It is essential that communication with the Local Planning Authority (LPA) takes place at an early stage (pre-application) when an application is likely to have an impact on locations where the annual average concentrations of Nitrogen Dioxide (NO_2) exceed statutory limits (see Box 1 'Roads where annual average nitrogen dioxide level exceeds statutory limits').

Habitats Regulations

24 The Habitats Regulations require that a development proposal, or a project or plan, will not cause a likely significant effect or, where likely significant effects cannot be discounted, no adverse effect on the integrity of designated sites.

25 The predicted impact and effect of emissions to air from the development on Natural England's designated site(s) should be determined. This will include the magnitude and scale of the development's impact on air pollution, using an appropriate air quality modelling technique. It is important to identify important ecological features that may be affected, with reference to a geographical context in which they are considered important. The impact and effect must be established by considering the in-combination impact with other projects and plans. The effects of air pollution arising from the development on the integrity of the designated site shall be established.

26 Levels of predicted pollutants should be evaluated against the National air quality objectives and European Directive limit and target values for the protection of vegetation and ecosystems https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf

27 The most appropriate environmental benchmarks for each feature on each designated site (e.g. site relevant critical levels and critical loads) should be used. It is recommended that the Air Pollution Information System (www.apis.ac.uk) is used to obtain information about site/habitat sensitivity (e.g. critical loads and levels for ecosystem protection)

28 Rotherham's designated sites can be found at https://designatedsites.naturalengland.org.uk/

Provision of Electric Vehicle Charging Points

29 A key theme of the NPPF is that developments should enable future occupiers to make 'green' vehicle choices and incorporate facilities for charging plug-in and other ultra-low emission vehicles (ULEVs). The NPPF (paragraph 110) requires a scheme proposal to 'be designed to enable charging of plug-in and other ULEVs in safe, accessible and convenient locations'.

30 Policy CS30 'Low carbon & Renewable Energy Generation' 1 Energy states 'Development should seek to reduce carbon dioxide emissions through the inclusion of mitigation measures…c. Incorporating low carbon and renewable energy sources. Developments will be supported which encourage the use of renewable, low carbon and decentralised energy. All development should achieve, as a minimum, the appropriate carbon compliance targets as defined in the Building Regulations.

31 The Council policy document 'Rotherham Council Responding to the Climate Emergency' **(5)** aims to reduce borough-wide carbon emissions to net zero by 2040 and one of the key areas identified to reduce borough-wide transport emissions is to 'facilitate a borough-wide switch to EVs (electric vehicles) and Ultra Low Emission Vehicles (ULEVs) through continuing to expand charging infrastructure' (para.6.8.5 of the policy document). Ensuring that new development is equipped with appropriate charging infrastructure will help ensure that Rotherham's residents and businesses are

5 https://moderngov.rotherham.gov.uk/mgConvert2PDF.aspx?ID=125067

well placed to make use of electric vehicles as the Government moves forward its plans to phase out the sale of petrol, diesel and hybrid powered vehicles.

Electric Vehicle Charging Points Provision

A standard level of electric vehicle charging points provision is expected in most development in addition to mitigation arising from the exposure assessment, via planning condition, as follows:

- Residential developments: A minimum of 1 charging point per dwelling and 1 charging point per parking space for flats (including changes of use to dwellings).
- Non residential developments (for proposals with 5 or more parking spaces): Provision of vehicle charging point infrastructure (cabling routes) to serve every car parking space and a minimum of 20% of parking spaces to have charging points.

The exact number, specification, location and maintenance schedule for electric vehicle recharge infrastructure should be agreed with the relevant authority.

32 The required thresholds are based on the Government's consultation document on changes to building regulations regarding Electric Vehicle Charging in Residential and Non-Residential Buildings[6].

33 Reference to BEAMA guidance[7] and the Alternative Fuels Infrastructure Regulations 2017[8] (or latest available version) is recommended. The UK Office for Low Emission Vehicles advice is that approved chargepoints should be used for residential developments[9], and recommends authorised installers of electric vehicle home chargers[10].

34 For commercial, retail and industrial developments it is recommended that to allow for increased demand for cleaner vehicles in future years[11], appropriate cable provision should be included in the scheme design and development, in agreement with the local authority and should include the suggested mitigation listed below.

6 https://www.gov.uk/government/consultations/electric-vehicle-chargepoints-in-residential-and-non-residential-buildings
7 http://www.beama.org.uk/resourceLibrary/beama-guide-to-electric-vehicle-infrastructure.html
8 https://www.legislation.gov.uk/uksi/2017/897/made
9 https://www.gov.uk/government/publications/electric-vehicle-homecharge-scheme-approved-chargepoint-model-list
10 https://www.gov.uk/government/publications/electric-vehicle-homecharge-scheme-authorised-installers
11 https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy

Pre-application Discussions

35 In order to avoid unnecessary delays in the planning process and ensure optimum scheme design and sustainability, it is vital for communication at an early stage in any significant proposal. It is therefore recommended that pre-application discussions with the relevant air quality personnel to confirm the scale of development and the assessment requirements are undertaken.

Air Quality Assessment

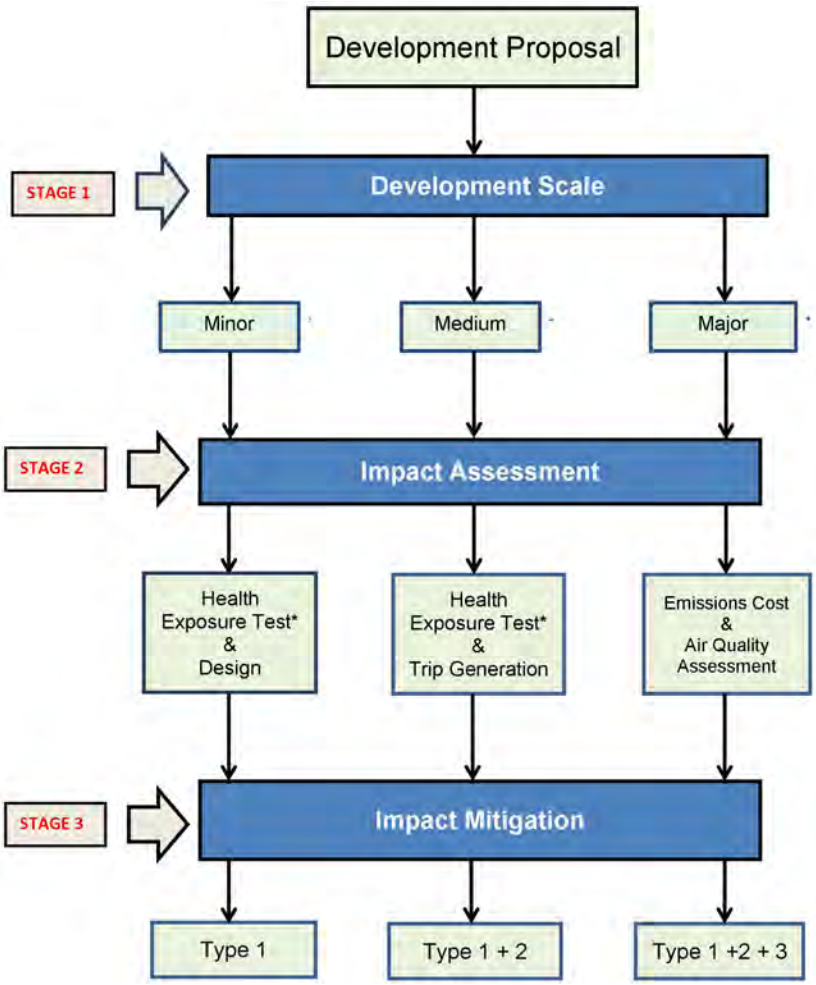
36 An Air Quality Assessment will be required when:

1. The proposal meets or exceeds the criteria in Table 1 'Criteria for development classification'

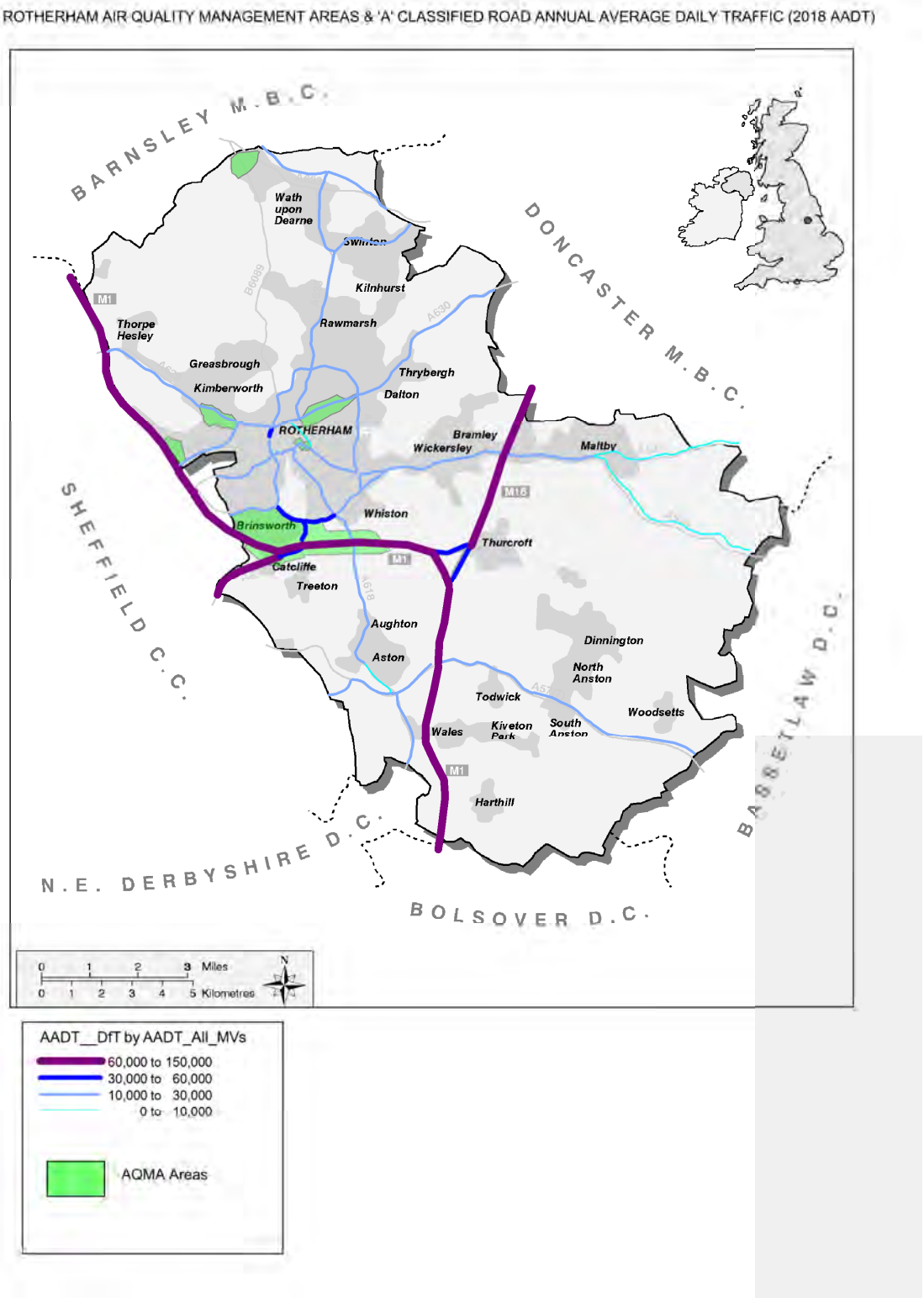
2. The proposed development of any size is classed as Use Class C1 to C4 or D1 and is within the defined Air Quality Assessment Areas identified on Map 1 'Air Quality Assessment Areas'

Please refer to the flow chart in Figure 1 below:

Figure 1 Air Quality Impact Assessment Flow Chart



Map 1 Air Quality Assessment Areas



Air quality and emissions mitigation assessment process

Stage 1: Development type classification

37 In preparing their proposals applicants will need to have regard to the following assessment process. Specialist assistance may be required to determine and assess the impact development proposals will have on air quality.

38 Three levels of development classification are determined using adapted criteria from the Department for Transport [(12)] .

1. MINOR Proposal: Development proposals that fall below the criteria in Table 1 'Criteria for development classification'.

2. MEDIUM Proposal: Development proposals that meet or exceed the criteria in Table 1 'Criteria for development classification'

3. MAJOR Proposal: Development proposals that meet or exceed the criteria in Table 1 'Criteria for development classification' and meet at least one of the additional criteria set out in Table 2 'Additional trigger criteria for major developments'.

39 Some medium proposals, such as a distribution centre (B8), would have a much greater impact compared with other uses in terms of emissions from transport. If a proposal meets or exceeds one of the criteria in Table 1 and it also meets or exceeds one or more of the criteria listed as 'other' at the bottom of table 1, an emissions and cost calculation would be required.

12 http://webarchive.nationalarchives.gov.uk/20100409053417/http://www.dft.gov.uk/adobepdf/165237/202657/guidanceontaappendixb

Table 1 Criteria for development classification

Land use	Description	Air quality assessment required
Food retail (A1)	Retail sale of food goods to the public – supermarkets, superstore, convenience food store	>800 m^2 (GFA)
Non-food retail (A1)	Retail sale of non-food goods to the public; but includes sandwich bars or other cold food purchased and consumed off site	>1,500 m^2 (GFA)
Financial and professional services (A2)	Banks, building societies and bureaux de change, professional services, estate agents, employment agencies.	>2,500 m^2 (GFA)
Restaurants and cafes (A3)	Use for the sale of food for consumption on the premises.	>2,500 m^2 (GFA)
Drinking establishments (A4)	Use as a public house, wine-bar for consumption on or off the premises.	>600 m^2 (GFA)
Hot food takeaway (A5)	Use for the sale of hot food for consumption on or off the premises.	>500 m^2 (GFA)
Business (B1)	a) Offices other than in use within Class A2 (financial & professional). (b) Research & development – laboratories, studios. (c) Light industry	>2,500 m^2 (GFA)
General industrial (B2)	General industry (other than B1).	>4,000 m^2 (GFA)
Storage or distribution (B8)	Storage or distribution centres – wholesale warehouses, distribution centres & repositories.	>5,000 m^2 (GFA)
Hotels (C1)	Hotels, boarding houses & guest houses	>100 bedrooms
Residential Institutions (C2)	Hospitals, nursing homes used for residential accommodation and care.	>50 beds
Residential institutions (C2)	Boarding schools and training centres	>150 students
Residential institutions (C2)	Institutional hostels, homeless centres	>400 residents
Dwelling Houses (C3)	Dwellings for individuals, families or not more than six people in a single household.	>50 units
Non-Residential Institutions (D1)	Medical & health services, museums, public libraries, art galleries, non-residential education, places of worship and church halls.	>1,000 m^2 (GFA)
Assembly and Leisure (D2)	Cinemas, dance & concert halls, sports halls, swimming, skating, gym, bingo, and other facilities not involving motorised vehicles or firearms.	>1,500 m^2 (GFA)
Other		
1. Any development generating 30 or more two-way vehicle movements in any hour 2. Any developments generating 100 or more two-way vehicle movements per day 3. Any development proposing 100 or more parking spaces 4. Any relevant development proposed in a location where the local transport infrastructure is inadequate 5. Any relevant development, including Short Term Operating Reserve power plants, proposed in an Air Quality Management Area identified on Map 1 'Air Quality Assessment Areas' (or any subsequent Air Quality Management Area as shown at https://uk-air.defra.gov.uk/aqma/maps) or close to any road identified on Map 1 'Air Quality Assessment Areas' (or as subsequently identified) as having over 10,000 annual average daily traffic movements.		

Table 2 Additional trigger criteria for major developments

Proposals located within an Air Quality Management Area, National Exceedance Area, Clean Air Zone or Low Emission Zone.
Where the proposed development falls within the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 and includes air quality and/or transport as a specific likely impact.
Development close to any road identified on Map 1 'Air Quality Assessment Areas' (or as subsequently identified) as having over 10,000 annual average daily traffic movements.
Proposed development where HGV trips are likely to exceed 10% of total trips generated by that development, or where additional HGV trips generated by the development would increase total HGV trips on the local highway network to more than 10%. This is only likely to become apparent when an assessment of traffic impact has been made. If there is any doubt as to the scale of likely impact it would be sensible to hold pre application discussions.
Where significant demolition and construction works are proposed (significance to be determined using Guidance on the assessment of Dust from Demolition and Construction, Institute of Air Quality Management [13])
Proposals associated with the Environmental Permitting Regulations.
Proposals located in an area with levels of air pollutants >90% of relevant NAQS objective.
Where Combined Heat & Power (CHP), biomass or biofuel boilers are proposed for heating or power.
Short term operating reserve electricity generation operations (depending on location).

13 http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf

Stage 2: Air quality impact assessment

40 There are two aspects of development proposals which can impact on local air quality, each requiring an appropriate level of assessment:

- The demolition and construction activities, and;
- The operational stage of a completed development which may mainly have impacts on air quality as a result of transportation, but can include emissions from heating and power generation.

MINOR Classified Proposals

41 Smaller development proposals may not in themselves create an additional air quality problem but will add to local air pollution and potentially introduce more people likely to be exposed to existing levels of poor air quality. Any demolition or construction activity associated with the proposal should undertake the assessment detailed in the guidance in 'Appendix 1: Demolition and construction management'. An assessment of the likelihood of introducing additional exposure will be required if:

42 The proposal is one of the following Land Use Classification types:

- C1 to C3 in Table 1 'Criteria for development classification';
- C4 (Homes of Multiple Occupation);
- D1 in Table 1 'Criteria for development classification'.

43 **And:** The proposal is within 20 metres of any of the roads in the area identified on Map 1 'Air Quality Assessment Areas' (this includes the area within or adjacent to AQMAs, applicable roads and includes roads at or above the relevant national objective highlighted on the DEFRA GIS modelled maps[(14)])

44 **Or:** The proposal is within an area of concern or within an AQMA, Clean Air Zone or Low Emission Zone.

45 It is important to establish the exposure of future residents to air pollution in the Air Quality Assessment. This can be undertaken by consulting the LPA and, if necessary, carrying out a nitrogen dioxide monitoring survey if the development is near to any of the roads in Map 1 'Air Quality Assessment Areas'.

46 At the design stage, the distance of the development properties from the road is an important consideration, as is for example, the incorporation of EV charging and secure cycle storage in the development. The aim should be to enable future occupant to make sustainable travel choices with minimal impact on air quality in Rotherham.

14 http://uk-air.defra.gov.uk/data/gis-mapping

MEDIUM Classified Proposals

47 The air quality emissions assessment should clearly establish the likely level of exposure of future occupants to the pollutants nitrogen dioxide and PM_{10} as a minimum. The likely impact of the construction and operational phases at relevant receptors must be taken into account ('Appendix 1: Demolition and construction management'). For medium developments, the LPA requires a calculation of the increase in emissions to air predicted from the proposal and a calculation of pollutant damage costs to be submitted[15]:

- Identifying the additional trip rates or numbers generated by the proposal (from the Transport Assessment);
- The emissions calculated for the pollutants of concern (NO_x, PM_{10}) [from the Emissions Factor Toolkit];
- The air quality damage costs calculation for the specific pollutant emissions;
- The result is totalled for a five year period to enable mitigation implementation and impact. Mitigation is estimated to have an 80% impact in the first 5 years of implementation [16].

48 The calculation is summarised below with further details of the process and an example calculation shown in 'Appendix 2: Emissions assessment calculator'.

49 The outcome of the exposure and emissions assessment will determine the level of mitigation required to make the development acceptable. The mitigation measures for the development should be clearly outlined in the Air Quality Assessment. Should there be no acceptable mitigation the recommendation to the planning officer will be to refuse the proposal on air quality grounds.

MAJOR classified proposals

50 The scale and nature of this type of proposal is such that a detailed prediction of the air quality impacts of the proposal will be required to determine the impact on public health and the local environment. A planning application will not be validated until such an Air Quality Assessment is submitted. The Assessment requires:

A. The identification of the level of exposure through the change in pollutant concentrations (in particular nitrogen dioxide and PM_{10}) including cumulative impacts arising from the proposal, both for on-site and off-site sensitive receptors following Local Air Quality Management Technical Guidance 16 (LAQM TG16)[17]. The location of the receptors will need to be agreed with the LPA. Where the level of exposure through changes in pollutant concentrations including cumulative impacts arising from the proposal, both for on-site and off-site sensitive receptors, is identified, an assessment of the changes in annual mean nitrogen dioxide concentration predicted during the operational phase at a distance of 4 metres from National Exceedance Roads (Box 1 'Roads where annual average nitrogen dioxide level exceeds statutory limits') where the EU Limit Value was breached in 2018 in Rotherham, will need to be included. This is irrespective of whether there is exposure as defined under LAQM TG16.

---

15 refer to https://www.gov.uk/guidance/air-quality-economic-analysis#abatement-cost-approach
16 Committee on the Medical Effects of Air Pollutants (2010)
17 https://laqm.defra.gov.uk/supporting-guidance.html

Box 1

Roads where annual average nitrogen dioxide level exceeds statutory limits

A630 Sheffield Parkway from J33 M1 to Sheffield Centre

Where an assessment of the changes in annual mean nitrogen dioxide concentration predicted during the operational phase at a distance of 4 metres from a National Exceedance Road is necessary, it is essential that the LPA is consulted to approve the proposed methodology and provide current monitored data to inform the assessment. If sufficient monitoring data is not available, monitoring will be required by the applicant as part of the Air Quality Assessment.

B. During both demolition/construction operations and operational phases, mitigation measures should be identified and quantified where practicable.

C. The pollutant emissions costs calculation will identify the environmental damage costs associated with the proposal and determine the amount (value) of mitigation that is expected to be spent on measures to mitigate the impacts from the development. The Impact Pathways Approach (IPA) [18] and is recommended for proposals with large air quality impacts (over £50 million using damage costs) that are not expected to affect compliance with legal limits Proposals that change emissions in a way that affects compliance with legal obligations should use the abatement costs approach [19].

The abatement costs approach recognises that changes in emissions will affect the level, and cost, of action required to comply with such obligations. Where the proposal affects emissions in other locations, or below the limit, you should use the damage cost or impact pathway approach as appropriate.

You will need to know the levels of pollution in relevant areas (consult the LPA for this) and the current legally binding air quality objectives. The NPPF (paragraph 32) suggests that " Where significant adverse impacts are unavoidable, suitable mitigation measures should be proposed (or, where this is not possible, compensatory measures should be considered)." It is proposed that if on-site mitigation is not possible then the Local Planning Authority should seek compensation for the identified air quality impacts through a section 106 agreement.

D. The methodology used for the determination of predicted pollutant concentrations should meet the requirements of the Department for the Environment, Food and Rural Affairs (DEFRA) Technical Guidance Note LAQM TG16[20].

51 The pollutant emissions costs calculation will identify the environmental damage costs associated with the proposal and determine the amount (value) of mitigation that is expected to be spent on measures to mitigate the impacts. The calculation will be expected to utilise the most recent DEFRA Emissions Factor Toolkit [21] to estimate the additional pollutant emissions from a proposed

18 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770649/impact-pathway-approach-guidance.pdf
19 refer to https://www.gov.uk/guidance/air-quality-economic-analysis#abatement-cost-approach
20 https://laqm.defra.gov.uk/technical-guidance/
21 http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html#eft

development and the latest DEFRA IGCB Air Quality Damage Costs for the specific pollutant of interest, to calculate the resultant damage cost [22]. The calculation process includes:

- Identifying the additional trips generated by the proposal (from the Transport Assessment);
- The emissions calculated for the pollutants of concern (NO_x and PM_{10}) [from the Emissions Factor Toolkit];
- The air quality damage costs calculation for the specific pollutant emissions (from DEFRA IGCB[23]);
- The result is totalled for a five year period to enable mitigation implementation.

52 The calculation is summarised below in Box 2 'Road transport emission calculation summary' with further details of the process along with an example calculation shown in 'Appendix 2: Emissions assessment calculator'.

Box 2

Road transport emission calculation summary

Road Transport Emission Increase =

Σ[Calculated trips for 5 years X Emission rate per 10 km per vehicle type X Damage Costs]

Short Term Operating Reserve Power Plants

53 If a Short Term Operating Reserve power plant is proposed at any of the following locations in the borough:

- Close to any of the major roads in Map 1 'Air Quality Assessment Areas' with Annual Average Daily Traffic (AADT) >10,000.
- Within 500 metres of any sensitive receptor as defined by LAQM.
- Within 500 metres of Class A1, A2, A3, A4, A5, B1 uses (Table 1 'Criteria for development classification').

54 an Air Quality Assessment which includes proposals for mitigating the impacts on air quality (in particular NO_x emissions) is required to be submitted to the LPA for approval.

Biomass Boilers

55 The LPA acknowledges that a biomass boiler may adversely affect air quality and as such may require the submission of detailed information on the type of system you are proposing to install. Most of these questions relate to the type of boiler proposed, so it is essential that you know the make, model and size of boiler you are proposing to use before you submit the planning application. As the whole of the borough of Rotherham is in a Smoke Control Area, and the size of your proposed

22 https://www.gov.uk/air-quality-economic-analysis
23 Interdepartmental Group on Costs and Benefits

boiler means that the Clean Air Act covers it, it is also essential that you check that your proposed boiler has been approved as an Exempt Appliance[24]

Stage 3: Mitigation

56 All air quality assessments are expected to include mitigation of impacts. The outcome of Stage 2 (Assessment) identifies the level of air quality impact and is then used to determine the level of mitigation required to offset the potential effects upon health and the local environment, should the scheme design not provide this.

57 The scale of damage cost will determine the level of appropriate mitigation required for specific proposals. Mitigation measure identification will be assisted by:

- Outcomes from the Transport Statement/Assessment and any Travel Plan;
- DEFRA air quality guidance[25]

58 The NPPF (paragraph 32) suggests that " Where significant adverse impacts are unavoidable, suitable mitigation measures should be proposed (or, where this is not possible, compensatory measures should be considered)." If on-site mitigation is not possible then the Local Planning Authority could seek compensation for the identified air quality impacts through a section 106 agreement. Suggested mitigation measures are set out in Boxes 3, 4 and 5 below for each type of proposal that demonstrate a minimum requirement. This is not an exhaustive list and will be adapted for particular locations and needs identified by relevant officers and the scale of damage costs. The authority welcomes the opportunity to work with applicants to devise innovative measures that will lead to improving local air quality.

TYPE 1 (Minor) Proposals Mitigation

59 If the proposal meets the exposure criteria in Stage 2, further mitigation will be required to reduce the level of exposure. This will be in the form of:

- Possible short term screening monitoring or utilising the distance calculation provided by Defra[26] at the proposed location to identify the level of exposure;
- Redesigning the proposal to reduce the ingress of pollution;
- Including a stand-off distance and/or vegetation boundary from the development.

24 refer to https://smokecontrol.defra.gov.uk/appliances.php?country=england
25 refer to http://laqm.defra.gov.uk/action-planning/measures/measures.html
26 DEFRA Distance: http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html

Table 3 Minor (type 1) Mitigation Measures

Scheme basic design for air quality
Improved design to minimise exposure to air pollution for future occupiers and maximises the use of sustainable transport, i.e.: • reduces the number and distance of trips; • shifts the journeys to alternative, less polluting modes; • Greenspace and people to be a priority wherever practicable. To reduce potential exposure of new occupiers to poor air quality: • Move occupied buildings back from the roadside • Re-organising main habitable rooms away from facing the roadside.
Electric vehicle charging infrastructure
EV Charging points included for housing and commercial proposals
Demolition / construction / non-road mobile machinery
Adherence to dust management guidance and best practice for all demolition and construction works provided in an appropriate Construction Environmental Management Plan (CEMP)

60 An appropriate provision of electric vehicle recharging points is expected for most developments as stated in the Planning Policy Section, in addition to mitigation arising from the exposure assessment.

Box 3

TYPE 1 (Minor) proposals: Suggested mitigation options for residential developments

- 1 charging point per unit (dwelling with dedicated parking) or 1 charging point per space (unallocated parking).
- The use of mitigation measures to design the layout of the development proposals to take into account air quality; and the use of green infrastructure including woodland planting and an associated management and maintenance plan to ensure the longevity of the Green Infrastructure provision and ensure it continues to contribute to improving air quality in the long term.
- Provision of secure cycle storage.
- Provision of incentives for the use of public transport.

61 Where innovative mitigation measures are proposed, these should have demonstrable air quality benefits. If measures are provided in mitigation of potential traffic impacts, these will be permitted to count towards the air quality mitigation measures.

TYPE 2 (Medium) Proposals Mitigation

62 Proposals meeting the Type 2 criteria in Table 1 'Criteria for development classification' will require a detailed Travel Plan as required by Rotherham MBC's guidance document: Transport Assessments, Travel Plans and Parking Standards: Good Practice Guidance 2014 (and any subsequent replacement). The NPPF identifies a Travel Plan as a key tool to promoting and delivering sustainable transport and that all transport mitigation measures may be included within the Travel Plan. The default mitigation measures to be incorporated into the scheme design include those listed in Box 4 'TYPE 2 (Medium) proposals: Suggested mitigation options' below. The list is not exhaustive and there may be additional issues that are site specific and reflect local conditions, as well as other material considerations. In respect of the Travel Plan it is essential that:

- The content of the travel plan is fully assessed prior to its approval in conjunction with local authority travel plan and highway development control officers. Applicants are strongly encouraged to seek pre-application advice.
- The agreed targets and objectives included in the travel plan are secured for implementation by mutual agreement of the local authority and the developer/applicant (normally by means of a Section 106 agreement).
- The outputs of the travel plan (typically trip levels and mode split) are annually monitored against the agreed targets and objectives.
- Should the travel plan not deliver the anticipated outputs or meet the targets and objectives for air quality, further mitigation/alternative compensation measures need to be identified and implemented.
- A named co-ordinator is essential to the success of the travel plan.

Box 4

TYPE 2 (Medium) proposals: Suggested mitigation options

- All minor proposal mitigation measures should be considered (as set out in Box 3 'TYPE 1 (Minor) proposals: Suggested mitigation options for residential developments').
- Commercial/Retail – 20% of parking spaces to be provided with an electric vehicle charging point; this may be phased with 5% initial provision and the remainder at an agreed trigger level.

- Industrial – 20% of parking spaces to be provided with an electric vehicle charging point; this may be phased with 5% initial provision and the remainder at an agreed trigger level.
- Demolition/Construction – adherence to dust management guidance and best practice for all demolition and construction works provided in an appropriate Construction Environmental Management Plan (CEMP).
- All:

  Travel Plan as required by Rotherham MBC's guidance document: Transport Assessments, Travel Plans and Parking Standards: Good Practice Guidance 2014 (or any subsequent replacement). This could include:

  - An agreed strategy for discouraging high emission vehicle use and encouraging modal shift (i.e. to public transport, cycling and walking) as well as the uptake of low emission fuels and technologies.
  - Improved pedestrian access to public transport.
  - Site layout designed to encourage walking, including improved pedestrian pathways.
  - New or improved bus stop infrastructure; provision of ticketing e.g. Travelmasters.

- Commercial specific:
  - Provision of public transport infrastructure; incentives for using public transport.
  - Provision of cycle storage and changing facilities together with support for cycle purchase or hire.
  - As many commercial vehicles as possible to comply with current or the most recent European Emission Standards from scheme opening, to be progressively maintained for the lifetime of the development.
  - Fleet operators should provide a strategy for reducing emissions, including the uptake of low emission fuels and technologies such as ultra-low emission service vehicles.
  - Fleet operators should consider joining schemes such as the South Yorkshire ECO Stars Scheme.

63 Each site will be different, and will require site-specific mitigation measures.

TYPE 3 (Major) Proposals Mitigation

64 The pollution damage costs attributed to the predicted change in emissions resulting from a proposal will determine the level of compensatory mitigation necessary to offset the impact of the development.

65 A suite of default compensation measures beyond the proposal scheme design are listed below. This is not an exhaustive list and may be adapted for particular locations. The type, scale and specificity of measures will be agreed with the Local Planning Authority.

Box 5

TYPE 3 (Major) proposals: Possible additional mitigation options

All minor and medium suggested mitigation measures should be considered (as set out in Box 3 'TYPE 1 (Minor) proposals: Suggested mitigation options for residential developments' and Box 4 'TYPE 2 (Medium) proposals: Suggested mitigation options')

The following approaches and options to reduce the need to travel could be considered:

- Local sourcing of staff, products, raw materials.
- Development and use of hub distribution centres employing low emission fleets.
- Provision of a mix of uses including services and facilities such as on site shopping, eating facilities, child care, banking etc.
- Support measures to reduce private car use:
    - Development of car clubs and car sharing with financial incentives and promotion.
    - Use of workplace pooled low emission vehicles – cars, vans, taxis, bicycles.
    - Provision of dedicated low emission shuttle bus including managed pick-up and drop-off.
    - Contribution to the emerging low emission vehicle refuelling infrastructure.
    - Contribution to improved cycling and walking infrastructure.
    - Incentives for the take-up of low emission vehicle technologies and fuels.
    - Support driver training schemes.

- Measures to support improved public transport:
  - Provision of new or enhanced public transport services to the site.
  - Shuttle services to public transport interchange, rail station or park and ride
  - facilities.
  - Support improving information systems for public transport.
  - Promoting low emission bus service provision.
  - Guaranteed ride home in emergencies.

- Further measures to promote walking and cycling:
  - Improvements to district walking and cycling networks including lighting, shelters, and information points and timetables.
  - Bike/e-bike hiring schemes.
  - Guaranteed ride home in emergencies.
  - Provision of secure and safe cycle parking facilities.
  - Support cycle training.
  - Supporting community/local groups to promote sustainable travel.

66 Agreed mitigation measures will be taken forward by condition where possible.

Proposal mitigation statement

67 Each development will require a mitigation statement which must include:

- The calculated damage cost (certain Medium and all Major proposals).
- Proposed mitigation/compensation measures.
- Estimated mitigation cost (Major proposals) that is equivalent to the value of the emissions calculation (appropriate to the type and size of development and local policy requirements);
- A proposed demolition/construction management plan that includes:
  - A brief project description and likely sources of dust emissions;
  - Measures to be adopted to minimise dust emissions;

- Emergency measures to be adopted in the event of unforeseen circumstances;
- Incident logging and reporting procedures.

Contact Details

If you have any questions regarding this Supplementary Planning Document please contact Planning Policy:

Submit an enquiry to Planning Policy online:

https://www.rotherham.gov.uk/xfp/form/535

Email:	planning.policy@rotherham.gov.uk
Telephone:	01709 823869
Website:	https://www.rotherham.gov.uk/localplan
Post:	Planning Policy, Planning, Regeneration and Transport, Regeneration & Environment Services, Rotherham Metropolitan Borough Council, Riverside House, Main Street, Rotherham, S60 1AE

For planning application and pre-application advice, please contact Development Management:

Submit an enquiry to Development Management online:

https://www.rotherham.gov.uk/xfp/form/216

Email:	development.management@rotherham.gov.uk
Telephone:	01709 823835
Website:	https://www.rotherham.gov.uk/planning
Post:	Development Management, Planning, Regeneration and Transport, Regeneration & Environment Services, Rotherham Metropolitan Borough Council, Riverside House, Main Street, Rotherham, S60 1AE

Appendix 1: Demolition and construction management

Demolition and construction environmental management

Emissions arising from demolition and construction site activities, including gases and dust [27], are additional to background concentrations. If not adequately controlled these emissions will lead to increases in concentrations beyond the site boundary, which may affect local amenity and influence local air quality. The main concern is related to dust emissions but emissions from Non-Road Mobile Machinery combustion can be significant in urban areas.

It is more effective to address emissions at the design and planning stage of new development proposals, than to seek to deal with problems retrospectively. Likewise it is more effective to deal with potential emissions at source, rather than once airborne.

The level of emission impact is dependent on:

- The scale of any proposal;
- The nature of the proposal;
- The location and sensitivity of receptors;
- The existing conditions at the location;
- Local weather patterns;
- Topography.

This short guidance is provided in order to reduce the time taken by all parties and provides a clear understanding of what is required and how it is to be achieved.

Minerals and quarries are specifically identified through the National Planning Policy Framework and National Planning Practice guidance and are not covered by this note.

The Institute of Air Quality Management (IAQM) [28] has produced a number of definitive guidance documents to which this guidance refers. The document `Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance' should be the reference for reporting the construction assessment. Assessment of the dust impact risk for designated LARGE proposals should follow the Institute of Air Quality Management (IAQM) Guidance[29].

Assessing demolition/construction impacts

The demolition and construction phases of development proposals can lead to both nuisance dust and elevated fine particulate (PM_{10} and $PM_{2.5}$) concentrations. Modelling is not appropriate for this type of assessment, as emission rates vary depending on a combination of the construction activity and meteorological conditions, which cannot be reliably predicted. The assessment should focus on the distance and duration over which there is a risk that impacts may occur. The Institute of Air Quality Management has produced a number of definitive guidance documents to which this guidance refers. The document `Guidance on the Assessment of the Impacts of Construction on Air Quality

27 'Dust' in this guidance refers to particles that give rise to soiling, to human health and ecological effects.
28 www.iaqm.co.uk
29 http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf

and the Determination of their Significance' should be the reference for reporting the construction assessment.

Guidance on Monitoring in the Vicinity of demolition and Construction Sites October 2018 v1.1:

https://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf

Appendix 2: Emissions assessment calculator

The calculation utilises the current Emissions Factor Toolkit (EFT) [30] to determine the transport related emissions from a development proposal. If the proposal is to include alternative fuels or technology i.e. LPG, EV etc., then there are 'advanced options' within the EFT to accommodate this.

A screenshot of the input and output pages are shown below:

Figure 2 Emissions Factor Toolkit input screen

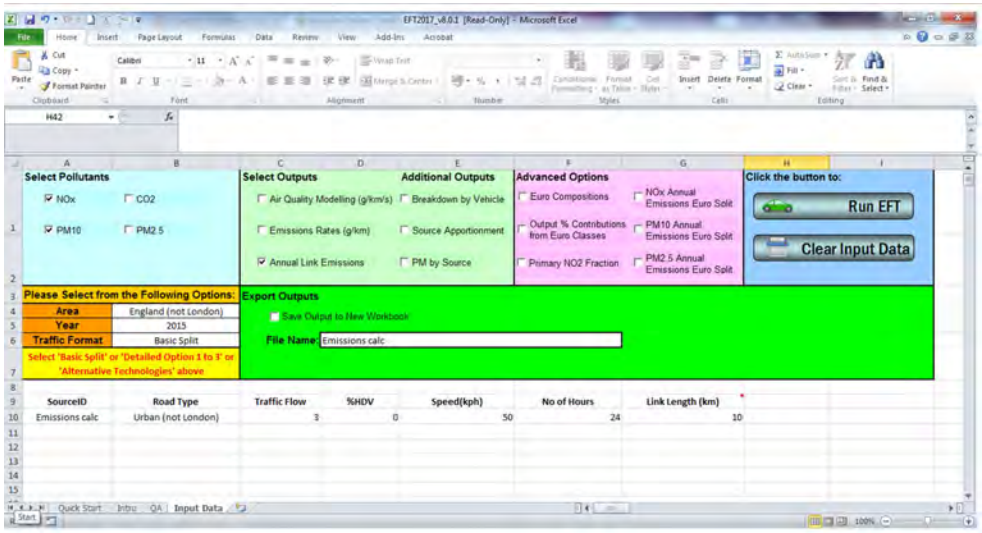
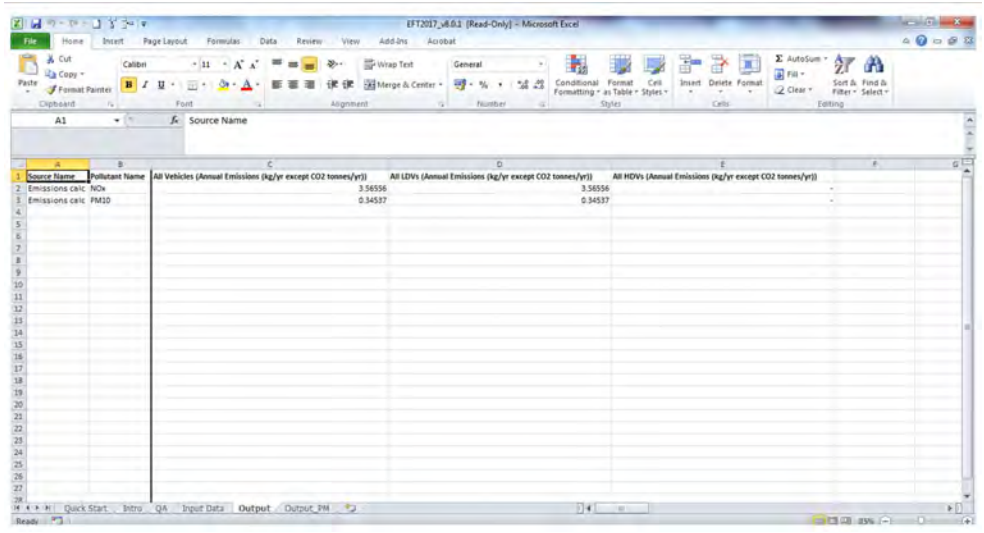


Figure 3 Emissions Factor Toolkit output screen



The output is in kg of specified pollutant per year and requires converting to tonnes per year. This is then multiplied by the IGCB[31] damage costs for the specified pollutant.

30 https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html
31 Interdepartmental Group on Costs and Benefits

The following example demonstrates the calculation based on a development of 10 domestic properties[32].

Box 6

Example of Calculation

EFT input:

10 household (urban not London) (NO_x and PM_{10})

X 27 (trip/traffic ratio for 10 houses)

X cars only (0% HGV)

X 50kph (average speed)

X 10km (NTS UK average)

EFT output = 32.55kg/annum (NO_x) + 3.795kg/annum (PM_{10})

= 0.0325 tonnes/annum (NO_x) + 0.003795 tonnes/annum (PM_{10})

X £955/tonne (NO_x) + £48,517/tonne (PM_{10})

=£31.08 = £184.15

X 5 (years)

= £155.42 = £920.76

Total = £1,076

Notes:

1. Trip Rates are sourced from the Transport Assessments and local authority where available.

2. Trip Length uses the National Travel Survey[33] - (UK average = 10km).

3. The IGCB damage costs are the central estimates (currently NO_x = £955/tonne & PM_{10} transport average £48,517).

32 Sussex Air Quality Partnership "Air Quality and Emission Mitigation Guidance for Sussex Authorities 2013"
33 https://www.gov.uk/transport-statistics-notes-and-guidance-national-travel-survey