Aberdeen Planning Guidance 2023: Air Quality

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1. Introduction

1.1 Status of Aberdeen Planning Guidance

The Aberdeen Planning Guidance (APG) forms part of the Development Plan and is a material consideration in the determination of planning applications.

The APG expands upon the following Aberdeen Local Development Plan policies:

- Policy WB2 – Air Quality

Given the timing of the Local Development Plan, a pragmatic approach has been taken to changes in the planning system. National Planning Framework 4 (NPF4) was adopted following the examination and subsequent modification of the Local Development, and the publication of a draft version of this APG for consultation but it should be noted that the LDP together with NPF4 now forms the basis of the statutory development plan.

1.2 Introduction to Topic

The Council has declared 3 Air Quality Management Areas (AQMAs) due to exceedances of the nitrogen dioxide (NO_2), and particulate (PM_{10} and $PM_{2.5}$) objectives (see Figures 1):

- **City Centre** (including Union Street, Market Street, Virginia Street, Commerce Street, Guild Street and Bridge Street, and parts of Holburn Street, King Street and Victoria Road);
- **Anderson Drive** (incorporating the whole of Anderson Drive, the area around the Haudagain roundabout and the A96 to Howes Road); and
- **Wellington Road** (from the Queen Elizabeth II Bridge to Balnagask Road).

Air quality problems are predominantly a result of emissions from road vehicles, and this is reflected in the locations of the AQMAs.

The Aberdeen Air Quality Action Plan (AQAP) was adopted in 2011 and recommends a range of initiatives to address air quality problems. These focus on increasing awareness of air quality issues, promoting sustainable transport, reducing the need to travel, improving traffic management and transport infrastructure, and consideration of the impact of a Low

Emission Zone. An updated version of the AQAP is, at the time of writing, at draft stage and forms an appendix to the draft Local Transport Strategy. This is expected to replace the 2011 AQAP once adopted.

1.3 Climate Change

The guidance supports the overarching vision of the Strategic Infrastructure Plan (Energy Transition) and one of the themed co-benefits of Aberdeen Adapts, by looking to improved air quality. Improving air quality also sits within the mobility strategy of the Net Zero Aberdeen RouteMap. An improvement in air quality will ensure there are less harmful air pollutants and particular matters in the environment, thereby helping to address climate change. Assessing and ensuring there is no worsening impact on air quality from development, and the implementation of the Low Emission Zone aligns with the UN Sustainable Development Goal 3: Good Health and wellbeing which will ensure healthy lives and promote wellbeing for all at all ages.

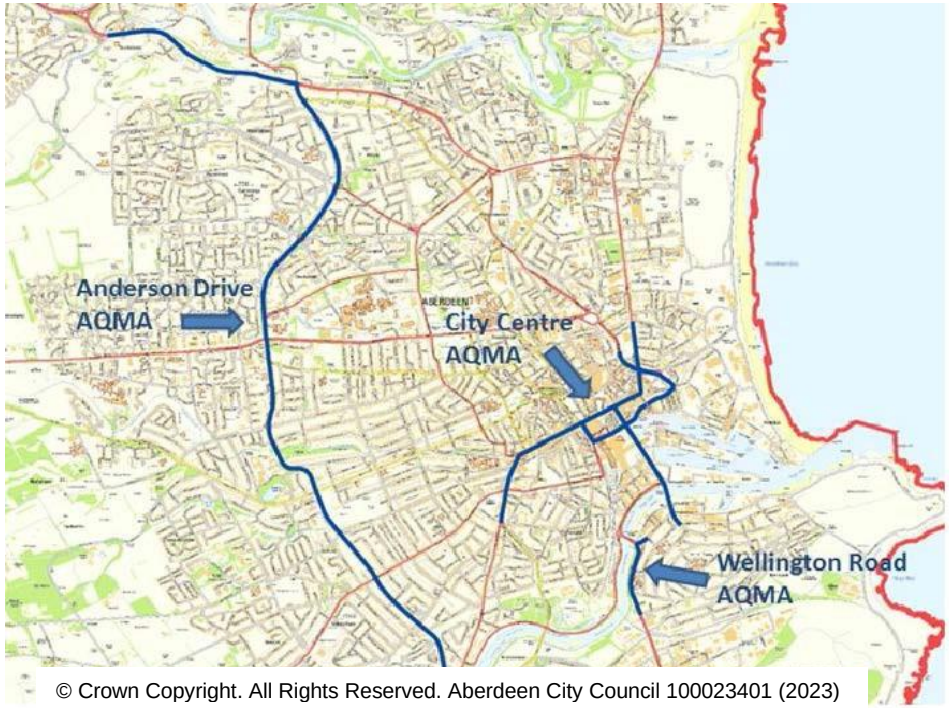
1.4 Health and Wellbeing

Where we live, where we work, and where we spend our time has an important influence on our health and wellbeing. Poor air quality – both inside buildings and outside them – is known to negatively impact on physical health.

This guidance can help to achieve the following Public Health Priorities for Scotland - Priority 1: A Scotland where we live in vibrant, healthy and safe places and communities.

This guidance is deemed to have some impact on population health and wellbeing. This means that it is possible a Health Impact Assessment (HIA) screening report will be requested to support any planning application, and this will depend on the detail and scope of the application. There may be elements of the proposals that relate to the health and wellbeing of the population that warrant consideration. If that is the case, then a screening HIA will be required and further advice on this will be provided.

Figure 1 – Air Quality Management Areas



2. Aberdeen Planning Guidance

2.1 Air Quality Assessments

An appropriate assessment of air quality must be included with any planning application for development that could adversely affect air quality during construction or demolition, once the development has been completed, or where the development may introduce new exposure in an area of existing poor air quality.

In the case of an assessment of the impacts of a development in the local area, a two-stage approach is recommended. The first stage is to screen out smaller developments, or developments where impacts can be considered to have an insignificant impact. The need for an assessment is only likely when the criteria in Table 1 are met. If none of the criteria are met then there should be no requirement to carry out an air quality assessment and the impacts can be considered to have insignificant effects.

Where an air quality assessment is required, the location, size and likely impact of the development will help define whether the assessment can be a simple screening assessment or whether a detailed assessment is necessary. A Simple Assessment relies on already published information without quantification of impacts. A Detailed Assessment requires the aid of a predictive technique such as dispersion modelling. The assessment, whether simple or detailed, should provide enough evidence to provide a sound conclusion on the presence, or otherwise, of a significant effect on air quality.

The criteria in Table 2 provide more specific guidance as to whether an air quality assessment is likely to be required. If none of the criteria are met, then there should be no requirement to carry out an air quality assessment.

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 m^2 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.

Table 1: Stage 1 Criteria

There may also be a requirement to carry out an air quality assessment for the impacts of the local area's emissions on the proposed development itself, to assess the exposure that residents or users might experience. This will need to be a matter of judgement and should take into account:

- The background and future baseline air quality and whether this will be likely to approach or exceed the value set in the air quality objectives;
- The presence and location of any Air Quality Management Areas;

- The presence of a heavily trafficked road, with emissions that could give rise to sufficiently high concentrations of pollutants that would cause unacceptably high exposure for users of the new development; and

- The presence of a source of odour and/or dust that may affect amenity for future occupants of the development.

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

Table 2: Indicative criteria for requiring an air quality assessment (from Land-Use Planning & Development Control: Planning For Air Quality)

*As a guide, the 5 mg/s criterion equates to a 450 kW ultra low NOx gas boiler or a 30kW CHP unit operating at <95mg/Nm3. Users should quantify the NOx mass emission rate from the proposed plant, based on manufacturers' specifications and operational conditions

It is essential that applicants contact the Planning Authority where any of the criteria or thresholds are breached or where there is any doubt about whether an assessment may be required. Failure to include appropriate information on air quality could result in the application being refused or delayed.

When a series of developments are proposed in a particular location, the Council will require a more strategic approach, taking into account the cumulative impacts of development on air quality.

As a minimum, the assessment should consider the following scenarios:

- Existing air quality in the study area (base year);
- Future air quality without the development in place; and,
- Future air quality with the development in place.

A wide range of assessment methods are available. The Local Air Quality Management Technical Guidance (TG22) and the Institute of Air Quality Management (IAQM) Guidance Land Use and Planning for Air Quality January 2017 (v1.1) must be considered when determining the assessment methodology. The applicant should agree the proposed methodology and datasets with the Environmental Protection Service prior to the commencement of the assessment. Depending on the nature of the development and potential emission sources, guidance within the following additional documents may also be relevant:

- IAQM Guidance on the Assessment of Dust from Demolition and Construction 2016
- IAQM Guidance on the Assessment of Mineral Dust Impacts for Planning 2016
- IAQM Guidance on Air Quality Monitoring in the Vicinity of Construction and Demolition Sites 2018
- Local Air Quality Management: Policy Guidance PG(S)(23) March 2023IAQM Guide to the Assessment of Air Quality Impacts on the Designated Conservation Sites May 2020
- UK Environment Agency AQTAG06 Technical Guidance on Detailed Modelling Approach for an Appropriate Assessment of Emissions to Air 2014

2.2 Content of Air Quality Assessments

Assessments must contain the information that will allow a full consideration of the impacts of the proposal on air quality. As a minimum this should include:

a. Relevant details of the proposed development including:

- an overview of the development proposal
- identification of on-site sources of pollutants
- an overview of expected traffic changes or changes in emissions for the site for a specified year, e.g. year of opening; and

b. Identification of local receptors, for example residential and other sensitive receptors, noting the presence of any AQMAs or other sources that may affect the site;
- the pollutants and sources to be assessed.

c. The policy context for the assessment including national and local policies to be taken into account.

d. Details of the relevant air quality standards and objectives.

e. The basis for determining significance of effects arising from the impacts.

f. Details of the assessment methods, including the following local input data and assumptions:

- traffic data used in the assessment
- the emission data and their source, with details where non-standard data are used
- meteorological data, including a description of how representative this is of the conditions in the vicinity of the proposed development
- baseline pollutant concentrations
- background pollutant concentrations
- choice of baseline year and whether it is a low, typical or high pollution year;
- basis for NO_x:NO_2 relationship used; and

- other relevant input data.

g. For point sources, the assessment should also include:

- Type of plant;
- Source of emissions data and actual emissions assumed; and
- The stack parameters, height diameter, emission velocity and exit temperature.

h. Model verification (generally for traffic modelling) including a comparison of predicted versus measured concentrations used to derive adjustment factors to account for systematic errors;

- Identification of sensitive receptors including residential and other properties close and within the proposed development as well as alongside roads significantly affected by the development;

- Description of baseline conditions including available monitoring data, any reference to Defra background maps and the findings of any site visit(s) or desktop investigations;

- Assessment of impacts, clearly showing in tabulated form the difference in concentrations between 'with development' and 'without development', see appendix A;

- Description of the construction phase, including likely activities, distance over which impacts are likely to occur and properties likely to be affected, duration and mitigation measures to be implemented. Where applicable, emissions from construction plant and vehicles should also be considered. The assessment should follow the guidance set out in the Institute of Air Quality Guidance on the Assessment of Dust from Construction and Demolition 2016;

- Cumulative impacts and effects, which should include other planning developments which may or may not have planning permission. Impacts from committed developments should be assessed cumulatively with those of the application site;

- Mitigation measures setting out measures to avoid, reduce and where appropriate, offset any significant effects. Even where the effect is judged to be insignificant, consideration should be given to the application of good design and good practice measures;

i. Summary of the assessment results. This should include:

- Impacts during the construction phase of the development
- Impacts on existing receptors during operation
- Impacts of existing sources on new receptors, particularly where new receptors are being introduced into an area of high pollution
- Any exceedances of the air quality objectives arising as a result of the development, or worsening of a current breach
- Whether the development will compromise or render inoperative the measures within the Air Quality Action Plan, where the development affects an AQMA.
- The significance of the effect of any impacts identified; and,
- Any apparent conflicts with planning policy.

j. The basis for determining significance of impacts. The descriptors used to describe impacts should be set out together with the basis for determining the significance of the air quality impact.

2.3 Describing the Impacts

The purpose of the assessment is to determine the likely significant effects of the impacts on air quality. This requires a two stage process:

- A qualitative or quantitative description of the impacts on local air quality arising from the development; and
- A judgement on the overall significance of the effects of any impacts.

Impacts are usually assessed at selected ‘receptors’. It can also be helpful to present the change in concentration across the study area as a whole using concentration isopleths on a map of the area.

For air quality impacts arising from surrounding sources on new occupants of a development, then the impacts are best

described in relation to whether an air quality objective will not be met or is at risk of not being met. An exceedance of the objective value is likely to be considered as being significant.

In the case of the impacts of a development on the surrounding area, the degree of impact can be expressed as the magnitude of incremental change as a proportion of a relevant assessment level and then to examine this change in the context of the new total concentration and its relationship with the assessment criterion.

The impacts of the development should be described with reference to Table 3 and take account of the explanatory notes where relevant. The term AQAL is used to include air quality objective or limit values, where these exist. Where legislative standards do not exist for a particular pollutant the Environmental Assessment Level from the Environment Agency's list in its risk assessment methodology can be used as the AQAL.

Most particulate matter from combustion processes (including road traffic) occurs in the $PM_{2.5}$ fraction. The AQAL for $PM_{2.5}$ is lower than that for PM_{10}, and therefore represents the more conservative approach for these sources. The application of Table 3 for $PM_{2.5}$ is straight forward as the AQAL is expressed as an annual mean. In assessing road traffic sources regard must also be given to emissions from brake/tyre wear and road abrasion, where PM_{10} is the more appropriate pollutant to assess. For the assessment of PM_{10}, Table 3 should be applied using an AQAL of $40ugm^{-3}$ as annual mean. In addition, consideration should also be given to the daily mean AQAL. This can be done using a derived value for the annual mean based on the number of days exceeding the daily mean concentration.

For most road transport related emissions and diffuse emissions associate with development, long term concentrations are the most appropriate for evaluating the severity of the impacts. For any point sources, consideration must also be given to the impacts resulting from short term, peak concentrations. The Environment Agency uses a threshold criterion of 10% of the short term AQAL as a screening criterion. This approach would be appropriate in the assessment the severity of impacts from short term concentrations.

Where the peak short-term concentrations from an elevated source are in the range 11-20% of the relevant AQAL, then the magnitude can be described as small, those in the range 21-50% medium and those above 50% as large. These are the maximum concentrations experienced in any year and the severity of this impact can be described as slight, moderate and substantial respectively, without the need to reference a background or baseline concentration.

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

Explanation

1. AQAL = Air Quality Assessment Level, which may be an air quality objective, EU limit or target value, or an Environment Agency 'Environmental Assessment Level (EAL)'.
2. The Table is intended to be used by rounding the change in percentage pollutant concentration to whole numbers, which then makes it clearer which cell the impact falls within. The user is encouraged to treat the numbers with recognition of their likely accuracy and not assume a false level of precision. Changes of 0%, i.e. less than 0.5%, will be described as Negligible.
3. The Table is only designed to be used with annual mean concentrations.
4. Descriptors for individual receptors only; the overall significance is determined using professional judgement (see Chapter 7). For example, a 'moderate' adverse impact at one receptor may not mean that the overall impact has a significant effect. Other factors need to be considered.
5. When defining the concentration as a percentage of the AQAL, use the 'without scheme' concentration where there is a decrease in pollutant concentration and the 'with scheme;' concentration for an increase.
6. The total concentration categories reflect the degree of potential harm by reference to the AQAL value. At exposure less than 75% of this value, i.e. well below, the degree of harm is likely to be small. As the exposure approaches and exceeds the AQAL, the degree of harm increases. This change naturally becomes more important when the result is an exposure that is approximately equal to, or greater than the AQAL.
7. It is unwise to ascribe too much accuracy to incremental changes or background concentrations, and this is especially important when total concentrations are close to the AQAL. For a given year in the future, it is impossible to define the new total concentration without recognising the inherent uncertainty, which is why there is a category that has a range around the AQAL, rather than being exactly equal to it.

Table 3: Impact Descriptors for Individual Reports

2.4 Assessing Significance

Significance is typically assessed at two stages in the overall process of examining air quality as a material consideration:

- Within the air quality report accompanying the planning application.
- When the Council's air quality specialist makes his/her recommendation to the planning officer.

The assessment framework for describing impacts can be used as a starting point to make a judgement on significance of effect, but other influences may need to be taken into account, for example, cumulative impacts and the extent of the area where there is a risk of harm to human health.

Any judgement on the overall significance of effects of a development will need to take account of factors such as:

- The existing and future air quality in the absence of the development;
- The extent of current and future population exposure to the impacts; and
- The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

The population exposure in many assessments will be evaluated by describing the impacts at individual receptors, taking into consideration the approximate number of people exposed to impacts in the various different categories of severity, in order to reach a conclusion on the significance of the effect.

A judgement of the significance should be made by a competent professional who is suitably qualified. The reasons for reaching the conclusions should be transparent and set out logically. Where the air quality is such that an air quality objective at the building façade is not met, the effect on residents, or occupants will be judged as significant unless, unless provision is made to reduce exposure by some means.

2.5 Mitigating Measures

Measures to mitigate poor air quality should be considered in all proposals; but will be required where the assessment concludes that there will be a significant effect.

The type of measures proposed will depend on the nature and scale of the development and should consider both emission and exposure while also addressing the design and operational phases. For example, new developments can be designed to minimise public exposure to pollution sources by locating habitable rooms away from busy roads or directing combustion generating pollutants through well sited vents or chimney stacks.

Where transport is likely to be a significant source of air quality problems, developers should consult the Aberdeen Planning Guidance: Transport and Accessibility which contains guidance on accessibility, car parking, Car Clubs and electric vehicle charging. Mitigation above the standards within the Transport and Accessibility APG may be required where the development may impact on an area of existing poor air quality.

Examples of principals that could be applied to combustion plant include

All gas -fired boilers to meet a minimum standard of <40 mgNO_x/kWh

All gas-fired CHP plant to meet a minimum emission standard of

- Spark ignition engine: 250 mgNO_x/Nm^3
- Compression inginition engines: 400 mgNO_x/Nm^3
- Gas turbines: 50 mgNO_x/Nm^3
- A presumption should be used to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emission standards of:
- Solid biomass boiler: 275 mgNO_x/Nm^3 and 25mgPM/Nm^3. Measures should take account of and complement actions identified in the AQAP.

If the Council considers that the proposed measures do not fully mitigate the impact of development, it may seek the provision of infrastructure (perhaps in the form of a transport improvement) or a contribution towards such infrastructure

which will more fully mitigate the impact. This may be secured through a planning condition and/or legal agreement such as a Section 75 planning obligation. A recommendation to refuse an application may be considered appropriate where the air quality impacts are unacceptable to the Council and mitigation is not possible.

2.6 Combustion Plant and Biomass Installations

Combustion plant are used for a variety of applications and can be a significant source of air pollutants, particularly NOx, PM (PM_{10} and $PM_{2.5}$) and SO_2.

SEPA currently regulates combustion plant above 20MW through the Integrated Pollution Control (IPP) regime, however many smaller combustion plant currently fall outside PPC and are regulated by local authorities under the Clean Air Act 1993. It is therefore important smaller scale combustion plant are appropriately screened for air quality impacts at the planning stage. The processes outlined in this APG and the 2017 LAQM Land-Use Planning and Development Control: Planning for Air Quality guidance, should be used in the assessment of impacts from combustion plant associated with new developments

Research has demonstrated that biomass boilers should not be a major source of PM_{10} or $PM_{2.5}$ in urban areas. However, in areas that already meet the objectives, the additional contribution of biomass may lead to exceedances at some urban background locations. The LAQM Technical Guidance TG(22) contains updated guidance on assessing biomass impacts across the UK. Developers should follow TG(22) and associated Scottish biomass screening tools to assess the impact of both individual and multiple boiler applications.

The location, design and operation of biomass installations must be carefully managed to ensure that emissions do not impact on health or conflict with the Council's ability to meet air quality objectives or measures within the AQAP.

In accordance with the Council's Biomass Installations Policy (2011):

- All new biomass installations shall include appropriate and effective abatement systems where necessary to control emissions.
- Pollution levels emitted from biomass installations shall not conflict with the requirements of the UK National Air Quality Strategy, the AQAP or statutory duties under the Environmental Act 1995; and

- Biomass installations for sites in or near AQMAs will not be supported unless it can be demonstrated that the change in annual mean NO2 and PM10 concentrations will be negligible.

2.7 Low Emission Zone

Introduction:

The LEZ is an area of the City Centre where the driving of vehicles which do not meet the specified emissions standards is prohibited. The aim of the LEZ is to improve air quality within the City Centre Air Quality Management Area (AQMA) to ensure compliance with the Scottish Government's air quality objectives, particularly for the pollutant nitrogen dioxide (NO2)

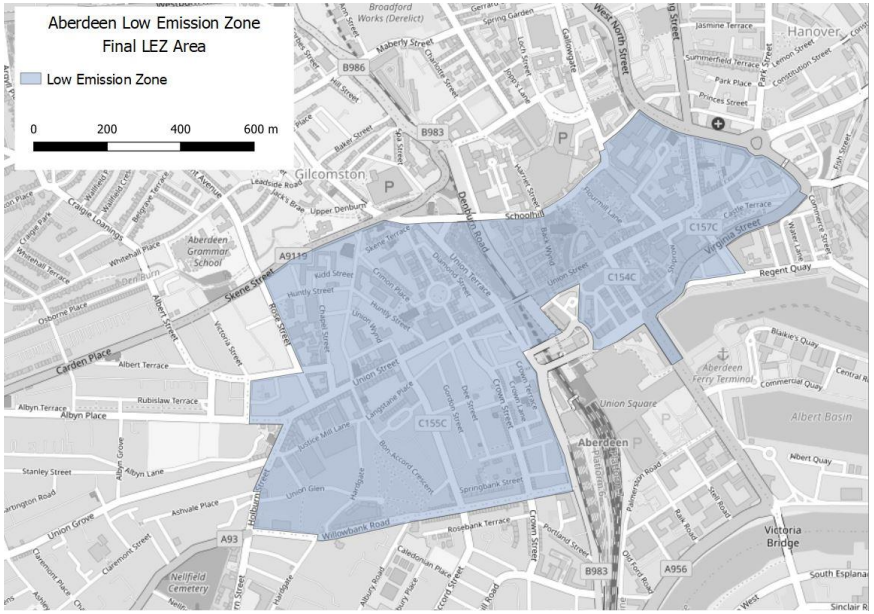


Figure 2: LEZ Boundary

The LEZ came into effect from 30th May 2022 and will operate for 365 days a year, 24 hours a day. A 2-year grace period (during which enforcement of the LEZ will not take place) for both residents and non-residents of the LEZ area and for all non-exempt vehicle types will commence from this date, meaning that enforcement will take place from 1st June 2024.

Background:

The LEZ has been introduced in response to longstanding issues of poor air quality in the Aberdeen City Centre AQMA.

Air pollution is a significant Public Health concern, and a LEZ is an effective means of responding to this. This is in accordance with the precautionary public health approach to air pollution advocated in the Scottish Government's Air Quality Strategy, Cleaner Air for Scotland 2 (CAFS2).

Although pollution levels have been improving in Aberdeen in recent years, in many City Centre locations monitoring stations still show regular exceedance or near exceedance of the annual mean NO_2 objective. This can be seen in Figure 3 where the red dots show exceedances of air quality objectives and the amber dots show levels close to exceedance in 2019. Road traffic is the main source of this pollution.

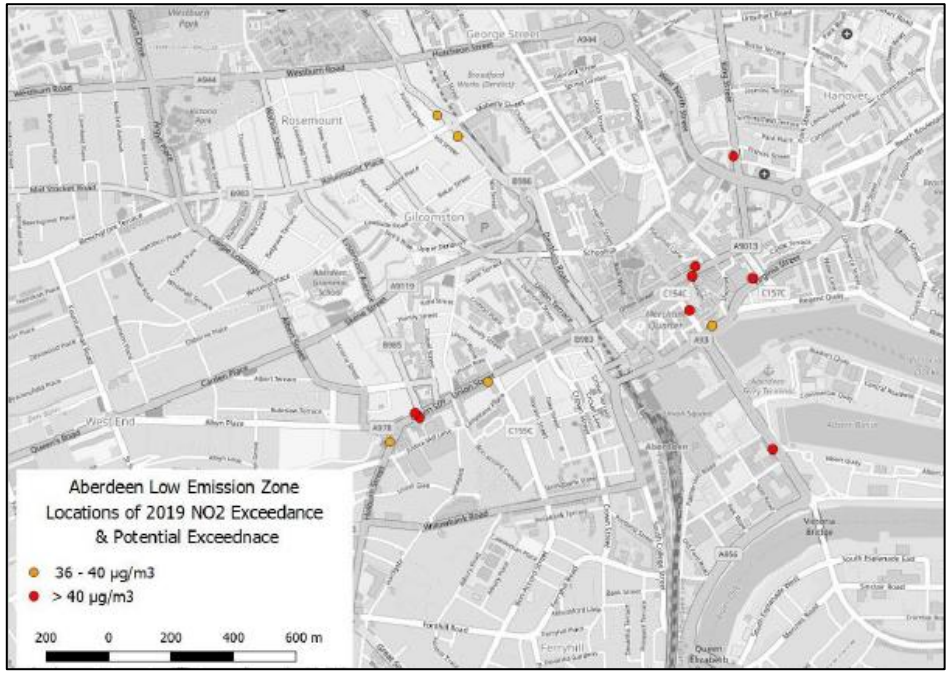


Figure 3: Locations of NO2 exceedance and near-exceedance in Aberdeen City Centre

The LEZ supports and contributes to national, regional and local plans and policies, which seek to reduce unnecessary traffic, encourage modal shift to sustainable transport, and reduce transport's impact on the environment. In this regard, the LEZ is fully compliant with the aims and objectives of Scotland's National Transport Strategy, the Nestrans Regional Transport Strategy, the Regional Economic Strategy, Aberdeen's Local Transport Strategy, CAFS2, Aberdeen's Air Quality Action Plan, the Aberdeen City Centre Masterplan and the Sustainable Urban Mobility Plan. Transport changes engendered by the LEZ may also contribute to meeting national and local net-zero carbon aspirations.

Objectives of the LEZ:

To improve air quality in Aberdeen by reducing harmful emissions from transport and delivering on the Scottish Government's statutory air quality objectives (prescribed under section 87(1) of the Environment Act 1995);

To support climate change targets (as set out in Part 1 of the Climate Change (Scotland) Act 2009) by reducing road transport's contribution to emissions.

To protect public health and wellbeing;

To support local and regional transport strategies by contributing to the development of a vibrant, accessible and safe city centre, where the volume of non-essential traffic is minimised and active and sustainable transport movements are prioritised; and

To contribute to ongoing transformational change in Aberdeen, helping promote the city as a desirable place to live, visit and invest in.

LEZ Scope:

Mandatory nationally consistent emission standards for Scottish LEZs have been set within the Low Emission Zones (Emission Standards, Exemptions and Penalty Charges) (Scotland) Regulations 2021). Generally, the minimum exhaust emissions standards are Euro 4/IV for petrol vehicles and Euro 6/VI for diesel vehicles. Only vehicles that meet or exceed these standards can be driven within the LEZ area, unless subject to an exemption.

LEZ Exemptions:

As identified in The Low Emission Zones (Emission Standards, Exemptions and Penalty Charges) (Scotland) Regulations 2021, a number of vehicle types are exempt from LEZs in Scotland, meaning that any restrictions do not apply to them. These are:

- Emergency vehicles;

- Naval, military or air force vehicles;
- Historic vehicles;
- Vehicles for disabled persons; and
- Showman vehicles.

Full details of the Aberdeen LEZ can be found at:
https://www.aberdeencity.gov.uk/services/roads-transport-and-parking/low-emission-zone

4. Further Reading

Environmental Protection UK and the Institute of Air Quality Management (2017) Land-Use Planning & Development Control: Planning For Air Quality - https://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

Appendix A: Air Quality and Planning Flowchart