

Air Quality

Supplementary Planning Document | June 2026



Contents

Abbreviations	3
1. Introduction	4
2. Development Design	6
3. Construction, Deconstruction and Demolition	9
4. Offsetting via Air Pollution Damage Costs	10
5. Assessing Air Quality Impacts	11
Appendix 1: Air Quality Planning Policy and Guidance	13
Appendix 2: Offset Calculation	16

Abbreviations

Abbreviations	Definition
AADT	Average Annual Daily Trip
AQDMP	Air Quality Dust Management Plan
AQG	Air Quality Guideline
AQMA	Air Quality Management Area
AQN	Air Quality Neutral
AQIA	Air Quality Impact Assessment
AQP	Air Quality Positive
AQS	City of London Corporation Air Quality Strategy 2025 - 2030
BAT	Best Available Technique
BNG	Biodiversity Net Gain
BREEAM	Building Research Establishment Environmental Assessment Method
CHP	Combined Heat and Power
CLP	Construction Logistic Plan
CoP	Code of Practice for Deconstruction and Construction Sites
DAQI	Daily Air Quality Index
Defra	Department for Environment, Food and Rural Affairs
DPF	Diesel Particulate Filter
DSMP	Delivery and Service Management Plan
EIA	Environmental Impact Assessment
EFT	Emission Factors Toolkit
EV	Electric Vehicle
GLA	Greater London Authority
HDV	Heavy Duty Vehicle
HIA	Health Impact Assessment
HGV	Heavy Goods Vehicle
HVO	Hydrotreated Vegetable Oil

Abbreviations	Definition
LAEI	London Atmospheric Emissions Inventory
LEZ	Low Emission Zone
LDV	Light Duty Vehicle
LGV	Light Goods Vehicle
LLAQM	London Local Air Quality Management
LPA	Local Planning Authority
LPG	London Plan Guidance
MCPD	Medium Combustion Plant Directive
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NRMM	Non-Road Mobile Machinery
PHV	Public Hire Vehicle
PM	Particulate Matter
PM ₁₀	Particulate Matter of a size less than 10µm in diameter
PM _{2.5}	Particulate Matter of a size less than 2.5µm in diameter
PTAL	Public Transport Accessibility Level
S106	Section 106
SCA	Smoke Control Area
SCR	Selective Catalytic Reduction
SoPW	Scheme of Protective Works
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
UGF	Urban Greening Factor
WHO	World Health Organization

1. Introduction

The planning system plays an important role in reducing emissions of air pollutants, as well as minimising exposure to poor air quality through good design.

Air quality has improved significantly over the past 20 years, and national standards are met everywhere in the City of London except adjacent to the busiest roads. However, it is generally recognised by health professionals that levels of air pollution below national standards will still have a negative impact on health¹. The City Corporation Air Quality Strategy 2025 - 2030² (AQS) recognises this with its aim to deliver air quality that is better than national standards. It sets a pathway towards meeting tighter Air Quality Guidelines (AQGs) recommended by the World Health Organization (WHO)³.

The City Plan 2040⁴ supports the aims of the AQS, principally through Policy HL2: Air Quality and Policy HL9: Health Impact Assessment. This Supplementary Planning Document (SPD) has been produced to provide guidance on how development should be designed to comply with these policies.

1 Royal College of Physicians (2025), A breath of fresh air; Responding to the health challenges of modern air pollution
 2 The City of London Corporation (2025), Air Quality Strategy 2025 - 2030
 3 World Health Organization (2021) WHO global air quality guidelines
 4 The City of London Corporation (2025), City Plan 2040

Policy HL2 states that developments will need to ensure acceptable air quality through appropriate design, layout, landscaping and technological solutions. It also states that developers will be expected to install non-combustion energy technology where available and that development that would result in a worsening of the City's pollution levels will be strongly resisted. Policy HL9 states that development will be required to deliver health benefits to the City's communities and mitigate any negative impacts. It also states that where significant impacts are identified, measures to mitigate the adverse impact of the development should be provided as part of the proposals or secured through conditions or a Section 106 Agreement.

In addition to the policies in the City Plan 2040, the Department for Environment, Food and Rural Affairs (Defra) has published interim guidance to ensure that national very fine particulate matter (PM_{2.5}) targets are considered in planning applications and when making planning decisions. The guidance moves away from a requirement to assess solely whether a scheme is likely to lead to an exceedance of a legal air quality limit and instead ensures that appropriate mitigation measures are implemented from the design stage. This aligns with the broader shift in planning policy from input-based assessments toward an outcomes-focused approach with the overall aim being for the minimum amount of air pollutants to be emitted and for exposure to air pollution to be minimised.

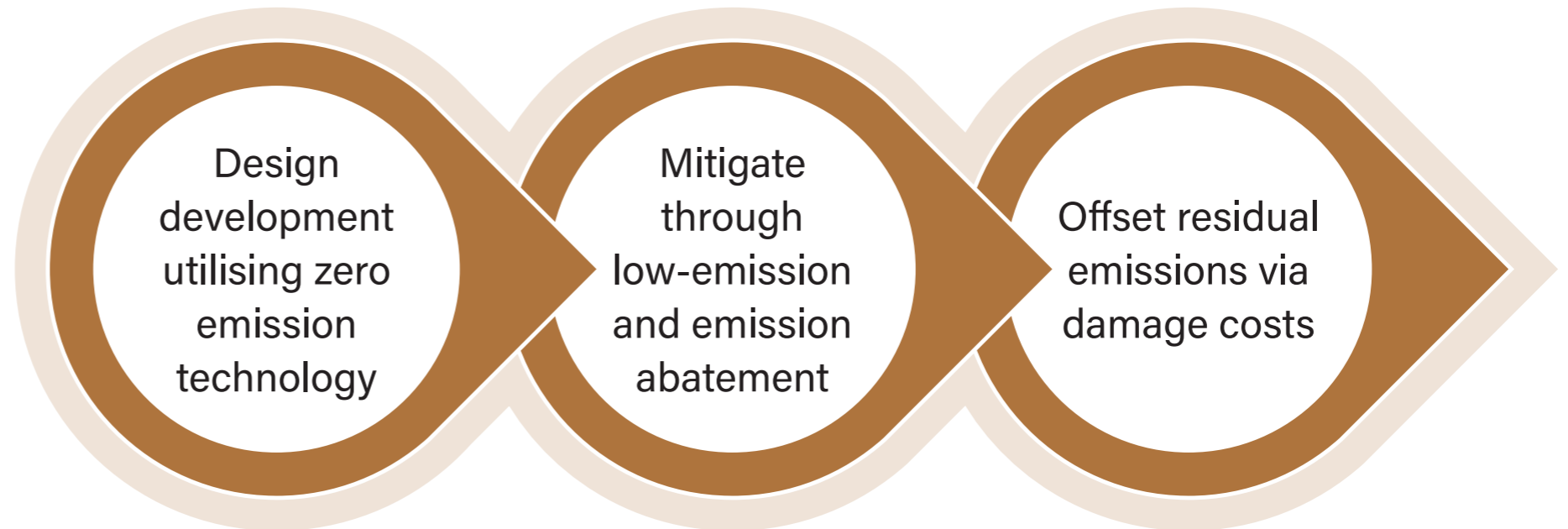
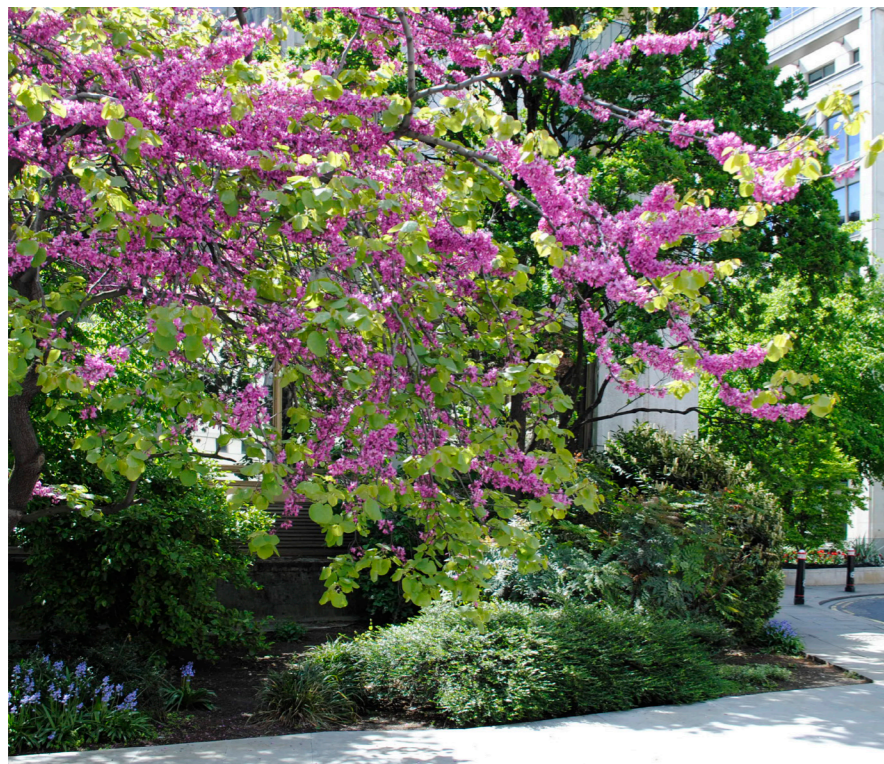
Key Considerations

How has exposure to PM_{2.5} been considered when selecting the development site?

What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors and to reduce emissions of PM_{2.5} and its precursors?

The primary aim therefore is for development in the City of London to have zero operational emissions of nitrogen oxides (NO_x) and particulate matter (PM₁₀ and PM_{2.5}). Not only will this help to improve health outcomes for City of London communities, but it will also support the transition to a net zero carbon City by 2040. Development should also be designed to reduce the exposure of the occupiers to air pollution, and to minimise the impact of air pollution associated with the development on nearby receptors.

If emissions cannot be designed out of a development, they will need to be minimised wherever possible. Air pollution damage costs will then be applied to any remaining operational emissions, to help to mitigate the adverse impact on health of the development, thereby supporting the delivery of Policy HL9 of the City Plan 2040.



A framework for assessing damage costs has been developed by Defra⁵. It represents an estimate of the societal costs (on human health, productivity, wellbeing and the environment) that are associated with emissions of air pollution. Damage costs, in the form of an offset, would be applied to combustion plant as well as any increase in vehicle use associated with the development, when compared to the existing land use. Air pollution damage costs would not be applied to construction, including deconstruction and demolition, activity as this is managed through the City of London Code of Practice for Construction and Deconstruction (CoP)⁶. Further information can be found in Section 4 and Appendix B.

Any air pollution damage costs paid by a developer would be used by the City Corporation on measures that have a positive impact on air quality in the Square Mile as well as measures to reduce the impact of air pollution on the health of the City of London's communities.

Planning Objectives for Air Quality
Design emissions of air pollutants out of a development
Design exposure to air pollution out of a development
Minimise unavoidable emissions
Mitigate the negative health impacts of any unavoidable emissions through the application of air pollution damage costs

To demonstrate how proposals meet the requirements of this SPD, applicants will be required to complete an Air Quality Impact Assessment (AQIA) for all major development⁷. Additionally, there are instances where non-major development will be required to complete an AQIA. These instances, and the information required for an AQIA are detailed in Section 5. Applications subject to an Environmental Impact Assessment (EIA) will also be required to submit an Air Quality Positive (AQP) Statement.

This SPD replaces the 2017 Air Quality SPD⁸ and should be followed for any proposal where air quality is a material consideration. It should be considered alongside relevant planning documents on the City Corporation website. The references made in this document are current at the time of writing. Where documents are revised, the latest version(s) should be used.

⁵ Air quality appraisal: damage cost guidance (2025). Available at: <https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-guidance>

⁶ City of London Corporation (2019), City of London Code of Practice for Deconstruction and Construction Sites, Ninth Edition

⁷ As defined in Appendix A

⁸ The City of London Corporation (2017), City of London Air Quality Supplementary Planning Document

1.1 Objectives

The objectives of this SPD are to:

- Provide guidance for complying with the air quality and health impact assessment policies of the City Plan 2040, together with national and regional policy
- Ensure that there is a consistent approach for managing air quality in planning applications
- Outline best practice for the design of a development to minimise its air quality impact
- Outline measures to mitigate residual emissions of air pollutants
- Provide guidance on the application of air pollution damage costs
- Detail when an AQIA is required, and the information to be included



2. Development Design

The design of a development will impact upon its ability to meet zero operational emissions. Suitable design can also reduce the exposure of occupants to ambient and indoor air pollution. An Air Quality Planning Checklist is available on the City Corporation website to provide guidance to developers on the type of design that can be incorporated. This will be updated periodically to reflect best practice. Synergies with neighbouring developments should be explored for shared heating and energy supply, combustion plant and delivery and servicing requirements. It is recommended that pre-application advice is sought from the Air Quality Team at an early stage.

2.1 Reducing Emissions Through Building Design

2.1.1 Heating and Energy Supply

A significant proportion of emissions of nitrogen oxides (NO_x) in the Square Mile are associated with heating and power generation⁹. The use of technology to generate heat and energy from zero emission sources such as heat pumps, solar water heating and photovoltaic panels will reduce emissions of NO_x and other pollutants. Energy and heating demand for new developments should therefore be sourced from zero emission plant where possible^{10&11}. There should also be a focus on reducing energy use and maximising efficiency, and district heating should be considered where available, particularly when fuelled by zero emission plant.

Where zero emission technology is not feasible, plant with the lowest emissions of NO_x and particulate matter available must be used. In such instances, the development should be designed so that zero emission technology can be installed in the future as it becomes available.

Gas Boilers

NO_x emission rates from gas boilers should be as low as reasonably practicable, ideally $\leq 27\text{mg/kWh}$. It should be noted that maximum Building Research Establishment Environmental Assessment Method (BREEAM) credits can be gained for the use of gas boilers with a NO_x emission rate of $\leq 24\text{mg/kWh}$.

Biomass Boilers

The use of biomass for heating can give rise to significant emissions of particulate matter; and consequently, **the use of biomass in the Square Mile is discouraged.**

⁹ Greater London Authority (2025), London Atmospheric Emissions Inventory 2022

¹⁰ For this purpose, zero emission is defined as zero on site emissions when operating the plant.

¹¹ Policy HL2: Air quality (4.), City Plan 2040

Combined Heat and Power

Combined Heat and Power (CHP) can give rise to significantly higher emissions of NO_x than regular boilers. Air quality monitoring in the Square Mile has shown that CHP can lead to very high localised levels of air pollution **therefore the use of CHP is discouraged.** If CHP is proposed, it is required to meet the following emission limits, at 5% oxygen:

CHP Engines $\leq 500\text{kWe}$ – 50 mg/Nm³

CHP Engines $> 500\text{kWe}$ – 25 mg/Nm³

Key Actions

Zero emission energy and heating plant should be incorporated into new development where possible.

Development should be connected to heat networks if available.

Where non-zero emission plant is proposed, the plant must have the lowest emission rates of NO_x and particulate matter as reasonably practicable and be no higher than the emission rates stated.

If combustion plant is installed, the development should be designed so that zero emission technology can be installed in the future as it becomes available.

2.1.2 Backup Power and Emergency Plant

Backup and emergency power is an important aspect of a building's operation, ensuring life-safety equipment can function in the event of mains power loss. Diesel fuelled generators used for backup and emergency power can be a significant source of air pollution. Their use in the Square Mile is discouraged where alternatives are available. They will only be approved if deemed appropriate through consideration of relevant Building Regulations and Fire Safety Standards. Where possible, alternatives to diesel fuelled generators should be installed. The Emergency Power Supply Hierarchy in the City Corporation Planning for Sustainability Supplementary Planning Document (SPD)¹² should be applied.

Emergency Power Supply Hierarchy

1. Secondary electrical supply
2. Shared emergency provision
3. Battery storage solutions
4. Generators, non-diesel
5. Generators, hydrotreated vegetable oil (HVO)*
6. Generators, diesel

*HVO should be sustainably sourced

¹² City of London Corporation (2025), City of London Corporation: Planning for Sustainability

Applicants will be expected to demonstrate, in their Air Quality Impact Assessment (AQIA), that all stages of the hierarchy have been considered, and the use of any combustion generator must be justified. Best Available Technique (BAT) must be used to minimise emissions of pollutants. A Fire Statement must be completed for all major development proposals¹³, and the backup power solution must be linked to this.

Generator Testing Requirements

Generator testing should be completed in-line with manufacturer's guidance with the aim of limiting the total number of hours of testing per year.

Testing should not be completed during light wind conditions¹⁴, and when the Daily Air Quality Index (DAQI) within the Square Mile is 'Moderate' or above¹⁵.

Where there are publicly accessible areas close to a generator flue, no testing should take place when the public is present.

Any generator should be Emissions Optimised rather than Fuel Optimised.

Where a building operates a backup generator, the operator will be required to submit an annual testing report for which a template will be provided.

Emission rates

All liquid fuelled generators are required to meet the following emission limits at a temperature of 273.15 K, a pressure of 101.3 kPa, 0% moisture and 15% oxygen:

NO_x - 190 mg/Nm³

PM - 10 mg/Nm³

These are equivalent to the emission limits set in Table 2 Annex II of the Medium Combustion Plant Directive (MCPD)¹⁶. Exhaust aftertreatment such as Selective Catalytic Reduction (SCR) and diesel particulate filters (DPF) may be required to meet these emission limits. A SCR system requires a high temperature for the catalytic reaction to occur. This should be considered when calculating the power requirements.

In an event that the limits cannot be achieved, the Air Quality Team should be consulted.

¹³ Policy S2: Safe and Secure City, City Plan 2040

¹⁴ Light wind conditions are to be wind speeds $< 5\text{mph}$

¹⁵ The DAQI should be taken from the contractor for City of London Air Quality Monitoring Data, available at <https://www.cityoflondon.gov.uk/services/environmental-health/air-quality/air-quality-monitoring>

¹⁶ Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants

Generator use

A distinction is made below between emergency life-safety and business continuity. Any proposal for a combustion-based backup power supply for business continuity purposes will be subject to further assessment, see Section 5.2.

In addition to backup and emergency power, emissions should be controlled from any other plant associated with a building, e.g., sprinkler pumps. Zero emission options should be sourced where possible. In the event this is not possible, emissions must be as low as is reasonably practicable. This should be achieved using the BAT approach.

Combustion Exhaust Flues

Definitions
Emergency Life Safety – The provision of a backup power supply to ensure life safety and essential loads are not interrupted during an emergency.
Business Continuity – The provision of a backup power supply which is in addition to Emergency Life Safety requirements. For example, in a commercial building to allow business activities to continue.

The location and emission discharge velocity of all exhaust flues should be considered to ensure maximum dispersion of pollutants. All combustion plant flues must be vertical and must terminate above the roof height of the tallest part of the development, unless agreed with the Local Planning Authority (LPA). There should be no nearby obstruction(s) that could influence dispersion.

Key Actions
The selection of emergency power supply must follow the Emergency Power Supply Hierarchy.
Any combustion-based generator must meet the stated emission limits.
If combustion plant is proposed for business continuity, it will be subject to further assessment.
All flues must be vertical, located away from any air intake points and there should be no nearby obstruction that could influence dispersion. They must terminate above the roof height of the tallest part of the development. They must be at least 3m away from any publicly accessible roof spaces.

2.1.3 Sustainable Travel

The Square Mile has the highest grade of Public Transport Accessibility Level (PTAL) meaning that access to the existing public transport network is rated as excellent. The City Corporation promotes infrastructure that reduces the volume of traffic in the Square Mile together with modes of transport that result in a positive impact on air quality. To reduce vehicle numbers, and to enable sustainable modes of transport, a development must adhere to City Plan 2040 policies relating to transport.

To support the aims of this SPD, the following aspects should be completed / incorporated, where applicable:

Transport	City Plan 2040 Policy
1. Transport Assessments / Statements	Policy VT1
2. Travel Plan (including Cycling Promotion Plan)	
3. Construction Logistic Plan	
4. Section 278 Drawings	
5. Car-Free Design	Policy AT3
6. Cycle Parking	
7. Delivery and Servicing Management Plan	Policy VT2
8. On-site Servicing Bays	
9. EV Charging:	Policy VT2 & VT3
– Service Areas	
– Off-Street Parking	
10. Pedestrian Movement	Policy AT1
11. Cycling Facilities	Policy AT2 & AT3

Development in the Square Mile is required to be car-free^{17&18}. A high number of delivery and service vehicles and taxis and Private Hire Vehicles (PHVs) is associated with development in the City of London, and emissions from these should be minimised as far as possible.

¹⁷ Car-free defined as a development not having any parking space, not including designated Blue Badge spaces.
¹⁸ Policy VT3: Vehicle Parking, City Plan 2040
¹⁹ Policy VT2: Freight and Servicing, City Plan 2040

Delivery and Servicing Management Plans

A Delivery and Service Management Plan (DSMP) is required for all major developments¹⁹ and any other developments or refurbishment that will cause significant transport impacts. To reduce the impact of operational vehicles, the DSMP should be completed in-line with the Freight and Servicing SPD¹⁴ and Noise Strategy²⁰. To support the aims of this SPD, the DSMP should set out the following:

DSMP Requirements
The estimated number of delivery and service trips associated with the development with no mitigation included.
The number of vehicle trips to be avoided through implementation of the DSMP. The unmitigated predicted vehicle trips should be reduced by at least 50%.
Procurement measures, including those taken jointly with other businesses/developments, that reduce the number of delivery and service trips and utilise zero tailpipe emission vehicles.
Commitment to the use of zero tailpipe emission vehicles where possible and providing infrastructure as part of the development to support the use.
Appropriate routing for vehicles, including to and from consolidation centres.
Implementation of a no idling policy.
Proposals for monitoring DSMP arrangements.

Key Actions
All development should be car-free, except for designated Blue Badge spaces.
The outcome of a DSMP should be to reduce predicted delivery and service vehicle trips by at least 50%.
A commitment must be made to use zero tailpipe emission vehicles where possible.

²⁰ City of London Corporation (2018), Freight and Servicing Supplementary Planning Guidance

2.1.4 Commercial Cooking

Commercial Cooking can be a significant source of PM_{2.5} emissions in central London. The Square Mile is a Smoke Control Area (SCA) therefore there are restrictions in place regarding the appliances and types of solid fuel that can be used for commercial cooking^{22&23}. An additional level of ventilation and filtration, in line with EMAQ+ guidance²⁴, is required to minimise emissions of PM_{2.5} and odour to ambient air. Electric appliances are the cleanest option for cooking and should be used where possible.

Key Actions

Zero emission cooking appliances should be used where possible.

All commercial cooking extraction flues should be located away from any air intake points and should terminate above the roof height of the tallest part of the development.

Kitchen ventilation and extraction must be designed to mitigate particulate emissions and odour.

2.2 Reducing Exposure Through Building Design

2.2.1 Building Ventilation

The impact of ambient air pollution on indoor air quality should be considered at the earliest stages of building design. Through its Air Quality Strategy (AQS), the City Corporation has committed to a pathway to meet the 2021 World Health Organization (WHO) Air Quality Guidelines (AQGs). The guidelines are applicable to both ambient and indoor air quality. Building design should ensure that the ingress of polluted air is avoided and internal exposure to elevated levels of air pollution is minimised.

The principles outlined in Building Regulations Ventilation Approved Document F²⁵ must be followed to minimise the intake of external pollutants, particularly for development in areas that exceed the aims of the AQS.

22 Authorised/Certified Fuels (2025). Available at: <https://smokecontrol.defra.gov.uk/fuels-php/>

23 Exempt Appliances (2025). Available at: <https://smokecontrol.defra.gov.uk/appliances-php/>

24 EMAQ+ (2022), Control of Odour and Noise from Commercial Kitchen Exhaust System

25 HM Government (2021), The Building Regulations 2010 Ventilation Approved Document F Volume 1: Dwellings / Volume 2: Buildings other than dwellings

2.2.2 External Amenity Space and Public Realm

The exposure to pollution of users of the proposed development should be minimised through good design. This should include the appropriate positioning and orientation of amenity spaces away from pollution sources such as busy roads or chimneys.

Where public realm forms part of the development, this provides an opportunity to provide areas where people can spend time away from sources of pollution. The development should incorporate design that provides low pollution routes through the development to reduce exposure. Recreational, seating and exercise areas should be located away from, or screened from, sources of pollution.

2.2.3 Urban Greening

As well as increasing biodiversity, plants can play a role in trapping pollution. The Mayor of London guidance on the use of green infrastructure²⁶ details that greening can impact air pollution through dispersion and deposition. The provision of urban greening²⁷ and biodiversity²⁸ should be integral to the design and layout of buildings and the public realm. In line with Policy OS4: Biodiversity Net Gain of the City Plan 2040, all major developments are required to submit Urban Greening Factor (UGF) and Biodiversity Net Gain (BNG)²⁹ calculations, demonstrating how the development will meet the City Corporation's target scores of 0.3 for the UGF and 3 biodiversity units per hectare (BU/ha), as a minimum.

26 Greater London Authority (2019), Using Green Infrastructure to Protect People from Air Pollution

27 Policy OS2: Urban Greening, City Plan 2040

28 Policy OS3: Biodiversity, City Plan 2040

29 Policy OS4: Biodiversity Net Gain, City Plan 2040

2.2.4 Combustion Flues

Flues and exhaust vents must be at least 3 m away in all directions from any area the public can access³⁰. This includes recreational areas such as open spaces, roof terraces, balconies and gardens. They should also be located away from any air intake points to avoid ingress into a ventilation system. Flues in lightwells or atria will not be approved. Consideration also needs to be given to emission exhausts on neighbouring properties and how they may impact on the development.

Key Actions

Ventilation air intakes and openable windows must be located away from elevated levels of air pollution.

Ventilation systems must follow the principles outlined in Building Regulations Ventilation Approved Document F.

Development should be designed to avoid air ingress to a building from ambient air that does not meet the aims of the City of London Air Quality Strategy 2025 - 2030.

Major developments must achieve an Urban Greening Factor of 0.3 and 3BU/ha, as a minimum.

30 Policy HL2: Air quality (8.), City Plan 2040



3. Construction, Deconstruction and Demolition

Construction is a significant source of air pollution in the Square Mile. Best practice for minimising emissions of air pollutants from these activities is outlined in the City of London Code of Practice for Deconstruction and Construction (CoP).

Prior to construction, the Principal Contractor must agree a Scheme of Protective Works (SoPW) with the City Corporation. It must comply with the requirements of the CoP and include an Air Quality Dust Management Plan (AQDMP).

As detailed in Policy S9 and VT1 of the City Plan 2040, a Construction Logistic Plan (CLP), which includes construction, deconstruction and demolition, is required for all major developments. A CLP may also be required for refurbishments or other development that would have a significant impact on the transport network during construction. The CLP should comply with the measures set out in the CoP and should detail how vehicle movements will be minimised.

3.1 Non-Road Mobile Machinery

The Non-Road Mobile Machinery (NRMM) London Low Emission Zone (LEZ) requires that all engines used on construction sites with a power rating of between 37kW and 560kW must meet a specified emission standard. The emission standards, which get tighter over time, are detailed below. The City Corporation encourages contractors to go above these standards and use alternatives to diesel NRMM where available.

NRMM LEZ Requirements	
From 1 January 2025	Stage IV
From 1 January 2030	Stage V

All developments must comply with the requirements of the London Low Emission Zone for NRMM³¹. Prior to the commencement of any works, contractors must register relevant NRMM on the Greater London Authority (GLA) online register³² and this must be kept up to date throughout the demolition and construction phases. Confirmation that this policy will be adhered to must be detailed in the SoPW. Further details about the NRMM Low Emission Zone can be found on the GLA NRMM website³³.

³¹ Policy HL2: Air quality (7), City Plan 2040

³² Welcome to NRMM. (2015) Available at: <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/non-road-mobile-machinery-register/login>

³³ Non-Road Mobile Machinery (NRMM). (2015) Available at: <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/pollution-and-air-quality/nrmm>

3.2 Construction Power Supply

A mains power supply, temporary or permanent, should be secured as soon as possible on all construction sites, unless it can be demonstrated that it is not reasonably practicable. The use of generators to provide electricity on site should be avoided. If it cannot be avoided, justification for the proposed use of the generator must be detailed in the SoPW.

Generators should not be installed on a construction site to solely charge and/or power electric or hybrid NRMM. These must be charged and/or powered using mains power supply.



4. Offsetting via Air Pollution Damage Costs

Policy HL2 of the City Plan 2040 requires development to ensure acceptable air quality levels through appropriate design, layout, landscaping and technological solutions, and expects developers to install non-combustion energy technology where feasible. Policy HL9 requires development to deliver health benefits to the City's communities and mitigate adverse impacts. This should be done through measures incorporated into development proposals or secured through planning conditions or Section 106 (s106) Agreements where significant impacts are identified.

4.1 Section 106 Planning Obligations

S106 planning obligations are legal agreements where developers are required to provide site-specific mitigation measures in line with Policy S26 of the City Plan 2040. They should meet the following statutory tests under Regulation 122³⁴.

- Necessary to make the development acceptable in planning terms
- Directly related to the development
- Fairly and reasonably related in scale and kind to the development

Any air pollution damage (offsetting) costs will be secured via a s106 agreement. Further information can be found in the Planning Obligations Supplementary Planning Document (SPD)³⁵.

4.2 Offsetting Requirements

In accordance with Policy HL2, HL9 and S26 of the City Plan 2040 the City Corporation will seek contributions towards air pollution resulting from emissions of air pollutants, nitrogen oxides (NO_x) and very fine particulates (PM_{2.5}). These **air pollution damage costs** estimate the societal impacts of emissions on human health, productivity, wellbeing and the environment and have been developed by the Department for Environment, Food and Rural Affairs (Defra).

Offsetting costs will be applied to:

- Any on site combustion plant (boilers, generators, Combined Heat and Power (CHP)) in major planning applications
- Any on site generator proposed for Business Continuity use, in any application
- Any increase in emissions associated with new replacement combustion plant, when compared to the current plant, in non-major applications
- Any increase in emissions associated with vehicle movement, when compared to the current land use, in major applications

Offsetting costs will not be applied to the construction phase of a development as this is managed via the City of London Code of Practice for Deconstruction and Construction.

Air pollution damage costs are directly linked to the quantity of emissions of air pollutants, the lower the emissions, the lower the cost. Damage costs, and the corresponding impact of air pollution on the health of the City of London's communities, can be minimised by following the approach outlined in this SPD.

Air pollution damage costs are applied across the typical life of the combustion plant or vehicle. For generators this is assumed to be 30 years, for boilers 20 years and for vehicles five years. The costs apply per tonne of pollutant over the respective period. All offsetting calculations should be provided in the Air Quality Impact Assessment (AQIA), or subsequent documentation submitted to discharge a planning condition. Appendix B provides examples of how to undertake an air pollution damage cost calculation.

The payment of air pollution offsetting will be required on completion of development and prior to occupation. Offsetting costs will be used by the City Corporation for air pollution improvement projects in the Square Mile and contribute to the aims of the City of London Corporation Air Quality Strategy 2025 - 2030 (AQS). The schemes would support the delivery of the AQS and fall into four categories: transport and public realm; infrastructure; improving public health and education and research.

³⁴ The Community Infrastructure Levy Regulations 2010, SI 2010/948, Regulation 11

³⁵ City of London Corporation (2026), Planning Obligations Supplementary Planning Document



5. Assessing Air Quality Impacts

Applicants must demonstrate that any major development complies with the requirements of this Supplementary Planning Document (SPD) by submitting an Air Quality Impact Assessment (AQIA). There may also be instances where non-major planning applications are required to produce an AQIA, for example for a refurbishment that includes the installation of combustion plant. The approach detailed in this SPD removes the requirement for cumulative assessment for the majority of development. All developments are required to remove operational emissions or reduce them as far as is reasonably practicable.

As detailed in the City Plan 2040³⁶ all developments in the Square Mile are required to be 'Air Quality Neutral' (AQN), as defined by the Mayor of London AQN London Plan Guidance (LPG)³⁷. The requirements of this SPD surpass the scope of AQN. Where AQN exclusions are applicable, only a short statement to confirm the development is AQN is required. In the event that either of the Building Emissions Benchmarks or Transport Emissions Benchmarks are exceeded, the Air Quality Team should be contacted. A development will not be subject to offsetting via AQN, only through the City of London methodology for air pollution damage costs.

In line with the Mayor of London Air Quality Positive (AQP) LPG³⁸ and the City Plan 2040, AQP Statements are required for developments subject to an Environmental Impact Assessment (EIA). An AQP Statement must outline measures taken forward during the design stage to achieve the best possible outcomes for air quality. The approach is very similar to that required for all major developments in this SPD. Where an AQP Statement is required, it should be incorporated into the AQIA.

The use of Artificial Intelligence (AI) to develop an AQIA is not prohibited by the City Corporation. However, it must be clear in the report if AI has been used and for what. An example of the type of information that should be provided is provided below.

AI Platform	Section / Page	Purpose
ChatGPT	Section 2: Policy Context	Used to summarise relevant air quality policies in the City Plan 2040.

³⁶ Policy HL2: Air quality (3.), City Plan 2040

³⁷ The Mayor of London (2023), London Plan Guidance, Air Quality Neutral

³⁸ The Mayor of London (2023), London Plan Guidance, Air Quality Positive

5.1 Air Quality Modelling

Air quality modelling can be a useful tool to predict how emissions of air pollutants will impact on local air quality. It can also be useful to understand how users of a site might be exposed to air pollution.

The process set out in this document means that a modelling assessment should not generally be required. However, there are occasions when applicants will be asked to demonstrate the impact of a potentially significant source of pollution, examples are given in the box below. The Air Quality Team should be consulted if any of these criteria are relevant to a proposed development.

Air Quality Modelling Criteria
<p>Combustion Plant:</p> <ul style="list-style-type: none"> • Combined Heat and Power (CHP) • Biomass/biofuel boilers • A combustion-based backup generator for business continuity
<p>Vehicles³⁹:</p> <ul style="list-style-type: none"> • Where the development results in predicted Average Annual Daily Trip (AADT) flows of: <ul style="list-style-type: none"> – 100 Light Duty Vehicles (LDVs) – 25 Heavy Duty Vehicles (HDVs)

The above list is not exhaustive. Proposals for developments that have sensitive receptors e.g., a school or nursery, may also require air quality modelling. Any such proposals should be discussed with the Air Quality Team.

When modelling is undertaken, predicted concentrations for the opening year of the development must be compared to the City of London Corporation Air Quality Strategy 2025 – 2030 (AQS) aims using a worst-case scenario. All relevant pollution sources, both existing and consented, should be included in the model. The City Corporation has designated relevant exposure as any location outside that is accessible to members of the public. All AQS aims apply to exposure, regardless of the pollutant averaging period.

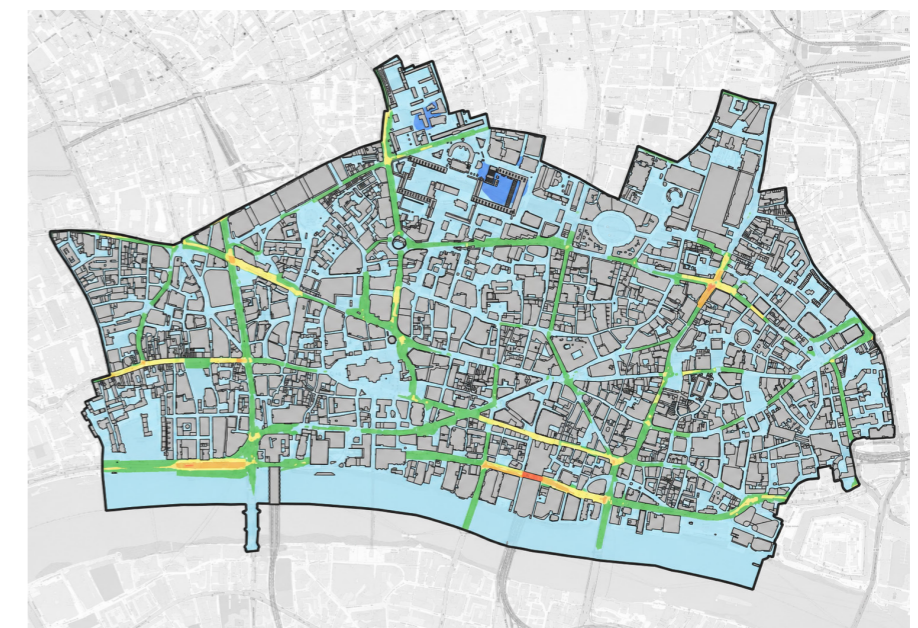
³⁹ To include all vehicles associated with the development, with application to both the Construction Phase and Operational Phase.

Pollutant	Air Quality Strategy Aims / Short-term Objectives	Averaging Period
Nitrogen Dioxide (NO ₂)	30µg/m ³	Annual mean
NO ₂	200µg/m ³ not to be exceeded more than 3 times a year	1-hour mean
Fine particulates, (PM ₁₀)	15µg/m ³	Annual mean
PM ₁₀	50µg/m ³ not to be exceeded more than 3 times a year	24-hour mean
Very fine particulates, (PM _{2.5})	10µg/m ³	Annual mean

Modelling information should be presented in the appendices of the AQIA, with a brief summary of the methodology and results provided in the main body. A modelling checklist is available from the Air Quality Team. This should be reviewed prior to completing any air quality modelling.

5.2 Structure of an Air Quality Impact Assessment

An AQIA should be structured as shown below. Not all Chapters will be relevant to all applications. The amount of detail required will depend upon the type and scale of the development. Early consultation with the Air Quality Team is recommended so that the scope of the AQIA can be agreed prior to submission.



	Chapter	Information Required	
1	Description of the Development	A summary of the proposed development including relevant information from the Design and Access Statement. A brief description of the current air quality in the locality of the proposed development, with a red line boundary marked on the relevant London Atmospheric Emissions Inventory air quality concentration map.	Human receptors, particularly sensitive receptors ⁴⁰ , that may be negatively impacted by the development. Reference to any documents that should be read alongside the AQIA, e.g. Delivery and Service Management Plan, Energy Strategy, Transport Assessment, Fire Statement.
2	Design Considerations: Emissions	How emissions of air pollutants have been avoided through the design of the development, for example: Choice of heating and energy supply. Choice of backup/emergency power supply with reference to the Emergency Power Supply Hierarchy. The use of heat networks.	Future proofing the design to incorporate zero emission technology in the future. Measures taken to reduce vehicle numbers. Measures taken to reduce vehicle emissions. Measures taken to reduce emissions from cooking sources.
3	Design Considerations: Exposure	How exposure, both new and existing, has been considered in the design of the development, for example: Ventilation, including a plan with the location of ventilation inlets.	The design of external amenity space. Green infrastructure. Flue heights and efflux velocity with the location clearly shown on a plan.
4	Emission Sources	All emission sources associated with the proposed development. Justification for the use of any combustion plant. Emission rates, both NO _x and PM _{2.5} for combustion plant. See Section 2.1 for emission limits. If a combustion generator is proposed, whether it is for Emergency Life Safety or Business Continuity, and proposed hours of testing.	Evidence that the back-up generator has been scaled appropriately to meet the energy demand of the development. Details of vehicle movements associated with the proposed development, presented as AADT and broken down by vehicle type. Any other emissions associated with the proposed development.
5	Mitigation of Emissions	How any emissions will be further mitigated. For emissions associated with construction: All construction sites in the City of London are designated High Risk as defined in the Mayor of London Supplementary Planning Guidance (SPG) ⁴¹ . The AQIA report does not need to include a Dust Assessment or Air Quality Dust Management Plan as this is covered by the City of London Code of Practice for Deconstruction and Construction (CoP). A statement to confirm that the construction phase is designated as high risk, and that a Scheme of Protected Works will be completed in-line with the CoP is sufficient.	Mitigation measures to minimise emissions from construction vehicles travelling on the road network should be provided in the AQIA. This should align with the measures to minimise vehicle movements outlined in the Construction Logistics Plan. For emissions associated with the operation of the building: The use of technology, including any abatement technology. The application of Best Available Technology. The use of alternative fuels.
6	Quantification of Emissions	Quantification of any residual annual emissions of NO _x and PM _{2.5} from operational sources only, with details of the calculation methodology.	Quantification of construction related emissions are not required.
7	Offset Calculation	This should be completed for: Operational combustion plant emissions.	Operational vehicle emissions for any increase in vehicle movements associated with the development when compared to the existing land use. See Appendix B for calculation methodology and example calculations.
8	Further Assessment	Modelling to predict concentrations of air pollution will not normally be required unless a significant source of pollution is proposed, see Section 5.1 for further information. Where modelling is undertaken, a summary of the methodology and results should be provided. Detailed information should be placed in the Appendices. Predicted concentrations must be compared to the aims in the AQS using a 'worst-case' approach.	The City Corporation has designated relevant exposure as any location outside that is accessible to members of the public. All of the AQS aims apply to exposure, regardless of the pollutant averaging period. Demonstration that the cumulative impact of consented developments in the locality of the proposed development has been considered. Details of an AQN Assessment, if undertaken.
9	Conclusions	A summary of how the proposed development complies with the Planning Objectives for Air Quality, as detailed in Section 1.	A summary describing the health impact of the predicted exposure.
10	Appendices	A summary of relevant national, regional and local air quality policies. Reference to any Artificial Intelligence used in the AQIA. Technical information for combustion plant.	Full technical details and predicted concentrations from any modelling undertaken for Chapter 8. Where relevant, an AQP Statement.

⁴⁰ This includes children's nurseries, schools, hospitals, GP surgeries/health centres/nursing homes and care homes

⁴¹ Mayor of London (2014), The Control of Dust and Emissions During Construction and Demolition: Supplementary Planning Guidance

Appendix 1: Air Quality Planning Policy and Guidance

The role of this SPD and its relationship to the national, regional and local policy, as well as its relationship to the London Local Air Quality Management (LLAQM) statutory requirements, are presented below.



* The City Corporation Air Quality Strategy 2025 - 2030 incorporates the Air Quality Action Plan.

Definitions	
Major Development ⁴² :	<ul style="list-style-type: none"> Residential development of ten or more dwellings or on a site of ≥ 0.5ha Development of other uses, where the floorspace to be created by the development is $\geq 1,000\text{m}^2$, or the site area is ≥ 1ha
Environmental Impact Assessment:	<ul style="list-style-type: none"> The City Corporation will determine whether the project is of a type listed in Schedule 1 or Schedule 2 of the 2017 Regulations⁴³ If listed in Schedule 1 an EIA is required in every case If listed in Schedule 2, the City Corporation will consider whether it is likely to have significant effects on the environment

⁴² For a full definition, see Part 1 of The Town and Country Planning (Development Management Procedure) (England) Order 2015 (SI 2015/595)

⁴³ The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/571)

National Policy

National Planning Policy Framework and Guidance

The National Planning Policy Framework (NPPF) sets out government’s planning policies for England and how these should be applied. The latest version of the NPPF should be reviewed prior to a planning submission being submitted. National Planning Policy Guidance adds further context and provides practical guidance on how to implement the NPPF.

PM_{2.5} Targets: Interim Planning Guidance

At the time of writing the Department for Environment, Food and Rural Affairs (Defra) is developing guidance for applicants and Planning Authorities in England to demonstrate that they have appropriately considered the national PM_{2.5} targets when making planning applications and planning decisions. The interim guidance moves away from a requirement to assess solely whether a scheme is likely to lead to an exceedance of a legal limit and instead ensures that appropriate mitigation measures are implemented from the design stage, ensuring the minimum amount of pollution is emitted and that exposure is minimised. This SPD reflects the requirements of the interim guidance.

Evidence is required in a planning application to show that sources of air pollution have been identified and appropriate action taken to minimise emissions of PM_{2.5} and its precursors as far as is reasonably practicable. If quantitative evidence is not available, a qualitative approach can be taken. More detailed assessments are expected for developments which are closer to populations, and those which are likely to have higher emissions.

Industrial Processes

Some industrial operations are regulated by the Environment Agency (Part A1 processes) and the City Corporation (Part A2 and Part B processes) under Part 1 of the Environmental Protection Act 1990⁴⁴. The planning process assumes that the operations comply with their permits and the Act. The planning process can consider whether a land use is appropriate, and it must consider the exposure to pollutants. For developments requiring planning applications this is done at the planning application stage.

Combustion plant between 1MW_{th} to 50MW_{th} in size are regulated by the Environment Agency under the Medium Combustion Plant¹⁶ framework.

⁴⁴ Environment Protection Act 1990, c.43



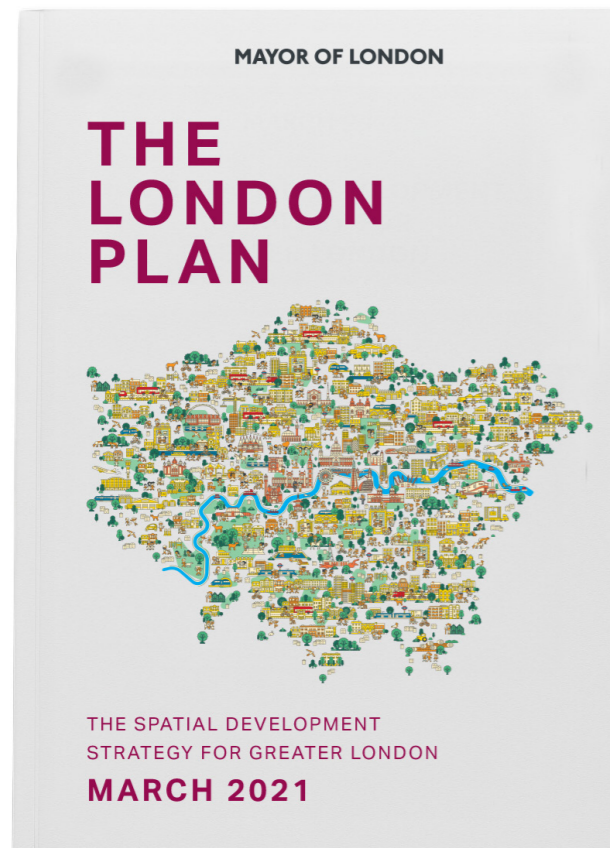
Regional Policy

The London Plan⁴⁵ is the Spatial Development Strategy for Greater London. It is part of the statutory development plan for London, and the policies inform decisions on planning applications across Greater London. At the time of writing, the relevant policies are in Policy SI 1: Improving Air Quality.

London Plan Guidance and Supplementary Planning Guidance provide further information on the appropriate implementation of the London Plan. To support Policy SI 1, the following documents have been produced:

LPG and SPG Documents

- Air Quality Neutral LPG³⁵
- Air Quality Positive LPG³⁶
- Control of Dust and Emissions SPG³⁹ and Practice Note⁴⁶



⁴⁵ The Mayor of London (2021), The London Plan: The Spatial Development Strategy for Greater London

Policy SI 1: Improving Air Quality

- A. Development Plans, through relevant strategic, site-specific and area-based policies, should seek opportunities to identify and deliver further improvements to air quality and should not reduce air quality benefits that result from the Mayor's or Boroughs' activities to improve air quality.
- B. To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:
1. Development proposals should not:
 - a. lead to further deterioration of existing poor air quality.
 - b. create any new areas that exceed air quality limits or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits.
 - c. create unacceptable risk of high levels of exposure to poor air quality.
 2. In order to meet the requirements in Part 1, as a minimum:
 - a. development proposals must be at least Air Quality Neutral.
 - b. development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retrofitted mitigation measures.
 - c. major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1.
 - d. development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people should demonstrate that design measures have been used to minimise exposure.
- C. Masterplans and development briefs for large-scale development proposals subject to an Environmental Impact Assessment should consider how local air quality can be improved across the area of the proposal as part of an air quality positive approach. To achieve this a statement should be submitted demonstrating:
1. how proposals have considered ways to maximise benefits to local air quality, and
 2. what measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.

- D. In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.
- E. Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development.



Local Policy

This SPD details the steps that should be taken to meet the air quality requirements of the City Plan 2040, with particular reference to Policy HL2 and Policy HL9.

Policy HL2: Air Quality

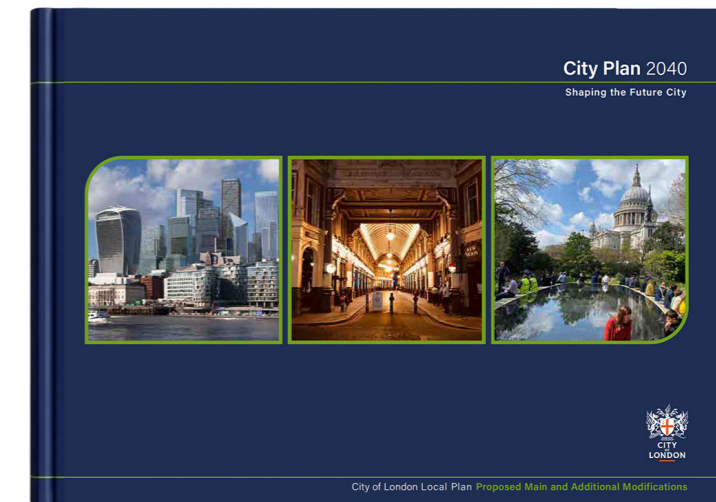
1. Developers will be required to effectively manage their proposal's impact on air quality. Major developments must comply with the requirements of the Air Quality SPD which includes requirements for Air Quality Neutral Assessments and Air Quality Impact Assessments (AQIAs).
2. Development that would result in a worsening of the City's nitrogen dioxide or PM₁₀ and PM_{2.5} pollution levels will be strongly resisted.
3. All developments must be at least Air Quality Neutral. Developments subject to an EIA should adopt an air quality positive approach. Major developments must maximise credits for the pollution section of the Building Research Establishment Environmental Assessment Method (BREEAM) assessment relating to on-site emissions of oxides of nitrogen (NO_x).
4. Developers will be expected to install non-combustion energy technology where available.
5. A detailed AQIA will be required for combustion based low carbon technologies (e.g. biomass, combined heat and power), and any necessary mitigation must be approved by the City Corporation.
6. Developments that include uses that are more vulnerable to air pollution, such as schools, nurseries, medical facilities and residential development, will be refused if the occupants would be exposed to poor air quality. Developments will need to ensure acceptable air quality through appropriate design, layout, landscaping and technological solutions.
7. Construction and deconstruction and the transport of construction materials and waste must be carried out in such a way as to minimise air quality impacts to the fullest extent possible. Impacts from these activities must be addressed within submitted AQIAs. All developments should comply with the requirements of the London Low Emission Zone for Non-Road Mobile Machinery.
8. Air intake points should be located away from existing and potential pollution sources (e.g. busy roads and combustion flues). All combustion flues should terminate above the roof height of the tallest part of the development to ensure maximum dispersion of pollutants and be at least three metres away from any publicly accessible roof spaces.

Policy HL9: Health Impact Assessment (HIA)

The City Corporation will require development to deliver health benefits to the City's communities and mitigate any negative impacts.

3.10.7 HIAs must look at the issue of health comprehensively and not focus solely on access to health services.

Where significant impacts are identified, measures to mitigate the adverse impact of the development should be provided as part of the proposals or secured through conditions or a Section 106 Agreement.



⁴⁶ The Mayor of London (2024), Practice Note – The Control of Dust and Emissions from Construction and Demolition

Appendix 2: Offset Calculation

This section presents examples of equations that can be used to calculate damage costs. All offsetting calculations should be provided in the AQIA, or subsequent documentation submitted to discharge a planning condition. An offset calculation is not required for emissions associated with construction (which includes construction, deconstruction and demolition).

Gas boilers

Where a gas boiler is proposed, it should meet NO_x emission rates detailed in Section 2.1.1. An emission offset calculation should be undertaken in the following scenarios:

Any on site combustion-based boiler in major applications	Any increase in emissions associated with a replacement combustion-based boiler, when compared to the current plant, in non-major applications
---	--

The standard damage cost values are given in tonnes, and this should be reflected in the emission rate. Gas boilers are assumed to have a typical life of 20 years. A 2% annual uplift is included in the calculation to account for inflation. If more than one boiler is proposed the calculation should be repeated for each boiler.

Damage Cost = (E x EU x DC) x ((1+0.02)²⁰-1) / 0.02

Where:

- E is boiler NO_x emission rate.
- EU is the predicted annual energy usage.
- DC is the current central damage cost value for the relevant source sector (£/t).
- Constants:
 - 20, the number of years for which the contribution is payable for.
 - 0.02, an uplift of 2% per annum is assumed.

Example

A gas boiler with an emission rate of 24mg/kWh is proposed within a commercial development that has a predicted total annual energy usage of 2,100,000kWh.

- E = 24mg/kWh
- EU = 2,100,000kWh
- DC = £21,315 per tonne

Damage Cost = (E x EU x DC) x ((1+0.02)²⁰-1) / 0.02
 (£1,074.28) x ((1+0.02)²⁰-1) / 0.02

Offsetting Total: £26,102.08

Note - Ensure emissions are calculated as tonnes as damage costs are in £/t.

Generators

Where a combustion-based generator is proposed it should meet the emission limits detailed in Section 2.1.2. An emission offset calculation should be undertaken in the following scenarios:

All major applications where a combustion-based generator for Emergency Life Safety is proposed.	All applications where a combustion-based generator for Business Continuity is proposed.
	All applications where a replacement combustion-based generator(s) has greater emissions than the existing generator, regardless of proposed use.

The example below is for an Emergency Life Safety generator. The assumption is that each generator is used for four hours a year on average, in addition to testing. The standard damage cost values are given in tonnes, and this should be reflected in the emission rate. Generators are assumed to have a typical life of 30 years. A 2% annual uplift is included in the calculation to account for inflation.

Where the proposed use is for Business Continuity the Air Quality Team should be consulted to agree assumed hours of usage in the calculation.

The offsetting calculation should be completed for both NO_x and PM_{2.5} emissions and repeated for instances where there is more than one generator.

Damage Cost = (E x (T + 4) x DC) x ((1+0.02)³⁰-1) / 0.02

Where:

- E is the generator emission rate, either NO_x or PM_{2.5}.
- T is the proposed total generator testing per annum (hours).
- DC is the current central damage cost value, for either NO_x or PM_{2.5}, for the relevant source sector (£/t).
- Constants:
 - 4, an assumption of actual usage per annum (hour). To be applied per generator.
 - 30, the number of years for which the contribution is payable for.
 - 0.02, an uplift of 2% per annum is assumed.

Examples

- One diesel fuelled generator has been proposed as part of a commercial development. The generator is rated at 1750kW and is to provide the power requirements for life-safety building services. The generator is to be tested for a total of four hours per year.
 - E = NO_x: 6.50g/kWh, PM_{2.5}: 0.03g/kWh
 - T = 4 hours
 - DC = NO_x: £21,315 per tonne, PM_{2.5}: £146,671 per tonne

Damage Cost = (E x (4 + 4) x DC) x ((1+0.02)³⁰-1) / 0.02

NO_x: (£1,939.67) x ((1+0.02)³⁰-1) / 0.02

PM_{2.5}: (£61.60) x ((1+0.02)³⁰-1) / 0.02

Offsetting Total: £81,187.55

* Ensure emissions are calculated as tonnes as damage costs are in £/t.
- One diesel fuelled generator has been proposed as part of a commercial development. The generator is rated at 1750kW and is to provide the power requirements for life-safety building services. The generator is fitted with SCR and is to be tested for a total of four hours per year.
 - E = NO_x: 1.304g/kWh, PM_{2.5}: 0.03g/kWh
 - T = 4 hours
 - DC = NO_x: £21,315 per tonne, PM_{2.5}: £146,671 per tonne

Damage Cost = (E x (4 + 4) x DC) x ((1+0.02)³⁰-1) / 0.02

NO_x: (£389.13) x ((1+0.02)³⁰-1) / 0.02

PM_{2.5}: (£61.60) x ((1+0.02)³⁰-1) / 0.02

Offsetting Total: £18,285.19

Note - Ensure emissions are calculated as tonnes as damage costs are in £/t

A significant reduction in offsetting total is experienced in Example 2 compared to Example 1 due to the reduction in NO_x emission rate. In this example evidence was provided that SCR would reduce the existing NO_x emission rate by 80%.

If CHP, biofuel or biomass boilers are proposed the Air Quality Team should be consulted to agree the offset calculation.

Operational Vehicle Emissions

For all major developments where an increase in operational vehicles is predicted when compared to existing use, an offsetting calculation is required. The calculation should be applied to vehicles over and above those associated with the existing site only.

Vehicle emissions should be defined for a five-year period, using a base year of the proposed year of opening. For the calculation, the total base year emissions remain constant for the five-year period, i.e. it is assumed that the emission rate will be constant over that time. The most recent Emissions Factors Toolkit (EFT) should be used, using the parameters below. Calculations should be undertaken for both NO_x and PM_{2.5}.

EFT Parameters

- Road Type: London – Central
- Speed: 15kph
- Link Length: 6km

Unless exact vehicle specifics are known, Diesel Light Goods Vehicle (LGV) and Rigid Heavy Goods Vehicle (HGV) (Diesel) within the 'All Vehicle Types' Traffic Format and the preset Euro Fleet for the opening year of the development should be used. Any proposals to deviate from these parameters should be discussed with the Air Quality Team.

$$\text{Damage Cost} = (E \times DC) \times ((1+0.02)^5 - 1) / 0.02$$

Where:

- E is the five-year total of vehicle emissions, either NO_x or PM_{2.5} (t).
- DC is the current central damage cost value, for either NO_x or PM_{2.5}, for the road transport Central London source sector (£/t).
- Constants:
 - 5, the number of years for which the contribution is payable for.
 - 0.02, an uplift of 2% per annum is assumed.

Example

For a proposed commercial development, the predicted operational vehicle numbers have increased when compared to the existing development. The increase in AADT is 25 LGVs and 10 HGVs. The predicted opening year of the development is 2025.

- E:
 - LGV = NO_x: 0.1082t, PM_{2.5}: 0.0071t
 - HGV = NO_x: 0.1032t, PM_{2.5}: 0.0070t
- DC = NO_x: £72,737 per tonne, PM_{2.5}: £648,110 per tonne

$$\text{Damage Cost} = (E \times DC) \times ((1+0.02)^5 - 1) / 0.02$$

LGV NO_x: £8,194.15

LGV PM_{2.5}: £4,761.76

HGV NO_x: £7,812.23

HGV PM_{2.5}: £4,713.32

Offsetting Total: £25,481.47

Key Actions

Offsetting calculations should be completed for all applicable operational emissions.

All offsetting calculations should be presented in the AQIA, or subsequent documentation submitted to discharge a planning condition.

The payment of air pollution offsetting will be required on completion of development and prior to occupation.



47 Travel time measures for local 'A' roads: January to December 2022 report. Available at: [https://www.gov.uk/government/statistics/travel-time-measures-for-the-strategic-road-network-and-local-a-roads-january-to-december-2022/travel-time-measures-for-local-a-roads-january-to-december-2022-report#:~:text=The%20lowest%20average%20speeds%20were,on%202019%20\(39.3%20mph\).](https://www.gov.uk/government/statistics/travel-time-measures-for-the-strategic-road-network-and-local-a-roads-january-to-december-2022/travel-time-measures-for-local-a-roads-january-to-december-2022-report#:~:text=The%20lowest%20average%20speeds%20were,on%202019%20(39.3%20mph).)

For further information contact:

The Air Quality Team

Environment Department
City of London Corporation
PO Box 270
Guildhall

London, EC2P 2EJ

Tel: 020 7332 3030

cityair@cityoflondon.gov.uk

This report will be available on the
City of London Corporation website.

