



# Air Quality and Emissions Mitigation Summary Document





## Introduction.

Policy 30 of the South East Lincolnshire Local Plan refers to pollution, which includes air quality. The environment can impact negatively on the health and wellbeing of the population and of all the environmental factors, air pollution has the greatest impact. Current evidence indicates that air pollution is associated with cardiovascular disease, lung cancer, respiratory disease, asthma and stroke. Air pollution disproportionately affects the young, older people, those with underlying cardiopulmonary conditions and the most deprived within our communities.

Boston Borough Council currently has two designated Air Quality Management Areas (AQMAs) at Haven Bridge and at Bargate Bridge. Both have been declared in relation to exceedances of Air Quality Standard annual mean objective for NO<sub>2</sub>. Boston's air quality issues derive in a large part from vehicular traffic. Boston Borough Council has an Air Quality Action Plan to try to improve the air quality in Boston.

This leaflet aims to summarise the 'East Midlands Air Quality Network' document 'Air Quality and Emissions Mitigation Guidance for Developers'. It does not replace it. By considering how the development effects, or is effected by, the surrounding environment, air quality and the health of the population can be improved. The NPPF supports this approach.

## Step 1 – Determine the classification of the proposed development.

Development proposals are classified in the 'East Midlands Air Quality Network' document as Small, Medium or Large using the indicative thresholds for Transport Assessments. These are reproduced in a modified form in the following table. In addition to be classed as a small development the site must NOT be in an Air Quality Management Area.

Many of the use classes listed below have been merged from 1 September 2020. Until the document and the founding Transport Assessment regulations are updated the following table remains extant.

	<b>Land use</b>	<b>Use/description of development</b>	<b>Size</b>	<b>Small</b>	<b>Medium</b>
1	Food retail (A1)	Retail sale of food goods to the public – food superstores, supermarkets, convenience food stores.	GFA	<800 sq.m	>800 sq.m
2	Non-food retail (A1)	Retail sale of non-food goods to the public; but includes sandwich bars – sandwiches or other cold food purchased and consumed off the premises, internet cafés.	GFA	<1500 sq.m	>1500 sq.m
3	A2 Financial and professional services	Financial services – banks, building societies and bureaux de change, professional services (other than health or medical services) – estate agents and employment agencies, other services – betting shops, principally where services are provided to visiting members of the public.	GFA	<2500 sq.m	>2500 sq.m
4	A3 Restaurants and cafés	Restaurants and cafés – use for the sale of food for consumption on the premises, excludes internet cafés (now A1).	GFA	<2500 sq.m	>2500 sq.m
5	A4 Drinking establishments	Use as a public house, wine-bar or other drinking establishment.	GFA	<600 sq.m	>600 sq.m

6	A5 Hot food takeaway	Use for the sale of hot food for consumption on or off the premises.	GFA	<500 sq.m	>500 sq.m
7	B1 Business	(a) Offices other than in use within Class A2 (financial and professional services) (b) research and development – laboratories, studios (c) light industry	GFA	<2500sq.m	>2500 sq.m
8	B2 General industrial	General industry (other than classified as in B1),	GFA	<4000 sq.m	>4000 sq.m
9	B8 Storage or distribution	Storage or distribution centres – wholesale warehouses, distribution centres and repositories.	GFA	<5000 sq.m	>5000 sq.m
10	C1 Hotels	Hotels, boarding houses and guest houses, development falls within this class if 'no significant element of care is provided'.	Bedroom	<100 bedrooms	>100 bedrooms
11	C2 Residential institutions - hospitals, nursing homes	Used for the provision of residential accommodation and care to people in need of care.	Beds	<50 beds	>50 beds
12	C2 Residential institutions – residential education	Boarding schools and training centres.	Student	<150 students	>150 students
13	C2 Residential institutions – institutional hostels	Homeless shelters, accommodation for people with learning difficulties and people on probation.	Resident	<400 residents	>400 residents
14	C3 Dwelling houses	Dwellings for individuals, families of not more than six people living together as a single household. Not more than six people living together includes – students or young people sharing a dwelling and small group homes for disabled people living together in the community	Dwelling unit	<80 units	>80 units
15	D1 Non-residential Institutions	Medical and health services – clinics and health centres, crèches, day nurseries, day centres and consulting rooms (not attached to the consultant's or doctor's house), museums, public libraries, art galleries, exhibition halls, non-residential education and training centres, places of worship, religious instruction and church halls.	GFA	<1000 sq.m	>1000 sq.m
16	D2 Assembly and leisure	Cinemas, dance and concert halls, sports halls, swimming baths, skating rinks, gymnasiums, bingo halls and casinos. other indoor and outdoor sports and leisure uses not involving motorised vehicles or firearms.	GFA	<1500 sq.m	>1500 sq.m
17	Others For example:	stadium, retail warehouse clubs, amusement arcades, laundrettes, petrol filling stations, taxi businesses, car/vehicle hire businesses and the selling and displaying of motor vehicles, nightclubs, theatres, hostels, builders' yards, garden centres, POs, travel and ticket agencies, hairdressers, funeral directors, hire shops, dry cleaners.	TBD	Discuss with appropriate highway authority	Discuss with appropriate highway authority

Medium developments also includes development that meets DfT threshold for a Transport Assessment based on considerations other than size or scale of land use, such as:

1. Any development that is not in conformity with the adopted development plan.
2. Any development generating 30 or more two-way vehicle movements in any hour.

3. Any development generating 100 or more two-way vehicle movements per day.
4. Any development proposing 100 or more parking spaces.
5. Any development that is likely to increase collisions or conflicts among motorised users and non-motorised users, particularly vulnerable road users such as children, disabled and elderly people.
6. Any development generating significant freight or HGV movements per day, or significant abnormal loads per year.
7. Any development proposed in a location where the local transport infrastructure is inadequate. – for example, substandard roads, poor pedestrian/cyclist facilities and inadequate public transport provisions.
8. Any development proposed in a location within or adjacent to an Air Quality Management Area (AQMA).
9. Any B2 or B8 use falling below the major classification.

Large developments are medium developments that also trigger any of the following:

1. Where development requires an EIA<sup>1</sup>
2. Where development is likely to increase traffic flows by more than 5% on roads with >10,000 AADT<sup>2</sup> or change average vehicle speeds by > 10 kph/likely to cause increased congestion
3. Where a proposal is likely to increase traffic by more than 5% on road canyons with >5,000 AADT.
4. Where a development requires a Transport Assessment and HGV movements are =/> 10% of total trips.
5. Where significant demolition and construction works are proposed.
6. Or the site is in, or close to, an Air Quality Management Area

## Step 2 – What am I expected to do.

If the proposal is a large development please go to the parent document to this leaflet: Air Quality and Emissions Mitigation Guidance for Developers, including Appendices 2 and 3.

Whilst a detailed Air Quality Assessment is not required for small and medium impact schemes, developers still need to consider whether the development will expose future occupiers to unacceptable levels of air pollution, defined as the exceedance of an air quality standard at the receptor location, and ensure that their development's potential benefits to air quality and health are maximised.

The determination of relevant exposure, where a short-term objective allows a number of exceedances of the standard because of considerations of feasibility and practicability, should be ascertained through reference to the Council's latest review and assessments of air quality; this can be checked on a case-by-case basis with the Environmental Health Service at the Council during the pre-application stage.

The Council, in considering exposure, may give weight to the following mitigation measures:

1. Can the curtilage of a residential building be set back beyond the pollutant exceedance zone?

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<sup>1</sup> Required where development is within or likely to create an area of exceedance of EU Limit Values and is within the scope.

<sup>2</sup> Annual Average Daily Traffic flow.

2. Can the scheme be designed to place residential units at the rear of the development or on higher floors?
3. Can vegetative barriers, including appropriate tree species, offer some degree of separation from the road? (While several reports<sup>3</sup> <sup>4</sup> have highlighted some potential for certain vegetation species to reduce particulate concentrations, they also indicate a limited effectiveness in reducing exposure to nitrogen dioxide (NO<sub>2</sub>) in the urban area)
4. Can design of built forms avoid the creation of canyons, allowing a greater degree of pollutant dispersal?
5. Mechanical ventilation should not automatically be seen as providing effective mitigation against exposure to air pollution and should be scrutinised carefully (eg, inlet location and level of pollutant attenuation, together with energy, maintenance and noise considerations)

### Step 3 - Mitigation

For Small developments Air Quality Pollution Mitigation includes:

1. The adoption of an agreed protocol to control emissions from construction sites
2. Provision of Electric Vehicle Recharging; and
3. All gas-fired boilers to meet a minimum standard of 40mgNO<sub>x</sub>/kWh or consideration of alternative heat sources. (The Government is indicating heat pumps will replace gas boilers.)

For Medium developments Air Quality Pollution Mitigation Includes:

1. Those measures listed above for Minor Developments;
2. Practicable mitigation measures supported by the NPPF; and
3. Active travel (cycling/walking) infrastructure including, but not limited to:
  - Developing cycle routes or pedestrianised areas and infrastructure to support low emission modes of transport;
  - Improved facilities to encourage cycling or other non-motorised travel (shower facilities, secure cycle storage etc); and
  - Signage.

Some typical mitigation measures include:

#### Residential

- Travel plan (where required) including mechanisms for discouraging high emission vehicle use and encouraging the uptake of low emission fuels and technologies
- A Welcome Pack available to all new residents online and as a booklet, containing information and incentives to encourage the use of sustainable transport modes from new occupiers
- EV recharging infrastructure within the development (wall mounted or free standing in-garage or off-street points)
- Provision of, or support for existing, car / EV car clubs
- Designation of parking spaces for low emission vehicles
- Improved cycle paths to link cycle network

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<sup>3</sup> Trees & Sustainable Urban Air Quality: Using Trees to Improve Air Quality in Cities

<http://www.es.lancs.ac.uk/people/cnh/docs/UrbanTrees.htm>

<sup>4</sup> <https://www.forestresearch.gov.uk/tools-and-resources/urban-regeneration-and-greenspace-partnership/greenspace-in-practice/benefits-of-greenspace/improving-air-quality/>

- Adequate provision of secure cycle storage
- Using green infrastructure, in particular trees to absorb dust and other pollutants

#### Commercial/Industrial

As above plus:

- Differential parking charges depending on vehicle emissions
- Public transport subsidy for employees
- All commercial vehicles should comply with either current or previous European Emission Standard
- Fleet operations should provide a strategy for considering reduced emissions, low emission fuels and technologies
- Use of ultra-low emission service vehicles
- Support local walking and cycling initiatives
- On-street EV recharging
- 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

#### Additional mitigation

- Contribution to low emission vehicle refuelling infrastructure
- Low emission bus service provision or waste collection services
- Bike/e-bike hire schemes
- Contribution to renewable fuel and energy generation projects
- Incentives for the take-up of low emission technologies and fuels

This list is not exhaustive and further options may be suggested where appropriate and justified, depending on the scale of development and air quality issues within the local area.

#### Step 4 – Mitigation Statement.

Each development requires a brief mitigation statement; outlining the measures proposed depending on development scale.

This would also include the mitigation measures suggested from the IAQM Guidance on the assessment of dust from demolition and construction<sup>5</sup>.

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<sup>5</sup> Guidance on the assessment of dust from demolition and construction - Version 1.1. Institute of Air Quality Management (IAQM) available at <https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>