

Air Quality and Planning - Technical Guidance

Swale Borough Council

(Updated July 2024)

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Record of substantive amendments

Main changes in 2021 update

- Updates made to section 2 with reference to Air Quality Statements (AQS)
- Emerging Air Quality Policy now included (section 4.4)
- Reference to new Parking Standard Supplementary Planning Document (SPD) (section 4.5)
- Revised checklist reference and guidance on assessing air quality in the planning Process (section 6). This includes the removal of Quick Reference Flow Chart: Assessing air quality in the planning process.
- Update for AQMA 4: St Paul's Street amended in October 2020 to include particulates (PM10) (24hr mean) and AQMA 7: Keycol Hill, Sittingbourne – declared October 2020 (section 5)
- Updates to section 6 and inclusion of AQS (section 6.2) and AQS templates (appendix 3 and 4)
- Revision of standard measures and list of mitigation measures (section 7)
- Revision of air quality assessment guidance on requirements and procedures (section 8). This includes additional guidance on cumulative impacts as part of the assessment (section 8.1.5)
- All AQMA maps with the inclusion of Keycol Hill AQMA (appendix 1)

Main changes in 2024 update

- Removed: Appendix 2. Criteria for Development Classification. Planning and Institute of Air Quality Management (IAQM)¹ classification now used.
- Removed: Appendix 3 and 4. Air Quality Statement template for minor and developments
- Revision of air quality assessment text in section 7.
- Additional information in section 1.1. Public Health Context
- National Planning Policy Framework, 2023 (NPPF) 2023 updates to paragraphs used.
- Revision of mitigation measures in section 8
- Local Air Quality Management; Technical Guidance TG16 (2022). Updated.
- Local Air Quality Management; Policy Guidance TG16 (2022). Updated.
- IAQM Guidance on the assessment of dust from demolition and construction, January 2024 (Version 2.2). Updated.

¹ http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

1. Purpose of this document

Air quality is a material planning consideration when a development is considered. This document seeks to explain how air quality is dealt with in planning applications in Swale.

This Air Quality and Planning Guidance aligns with the Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) guidance, Land-Use Planning & Development Control: Planning for Air Quality, 2017² to ensure that air quality is adequately considered in the land-use planning and development control processes.

This document has been adapted from the Kent and Medway Air Quality Partnership's Air Quality Planning Guidance (2015, updated 2019). It was first written in 2016 and has been updated multiple times in 2019, 2021 and 2024 in response to changes in national planning policy, including updates to the National Planning Policy Framework, the increased number of planning applications in which air quality has been a specific issue and emerging Local Plan policy. We will continue to review this document in light of relevant future national and local policy changes and circumstances.

This document aims to:

- Explain how air quality is dealt with in planning applications in Swale, providing clarity and consistency for officers within the local authority, and developers and consultants involved in the preparation of development proposals and planning applications, and local communities.
- Explain the standard mitigation requirements expected for all development.
- Set out when an Air Quality Assessment (AQA) is required, how this should be undertaken and how it will be used to determine the air quality impacts of planning applications.
- Explain the emissions mitigation assessment (including damage cost calculations)
 expected for development with potential air quality impacts. The document
 emphasises the importance of applying good design and 'best-practice' measures
 to all developments, to reduce both pollutant emissions and human exposure.

The document deals primarily with the air quality impacts from traffic emissions; however, dust also contributes airborne particulate matter. The assessment and control of dust impacts during demolition and construction is also considered briefly in this document. It should be noted that the IAQM document 'Guidance on the assessment of dust from demolition and construction' is the recommended text to refer to on this matter³. Greenhouse gas emissions are not addressed explicitly, as they are covered by other initiatives, but synergies exist between measures to minimise climate change and local air quality impacts.

The spatial planning system (both local plan policies and the determination of individual planning applications) has an important role to play in improving air quality and reducing exposure to air pollution.

²Land-Use Planning & Development Control: Planning For Air Quality, (2017) https://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

³Guidance on the assessment of dust from demolition and construction 2024 (Version 2.2) https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

It is recognised that development will usually increase road transport emissions, both during the construction and operational phases. However, it is also recognised that sustainable development can be a positive force for change. The approach in this document seeks to minimise road transport emissions wherever practicable to sustainable levels, by securing reasonable emission mitigation while also seeking to counter the cumulative impacts arising from all developments.

A theme of the NPPF is that developments should enable future occupiers to make green vehicle choices and that low emission vehicle infrastructure, including electric vehicle charging infrastructure, should be provided. Sustainable development is key to ensuring the need for travel is reduced, offering genuine alternative transport modes, which can help reduce congestions and emissions and improve air quality and public health.

As stated in IAQM Guidance it is established good practice to consult with the Local Planning Authority (and/or its air quality specialists) to gain agreement on the need for an air quality assessment in support of a planning application and if one is required, the approach and methodology that will be used. If an assessment is required, the approach and methodology can then be constructed to deal with the key issues driving the need for the assessment.

This guidance document aligns with IAQM Guidance where it follows a two-stage process when considering if an air quality assessment is required. The first stage uses a 'screening checklist' to determine whether the proposal qualifies as a 'major development' and the second stage reviews indicative criteria to determine whether an air quality assessment is required.

2. Public health context

Clean air is essential for life. The quality of the air impacts on human health, the natural environment and can damage buildings and materials.

Air pollution is associated with several adverse health impacts. Some individuals such as those with pre-existing respiratory or cardiovascular disease are particularly susceptible, but the effects of air pollution can be seen across the population. The mortality burden of air pollution in England is estimated to be between 26,000 and 38,000 a year, but in addition many people suffer avoidable chronic ill health as a result of poor air quality $\frac{4}{3}$.

There is gathering evidence regarding the impact of gaseous and particulate matter pollutants on respiratory and cardiac health from sources such as the Committee on the Medical Effects of Air Pollutants (2010) and the Royal College of Physicians and Royal College of Paediatrics and Child Health (2016)⁵. Research has linked air pollution with cancer and dementia, as well as the additional impact on mental health from the traffic noise affecting residents in homes in Air Quality Management Areas.

⁴ Chief Medical Officer's Annual Report 2022: https://assets.publishing.service.gov.uk/mwg-internal/de5fs23hu73ds/progress?id=i8m5J5egGiRk9LeevIwAnFThInUFKlpi6fR82MnB2s8,&dl

⁵ Every Breath We Take: www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution

3. Acknowledgements

This technical guidance has been developed from guidance documents produced by the Kent and Medway Air Quality Partnership, Forest of Dean District Council, Sussex Air Quality Partnership and West Yorkshire Low Emissions Strategy Group with their permission. We would also like to thank RPS for use of their table of mitigation measures https://www.rpsgroup.com/

Swale Borough Council's Environmental Protection Team can be contacted on 01622 602460 and EPTeamSBC@Midkent.gov.uk

4. Air Quality in the Planning System

Land-use planning plays an important role in improving air quality, strategically by setting out the broad location for development and locally through individual planning applications. Air quality is a material planning consideration to be taken into account in relevant planning decisions.

4.1. The National Planning Policy Framework

The <u>National Planning Policy Framework</u>, 2023 (NPPF)⁶ sets out the Government's planning policies for England and how these should be applied. It states that the purpose of the planning system is to contribute to the achievement of sustainable development and to achieve this the planning system has three overarching objectives: economic, social and environmental. The NPPF places a general presumption in favour of sustainable development whilst emphasising the statutory status of the development plan as the starting point for decision making.

Para.109 states "The planning system should actively manage patterns of growth in support of these [sustainable transport] objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health".

Para 191. goes on to say "Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development".

Para 192 outlines that: "Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when

⁶ https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF December 2023.pdf

determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent. with the local air quality action plan"

4.2. Planning Practice Guidance

<u>Planning Practice Guidance</u> (PPG) complements the NPPF and explains the legislative context for air quality, why air quality is an area of importance in the planning system and when it is relevant. It examines the role of air quality as an issue in Local Plans and in the Development Management process, where information on air quality can be found, the detail required in air quality assessments and examples of mitigation against air quality impacts. It should be referred to by applicants. The PPG also makes clear that air quality can also affect biodiversity and may therefore impact on international obligations under the <u>Habitats Directive</u>.

4.3. Local Planning Policy

Bearing Fruits 2031: The Swale Borough Local Plan 2017 is the adopted local plan for Swale. It outlines the Air Quality Management Areas (AQMAs) in the borough and advises that applicants with proposed development that could have an impact on air quality levels within an AQMA should contact the Council's Environmental Protection Team and refer to updates to the Kent and Medway Air Quality Partnership's document, Air Quality and Planning Technical Guidance document and updated versions. This document updates that guidance for development in Swale.

4.4. Emerging Air Quality Policy

The Local Plan Review 2021 Pre-Submission Document (Regulation 19) includes a draft Air Quality Policy which aims to ensure that development within Swale does not lead to a detrimental impact on air quality and that where air quality is affected, that development is not permitted unless appropriate mitigation is provided and opportunities for improvements are sought. This policy also aims to ensure the impacts on air quality from individual, cumulative and committed schemes (both inside and outside the borough) are proportionally addressed.

Table 1. <u>Draft</u> Air Quality Policy <u>2021</u>

Policy DM 33

Air Quality

Poor air quality has a detrimental effect on both human health and the environment. Air quality should be considered in the early stages of a development in consultation with the Borough's Environmental Protection Team and with reference to Swale's Air Quality and Planning - Technical Guidance 2019 and updates, the Parking Standards Supplementary Planning Document and any forthcoming relevant Supplementary Planning Documents. The following criteria should be applied:

- 1. Proposals should demonstrate they include measures to improve air quality through location, linkage, layout, land-use, landscaping and building design with passive solutions prioritised overactive measures;
- 2. All proposals (excluding householder applications) should demonstrate their impact on local air quality in the form of an Air Quality Statement as set out in the borough's Air Quality and Planning Technical Guidance;
- 3. All proposals should provide standard mitigation as set out in the borough's Air Quality and Planning Technical Guidance;
- 4. Proposals either within, close to, or accessed via one of the Borough's Air Quality Management Areas (AQMAs) should demonstrate no adverse effect on air quality in an AQMA that is likely to lead, in itself or in combination with other schemes, to an exceedance of air quality objectives;
- 5. Proposals which would introduce or intensify sensitive receptors' exposure to poor air quality
- 6. within or close to AQMAs, or potential AQMAs, should clearly demonstrate measures that mitigate air quality impacts;
- Proposals will need to demonstrate that, in itself or in combination with other schemes, the proposed development will not cause an air quality impact by leading to the likelihood of air quality objective exceedances or the declaration of a new AQMA;
- 8. Air quality assessments should be carried out as required by the criteria set out in the borough's Air Quality and Planning Technical Guidance and to the satisfaction of Swale's Environmental Protection Team;
- Air quality assessments should reference the most relevant and accurate data and consider the cumulative effects on air quality by including an assessment of relevant built and committed developments both inside and outside the borough;
- 10.Mitigation measures for developments which have required an Air Quality Assessment need to be site specific and be prepared with reference to the borough's Air Quality and Planning Technical Guidance and in consultation with the borough's Environmental Protection Team;
- 11.Developments that would increase air pollution, either alone or in combination with other relevant developments already existing or permitted, will not be permitted unless detrimental effects are:
 - i. Mitigated, to the satisfaction of the borough's Environmental Protection team and/or if necessary,
 - ii. Offset, by proportionally contributing to air quality improvements elsewhere; to the satisfaction of the borough's Environmental Protection Team and in accordance with Defra's Emissions Factor Toolkit, using the Council's Offsetting or Pooled Contributions Scheme.

Offsetting measures should be linked to objectives in the borough's Air Quality Action Plan, the Swale Green and Blue Infrastructure Strategy, Swale's Parking Standards Supplementary Planning Document (SPD), the Swale Transport Strategy and updates, the borough's Climate and Ecological Emergency Action Plan and the forthcoming Sustainable Design and Construction SPD and are likely to be secured via planning obligations.

A new Regulation 18 Local Plan Document is due to be published for consultation in the autumn of 2024 and a Regulation 19 Local Plan in the spring of 2025. This will likely include an updated Air Quality Policy.

4.5. EV charging

The Swale Borough Council Parking Standards SPD sets out local standards and parking measures for new development in Swale. This document includes requirements for Parking for Ultra Low Emission Vehicles with the objective of improving air quality. The Parking SPD can be found at SBC-Parking-Standards-May-2020.pdf.

Parking standards for electric vehicles must apply in line with the 'Infrastructure for the charging of electric vehicles' 2021 edition now part of The Building Regulations 2010 which include new requirements for electric vehicles.

Therefore, SBC parking standards that now apply is only for non-residential, which are:

10% Active Charging Spaces with all other spaces to be provided as Passive Charging Spaces. As part of this provision, consideration should be given to the operational requirements of the site; namely, if EV charging provisions are required for larger / commercial vehicles. If so, suitable provision should be made.

5. The Local Air Quality Management Regime

The Environment Act 1995 established the Local Air Quality Management (LAQM) regime. LAQM requires Local Authorities to review and assess ambient air quality in their areas against health-based standards for a number of specific pollutants prescribed in the Air Quality Standards Regulations 2010. If there is a risk that levels of air pollution in any part of the authority's area will be higher than the prescribed objectives, the authority is required to designate an Air Quality Management Area (AQMA). It is then required to produce an Air Quality Action Plan, which sets out the measures it intends to take in pursuit of the objectives.

It is not necessarily the case that a proposed development in <u>(or near)</u> an area of poor air quality will have a negative impact. However, it is important to recognise when such development might introduce additional people into an area of poor air quality.

The declaration of an AQMA does not mean that there will be no new development within that area. Rather, it means that greater weight must be given to the consideration of air quality impacts and their mitigation. In addition, the boundary of an AQMA does not necessarily define the limit of the area of poor air quality.

Swale Borough Council continues to review and assess air quality across the Borough to identify if there are any breaches of the National Objectives. To date this has resulted in the declaration of six Air Quality Management Areas (Appendices 1 to 7). All of these areas have been designated for exceedances of the nitrogen dioxide (NO_2) objective (annual mean) and one for particulates (PM_{10}) (24hr mean). Changes to the AQMAs and concentration levels are reported on the Councils Annual Status Reports⁷.

⁷ https://swale.gov.uk/bins-littering-and-the-environment/air-quality/monitoring#h2

The **six AQMAs** are listed below:

- **AQMA 1**: Newington, (A2 / High St) declared in 2009.
- AQMA 3: East Street, Sittingbourne (A2 / Canterbury Road) declared in January 2013.
- **AQMA 4**: St Paul's Street, Milton, Sittingbourne (B2006) declared in January 2013 for exceedances of NO₂ (annual mean) and was amended in October 2020 to include particulates PM₁₀ (24hr mean).
- AQMA 5: Teynham (A2 / London Rd) declared December 2015.
- **AQMA 6**: Ospringe Street, Faversham (A2 / Ospringe) declared in June 2011as AQMA 2 and revised as AQMA 6in May 2016.
- AQMA 7: Keycol Hill, Sittingbourne declared October 2020

6. Assessing air quality in the planning process

Air quality is a material consideration in planning applications and should be considered at an early stage in a scheme's development. An Air Quality Assessment combined with an Emission Mitigation Assessment will be required if the development falls within certain criteria (section 6.3).

6.1. The need for pre-application advice

In order to avoid unnecessary delays in the planning process and ensure optimum scheme design and sustainability, pre-application discussions with the Swale's Development Management Team, and where necessary Swale's Environmental Protection Team, is advised⁸. This should also flag up if the application is within or close to an AQMA or a major development.

6.2. Areas where air quality is a concern

There are key areas where the magnitude of change as well as the concentration of pollutants in air caused by proposed development is a concern. In some cases, any additional contribution of emissions may worsen air quality and potentially cause the creation of a new AQMA. For example:

- Where cumulative impacts are predicted to be high.
- Where the development would introduce new public exposure in areas of existing poor air quality or highly trafficked roads or junctions.
- The presence of a source of odour and/or dust that may affect amenity for future occupants of the development.
- Localised sensitivities i.e., street layout (canyon effects) and road network (magnitude of traffic flow and routes/ road links that endure secondary effects of the development).
- Air Quality Management Areas (AQMAs)
- Areas near to or adjacent to AQMAs
- Developments that require an EIA

6.3. Criteria as part of the planning process

The following tables provide criteria that may be useful to guide the consultation process in establishing the need for an assessment. They separately consider:

- the impacts of existing sources in the local area on the development; and
- the impacts of the development on the local area

The Institute of Air Quality Management (IAQM) provides guidance for <u>Air Quality and Planning</u>⁹ and a screening criteria to screen out developments which are not likely to have a significant effect on local air quality and, therefore, do not require further assessments. Please remember, however, that all development requires standard mitigation.

⁸ For details of Swale's pre-application advice service see https://www.swale.gov.uk/pre-application-advice/

⁹ https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

The first stage is intended to screen out smaller development and/ or developments where impacts can be considered to have insignificant effects. The second stage relates to specific details regarding the proposed development and the likelihood of air quality impacts.

6.3.1. Stage 1: IAQM criteria for Air Quality and Planning

Applicants should review criteria shown below which is IAQM Guidance for Air Quality and Planning (Table 6.1: Stage 1 Criteria¹⁰). This includes additional criteria added by Swale's Environmental Health Team.

Criteria to Proceed to Stage 2

A. If any of the following apply:

- 10 or more residential units or a site area of more than 0.5ha
- more than 1,000 m2 of floor space for all other uses or a site area greater than 1ha

B. Coupled with any of the following:

- the development has more than 10 parking spaces
- the development will have a centralised energy facility or other centralised combustion process

Note: Consideration should still be given to the potential impacts of neighbouring sources on the site, even if an assessment of impacts of the development on the surrounding area is screened out.

¹¹ Is the proposed development within, or close to an Air Quality Management Area (AQMA)¹²? If yes, go to stage 2.

The criteria provided is precautionary and treated as indicative. The function of the checklists is to highlight 'sensitive triggers' for initiating an assessment where there is a possibility of significant air quality effects.

¹⁰ https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

 $^{^{11}}$ Added by Swale's Environmental Health Team

¹² Appendix 1. All Swale AQMA's 2024

6.3.2. Stage 2: EPUK & IAQM indicative Criteria to Proceed to an Air Quality Assessment

Please review the criteria shown below taken from EPUK & IAQM, 'Land Use Planning & Development Control: Planning for Air Quality', January 2017 (LUPDC) (Table 6.2: Indicative criteria for requiring an air quality assessment¹³).

The development will:	Indicative Criteria to Proceed to an Air Quality Assessment
1. Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with	A change of LDV flow of:
relevant receptors (LDV = cars and small vans	more than 100 AADT within or adjacent to an AQMA
<3.5t gross vehicle weight)	more than 500 AADT elsewhere
Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant	A change of HDV flow of:
receptors (HDV = good vehicles + buses >3.5t	• more than 25 AADT within or adjacent to an AQMA
gross vehicle weight)	More than 100 AADT elsewhere
3. Realign roads i.e., changing the proximity of receptors to traffic lanes	Where the change is 5m or more and the road is within an AQMA
4. Introduce a new junction or remove an existing junction near to relevant receptors	Applies to junctions that cause traffic to significantly change vehicle accelerate/ decelerate e.g., traffic lights or roundabouts
	Where bus flows will change by:
5. Introduce or change a bus station	more than 25 AADT within or adjacent to an AQMA
	More than 100 AADT elsewhere
6. Have an underground car park with	The ventilation extract for the car park will be within 20m of a relevant receptor
extraction systems	Coupled with the car park having more than 100 movements per day (total in and out)
7. Have one or more substantial processes, where there is a risk of impacts at relevant receptor sites.	Typically, any combustion plant where a single or combined NOx emission rate is less than 5mg/sec* is likely to give rise to impacts, provided that the emissions are released from the vent or stack in a location and at a height that provides adequate dispersion
NB. This includes combustion plant associated with standby emergency generators (typically associated with centralised energy centres) and shipping.	In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates.
	Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable.
¹⁴ Will the development introduce new sensitive receptors into an AQMA or an area where high traffic flows are evident or where air pollution levels are moderately high?	If any question is answered as YES, contact Swale's Environmental Protection Team to confirm whether an air quality assessment is required. A site suitability assessment might be required.

¹³ https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

¹⁴ Added by Swale's Environmental Health Team

7. Air Quality Assessments (AQAs)

The purpose of an air quality assessment is to determine whether the predicted impact of a development on local air quality would adversely affect public health and/or the local environment or is to determine whether a particular site is suitable for the proposed use, depending on its proximity to major sources of air pollutants or being located within or close to an existing AQMA. The assessment will help determine a planning application and calculate the appropriate level of mitigation from a development. The assessment should be carried out by a qualified air quality consultant.

If an air quality assessment is required, it should be carried out in line with the latest best practice guidance:

- Defra 'Local Air Quality Technical Guidance', August 2022 (TG22)¹⁵
- EPUK & IAQM, 'Land Use Planning & Development Control: Planning for Air Quality', January 2017 (LUPDC)¹⁶
- EPUK & IAQM 'Guidance on the assessment of dust from demolition and construction' January 2024 (Version 2.2)¹⁷

Applicants should always seek the latest information available on local air quality from the either the Environmental Team, or latest Annual status Reports on the Councils website or Kentair¹⁸.

7.1. Type of air quality assessment

As outlined in IAQM Guidance (LUPDC), an air quality assessment may be either a simple or detailed assessment. A simple assessment may rely on already published information and without a predictive quantification of impacts, in contrast to a detailed assessment that is completed with the aid of a predictive technique, such as a dispersion model. The simple assessment provides a screening level of detail undertaken to consider the impacts of the proposed development.

An air quality assessment should clearly describe and quantify the likely change in pollutant concentrations at relevant receptors resulting from the proposed development during both the construction and operational phases. It must take into account the cumulative air quality impacts of committed developments (i.e., those with planning permission within the vicinity of the application site).

Air quality assessments will usually include at least one but often both of the following:

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

¹⁵ https://laqm.defra.gov.uk/air-quality/featured/uk-regions-exc-london-technical-guidance/

¹⁶ https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

¹⁷ https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

¹⁸ https://www.kentair.org.uk/

<u>Site Suitability</u>: to determine whether a particular site is suitable for the proposed use, depending on its proximity to major sources of air pollutants or being located within or close to an existing AQMA.

Impact Assessment: to determine whether the development is likely to result in a deterioration of local air quality or a breach of the national air quality objectives, as a result of construction and/or operation activities.

7.2. What should be included in simple assessment:

If the change in traffic on local roads, as a result of the proposed development, is below the respective EPUK/IAQM criteria¹⁹, a simple assessment may suffice and include the following:

- A baseline conditions, including identifying relevant monitoring data and existing sources of pollutants in the area.
- Qualitative assessment of the impacts of road traffic emissions associated with the proposed development and/or a qualitative assessment on the suitability of the site for the introduction of new sensitive receptors, both based on the existing air quality baseline.
- Qualitative assessment of the impacts of dust and PM₁₀ from construction works, using the risk assessment approach; and,
- An Emissions Mitigation Assessment, including an emissions mitigation calculation and list of relevant mitigation measures based the local air quality and additional Annual Average Traffic (AADT) from the development. Emissions Mitigation Assessment (section 8.2) is required for all major development.
- May conduct a quantitative assessment that does not require the use of a dispersion model.

As good practice, applicants should contact the Environmental Protection Team at the pre-application stage to determine the significance of a development and whether an air quality assessment is required.

7.3. What should be included in a detailed assessment:

The assessment provides modelled predicted concentrations for scenarios (for the year of the application and an agreed opening year). The difference in the compared scenarios is used to determine the classification of the change in the air quality concentration. The scale of air quality impact due to changes of concentration determines the planning recommendations.

As outlined in IAQM guidance there are three basic steps to a detailed assessment:

- 1. Assess the existing air quality in the study area (existing baseline);
- 2. Predict the future air quality without the development in place (future baseline) which may or may not include the contribution of committed development);
- 3. Predict the future air quality with the development in place (with development)*

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¹⁹ https://iagm.co.uk/text/guidance/air-guality-planning-guidance.pdf

* All relevant committed development should be included in the assessment to consider the cumulative impacts and should align with any transport reports approved by KCC highways.

Each traffic source assessment will include details of the assessment methods including monitoring data used; modelling procedures undertaken, including an appropriate model verification; and the basis for determining significance of effects arising from the impacts and assessment of results.

Further details of what should be included in an air quality assessment report is outlined in EPUK/IAQM (LUPDC) and Defra's Local Air Quality Management Technical Guidance (TG22).

A summary of the assessment results may include:

- Impacts during the construction phase of the development (usually on dust soiling and PM₁₀ concentrations);
- Impacts on existing receptors during operation (usually on concentrations of nitrogen dioxide (NO₂), particulates PM₁₀ and PM_{2.5});
- Impacts of existing sources on new receptors, particularly where new receptors are being introduced into an area of high pollution or busy road;
- Any exceedances of the air quality objectives arising as a result of the development, or any worsening of a current breach (including the geographical extent);
- Whether the development will compromise measures within an Air Quality Action Plan, and where the development affects an AQMA;
- The significance of the effect of any impacts identified;
- Emission Mitigation Assessment/ Damage Cost Calculation (for all major development)

The Council will work with applicants by providing guidance on the suitability of mitigation measures which should be incorporated at the early design stage of any proposal. The key concern for Environmental Protection Team with regard to the air quality impacts of a development is the likely effect on human health. It is important that an air quality assessment evaluates changes in pollution concentrations where there is relevant public exposure.

The Council will make a balanced judgment on the likely impact of each development, based on the results of the air quality assessment. Swale Borough Council may also need to consider the impact of the development on air quality in neighbouring authorities, as well as the impact of development in neighbouring authorities on Swale's air quality.

7.4. Air Quality Monitoring

In some cases, it will be appropriate to carry out a period of air quality monitoring as part of the assessment work. This will help where new exposure is proposed in a location with complex road layout and/or topography, which will be difficult to model or where no data is available to verify the model. Monitoring should be undertaken for a minimum

of six months using agreed techniques and locations with any adjustments made following Defra's Technical Guidance LAQM.TG (22).

7.5. Assessing Demolition/Construction Impacts

The demolition and construction phases of development proposals can lead to both nuisance dust and elevated fine particulate (PM_{10} and $PM_{2.5}$) concentrations. Modelling is not appropriate for this type of assessment, as emission rates vary depending on a combination of the construction activity and meteorological conditions, which cannot be reliably predicted. The assessment should focus on the distance and duration over which there is a risk that impacts may occur. The Institute of Air Quality Management (IAQM) provide guidance on the assessment of dust from demolition and construction²⁰. The document 'Air Quality Monitoring in the Vicinity of Demolition and Construction Sites, 2018²¹' should be the reference for monitoring and reporting the construction assessment.

7.6. Scaling of Impacts on Air Quality from a Development

EPUK & IAQM Land-Use Planning & Development Control guidance: Planning For Air Quality²² provides a method for identifying the developmental impact at specific receptor sites, taking into account the resultant total concentration as well as the magnitude of change in relation to the Air Quality Assessment Level (AQAL) = UK Air Quality Objective.

Below shows table 6.3 that sits within the EPUK & IAQM guidance and outlines the impact descriptors for individual receptors, and how the scale or "magnitude" of change in pollutant concentration is used to determine the significance of the air quality impact from a development.

The total concentration categories reflect the degree of potential harm by reference to the AQAL value. At exposure less than 75% of this value, i.e., well below the AQAL, the degree of harm is likely to be small. As the exposure approaches and exceeds the AQAL, the degree of harm increases. This change naturally becomes more important when the result is an exposure that is approximately equal to, or greater than the AQAL.

EPUK & IAQM guidance: table 6.3 Impact descriptors for individual receptors

Long term average	% Change in con	evel (AQAL)		
Concentration at receptor in assessment year	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

²⁰ https://iagm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

²¹ https://iagm.co.uk/text/guidance/guidance monitoring dust 2018.pdf

²² https://iagm.co.uk/text/guidance/air-quality-planning-guidance.pdf

In the assessment a two-stage process is followed to describe impacts:

- a qualitative or quantitative description of the impacts on local air quality arising from the development (usually assessed at selected 'receptors'); and
- a judgement on the overall significance of the effects of any impacts.

Assessing the significance will align with the increase in pollutant concentration when compared to National Air Quality Objective (AQO).

7.8. Cumulative Impacts

The NPPF (paragraphs 191 and 192) recognises that several individual development proposals within close proximity of each other require planning policies and decisions to consider their cumulative impact. Difficulties arise when developments are permitted sequentially, with each individually having only a relatively low polluting potential, but which cumulatively results in a significant worsening of air quality. This will occur where:

- A single large site is divided up into a series of units, such as an industrial estate or retail park.
- A major development is broken down into a series of smaller planning applications for administrative ease.
- There are cumulative air quality impacts from a series of unrelated developments in the same area.

The Environmental Protection Team will make balanced judgment based on the results of the air quality assessment. If the cumulative impact is significant but the development impact alone is negligible, we may require additional mitigation that goes beyond what is required within the emissions mitigation assessment. This maybe in form of a wider strategic scheme to improve the cumulative impacts on the area.

8. Emissions Mitigation Assessment

As outlined in Defra's Local Air Quality Management (LAQM) Technical Guidance the Damage Costs have been developed to assess the effects of air pollution within economic appraisals and can help a local authority with understanding changes in emissions as a monetary figure.

An emissions mitigation assessment (also known as a Damage Cost Calculation) is required for all major developments. The purpose of an emissions mitigation assessment is to assess the local emissions from a development and to determine the appropriate level of mitigation (a damage cost value) required to help reduce the potential effect on health and/or the local environment.

The emissions mitigation assessment should include a scheme detailing, and where possible quantifying, what measures or offsetting schemes are to be included in the development which will reduce the air pollution from the development when in occupation. The assessment should be carried out by a qualified air quality consultant.

8.1. Emissions mitigation calculation inputs

Each emissions mitigation assessment should include a brief emissions mitigation statement and damage cost calculation. An emissions mitigation calculation inputs the additional number of trips generated by the development into the latest DEFRA Emissions Factor Toolkit (EFT) 23

A five-year damage cost should be determined for the scheme as follows:

- EFT output (most up to date version) for each pollutant x damage cost x 5 years
- The air quality damage costs calculation for the specific pollutant emissions;
- Damage cost value calculation for each section and totals.
- The pollution damage costs. This will determine the level of mitigation/compensation required to negate the impacts of the development on local air quality.
- Mitigation proposed. This should be equivalent to the value of the emissions mitigation/damage cost value calculation (appropriate to the type, size and location of the development and local policy requirements). Details of the measures to be provided with this sum should be agreed in consultation with the Environmental Protection Team.

Guidance on how to carry out an emission mitigation assessment is given in Defra's Air quality appraisal: damage cost guidance²⁴.

9. Mitigation measures

The following table lists the standard mitigation measures required for all development. It also includes other mitigation options that should be considered in line with an air quality assessment and in consultation with the Environmental Protection Team.

Where mitigation is not integrated into a scheme, the Council will generally require mitigation through a planning condition(s). If on-site mitigation/the use of planning conditions is not possible then the Council may seek contribution to wider air quality mitigation measures through the damage cost value and/or section 106 agreement. If the development is within or close to an AQMA and is considered a non-major development, then it will be at the discretion of Swale's Environmental Protection Team to suggest reasonable mitigation options.

In line with IAQM Guidance good practice principles should be applied to all developments that have not been screened out using the stage 1 criteria (section 6.3.1).

²³ http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html

²⁴ https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-guidance

Table 2. Mitigation measures and good practice principles

Standard mitigation measures for all development:

Demolition and Construction: Mitigation shall be provided in accordance with Institute of Air Quality Management (IAQM) guidance on the assessment of dust from demolition and construction (January 2024 - Version 2.2)²⁵.

EV charging:

Residential uses: Shall be in accordance with the 'Infrastructure for the charging of electric vehicles' 2021 edition now part of The Building Regulations 2010 which include new requirements for electric vehicles.

Commercial: Shall be in accordance with Swale's Parking Standards, 10% Active Charging Spaces with all other spaces to be provided as Passive Charging Spaces. As part of this provision, consideration should be given to the operational requirements of the site; namely, if EV charging provisions are required for larger / commercial vehicles. If so, suitable provision should be made.

We recommend reviewing best practice examples outlined in <u>RPS hierarchy</u> as a starting point²⁶.

Some examples below (not an exhaustive list nor in order of preference):

Design measures to be considered:

- Design and layout of infrastructure to increase separation, for example, set buildings back from the roadside.
- Arrange sites to separate polluting and sensitive uses.
- Avoid creation of non-dispersive canyons.
- Landscaping to improve air flow and minimize canyon effects (this should be discussed at design phase with Environmental Protection and Planning Development Teams).
- New developments should be designed to minimise public exposure to pollution sources, e.g., by locating habitable rooms away from busy roads, or directing combustion generated pollutants through well sited vents or chimney stacks for clean air intake.

Residential and commercial

- Dust Management Plan, where appropriate (for major sites, this may be incorporated into a Construction and Environmental Management Plan).
- Where a development generates significant additional traffic, a provision of a detailed travel plan will be required (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety.
- A Welcome Pack available to all new residents online and as a booklet, containing information and incentives to encourage the use of sustainable transport modes from new occupiers.
- Contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development.

²⁵ https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

²⁶ https://www.rpsgroup.com/media/kcyhygz4/488-rps-air-quality-mitigation-wall-chart v2.pdf

• Modal shift facilities and infrastructure:

- Provision of a Car Club Scheme within the development or support given to local car club/eV car clubs.
- o Additional improved cycle paths to link cycle network.
- Secure bike storage facilities (site wide).
- Support secure and safe cycle parking facilities (out with the scheme).
- Provision of bike hire/share schemes, including E-bikes and off-gauge bikes.
- Improvements to district walking and cycling networks including lighting, shelters, and information points and timetables.
- Support cycle training and awareness schemes.
- Installation of charge points for EV bikes.
- Provision of pooled EV bikes.
- Bike racks on local buses.
- Active and passive EV charging infrastructure beyond standard measures.
- Subsidy for bus and rail passes.
- Electric Shuttles, or other low emission alternative, to local facilities i.e. schools
 & public.
- Provision of new or enhanced public transport services to the site.
- Shuttle services to public transport interchange, rail station or park and ride facilities.
- Support improving information systems for public transport.
- Promoting low emission bus service provision.
- Support local travel to school and school travel plans initiatives.

Additional commercial

- Public transport subsidy for employees.
- Support measures to reduce polluting motorised vehicle use:
 - Use of pooled low emission vehicles cars, vans, taxis, bicycles.
 - Provision of dedicated low emission shuttle bus including managed pick-up and drop-off.
 - o Contribution to the emerging low emission vehicle refueling infrastructure.
 - o Contribution to site low emission waste collection services.
 - o Incentives for the take-up of low emission vehicle technologies and fuels.
- All commercial vehicles should comply with current European Emission Standards.
- Fleet operations should provide a strategy for considering reduced emissions, low emission fuels and technologies.

For guidance on selecting the best air quality species please refer to the <u>Urban Air Quality – how trees can improve air quality</u>, 2012 The Woodland Trust. Green infrastructure on development should only be used to reduce human exposure, they cannot be used as a form of mitigating transport emissions.

10. Planning Requirements and Outcomes

If the air quality assessment determines specific changes in air quality due to a single development or from the cumulative effect of several developments. The following determinations will be made by the Local Planning Authority.

In determining a planning application, the aim will be to ensure that the air quality in existing AQMAs does not worsen by the introduction of a development and/or that there is no additional air pollution burden from a development(s) which could create new AQMAs.

The decision on a planning application must be a balance of all material considerations depending upon the individual merits and circumstances. The weight to be given to the impact on air quality in the consideration of a planning application and the acceptability of proposed mitigation measures.

Refusal of a planning application may still result if air quality impacts from a development remain, even after all reasonable means to mitigate the impacts on air quality have been exhausted having regard to the relevant Local Plan policies and national planning policy requirements.

The following table summarises the potential planning requirements and outcomes.

Table 3: Planning requirements and outcomes.

Classification of impact	Likely planning requirements	Likely planning outcomes
Very High	Require evidence to show that mitigation will cancel out air quality impacts. If impact of development on air quality still very high => strong presumption for recommendation for refusal on air quality grounds.	EHO will recommend refusal
High	Seek mitigation to significantly reduce air quality impacts. Mitigation to include reducing exposure through various measures, emissions reduction technologies and/or development redesign.	EHO will recommend refusal unless significant mitigation measures are implemented. * Offsetting measures explained below
Medium	Seek mitigation to reduce air quality impacts. Mitigation to include reducing exposure through various measures, emissions reduction technologies and/or development redesign.	* Offsetting measures explained below
Low/Imperceptible	Recommend the standard mitigation for development scheme type.	Ensure standard mitigation is implemented.

Offsetting by providing money for schemes that improve overall air quality should be a last resort but may need to be combined with good design and mitigation in some circumstances. Appropriate contributions for offsetting can be negotiated or contributions can be calculated using Defra's Emissions Mitigation Assessment.

Examples of possible offsetting measures could be financial contribution towards:

- Traffic management measures
- Improvements in public transport facilities and/or support for new services
- Improvements in walking and cycling infrastructure.
- Air Quality Action Plan and air quality improvement projects

Early discussion with the Planning Development Management Team and Environmental Protection Team is recommended if offsetting/contributions will be required.

11. Developments that require an Environmental Impact Assessment (EIA)

Planning applications for large scale developments may require an EIA, which may need to include a more detailed assessment of the likely air quality effects. The Environmental Impact Assessment Directive provides the policy requirement for EIAs, as does Planning Practice Guidance (Environmental Impact Assessment - GOV.UK (www.gov.uk).)

The EIA procedure ensures that the likely effects of a new development on the environment are fully understood. The EIA is likely to include a detailed study of the effects of any development upon local air quality as highlighted below:

- Developments that require an EIA include major developments which are of more than local importance; developments which are proposed for particularly environmentally sensitive or vulnerable locations and developments with unusually complex and potentially hazardous environmental effects.
- Most proposals for commercial or industrial installations that have the potential to emit pollution (e.g., Part A1, A2 and B installations) are likely to require an air quality assessment under the EIA regulations but more detailed "screening" may be required before this can be finally determined.

There are likely to be many other situations where developments that do not require a full EIA will nevertheless warrant an air quality assessment as part of the planning application.

12. Guidance Documents

There are many resources available which give guidance on air quality in the planning process. Some are show below and on the reference page:

- <u>EPUK & IAQM</u> (Institute of Air Quality Management) Land-Use Planning & Development Control: <u>Planning for Air Quality</u> (2017).
- Institute of Air Quality Management (IAQM) guidance on the assessment of dust from demolition and construction (January 2024 Version 2.2).
- Guidance on the methodologies to be used for air quality assessments is also available in the Department for Environment, Food and Rural Affairs (DEFRA) Local Air Quality Management Technical Guidance LAQM TG (22).
- Applicants should also seek the latest information available on local air quality from Swale's Environmental Protection Team or from the Kent Air Website http://www.kentair.org.uk/ and from Swale Borough Council website (i.e. where the latest Annual Status Report²⁷ can be found)

There are a number of tools which are used by local authorities, policy makers, developers and consultants to assist in Emissions Mitigation Assessment / Damage Cost Calculation. The most up to date versions of these documents should be referenced in the Emissions Mitigation Statement and include:

- Defra's Emissions Factor Toolkit (EFT) calculator provides a formula to calculate
 the emissions resulting from a development and produces a damage cost value to
 be spent on mitigation measures. The latest version of the EFT should be used.
 The EFT can be downloaded here.
- GOV.UK's <u>Air quality: economic analysis</u> explains how impacts on air quality should be incorporated into a cost benefit analysis.
- The Defra document 'Air quality damage cost guidance', January 2019. This document is designed as a guide to assessing air quality impacts.

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²⁷ https://swale.gov.uk/bins-littering-and-the-environment/air-quality/monitoring#h2

13. Conclusion

An overriding consideration of planning decisions with regard to Air Quality in Swale will be to ensure that the air quality in existing AQMAs is not worsened by the introduction of a development and/or whether it's likely to lead to an exceedance of Air Quality Standards and creation of new AQMAs.

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

Refusal of a planning application may still result if air quality impacts from a development remain; even after all reasonable means to mitigate the impacts on air quality have been exhausted.

References

The Air Quality Standards Regulations 2010 http://www.legislation.gov.uk/uksi/2010/1001/contents/made

Institute of Air Quality Management (IAQM) guidance on the assessment of dust from demolition and construction (January 2024 - Version 2.2). https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

DEFRA Emissions Factor Toolkit

http://lagm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html

DEFRA Impact pathway guidance for valuing changes in air quality (2013)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197900/pb139_13-impact-pathway-quidance.pdf

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

Defra Local Air Quality Management: Technical Guidance (TG22) https://lagm.defra.gov.uk/documents/LAOM-TG16-February-18-v1.pdf

Defra Local Air Quality Management: Policy Guidance (PG22)

https://lagm.defra.gov.uk/wp-content/uploads/2023/11/LAQM-Policy-Guidance-2022.pdf

Environmental Impact Assessment Directive

http://ec.europa.eu/environment/eia/eia-legalcontext.htm

UK Air Quality Limits

https://uk-air.defra.gov.uk/air-pollution/uk-limits

HM Treasury, Valuing impacts on air quality – Supplementary Green Book Guidance (2013) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197893/pu150 0-air-quality-greenbook-supp2013.pdf

National Planning Policy Framework (NPPF) December 2023

 $\frac{https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF\ December\ 20}{23.pdf}$

Town and Country Planning (Development Management Procedure) (England) Order 2010 http://www.legislation.gov.uk/uksi/2010/2184/pdfs/uksi 20102184 en.pdf

Air Quality Appraisal: Damage Cost Calculation

https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-quidance

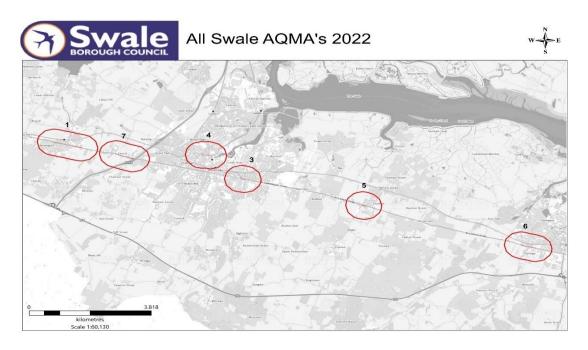
Parking Standards Supplementary Planning Document (SPD)

 $\frac{https://swale.gov.uk/news-and-your-council/publications/planning-and-planning-policy/parking-standards-supplementary-planning-document-spd$

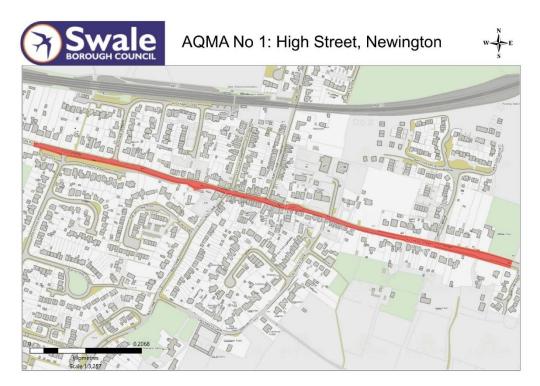
Appendices

Appendix 1. All Swale AQMA's 2024

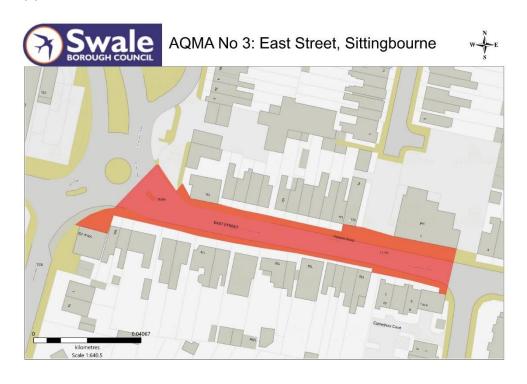
NB. The small red outlines are the AQMAs. This includes buffer areas to aid viewing and have no reflection on the size or spatial context of the AQMAs.



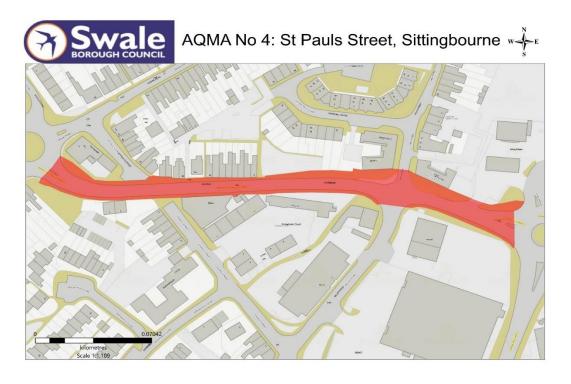
Appendix 2. Newington AQMA 1



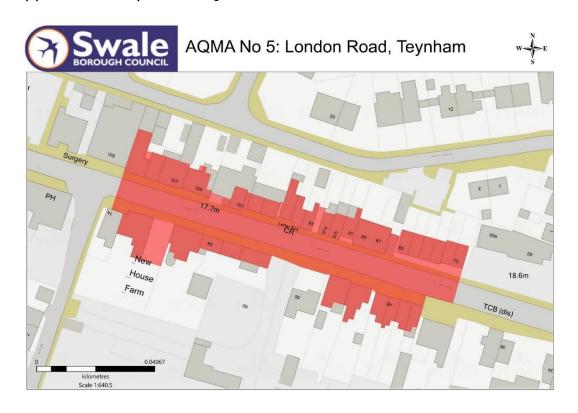
Appendix 3. East Street AQMA 3



Appendix 4. St Paul's Street AQMA 4



Appendix 5. Teynham AQMA 5



Appendix 6. Ospringe AQMA 6



Appendix 7. Keycol Hill AQMA 7

