



Air Quality Action Plan

Tonbridge and Malling Borough Council

January 2020

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Tonbridge and Malling Borough Council Air Quality Action Plan

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

January, 2020

Tonbridge and Malling Borough Council

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Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Tonbridge and Malling Borough Council up to 2025. This action plan replaces the previous draft action plan¹ which ran from June 2011.

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{2,3}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion⁴. Tonbridge and Malling Borough Council are committed to reducing the exposure of people within the borough to poor air quality in order to improve health.

We have developed actions that can be considered under four broad priority topics:

- Priority 1: Transport;
- Priority 2: Planning and Infrastructure;
- Priority 3: Policy Guidance; and
- Priority 4: Public Health and Wellbeing

The primary focus of the AQAP is to implement measures which will ensure levels of NO₂ across the borough, and specifically within the existing AQMAs, are consistently below 10% of the annual mean NO₂ Air Quality Strategy (AQS) objective of 40µg/m³. For two out of the six existing Air Quality Management Areas (AQMAs), a relatively small reduction in annual mean NO₂ concentration is required (3µg/m³ within AQMA 3 and 3.6µg/m³ within AQMA 7) to reduce existing concentrations to 36µg/m³ thus ensuring compliance with the annual mean objective of 40µg/m³. Where required concentration reductions are relatively low, borough-wide actions / 'soft' measures such as educational events, are more applicable within these AQMAs, compared to additional AQMA / area specific 'hard' measures such as changes in existing road layouts, that are required within the AQMAs that are current showing concentrations of NO₂ significantly in excess of the annual mean objective.

The priorities from the adoption of this action plan are to aid a behavioural shift within the population to promote more sustainable and less polluting methods of transport, reducing dangerous pollutant concentrations and reducing the risks of detrimental effects against health and wellbeing within the borough. In addition where transport remains a majority source of air pollution, traffic measures are to be implemented to reduce congestion and aim to reduce source emissions in areas of relevant exposure.

This AQAP outlines a plan to effectively tackle air quality issues within the Council's control. It should be noted that there are a large number of air quality policy areas that are outside of the Council's influence (such as vehicle emissions standards agreed in Europe), but for which the Council is able to provide useful evidence. The Council will therefore continue to work with regional and central government on policies and issues beyond Tonbridge and Malling's direct influence in relation to air quality.

¹ Tonbridge and Malling Borough Council (June 2011), Draft Air Quality Action Plan

² Environmental equity, air quality, socioeconomic status and respiratory health, 2010

³ Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

⁴ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Responsibilities and Commitment

This AQAP was prepared by the Environmental Protection department within Tonbridge and Malling Borough Council with support provided by Bureau Veritas. The following officers and departments have, and continue to provide, support and agreement to the AQAP:

List officers/departments involved in the preparation of the AQAP

This AQAP has been approved by:

<Details of high level Council members who have approved the AQAP (This could also include support from County Councils or from Highways England where appropriate) e.g. Head of Transport Planning, Head of Public Health, with e-signature>.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the relevant Council Committee and Defra. Progress each year will be reported to Defra within the Annual Status Report (ASR) due for completion each year and produced by Tonbridge and Malling Borough Council, as part of our statutory LAQM duties.

If you have any comments on this AQAP please send them to the Environmental Protection department at Tonbridge and Malling Borough Council at:

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1 Introduction

This Air Quality Action Plan (AQAP) outlines the actions that Tonbridge and Malling Borough Council will deliver up to 2025 in order to reduce concentrations of air pollutants (primarily to nitrogen dioxide (NO₂)) within the existing Air Quality Management Areas across the borough, and also across the wider borough area; thereby positively impacting on the health and quality of life of residents within, and visitors to Tonbridge and Malling.

The AQAP has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process. Development of the AQAP has taken place through discussions within a Tonbridge and Malling Borough Council Steering Group led by the Environmental Protection team and supplemented by guidance from Bureau Veritas.

The document is presented as an initial draft and is to be subjected firstly to internal consultation. Following this initial stage of consultation the draft will be subjected to external consultation and therefore will be submitted to the following parties in line with PG(16) guidance⁵:

- Department of Environment, Farming and Rural Affairs (Defra);
- Environment Agency (EA);
- Highways England;
- Tonbridge and Malling Borough Council;
- Kent County Council (KCC);
- Neighbouring local authorities;
- Residents within Tonbridge and Malling, especially within the existing AQMAs; and
- Bodies representing local business interests and other organisations as appropriate.

Once accepted by Defra, and implemented by Tonbridge and Malling this AQAP will be reviewed every five years at the latest. Details of the progress on measures set out within this AQAP will be reported on annually within the Tonbridge and Malling air quality ASR.

⁵ Local Air Quality Management Policy Guidance LAQM.PG(16). April 2016. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.

2 Summary of Current Air Quality in Tonbridge and Malling

Currently there are six Air Quality Management Areas (AQMAs) designated within Tonbridge and Malling Borough Council area. All six have been declared in response to exceedances of the NO₂ annual mean objective. Each of the six declared AQMAs incorporate areas that have strategic road links passing through them, with road traffic emissions having previously been identified as the major source of the elevated NO₂ concentrations.

The previous AQAP completed by Tonbridge and Malling⁶, dated June 2011, had been developed to include the initial six AQMAs declared (the designation relating to 24-hour PM₁₀ concentrations for the M20 AQMA 1 and the Ditton AQMA 2 have since been revoked). The previous AQAP had not been updated to include the declaration, and subsequent amendment of Borough Green AQMA. Therefore the measures outlined within this AQAP have been developed based upon the current designation of AQMAs.

Details of the current AQMAs are provided within Table 2.1 and boundary maps for each of the AQMAs are presented in Appendix A:

Table 2.1 – Tonbridge and Malling Air Quality Management Areas

AQMA Name	Date of Declaration	Location	Description of Area
M20 AQMA 1	May 2001	Larkfield / Ditton	An area along the M20 motorway between the points where it passes below New Hythe Lane, Larkfield to the west and where it crosses Hall Road, Aylesford to the east.
Tonbridge High Street AQMA 3	June 2005	Tonbridge	An area incorporating the High Street between Botany and the High Street/Vale Road roundabout, Tonbridge.
Wateringbury AQMA 4	June 2005	Wateringbury	An area incorporating the Red Hill/Tonbridge Road A26 crossroads in the Parish of Wateringbury.
Aylesford AQMA 5	October 2008 (Amended January 2020)	Aylesford	An area encompassing the junction of the A20 (London Road) with Hall Road and Mills Road.
Larkfield AQMA 6	October 2008 (Amended January 2020)	Larkfield	An area encompassing a section of the A20 (London Road) within Larkfield, including the junction with New Hythe Lane.
Borough Green AQMA 7	April 2013 (Amended January 2020)	Borough Green	An area encompassing the junction of the A25 (Sevenoaks Road) and the A227 (Western Road) within Borough Green.

Tonbridge and Malling operate a large network of passive diffusion tubes, which provide annual mean concentrations of NO₂ at monitoring locations across the borough. During 2018 monitoring was completed at 54 locations, with monitoring completed both within and outside the current AQMA boundaries. The diffusion tubes are exposed in 4-5 week periods, in line with the Defra LAQM Diffusion Tube Monitoring Calendar, and are processed to derive annual mean concentrations as per Defra TG(16) guidance⁷. In addition to the passive diffusion tube monitoring completed within the borough, the automatic monitoring of NO₂ has historically been completed at one location within the Tonbridge High Street AQMA (ZT5). In

⁶ Tonbridge and Malling Borough Council, Environment Act 1995 LAQM Draft Air Quality Action Plan, June 2011

⁷ Local Air Quality Management Technical Guidance LAQM.TG(16). April 2016. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland

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2018 the monitor was relocated close to the Watringbury AQMA due to the elevated concentrations reported within the AQMA.

Of the 54 NO₂ monitoring locations within the Council area, 21 are located within the current designated AQMAs. A summary of the recent NO₂ monitoring completed within each AQMA is presented in Table 2.2. Further details of all monitoring locations, and subsequent annual mean NO₂ concentrations are available in the latest Annual Status Report (ASR) completed and submitted to Defra each year. All LAQM reports completed by Tonbridge and Malling are available through the Tonbridge and Malling Borough Council website⁸.

Table 2.2 – Tonbridge and Malling AQMA NO₂ Monitoring

Site ID	Site Type	Monitoring Type	Annual Mean NO ₂ Concentration (µg/m ³)				
			2014	2015	2016	2017	2018
M20 AQMA 1							
TN5	Roadside	Diffusion Tube	-	-	38.1	38.8	34.9
TN7b	Roadside	Diffusion Tube	-	-	38.0	36.7	31.5
TN80a	Roadside	Diffusion Tube	38.8	35.1	34.4	35.4	30.2
TN5a	Roadside	Diffusion Tube	37.1	35.5	34.5	34.1	30.1
TN30	Roadside	Diffusion Tube	28.3	29.3	29.7	26.7	25.5
TN29a	Roadside	Diffusion Tube	24.9	25.4	28.0	25.2	24.1
Tonbridge High Street AQMA 3							
TN35	Urban Centre	Diffusion Tube	43.2	36.7	34.6	37.5	36.4
TN44	Urban Centre	Diffusion Tube	42.0	40.1	40.5	38.4	35.2
ZT5	Urban Centre	Automatic Analyser	46.6	45.8	46.8	49.6	34.9
TN45, 74, 75	Urban Centre	Diffusion Tube	42.7	41.6	40.5	42.3	39.0
TN110	Roadside	Diffusion Tube	-	-	30.1	32.8	28.4
Watringbury AQMA 4							
TN33	Roadside	Diffusion Tube	52.7	51.9	56.4	53.6	51.9
TN43	Roadside	Diffusion Tube	38.2	38.2	39.1	38.7	35.7
TN42, 76, 77	Roadside	Diffusion Tube	64.8	63.5	64.8	61.3	58.1
Aylesford AQMA 5							
TN68	Roadside	Diffusion Tube	31.9	30.8	30.8	31.4	28.3
TN60, 62, 63	Roadside	Diffusion Tube	45.3	44.1	44.8	44.8	41.7
DF1, 2, 3	Roadside	Diffusion Tube	-	42.6	44.3	44.1	40.1
Larkfield AQMA 6							
TN57, 58, 59	Roadside	Diffusion Tube	36.5	34.0	33.7	31.4	32.2
DF7, 8, 9	Roadside	Diffusion Tube	-	35.2	41.8	35.0	32.8
TN106	Roadside	Diffusion Tube	-	-	43.9	43.2	42.0
Borough Green AQMA 7							
TN70, 72, 73	Roadside	Diffusion Tube	42.2	42.1	45.6	43.0	39.6
Notes:							
<ul style="list-style-type: none"> - Exceedances of the NO₂ annual mean objective are presented in Bold - The automatic monitor ZT5 was relocated part way through 2018 							

It can be seen by the monitoring results presented within Table 2.2 that the number of monitored exceedances of the NO₂ annual mean objective across all current AQMAs has reduced between 2014 (eight) and 2018 (five). In addition, detailed within the latest ASR at

⁸ Tonbridge and Malling Borough Council Air Quality – <https://www.tmbc.gov.uk/services/environment-and-planning/pollution/air-quality>

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the time of writing, during 2018, as has been apparent since 2014, there have not been any monitored exceedances outside of the declared AQMAs. Although there has been a visible decline in concentrations, aside from within the M20 AQMA there remains one monitoring location reporting an NO₂ annual mean greater than, or within 10% of the annual mean objective (36.0µg/m³).

Annual mean concentrations have remained at their highest within the Watlingbury AQMA, with the triplicate diffusion tube monitoring location TN42, 76, 77 reporting the highest concentration within the borough every year since 2014 (58.1µg/m³ in 2018). As can be seen within Figure A.3, the Watlingbury AQMA consists of a single cross junction between the A26 (Tonbridge Road), Red Hill and Bow Road. The junction is traffic light controlled and congestion is experienced throughout the day due to the A26 linking Maidstone with Tonbridge and also Royal Tunbridge Wells.

There have not been any monitored exceedances of the NO₂ annual mean objective within the M20 AQMA during the previous five years. The maximum monitored concentration recorded during this period was 38.8µg/m³ recorded at both TN5 in 2017 and TN80a in 2014. Although there has not been any monitored exceedances, the detailed modelling completed as part of the AQMA review⁹ attached as Appendix xx predicted that a number of properties located to the north and south of the M20 motorway experience NO₂ annual mean concentrations greater than 36.0µg/m³. Due to the layout of the M20 motorway, and the adjoining local roads, it has not always been possible to locate diffusion tubes in locations of relevant exposure, e.g. gardens of residential properties at their closest point to the M20 motorway.

In addition to future years monitoring results, any changes made to the existing monitoring network within the borough will be detailed and justified within subsequent ASRs. The monitoring network serves as an ongoing indicator for changing NO₂ trends within the borough, and will be essential for the assessment of implementation for the measures detailed within this AQAP. The monitoring network also provides an initial evidence base for consideration of the requirement to revoke, amend or declare any AQMAs.

⁹ Bureau Veritas (November 2019), Tonbridge and Malling Borough Council Air Quality Management Area Review

3 Tonbridge and Malling's Air Quality Priorities

This chapter presents the main drivers, and the approach taken by Tonbridge and Malling for the development and subsequent selection of measures that have been included within this AQAP. Included within this section of the AQAP are descriptions of the existing strategies and policies that relate to air quality within the borough.

A source apportionment study has been completed across the borough, focusing on each of the existing six AQMAs and surrounding area. The source apportionment study has allowed the most significant vehicular NO_x contributors to be identified, and in conjunction with the strategies and policies that are currently in place, the conclusions have been used to identify and prioritise the action measures presented within Section 5.

3.1 Public Health Context

Scientific evidence has continued to show the scale of the negative impact of poor ambient air quality on health. Although the links between air pollution as a direct cause of death are still the subject of much debate, poor air quality is considered to be a significant contributory factor to the loss of life, with an average estimation of lives being shortened by five months. The Committee on the Medical Effects of Air Pollution (COMEAP)¹⁰ provides advice to Government on the setting of air quality standards, and increasingly has sought to consolidate evidence on the health burden and impacts of various pollutants, both in single occurrence and pollutants in combination. In terms of NO₂, COMEAP provide a current range of estimate for annual mortality burden for human-made air pollution in the UK is estimated to be between 28,000 and 36,000 deaths and an associated loss of population life of 328,000 and 416,000 life years lost¹¹.

Local authorities across England have a central role in achieving improvements in air quality, and have a range of powers which can effectively help to improve air quality. The involvement of public health officials is crucial in playing a role to assess the public health impacts and providing advice and guidance on taking appropriate action to reduce exposure and improve the health of everyone in Tonbridge and Malling.

The online Public Health Outcomes Framework (England) tool¹² provides further impetus to join up action between the various local authority departments that all contribute towards the delivery of air quality improvements. There is extensive evidence about the health impacts of air pollution, growing media and public interest and an indicator on mortality attributed to airborne particulate matter in the Public Health Outcomes Framework. The Public Health briefing document published by Defra and Public Health England (PHE)¹³ provides guidance as to the latest information to consider in terms of the health response to air pollution, guiding local authorities to use existing tools to appraise the scale of the air pollution issue in its area. The briefing document, as part of a resource pack for public health teams, advises local authorities how to appropriately prioritise air quality alongside other public health priorities to ensure that it is provided relevant exposure within local agenda.

The briefing document comprises the following key guides:

- Getting to grips with air pollution – the latest evidence and techniques;

¹⁰ The Committee on the Medical Effects of Air Pollution – <https://www.gov.uk/government/groups/committee-on-the-medical-effects-of-air-pollutants-comeap>

¹¹ The Committee on the Medical Effects of Air Pollution (2018), Associates of long-term average concentrations of nitrogen dioxide with mortality

¹² Public Health England, Public Health Outcomes Framework – <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>

¹³ Department for Environment, Food and Rural Affairs and Public Health England (March 2017), Air Quality: A Briefing for Directors of Public Health

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- Understanding air pollution in your area;
- Engaging local decision-makers about air pollution;
- Communicating with the public during air pollution episodes;
- Communicating with the public on the long term impacts of air pollution; and
- Air Pollution: an emerging public health issue: Briefing for elected members.

As stated above, the Public Health Outcomes Framework tool includes an indicator on mortality attributed to airborne particulate matter. It should be noted that the indicator only accounts for one pollutant (particulate matter with an aerodynamic diameter of 2.5µm or less – PM_{2.5}) for which stronger scientific evidence on links with detrimental health effects and mortality exist, and not for NO₂, for which the six current AQMAs within Tonbridge and Malling are declared. For PM_{2.5} evidence continues to show that there is no real safe threshold for this pollutant and UK government should achieve reductions in levels of PM_{2.5} as low as reasonably practicable below the current air quality standard.

For Tonbridge and Malling in 2017, the fraction of mortality attributable to particulate PM_{2.5} air pollution is 5.7%, which is higher than the national average of 5.1%. The borough is currently under no obligation to monitor PM_{2.5}, which is a focus at national level, but anticipates that some of the measures implemented within this action plan for the achievement of reductions in NO₂, will have co-benefits in additionally reducing concentrations of particulate matter. Furthermore, following on from a review of research into the death burden associated with the air pollution mixture rather than single pollutants acting independently, COMEAP are currently reviewing the ability to link deaths to one specific pollutant.

At a County level the Kent Joint Health and Wellbeing Strategy¹⁴, which has been extended to 2021 provides strategic direction to address the numerous health and wellbeing issues facing the population within Kent. It is identified within the strategy that a number of factors affecting short and long term physical and mental health such as air quality need to be considered. Through an integrated approach, with continual links with local authorities feeding into the strategy, the overall vision of improving health and wellbeing outcomes.

The Kent Public Health Observatory last provided an update in terms of mortality rates attributable to air pollution in April 2018¹⁵. Within which air pollution (particulate matter) is a contributory factor in fewer deaths per year in the population (under 75) in Kent than cancer and cardiovascular disease, however it is linked with a similar number of deaths as is attributed to respiratory disease and liver disease.

3.2 Planning and Policy Context

This Action Plan outlines the Council's plan to effectively tackle air quality issues within its control; however, it is recognised there are numerous existing, and also impending policies and strategies adopted at local, regional and national level that can exert significant effects, both positive and negative, on air quality across Tonbridge and Malling. It is important that these plans and strategies are identified, and taken into consideration at an early stage of the development of the plan. These will aid the establishment of the context in which specific options for improving air quality can be implemented.

Whilst certain policies and / or strategies may be outside of the influence of Tonbridge Malling, there are a number of related policies and strategies at local and regional levels that can be tied directly with the aims of this AQAP. Some of these are directly focused on air quality improvements within Tonbridge and Malling, whilst others relate to transportation issues and therefore are likely to help contribute to overall improvements in air quality across Tonbridge and Malling.

¹⁴ Kent County Council (2013), Kent Joint Health and Wellbeing Strategy: Outcomes for Kent

¹⁵ Kent Public Health Observatory (April 2018), Air Quality

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The review of these strategies and policies also assist in not duplicating the work within the AQAP, but instead focus on direct measures outside those considered within the already developed strategies and policies, but that still contribute toward their overall aims. This section outlines the strategies and policies that have the most significant potential to impact on pollutant concentrations within Tonbridge and Malling. Given their importance, the majority of measures listed below have been included as action measures within this Action Plan.

The most relevant policies and strategic documents are detailed below.

3.2.1 Clean Air Strategy 2019

The Clean Air Strategy¹⁶ has been published to set out the case for action at a national level, identifying a number of sources of air pollution within the UK including road transportation, that is relevant in terms of the AQMAs currently present within Tonbridge and Malling, and sets out the actions required to reduce the impact upon air quality from these sources. It has been developed in conjunction with three other UK Government Strategies; the Industrial Strategy, the Clean Growth Strategy, and the 25 Year Environment Plan

Key actions that are detailed within the strategy aimed at reducing emissions from transportation sources include the following:

- The publication of the Road to Zero strategy which sets out plans to end the sale of new conventional petrol and diesel cars and vans by 2040;
- New legislation to compel vehicle manufacturers to recall vehicles and non-road mobile machinery for any failures in emission control systems, and to take effective action against tampering with vehicle emissions control systems;
- Develop new standards for tyres and brakes to reduce toxic non-exhaust particulate emissions from vehicles;
- The encouragement of the cleanest modes of transport for freight and passengers; and
- Permitting approaches for the reduction of emissions from non-road mobile machinery, especially in urban areas.

3.2.2 UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations

Published in July 2017, the UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations (Detailed Plan)¹⁷ is the UK governments plan for bringing concentrations of NO₂ within statutory limits within the shortest possible time. It is identified that the most immediate air quality challenge within the UK is tackling the issue of NO₂ concentrations close to roads, especially within towns and cities. The plan identifies a number of local authorities that were required to complete feasibility studies to define NO₂ concentrations on road links identified by the national Pollutant Climate Mapping (PCM) model as being in exceedance of the NO₂ annual mean AQS objective.

Tonbridge and Malling were not one of these authorities identified, but regardless the UK Plan provides a high level of detail on possible solutions, and their implementation, to reduce NO_x emissions from vehicles, and therefore lower NO₂ concentrations. The actions detailed within the UK Plan include the following:

- Implementation of Clean Air Zones (CAZs);

¹⁶ Department for Environment, Food and Rural Affairs (2019), Clean Air Strategy

¹⁷ Department for Environment, Food and Rural Affairs, Department for Transport (2017), UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations (Detailed Plan)

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- New real world driving emissions requirements for light passenger and commercial vehicles;
- Additional funding to accelerate the uptake of low emissions buses and also for the retrofitting of older buses;
- Additional funding to accelerate the uptake of hydrogen vehicles and associated infrastructure;
- New mandatory emissions standards for non-road mobile machinery; and
- Local cycling and walking investment plans.

3.2.3 Kent Environment Strategy / Energy and Low Emission Strategy

The Kent Environment Strategy (KES)¹⁸ that was adopted in 2016, and the Energy and Low Emission Strategy (ELES)¹⁹ (currently at consultation stage) which is a sub strategy of the KES have been developed to address the challenges posed across Kent through the growth and change that is predicted to occur across the County over the coming years / decades. Economic growth is welcomed within the County, but this should be realised without impacting the health and wellbeing of its residents, and also without impacting the diverse landscape across the County that is valued by residents, businesses and visitors alike.

Air quality is identified within the KES as a key issue within the County, the unique position of Kent between London and the continent leads to challenges with emissions from cross-channel freight and traffic leading to the declaration of over 40 AQMAs. Transport is identified as a majority emission source leading to associated risks for air quality, with sustainability and a shift to active travel detailed as a requirement for transport growth. In a wider sense the KES has three core themes that are applicable to the strategy and also are drawn down into the ELES:

- Theme One: Building the Foundations for Delivery;
- Theme Two: Making best use of existing resources, avoiding or minimising negative impacts; and
- Theme Three: Toward a sustainable future.

The purpose of the ELES is to identify an approach to deliver clean growth, by reducing emissions from housing, industry and transport to lead to improvements in air quality across the County. The challenge of tackling the AQMA hot-spots of poor air quality is outlined as a major challenge to be overcome at a County level, and also at a local authority level due to the majority of declared AQMAs being designated of local authority controlled road links. In terms of vehicle emissions, growth without gridlock is promoted to deliver safe and effective transport, ensuring that communities and businesses benefit, the environment is enhanced and economic growth is supported.

A drive towards a low carbon economy is included within the ELES, with five themes identified:

- Low Carbon Heating;
- Energy Saving and Efficiency;
- Renewable Generation;
- Smart Energy System; and
- Transport Revolution.

¹⁸ Kent County Council (March 2016), Kent Environment Strategy: A Strategy for Environment, Health and Economy

¹⁹ Kent County Council (2019), Kent and Medway Energy and Low Emissions Strategy: Supporting Delivery of the Kent Environment Strategy (Consultation Draft)

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All of the above have the potential to help lower pollutant concentrations across Tonbridge and Malling, and the wider County. Of significant importance is the Transport Revolution which promotes EV charging and a hydrogen fuelling infrastructure, compressed natural gas (CNG) fuelling and the modernisation of the energy infrastructure within ports.

3.2.4 Local Plan

The new Tonbridge and Malling Local Plan²⁰ has been consulted upon and is currently at the examination stage. Once adopted, the Local Plan will form part of the Development Plan and will replace the current suite of adopted local plans. Due to the advanced stage of the Local Plan in terms of adoption the policies held within the plan have been detailed within this AQAP, if the relevant policies change significantly prior to the adoption of the plan the AQAP will be updated to reflect these. A large number of documents have been used to shape the Local Plan, one of which was an Air Quality Assessment²¹ that was completed to provide an evidence base for the potential air quality impacts of the Local Plan upon human health receptors (residential properties, hospitals and schools).

The Local Plan represents the starting point for decision taking on planning applications, it includes a suite of policies with the purpose to manage and facilitate sustainable development across the borough. In addition there are areas within the borough that are identified in terms of future housing allocations (LP25: Housing Allocations). The areas that are identified within the housing allocations are important as these may be close to areas of poor air quality, or will have the potential to impact upon existing air quality conditions.

In terms of air quality and future development, compliance with LP20: Air Quality within the application is required, with the identification of detailed mitigation measures to be included with the Environmental Health department having regard to the relevant air quality standards at a national level. Policy LP20: Air Quality states the following:

1. Development, either individually or cumulatively with other proposals or existing uses in the vicinity, that could directly or indirectly result in material additional air pollutants and a significant worsening of levels of air quality within the area surrounding the development site will not be permitted unless evidenced, specifically identified and detailed measures to offset or mitigate those impacts are introduced as part of the proposal.
2. Development that would introduce new receptors into an area of poor air quality will not be permitted unless the proposals incorporate acceptable measures to ensure receptors would not be subject to unacceptable risk as a result of poor air quality.

In addition to policy LP20, there are several policies within the Local Plan that are aimed at mitigating the impacts of developments upon air quality. These include LP23: Sustainable Transport, and the policies for strategic sites which seek to maximise opportunities for additional cycling and walking routes. A number of identified Strategic Sites (LP28: South Aylesford, LP29: Borough Green, LP31: South-West Tonbridge) bring opportunities to improve the air quality of the nearby AQMAs through the development of relief roads alleviating the traffic flow through the areas of concern. But this earmarked development also brings a risk of detrimental effects upon air quality with the increase of traffic flow in the immediate and surrounding area. Throughout the development of any of the Strategic Sites, or any other development within the borough the Environmental Protection team will review applications received to ensure that all applications are completed in accordance with LP20.

²⁰ Tonbridge and Malling Borough Council (January 2019), Local Plan – Regulation 22 Submission

²¹ Mott MacDonald (June 2018), Tonbridge and Malling Borough Council Local Plan Air Quality Evidence Base

3.2.5 Local Transport Plan

The Kent County Council Local Transport Plan²² was approved in 2016 setting out a vision for transport over a 15 year timeframe and has the ambition to deliver safe and effective transport, ensuring that all of Kent's communities and businesses benefit, the environment is enhanced and economic growth is supported. This ambition is to be achieved through five overarching policies, of which three have immediate relevance to improving air quality conditions:

- Outcome 3: Safer travel;
- Outcome 4: Enhanced environment; and
- Outcome 5: Better health and wellbeing.

When assessing any transport schemes air quality impacts are to be taken into account in addition to the consideration of the relocation of traffic, ranging from a strong negative impact to a strong positive impact. It is identified that the reduction of vehicle numbers will lead to a positive effect upon local air quality, with Active Travel methods such as walking or cycling promoted as a means of transport rather than just for leisure purposes. Through this links are made to the Active Travel Strategy and Cycling Strategies.

The transport priorities detailed within the Transport Plan that are relevant to Tonbridge and Malling are as follows:

- M20 Junctions 3 – 5 'smart' (managed) motorway system;
- A20 corridor improvements between A228 and M20 Junction 5;
- A228 corridor improvements;
- Borough Green Relief Road;
- Watlingbury A26 / B2015 junction improvements;
- Implementation of the Tonbridge and Malling Cycling Strategy; and
- Improvements within Tonbridge:
 - Tackling congestion in Tonbridge town;
 - Tonbridge town centre regeneration; and
 - Potential for Urban Traffic Control (traffic signal coordination) in Tonbridge to help alleviate congestion and improve air quality.

All of the above have the potential to impact air quality conditions within the existing AQMAs, and across the wider borough. The Environmental Protection team at Tonbridge and Malling will continue to the work in unison with our colleagues in the Highway teams at both Tonbridge and Malling and Kent County Council to ensure that the impacts upon air quality due to the implementation of any highways scheme is quantified in terms of pollutant emissions, and that our expertise within the field is sought when future schemes are developed within Tonbridge and Malling.

3.2.6 Freight Action Plan

The Kent County Council Freight Action Plan for Kent²³ identifies that when road freight vehicles travel on the local road network they can have an adverse impact on local communities in a number of ways, one of which being the impact upon local air quality conditions. It is a supporting policy to the Local Transport Plan detailed above and has three

²² Kent County Council, Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031

²³ Kent County Council, Freight Action Plan for Kent

core actions detailed within. In terms of air quality issues have been identified in a number of areas:

- Direct tailpipe emissions from the freight passing through the County and also from increased congestion due to Operation Stack whereby vehicles are diverted from the M20 to the A20 when congestion for the Euro Tunnel and Port of Dover reach certain levels;
- Refrigeration and in-cab heaters running when freight are parked through the night, contributing to air pollution within the local area; and
- Implementation of vehicle restrictions within Towns and Villages to restrict the type and / or the number of vehicles that are allowed to pass through certain settlements.

Initiatives such as an ECO Stars scheme can be set up to improve efficiency within a fleet of freight vehicles, this is realised through improvements in fuel consumption and reducing any possible impacts upon local air quality conditions.

3.2.7 Climate Change Strategy

The Tonbridge and Malling Climate Change Strategy (2008 – 2011)²⁴ detailed the climate issues being faced within the borough, and the role that Tonbridge and Malling Borough Council had in the response to the challenges posed by climate change. With the main themes of the strategy being:

- Housing and Energy Conservation;
- Transportation and Air Quality;
- Sustainable Development and Sustainability within Tonbridge and Malling Borough Council;
- Waste Minimisation and Recycling;
- Community and Business Engagement; and
- Adapting to Climate Change.

In terms of air quality, it was identified that there is a close relationship between air quality and climate change pollutants emitted from transportation sources. Working to reduce the reliance upon personal travel and vehicle trips has two-fold benefits in reducing both local air pollutants and climate pollutants.

Further to the above a climate emergency has been declared by Tonbridge and Malling Borough Council with an aspiration for the borough to become carbon neutral by 2030, 20 years sooner than what Kent County Council have initially agree to. As part of the declaration a drive for electric vehicle charging points is identified, this is to ensure that Tonbridge and Malling is one of the most welcoming places in the country for driving electric and hybrid vehicles.

3.2.8 Cycling Strategy

The Tonbridge and Malling Cycling Strategy (2014 – 2019)²⁵ provided a core collection of principals and actions to promote cycling and the development of cycling facilities across the borough. It was identified that an increase in cycling has a number of positive benefits, with one of which being an improvement in air quality within urban areas through a reduction in traffic congestion.

²⁴ Tonbridge and Malling Borough Council (2008), Tonbridge and Malling Climate Change Strategy

²⁵ Kent County Council, Sustrans and Tonbridge and Malling Borough Council (2014), Tonbridge and Malling Cycling Strategy 2014 – 2019

The aim of the Cycling Strategy was to increase the number people in within Tonbridge and Malling using cycling as a frequently used travel option. The strategy considered improvements to the network in terms of new cycle routes, improved infrastructure and also influencing attitudes to cycling to shift behavioural responses. The key features to deliver step change are associated with improving and expanding the existing cycling infrastructure, providing cycle safety training within schools and the workplace, promoting and marketing cycle usage and running events to raise cycling profile.

An increase in cycling will ultimately help achieve Tonbridge and Malling's vision for improved air quality conditions by reducing congestion on the roads, therefore reducing NO_x vehicle emissions and subsequent NO₂ concentrations.

3.3 Source Apportionment

Source apportionment is the process by which different pollutant sources to relation to existing ambient concentrations are quantified. The AQAP measures presented within this Plan are intended to be targeted towards the predominant sources of emissions within Tonbridge and Malling.

The source apportionment process has been completed in order to:

- Quantify the proportions of NO_x that are attributable to both background emissions and to local road emissions;
- Determination of the relative contributions from different vehicle types (cars, Heavy Good Vehicles (HGVs), Light Goods Vehicles (LGVs), buses and coaches, and motorcycles); and
- Identification of whether action plan measures would need to be on a local / regional / national scale to have a significant impact upon reducing NO_x emissions within the existing AQMA areas.

A source apportionment exercise has been carried out using the ADMS-roads (Version 4.1.1) dispersion model to identify and assess the emission profile of vehicles within Tonbridge and Malling based upon the traffic data and receptors detailed within the AQMA review⁹. To complete this exercise, NO_x and NO₂ concentrations have been predicted at a number of receptor locations within, and close to each AQMA. The source apportionment studies have been undertaken to identify which vehicle type(s) represent the most significant source of NO_x pollution within all existing AQMA's, in addition to a borough wide exercise that encompasses all of the existing AQMAs.

Emission sources of NO₂ are dominated by a combination of direct NO₂ (f-NO₂) and oxides of nitrogen (NO_x), the latter of which is chemically unstable and rapidly oxidised upon release to form NO₂. The NO_x, once emitted from vehicles undergoes a number of chemical reactions and disperses to form the NO₂ concentrations that are measured at roadside monitoring locations. Reducing levels of NO_x emissions therefore reduces levels of NO₂. As a consequence, the source apportionment study has considered the emissions of NO_x which are assumed to be representative of the main sources of NO₂.

3.3.1 M20 Air Quality Management Area (1)

For the M20 AQMA, of the 39 modelled receptor locations, exceedances of the annual mean NO₂ objective have been predicted at nine receptors, and one further receptor had an annual mean predicted to be within 10% of the objective. As detailed below in Table 3.1 and Figure 3.1, the results of the source apportionment exercise present that across all modelled receptors the vehicular proportion of NO_x concentration is 63.3%, and this increases to 82.2% at the receptor with the maximum modelled concentration. Across both source

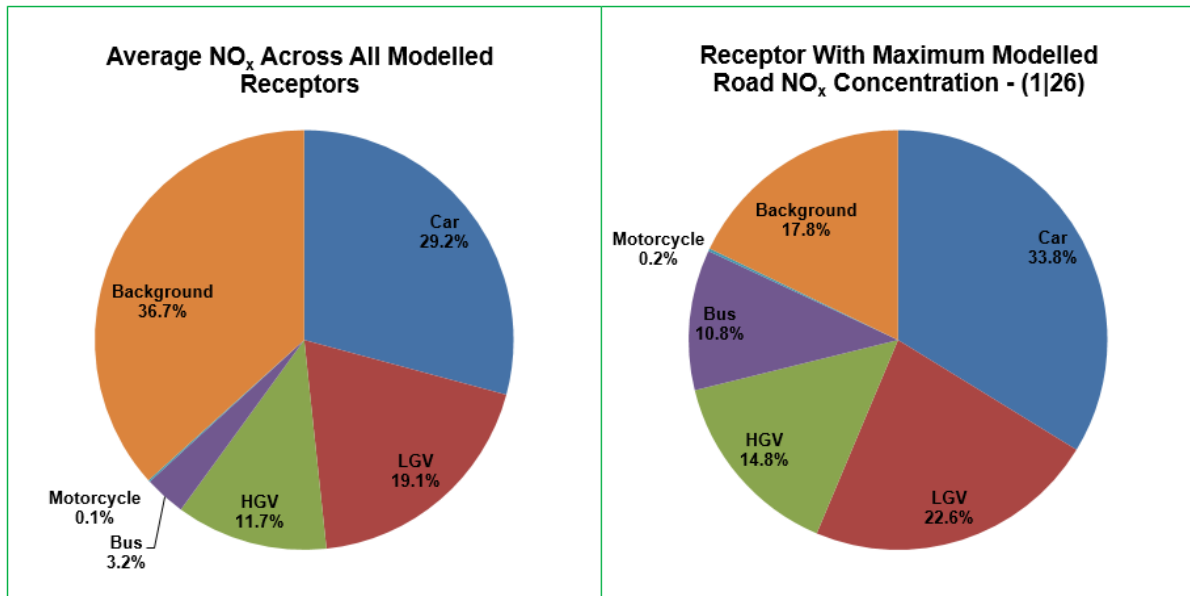
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apportionment scenarios, the proportion of vehicular sources ranks high to low through cars, LGVs, HGVs, bus and coaches, and motorcycles.

Table 3.1 – Source Apportionment: M20 Air Quality Management Area

Metric	All Vehicles	Car	LGV	HGV	Bus & Coach	Motorcycle	Background
Average Across All Modelled Receptors							
NO_x Concentration (µg/m³)	37.2	17.2	11.2	6.9	1.9	0.1	21.5
Percentage of Total NO_x	63.3%	29.2%	19.1%	11.7%	3.2%	0.1%	36.7%
Percentage Contribution to Road NO_x	100.0%	46.1%	30.1%	18.5%	5.0%	0.2%	-
Receptor With Maximum Modelled Road NO_x Concentration (1 26)							
NO_x Concentration (µg/m³)	102.2	42.0	28.1	18.4	13.5	0.3	22.2
Percentage of Total NO_x	82.2%	33.8%	22.6%	14.8%	10.8%	0.2%	17.8%
Percentage Contribution to Road NO_x	100.0%	41.1%	27.5%	18.0%	13.2%	0.3%	-

Figure 3.1 – Source Apportionment: M20 Air Quality Management Area



3.3.2 Tonbridge High Street Air Quality Management Area (3)

For the Tonbridge High Street AQMA, of the 28 modelled receptors there were no exceedances of the annual mean NO₂ objective predicted within the AQMA, however the most recent monitoring concentrations published within the 2018 ASR presented locations with annual means within 10% of the objective. As detailed below in Table 3.2 and Figure 3.2, the results of the source apportionment exercise present that across all modelled receptors the vehicular proportion of NO_x concentration is 67.0%, and this increases to 80.3% at the receptor with the maximum modelled concentration. Across both source apportionment scenarios, the proportion of vehicular sources ranks high to low through cars, LGVs, bus and coaches, HGVs, and motorcycles.

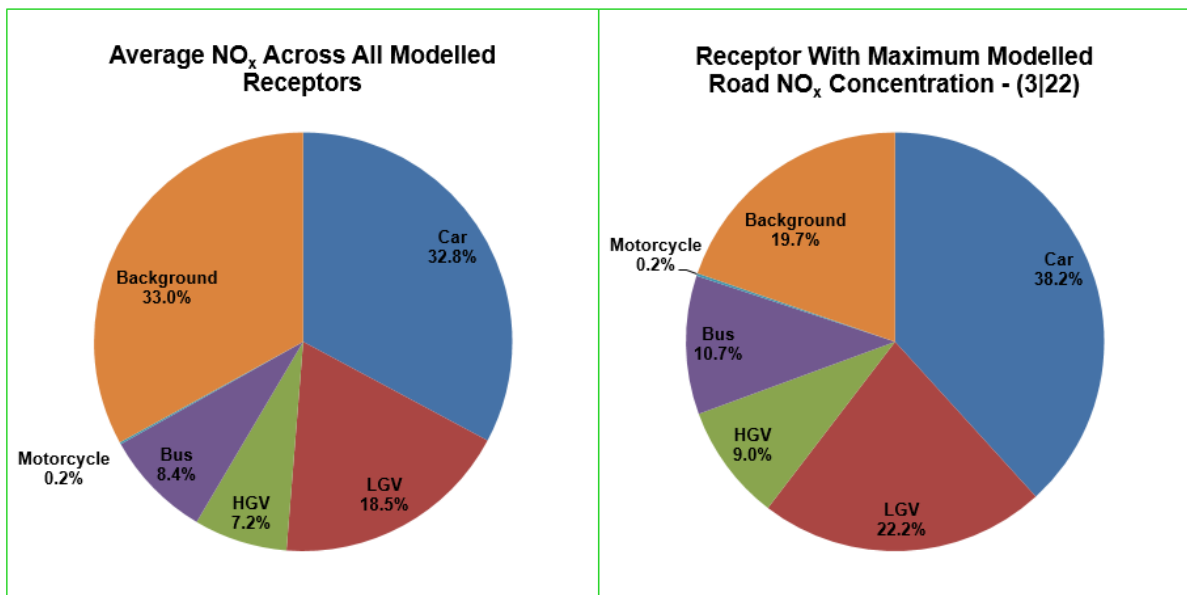
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There is less of a proportion of HGVs compared to buses and coaches across both assessment scenarios. Tonbridge High Street would not be a through-fare route taken by HGVs, only service vehicles requiring to enter this area would travel along the High Street. In contrast there are a number of bus stops located along the length of the High Street with a number of different services travelling along this stretch.

Table 3.2 – Source Apportionment: Tonbridge High Street Air Quality Management Area

Metric	All Vehicles	Car	LGV	HGV	Bus & Coach	Motorcycle	Background
Average Across All Modelled Receptors							
NO_x Concentration (µg/m³)	32.2	15.8	8.9	3.5	4.0	0.1	15.9
Percentage of Total NO_x	67.0%	32.8%	18.5%	7.2%	8.4%	0.2%	33.0%
Percentage Contribution to Road NO_x	100.0%	49.0%	27.5%	10.8%	12.5%	0.2%	-
Receptor With Maximum Modelled Road NO_x Concentration (3 22)							
NO_x Concentration (µg/m³)	62.4	29.7	17.2	7.0	8.3	0.2	15.3
Percentage of Total NO_x	80.3%	38.2%	22.2%	9.0%	10.7%	0.2%	19.7%
Percentage Contribution to Road NO_x	100.0%	47.6%	27.6%	11.2%	13.3%	0.3%	-

Figure 3.2 – Source Apportionment: Tonbridge High Street Air Quality Management Area



3.3.3 Watringbury Air Quality Management Area (4)

For the Watringbury AQMA, of the 23 modelled receptor locations, an exceedance of the annual mean NO₂ objective has been predicted at one receptor within the existing AQMA, and a further receptor located close to the boundary of the AQMA had annual mean concentration predicted to be within 10% of the objective. As detailed below in Table 3.3 and

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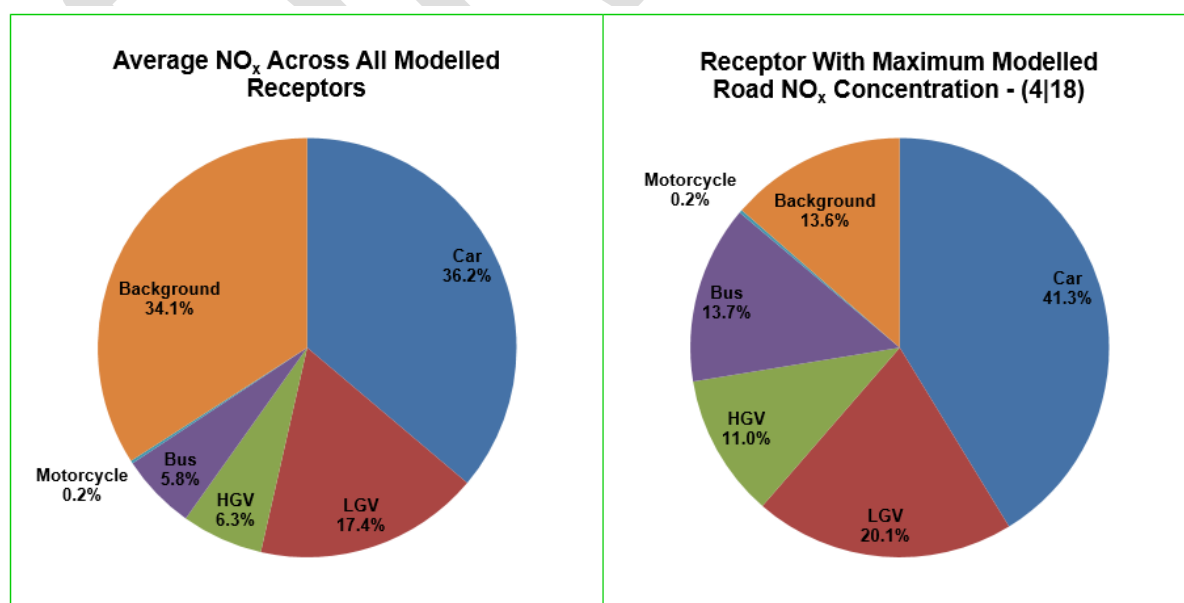
Figure 3.3, the results of the source apportionment exercise present that across all modelled receptors the vehicular proportion of NO_x concentration is 65.9%, and this increases to 86.4% at the receptor with the maximum modelled concentration. For the average of all modelled receptors, the proportion of vehicular sources ranks high to low through cars, LGVs, HGVs, bus and coaches, and motorcycles. But for the maximum NO_x concentration receptor the proportion from buses and coaches is greater than for HGVs.

Both the highest monitored and highest modelled concentrations are within the Watringbury AQMA. The AQMA is very small in size and is due to traffic congestion at a single cross-junction at the centre of Watringbury. This can be seen with the high proportion of NO_x concentration from cars (41.3% at the receptor with the maximum NO_x concentration), this is the highest singular vehicle proportion across all existing AQMAs.

Table 3.3 – Source Apportionment: Watringbury Air Quality Management Area

Metric	All Vehicles	Car	LGV	HGV	Bus & Coach	Motorcycle	Background
Average Across All Modelled Receptors							
NO_x Concentration (µg/m³)	27.3	15.0	7.2	2.6	2.4	0.1	14.1
Percentage of Total NO_x	65.9%	36.2%	17.4%	6.3%	5.8%	0.2%	34.1%
Percentage Contribution to Road NO_x	100.0%	54.9%	26.4%	9.5%	8.9%	0.3%	-
Receptor With Maximum Modelled Road NO_x Concentration (4 18)							
NO_x Concentration (µg/m³)	89.9	43.0	21.0	11.5	14.3	0.2	14.2
Percentage of Total NO_x	86.4%	41.3%	20.1%	11.0%	13.7%	0.2%	13.6%
Percentage Contribution to Road NO_x	100.0%	47.8%	23.3%	12.8%	15.9%	0.3%	-

Figure 3.3 – Source Apportionment: Watringbury Air Quality Management Area



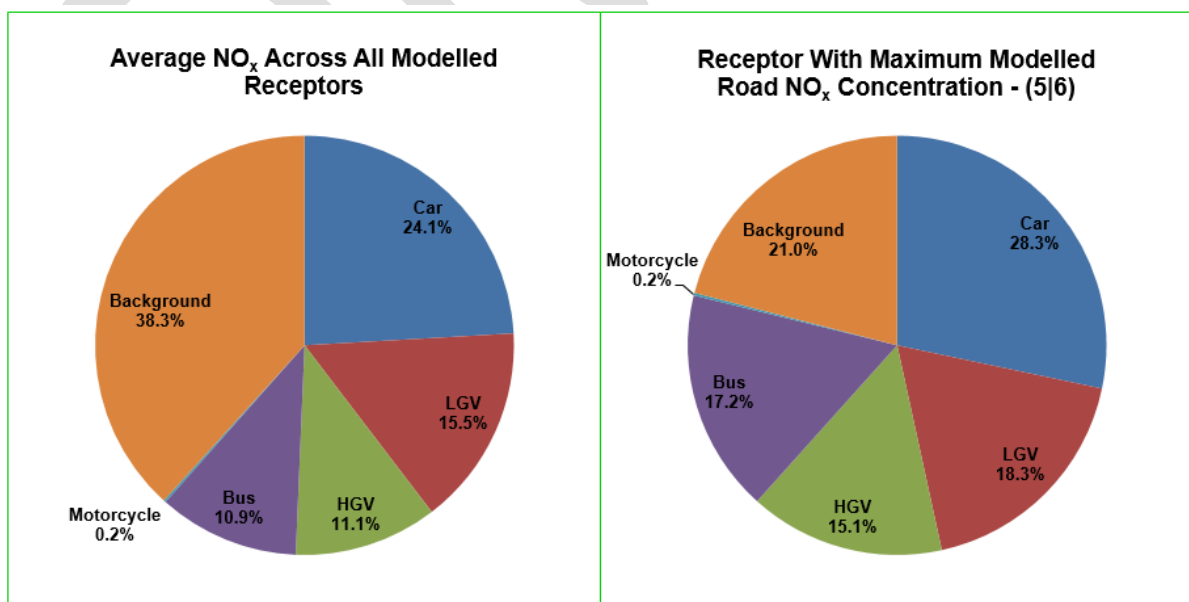
3.3.4 Aylesford Air Quality Management Area (5)

For the Aylesford AQMA, of the 16 modelled receptor locations, there was one predicted exceedance of the annual mean NO₂ objective, and one additional receptor predicted to be within 10% of the objective. As detailed below in Table 3.4 and Figure 3.4, the results of the source apportionment exercise present that across all modelled receptors the vehicular proportion of NO_x concentration is 61.7%, and this increases to 79.0% at the receptor with the maximum modelled concentration. For the average of all modelled receptors, the proportion of vehicular sources ranks high to low through cars, LGVs, HGVs, bus and coaches, and motorcycles. But for the maximum NO_x concentration receptor the proportion from buses and coaches is greater than for HGVs.

Table 3.4 – Source Apportionment: Aylesford Air Quality Management Area

Metric	All Vehicles	Car	LGV	HGV	Bus & Coach	Motorcycle	Background
Average Across All Modelled Receptors							
NO _x Concentration (µg/m ³)	31.3	12.2	7.9	5.6	5.5	0.1	19.4
Percentage of Total NO _x	61.7%	24.1%	15.5%	11.1%	10.9%	0.2%	38.3%
Percentage Contribution to Road NO _x	100.0%	39.0%	25.1%	17.9%	17.6%	0.3%	-
Receptor With Maximum Modelled Road NO_x Concentration (5 6)							
NO _x Concentration (µg/m ³)	72.6	26.0	16.8	13.9	15.8	0.2	19.3
Percentage of Total NO _x	79.0%	28.3%	18.3%	15.1%	17.2%	0.2%	21.0%
Percentage Contribution to Road NO _x	100.0%	35.8%	23.1%	19.1%	21.7%	0.3%	-

Figure 3.4 – Source Apportionment: Aylesford Air Quality Management Area



3.3.5 Larkfield Air Quality Management Area (6)

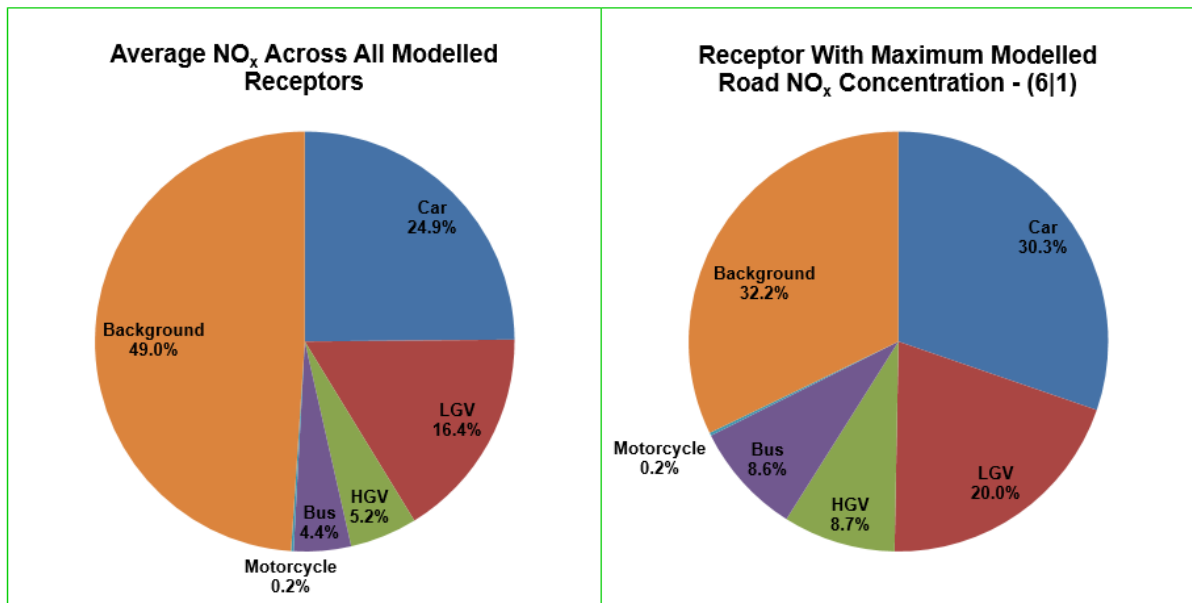
For the Larkfield AQMA, there continues to be a monitoring location (TN106) that exceeds the NO₂ annual mean objective but there were no receptor locations predicted to exceed the objective. As detailed below in Table 3.5 and Figure 3.5, the results of the source apportionment exercise present that across all modelled receptors the vehicular proportion of NO_x concentration is 51.0%, and this increases to 67.8% at the receptor with the maximum modelled concentration. Across both source apportionment scenarios, the proportion of vehicular sources ranks high to low through cars, LGVs, HGVs, bus and coaches, and motorcycles.

The proportion of NO_x concentration from background sources is higher within the Larkfield AQMA than for any other AQMA across both source apportionment scenarios. For all modelled receptors the proportions of vehicular sources and background sources are almost even (51.0% and 49.0%), background sources reduces to 32.2% at the maximum NO_x concentration receptor but this remains the highest proportion of background for these scenario across all of the AQMAs.

Table 3.5 – Source Apportionment: Larkfield Air Quality Management Area

Metric	All Vehicles	Car	LGV	HGV	Bus & Coach	Motorcycle	Background
Average Across All Modelled Receptors							
NO_x Concentration (µg/m³)	20.8	10.1	6.7	2.1	1.8	0.1	19.9
Percentage of Total NO_x	51.0%	24.9%	16.4%	5.2%	4.4%	0.2%	49.0%
Percentage Contribution to Road NO_x	100.0%	48.7%	32.1%	10.2%	8.6%	0.4%	-
Receptor With Maximum Modelled Road NO_x Concentration (6 1)							
NO_x Concentration (µg/m³)	41.6	18.6	12.3	5.3	5.3	0.1	19.7
Percentage of Total NO_x	67.8%	30.3%	20.0%	8.7%	8.6%	0.2%	32.2%
Percentage Contribution to Road NO_x	100.0%	44.7%	29.5%	12.8%	12.7%	0.3%	-

Figure 3.5 – Source Apportionment: Larkfield Air Quality Management Area



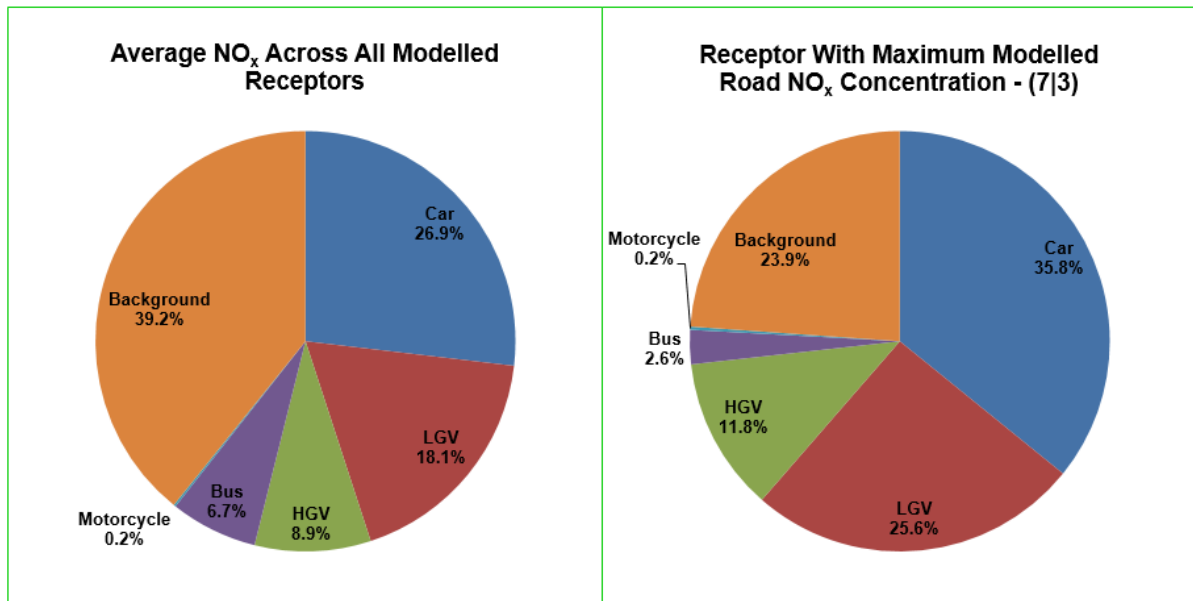
3.3.6 Borough Green Air Quality Management Area (7)

For the Borough Green AQMA, of the 49 modelled receptor locations, all receptor locations were predicted to be in compliance with the annual mean NO₂ objective, but there was one receptor predicted to have an annual mean to be within 10% of the objective. As detailed below in Table 3.6 and Figure 3.6, the results of the source apportionment exercise present that across all modelled receptors the vehicular proportion of NO_x concentration is 60.8%, and this increases to 76.1% at the receptor with the maximum modelled concentration. Across both source apportionment scenarios, the proportion of vehicular sources ranks high to low through cars, LGVs, HGVs, bus and coaches, and motorcycles.

Table 3.6 – Source Apportionment: Borough Green Air Quality Management Area

Metric	All Vehicles	Car	LGV	HGV	Bus & Coach	Motorcycle	Background
Average Across All Modelled Receptors							
NO_x Concentration (µg/m³)	26.4	11.7	7.9	3.9	2.9	0.1	17.1
Percentage of Total NO_x	60.8%	26.9%	18.1%	8.9%	6.7%	0.2%	39.2%
Percentage Contribution to Road NO_x	100.0%	44.2%	29.8%	14.7%	11.1%	0.3%	-
Receptor With Maximum Modelled Road NO_x Concentration (7 3)							
NO_x Concentration (µg/m³)	53.6	25.3	18.0	8.3	1.9	0.2	16.8
Percentage of Total NO_x	76.1%	35.8%	25.6%	11.8%	2.6%	0.2%	23.9%
Percentage Contribution to Road NO_x	100.0%	47.1%	33.6%	15.6%	3.5%	0.3%	-

Figure 3.6 – Source Apportionment: Borough Green Air Quality Management Area



3.3.7 All Air Quality Management Areas

In addition to the source apportionment that has been completed within each of the six AQMAs, an assessment across all AQMAs has been completed to better assess the source contributions of NO_x across the borough as a whole. As would be expected, due to the assessment of each AQMA, out of the vehicular sources it is the car proportion that is the highest, this is true both in terms of the average across all modelled receptors and for the average across receptors with a predicted NO₂ concentration greater than 40µg/m³.

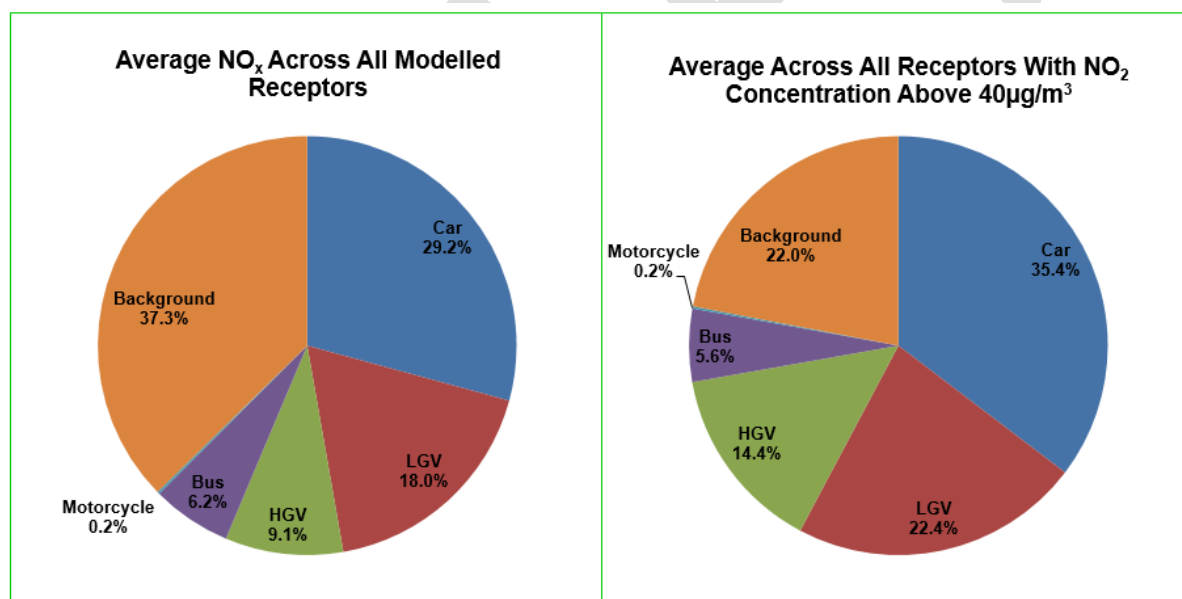
When comparing all receptors to those with NO₂ concentrations greater than 40µg/m³ it can be seen that there is much less of a contribution from background, 37.3% compared to 22.0%. At the receptors that have been predicted to be in exceedance of the AQS annual mean objective close to 80% of the NO_x contribution is predicted to be from vehicular sources, with the highest proportion of the vehicular source to be from cars (35.4%).

The above emphasises that localised road traffic is contributing to the elevated concentrations recorded within the AQMAs, background pollutant concentrations within the AQMAs are exacerbated by road traffic emissions. It can be seen that cars and LGVs are contributing the most to NO_x concentrations, therefore there has been an emphasis upon these vehicular groups within the development of the action plan measures.

Table 3.7 – Source Apportionment: All Air Quality Management Areas

Metric	All Vehicles	Car	LGV	HGV	Bus	Motorcycle	Background
Average Across All Modelled Receptors							
NO_x Concentration (µg/m³)	30.1	14.0	8.6	4.4	3.0	0.1	17.9
Percentage of Total NO_x	62.7%	29.2%	18.0%	9.1%	6.2%	0.2%	37.3%
Percentage Contribution to Road NO_x	100.0%	46.6%	28.7%	14.5%	9.8%	0.3%	-
Average Across All Receptors With NO₂ Concentration Greater Than 40µg/m³							
NO_x Concentration (µg/m³)	71.5	32.4	20.5	13.2	5.2	0.2	20.1
Percentage of Total NO_x	78.0%	35.4%	22.4%	14.4%	5.6%	0.2%	22.0%
Percentage Contribution to Road NO_x	100.0%	45.3%	28.7%	18.5%	7.2%	0.2%	-

Figure 3.7 – Source Apportionment: All Air Quality Management Areas



3.3.8 Summary

The source apportionment assessment, completed individually in relation to each of the six designated AQMAs and in combination, has confirmed that the dominant source in regards to NO_x emissions across all of the designated AQMAs is from local road transport sources. In terms of the different vehicles that contribute to the overall vehicle NO_x source, although the specific percentages vary between each AQMA there is a clear trend for cars and LGVs contributing the highest proportion of NO_x emissions and motorbikes contributing the lowest. In terms of the car and LGV contribution, the majority of NO_x emissions are from diesel fuelled vehicles due to NO_x emissions being on average ten times higher from a diesel vehicle rather than a petrol vehicle. The proportion of HGVs and Buses and Coaches varies between AQMAs with HGVs provided a higher proportion within the M20 AQMA, and in

contrast Buses and Coaches providing a higher proportion within the Tonbridge High Street AQMA.

Based upon the findings from the source apportionment exercise, and from the nature of the existing AQMAs (designated to include / located close to strategic road links and / or traffic junctions), local traffic management and sustainable transport action plan measures may assist in reducing NO_x emissions, and subsequently NO₂ concentrations within the designated AQMAs and across the borough as a whole.

3.4 Required Reduction in Emissions

In line with the methodology presented in Box 7.6 of TG(16)⁷, the necessary reduction in Road NO_x emissions required to bring the each current AQMA into compliance is calculated below, as shown in Table 3.8. This has been completed at the maximum annual mean concentration location, either monitored or modelled, for each existing AQMA. The TG(16) procedure calculates the required reduction of road NO_x to achieve a total NO₂ concentration of 40µg/m³. To take into account possible uncertainties with dispersion modelling, and also the degree of potential inaccuracy with diffusion tube monitoring a figure of 36µg/m³ for total NO₂ concentration has been used instead (10% lower than the annual mean AQS objective). This has been used as a conservative conservation target to ensure that an AQMA is only revoked once NO₂ concentrations are confirmed to be below the AQS objective.

Table 3.8 – NO_x Reduction Required Within Each Air Quality Management Area

Metric	Air Quality Management Area					
	1	3	4	5	6	7
Maximum monitored/modelled NO ₂ concentration (µg/m ³)	51.6	39.0	58.1	46.5	42.0	39.6
Road NO _x Concentration (µg/m ³)	83.2	57.9	110.2	45.9	59.4	57.7
Required Road NO _x Reduction (µg/m ³)	38.6 (46.4%)	7.1 (12.2%)	64.3 (58.4%)	25.4 (35.6%)	14.2 (23.9%)	8.5 (14.7%)

3.5 Key Priorities

Based on the information presented with Section 3, and the conclusions drawn from this, there are a number of separate area of action than can be defined.

3.5.1 Priority 1: Transport

The main source of air pollution that has caused the declaration of the AQMAs across Tonbridge and Malling is associated with road transport emissions. Therefore, reducing transport emissions through the measures contained within the AQAP are a key priority. The approach taken focuses on areas where the Tonbridge and Malling has direct control (e.g. planning and procurement of out sourced functions), or areas where measures can be implemented via a partnership e.g. with Highways England (in terms of the M20 AQMA) and / or Kent County Council.

3.5.2 Priority 2: Planning and Infrastructure

The new Local Plan, through LP:20 and subsequent policies sets out the considerations that will be applied by Tonbridge and Malling Borough Council when considering all development proposals. The Council will work with developers and partner organisations to ensure the delivery of infrastructure, services and community facilities necessary to develop and

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maintain sustainable communities, this is not just in terms of air quality but all relevant environmental aspects. Further Section 106 agreements are to be sought through developments to allow aspects of funding to be secured for future mitigation measures to be developed and implemented.

3.5.3 Priority 3: Policy Guidance

The existing strategies and policies currently adopted by Tonbridge and Malling Borough Council and by Kent County Council are key mechanisms for reducing emissions across the borough, most prevalent in terms of transport that has been identified as the main source of NO_x emissions and therefore NO₂ concentrations within the existing AQMAs. For effective reductions in NO_x emissions to be realised, in addition to the implementation of the measures outlined within the AQAP future revisions of Transport Plans, Freight Strategies, Climate Change Strategies, Cycle Strategies etc should all be completed with potential air quality impacts taken into account.

3.5.4 Priority 4: Public Health and Wellbeing

As discussed in further detail within Section 3.1, the impact of air pollution on public health is detrimental therefore improving air quality within the borough is a key priority. The main sources of air pollution in areas of public exposure within Tonbridge and Malling are from vehicle emissions from vehicles travelling on the road network within the borough. Aside from restricting vehicle usage through measures such as Clean Air Zones / Low Emission Zones, the most effective way to achieve a reduction in vehicle numbers is to change the attitudes / behaviour of the population towards travel. Tonbridge and Malling Borough Council are responsible for encouragement and facilitation of these changes through education and awareness as well as through schemes which incentivise change. Improving air pollution to ensure the health of the public is maintained requires a wide reaching perspective and will therefore not be specific to the AQMA but instead aim to have a wider impact across the borough.

3.5.5 Priority 5: Air Quality Monitoring

Currently, NO₂ is monitored across Tonbridge and Malling using passive diffusion tubes and a continuous monitoring station. Air quality monitoring is a useful way to continually assess the extent of the air pollution problem within Tonbridge and Malling. It also assists in quantifying the improvements that have materialised as a consequence of implementing measures to reduce emissions, and as an evidence base for AQMAs to be revoked.

4 Development and Implementation of Tonbridge and Malling's AQAP

4.1 Steering Group

A steering group was established at the start of the update process to drive forward the development of the new AQAP. The core aim of the steering group was to identify measures for inclusion within the AQAP that would be both effective in terms of reducing NO₂ concentrations and also would be feasible in terms of implementation and delivery.

The steering group is composed mainly of Tonbridge and Malling Council officers from those Services with an interest or potential impact on air quality and who may have an influence on the action measures being considered. Members included officers from Environmental Protection, Planning Services, Environmental Health, Housing Services and also representatives from Kent County Council in terms of Highways and an external consultant Bureau Veritas. The officers have, and continue to provide guidance in their respective areas of expertise to ensure selection, and continual evaluation of the most appropriate measures. Environmental Protection have taken the lead responsibility for the production, and any subsequent updates of the plan.

The first steering group meeting was held in December 2018 with subsequent meetings carried forward through 2019. The meetings included presentations and agendas covering an overview of the action planning process, the identification of the existing issues, with an assessment of the existing AQMAs and source apportionment exercise to inform all officers, followed by a period whereby the refinement of possible action measures was completed to those contained within the AQAP which have been agreed upon in terms of the most effective, feasible and cost-effective measures for Tonbridge and Malling Borough Council to pursue. In addition to the steering group meetings, separate individual meetings between Environmental Protection and officers from each department were also conducted in order to discuss measures in more depth.

It is thought that the steering group will continue to meet at regular intervals following the adoption of the AQAP. This is essential to provide progress reports on individual actions in relation to the AQAP measures, discuss any key lessons learnt from the continual implementation of the measures and to continue to discuss any new ideas in terms of future measures and actions within the borough.

4.2 Consultation and Stakeholder Engagement

In developing this AQAP, we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 4.1.

In addition, we have undertaken the following stakeholder engagement:

- E.g. website
- Articles in local newspaper
- Questionnaires distributed directly to households along major roads
- etc

The response to our consultation stakeholder engagement is given in Appendix A.

Table 4.1 – Consultation Undertaken

Yes/No	Consultee
TBC	Department of Environment, Farming and Rural Affairs
TBC	Environment Agency
TBC	Highways England
TBC	Tonbridge and Malling Borough Council
TBC	Kent County Council
TBC	Neighbouring Local Authorities
TBC	Local residents
TBC	Bodies representing local business interests and other organisations as appropriate

Following the statutory consultation completed.....

5 AQAP Measures

Throughout the development of the AQAP, a wide range of measures aimed at improving air quality within the six existing AQMAs and the wider borough have been considered. TG(16)⁷ states that AQAPs should be adapted to every local situation and most importantly are seen as part of an integrated package of measures, particularly in relation to linking with other key policy areas.

An evaluation of all possible measures was initially undertaken by the Environmental Protection team and other offices within the steering group to complete the refinement of measures, taking into consideration their local knowledge, the source apportionment results and existing local council policies. There were a number of measures that were considered, but not included within the AQAP. These measures, along with the reasons for non-inclusion within the AQAP are detailed within Appendix C.

Having undertaken this evaluation process, the resultant action measures contained within this AQAP are considered the most effective, feasible and cost-effective to pursue in terms of potential air quality improvements within the AQMAs and the wider borough. Given that road traffic has been identified as the principal source of NO_x emissions and therefore NO₂ concentrations within the AQMAs, the measures presented below focus on the promotion of low / zero emission transport, traffic management improvements and improved community awareness.

Table 5.1 presents the Tonbridge and Malling Borough Council AQAP measures, it contains the following:

- a list of the actions that form part of the plan;
- the responsible individual and departments/organisations who will deliver this action;
- estimated cost of implementing each action (overall cost and cost to the local authority);
- expected benefit in terms of pollutant emission and/or concentration reduction;
- the timescale for implementation; and
- how progress will be monitored.

The progress of the implementation of each measure, as per TG(16)⁷ will be reviewed annually, with details provided within subsequent ASRs completed following the implementation of the AQAP.

Table 5.1 – Air Quality Action Plan Measures

Measure Number	Measure	EU Category	EU Classification	Lead Authority	Lead officer	AQMA Covered	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
Transport											
1	Establish/Join a Quality Bus Partnership to help upgrade Bus Fleet	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	TMBC	Bartholomew Wren / Steven Saxbee (TMBC)	Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPI measured via the % of buses meeting a set EURO standard.	In areas of high bus usage, such as within the Tonbridge High Street AQMA an NO ₂ in conjunction with other measures a reduction of between 1 – 3µg/m ³ is to be aimed for.		2021 Yearly grants available so try to apply each year for a grant Related to grants if they are awarded	Establish or extend neighbouring QBP(s) to help drive up the quality and emissions performance of the local bus fleet. Engage with KCC public transport and neighbouring authorities. Pursue funding opportunities from DfT, Defra and elsewhere as appropriate. To make sure cleaner buses are used on all routes, especially those operating through AQMAs.
2	Review Taxi/Private Hire Vehicle Policy and license fees, implement a strategy to encourage a switch to low emission vehicles	Vehicle Fleet Efficiency	Fleet Efficiency and Recognition Schemes	TMBC	Katie Shipman / Anthony Garnet (TMBC)	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPI measured via the % of taxis and private hire vehicles meeting a set EURO standard. KPI could also be to have the review completed by a set date.	To be confirmed once full fleet information is available – use of the Emissions Factor Toolkit (EFT) to define NO _x emission reductions for changes within the fleet per annum.		2025 2030	Support the review of taxi licensing policy to include options to reduce the age of vehicles in use, and to complete a review of licensing fees to work towards increasing the uptake of ULEVs. All vehicles to be petrol hybrid Euro 5 or petrol and diesel euro 6 by 2025. By 2030 all vehicles to be zero or ultra low emissions such as electric or liquid petroleum gas
3	Explore opportunities to reduce emissions from local delivery HGV's/LGV's possibly through the formations of a Freight Quality Partnership	Freight and Delivery Management	Freight Partnerships for Town Centre Deliveries	TMBC	Steven Saxbee / Jeremy Whittaker (TMBC)	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPI measured via the % vehicles meeting a set EURO standard, and/or by the % of business participation in recognition schemes.	To be confirmed once fleet information is available – use of the EFT to define NO _x emission reductions for changes within a fleet.		2021 2021	Opportunities for sustainable urban freight deliveries at existing locations and for new developments, can also help promote recognition schemes such as ECO Stars. Through Kent Invicta Chamber of Commerce etc and on media / website If Locase is extended past march 2020 then businesses can get grant from KCC up to 40% of costs towards low carbon and greener fuels projects (max £20,000) Advertise this on media / website

Measure Number	Measure	EU Category	EU Classification	Lead Authority	Lead officer	AQMA Covered	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
4	Develop and implement a borough-wide school transport scheme	Promoting Travel Alternatives	School Travel Plans	KCC	Relevant KCC officer/team to lead, Contact at TMBC to be Tamsin Ritchie	Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPIs may include the following: % reduction of children travelling to school in cars % of children cycling or walking to school. Number of schools implementing individual school travel plans.	Measure has the potential to have a medium to high impact upon short term NO ₂ concentrations close to schools depending on the uptake of the schemes across the borough. On a borough wide scale a lesser impact upon on concentrations would be realised.		2022	Walking buses, action to focus on school run drop offs, feasibility of school start time variations.
										2020	Work closely with KCC in developing these travel plans and feasibility studies.
										2020	Bike Smart (Tonbridge) Tonbridge schools (secondary)
										2020	Anti-idling outside school gates. Signs Banners etc
										2021	Walk to school needs to start organising in Jan for sept role out.
Yearly	Bike to school. Bike Week? dates?										
5	Create Anti-idling zone at Tonbridge taxi rank Develop and enforce a borough wide anti-idling campaign	Traffic Management	Anti-Idling Enforcement	TMBC to lead but working closely with KCC Highways team where they have input	At TMBC, Katie Shipman / Anthony Garnet (Tonbridge taxi rank) Steven Saxbee (borough wide)	Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPI measured via an annual review of the number of fixed penalty fines and number of complaints received. After an initial year of results the % change in penalty fines and complaints can be quantified.	Measure is more an awareness raising tool, however it is also a useful measure to prevent vehicles idling and causing congestion in specific locations, which is a significant cause of emissions.		2021	Borough-wide anti idling enforcement at taxi ranks, bus stops, and outside schools etc.
										2020	Social Media posts to encourage behavioural change. School case study to be chosen
6	Pilot a Car Club within the Council for individuals use in local communities	Promoting Travel Alternatives	Workplace Travel Planning	TMBC	Steven Saxbee / Jeremy Whittaker (TMBC)	Wateringbury, Aylesford, Larkfield	The introduction of pool cars can result in a reduction of approximately 20% in business mileage. KPI relating to usage at the Council can be measurements of reduction in annual mileage undertaken per team.	NO _x emission reduction achieved by the Council will be able to be calculated annually.		2020	Tunbridge Wells Borough Council operate a successful car club, to be contacted for information.
										2022	Car club campaigns, possibility to include advertising and sponsorship opportunities.
										2022	Contact Liberty at Kings Hill for setting up round the estate
										2020	Also advertise Kent Journey share (when covid restrictions lift)
7	Continue to explore traffic improvement options at Wateringbury crossroads, emphasis on looking at capacity and flow	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	KCC	Tim Middleton at KCC (with possible assistance from TMBC Technical Services)	Wateringbury	KPI to be formulated once option has been developed, to be based around vehicle turning counts and/or queuing statistics.	An improvement to the Wateringbury crossroads would aim to reduce NO ₂ concentrations by between 1 – 5µg/m ³ .		2024	Following the completion of a feasibility study a preferred option will be taken forward within Wateringbury.
8	Encourage companies to allow home working at least one day a week	Other	Via the internet and other mechanisms	TMBC	Jeremy Whittaker / Steven Saxbee (TMBC)	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	Yearly surveys to companies for numbers of staff and number of days a week staff work at home	Small impact upon NO ₂ concentrations from measure individually, estimated to be less than 5µg/m ³ . Based on small uptake		To start in 2020 and be ongoing	To promote on website multimedia and targeted adds campaigns to local office based companies using momentum from for home working from Covid restrictions

Measure Number	Measure	EU Category	EU Classification	Lead Authority	Lead officer	AQMA Covered	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
Planning and Infrastructure											
9	Explore the process for possible standardising Section 106 agreement funding from development for AQ improvements	Policy Guidance and Development Control	Other Policy	TMBC	Steven Saxbee / Emma Keefe (TMBC)	Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPI may be the total number of Section 106 agreements secure in terms of AQ funding per annum, or the total amount of funding secured per annum.	N/A		ongoing	Standardising the process for securing S106 agreements for AQ to be linked with planning department to ensure harmonious implementation. Conditions to be more specific in planning decisions regarding green energy, low emission vehicle and EV parking (policy compliant).
10	Installation of electric charging points within Council car parks throughout the borough	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	TMBC to lead with input from KCC	Andrew Young (TMBC)	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPI should include the number of EV charging points installed within the borough from a baseline year, and the number and % increase per annum.	Small impact upon NO ₂ concentrations from measure individually, estimated to be less than 1µg/m ³ based upon a low to medium uptake.		2025 or sooner	Council car parks, TMBC funded with possible assistance from KCC OLEV could provide funding
11	Installation of green walls and increased vegetation across the borough	Other	Other	TMBC	Tamsin Ritchie /Steven Saxbee (TMBC)	Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	The number of green walls / vegetation installed within the borough per annum.	N/A		2021 2021 2024 2021	Investigate areas like Wateringbury where results are close to hourly mean or increasing vegetation can made a difference Look into if grant funding is available To be installed as a physical barrier to increase distances between the road and pedestrians. See if can be done through planning applications
Public Information, Strategies and Policy Guidance											
12	Raise public awareness through the launch of a Travel Choices Campaign	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	TMBC to lead with assistance from KCC (see comments)	Tamsin Ritchie / Steven Saxbee (TMBC)	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	Usage statistics for public transport across the borough per annum.	Small impact upon NO ₂ concentrations from measure individually, estimated to be less than 1µg/m ³ .		2021 2021	Possibility of partnership with 'Step Ahead of the Rest' KCC Active travel programme. Social Media advertising. Community projects
13	Prepare a new Local Cycling and Walking Infrastructure plan (LCWIP)	Promoting Low Emission Transport	Promotion of cycling	TMBC working closely with KCC	Bartholomew Wren (TMBC)	Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	2021	Identify infrastructure improvements to support existing and new communities to walk and cycle more frequently, through the provision of a more joined up route network. Work with partners including KCC Highways and Public Rights of Way.		2021	Identify if there any specific routes that can be improved upon or require the introduction of new routes.

Measure Number	Measure	EU Category	EU Classification	Lead Authority	Lead officer	AQMA Covered	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
13b	Delivery of identified cycling and walking schemes	Promoting Low Emission Transport	Promotion of cycling	KCC	Relevant KCC officer/team	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	KPIs to include: Usage of rental schemes. Numbers of cycle to work schemes Implementation of new routes per annum. Obtain figures from use of new cycle hub and Tonbridge station	Small impact upon NO ₂ concentrations from measure individually, estimated to be less than 1µg/m ³ based upon a low to medium uptake.		2021-2030 ongoing ongoing	Following the completion of the LCWIP, the identified cycling and walking routes will be improved / new routes are to be introduced. In addition cycle to work schemes are to be encouraged and supported through local campaigns, events and planning negotiations. Active travel to be promoted in partnership with KCC – Kent Connected. Tie in with 11. Bike Smart Tonbridge. Bike Smart Malling (Wrotham School). Tie in with 11
14	Education and encouragement in terms of air quality across the borough: public workshops, leaflet campaigns, advertising, approaching schools, businesses, community centres	Public Information	Via leaflets and other mechanisms	TMBC	Tamsin Ritchie (TMBC)	M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	Usage statistics for public transport and zero emission transport options (walking and cycling) across the borough per annum. Most of the individual parts to this measure can be developed immediately, again it may be beneficial to have a KPI relating to implementation time.	Small impact upon NO ₂ concentrations from measure individually, estimated to be less than 1µg/m ³ .		2020 2021 Asses if needs to be repeated over 5 years 2021 2021	Available AQ information, current issues, what the council is doing paired with what the public can do as a bottom up approach. Provision of workshops, physical and digital leaflets, drop in sessions, dedicated phone-line etc. Social media visibility is a key element with potential to link to other KES/ELES communications. Community Champions / case studies
15	Implement an improved public transport information platform	Public Information	Via the internet and other mechanisms	KCC		M20, Tonbridge, Wateringbury, Aylesford, Larkfield, Borough Green	Usage statistics for public transport across the borough per annum.	Small impact upon NO ₂ concentrations from measure individually, estimated to be less than 1µg/m ³ .		2021 2021 2021	To include links to Kent connected app and options to download it on website. To include the provision of high quality accessible information on sustainable travel, also the promotion of public transport use to incentivise usage. All available information to be linked to 'smarter cities' initiative.

Appendix A: Maps of Current Air Quality Management Areas

Figure A.1 – M20 Air Quality Management Area

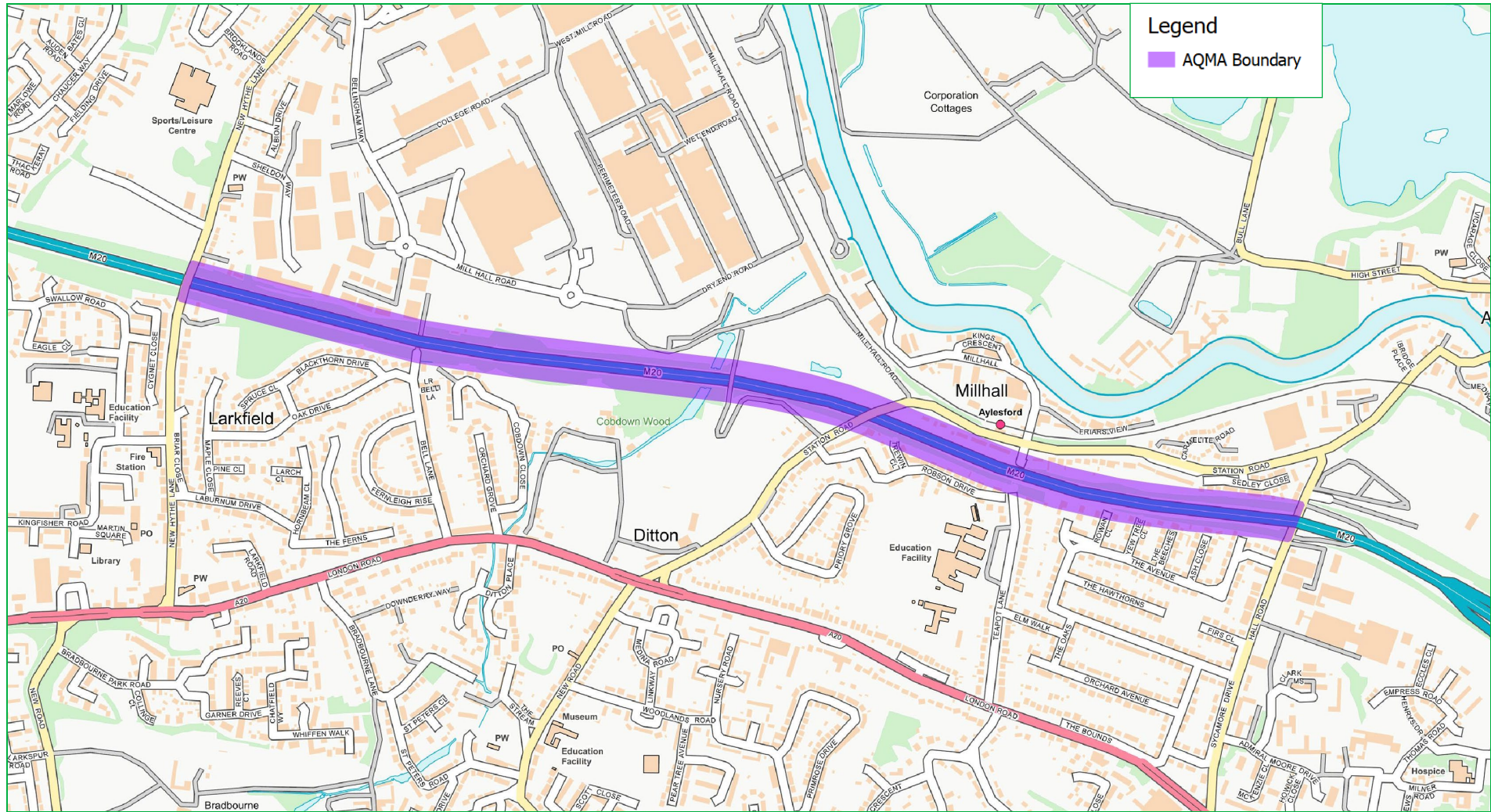


Figure A.2 – Tonbridge High Street Air Quality Management Area

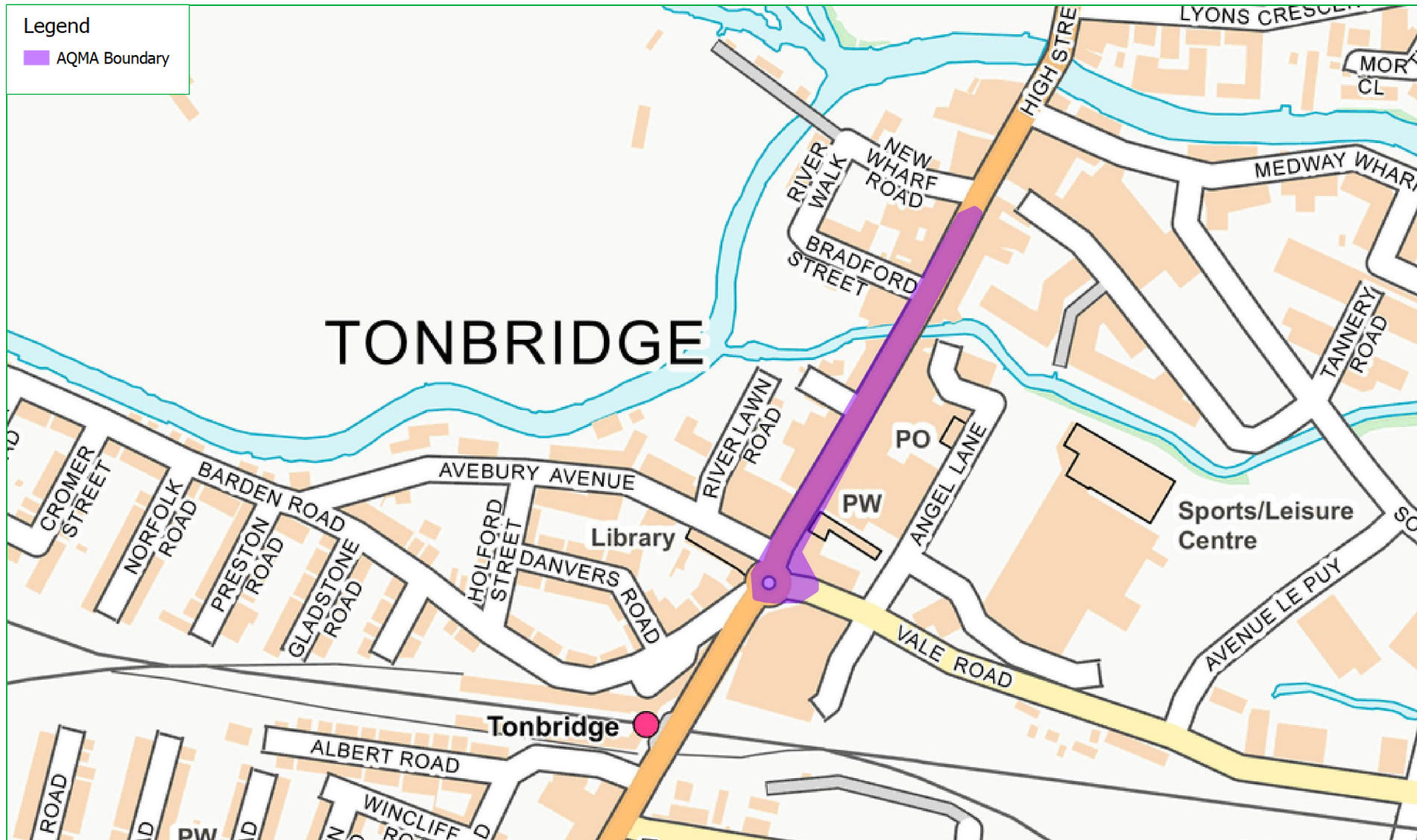


Figure A.3 – Watringbury Air Quality Management Area

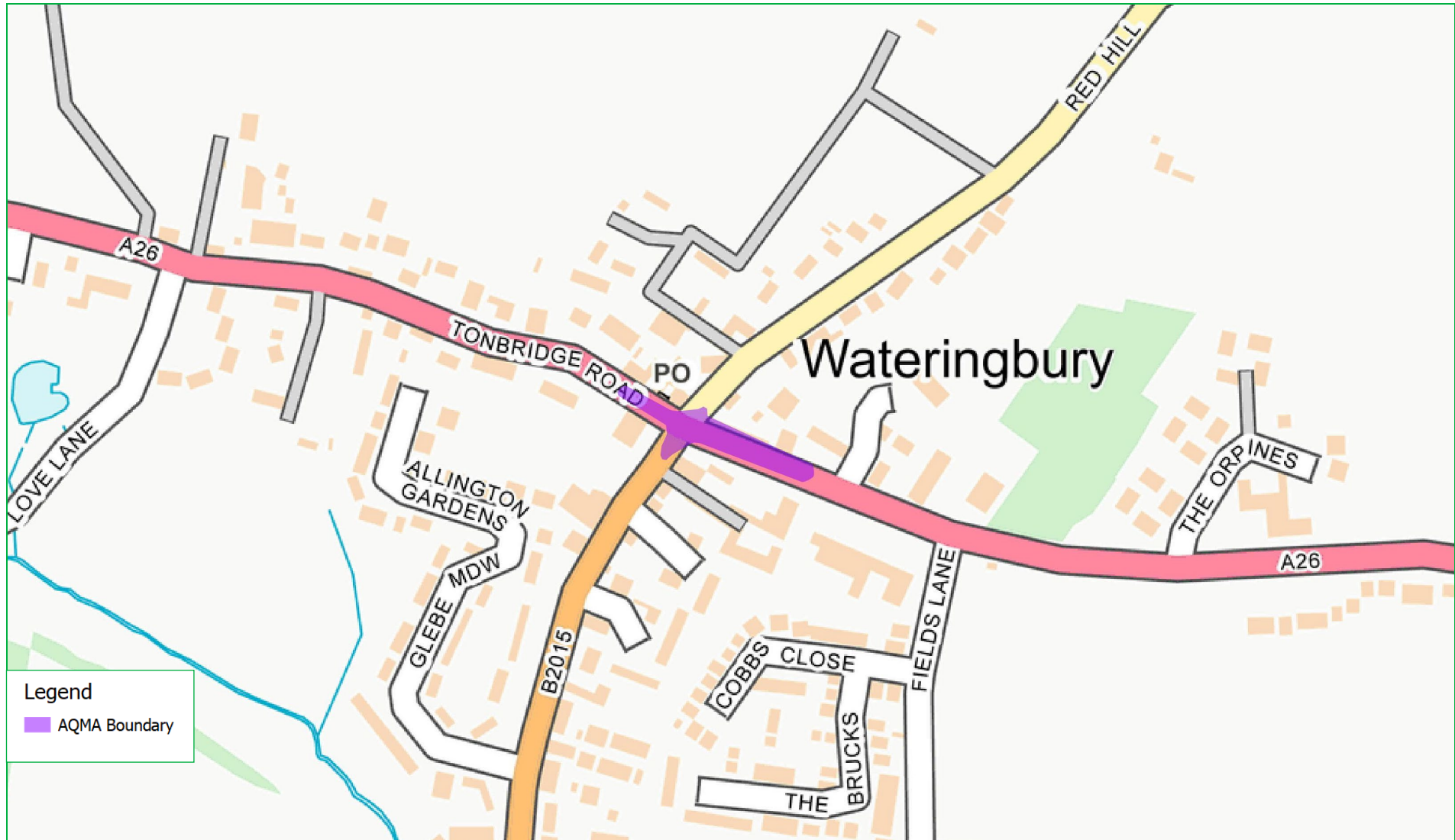


Figure A.4 – Aylesford Air Quality Management Area (Amended)

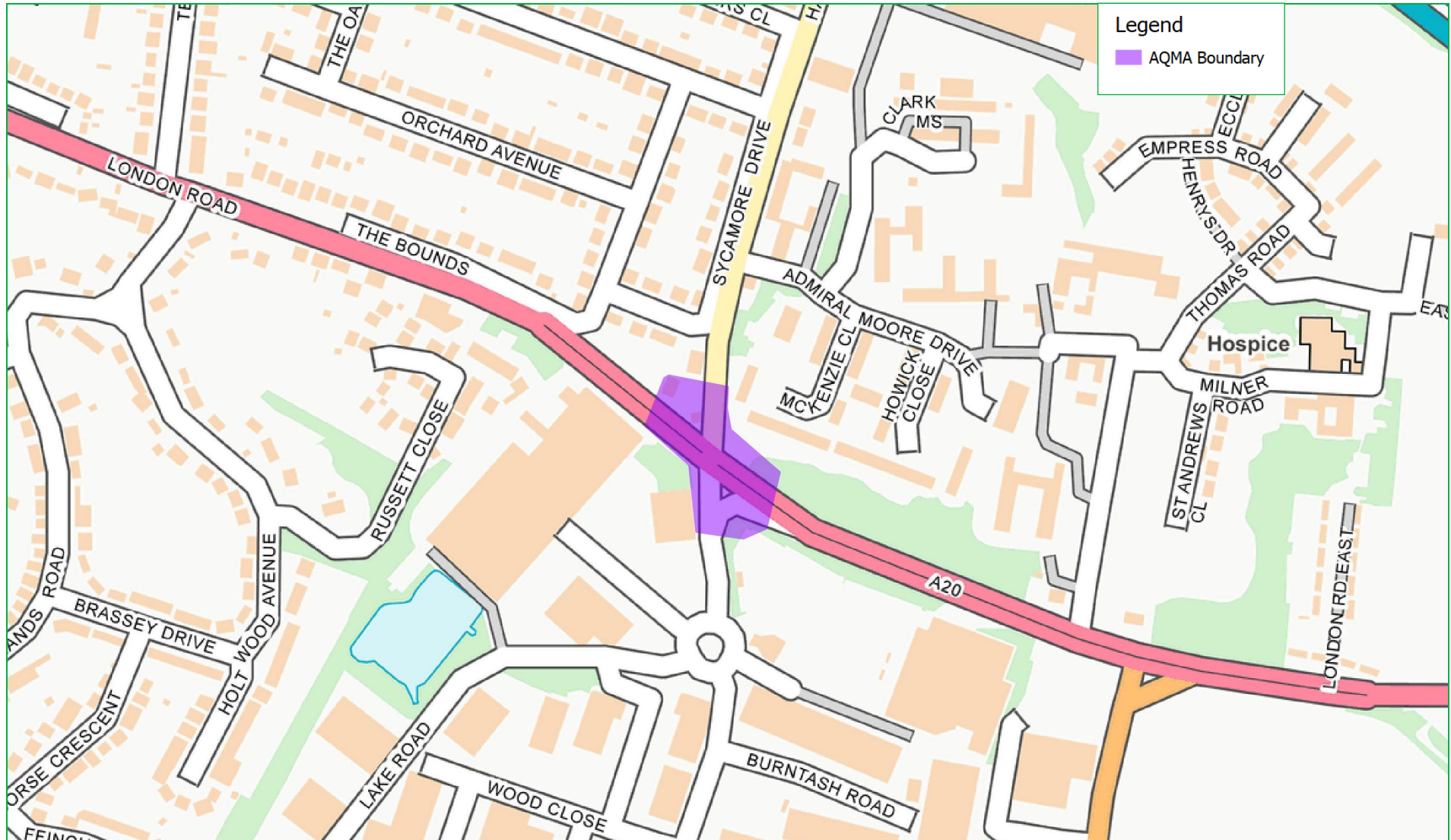


Figure A.5 – Larkfield Air Quality Management Area (Amended)

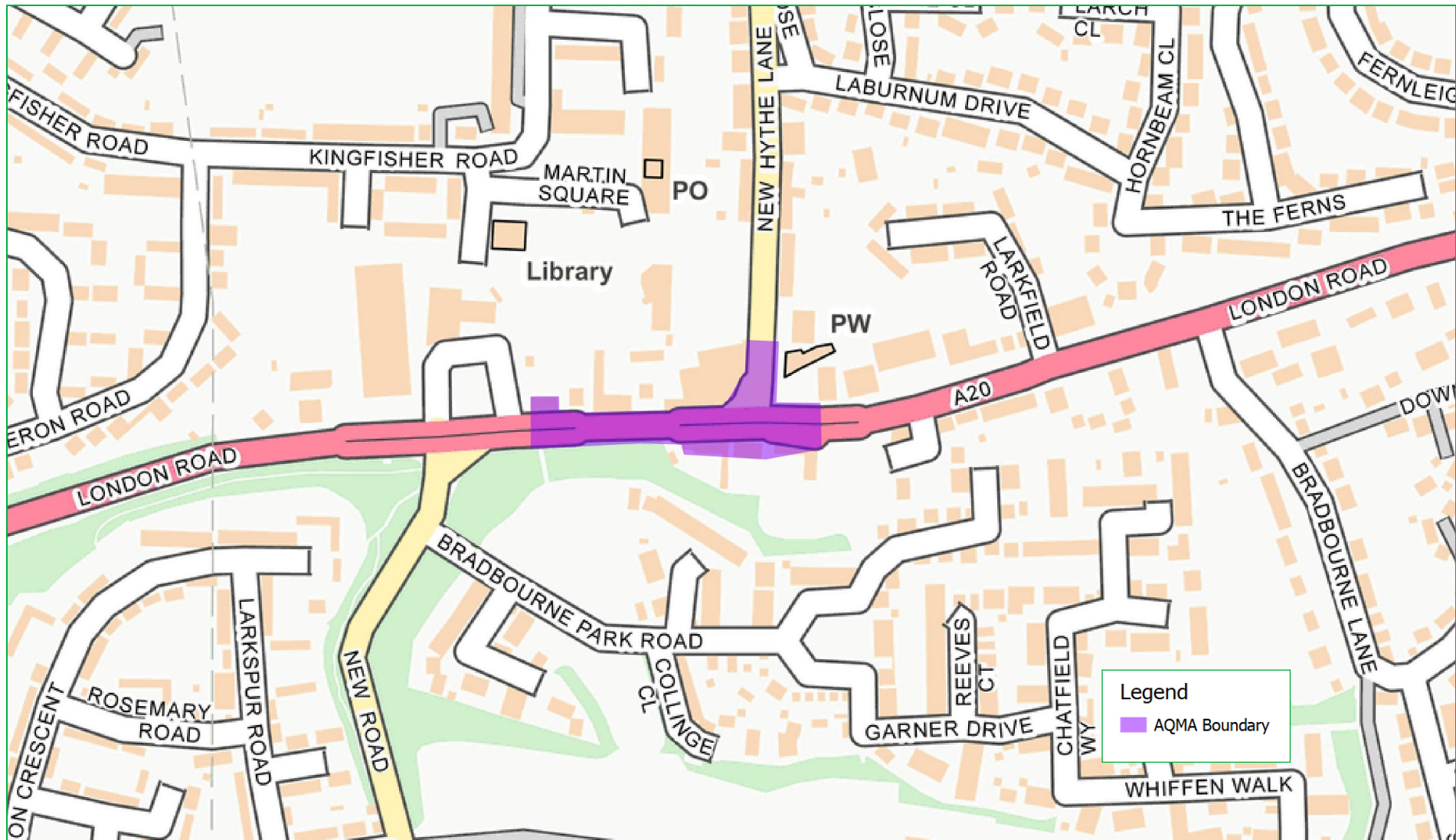


Figure A.6 – Borough Green Air Quality Management Area (Amended)



Appendix B: Response to Consultation

Table B.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
e.g. Chamber of Commerce	Business	E.g. Disagree with plan to remove parking on High Street in favour of buses and cycles; consider it will harm business of members.

Appendix C: Reasons for Not Pursuing Action Plan Measures

Table C.1 – Action Plan Measures Not Pursued and the Reasons for that Decision

Action Category	Action Description	Reason action is not being pursued (including Stakeholder views)
Traffic Management	Introduce permanent speed reduction zone on M20 (J3-5) on completion of smart motorway in 2020	Highways England Road – smart motorway has been implemented partly of AQ grounds – impact to be assessed before any further actions to be taken
Promoting Low Emission Transport	Council car fleet upgrades	
Promoting Low Emission Transport	Taxi scrappage/retrofit scheme to upgrade vehicles over 5 years' old	Scrappage scheme would have to be on a national scale to have intended impact
Vehicle Fleet Efficiency	Collaborative waste fleet upgrades across the county	Too many different operators?
Vehicle Fleet Efficiency	Pollution abatement equipment for local delivery HGVs/LGVs	
Vehicle Fleet Efficiency	Clean van commitment, review of delivery routes through AQMAs, LGV delivery consolidation	
Traffic Management	Restrictions on HGVs in AQMAs during Peak Periods/HGV's Routing	
Traffic Management	Smart' traffic lights within Watlingbury looking at capacity and flow, trying to improve flow	Other options to be looked at for Watlingbury junction
Promoting Low Emission Transport	Workplace parking levys - payments linked to vehicle emission standards?	
Traffic Management	Bus route amendments for AQMAs	
Promoting Travel Alternatives	Partial pedestrianisation of Tonbridge High Street	Unrealistic, only a slight reduction in NO ₂ concentrations required in Tonbridge
Policy Guidance and Development Control	Review the Kent and Medway Air Quality and Development Control Guidance; adapt to TMBC and adopt	
Promoting Travel Alternatives	Council and local businesses to promote a home working scheme to reduce car use	
Promoting Travel Alternatives	Encouragement of car sharing, campaign to reduce single occupancy trips	Public awareness campaign to be completed under measure 12

<Appendix C: Add Additional Appendices as Required>

INSTRUCTIONS

The Council should add additional supporting appendices as required.

For example, where the selection of AQAP measures has been supported by further studies, e.g. quantitative appraisal of action plan measures through dispersion modelling, or other feasibility studies, this work should be included here.

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
CAZ	Clean Air Zone
COMEAP	The Committee on the Medical Effects of Air Pollution
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
HGV	Heavy Goods Vehicle
EU	European Union
KCC	Kent County Council
LAQM	Local Air Quality Management
LGV	Light Goods Vehicle
NO ₂	Nitrogen Dioxide
PCM	Pollution Climate Mapping
NO _x	Nitrogen Oxides
PHE	Public Health England
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less