

GUILDFORD BOROUGH COUNCIL AND
SURREY COUNTY COUNCIL



GUILDFORD
BOROUGH

GUILDFORD JOINT COMMITTEE

DATE: 3 JULY 2019

LEAD OFFICER: JUSTINE FULLER, REGULATORY SERVICES MANAGER,
GUILDFORD BOROUGH COUNCIL

SUBJECT: SHALFORD AIR QUALITY MANAGEMENT AREA

AREA AFFECTED: SHALFORD

SUMMARY OF ISSUE:

Guildford Borough Council air quality monitoring between January and September 2018 indicated that the annual national air quality objective for nitrogen dioxide may be exceeded along the A281 in Shalford. A detailed assessment of air quality within Shalford determined that there are a small number of residential properties at which levels of nitrogen dioxide exceed the air quality standard.

The Council has a statutory duty, under Section 83 of the Environment Act 1995, to declare an 'air quality management area' (AQMA) where a breach of the air quality standard has occurred.

The report proposes that the Council designate an 'air quality management area' for the pollutant nitrogen dioxide within the bold purple area shown in Appendix 1.

RECOMMENDATIONS:

The Guildford Joint Committee is asked to agree that the Council:

- (i) Designate an Air Quality Management Area as identified within the bold purple area shown in Appendix 1.
- (ii) Authorise the Director of Community Services, Guildford Borough Council to make the Order required under Section 83 of the Environment Act 1995 to implement recommendation (i).

REASONS FOR RECOMMENDATIONS:

To ensure the Council meets its statutory duties to designate an air quality management area and to improve air quality along the A281 in Shalford.

1. INTRODUCTION AND BACKGROUND:

- 1.1 The purpose of the report is to provide details on the requirement to designate an Air Quality Management Area (AQMA) in an area of Shalford due to a breach of the national annual mean level of nitrogen dioxide air quality standard (National Air Quality Objectives and European Directive limit and target value for the protection of Human Health).

Local Air Quality Management background

- 1.2 The Environment Act 1995 introduced the current system for Local Air Quality Management and requires every Local Authority to carry out a review of the current air quality and the likely future air quality within its area.
- 1.3 In carrying out the review, the Local Authority must assess whether air quality standards and objectives are being achieved or are likely to be achieved. The objectives are set out in the Air Quality (England) Regulations 2000, as amended by the Air Quality (England) (Amendment) Regulations 2002 and the UK Air Quality Strategy (DEFRA 2007).
- 1.4 To determine if there is an exceedance of the nitrogen dioxide (NO₂) objective at any location in the Borough a monitoring network of approximately 35 passive diffusion tubes, established for over 20 years, is in operation. We review the sites periodically to ensure we are monitoring in locations that could potentially exceed air quality objectives and meet the criteria specified in the Defra technical guidance.
- 1.5 The Government's Air Quality Strategy objectives and EU limit values for NO₂ are:
 - an annual mean concentration of 40 µg/m³; and
 - a one-hour mean concentration of 200 µg/m³, not to be exceeded more than eighteen times per year.
- 1.6 Results from NO₂ air quality monitoring along with actions taken to improve air quality across the Borough are in the Annual Status Report (ASR) required by Defra.
- 1.7 If there are breaches or predicted breaches of air quality objectives the Council is legally required to designate an air quality management area (AQMA).
- 1.8 There are over 700 active AQMAs designated across UK Local Authorities, mostly for NO₂ with England accounting for nearly 600 of the AQMAs.

2. ANALYSIS:

Air quality monitoring in Shalford

- 2.1 One area of focus for diffusion tubes locations monitoring NO₂ are the main roads into Guildford town centre where houses are close to the road and dispersion is restricted due to the proximity of the nearby buildings. For this reason, a diffusion tube was placed on the A281 in Shalford where the road passes housing near the roadside.
- 2.2 The concentrations at diffusion tubes SH1 was below the annual mean objective for NO₂ in 2016 and 2017. An additional site, SH2 was added in 2018 as the levels were close to the objective requiring further investigation.

Diffusion Tube site locations of SH1 and SH2 - Figure 1, Appendix 2

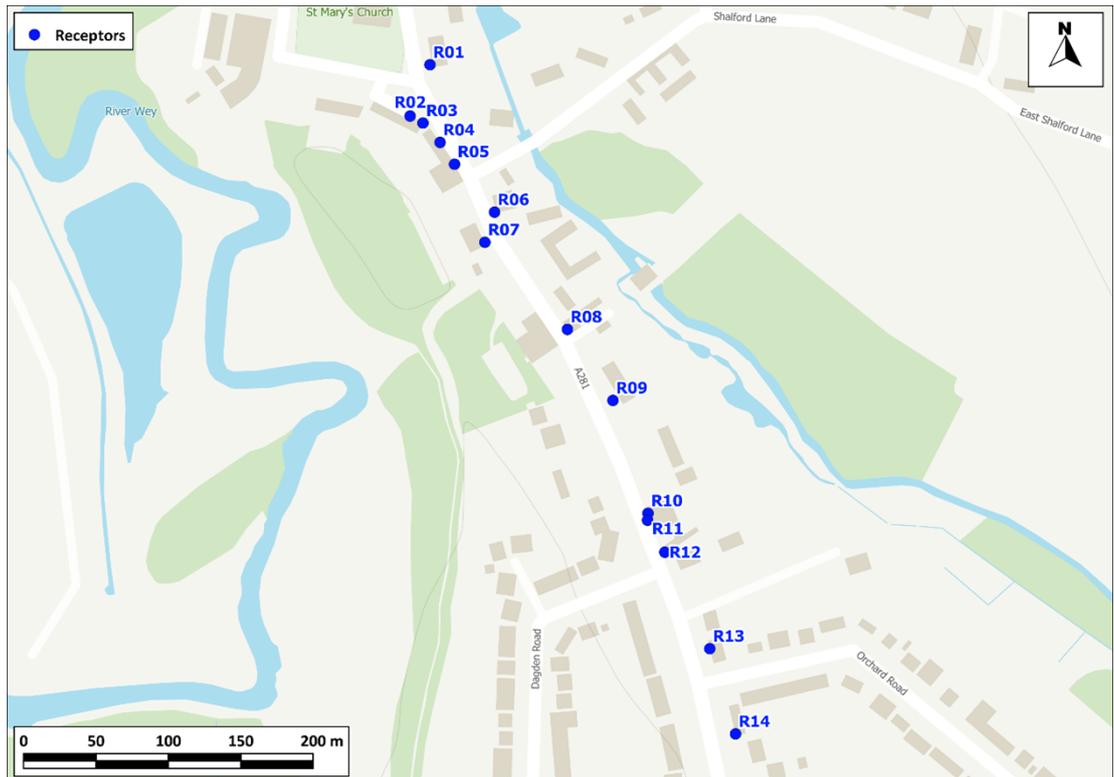


- 2.3 Nitrogen Dioxide concentrations at both sites between January and September 2018 were above the objective without bias adjustment and annualisation indicating that exceedances of the objective were likely. Table 2, Appendix 2 shows the summary of the NO₂ monitoring results with explanatory notes.

Detailed assessment and designation of an Air Quality Management Area (AQMA)

- 2.4 A detailed assessment was then completed to determine whether the annual mean NO₂ objective is exceeded at relevant locations and if so, the extent of the exceedances and boundary of the required AQMA.
- 2.5 Part of the assessment included modelling at 14 specific receptors, chosen to represent the worst-case locations along the A281 in Shalford, close to narrow sections of road and where dispersion is limited by buildings.

Modelled receptors in the detailed assessment – Figure 2, Appendix 2



- 2.6 Table 3 of Appendix 2 shows the results of the modelling with the predicted concentrations exceeding the annual mean objective at two of the receptors. The modelled annual mean exceedances are $46.6 \mu\text{g}/\text{m}^3$ at R04 and $48.1 \mu\text{g}/\text{m}^3$ at R05. All the other receptors are below $33 \mu\text{g}/\text{m}^3$ which is sufficiently lower than the $40 \mu\text{g}/\text{m}^3$ objective to consider the possibility of exceedances.
- 2.7 The detailed assessment recommends that an AQMA is designated to cover 8 properties, 24-38 on the west side of The Street, Shalford which includes receptors R04 and R05.
- 2.8 The full detailed air quality assessment can be seen in Appendix 2.

3. OPTIONS:

- 3.1 There are two options available after considering the information in this report:
1. Designate an Air Quality Management Area in Shalford within the bold purple area shown in Appendix 1.
 2. Designate a modified Air Quality Management Area in Shalford. This would mean expanding or altering the area being designated and such a change would need evidence to support the reasoning for this.
- 3.2 The modelling and monitoring results provide sufficient evidence to demonstrate a breach of the annual mean NO_2 air quality objective in Shalford. Therefore, to ensure the Council meets its statutory duty to designate an AQMA, where there is a breach of the air quality objectives, officers recommend Option 1.

4. CONSULTATIONS:

- 4.1 Following discussions with Councillor Susan Parker, Lead Member for Environment, Guildford Borough Council she supports the designation of the AQMA.
- 4.2 We have briefed the borough ward members for Shalford, Councillor Chris Blow and Councillor Ramsey Nagaty and county member and Cabinet Member for Highways Councillor Matt Furniss. The residents of properties within the proposed AQMA area have also been notified and will be consulted further on the draft action plan.
- 4.3 We have also notified Environmental Health at Waverley Borough Council as the A281 extends into their area.

Legal Implications

- 4.4 The provisions of Part IV of the Environment Act 1995 (the Act) establish a national framework for air quality management, which requires all local authorities in England, Scotland and Wales to conduct local air quality reviews.
- 4.5 Section 82(1) of the Act requires these reviews to include an assessment of the current air quality in the area and the predicted air quality in future years. Should the reviews indicate that the objectives prescribed in the UK Air Quality Strategy (DEFRA 2007) and the Air Quality (England) Regulations 2000 as amended will not be met, the local authority is required under Section 83(1) of the Act to designate an Air Quality Management Area.
- 4.6 To designate an AQMA the Council must make an Order containing the following details:
 - Date the order will come into force
 - The pollutants to which it relates and the relevant objective exceedance
 - Map of area to be designated
 - Description of the area
- 4.7 Defra and members of the public must be made aware of the Order.
- 4.8 Guildford Borough Council must then produce and consult on an action plan, which details the proposed actions to ensure that air quality in the area improves.

5. FINANCIAL IMPLICATIONS:

- 5.1 Currently there are no immediate financial implications however this will need to be reviewed following consultation and approval of the action plan where it

is anticipated that additional resources will be required to implement the measures approved in the action plan.

6. WIDER IMPLICATIONS:

- 6.1 The potential implications of the proposed action have been considered in relation to the following Council priorities and policies.

Area assessed:	Direct Implications:
Crime and Disorder	No significant implications
Equality and Diversity	No significant implications
Localism (including community involvement and impact)	No significant implications
Sustainability (including Climate Change and Carbon Emissions)	Significant implications
Corporate Parenting/Looked After Children	No significant implications
Safeguarding responsibilities for vulnerable children and adults	No significant implications
Public Health	Significant implications
Human Resource/Training and Development	No significant implications

6.2 Sustainability implications

There will be a reduction in carbon emissions as a result of implementing the resulting action plan.

6.3 Public Health implications

The implementation of an action plan will have a positive impact on the health of those within the AQMA.

7. CONCLUSION AND RECOMMENDATIONS:

- 7.1 A detailed air quality assessment carried out on A281, Shalford has identified an area which exceeds the annual mean objective for nitrogen dioxide. The Council therefore is required to designate an AQMA.
- 7.2 Officers recommend the Committee support the recommendations detailed at the beginning of the report.

8. WHAT HAPPENS NEXT:

- 8.1 If the recommendation is agreed, the signed Order designating the AQMA in Shalford will be sent to Defra.
- 8.2 A draft air quality action plan (AQAP) will be drafted in consultation with Surrey County Council, who as the Highway Authority are key in implementing any highways based solutions to the issue. The action plan will have to identify measures that lead to a long-term improvement as the detailed air quality

assessment identified that a 25% reduction in local traffic emissions is needed. The AQAP will be presented to the 18 September 2019 Guildford Joint Committee seeking approval for consultation.

- 8.3 The final AQAP will be presented to the 11 December 2019 Guildford Joint Committee for approval. Implementation of the measures in the action plan will then commence if the AQAP is approved.

Contact Officer:

Justine Fuller, Regulatory Services Manager, Guildford Borough Council. Contact: 01483 44370/Justine.fuller@guildford.gov.uk

Consulted:

The following teams and person have been consulted on the report:

Surrey County Council: William Bryans, Transport Studies and Councillor Mike Goodman, Cabinet Member for Environment and Waste

Guildford Borough Council: Director of Community Services, Corporate Management Team, legal, finance, communications and human resources

Annexes:

- Appendix 1 – Map of proposed Air Quality Management Area in Shalford
- Appendix 2 – Detailed Assessment of Air Quality along the A281, Shalford
- Appendix 3 – Draft Order to declare an Air Quality Management Area in Shalford

Background papers:

- 14.1 Local Air Quality Management, Policy Guidance (PG16), Defra, April 2016
<https://laqm.defra.gov.uk/documents/LAQM-PG16-April-16-v1.pdf>
- 14.2 Local Air Quality Management, Technical Guidance (TG16), Defra, April 2016
<https://laqm.defra.gov.uk/technical-guidance/>
- 14.3 Air Quality (England) Regulations 2000
<http://www.legislation.gov.uk/uksi/2000/928/contents/made>
- 14.4 The Environment Act 1995 <https://www.legislation.gov.uk/ukpga/1995/25/contents>
- 14.5 The Air Quality (England) (Amendment) Regulations 2002
<http://www.legislation.gov.uk/uksi/2002/3043/contents/made>
- 14.6 UK Air Quality Strategy (DEFRA 2007)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69336/pb12654-air-quality-strategy-vol1-070712.pdf
- 14.7 Guildford Borough Council - Annual Status Reports and air quality monitoring results
<https://www.guildford.gov.uk/article/19807/Air-quality-monitoring>

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