GLA Planning

Air Quality Neutral and Air Quality Positive London Plan Guidance

Consultation summary report

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1 Introduction

Between 12 November 2021 and 27 February 2022, the Greater London Authority (GLA) carried out a public consultation on the Mayor's draft Air Quality Neutral (AQN) and Air Quality Positive (AQP) guidance. This consultation summary report summarises the responses received during this consultation. The Mayor would like to thank everyone who took part for engaging with the guidance.

2 Who took part?

Through the consultation period there were 282 attendees to virtual events[1] and 2,929 page views of the consultation webpage. In total, 49 consultation responses were received during the consultation. Of the responses, 32 were received through the Bang the Table surveys and 17 via email. This document provides a summary of all the consultation responses received, including both those received via the surveys and emails. The information around who took part in the consultation is taken from information submitted alongside consultation responses. There is limited data available about event attendees and those who responded via email. Therefore, the data on who took part represents only a small sample of those engaged with and does not reflect the true breadth of engagement. Survey respondents were asked whether they were responding as an individual; and, if not, what type of organisation they represented. The respondent types are broken down in the table below:

Respondent type	**Number**	**Percentage**
Individual	7	14%
Business	8	16%
Campaign group	0	0%
Community group	2	4%
Government body or agency	3	6%
Local authority outside London	0	0%
London borough	23	48%
Professional body	6	12%
Total	**49**	**100%**

[1] See Appendix 1 for summary of the engagement events.

2.1 Respondent demographics

Survey respondents were asked equality monitoring information in order to assess how representative respondents were compared to the demographics of Londoners. However, the number of responses received on those questions was limited; therefore, the relevant analysis has not been included in this consultation summary report.

3 Consultation feedback and GLA response

3.1 Summary of Air Quality Positive LPG consultation responses

As part of the engagement on the draft guidance, respondents were asked to submit responses to specific questions. This section also includes responses through other engagement channels such as emailed responses.

Question 1: The guidance requires Air Quality Positive to be applied at the plan-making stage (to masterplans and development briefs that include large-scale development sites that are likely to be subject to an Environmental Impact Assessment) and at the planning application stage (to masterplans and development briefs for large-scale development proposals subject to an Environmental Impact Assessment). In the planning application context, 'large-scale development' refers to planning applications that are referable to the Mayor under the following categories of the Town and Country Planning (Mayor of London) Order 2008 which are detailed in Appendix 1:

> **Category 1A, Category 1B, Category 2C(1)(a)-(f), Category 2C(2), Category 2C(3), Category 2D**

Do you agree with how the guidance is applied to development in London? Please share any comments you have on the routes to applying Air Quality Positive.

Thirteen responses were received to this question via the online survey. A summary of the responses to this question is detailed below:

- Most respondents agree with the approach.
- **Scope** of the policy could be expanded to include: developments not subject to Environmental Impact Assessments (EIAs); those proposed in Air Quality Focus Areas (AQFAs) and other sensitive locations; all developments; additional categories of the Town and Country Planning (Mayor of London) Order 2008; or developments beyond a specific size or floorspace.

GLA response

The **scope** within which AQP should be applied has been established based on the ability of the policy to make a meaningful and relevant impact to local air quality. It is recognised that strategically important/larger developments offer more potential for innovative designs that can actively contribute to improving air quality within/around the development or masterplan area.

The availability of resources has also been considered when determining the scope of this policy. Proposed developments that are subject to EIAs are more likely to have the funding required for specialist expertise to fulfil the requirements of AQP, since advice from the same sources are likely required during the completion of general air quality assessments.

Whilst the LPG provides guidance on the sites for which AQP is considered most relevant, in certain cases local planning authorities may include requirements in their Local Plans for the policy to apply to additional developments – as long as they are appropriate and adequate to meet the London Plan policy.

Question 2: The guidance sets out criteria for when an Air Quality Positive Statement is required. To what extent do you agree or disagree with these criteria?

Nineteen responses were received to this question through the online survey. The majority of respondents stated they 'somewhat agree', while three disagreed.

Response	Number	Percentage
Strongly agree	3	15.8%
Somewhat agree	12	63.2%
Neither agree nor disagree	1	5.3%
Somewhat disagree	2	10.5%
Strongly disagree	1	5.3%
Total	**19**	**100%**

Question 3: Please share any comments you have on when an Air Quality Positive Statement should be required.

Fourteen responses were received to this question via the online survey. A summary of the responses to this question is detailed below:

- Not enough content/details provided in statement, including around **enforcement**.

- AQP should be a material consideration for the **majority of developments**/all major developments.
- Greater degree of flexibility in the **minimum requirements** of statement needed, depending on the design stage of a proposal – i.e. in the early stages.
- **Definition** of AQP should be clearer – for example, should be percentage improvement over **AQN**.
- AQP should reference **Policy SD4 (Central Activities Zone (CAZ))** of the London Plan and provide guidance on the scale of development that should be considered for application.

GLA response

The LPG suggests the minimum requirements of the AQP Statement, but it is ultimately up to the local planning authority to determine if the details presented in the Statement satisfies the criteria outlined in 4.2.1 of the guidance. And while we recognise the potential for enforcement of the AQP Statement to be resource-intensive, the local planning authority can seek to secure planning conditions and/or **enforcement** of section 106/section 278 agreements to ensure the implementation of measures proposed in the Statement.

The scale of the development and resourcing requirements needed to effectively apply an AQP approach means that application of this policy to the **majority of developments** would be impractical. However, in certain cases, local planning authorities may require additional developments in sensitive sites to take an AQP approach by including this requirement in their Local Plans.

The proposed contents of the AQP Statement have been designed to ensure relevant developments demonstrate that they have been designed to maximise benefits to local air quality, and minimise exposure to air pollution. This policy aims to drive consideration of air quality during early design stages, so reducing the **minimum requirements** at that stage would weaken the overall impact of this policy. It is, however, anticipated that the content of the Statements will vary between schemes and ultimately, the local planning authority must be satisfied that the criteria in 4.2.1 of the guidance have been met. This also means that Statements that deviate significantly from those submitted at earlier stages of the application, or produced during masterplanning, will need to be updated to confirm that air quality conditions will be as good as or better than previously anticipated.

A more concise **definition** and description of the policy has been provided in Paragraph 1.1.1 of the updated LPG. AQP has been developed based on the principles set out in section 9.1.3 of the London Plan and is not intended to be a numerical standard, like the **AQN** policy. This means AQP will draw out project-specific design approaches and measures for each development, driving innovation and design solutions, rather than setting predetermined benchmarks or targets.

Policy SD4 (CAZ) of the London Plan is based on the principle of using an AQP approach, where possible, to address issues related to climate change and the

urban heat island effect in the CAZ. A reference to Policy SD4 (CAZ) has been added to Section 2 of the LPG.

Question 4: The Air Quality Positive Statement will be deemed compliant if it demonstrates how the proposal will maximise benefits to air quality and mitigate exposure to air pollution. This should be outlined in a matrix of adopted measures, under four key themes (better design and reducing exposure; building emissions; transport emissions; and innovation and future-proofing). Do you agree or disagree with these four themes under which the different measures could fall within?

Nineteen responses were received to this question through the online survey. The majority of respondents strongly or somewhat agreed, while three disagreed.

Response	Number	Percentage
Strongly agree	9	47.4%
Somewhat agree	6	31.6%
Neither agree nor disagree	1	5.3%
Somewhat disagree	1	5.3%
Strongly disagree	2	10.5%
Total	**19**	**100%**

Question 5: Please share any comments you have about the requirement for development proposals to complete a matrix of adopted measures. If you feel this could be improved, please specify why and how this could change.

Twelve responses were received to this question via the online survey. A summary of the responses to this question is detailed below:

- Statements/measures likely to be non-**binding**.
- More radical solutions needed; the sample matrix should be expanded to include more **examples** and/or made into a toolkit.
- Ambiguity around when a development is deemed AQP, lack of **minimum requirements**; validation checklist should be required comparing how the development delivers specific improvements beyond **AQN** benchmarks.
- Reference to best practice of siting plant **flues** and criteria to assess emissions from these.
- Potential **unintended consequences** from design measures and **limitations of green infrastructure** should be flagged for those completing the matrix.
- Specific reference to the **Urban Greening Factor LPG** should be made to assist with designing of public and green spaces within development.

- Section on transport measures should include more guidance on **delivery and servicing**, and more emphasis should be placed on the use of **public transportation**.
- **Construction** emissions should be considered – as should **green energy**.
- Additional sections on limitations and **future iterations** should be added to ensure information is not lost and remains consistent and **updated** over different phases of development/proposal.

GLA response

The AQP Statement includes a requirement for developers to indicate how measures will be secured – for example, by **binding** conditions; monitoring plans to ensure future milestones are fulfilled; and establishing timescales for delivery of measures. These will be approved, monitored and enforced by local planning authorities.

AQP is meant to be a holistic policy that encourages creative thinking and innovation. The inclusion of a long list of specific **examples** may result in the use of the LPG as a shopping/tick list, which could hinder its full potential. It is therefore the intention for the GLA to collect examples of best practice and innovation in the coming years; and to share these in order to inspire continued generation of ever-bolder and more effective solutions.

Minimum requirements of the AQP Statement have been provided in section 4.2 of the LPG, and developments are considered to be 'AQP' if they are able to demonstrate to the planning authority that the proposal will maximise benefits to air quality and minimise human exposure to air pollution. AQP does not function in the same way as a quantitative policy like **AQN**; a validation check against a specific and detailed list would likely be difficult and ineffective – for example, comparing emissions generated from transport and buildings against proposed measures to improve dispersion and exposure.

Additional guidance on good design principles, location of air intakes, stacks, and **flues**, etc., lie outside the direct scope of AQP as they may be subject to detailed rules through building regulations, the Clean Air Act requirements and other regimes. However the air-quality professionals engaged with the project should be able to provide advice on these matters; and any development-specific issues can be addressed in the "Better design and reducing exposure" section of an AQP statement.

A paragraph has been added to the LPG to caution against **unintended consequences** of designs that are intended to benefit local air quality or reduce exposure, but can potentially lead to issues of, for example, accessibility or wind tunnels.

In addition to a new link to the **Urban Greening Factor LPG**, the guidance signposts to Using Green Infrastructure to Protect People from Air Pollution, which provides further information on the **limitations of green infrastructure** for urban air quality, Furthermore, a link to TfL's Delivery and Servicing Plan Guidance has now been

embedded into the LPG to help developments optimise **delivery and servicing** activities.

AQP supports and encourages proposals to adopt the 'Healthy Streets Approach' and include detailed consideration of how walking, cycling and **public transport** routes are convenient and attractive to use within the development site.

Emissions from **construction** are addressed directly by a separate London Plan policy (SI 1 D) and are therefore outside the scope of AQP. The GLA has retained The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance (SPG) to reduce pollutants from construction and demolition activities, and is committed to updating this particular piece of guidance in the near future.

The use of **green energy** and the energy hierarchy is covered by the GLA's Energy Planning Guidance and Policy SI 2 of the London Plan.

The text in the LPG reflects the expectation that proposals with approved AQP Statements should be **updated** and resubmitted to reflect changes to the application in terms of addressing AQP measures; and to ensure the benefits and principles originally assumed are not worsened or lost during the different phases of development. However, we recognise that the AQP Statement will vary between different schemes, so there is a level of flexibility offered in terms of how this additional information is captured and presented to the local planning authority for review.

Question 6: To what extent do you agree or disagree with the proposed content and structure of the Air Quality Positive Statement?

Nineteen responses were received to this question through the online survey. The majority of respondents strongly or somewhat agreed, while four disagreed.

Response	Number	Percentage
Strongly agree	4	21%
Somewhat agree	10	53%
Neither agree nor disagree	1	5%
Somewhat disagree	3	16%
Strongly disagree	1	5%
Total	**19**	**100%**

Question 7: Do you have any comments or suggestions for how the required content and structure of the Air Quality Positive Statement and/or matrix could be improved?

Thirteen responses were received to this question via the online survey. A summary of the responses is detailed below:

- Include more detailed requirements for what it means to be AQP – for example, it is not possible to improve dispersion if a development is being built on an **empty site**; well-designed spaces only minimise disbenefits as opposed to maximising benefits.
- Too many uses prioritised for **less polluted areas** to minimise exposure – for example, residential areas versus parks and public spaces.
- Addition of a separate section detailing limitations and **variations** of the Statement.
- LPG could benefit from more examples of **best practice**, quantitative tools, assessment methods (i.e. a hierarchy of measures before offsetting is proposed) and references to expert technical guidance across the four themes.
- Costs of implementation/**cost-benefit analysis** should be included in the matrix.
- Clarity needed for purpose of the '**Assessment and Reporting**' column of the matrix.
- AQP Statements for hybrid**/outline applications** should be secured by condition or notice of intent.
- The Statement should refer to **impact** on inequalities.
- Building emissions should specifically include those produced through **commercial cooking**.
- Statement should include reference to **offsite** emissions control, i.e. permitted sites, and how the policy interacts with the agent of change principle.
- The Statement should be integrated into the air quality report or mitigation chapter of the EIA; all air quality documents should be incorporated together (for example, AQP Statement, AQN Assessment, air quality assessment, EIA) instead of **cross-referenced**.

GLA response

It is true that development on **empty sites** will never improve dispersion, and all new development has options that are better or worse for air quality. However, the aim of this policy is to drive developers to seek the best outcomes possible through good design and layout.

Appropriate placement of both residential areas and shared public spaces in **less polluted areas** within a development can be challenging, but it is not an insurmountable challenge. We would expect the development's team of experts to find an appropriate balance between use versus exposure during the design stages.

The GLA anticipates that AQP will become a minimum standard and **best-practice** approach in planning. Future examples of best practice for innovation, assessment, and other solutions across the four main themes will be collated and shared with interested stakeholders as these become available. However, there is a possibility

that the introduction of a hierarchy of measures could hinder the process of encouraging innovative designs.

A requirement for quantification and **cost-benefit analysis** could potentially lead to a preference for the cheapest measures to be selected for implementation. Furthermore, the quantified benefits of many air quality measures are also poorly understood, so the compliance of the AQP Statement and the proposed matrix of measures would depend heavily on the professional judgement of the planning officer in any case, making these extra calculations superfluous.

A footnote has been added to the matrix template to explain the purpose of the '**Assessment and Reporting**' column and the expected content that should be included in it.

It is expected that **outline planning applications** for large-scale developments subject to an EIA must be accompanied by an AQP Statement that details how measures will be secured in subsequent reserved matters applications. It is also expected that the Statement and its matrix should be kept up to date to reflect the specifics of the application.

Text has been added to the LPG signposting to the updated Air Quality Guide for Public Health Professionals, which contains borough-specific information on air-pollution levels, including around sensitive sites such as schools, hospitals and care homes. With this information, developers will be able to account for a development's **impact** on groups that are disproportionately affected by air pollution.

New sections have now been added to the LPG to encourage opportunities to reduce or eliminate $PM_{2.5}$ emissions from **commercial cooking** and the application of the 'agent of change' principle, where preliminary assessments have identified **offsite** nuisances/issues from nearby developments.

If the contents of the AQP Statement are split across different sections of other reports, it is no longer a statement of its own. However, by suggesting that the Statement can signpost to relevant information contained in other documents, the need to provide duplicated information is reduced or removed. It is also an option to submit the AQP Statement as an appendix to the Environmental Statement. Keeping documents separate, but allowing **cross-referencing** where needed, should mean a less onerous and complicated process for the air-quality professionals to undertake, whilst promoting integration of the AQP approach throughout the development process. It should also be noted that air quality assessments (which follow industry standard guidance and methodology, and are not specific to London), AQP and AQN all function differently and address different facets of air quality in planning.

Question 8: To what extent do you agree or disagree with the minimum requirements for an Air Quality Positive Statement to be judged as compliant?

Nineteen responses were received to this question through the online survey. The majority of respondents somewhat agreed while six disagreed.

Response	Number	Percentage
Strongly agree	2	10.5%
Somewhat agree	9	47.4%
Neither agree nor disagree	2	10.5%
Somewhat disagree	4	21.1%
Strongly disagree	2	10.5%
Total	**19**	**100%**

Question 9: Do you have any further comments to make on the guidance?

Thirteen responses were received to this question from the online survey. A summary of the responses is detailed below:

- The guidance implies non-mandatory self-governance with no backstops/**enforcement**.
- **Scale** for application should be broadened to include other smaller/major developments that may not necessarily be subject to EIAs.
- Statement does not provide adequate **evidence** to show improvements or justification for measures rejected by developers.
- Effectiveness of measures should be measured against specific **targets** of reduction.
- It should be made clear that the **Atmospheric Dispersion Modelling System** (**ADMS)** 5 rather than ADMS Roads should be used; and further detail on the modelling process should be included.
- **Modelling** should be undertaken alongside the road network being modelled to be useful; design process dispersion modelling should be required.
- Emphasis should be placed on **monitoring** of measures post-completion; reference to **Breathe London** sensors should be removed due to margin of error of data compared to regulatory monitoring devices.
- Environment Agency's simplified monitoring guidance for **medium combustion plant** may be referenced.
- **Training** for local planning authority colleagues is welcome.
- More technical guidance and **best-practice examples** are welcome.
- Consultation of AQP Statement with the **local community** should be required.
- Not enough specifics around enforcement of measures; **model conditions** should be provided; local planning authorities would welcome opportunities to **control more sources** of air pollution from new major developments, i.e. woodburning.
- Applicants should be required to liaise with **Environmental Health Officers** before the pre-app stage and before dispersion modelling is carried out.

- **Hyperlinks** to the London Plan should be embedded into guidance where appropriate, along with links to external resources.
- AQP should be referenced in **design guidance** to inform non-air-quality specialists.
- Reference to **transitional** provisions could be included at masterplanning level.

GLA response

The draft guidance explicitly states that measures that are fundamental to the design of a development are expected to be secured through legal and binding agreements or conditions, and **enforced** where necessary. However, additional text has now also been added to support the use of conditions and legal agreements to secure measures that are relevant to the monitoring of the application, or those seeking further details that may potentially change. Meanwhile, appropriate monitoring methods and requirements can be secured in the 'Implementation and monitoring' section of the Statement.

It is expected that large project teams will be established early on for **large-scale** developments that are likely subject to EIAs and will be able to provide sufficient expertise to develop and test ideas during the design process. It will also likely be possible for these large-scale developments to align AQP approaches with related area-wide policies, such as Healthy Streets and energy masterplanning, and seek opportunities to go beyond the simple requirements of London Plan Policy SI1.

The AQP Statement is expected to capture **evidence** of why specific measures have been identified and how they will be implemented and monitored. There is also an expectation that evidence will be provided to support the decisions to implement these measures. Similarly, justification and evidence to support circumstances where measures have not been implemented, but could reasonably be expected to be, will also be required.

It should be noted that AQP is meant to be a holistic approach to encourage creative thinking and innovation; and that it does not function as a quantitative policy, as with AQN. Its purpose goes beyond emissions reductions alone. As such, requiring calculated examples of emissions reductions against specific **targets** may lead to results drawn from hypothetical bases, bringing about similar conclusions to those currently proposed. Moreover, the quantitative benefits of many measures may not be well known at this time, especially for new and innovative ones, so it would be difficult to stipulate specific targets against which each one should be compared. The inclusion of targets and thresholds for measures where a firm evidence base is not available – for example, an improvement of x per cent on baseline NO_2 concentrations for an area – would likely result in unachievable targets. We also know of designs that are beneficial, but are not quantifiable – for example, measures that drive positive behavioural change such as the installation of bike shelters to promote active travel.

AQP is one policy amongst a package of others found in the London Environment Strategy, the London Plan and the Mayor's Transport Strategy that are in place to

control air pollution in the city. As such, the suitability of evidence provided in the Statement will be down to the professional judgement of the planning officer.

Specific versions of the **ADMS** and other modelling programmes have not been referenced in the guidance, as it is generally assumed that the **modelling** would be undertaken by air-quality professionals who should be staying abreast of the appropriate tools and modelling methods to use. A similar assumption is made in terms of **monitoring** the impact of implemented measures, which will rely on professional standards and the available options. The specific reference to **Breathe London**, however, has now been removed and replaced with a broader reference to low-cost indicative monitoring options.

A reference to the Environment Agency's guidance for monitoring emissions from **medium combustion plant** has been included to assist with those developing emission testing programmes for combustion appliances.

Depending on the areas for which **training** is requested, and on available resources, there may be scope for workshops to be delivered in the future.

The GLA intends to create a database of **best-practice examples** and case studies across the four themes within the AQP approach, which will be shared with interested stakeholders as these become available.

Local authorities and developers may choose to engage with **local communities** and consult on a new development's AQP Statement if they wish, and the GLA would not oppose this process. Whilst the guidance states that the 'Implementation and monitoring' section of the AQP Statement should detail any consultation stakeholders that have informed the AQP approach, it is not a specific requirement of the policy for engagement with local communities to be undertaken.

It is difficult to include specific methods of enforcement, including **model conditions**, in the LPG without first understanding what measures are being proposed for implementation. However, the matrix includes a section for further information around how measures will be secured, and the implementation and monitoring requirements should detail how binding agreements will be fulfilled before conditions are discharged.

Additional text to support local authorities wishing to propose measures and approaches to developers have now been included, so that they may be able to **control more sources** of air pollution. It should be noted that AQP is one policy within a package of others aimed at improving air quality in London. Therefore, whilst this policy alone cannot address all sources of pollution, there are others found within the Mayor's Transport Strategy, the London Environment Strategy and the London Plan that can support this aim. The AQN policy, for example, restricts the use of solid fuels such as wood for primary and secondary heating; and any new development that uses solid and liquid biomass/non-biomass appliances would not be AQN.

Text has been added to suggest that discussions with **Environmental Health Officers** could be helpful to identify local pollution sources, which could influence designs to benefit air quality.

Additional **hyperlinks** have been added to the LPG to help users navigate between relevant London Plan policies and GLA/TfL guidance documents. However, a decision has been made to exclude hyperlinks to external information as these may become broken over time and the GLA has no control and ability to fix them.

AQP is referenced in the **design guidance**, Optimising site capacity – A design-led approach LPG and Housing Design Standards LPG.

The LPG's text has been modified to include the suggestion that, where full build-out will take many years, it may also be necessary to consider intermediate and **transitional** phases of infrastructure delivery and the implementation of measures to prevent negative impacts to air quality in the short term.

3.2 Summary of Air Quality Neutral LPG consultation responses

As part of the engagement on the draft guidance, respondents were asked to submit responses to specific questions. This section also includes responses through other engagement channels, such as emailed responses.

Question 1: To what extent do you agree or disagree with the following sentence? 'Having the Air Quality Neutral guidance will help to improve air quality in London.'

Thirteen responses were received to this question from the online survey; and 77 per cent of respondents strongly or somewhat agreed that having the AQN guidance will help to improve air quality in London.

Response	Number	Percentage
Strongly agree	5	38.5%
Somewhat agree	5	38.5%
Neither agree nor disagree	0	0%
Somewhat disagree	2	15.4%
Strongly disagree	1	7.7%
Total	**13**	**100%**

Question 2: Please tell us why you answered the way you did to the previous question.

N.B. This question refers to question 1: 'To what extent do you agree or disagree with the following sentence? "Having the Air Quality Neutral guidance will help to improve air quality in London."'

Thirteen online consultation respondents provided an answer to this question. A summary of the responses, including responses submitted by emails and online/in-person events, are shown below:

- Benchmarks are an effective tool and useful measure of AQN and will drive a reduction in emissions.
- Guidance will reduce air pollution from new developments, along with associated emissions.
- AQN is clear and user-friendly. It is useful to have clear guidance.
- **Scope** of AQN is limited, does not improve air quality, and does not drive change; it should be clear that AQN prevents erosion of baseline air-quality conditions.
- AQN should include more stringent benchmarks for **sensitive locations**.
- Option of **offsetting** could lead to mitigation avoidance.
- Needs to be clearer that AQN is the minimum standard.
- There should be no **exclusions** for major developments, even if there are no new emissions sources.

GLA response

The **scope** of the policy is aimed at preventing the gradual degradation of air quality through the sum of many smaller contributions by individual developments to air pollution. It is one policy amongst a package of others found in the London Environment Strategy, London Plan and Mayor's Transport Strategy to improve the air quality in London more broadly.

We have made the decision to maintain the broad applicability of the benchmarks found in the policy, however local authorities may choose to implement more stringent benchmarks in their Local Plans provided they are appropriate and do not conflict with the aim of this policy and the London Plan.

Offsetting payments have been provided as a final option, at the discretion of the local planning authority, for situations where it is not possible to identify or agree appropriate and adequate mitigation measures. However, offsetting payments are deliberately high and prohibitive to counter the risk of developers using this option to avoid mitigation.

Although AQN allows for **exclusions** from a detailed calculation for certain major developments, air quality assessments still need to be carried out for these types of developments as per the London Plan requirements where AQN would still need to be addressed.

Question 3: To what extent do you agree or disagree with the methodology set out for meeting the Building Emissions Benchmarks?

Thirteen responses were received to this question from the online survey, 76 per cent of respondents strongly or somewhat agreed with the methodology set out for meeting the Building Emissions Benchmarks (BEBs).

Response	Number	Percentage
Strongly agree	1	7.7%
Somewhat agree	8	61.5%
Neither agree nor disagree	4	23.1%
Somewhat disagree	1	7.7%
Strongly disagree	0	0%
Total	**13**	**100%**

Question 4: Please share any comments you have on the Building Emissions Benchmarks, including your views about the benchmark emissions rate for Particulate Matter being set at zero.

Eleven online consultation respondents provided an answer to this question. Many respondents indicated support for the concept of the BEBs and supported the benchmark emissions rate for particulate matter to be set at zero. A summary of the responses is shown below:

- Agreement in principle with benchmark emissions rate for particulate matter being set at zero and the concept behind BEBs.
- BEBs should not include standby **generators**; evidence needed for allowance of less than 50 hours of testing.
- Scope of the BEBs should be wider, i.e., to include **woodburning**.
- Liquid and solid fuels from biomass can create pollution but have benefits for **circular economy** and carbon; Table 3.5 needs updating as lacks generic emission rates for these sources.
- Emissions from regular **temporary events/temporary uses** should not be excluded; definition for temporary events needed.
- BEBs for NO_x are provided for different **land uses** that do not match existing class coding under the Town and Country Planning Order 1987.
- Would be better to set emission standards for the **equipment** and exclude land use.
- **Gas combustion** still produces particulate matter; therefore the benchmark for this pollutant cannot be set at zero.
- Particulate matter from **commercial catering** should be tackled.
- BEB for **hotels** should be lower.

- Exception for developments using **wasted** heat from existing heat network should be removed.
- Guidance should be clear that **non-biomass** solid and liquid fuels are not AQN.
- BEBs for additional **combustion plant technology**/technology types should be provided.
- BEBs should be **technology-neutral**.
- Emission rates for **boilers with selective catalytic reduction (SCR)** are not consistent with figures found in the GLA's SPG and many local authorities' Local Air Quality Management (LAQM) plans.

GLA response

We recognise the potential use of **generators** for emergency uses and operational testing (less than 50 hours per year as per Government guidance on specified generator and medium combustion plant permitting) but expect emissions from uses other than those stated to be included in the AQN calculations. Additional text has been added to the LPG to suggest that, where appropriate, local authorities could impose more restrictive benchmarks as long as they are consistent with the safe operation of the equipment.

AQN does not permit the use of solid and liquid fuelled appliances, including **woodburning**, for primary or secondary heating due to the particulate matter emissions produced by these methods. The benchmark emission rate for particulate matter is zero, so the use of these appliances for the purposes stated would mean the development is not AQN. This is the reason that there are no benchmarks for solid and liquid fuels included in the BEBs.

We consider that the burning of biomass does not support a **circular economy** since the material is burnt. A circular economy keeps materials in use for as long as possible.

AQN benchmarks are assessed against annual emissions, so it is unlikely that this policy could be applied effectively against **temporary events**. However, there are policies in place that would be more effective in controlling emissions from these sources, e.g., London's Low Emissions Zone for Non-Road Mobile Machinery; local licensing, etc. A footnote has also been added to the LPG to define temporary events. **Temporary uses** and structures, however, should be seeking to achieve the benchmarks. Unlike events, temporary uses can be in place for long periods of time and thus should be encouraged to meet the benchmarks.

The benchmarks have been based on **land uses** as opposed to use classes in order to make the guidance simpler and more user-friendly. Where land uses have been combined, this was done on the basis of similar fuel energy densities or travel patterns and, as such, may not exactly reflect class coding under the Town and Country Planning (Use Class) Order 1987 (as amended).

The current methodology reflects our understanding that different land uses, **equipment** and technologies will likely influence the levels of emissions produced from heating and power and it has been applied to the BEBs outlined in the LPG.

Particulate matter emissions from domestic **gas combustion** are not well enough understood or routinely measured as part of type-testing for appliances. For this reason we are unable to set an evidence-based benchmark for these emissions.

Emissions from **commercial catering** do need to be addressed and the GLA will review options to do this in future. However, they currently lie outside the scope of this policy. Inclusion of a benchmark for commercial catering could also, potentially, lead to the inclusion of emissions from domestic cooking appliances; we currently do not have an evidence base for either against which we can set informed benchmarks.

Hotels are very energy-intensive developments, and efforts to reduce the BEB without evidence on reduced energy use could create a risk potentially rendering most future development of this type non-compliant.

The LPG states that connection to a district heat network does not mean the development is automatically considered to be AQN, but where the heat is genuinely from an existing source that would otherwise be **wasted**, the emission rate is zero. Removing this exception has the potential to: fail to reduce emissions from these sources; and continue to allow for the creation of unproductive pollution from them. Additional text has been added to the LPG to explain that *any new* heat sources will require AQN calculations.

Text in guidance modified to clarify that both biomass and **non-biomass** liquid and solid fuels are not AQN due to the particulate matter that they emit, in addition to NOx.

BEBs for other **combustion plant technology** are not included due to their PM emissions, for which the benchmark is set at zero. Furthermore, other technology types are not directly supported in Policy SI 3 of the London Plan.

It would not be possible to set **technology-neutral** BEBs because doing so would either effectively outlaw other sources that are needed in the transition to heat networks, or allow the installation of higher-pollution boilers.

The rates for **boilers with SCR** found in the model SPG previously published by the GLA as part of the London LAQM (LLAQM) regime has now been withdrawn.

Question 5: The guidance sets out the methodology for calculating generic predicted building emissions where a combustion source is not known. Please share any comments you have regarding this process.

Seven online consultation respondents provided an answer to this question. A summary of the responses is shown below:

- Agreement in principle for calculating generic predicting building emissions and the methodology.
- Guidance required for circumstance where **generic emission rates** are different to the actual emission rates of the installed. This may change the outcome of whether the proposed development is AQN or not; methodology should assume worst-case scenario when developers have not disclosed combustion source; generic values used by the developer need to be secured through a condition that require such emissions rates to be met.
- Clarification requested for how generic rates are calculated; supporting **research** should be published.

GLA response

Text has been added to clarify that generic emission rates from Table 3.5 can be used in an AQN Assessment when subject to a condition that ensures that the final units will not produce emissions which exceed those figures.

Whilst **generic emissions rates** can be used when a developer is not yet aware of/unable to disclose the specific units that will be installed in a development, the appropriate BEB will still need to be met in order for a development to be deemed AQN. This is ultimately a matter for the planning authority to require the details before making a planning decision. In circumstances where this is not possible, the procedure for an outline application should be followed.

The **research** behind the updated benchmarks and generic emission rates has been published on London.gov.uk here.

Question 6: The guidance sets out the process of gathering data on energy usage and emissions rates for combustion sources. Please share any comments you have regarding this process and suggestions for how it can be improved.

Seven online consultation respondents provided an answer to this question. Many respondents indicated support for the process of gathering data on energy use and emission rates for combustion sources. A summary of the responses is shown below:

- Agree in principle with the process.
- Why **heat networks** don't have an estimated combustion rate; and heat pumps set at zero.
- Uncertainty if emissions from the **grid** should be included in the BEB. It is included in table 3.3, but there is an emission rate of zero at point of use.
- LPG should state that running diesel **generators** to feed into the grid should be discouraged due to emissions.
- **Combustion-based heating** should not be allowed.
- Guidance to facilitate **estimation of energy use** should be included.

GLA response

Fully heat-pump-driven **heat networks** do not produce NO_x emissions, which is why the NO_x emission rate is set at zero. For more complex networks, there are no generic emissions available because they vary according to size; further details should be sought from the energy supply company.

Additional text has been added to the LPG to clarify that the NO_x emissions rate for **grid** electricity should be assumed to be zero. This is because emissions from electricity generation at power stations will be dealt with in local permissions for those facilities.

Emissions from **generators** that are not being used for emergency, life-saving or operational testing, are included in the AQN calculations. The default position is that these would not be considered AQN as they exceed the particulate matter benchmark. It is thus the intention of the policy to promote the use of more energy-efficient technologies.

It is currently not GLA policy to exclude **combustion-based heating** sources.

Additional footnote added to reference GLA's Energy Assessment Guidance to support robust **estimation of energy use**.

Question 7: The guidance sets out generic emissions rates for combustion technologies where specific units have not yet been selected. Please share any comments you have regarding the emission rates or how the process can be improved.

Seven online consultation respondents provided an answer to this question. A summary of the responses is shown below:

- Agree in principle with the process.
- **Methodology** of the calculations and conditions under which the benchmarks are calculated need to be provided. For **mg/kWh** it is very difficult to find out the correct basis for the calculation. For mg/Nm^3 the guidance needs to define what is meant by **Nm^3** (i.e. what are the parameters for normalisation – N).
- **Minor developments** can be assumed to meet the benchmarks if the system is a gas boiler meeting the NO_x emission rate of 40 mg/kWh. Does this apply to a development with multiple boilers that meet this standard?

GLA response

The research and **methodology** behind the updated benchmarks has been published on London.gov.uk here and the basis for calculation for **mg/kWh** can be found in the information supplied by the manufacturer.

A footnote has been added to the LPG to set the parameters for normalisation, the 'N' in **Nm^3**.

Additional text has been added to the LPG to clarify that a **minor development** with a new heating system can be deemed AQN if it consists of one or more individual gas boilers with NO_x emissions rated at less than 40 mg/kWh.

Question 8: To what extent do you agree or disagree with the methodology set out for meeting the Transport Emissions Benchmark?

Thirteen responses were received to this question from the online survey. Under a quarter of respondents of the online survey disagreed with the methodology set out for meeting the Transport Emissions Benchmark (TEB).

Response	Number	Percentage
Strongly agree	1	7.7%
Somewhat agree	7	53.8%
Neither agree nor disagree	2	15.4%
Somewhat disagree	3	23.1%
Strongly disagree	0	0%
Total	**13**	**100%**

Question 9: Do you have any additional comments on the Transport Emissions Benchmark, including the use of TRICS data to calculate the new proposed benchmarks? If you disagree with the use of TRICS data, please specify what data the Transport Emissions Benchmarks should be based on.

Ten online consultation respondents provided an answer to this question from the online survey. These responses have been combined with those received by email. The most frequent comment was that car-free developments should not be excluded from transport emission assessments. A summary of the responses is shown below:

- Too many elements are out of scope, reducing impact on central London sites. For example, it excludes deliveries, deliveries from depots, **HGV** vehicles, servicing, petrol scooters and emissions from non-occupiers. It is only aimed at large car parking sites, which are less common in central London. “Car-free developments” should not be excluded from transport emission assessment.
- Agree with the methodology in principle.
- Unclear why **offices/light industrial** should generate more trips in the CAZ than in inner London. If residential development generates more trips in inner London than in the CAZ, the office/light industrial trip rates should follow.
- Query regarding how **Public Transport Accessibility Level (PTAL)** ratings impact on air-quality emissions.

- If additional transport is included in wider air quality impact assessments, developers should still be required to provide this information in one **single document**.
- Additional guidance from the GLA requested on whether **local authorities** may enforce the CAZ TEBs in areas that fall outside the formal boundaries of the CAZ.
- The definition of transport benchmarks should be based on the desirable trip generation to be achieved to reach sustainable development, as opposed to using the "as is" situation as reported in Trip Rate Assessment Valid for London (TRAVL)[2] survey results as acceptable; trip rates should be based on **sustainability principles**, not TRICS/TRAVL.
- AQN requirements are based on improving air quality, not on keeping current hotspot locations. Therefore, the use of "**achievable** benchmarks" is not considered strict enough to support the policy.
- Trip rates too low for **logistics**, service and distribution centres; and not consistent with TRICS/TRAVL.
- Request for the GLA to continually **review** and improve the stringency and scope of these benchmarks, to reflect best practice, emerging issues and pollutants.
- Further detail requested for methodology behind emission factors found in **Table 5.3**.
- Use of **TRICS**/TRAVL data is circular; developments would not exceed benchmarks if the same data were used to identify trip rates.
- Difference of trip rates between CAZ and outer London are too high; trip rates for hotels too high.
- Do trip rates include **public transport**?
- Unclear if TEB only includes **private vehicles**.
- Unclear if trip rates are based on **one-way** or two-way trips.

GLA response

AQN focuses on minimising emissions from transport that can be controlled via the planning process, for example, limiting parking available for staff and customers to reduce the number of trips generated by private vehicles and should align with the transport policies of the London Plan. Emissions generated by other sources such as **HGVs**, servicing and delivery, will be assessed in an air quality assessment, which reviews the air quality impacts of a development as a whole.

The updated benchmarks are based on TRICS data that was available at the time the research was commissioned and should reflect travel patterns to the relevant land uses. It should be noted that trip rates for **office/light industrial** land use are based on trips per m^2; and for residential use, trips per dwelling.

[2] The TRAVL was used to set TEBs in the previous AQN guidance. TRAVL has now been merged with the national TRICS database, but some responses to the consultation used the old name.

The impact and inclusion of **PTALs** can be complicated because they can change regularly and, in fact, the new development itself can have an impact on a local area's PTAL. The GLA will consider options to include PTAL ratings within the TEBs in future updates of the LPG.

Whether the AQN Assessment is presented within a **single document**, for example, within the air quality assessment, or separately, is a matter of preference. We feel that cross-referencing between relevant documents is also an acceptable approach to take. It should be noted that not all types of new developments require air quality assessments, so AQN Assessments would need to be presented as a separate document in those occasions in any case.

Local authorities may set tighter TEBs for AQFAs, for example, as long as they are appropriate and adequate to meet the requirements of this policy and the London Plan.

Basing trip rates on **sustainability principles** and not TRICS would mean a fundamental change in the policy, and would lead to difficulties in evidencing benchmark numbers.

The AQN benchmarks are meant to be challenging, but **achievable**. An unachievable policy would not only be unfair, it could become one that forces offsetting as an outcome, which is not its aim or purpose.

The GLA has revisited the data used to inform the TEBs proposed for the **logistics** industry in the draft LPG; and has revised them in order to support the policy's aim to set realistic benchmarks that are both challenging *and* achievable. The new Trip Rate Benchmarks for the 'Industrial' and 'Storage and distribution' uses in inner and outer London have been sense-checked against real-world examples; and have been adjusted to the following:

Land use	Annual trips per	CAZ Trip Rate Benchmark	Inner London (excluding CAZ) Trip Rate Benchmark	Outer London Trip Rate Benchmark
Industrial	m^2	0	5.6	6.5
Storage and distribution	m^2	0	5.5	6.5

These benchmarks, as with others found in the LPG, will be kept under **review** and updated in line with technological and commercial advances.

The 2016 London Atmospheric Emissions Inventory (LAEI) informed the emission factors found in **Table 5.3**. The LAEI provides an estimate of the total emissions from all passenger cars in central, inner and outer London in 2016. These emissions are based on a detailed inventory of link speeds and include a provision for cold-starts. The LAEI also provides the total vehicle-kilometres driven by cars in 2016 in each area. The approach has been to divide the total emissions by the total vehicle-kilometres; thus providing the average assumed emissions per vehicle-kilometre in each area in 2016.

TRICS allows people to estimate trip generation on a “per parking space” basis. The benchmark can be exceeded if there is excessive parking on site. Conversely, the benchmark can be met if enforceable measures are in place to reduce journeys. Using TRICS, therefore, provides a consistent method for understanding the impacts of the site on transport emissions.

The TEBs reflect the latest evidence that we had available at the time external research was commissioned.

The trip rates do not include **public transport**. The GLA and TfL are working towards zero-emission public transport, so these trips are not relevant within the scope of AQN.

The TEBs only account for **private cars/vehicles**. The TEBs do not include operational trips generated by deliveries and servicing, taxis or heavy vehicle movements from non-occupiers. Extra text has been added to the LPG to stress that these types of trips should be excluded from TEB calculations, as they will be captured in the air quality assessment.

The TEBs are defined as the predicted number of single trips per m^2 of floorspace or dwelling; and each **one-way** trip is counted. This means an outbound and return journey to and from a location is counted as two trips. Additional text has been added to the LPG to clarify this.

Question 10: The BEB and TEB in the guidance are defined for different land uses. To what extent do you agree or disagree with the following sentence? ‘The way the land use categories have been grouped and defined are clear and easy to apply.’

Thirteen responses were received to this question from the online survey; 61 per cent of responses indicated agreement that the way land use categories were grouped and defined was clear and easy to apply.

Response	Number	Percentage
Strongly agree	3	23.1%
Somewhat agree	5	38.5%
Neither agree nor disagree	1	7.7%
Somewhat disagree	3	23.1%
Strongly disagree	1	7.7%
Total	**13**	**100%**

Question 11: The new Class E was introduced under the Town and Country Planning (Use Classes) (Amendment) (England) Regulations 2020 following

the development of the guidance. As a result, separate use classes for commercial uses, including retail and offices, have now been replaced by use Class E. Please comment on whether you think this guidance takes the right approach to calculating the Building Emissions Benchmark for uses within Class E based on the intended and anticipated use of the land under this category. If you think this is not the right approach, please detail how this approach should be modified.

Nine online consultation responses were received for this question. The majority (five) of respondents indicated that they agreed in principle with the approach. A summary of responses is detailed below.

- Agree in principle with the approach.
- Further differentiation is needed to accommodate different trip rates/emissions associated with different use classes within **class E**.
- Additional guidance required on sub-categories of **land use that are not included in Table 3.1**.
- The **official land use classes** should be added to the table, as per planning portal.

GLA response

The text in the LPG has been amended to further clarify that, where the use class/land use type is not specified in a development proposal, it is up to the discretion of the local planning authority to decide and use the most relevant benchmarks (given the information submitted at the planning application stage). Alternatively, where use **class E** has been specified without further detail, the land uses with the strictest emissions/trip rates from Tables 3.1 and 4.1 should be used as the default worst-case scenarios. Similarly, in situations where a **land use is not included in Table 3.1**, the final decision regarding which benchmark should be used will rest with the professional judgement of the planning authority.

Official land use classes have not been added to the table because the guidance is meant to be more user-friendly, with less reference to technical language and we have made the decision to continue with this format. Furthermore, some land uses within use classes may have been split and grouped with others as they share similar fuel energy densities or travel patterns.

Question 12: The new Class E was introduced under the Town and Country Planning (Use Classes) (Amendment) (England) Regulations 2020 following the development of the guidance. As a result, the guidance requires the benchmark for office/light industrial to be used for use Class E (or where separate uses within use Class E are not specified). Please comment on whether you think this guidance takes the right approach to calculating the benchmark trip rates for uses within Class E. If you think this is not the right approach, please detail how this approach should be modified.

Eight online consultation responses were received for this question. Whilst many agreed with the approach in general, several respondents sought the application of

the worst-case benchmark if there was no more specific detail available than use class E, and a clarification on the approach taken. A summary of the responses is detailed below:

- Agree in principle with the approach.
- Worst-case use should be applied if the use of class E is **not known**; there should be flexibility for local planning authorities to determine the most likely use of the Class E floorspace, or if land use is not specified at the planning application stage/outline application stage.
- Approach taken in Table 4.1 (TEB trip rates) contradicts the approach taken in Table 3.1, as in this case where the separate Class E uses are not specified the benchmark for office/light industrial is to be used.
- An application relying on an assessment done on the basis that it is office/light industrial, should attract a condition **limiting use** to office/light industrial, and requiring a new air quality assessment if they implement any use other than office/light industrial.
- **Doctors' surgeries** should not be included in the same land use as schools and nurseries, but should be a separate category, with different benchmark trip rates.
- Unclear why the retail land use has been broken down to two separate land uses: **superstore** and convenience.

GLA response

The LPG has been amended to provide additional clarity that where the use class/land use type is **not known**/not specified in a development proposal, it is up to the discretion of the local planning authority to decide and use the most relevant Trip Rate Benchmark. Where use class E has been specified without further detail, the benchmark for office/light industrial should be used for calculating the TEB; and the benchmark for retail should be used for calculating the BEB, as these land uses reflect the 'worst-case scenarios' for both benchmarks. This means the strictest benchmarks applicable to use class E would apply.

It may not always be possible to restrict changes within use class E, **limiting use** in a blanket way via conditions – for example, by not allowing a development to change from a shop to a café. However, in the event that there is a restriction of use within a class E, the relevant benchmarks would still need to be applied and permission would need to be sought from the local planning authority to approve any subsequent changes. Additional text has been added to clarify that where the use within class E is unrestricted the tightest benchmark should be applied to prevent excess emissions.

The updated Trip Rate Benchmarks are based on external research commissioned by the GLA and the consultants would have considered the latest data/travel patterns available to them at the time. The benchmarks proposed were based on use classes and use class D1 includes schools, **doctors' surgeries** and nurseries. Similarly, the consultants made the distinction between **superstores** and

convenience stores when analysing the TRICS data because it was the sensible approach to take based on available data.

Question 13: To what extent do you agree or disagree with the methodologies set out for mitigation and offsetting, including the switch of focus from PM_{10} to $PM_{2.5}$?

Thirteen responses were received to this question from the online survey. Over 75 per cent of respondents agreed strongly or somewhat with the methodologies set out for mitigation and offsetting.

Response	Number	Percentage
Strongly agree	7	53.8%
Somewhat agree	3	23.1%
Neither agree nor disagree	2	15.4%
Somewhat disagree	1	7.7%
Strongly disagree	0	0%
Total	**13**	**100%**

Question 14: Do you have any comments on the mitigation measures and offsetting calculations?

Nine responses were received to this question from the online survey. Numerous respondents agreed with the mitigation measures and the switch in focus from PM_{10} to $PM_{2.5}$. A summary of responses is given below:

- Agree in principle with the mitigation measures and a switch in focus from PM_{10} to $PM_{2.5}$.
- Request for an indicative **list of mitigation measures** for offsetting excess building and transport emissions.
- Further guidance is needed on the methodology for the **offsetting** including worked example; details on how the offsetting payments should be made and for what measures.
- The text should be amended to make sure **mitigation** measures are specific to specific land uses.
- Firmer language needed to encourage **redesign** before mitigation.
- Offsetting should be considered a measure of **last resort**, and the guidance wording should be strengthened to make this more explicit; development should be refused if benchmarks not met; guidance is not clear about the relationship between achieving the standards and the necessary amount of mitigation.

- It is not clear how Table 5.1 and the offsetting calculation is linked to **Tables 5.2 and 5.3** and relate to the calculation for offsetting for TEBs shortfall in a development.
- Offsetting should be updated to reflect the DEFRA Emission Factor Toolkit (**EFT**); using fixed emission factors over a 30-year period does not show developers the benefits of adopting cleaner fleets.
- NO_x benchmarks needed for offsetting calculations on **solid/liquid fuels**.
- Further guidance needed for offsetting building emissions of **particulate matter**.
- Additional guidance needed for how to offset emissions from **mixed-use** developments.
- More emphasis should be placed on **post-completion monitoring** and quantification of mitigation.

GLA response

A general indicative **list of mitigative measures** has not been included as mitigation should be locally specific to produce effective outcomes.

A further example of **offsetting** calculations has been added to the LPG in addition to a footnote simplifying the offsetting formula. Text has also been added to state that the expectation is for the offsetting payment to be used to improve local air quality and how it could be collected.

The LPG states that, where a development cannot meet the benchmarks, agreement can be sought with the local planning authority to secure **mitigation** measures, with a preference for on-site measures in accordance with Part E of Policy SI 1. Mitigation measures should exceed the minimum requirements in the London Plan policies.

The guidance is clear that **redesign** should be the first step taken if a development fails to meet one or both benchmarks, after which mitigation can be an option. Further guidance on the amount of mitigation required is outlined in 5.1.3 and 5.1.4. Offsetting is presented as a **last resort** option at the discretion of the local planning authority and should be reserved only for situations when it is not possible to identify or agree appropriate and adequate mitigation measures and to help developers compensate for emissions that cannot be avoided. The option of offsetting cannot be removed completely. Paragraph 9.1.21 of the London Plan also recognises that offsetting payments may be an option for developments that are unable to meet AQN standards.

Paragraph 5.3.1. in the LPG explains the role of **Tables 5.2 and 5.3** in the offsetting calculations and the guidance signposts to a worked-out example in Appendix 1.

Modifying the offsetting methodology to reflect the **EFT** would reduce the current incentive structure in place to motivate developers to redesign or mitigate before agreeing an offsetting payment option with the local planning authority. The 30-year time frame is typical for carbon emissions, which is the assumed lifetime of the development's services. Similarly, whilst the grid is decarbonising, there is no discount offered for carbon offset payments.

Additional text has been added to the LPG to clarify that, for the purposes of offsetting, any NO_x emissions from **solid/liquid** fuels will be assumed to have a benchmark of zero.

Heating technologies that emit **particulate matter** are not permitted under this policy; therefore the benchmark for this pollutant is set at zero. The same benchmark can be used for AQN calculations and offsetting.

Text has been modified to clarify that, for **mixed-use** developments, the highest-category damage cost applicable to any part of the development should be used to calculate the offsetting payment.

Post-completion monitoring can be secured through a condition to ensure/evidence that specific outcomes have been achieved from mitigative measures.

Question 15: Do you have any further comments to make on the guidance?

Nine responses were received to this question from the online survey. A summary of the responses is detailed below:

- Are the GLA planning any **training** or information sessions on the AQP/AQN guidance for development management colleagues or developers?
- GLA should provide a **model-planning condition** to require submission of the appliance details.
- The BEBs should include both **PM_{10}** and $PM_{2.5}$ emissions.
- "Emergency and **life-saving power**" should be clearly defined within the AQN guidance to avoid unnecessary emissions from over-sized generators.
- Clarification on **phased developments**, and when applications for amendments to the approved scheme should trigger reassessment is requested.
- No definition is provided within this guidance of what a "**minor development**" is and, therefore, when the simplified procedures for assessment should be used.
- Would like endorsement from **DEFRA** and departments responsible for physical planning for London and beyond, their full backing in cases of difficulty will be crucial.
- For minor applications, the LPG should require a clear **statement** on the AQN status of the application in the planning statement or Design & Access document.
- Diesel-fuelled backup generators should be not neutral by default, **zero-emission alternatives** should be proposed.
- Benchmarks for all **backup generators** must be provided in the LPG and conformed with.
- Text should be amended to reflect the need to take **location** into account, particularly hot spot/sensitive locations. The benchmarks need to also be consistent with the LAQM endeavours to improve air quality within problematic areas.

- Guidance should explain **relationship** between AQN and AQP, i.e. one is a minimum standard and AQP pushes development beyond this.
- GLA should **monitor** application of the policy.
- Text should be repeated in relevant sections of the LPG to help users **navigate** through the guidance.
- GLA should provide reference to **Heat Network Priority Areas** and links to TRAVL system and TRICS.
- Clarity needed to confirm if solid/liquid fuels include **non-biomass** sources
- A full AQN Assessment should be required for minor developments in **Air Quality Management Areas (AQMAs)**.
- Clarification needed on relationship between AQN, permitted installations and **permitting**.

GLA response

Depending on resources available, there may be scope for **training** workshops to be delivered in the future, so best-practice can be shared, and **model-planning conditions** can be discussed.

In 2018, the London Environment Strategy introduced a new focus on fine particulate matter pollution ($PM_{2.5}$) as opposed to the coarser fraction (**PM_{10}**). This change of emphasis is also reflected in the London Plan, which in turn means that we are proposing similar changes to the AQN benchmarks. It should be noted that the benchmark emission rate for particulate matter is zero. Any development that uses solid or liquid fuels for primary or secondary heating will therefore not be AQN.

There is no formal definition for 'emergency and **life-saving**' power, but it is generally considered to include emergency and standby systems that provide backup power to fire/life-safety systems and critical equipment. It would be difficult to define exactly what equipment should be included due to the complexities of how some of the systems work or are interlinked – for example, a data centre uninterruptable power supply might support the cloud software running the systems that support hospital infrastructure.

Additional text has been added to indicate points at which a **phased development** should be reassessed against the AQN benchmarks.

The LPG text has been modified to provide a clearer definition for '**minor development**'.

The GLA will continue to promote our air quality policies to **DEFRA**, but it will be equally important for stakeholders and supporters of AQN and AQP to endorse this policy for use nationwide.

The LPG is clear that all developments, unless specifically excluded, must meet the AQN benchmarks and carry out an AQN Assessment. We are allowing flexibility in terms of how this information is being presented for minor development, i.e. not as a specific type of **statement**, in order to impose proportional assessment/resource implications.

Endorsement of **zero-emission** alternatives to diesel generators sits outside the scope of this LPG's template/style. However, we are supportive of these alternative sources and the push for zero-emission developments and will promote these outsides of the guidance for example, on the LPG's landing page.

It is expected that the use of **backup generators** for anything other than an emergency and operational testing would be prevented by planning condition. The NO_x and particulate matter emissions from these sources other than for an emergency must be included in AQN calculations. Where appropriate, boroughs could seek a more restrictive condition for these sources, if that would be consistent with the safe operation of the generators.

Local authorities may wish to encourage stricter benchmarks locally, for example, a development's **location** in a pollution hotspot, but evidence will need to be available to support this approach within their local plan examinations.

An explanation of the **relationship** between AQN and AQP and how they work together will be provided on the london.gov.uk landing page following the publication of the LPGs.

Application of AQN is **monitored** in the LLAQM Annual Status Reports on a local level, the London Plan Monitoring report will capture referable applications that meet AQN standards, and the Planning London Datahub will also help the GLA record NO_x and PM emissions on a borough level from development.

Additional hyperlinks have been embedded into the LPG to help readers **navigate** through the document without the addition of unnecessary text.

A hyperlink has been added to signpost to **Heat Network Priority Areas** in the London Plan. We are unable to signpost to TRICS data, as it is not freely available and must be purchased.

Additional text added to state that solid and liquid biomass *and/or* **non-biomass** appliances emit particulate matter and are therefore not considered AQN.

The LPG states that local planning authorities may require a full air quality assessment for a minor development, for example, for those proposed in an **AQMA/AQFA**, in which case full procedures for calculating the BEB and the TEB should be used in the AQN Assessment.

Additional text has been added to the LPG to clarify when AQN can apply to sites regulated by local authority or Environment Agency **permitting.**

4 Other themes raised during engagement

Air Quality Positive LPG

Some feedback received through the consultation process included themes and comments that were not addressed in the final draft of the LPG, as they lie outside the scope of the policy, its objectives and/or the planning process. A summary of these comments is included in the list below:

- Policy not stringent enough to prevent “unnecessary development”.
- Policy should be explicitly linked to the climate emergency and carbon emissions.
- AQP should be combined with AQN to provide a zero-emission framework.
- An AQP Statement should be mandatory at the pre-app stage, with up to five versions produced by the point of discharge of planning conditions.
- Discussions prior to pre-app meetings should be recommended to calculate emissions reductions/produced for each design option.
- Unnecessary use of vans, lorries and other diesel vehicles should be banned
- AQP does not mandate favouring reusing existing buildings.
- LPG should include roadmap for broader application of the policy in the future.

Air Quality Neutral LPG

Some feedback received through the consultation process included themes and comments that were not addressed in the final draft of the LPG as they lie outside the scope of the policy, its objectives and/or the planning process/requirements. A summary of these comments is included in the list below:

- BEBs should include unregulated sources of emissions.
- Engagement with air-quality professionals at design stage should be required.
- Examples of acceptable mitigation for $PM_{2.5}$ from combustion sources should be provided.
- Consideration required for upgrades including glazing and roofing.
- Impact of ventilation for heat conservation vs. indoor air pollution and COVID.
- Pollutants from neighbouring boroughs and sources not included in the BEB.
- Designers/architects and air quality specialists should be brought together at the design stage to influence clean-by-design options and calculate total emissions and exposure risks.
- The use of DEFRA’s damage cost calculator should be recommended to calculate the cost to society and support section 106 contributions.
- Guidance should clearly state that emission reductions achieved by each mitigation measure proposed must be quantified and not be based on subjective assessments.
- Benchmark for new last mile delivery companies should be included.
- A better definition of an AQFA should be provided.
- LPG should include emissions from construction and link with waste/circular economy.

- AQN should be a requirement for energy assessments and developers should be expected to provide statements for energy efficiency improvement for new builds/major works.

5 Equality impacts

Respondents raised the following potential equality impacts arising in relation to the draft guidance:

- Welcome the focus on improving London's air quality as this has a potential positive impact on children, the elderly and those living near busy roads.
- Concern that the AQN benchmarks benefit inner London more than outer London.
- More stringent measures should be in place where the application site sits in the vicinity or catchment area of a sensitive receptor, with particular attention to hospitals, schools, and care homes.
- Improved air-quality measures should ensure that issues of accessibility are also considered.
- Improved air quality can benefit under-21s, over-65s and those with a disability.
- Improvements to walking, cycling and public transport accessibility, through air quality measures, can benefit those without a car.
- The need for wording that reflected transport and active travel networks being accessible for all was highlighted, especially ensuring that cycle infrastructure was accessible to all groups and supporting different groups to cycle more.

GLA response

The GLA welcomes the broad support for additional guidance aimed at improving air quality in London. Both the AQN and AQP guidance documents aim to improve London's air quality over the long term. In particular, the AQP LPG notes the importance of considering the placement of different land uses to ensure that more sensitive uses, such as schools, hospitals and public spaces, are placed in locations where there is good air quality. The AQP guidance also advocates that the layout of development should be designed to improve the dispersion of air pollution; and further advice has now been added in the LPG to suggest that wider, smoother pavements can improve accessibility for those on foot as well as people with disabilities, i.e. wheelchair users.

The AQN guidance provides strict benchmarks on transport and building emissions while recognising the difference in car use in outer London. Nevertheless, both documents strongly advocate improvements to walking, cycling and public transport accessibility.

6 Next steps and monitoring

The consultation took place in late 2021 and early 2022, towards the easing of coronavirus pandemic restrictions. Nevertheless, due to the uncertainty over possible new restrictions, brought in at short notice, the consultation events were held online, with virtual meetings and different ways of responding publicised through the GLA's online platforms. Following the consultation and analysis of responses, the AQN and AQP documents have been updated to reflect the points raised as part of this process. Updated documents will then be approved by the Mayor and it is expected that the documents will be adopted in winter 2022-23.

Following the adoption of the London Plan in 2021 a consultation was undertaken on a new framework for the Annual Monitoring Report (AMR). The consultation has concluded, and the new AMR framework has now been published. A new AMR covering the period 2021-22 is due to be published in March 2023. Monitoring of this guidance will fall under the key performance indicator on air quality.

Appendix 1 Summary of engagement

Formal engagement

Date	Activity Type	Participation	Representation
12 November – 27 February 2022	Consultation survey and written responses	All	49 responses
25 November 2021 10:30 – 15:00	CERC-ADMS User Group	Users of ADMS modelling software	168 attendees
3 December 2021 13:00 – 14:30	Webinar – Overview of AQN and AQP	London borough officers	45 attendees
7 December 2021 18:00 – 19:30	Webinar – Overview of AQN and AQP	General public	16 attendees
10 December 2021 10:00 – 11:30	Webinar – Overview of AQN and AQP	Air-quality professionals	53 attendees