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TONBRIDGE & MALLING BOROUGH COUNCIL

EXECUTIVE SERVICES

Chief Executive
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NB - This agenda contains proposals, recommendations and options. These do not represent Council policy or decisions until they have received proper consideration through the full decision making process.

Contact: Committee Services
committee.services@tmbc.gov.uk

26 February 2020

To: MEMBERS OF THE STREET SCENE AND ENVIRONMENT SERVICES ADVISORY BOARD
(Copies to all Members of the Council)

Dear Sir/Madam

Your attendance is requested at a meeting of the Street Scene and Environment Services Advisory Board to be held in the Civic Suite, Gibson Building, Kings Hill, West Malling on Thursday, 5th March, 2020 commencing at 7.30 pm

Yours faithfully

JULIE BEILBY

Chief Executive

A G E N D A

PART 1 - PUBLIC

3. Minutes 9 - 12

To confirm as a correct record the Notes of the meeting of the Street Scene and Environment Services Advisory Board held on 11 February 2020

Matters for recommendation to the Cabinet

4. Car Parking Fees and Charges - Outcome of Public Consultation 13 - 42

The report considers the objections and comments received during the statutory consultation period relating to proposed off-street parking charges. It relates to existing car parks where charges are already in place in Tonbridge, West Malling, Borough Green, Blue Bell Hill and the Council's two Country Parks.

5. Air Quality Management Area Review 43 - 112

The report set out details of the periodic statutory review of Air Quality Management Areas (AQMAs) within the Borough and proposed update of the Council's Air Quality Action Plan (AQAP)

Matters submitted for Information

6. Priory Wood, Tonbridge - Landfill Gas Investigation Update 113 - 120

The report provides an update on a yearlong detailed landfill gas investigation which commenced in August 2019 at the Priory Wood site in Tonbridge.

7. Urgent Items 121 - 122

Any other items which the Chairman decides are urgent due to special circumstances and of which notice has been given to the Chief Executive.

Matters for consideration in Private

8. Exclusion of Press and Public 123 - 124

The Chairman to move that the press and public be excluded from the remainder of the meeting during consideration of any items the publication of which would disclose exempt information.

PART 2 - PRIVATE

9. Urgent Items 125 - 126

Any other items which the Chairman decides are urgent due to special circumstances and of which notice has been given to the Chief Executive.

MEMBERSHIP

Cllr M O Davis (Chairman)
Cllr Mrs S Bell (Vice-Chairman)

Cllr G C Bridge
Cllr D J Cooper
Cllr D A S Davis
Cllr S M Hammond
Cllr M A J Hood
Cllr F A Hoskins
Cllr A P J Keeley
Cllr D Keers
Cllr A Kennedy
Cllr Mrs C B Langridge
Cllr R V Roud
Cllr J L Sergison
Cllr T B Shaw
Cllr Miss G E Thomas

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Apologies for absence

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Declarations of interest

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TONBRIDGE AND MALLING BOROUGH COUNCIL

STREET SCENE AND ENVIRONMENT SERVICES ADVISORY BOARD

Tuesday, 11th February, 2020

Present: Cllr M O Davis (Chairman), Cllr Mrs S Bell (Vice-Chairman), Cllr G C Bridge, Cllr D J Cooper, Cllr D A S Davis, Cllr M A J Hood, Cllr F A Hoskins, Cllr A P J Keeley, Cllr D Keers, Cllr R V Roud, Cllr J L Sergison, Cllr T B Shaw and Cllr Miss G E Thomas

Councillors Mrs J A Anderson, Mrs P A Bates, R P Betts, M D Boughton, V M C Branson, A E Clark, N J Heslop, P M Hickmott, D W King, K King, D Lettington, B J Luker, Mrs A S Oakley, M R Rhodes and H S Rogers were also present pursuant to Council Procedure Rule No 15.21.

An apology for absence was received from Councillor Mrs C B Langridge

PART 1 - PUBLIC

SSE 20/1 DECLARATIONS OF INTEREST

There were no declarations of interest made in accordance with the Code of Conduct.

SSE 20/2 MINUTES

RESOLVED: That the notes of the meeting of the Street Scene and Environment Services Advisory Board held on 30 October 2019 be approved as a correct record and signed by the Chairman.

MATTERS FOR RECOMMENDATION TO THE CABINET

SSE 20/3 WASTE SERVICES CONTRACT

Decision Notice D200007MEM

The report of the Director of Street Scene, Leisure and Technical Services provided an update on progress with the Waste Services Contract following the introduction of opportunities for new and improved recycling services on 30 September 2019. The report outlined progress against the key aims of the new service and actions taken by the Council and Urbaser to address outstanding contract performance issues.

RECOMMENDED: That

(1) achievement of the new service to date against the stated improvement aims be noted;

(2) actions taken by both Urbaser and the Council to improve contract performance be noted and the outcomes of the Contract Action Plan be closely monitored;

(3) the roll-out of new services to Flats and the Communal Bin Stores and the subsequent reduction in bring bank sites be delayed until the collection arrangements are delivered in accordance with the contract requirements; and

(4) detailed performance information be reported to future meetings of the Street Scene and Environment Services Advisory Board.

SSE 20/4 DRAFT CLIMATE CHANGE STRATEGY

Decision Notice D200008MEM

Further to the Motion adopted by full Council in July 2019 to develop a strategy to support the aspiration for Tonbridge and Malling to be carbon neutral by 2030 the report of the Chief Executive set out, at Annexes 1 and 2, an initial draft Climate Change Strategy and a draft Climate Change Action Plan. It was noted that the draft strategy set out the Council's commitment to local action on climate change, biodiversity protection and enhancement and an approach to partnership working.

It was acknowledged that the strategy would evolve over time and noted that consultation with the community, key partners and stakeholders and interested groups would be undertaken between the end of February and end April 2020 with the responses to the consultation reported to the meeting of the Advisory Board to be held on 9 June 2020. It was further noted that the evolution and delivery of the Climate Change Strategy and Action Plan would encompass a number of services across the Authority with individual work streams undertaken by the appropriate board or committee.

RECOMMENDED: That

(1) the initial Draft Climate Change Strategy and Action Plan, as set out at Annexes 1 and 2 to the report, be endorsed for consultation purposes; and

(2) the financial and value for money considerations, as set out at paragraph 1.3 of the report, be noted.

SSE 20/5 EXCLUSION OF PRESS AND PUBLIC

There were no items considered in private.

The meeting ended at 9.38 pm

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TONBRIDGE & MALLING BOROUGH COUNCIL

STREET SCENE and ENVIRONMENT SERVICES ADVISORY BOARD

05 March 2020

Report of the Director of Street Scene, Leisure & Technical Services and the Director of Finance & Transformation

Part 1- Public

Matters for Recommendation to Cabinet - Key Decision

1 CAR PARKING FEES AND CHARGES – OUTCOME OF PUBLIC CONSULTATION

Summary

This report considers the objections and comments received during the statutory consultation period relating to proposed off-street parking charges. The report relates to existing car parks where charges are already in place in Tonbridge, West Malling, Borough Green, Blue Bell Hill and the Council's two Country Parks.

1.1 Introduction

1.1.1 At the October 2019 meeting of this Board, Members considered a number of proposals to change the Council's off-street parking charges and made a number of recommendations to Cabinet. At an Extraordinary meeting of Cabinet on 6th January 2020 it was agreed that the proposed charges would be approved for consultation in accordance with the requirements of Statutory Regulations. To enable the charges to be introduced a new off-street Traffic Regulation Order is required.

1.1.2 Where there is a statutory process a local authority should comply with the process as laid out. In the case of the proposed car parking charges this is under the Road Traffic Regulation Act 1984, following the procedure set out in the Local Authorities Traffic Orders (Procedure) (England & Wales) Regulations 1996. Regulation 8 of the 1996 Regulations requires a 21 day consultation period.

1.1.3 This report covers proposals for the Council's existing car parks in Tonbridge, West Malling, Borough Green, Blue Bell Hill and the Council's two Country Parks. Proposed charges for the Council's car parks in Martin Square and Aylesford will be reported to the next meeting of this Board on 9th June 2020. On Street parking charges (Residents Parking Permits) will be reported to the Joint Transportation Board on 9th March 2020.

1.2 Consultation

1.2.1 The statutory consultation was carried out between 17th January and 9th February 2020.

1.2.2 The proposed charges considered in this report are outlined in the Intends Notice, shown at **Annex 1.**

1.2.3 The statutory consultation process followed a number of steps inviting comments or objections as follows:-

- Notices were placed in each car park by each pay and display machine;
- Adverts were placed in the Kent Messenger;
- Letters were sent to each Parish/Town Council and Borough Council Member;
- Letters were sent to all statutory consultees (Police, Fire, Bus operators etc.);
- Consultation documents were placed "on-deposit" for inspection at the Council Offices in Kings Hill and Tonbridge Castle.

The consultation documents were also placed on the Council's website. In line with the Council's new Digital Strategy respondents were able to make comments online.

1.2.4 During the consultation period 85 responses were received.

1.2.5 17 of the responses did not relate to the proposals in the Intends Notice, but related to other proposals for the introduction of parking charges in either Martin Square, Larkfield or Bailey Bridge (East and West) car parks in Aylesford. These responses will therefore be incorporated into the consultation on Martin Square and Aylesford car parks, which will be reported to the next meeting of this Board on 9th June 2020.

1.2.6 There were also several responses relating to potential changes to on-street charging. The Council has not yet consulted on proposals for on-street charges but, subject to approval by the Joint Transportation Board on 9th March 2020, will be embarking on a consultation exercise in mid March to early April 2020. The responses will be held over for inclusion in that forthcoming consultation.

1.2.7 This leaves 68 responses relevant to this consultation, of which 4 were duplicates.

1.2.8 The 64 discrete responses that related to this consultation raised a number of issues which are outlined below. West Malling and Leybourne Parish Councils

responded to the consultation and their responses are included. The full text of each response (redacted of personal details) is shown at **Annex 2.**

1.3 General Responses Received

1.3.1 There were a number of general comments that related to the proposals that were not location specific.

Comment	Times Raised	Officer Response
Consider 30 minute/1 hour free parking to maintain footfall for local businesses	5	There are significant costs associated with the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces for shoppers that supports the local businesses. Proposals apply no increase to 30 minute tariff.
As elected representatives you should do more to help the High Street/local businesses	4	Impact on businesses is taken into account when bringing forward proposals. The Council does not apply charges on Sundays, Bank holidays and evenings to support local businesses.
Parking charges shouldn't have been introduced in the first place	3	There are significant costs associated with the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces. The proposals do not represent significant increases.
Consider charging model at end of stay rather than at beginning	2	A "pay at end" model of parking management has benefits, but also significant problems - the necessary infrastructure is not well-suited to surface car parks, and areas where there are no barrier controls. However, we already offer a "start-stop" method of payment by Parkmobile.
Include exceptions to charges for NHS mobile units e.g. breast screening	1	At the last meeting of this Board Members supported parking concessions for the Breast Screening Unit and Blood Donation Service in Tonbridge.
Increasing charges impacts on the daily lives of people	1	There are significant costs associated with the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces. The proposals do not represent significant increases.
Introduces private finance into another area of public life	1	There are significant costs associated with the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces. The proposals do not represent significant increases.
Why not charge in the evenings too - pubs/restaurants benefit disproportionally?	1	The introduction of an evening charge is something that could be considered in any future review of charges.
Work with KCC and others to increase capacity for free parking in town centres to boost footfall	1	There are significant costs for the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces. Charges are

Comment	Times Raised	Officer Response
		currently free on Sundays, Bank holidays and evenings.
Invest in public transport, particularly the bus service to reduce traffic congestion	1	Improved bus services are important in maintaining sustainable communities and effective parking management. The responsibility for public transport rests with the Bus operators and Kent County Council.
Consultation timeframe is too short to allow all to contribute	1	The consultation period of 21 days is a statutory requirement and is set in the Local Authorities Traffic Orders (Procedures) (England and Wales) 1996.
Public has already paid for roads - shouldn't be charged again for parking on them	1	The Council receives no funding from income raised by the Road Fund License for the management of its car parks. There are significant costs for the operation and enforcement of the car parks, and the effective management of town centre parking is vital to assist with the turn-over of spaces.
No mention of use for monies - so plan is punitive	1	There are significant costs for the operation and enforcement of the car parks.

1.4 Responses to proposals in Tonbridge

1.4.1 Summary of proposals

- no increase to the charge for parking for up to 30 minutes, remaining at 70 pence;
- an increase of 10 pence per hour on each parking tariff (up to a maximum tariff of £6.70);
- an increase of £20 (to £290) for 12 month off peak car park season tickets;
- an increase of £10 (to £120) for monthly car park season tickets;
- 3 monthly car park season tickets no longer offered;
- 6 monthly car park season tickets no longer offered;
- an increase of £70 (to £1020) for 12 month car park season tickets.

1.4.2 Responses

- Only one response was received.

Comment	Times Raised	Officer Response
Negative impact on shops and shoppers - prefer a decrease or alternatively introduce an hour free	1	Impact on businesses is taken into account when bringing forward proposals. The Council does not apply charges on Sundays, Bank holidays and evenings to support local businesses.

1.5 Responses to proposals in West Malling High Street

1.5.1 Summary of proposals

- no increase to the charge for parking for up to 30 minutes, remaining at 40 pence;
- an increase of 10 pence per hour for parking up to 3 hours;
- no increase to the charge for parking for up to 4 hours, remaining at £3.20.

1.5.2 Responses

Comment / Objection	times raised	Response
Detrimental impact on shops / business / displacement of shoppers to other locations/ Kings Hill / supermarkets / Bluewater etc	41	There are significant costs associated with the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces. The proposals do not represent significant increases.
Displacement of parking to local streets affecting residents	10	Residential streets in West Malling that are near to the town centre have in place on-street Resident Parking Permit schemes.
One parking machine not working for three months - long queues for other machine - often in the rain	1	There have been technical issues with the machines which are being addressed with the supplier. Machines will be replaced if necessary.
Impact on pensioners	1	There are no specific age-related concessions offered on parking charges, though we offer free parking for blue badge holders.
Introduce 20 mins free at school drop off/pick up to reduce impact on local streets	1	There is already provision for this - there are arrangements for a "walking bus" from the High Street car park in the morning, and the restrictions in the Ryarsh Lane car park end at 3pm to assist parent parking for school pick-up.
Support increase as this might stop commuters using car parks - but increase proportionally over 4 -5 hours	1	The introduction of an extended charging period (but at higher hourly rates) is something that may add more flexibility to parking arrangements, and may be looked at in any future review.

Comment / Objection	times raised	Response
Detrimental impact on local charity	1	There are significant costs for the operation and enforcement of the car parks. The effective management of town centre parking is vital to assist the turn-over of spaces.

1.6 Responses to proposals in Car Park, West Malling

1.6.1 Summary of proposals

- an increase of £80 (to £255) for 12 month car park season tickets.

1.6.2 Responses

Comment / Objection	times raised	Response
Steep increase on annual charges will impact on staff working in local business. (45%) (68%!) (400% over 4 years!!!)	19	Whilst a significant percentage increase is proposed, the charge is still less than £1 per day. This compares extremely favourably to prices for all-day parking at the station, and the parking charges in the short-stay car park.
Not sufficient parking permits for business	3	There is an existing waiting list for season tickets. We aim to release as many as possible to those on the waiting list, but this relies on current season ticket holders moving on and freeing-up the space.
Those working locally less well paid than those using station car park.	1	The proposed charge is less than £1 per day. This compares extremely favourably to prices for all-day parking at the station, and the parking charges in the short-stay car park.
Consider pay and display for shoppers here as car park has capacity	1	There is demand for long-stay parking in the town and the Ryarsh Lane car park is the only off-street facility the Council has that can meet that demand.

1.7 Proposals in Borough Green

1.7.1 Summary of proposals

- no increase to the charge for parking for up to 30 minutes, remaining at 20 pence;
- an increase of 10 pence on each further parking tariff, up to a maximum tariff of £5.30;

1.7.2 There were no responses relating to the proposals for Borough Green.

1.8 Proposals in Blue Bell Hill Commuter Car Park

1.8.1 Summary of proposals

- an increase of 20 pence (to £2.70) for daily parking;
- an increase of £2.00 (to £12) for weekly parking;
- an increase of £5 (to £40) for monthly car park season tickets;
- 3 monthly car park season tickets no longer offered;
- 6 monthly car park season tickets no longer offered;
- an increase of £120 (to £420) for 12 month car park season tickets.

1.8.2 There were no responses relating to the proposals for Blue Bell Hill

1.9 Proposals for Leybourne Lakes and Haysden Country Parks

1.9.1 Summary of proposals

- an increase of 20p (to £1.40) to the “up to 4 hour” tariff;
- an increase of £10 (to £50) for 12 month car park season tickets.

1.9.2 There were no responses relating to the proposals for Leybourne Lakes and Haysden Country Parks.

1.10 Consideration of Objections

1.10.1 The reasons and principles for the introduction of the proposed parking charges were outlined in the report to the October 2019 meeting of this Board.

1.10.2 The introduction and management of parking charges have proven effective in maintaining accessible short-stay parking and in managing demand for long-stay parking. This in turn assists in generating availability of spaces for short-stay shopping visits and people working in and commuting from the Borough.

1.10.3 **Given the context of the parking charges proposals, it is recommended that Members note the responses received and set aside the objections.**

1.11 Legal Implications

1.11.1 The consultation on the proposed parking charges followed the requirements of statutory regulations as detailed in sub-sections 1.1.1 and 1.1.2 of the report.

1.12 Financial and Value for Money Considerations

1.12.1 The proposed charges were reviewed within the context of a set of guiding principles, the cost of the parking service to the Council and ongoing investment in the parking management service.

1.13 Risk Assessment

1.13.1 The estimated additional income outlined in the report to the October 2019 meeting of this Board was modelled on the basis that future parking patterns and demand match current activity. It does not reflect any potential adverse customer reaction or the possibility of increased take up of the dual ticketing arrangement in Angel and Botany car parks.

1.14 Equality Impact Assessment

1.14.1 The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

1.14.2 Blue Badge holders can park free of charge in the Council's car parks for up to 23 hours. The Blue Badge scheme has recently been extended by Central Government to include people with "hidden disabilities". This includes people with learning disabilities, autism and mental health conditions.

1.15 Policy Considerations

1.15.1 Asset Management

1.15.2 Community

1.15.3 Customer Contact

1.16 Recommendations

1.16.1 It is **RECOMMENDED TO CABINET** that it **APPROVE** the following actions to be progressed prior to the proposed parking charges outlined in the report coming into effect on 5th April 2020:-

i) the objections to the proposed charges to the off-street parking charges, as detailed in the report, be set aside; and

ii) the appropriate Traffic Regulation Order be made to facilitate the variation of the off-street parking charges.

Background papers: contact: Andy Bracey

Annex 1 – Consultation “Intends” notice
Annex 2 – Redacted consultation responses

Parking Manager

Robert Styles
Director of Street Scene, Leisure & Technical Services

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THE TONBRIDGE AND MALLING BOROUGH COUNCIL (OFF-STREET PARKING PLACES) ORDER 2020

Notice is hereby given that Tonbridge & Malling Borough Council intends to make the above Order under Sections 32 and 35 of the Road Traffic Regulation Act 1984, the effect of which will be as per the Council's existing Off-Street Parking Places Order, save for the following changes;

In the town of Tonbridge,

- no increase to the charge for parking for up to 30 minutes, remaining at 70 pence
- an increase of 10 pence per hour on each parking tariff (up to a maximum tariff of £6.70)
- an increase of £20 (to £290) for 12 month off peak car park season tickets
- an increase of £10 (to £120) for monthly car park season tickets
- 3 monthly car park season tickets no longer offered
- 6 monthly car park season tickets no longer offered
- an increase of £70 (to £1020) for 12 month car park season tickets

In the town of West Malling,
High Street car park

- no increase to the charge for parking for up to 30 minutes, remaining at 40 pence
- an increase of 10 pence per hour for parking up to 3 hours
- no increase to the charge for parking for up to 4 hours, remaining at £3.20

Ryarsh Lane car park

- an increase of £80 (to £255) for 12 month car park season tickets

In the town of Borough Green

- no increase to the charge for parking for up to 30 minutes, remaining at 20 pence
- an increase of 10 pence on each further parking tariff, up to a maximum tariff of £5.30

In the village of Blue Bell Hill

- an increase of 20 pence (to £2.70) for daily parking
- an increase of £2.00 (to £12) for weekly parking
- an increase of £5 (to £40) for monthly car park season tickets
- 3 monthly car park season tickets no longer offered
- 6 monthly car park season tickets no longer offered
- an increase of £120 (to £420) for 12 month car park season tickets

Leybourne Lake and Haysden Country Parks

- an increase of 20p (to £1.40) to the "up to 4 hour" tariff
- an increase of £10 (to £50) for 12 month car park season tickets

A copy of the draft Order and a statement of reasons for proposing to make the Order may be inspected during normal working hours at the offices of Tonbridge and Malling Council Offices, Kings Hill, West Malling or Tonbridge Castle and at the Kent County Council Offices, Sessions House, County Hall, Maidstone, Kent.

The proposed Order may also be viewed on www.tmbc.gov.uk/offstreetcharges

Anyone wishing to support these proposals, or object to them, should write stating reasons, and quoting the name of the Order, by no later than 9th February 2020

If you have any questions concerning this notice, require further information or have difficulty in reading this notice, please contact, during normal office hours, the Parking Office tel: (01732) 844522, email: parking.office@tmbc.gov.uk or by post to;

The Parking Office, Tonbridge & Malling Borough Council,
Gibson Building, Gibson Drive, Kings Hill, West Malling, Kent ME19 4LZ.

Dated 17th January 2020

Julie Beilby
Chief Executive

For enquires relating to these proposals please contact Tonbridge & Malling Borough Council on 01732 844522.

CAR PARKING FEES & CHARGES
CONSULTATION RESPONSES

ANNEX 2

ID	Comment	Agree / Object	Pertaining to
128	Please dont increase the parking charges. It has already put off a lot of people visiting.	Object	Proposed changes to parking charges
378	We are already seeing shops closing and not being reopened by new businesses. How much more damage do you want to do to our dieing high streets...	Object	Proposed changes to parking charges
542	The Council's plan constitutes yet another irrational and discriminatory effort to fleece the public. Several points are relevant: 1. The consultation timeframe is short and likely to exclude many from offering contributions. 2. Notwithstanding that as members of the public who have entirely and already funded the laying of the roads, and therefore ought not to be charged further for using them or parking on them, the plan is manifestly only aimed at raising money, likely to be spent on yet more unwarranted civil servants. 3. Nowhere in the plan does it state that it is necessary to raise money for any legitimate purpose; thus the plan is intentionally punitive. 4. If the plan were to be applied then the Council would be charging for a service: 'ability to park near one's home', and that would also infer that in the event that residents had to park outside of Rose Street then the Council ought to repay residents each time they cannot use the street for which they had paid an exclusive higher fee to use, and thus ought to have a proportionately greater right, to use. 5. Accordingly, if, as residents, we were to endorse the plan, there would need to be practical benefits for us. However, as outlined above, in practice, charging higher parking permit fees does not increase any benefits to residents of Rose Street, because even in the event that all relevant households were to pay higher fees for three cars per household, then this does not alter the number of cars in the street – only the revenue gained from the scheme. 6. Regardless, if all households in Rose Street were to own three cars each – which they are entitled to - then there would not be sufficient spaces in the road anyway; thus the Council would be charging for a benefit that they cannot in principle or practice deliver, and that would be fraudulent. 7. A major part of the problem with parking in Rose Street arises due to people from other roads using the spaces. 8. It is wrong to seek to penalise individuals for being able only to afford to live in multi-shared households, which frequently necessitates two or three vehicles per household. 9. The Council's plan has not be rationalised, is unworkable, and is legally challengeable.	Object	Proposed changes to parking charges
569	To add parking charges to the areas proposed will further drive shoppers to out of town retail parks further increasing the demise of local shopping areas. Local streets will then become the new car parks resulting in traffic restrictions and congestion.	Object	Proposed changes to parking charges
640	Dear Sir I am replying to your request for commentary on behalf of the Plaxtol Parish Council.	Object	Proposed changes to parking charges

ID	Comment	Agree / Object	Pertaining to
	We would like to see an investment into the public transportation network such as local busses, to offset these increase costs. The higher charges make it harder for our parishioners to commute into these towns to conduct their work or to shop, and one reason for increasing the parking charges is to reduce traffic congestion and so make use of more public transport. However, in recent years we have seen a reduced level of public transport through our village and therefore we would like to see a commitment from yourself into the rural bus network so that the residents of outlying villages like ours may be able to commute into these towns for their business and hence reduce congestion. Thanks and regards [redacted]		
690	Plenty of revenue coming in from council tax especially with all the new properties that have been built since I came to live here [redacted] ago, so I don't see why there is a need to increase parking charges let alone why they were introduced in the first place!	Object	Proposed changes to parking charges
691		Agree	Proposed changes to parking charges
695	And you wonder why our high Streets are dying!	Object	Proposed changes to parking charges
732	Across the Borough, TMBC is proposing taxing residents and local businesses with this ludicrous proposal. It will provide minimal increase in revenue but hugely inconvenience local residents who wish to use local services; and it will deter new comers. Just in case the team that has proposed these increases (and the diabolical proposal to introduce charges at Martin Square, Larkfield, which I also object to!) doesn't already realise, High Streets are DIEING on their feet!! What TMBC need to do is work with KCC and the Parish Council and Commerce, to INCREASE parking capacity in the town, increase footfall and increase -not limit! the time people spend in the town. I use the hairdressers and enjoy getting my nails done and having lunch, none of which you can do with any degree of certainty of parking! TMBC, KCC and the Parish Council must URGENTLY increase parking capacity. This is EASILY done adding extra levels and ramps to existing car parks (see Gravesend ASDA and Medway Maritime Hospital for examples where additional parking is provided at minimum cost, inconvenience and construction!) Use your imagination to solve these common town centre problems and not turn to additional taxing of residents and businesses!	Object	Proposed changes to parking charges
459	Tonbridge High street is already suffering with lack of shops, and more shops going into administration. We should be encouraging people to support our high street instead of going elsewhere. Therefore I think the parking should be decreased or even an hour free to encourage people back to the high street. With the increasing costs I for one won't pay to park, so I don't use the towns supermarkets for big shops, I would rather go to aldi or lidl where the parking is free.	Object	Proposed changes to parking charges (Tonbridge)
119	Businesses in West Malling are already struggling because of the new charges. By increasing them, you are only making the situation worse. I often shop in Snodland, to quickly stop and get odd bits. If charges are increased, I would just go to a supermarket instead, rather than risk running over the free period. Tonbridge and Malling Borough Council is going the right way to ruin local business and High Streets.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
121	Ryarsh lane car park, is used to service mainly the people working within West Malling on minimum wage or low incomes. To raise the cost way beyond the rise of wages is ludicrous. You are only making it harder for the High Street to employee staff or pushing the problem out to the residential streets surrounding.	Object	Proposed changes to parking charges (West Malling)
122	The [redacted] address is not in your list. I have been parking in ryarsh car park on a daily basis for the past 20 years, and in that time I have seen a full car park go to half empty. While I am all for the introduction of parking permits to eliminate the parking issues, such as cars parking there to escape the train station parking fees in the past, the fee increase of almost 400% over recent years is ludicrous!, I dont know what business can increase their prices in that way in that time?..I need 3 permits and I simply cant justify or afford £765. I feel the last increase saw the decrease in permits being purchased and resolved the problem of too many permits being 'held on to', so why a further increase?...Furthermore, I have customers on an almost daily basis complaining they have been driving round for 20 min or so struggling to park, I am in no doubt, I am losing business due to customers not coming into the town because of the parking problems!..To add to my frustration, I see the ryarsh car park half empty every morning now, could you not introduce pay and display fees to non permit holders in ryarsh car park? At least customers will be able to park! The high street is struggling enough in today climate, with the likes of bluewater where parking is never a issue and online shopping...we need to make the town a welcoming place without this parking worry...and where businesses dont have the worry of even higher bills and the continued struggle to survive!	Object	Proposed changes to parking charges (West Malling)
123	Ever since parking charges have been introduced in West Malling, I have avoided using West Malling for significant shopping. I used to stop in the carpark on my way home and get my big food shop, buy birthday gifts from the smaller shops, flowers or chocolates, and maybe stop for a coffee in a cafe. Now because of the parking I just go on to Asda or Lunsford Tesco, because they can provide all these things with easy parking. A group of parents used to meet in West Malling for coffee fairly after dropping off their children at Offham school, but now we go to Spade works or Kings Hill for coffee because parking is easier - it's due to the charges. Even when people do pay to park, they are unlikely to linger, get a coffee, browse the shops because the time limit on their parking ticket stops this.	Object	Proposed changes to parking charges (West Malling)
124	I live in the village and does not need parking for myself. However what made us choose this village in the first place was the quality of the shops on its High Street. We love our High Street and we do everything we can to support it but the inhabitants of West Malling are not enough and we need people from other villages to come and shop here to keep our High Street alive. If we increase the parking charges again, many people will stop shopping in West Malling. December was the fifth consecutive month with no growth as high street stores suffered particularly poor sales, showing the steepest fall for three years. We need to do everything we can to stop this, increasing parking fee is then totally illogical.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
136	When all the shops in West Malling are empty the council will wake up. The charges, any charges are a cash tel, the high street looks a mess, the council let repairs go ahead to the road surface with the wrong coloured blocks, it look a mess, even the crossing marking has nearly worn off, who will take the responsibility when someone gets knocked down while walking across it.	Object	Proposed changes to parking charges (West Malling)
256	We are a local charity doing lots of good work and fundraising in West Malling. The parking fees would have a detramental affect to events we run and the income we raise through these.	Object	Proposed changes to parking charges (West Malling)
268	West Malling - Ryarsh Lane season ticket increase is ridiculous! £175 to £255... 45% increase?!? Will just mean people, like me, who work in the area will not be able to afford a season ticket and will just park in local streets instead, which will in turn upset local residents, who will then hopefully vote out whoever made this ridiculous decision.	Object	Proposed changes to parking charges (West Malling)
428	The Village has seen a drop in footfall since the introduction of parking charges. The proposed increase in charges will not create more parking it will just give the council more money. By Increasing the charges it stops customers coming to the village to browse the shops. They just come if they have a reason too. It would be better to try to find a new parking solution than drive the customers further away. Also increasing the car park charges for the Ryarsh Lane car park is only going to benefit the local council! It will push people out into the already congested surrounding roads. We need to be looking at ways to bring people to our lovely village rather than discouraging them.	Object	Proposed changes to parking charges (West Malling)
483	I oppose further increases to the car parking charges in the High Street Car Park at West Malling. As anticipated when the charges were first imposed, they have had a detrimental impact on trade in the town, with people choosing to go elsewhere in the vicinity where they can park for free, e.g. Asda and Waitrose at Kings Hill, Tesco at Lunsford Park and Morrisons at Ditton. Also, if the proposal for a new Lidl store at Ditton goes ahead, there will probably be free parking there for customers. Town and village centres locally and nationally are already struggling because of high business rates and competition from online shopping and increasing parking charges will only exacerbate the problem. I would therefore ask that you think carefully before inflicting further damage on the health and viability of West Malling businesses.	Object	Proposed changes to parking charges (West Malling)
485	I would like to strongly object to the proposed increases in parking charges in the West Malling High Street car parks. Parking was cited as a problem and partly instrumental in the decision to move almost all Doctor's appointments away from West Malling to Kings Hill. Over the last year 3 shops have become vacant and show no signs of being taken up by other businesses. I would imagine that any benefits from car parking	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
	charges and the costs associated with maintaining the machines and collecting the money will have been easily offset by the reduction in Business Rate incomes from those properties. Unfortunately, West Malling is on the edge of the Borough so car parking charges in the Town make it a less attractive place to visit when there are so many free car parks within a 3 mile radius. Kings Hill Asda has free parking (for people shopping, eating, having a coffee or visiting the Doctor) as does Morrisons at Ditton and Tescos at Lunsford. West Malling cannot compete with these destinations when each visit here imposes the extra cost of any parking...let alone an increase. Footfall in the Town has markedly decreased since parking charges were imposed and unless the Town is halted from this downward spiral other shops and businesses will follow suit and move elsewhere. I hope you will think long and hard as to whether your long term objective is best served by further decimating trade and prosperity in West Malling Town		
517	The council has already removed the first two hours free parking in the car park behind Tesco's. West Malling now has two long frontage shops empty. Any further charges may deter shoppers with the result that Boots the Chemist and Tesco could find further foot fall and consider there shops uneconomic. Please do not introduce further charges.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
567	Hiking one of the yearly charges from £175 to £255 per annum? What, why? When inflation and wage increases are effectively 0...what possible reason can there be for doing this other than to generate more funds (which I assume will fill a hole somewhere else) and to introduce private enterprise into the monetization of car parks? I live near and use West Malling a lot - but I walk. I only park there is it is business and I am able to claim it as an expense - otherwise I would choose to go somewhere else and not support my local town. This has the net effect that I dont pass the pubs, or flower shop (etc) as much or make an impromptu purchase that hep keep these businesses alive. IF TMBC were able to point to a need for the car parks to be 'renovated' I would still disagree...but you cannot even lean on that reason as, to my knowledge, they all allow the parking of cars. If these funds were then ring-fenced to fix local infrastructure (aka roads with an increasing number of huge potholes in the area), I wouldn't support it...but it would make more sense at least, but equally that isnt being proposed. All this does is further the squeeze on local people, dissuade people from any local shopping and introduce private finance into another area of public life. Also - do you realise that money is all made up? As in, our central bank (BoE) prints money on a daily basis - it materialises out of thin air and is underpinned by nothing - it is a Fiat currency underpinned by no material worth. All councils and relatively middle-managed places such as this achieve, by implementing more and more charges to the daily lives of people, is to further push people into financial difficulty and the need to work longer, harder and faster. It solves nothing and will have zero effect on the bigger issues whilst making the lives of ordinary folk immeasurably less liveable over the course of time. Even the 70>80p increase in West Malling...it may not sound a lot...but a year on year increase of 14% will (and have) become normal in so many areas of public life. What starts now will continue and will eventually become a significant issue for many people - affecting the most vulnerable first. Please do not proceed with introducing new charges where presently there are none. Please, in areas where charges already exist, cap the increase to inflation or inflation +1% (MAX). And please, in all areas affected, consider introducing a 30/45 minute 'free' parking time - it will allow at least the most in need to collect prescriptions, see a doctor or run a short errand without making it a costly exercise.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
674	We run a business in the High Street, West Malling and we, as owners, offer parking for our employees as parking in West Malling is rapidly diminishing. We are not some big corporate company (in fact most business are small independent companies in the High Street) and the increase in the parking charges is and could be crippling to some companies. The rise in the charges is appalling. If you want people to visit/work in West Malling to continue the place to thrive - you are doing your best to ensure that does not happen - WE OBJECT STRONGLY	Object	Proposed changes to parking charges (West Malling)
675	The system does not allow our business address which is ridiculous [redacted] We have 7 staff and we currently pay for 3 parking permits and have been on a waiting list for a long time for a 4th. We are a small independent business and rely on our staff to be able to park and we pay for this each year. Such an increase in parking affects our ability to pay for such - an increase on such a level for business' that rely on parking is extortionate. Parking is bad enough in West Malling and if the charges increase to a level that is not economic for a business then staff will start using the surrounding roads which we are sure will not please current residents.	Object	Proposed changes to parking charges (West Malling)
676	Already frustrating to pay for using your local high street and already avoid using now when possible and head to bigger supermarket sites or shopping centres with free parking. Especially when I don't have change available. Shame there isn't a school drop off/pick up free 20 mins to encourage parents to walk children part way to school at local car parks to school e.g. West Malling high street. It makes parking near the school impossible because everyone uses those spaces to not pay for parking in car parks. West Malling school car park near the cricket ground is always full from commuters and local business workers to avoid costs and puts pressure and danger for the primary school children	Object	Proposed changes to parking charges (West Malling)
677	On behalf of The West Malling Chamber of Commerce, we are objecting to the proposed increased charges to both the Business Ryarsh Lane car park plus the public car park behind Tesco. Due to a declining footfall and sales in West Malling since the car park charges were introduced to the public car park, we have had three long established businesses close within a 12 month period, The Cook Shop (approx. 5 years trading) The Fishing Tackle Shop (over 20 years trading) and Martins Newsagents (over 30 years grading) not one of the units has been taken up for rent, they all remain empty. As retailers we are competing with a number of elements, including internet shopping, large shopping centres with free parking, i.e. Bluewater. So for the T&MBC to increase the public parking this will further discourage shoppers from visiting WM also it will reduce the time they spend shopping in our small independent shops. This proposal is in complete contrast to Boris Johnson's pledged to 'Save the Great British High Street'. Regarding the proposed increase of 57% on the Ryarsh Business Car Park, this is a totally unmanageable increase for the small independent businesses and their staff, it will also discourage employment in the Town businesses. Sadly West Malling will become a ghost town if the T&MBC continue to put up barriers to visitors who want convenience and ease to use and support their local High Street. The Chamber of Commerce urge the T&MBC to reconsider on both counts. Regards [redacted] Secretary, The West Malling Chamber of Commerce.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
679	Parking charges are killing West Malling as clearly demonstrated by the increasing number of empty shops. The charges also drive cars to park in the residential streets behind the High street. This is a shortsighted reaction to budget pressure that will cause far greater long term issues.	Object	Proposed changes to parking charges (West Malling)
681	Business has already seriously suffered as a result of parking charges in West Malling. Whilst in Tonbridge Sainsbury's, Waitrose and Iceland can offer one or two hours parking refund depending on amount spent I understand that Tesco are not allowed to do that in West Malling , even though, as I understand it, they own part of the car park !!. It should be a level playing field should it not. As far as charging in Martin Square and Snodland is concerned I can only ask if the council are deliberately trying to ruin local businesses ! My wife and I are retired and have never had any connection with any business in the areas mentioned. Let's hope that the council listens to the people and the local politians that oppose these plans before even more local businesses cease trading.	Object	Proposed changes to parking charges (West Malling)
683	Councils are treating motorists as a cash cow. I have always used my local high street, but now enough is enough. There are shopping centres with free parking close enough for residents to use as an alternative, Bluewater and Hempstead Valley spring to mind. Local shops are struggling to survive and councils seem determined to kill them off. The rise in the Ryarsh lane car Park will punish the very workers who are struggling to survive in this toxic retail environment. The council should be encouraging people to use the local high street not punishing both visitors and workers alike. What will the council do when the golden goose is finally dead?!	Object	Proposed changes to parking charges (West Malling)
684	I see this change as likely to be detrimental to the shops and businesses in West Malling, several of which have already closed. I already avoid the car park behind Tesco whenever possible.	Object	Proposed changes to parking charges (West Malling)
685	Having worked in West Malling for over 30 years I have parked in Ryarsh Lane Car park and as such have paid the parking fees since their inception. It has gone from £75.00 to a proposed £255.00 per year which I find ridiculous. If I remember correctly these increases have occurred over three years but I could be mistaken. As I am sure that you are aware, businesses in West Malling are already struggling and many have closed down in recent months. I feel that to add further cost to them by upward spiraling parking costs is just yet another nail in the coffin of West Malling.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
687	The business car park doesn't guarantee a space after 8.30 sadly. This can cause problems when I have a client service timed list to work to. I would like to get another parking permit for a staff member as they experience verbal and threatening abuse from local residence and at the new charge could not afford 2 spaces as we are only a small business.	Object	Proposed changes to parking charges (West Malling)
689	The council should consider adopting a policy of 'no charge' for the first 30 minutes in all of its car parks. This would promote a higher turnover/availability rate and encourage a good proportion of people to consolidate their shopping needs and free up their parking space sooner, especially if they are needing only a few items of shopping or to quickly visit a bank, post office, etc. I believe this will be welcomed by residents, particularly at smaller shopping venues such as West Malling and Martin Square. In West Malling, such a policy could greatly increase turnover for the shops if it was applied to the parking spaces in the High Street where the current limit is one hour.	Object	Proposed changes to parking charges (West Malling)
692	When most of the shops in West Malling will be closed because of any new car parking charges made, Tonbridge & Malling Council will be pleased. I totally object to any increase in the charges, as a local resident I have seen the shops come & go over the last 54 years, the car parking charge will certainly kill off more of the smaller businesses . People will not stop when they know that money / card has to be found to stop for a few hours. It's just a cashtel for the council, I would not mind but our roads are a total disgrace, even when the high street is dug up, they replace the blocks in a different colour, the Romans must be laughing at our appalling look of our roads, I will not mention the Pot Holes, that's another story.	Object	Proposed changes to parking charges (West Malling)
694	Please don't increase car parking charges in West Malling. People are choosing not to shop there because of the charges and several shops have closed down. We want to maintain a vibrant community but this will not happen without shops.	Object	Proposed changes to parking charges (West Malling)
697	I object to the proposal to increase the annual parking charges at the Ryarsh Lane Car park in West Malling. I understand that this car park is used primarily by businesses in the high street. We already have a number of empty shops in the high street and the number is increasing. Anything which increases costs for business in the high street will decrease the chances of empty units being filled and make things more difficult for those already operating there. It would make more sense to decrease the charge for annual passes in this car park to encourage business into the area.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
701	The parking charges have had a significant impact on trade in West Malling already. £3.20 for 4 hours is far too much, considering the small variety of shops we have in comparison to bigger towns like Sevenoaks or Maidstone. If people want to come to shop and then stay for lunch, they were far more likely to do this when the car park was free. Putting the price up is simply not good for our village. I have never put one penny in the machines. If I need to drive to the centre for shopping, I will only use on street parking. If I cannot find a space, I go elsewhere. I refuse to put money in the machines, because I totally disagree with the charges. I know I am not alone in this. And people who are not local do not come to shop with us as much because of the charges. Please do not increase the charges again.	Object	Proposed changes to parking charges (West Malling)
703	As a small business owner we object grossly to the increased charges at both the car park in West Malling for our customers and the Ryarsh Lane Business Permit car park. This will have a detrimental effect on our business, our staff and our customers. We implore you to reconsider and help support our dying high street rather then infringe extra charges, otherwise out business will die. We are a mains post office and offer a public service, a lifeline to our local and rural community, please do not kill it.	Object	Proposed changes to parking charges (West Malling)
704	As a small business owner we object grossly to the increased charges at both the car park in West Malling for our customers and the Ryarsh Lane Business Permit car park. This will have a detrimental effect on our business, our staff and our customers. We implore you to reconsider and help support our dying high street rather then infringe extra charges, otherwise out business will die. We are a mains post office and offer a public service, a lifeline to our local and rural community, please do not kill it.	Object	Proposed changes to parking charges (West Malling)
711	We own two shops in the High Street, we inherited four parking permits at Ryarsh Lane car park and have over the years reduced that to one, what justification is there for an £80 uplift to the annual parking charge? In real terms, I have Calculated that I have to make an additional seven sales per week at a time when fewer people are coming to the high street, not more. With the increased parking charges across the town, is this a realistic proposition? No. When charges were first introduced there was a considerable downturn in sales which have not to date picked up. You are closer to government and are therefore fully aware of the pressures for anyone in retail, are aware of the falling sales in every high street across the country, are fully aware of the amount of empty premises in our own high street of West Malling and surely must be aware that there will be more closures to come. As our elected representatives, I would expect you to do everything in your power to protect our interests rather than undermine them.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
712	We need to support local business in West Malling High Street. We get some fantastic shops opening only to close as business fails due to lack of customers. Its nearly impossible to park there at the moment and the charges just make it even more problematic and difficult. Its just easier to go to Blue Water where parking is free. We have some vacant shops in West Malling at the moment - making customer parking easier and free would help enormously in filling these spaces and thus bringing more custom into the Town. It needs variety so that people don't just come for one thing but come for several things to make it worth while	Object	Proposed changes to parking charges (West Malling)
714	I object to the permit increases. I object to the hourly rate increases, unless a contactless facility is added to all parking machines. We do not want to use park mobile. Park mobile's service is awful. I'd rather not use west malling car park, and use businesses in Maidstone instead.	Object	Proposed changes to parking charges (West Malling)
722	Current parking fees,(to which I objected when it commenced) have seriously impacted West Malling businesses. In other boroughs an hours free parking is often found and seems to work well. TMBC should actively study this approach. Increasing the charges will exacerbate the problem.	Object	Proposed changes to parking charges (West Malling)
724	We regularly use West Malling for shopping but due to proposed increased car parking charges will now be using other close locations where car parking is free.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
729	West Malling is a historic Georgian High Street which attracts local shoppers, ramblers, Kent folk from surrounding and outer lying areas as well a few tourists. The High Street has always had a good mix of independent shops, service providers, estate agents pubs and restaurants. Since the parking charges have been implemented there have been some notable closures of independent traders as well as locals either reducing the time of their visits or finding alternatives. A further increase will not help this situation and could substantially change the character of this beautiful place. Alternatively, if the Council continue with this plan, which we all know they will. Perhaps they may like to consider the way they collect the charge. At the moment, the charge is collected on arrival which means you have to calculate how long you will be in the village. Many times I have had an appointment of some kind with the intention of shopping in the village afterwards but for various reasons the appointment has run late or been much longer than expected and I have had to make alternative shopping plans. This means valuable trade has been lost and I am only one person. Also, if you meet up with friends during the day at a pub or restaurant again their service speed can depend on whether you all have a mini shopping trip with your friends afterwards. How many people are doing this everyday? If you could pay once you had finished off your trip how you want to, our dear beloved Council would receive more income as well as our local traders. [redacted]	Object	Proposed changes to parking charges (West Malling)
731	Once car parking charges are introduced the inevitable happens , as we see now. These charges are increased to provide a cash cow for the local councils. If on my short shopping trips to West Malling I can not find a free space in the high street I carry on driving and shop elsewhere. It is the local traders who will lose out. I refuse to pay for something that used to be free.	Object	Proposed changes to parking charges (West Malling)
733	I work for a small business within West Malling and currently have a annual parking permit for The Ryarsh Lane Carpark. Employees rely on the permit to be able to park for the whole day whilst at work. As a small business this increase (of over 45%),per permit, will impact greatly on whether they can now afford to provide permits to employees. If they decide they cannot and employees themselves cannot afford this, this will inevitably mean employees will have to park in other areas of West Malling (i.e non permit residential areas). This then creates issues within the residential parking areas, but quite frankly employees of any small business within the area will have no other choice.	Object	Proposed changes to parking charges (West Malling)
735	It is discouraging to business and to visitors, potentially leading to more decline in West Malling (and elsewhere), whilst encouraging people to use parking free alternatives. Please do not do this.	Object	Proposed changes to parking charges (West Malling)
744	The price increase to the business car park is ridiculous. I work for a small company in the High Street in West Malling and we have 3 permits. The increase will be a high cost to my company and as an employee may have to look for alternative parking with the increase which in very hard to find in this town anyway for a whole day. People have to work within the town to generate business which is already decreasing with the number of empty shops and will only decrease further with high parking charges.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
746	The new proposed business car park on the A20 is too far from our business, we have to transport delicate cakes to the Tea Room, we could not walk them from there. We are on the waiting list for the Ryarsh Lane business car park, the £80 increase in the annual charge would prevent us from parking there, it is a 45.7% increase. We could not as a very small business sustain that. The increase in car parking charges behind Tesco, that will serve to kill the high street even more than it is. With high streets stuggling generally, and 4 shops having closed in the past year, surely businesses need more help attracting customers. All these proposals can only serve to harm the current businesses who are struggling to keep going. [redacted]	Object	Proposed changes to parking charges (West Malling)
751	In my opinion, charging any amount for parking at West Malling high street will help kill the high street. There are already a number of shop premises that remain empty. These small shops rely on footfall to exist. Increasing the charges only adds salt to the wound. People will continue to go to out of town shops where the parking is free.	Object	Proposed changes to parking charges (West Malling)
755	The parking charges that were introduced in West Malling have certainly reduced the number of times I visit West Malling especially if I only want to do one or two quick jobs like drop something off at the dry cleaners or pop into Boots or the bank or post office. I do not object to paying for a longer stay but the first half hour should be free like the car park in Otford. This would encourage me and others to return to West Malling for these quick stops - instead I go up to Kings Hill and use the shops in the commercial centre there where parking is accessible and free	Object	Proposed changes to parking charges (West Malling)
762	As the largest business in West Malling high street we employ just under 100 staff and the business is growing by the day. The majority of our staff travel by car to work as well as client meetings and the need for a parking space is vital. When we have staff that leave, this reduces the number of permits. We have a car park at the back of the business premises which accommodates 37 spaces for our staff which as you can see is nowhere near enough for the amount of staff that are employed. Currently we have 23 employees on the waiting list for Ryarsh car park as well as a handful of employees who walk to work. This also causes us problems when employing potential new staff as we cannot guarantee them a parking space or off street parking. We currently have 19 parking permits which will reduce to 11 by the end of June 2020. With regards to the proposed annual season car parking charge from £175 to £255 we feel that an increase of 68% is not warranted and unjustified. With Ryarsh Lane being the only the long stay business car park in West Malling this is the preferred car park for our employees. Due to the parking restrictions enforced by the council this could have a negative effect when our lease is due for renewal. We would welcome your feedback.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
766	I wish to strongly object to the increase in parking charges in West Malling. This rise will be just another nail in the coffin of small business. There are currently at least 2 shops empty and the increase in charges will discourage more people from visiting the town. The council should be looking to do all it can to encourage people to visit rather than making it more expensive.	Object	Proposed changes to parking charges (West Malling)
769	Regardless of the fact that I have spent some time trying, but failing, to unearth the Council's reasons through the labyrinthine paper trail, I am quite clear in submitting this objection to the proposed increase in charges. My wife and I moved to West Malling [redacted] ago with a view to down sizing our accommodation in advancing years. At that time, parking in West Malling was free, but charges were introduced soon after our arrival. Given the opportunity, as pensioners, we would have objected then to that imposition and we certainly wish to do so now.	Object	Proposed changes to parking charges (West Malling)
815	These comments are intended for the parking consultation relating to West Malling. Would it be possible to give the first hour free in the Tesco Car Park in the same way that you can park for free in the High Street for one hour. Someone who lives outside the town centre who wants to pop into the village to buy a few items and only stay for a very short period has to pay 40p. If they do this daily it puts an extra £2.40 on their shopping bill. This does not encourage people to shop in the town but instead go to Kings Hill where they can park completely free. The system whereby the number plate has to be on the ticket also takes a huge amount of time, especially when one of the ticket machines is out of order which often happens. In many places cardboard time 'clocks' are used; a time is set on the clock so a parking attendant can see if the free parking period has been exceeded, this could be introduced on the high St where the 1 hour limit is abused. It is hard to understand why parking is charged during the day and not of an evening. It seems that the shops pay while pubs and restaurants get mostly free parking. Surely the Council should encourage trade for both. The number of empty shops does nothing for the town. The council has to raise money where they can, but encouraging traders to the town is important for the long term prosperity of the community. Could we replace the current ticket machines with those you see in other car parks where you collect a token or ticket on entry and pay to leave the car park. No lengthy system to register the number plate, no entry to the car park unless a space is available so avoiding queues. This might allow people to stay longer than 4 hours but short stays could be encouraged by making long stays very expensive and re-entry avoided by the number plate recognition cameras.	Object	Proposed changes to parking charges (West Malling)

ID	Comment	Agree / Object	Pertaining to
816	I live in West Malling, walking distance to the High Street so do not need to use the car park that often, but still object to the increases as I have seen a drop in the use of the High Street Car park since charges were introduced. Also more cars stop where they should not if they are only going to be a short while or dropping or picking someone up. So even the rise in the 1/2 hour stay is not good. The business car park has also been used less since the last increase and people use the zoned areas instead leaving less spaces for people like us who buy the yearly permit as the lane we live in is single file so if it is going to be blocked during the day and we need the car we have to park on the road in advance. The Council needs to keep small towns and businesses alive, keep a comunity not drive it out and leave empty shops.	Object	Proposed changes to parking charges (West Malling)
771	I live in East Malling and work from home. I regularly do errands during my lunch break and might visit several places with the proposed parking charges during my short lunch break. Just this Thursday I visited Aylesford and St Martins Sq. Not only would this have meant a 40p charge (2x20p) but a great deal of time wasted. For this reason I never visit central West Malling, even though it is under 1 mile from my house, because I have to waste time walking to the machine and back and completing all that registration number etc. I really like supporting the local independent shops but will not continue to do so if I am wasting time buying tickets. [redacted] Please reconsider your proposal and even scrap the parking charges in West Malling.	Object	Proposed changes to parking charges (West Malling, Martin Square car park, Aylesford car parks)
817	I wish to object to the proposed increase in car parking charges in West Malling. **High Street Car Park** I quote from your consultation document: "1.17. Existing Free to Use Car Parks 1.17.2 The introduction of car parking charges in West Malling generated significant public and media interest, with concerns expressed by residents and shop owners over the potential impact on the economic viability of the town, and the possibility of cars parking in residential streets nearby rather than paying to park. These concerns have not materialised... " That is not true - the introduction of charges led to an immediate reduction in revenue for shopkeepers, and the Cook Shop, Country Sports Shop, Baldocks and the Newsagents are all now empty, as are a number of shops in the Abbey Arcade. There has been an obvious increase in the number of cars parked on residential streets, to the extent that I can no longer access my driveway from the West Malling Town direction because of an increase in cars parked opposite. It is also the case that the revenue obtained from the High Street car park (roughly £160,000), together with the present level of revenue from Ryarsh Lane permits (£26,250) greatly exceed the £80,000 cost of maintaining both the High Street and Ryarsh Lane car parks. I urge the Borough Council to allow free car parking for the first one or two hours - this would encourage more visitors to the town and a greater throughput in the car park, yet still provide sufficient revenue for the Borough Council to cover their costs. **Ryarsh Lane car park** The proposed annual increase from £175 to £255 represents a 45.7% increase. The quoted justification of the comparison with the charges at the railway station are fallacious - commuters to London enjoy London wages which, even with the cost of season tickets, far outweigh the earning power of those workers in West Malling who use the Ryarsh Lane car park.	Object	Proposed changes to parking charges (West Malling, Ryarsh Lane), Martin Square car park, concessions within car parks, enforcement and resident permit parking

ID	Comment	Agree / Object	Pertaining to
	These proposals - for the High Street and Ryarsh Lane car parks - will again further threaten the viability of the town, which will, in turn, reduce the amount of money which the Borough receives in Business Rates and hence be counterproductive. **Diabetic Eye Screening** Special measures are proposed in Paragraph 1.20 for waiving charges for use of blood transfusion and breast screening vehicles. I shall be grateful if similar consideration could be given to the voluntary diabetic eye clinic screening van which has hitherto attended the car park at West Malling surgery a few times each year. The sale of the West Malling surgery premises means that this will not be poss ble in future, with the van having to park at Kings Hill unless alternative arrangements can be made locally. The screening service states that patients must not drive to or from their appointments as their vision is affected by the screening, which will therefore adversely affect West Malling patients who can currently walk to the screening van. An alternative location in the a Tesco car park would solve this problem. **Enforcement** A problem with the present system is the low level of enforcement since there are only 11 full time traffic wardens across the whole Borough. If additional car parks have Charges, the need for enforcement will be even greater. Nowhere does the report say that additional traffic wardens will be appointed, although the need for this is mentioned in paragraph 1.2.2. **Permits for residents' parking** I understand that all renewals for permits within residents' parking schemes must now be done online. I would have thought that this change should have been incorporated into this Consultation. It will adversely affect the many people, especially the elderly, who do not have the Internet and are not familiar with using it.		

ID	Comment	Agree / Object	Pertaining to
490	Please be aware that I do support parking fees as I get very frustrated particularly in West Malling High Street that I can never park and this prevents me from visiting my local village. I feel by charging it will stop people using the car park for alternative reasons e.g. commuting. However, the first hour or at least half hour should be free of charge. And charges imposed thereafter should be of a fair price raising more substantially if you stay longer than 4-5 hours. If car park charges are imposed to high this will impact on the local businesses that are already struggling. Please note that I visited West Malling Car park in the last week and both the car parking payment machines were out of order. I was able to call up and pay and then downloaded the app. BUT, I could see older people getting in a state and they may not be in a position to do as I did. Out of order payment machines may stop potential customers supporting our local shop keepers, so this is a matter which needs addressing too. Also I am not sure where the shop keepers and their staff park ? Permits or arrangements for their parking must be considered too.	Agree	Proposed charges to parking charges (West Malling)

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TONBRIDGE & MALLING BOROUGH COUNCIL

STREET SCENE and ENVIRONMENT SERVICES ADVISORY BOARD

05 March 2020

Report of the Director of Planning, Housing and Environmental Health

Part 1- Public

Matters for Recommendation to Cabinet - Non-Key Decision (Decision may be taken by the Cabinet Member)

1 AIR QUALITY MANAGEMENT AREA REVIEW

1.1 Summary

1.1.1 Tonbridge and Malling Borough Council has seven Air Quality Management Areas (AQMAs) all declared for exceedances of the annual Nitrogen Dioxide objective, with one AQMA on the M20 also declared for the daily Particulate Matter (PM^{10}) objective. We have a statutory duty to both review these AQMAs periodically and keep updated an Air Quality Action Plan (AQAP) to outline the actions we will take to reduce concentrations of pollutants causing the exceedances. Working with consultants Bureau Veritas we have reviewed our historic monitoring results and carried out a modelling and source apportionment exercise with recommendations to fully revoke one AQMA at Ditton, revoke the PM^{10} designation of the M20 AQMA and amend the areas of three other AQMAs at Aylesford, Larkfield and Borough Green as shown in the Technical Note at **Annex 1**. With these changes implemented we will look to update our AQAP to outline the actions the Council will take up to 2025 to tackle the pollutants of concern not only within the designated AQMAs but also across the Borough as a whole as part of our wider Climate Change strategy.

1.2 Background

1.2.1 The Council has a statutory duty under Part IV of the Environment Act 1995 to;

- Monitor air quality within its boundary,
- Declare an Air Quality Management Area (AQMA) where air quality fails to meet the relevant standard laid down in law,
- Where an AQMA is declared, prepare an Air Quality Action Plan (AQAP) to demonstrate how it intends to reduce that pollutant, and;
- Review AQMAs and AQAPs in response to ongoing monitoring.

1.2.2 In line with statutory requirements, the Council has been monitoring levels of Nitrogen Dioxide across the Borough since the 1990's. In that time seven hotspots have been identified and AQMAs declared for exceedances of the Nitrogen Dioxide Annual objective of 40µg/m^{-3} at the following sites;

AQMA Name	Date of Declaration	Location	Description of Area
M20 AQMA 1	May 2001	Larkfield / Ditton	Between New Hythe Lane and Hall Road
Ditton AQMA 2	June 2005	Ditton	An area encompassing the Ditton crossroads
Tonbridge High Street AQMA 3	June 2005	Tonbridge	Between The Botany and Vale Road roundabout
Wateringbury AQMA 4	June 2005	Wateringbury	An area incorporating the crossroads
Aylesford AQMA 5	October 2008	Aylesford	An area encompassing the junction of the A20 (London Road) with Hall Road and Mills Road.
Larkfield AQMA 6	October 2008	Larkfield	An area encompassing the A20 from just West of the junction with New Hythe Lane, heading East towards Ditton.
Borough Green AQMA 7	April 2013	Borough Green	An area encompassing the junction of the A25 (Sevenoaks Road) and the A227 (Western Road) within Borough Green.

1.2.3 Although no monitoring has been undertaken, a modelling exercise in 2001 also led to the M20 AQMA being declared for an exceedance of the daily Particulate Matter (PM^{10}) objective.

1.2.4 Since these declarations, monitoring has shown a downward trend in levels of Nitrogen Dioxide as cars become cleaner and previous actions have taken effect, to the extent that monitoring in some areas such as Ditton have not shown any exceedances of the air quality objective since 2014. Monitoring within three other AQMAs at Aylesford, Larkfield and Borough Green also indicates that the original designated areas as shown Figures 3.18, 3.21 and 3.25 respectively of the Technical Note in **Annex 1** are no longer appropriate as some monitoring locations within the existing boundaries have not exceeded the objective for a number of years. It is therefore recommended that these areas are revoked/amended, as supported by the modelling and source apportionment work shown fully in the Technical Note at **Annex 1**.

1.3 Recommended revocation and amendments to existing AQMAs

1.3.1 Statutory guidance requires that prior to the revocation or amendment of declared AQMAs, a revocation or amendment order as appropriate should be submitted to DEFRA and other statutory consultees for comment as well as being made publicly available so that the public are aware of the situation.

Following the modelling and source apportionment exercise detailed in the Technical Note shown at **Annex 1**, it is recommended that the following orders are made.

AQMA 1, M20 (Particulate Matter (PM^{10}) revocation only)

This AQMA was declared in May 2001 for exceedances of both the Annual Nitrogen Dioxide objective and the Daily Particulate (PM^{10}) objective. The PM^{10} declaration was made on the back of a modelling study rather than monitoring. Further modelling has been undertaken as part of the technical exercise taking into account Smart Motorway works, and changes in vehicles such as modern Euro standards. Modelling has predicted no exceedances of the Daily PM^{10} objective at nearby relevant receptors (as shown in Section 3.1 of the Technical Note in **Annex 1**).

As there were no exceedances of the objective at relevant receptors as described in DEFRA Technical Guidance (TG16) the Daily PM^{10} declaration of this AQMA is recommended for revocation. This would also bring this stretch of the M20 in line with the section in Maidstone Borough Councils area, where the Daily PM^{10} declaration was revoked in May 2018 following a similar exercise.

No changes are proposed to the Nitrogen Dioxide designation of this AQMA and existing Nitrogen Dioxide monitoring will continue.

AQMA 2, Ditton (revocation)

This AQMA was declared in June 2005 for exceedances of the Annual Nitrogen Dioxide objective. As levels of Nitrogen Dioxide have declined through cleaner engine technology and the implantation of previous action plan measures, monitoring within this AQMA has demonstrated that it has not exceeded the objective level at relevant receptors since 2014. Members may recall a decision was taken in October 2017 to keep the AQMA in place during the M20 smart motorway works, however monitoring since that time has not shown an increase but confirmed a slow downwards trend.

Supported by modelling as shown in Section 3.2 of the Technical Note in **Annex 1**, it is therefore recommended that this AQMA designation now be fully revoked.

Notwithstanding the above, monitoring will be maintained in the area and guidance allows us to declare a new AQMA should that become necessary.

AQMA 3, Tonbridge High Street

No changes are proposed to this AQMA at this time

AQMA 4, Wateringbury

No changes are proposed to this AQMA at this time

AQMA 5, Aylesford (amendment)

This AQMA was declared for exceedances of the annual Nitrogen Dioxide objective at relevant receptors in October 2008. There are a number of monitoring locations within the current declared area as shown in Section 3.5 of the Technical Note in **Annex 1** but only two locations have exceeded the objective since 2014, those being directly adjacent to the Hall Road, A20, Mills Road crossroads.

It is therefore recommended that the area of AQMA 5 be amended to that shown in **Annex 2**.

Monitoring will continue within the old area and the designation can be amended again in the future should results indicate a need.

AQMA 6, Larkfield amendment

This AQMA was declared for exceedances of the annual Nitrogen Dioxide objective in October 2008. There are a number of monitoring locations within the current declared area as shown in Section 3.6 of the Technical Note in **Annex 1** but only two locations have exceeded the objective since 2014 and only one since 2016.

It is therefore recommended that the area of AQMA 6 be amended to that shown in **Annex 3**.

Monitoring will continue within the old area and the designation can be amended again in the future should results indicate a need.

AQMA 7, Borough Green amendment

This AQMA was declared for exceedances of the annual Nitrogen Dioxide objective in April 2013. There are a number of monitoring locations within the current declared area as shown in Section 3.7 of the Technical Note in **Annex 1** but only one location has exceeded the objective since 2014.

It is therefore recommended that the area of AQMA 7 be amended to that shown in **Annex 4**.

Monitoring will continue within the old area and the designation can be amended again in the future should results indicate a need.

1.4 Remainder of declared AQMAs and ongoing monitoring

1.4.1 The changes detailed in 1.3.1 are the only proposed changes to the declared AQMAs at this time, and are all based on physical monitoring results supported by modelling, except for the PM^{10} revocation of AQMA 1 (M20) which like its declaration was based solely on a modelling exercise.

1.4.2 There are no proposals at this time to amend the remaining AQMAs at Wateringbury or Tonbridge High Street as this is not supported by monitoring or modelling results which also cover road links beyond the existing AQMA boundaries including Red Hill and Bow Road in Wateringbury and Bordyke, Quarry Hill, Brook Street and Pembury Road in Tonbridge.

1.4.3 We will continue to review our AQMAs and monitoring locations annually during the creation of our Annual Status Report which is a statutory submission to DEFRA in June each year, with changes to monitoring locations taking effect in January. All historic Annual Status Reports are available to view online at www.kentair.org.uk

1.5 Climate Change Strategy and Draft Updated Air Quality Action Plan

1.5.1 In line with our statutory duty to review and update our AQMAs and AQAP, a steering group made up of Council Officers and representatives from the County Council are working with our contractors Bureau Veritas to utilise the Technical Note at **Annex 1** to produce an updated AQAP which will outline the actions the Council will take to improve air quality both within the AQMAs and across the Borough up to 2025.

1.5.2 This updated AQAP will be presented to members for agreement in principal before it moves to the next stage which is a statutory external consultation with parties including, DEFRA, The Environment Agency, Neighbouring Local Authorities, KCC, and Local Residents.

1.5.3 The Source Apportionment exercise as detailed in Section 4 of **Annex 1** has identified five broad topics for the action plans priorities;

- Priority 1: Transport
  Source apportionment shows the main source of air pollution causing the declaration of AQMAs across the Borough is associated with road transport emissions. Therefore reducing transport emissions through measures contained within the Action Plan are a key priority.

- Priority 2: Planning and Infrastructure
  The new Local Plan through LP:20 and supporting policies sets out the considerations to be applied when considering development proposals. With significant housebuilding occurring during the life of this plan, ensuring suitable planning and infrastructure is in place is a key priority.

- Priority 3: Policy Guidance
  There are a number of existing and emerging policy/strategy documents which are a key mechanism for reducing emissions across the Borough, including the Kent Environment Strategy and the Energy and Low Emission Strategy the latter of which we have recently signed up to. Engaging with such documents is a key priority.

- Priority 4: Public Health and Wellbeing; and
  The impact of air pollution on public health is known to be highly detrimental. As we know transport is a key pollutant, aside from restricting vehicle usage through the introduction of clean air/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.

- Priority 5: Air Quality Monitoring
  Currently Nitrogen Dioxide is monitored through a network of passive diffusions tube and two continuous analysers. A Particulate monitor is also being established in Borough Green, with opportunities through the Smart Cities initiative being looked at to create a network of indicative Particulate Monitors, to inform the general public. Monitoring is the best way to continually assess the extent of pollution within Tonbridge and Malling, as well as quantifying improvements that have been achieved through the AQAP, and acting as an evidence base for AQMAs to be amended/revoked.

1.5.4 Whatever actions are in the final plan, it will not prevent new actions which may present themselves during the life of the plan from being taken forward.

1.5.5 The challenge ahead will be considerable and will require a combined approach. The Council has already established a Steering Group comprising of representatives from across the different Council departments as well as representatives from the County Council to develop this action plan. Expertise from within this group will assist with progression of the targets within the action plan. We will also need to work closely with other statutory partners, businesses, community groups and individuals to raise awareness and help to influence change.

1.6 Legal Implications

1.6.1 The Council has a statutory duty to monitor air quality within the Borough but specific pollutants are not described within this requirement. The Council has monitored Nitrogen Dioxide through a network of passive diffusion tubes and continuous monitors since the 1990's in line with this statutory duty.

1.6.2 The Council also has a statutory duty under the Environment Act 1995 to revoke/amend/declare AQMAs as necessary, and prepare and update AQAPs.

1.7 Financial and Value for Money Considerations

1.7.1 Air Quality monitoring has an annual budget which is not proposed to be changed at this time. There is no budget set aside for the implementation of the Action Plan.

1.7.2 There are regular opportunities to bid for funding from Air Quality projects from difference sources including DEFRA and the AQAP being developed will identify funding opportunities for the proposed actions to ensure the action has a realistic chance of success.

1.7.3 In addition, subject to final endorsement of the 2020/21 Budget, a specific earmarked reserve has been established in the sum of initially £250,000 to fund Climate Change initiatives. It is anticipated that as the aims of the AQAP will accord with the aims of the Climate Change Strategy some of this funding could also be utilised to help fund proposed actions within the Air Quality Action Plan.

1.8 Risk Assessment

1.8.1 None

1.9 Equality Impact Assessment

1.9.1 The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

1.10 Policy Considerations

1.10.1 Planning, Air Quality and Climate Change, as detailed in the report and associated Annex.

1.11 Recommendations

1.11.1 That the issue of revocation and amendment orders as required by DEFRA for the;

- Revocation of AQMA 1 relating to Daily PM^{10} only,
- The revocation of the whole of AQMA 2 at Ditton and;
- The amendments to the areas of AQMAs 5, 6, and 7 at Aylesford, Larkfield and Borough Green respectively,

as detailed in Section 1.3 of this report **BE ENDORSED**.

The Director of Planning, Housing and Environmental Health confirms that the proposals contained in the recommendation(s), if approved, will fall within the Council's Budget and Policy Framework.

Background papers:

Nil

contact: Crispin Kennard
Linda Hibbs

Eleanor Hoyle
Director of Planning, Housing and Environmental Health

AQMA Technical Note

Tonbridge and Malling Borough Council AQMA Review

November 2019

Move Forward with Confidence

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	Name	Job Title	Signature
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Approved By	J Clayton	Principal Consultant	

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Executive Summary

Bureau Veritas have been commissioned by Tonbridge and Malling Borough Council to complete a review of the Council's existing Air Quality Management Areas (AQMAs) to help inform a new Air Quality Action Plan (AQAP). The Council currently have seven AQMAs, all of which have been declared in relation to traffic emissions; six of the AQMAs have been designated for exceedances of the NO_2 annual mean Air Quality Strategy objective, whereas the M20 AQMA has been declared due to exceedances of both the NO_2 annual mean and the PM_{10} 24-hour mean AQS objectives.

A dispersion modelling assessment has been completed whereby NO_2 and PM_{10} concentrations have been predicted across all relevant areas within the borough at both specific receptor locations, and across a number of gridded areas to allow the production of concentration isopleths. This has been used to supplement local monitoring data to provide a clear picture of the pollutant conditions within the borough.

Following the completion of the analysis of both monitoring data and modelled concentrations across all of the assessed area a number of recommendations have been made in terms of the AQMAs within Tonbridge and Malling:

- M20 AQMA (1) – A revocation of the AQMA in terms of the 24-hour PM_{10} objective, and for the annual mean NO_2 designation to remain in force;
- Ditton AQMA (2) – A revocation of the AQMA;
- Tonbridge High Street AQMA (3) – The AQMA to remain in place based upon current monitoring results, with the designation to be reviewed based upon future monitoring data;
- Wateringbury AQMA (4) – The AQMA to remain in place based upon monitoring and modelled results;
- Aylesford AQMA (5) – A revision of the AQMA boundary based upon both monitored and modelled concentrations;
- Larkfield AQMA (6) – A revision of the AQMA boundary based upon both monitored and modelled concentrations; and
- Borough Green AQMA (7) – A revision of the AQMA boundary based upon both monitored and modelled concentrations.

The next steps upon completion of this Technical Note are to develop, through consideration of merit, a defined set of achievable measures to be drawn forward into the revised action plan document.

1 Introduction

Bureau Veritas have been commissioned by Tonbridge and Malling Borough Council ("the Council") to complete a review of the Council's existing Air Quality Management Areas (AQMAs) to help inform a new Air Quality Action Plan (AQAP). The Council's current draft AQAP was published in 2011, and the details presented within this Technical Note are to be used to develop an updated AQAP.

The Council currently have seven AQMAs. All of which are related to traffic emissions; six of the AQMAs have been designated for exceedances of the NO_2 annual mean Air Quality Strategy (AQS) objective, whereas the M20 AQMA has been declared due to exceedances of both the NO_2 annual mean and the PM_{10} 24-hour mean AQS objectives. Details of the AQMAs are as follows:

- M20 AQMA (1) – An area extending 39m from the centreline 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;
- Ditton AQMA (2) – An area incorporating the Station Road/London Road A20 crossroads in the Parish of Ditton;
- Tonbridge High Street AQMA (3) – An area incorporating the High Street between Botany and the High Street/Vale Road roundabout, Tonbridge;
- Wateringbury AQMA (4) – An area incorporating the Red Hill/Tonbridge Road A26 crossroads in the Parish of Wateringbury;
- Aylesford AQMA (5) – An area encompassing the A20 London Road in Aylesford, including the junction with Hall Road and Mills Road;
- Larkfield AQMA (6) – An area encompassing the A20 London Road in East Malling, Larkfield and Ditton, including the junction with New Hythe Lane; and
- Borough Green AQMA (7) – Parts of Sevenoaks Road A25, Western Road and the High Street in Borough Green.

1.1 Scope of Report

This Technical Note seeks, with reasonably certainty, to predict the magnitude and geographical extent of any exceedances of the AQS objectives, providing the Council with updated modelling data that can be utilised for the development and/or updates to AQAP measures.

The areas considered as part of this study are illustrated in the figures shown under each AQMA heading within this report. The following are the main objectives of this report:

- To assess the air quality at selected locations ("receptors") at the façades of existing residential units, representative of worst-case exposure within, and close to the existing AQMA boundaries, based on modelling of emissions from road traffic on the local road network;
- To determine the geographical extent of any potential exceedance of the annual mean AQS objective for NO_2, and in regards to the M20 AQMA the 24-hour AQS objective for PM_{10};
- To determine the relative contributions of various source types to the overall pollutant concentrations through the completion of a source apportionment study; and

- To put forward recommendations as to the extent of any changes to the current AQMA boundary, and any changes to the declaration of the specific AQMAs.

The approach adopted in this assessment to assess the impact of road traffic emissions on air quality utilised the atmospheric dispersion model ADMS-Roads version 4.1.1, focusing on emissions of oxides of nitrogen (NO_x), which comprise of nitric oxide (NO) and NO_2, and also on PM_{10}.

In order to provide consistency with the Council's own work on air quality, the guiding principles for air quality assessments as set out in the latest guidance and tools provided by Defra for air quality assessment (LAQM.TG(16)[1]) have been used.

All figures presented within this Technical Note are not to scale and contain Ordnance Survey Data © Crown Copyright and database right 2019. Ordnance Survey 100049046.

[1] 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.

2 Assessment Methodology

To predict pollutant concentrations of road traffic emissions the atmospheric model ADMS Roads version 4.1.1 was utilised, with the approach used based upon the following:

- Prediction of NO_2 and PM_{10} (where relevant) concentrations to which existing receptors may be exposed and comparison with the relevant AQS objectives;
- Quantification of relative NO_2 contribution of sources to overall NO_2 pollutant concentration; and
- Determination of the geographical extent of any potential exceedances in regards to the existing AQMA boundaries and proposed boundary changes stated in the previous assessment.

Pollutant concentrations have been predicted within a baseyear of 2018, with model inputs relevant to the assessment based upon the same year.

2.1 Traffic Inputs

Traffic flows for the road links included within the model have been taken from two sources; Kent County Council data presented within the Councils Local Plan Transport Assessment[2], and the remaining links from the DfT traffic count online resource[3]. Where relevant traffic flows for years preceding 2018 have been used, the data has been factored up to 2018 a factor derived from TEMPro Version 7.2.

Traffic speeds were modelled at the relevant speed limit for each road. However, in accordance with LAQM.TG(16)[1], where appropriate, traffic speeds have been reduced to simulate queues at junctions, traffic lights and other locations where queues or slower traffic are known to occur.

The Emissions Factors Toolkit (EFT) version 9.0[4] developed by Bureau Veritas on behalf of Defra has been used to determine vehicle emission factors for input into the ADMS-Roads model. The emission factors are based upon the traffic data inputs used within the assessment.

2.2 General Model Inputs

A site surface roughness value of 0.5m was entered into the ADMS-roads model, consistent with the suburban nature of the modelled domain.

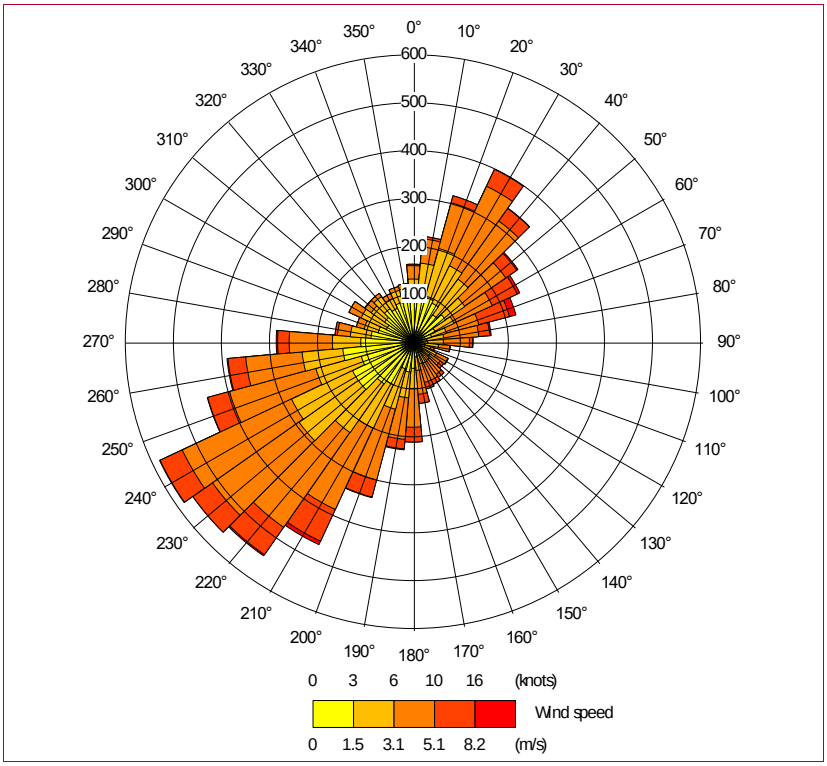
One year of hourly sequential meteorological data from a representative synoptic station is required by the dispersion model. 2018 meteorological data from Charlwood weather station, has been used in this assessment. A wind rose for this site for the year 2018 is presented in Figure 2.1.

[2] Mott MacDonald, Tonbridge and Malling Local Plan, Transport Assessment (2018

[3] Department for Transport, Traffic distribution by time of day on all roads in Great Britain (2019), available at https://www.gov.uk/government/collections/road-traffic-statistics

[4] Defra, Emissions Factors Toolkit (2019). http://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html

Figure 2.1 – Wind Rose for Charlwood 2018 Meteorological Data 2018



2.3 Sensitive Receptors

180 specific receptors were included within the assessment to represent locations of relevant exposure, the locations were identified through the completion of a desktop study and through consultation with the Council. In addition concentrations were also modelled across regular gridded area's set across the individual AQMAs within the model domain at a receptor height of 1.5m (plus at 3m for AQMA 3). These were supplemented with additional receptor points added close to the modelled road links, using the intelligent gridding tool in ADMS-Roads.

The majority of the receptors (162) were included at a height of 1.5m to represent ground level exposure, whereas 18 receptors were included at increased heights of 3m or 5m at various locations to represent exposure at buildings with residential use at a first storey level. The receptors at a height of greater than 1.5m are all located within AQMA 3 where there is residential exposure located above ground floor commercial usage along Tonbridge High Street.

2.4 Model Outputs

Background pollutant values derived from the Defra background maps database[5] have been used in conjunction with the concentrations predicted by the ADMS-Roads model to calculate predicted total annual mean concentrations of NO_x.

For the prediction of annual mean NO_2 concentrations for the modelled scenarios, the output of the ADMS-Roads model for road NOx contributions has been converted to total NO2 following the methodology in LAQM.TG(16)1, using the NO_x to NO_2 conversion tool developed on behalf of Defra. This tool also utilises the total background NO_x and NO_2 concentrations. This assessment has utilised version 7.1 of the NO_x to NO_2 conversion tool[6]. The road contribution is then added to the appropriate NO_2 background concentration value to obtain an overall total NO_2 concentration.

[5] Defra Background Maps (2019), http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html

[6] Defra NO_x to NO_2 Calculator (2019), available at https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html#NOxNO2calc

In addition to the calculation of total NO_2 annual mean concentrations, source apportionment was also carried out split between the following vehicle classes, for both NO_x and NO_2:

- Cars;
- Light-Goods Vehicles (LGVs);
- Heavy-Goods Vehicles (HGVs);
- Bus and Coaches; and
- Motorcycles.

Verification of the ADMS-Roads assessment has been undertaken using a number of local authority diffusion tube monitoring locations in accordance with the methodology detailed within LAQM.TG(16)[1]. Due to the spatial variance of the AQMA's across Tonbridge and Malling, separate verification has been completed for a number of different areas to take into account local monitoring results and specific local conditions. All NO_2 results presented in the assessment are those calculated following the process of model verification, using the following NO_x verification factors:

- AQMAs 1, 2, 5 and 6 – 1.827;
- AQMA 3 – 2.461;
- AQMA 4 – 5.684; and
- AQMA 7 – 2.334.

For the prediction of short term PM_{10} within the assessment of AQMA 1, LAQM.TG(16)[1] provides an empirical relationship between the annual mean and the number of exceedances of the 24-hour mean AQS objective for PM_{10} that can be calculated as follows:

$$Number\ of\ 24\ hour\ Mean\ Exceedences = -18.5 + 0.00145 * annual\ mean^3 + \frac{206}{annual\ mean}$$

This relationship has thus been adopted to determine whether exceedances of the short-term PM_{10} AQS objective are likely in this assessment, with annual mean PM_{10} results derived by combining the modelled road contributions with the relevant background annual mean PM_{10} concentrations. As with the modelled road NO_x emissions, the modelled PM_{10} road emissions have had a verification factor applied to them. There are no PM_{10} monitoring sites within Tonbridge and Malling, therefore as per LAQM.TG(16)[1] guidance the relevant NO_x verification factor has been used (1.827).

3 Modelling Results

The following section provides a detailed assessment for each AQMA, comparing monitoring completed within the AQMA over a five year period with the modelled concentrations of annual mean NO_2, and in reference to AQMA 1, 24-hour PM_{10} concentrations. Details of each monitoring location, and monitoring results have been taken from the 2019 Annual Status Report[7] completed by the Council. For each AQMA, recommendations have been put forward in terms of the current determination of the specific AQMA, in relation to potential changes to the designation or boundary.

Within the tabulated presentation of results for each AQMA any exceedances of the annual mean AQS objective of 40µg/m^3 have been highlighted in red, and where the predicted annual mean is within 10% of the annual mean objective (36µg/m^3) this has been highlighted in orange. Annual mean concentrations that are within 10% of the objective have been highlighted as a precautionary procedure, this is to ensure that for any recommendations made in terms of AQMA designation and revocation an element of uncertainty has been taken into account in regards to the predicted modelling concentrations.

3.1 AQMA 1 – M20

3.1.1 Council Monitoring Data

AQMA 1 is currently designated for both concentrations of annual mean NO_2 and 24-hour PM_{10}, and the current boundary incorporates a large section of the M20 between Larkfield and Aylesford. Currently there are nine diffusion tubes monitoring annual mean NO_2 located within the AQMA's modelled area, but there is not any PM_{10} monitoring located within the AQMA. The current monitoring diffusion tube sites both within, and located close to the AQMA are presented in Figure 3.1, and results for the previous five years are detailed in Table 3.1.

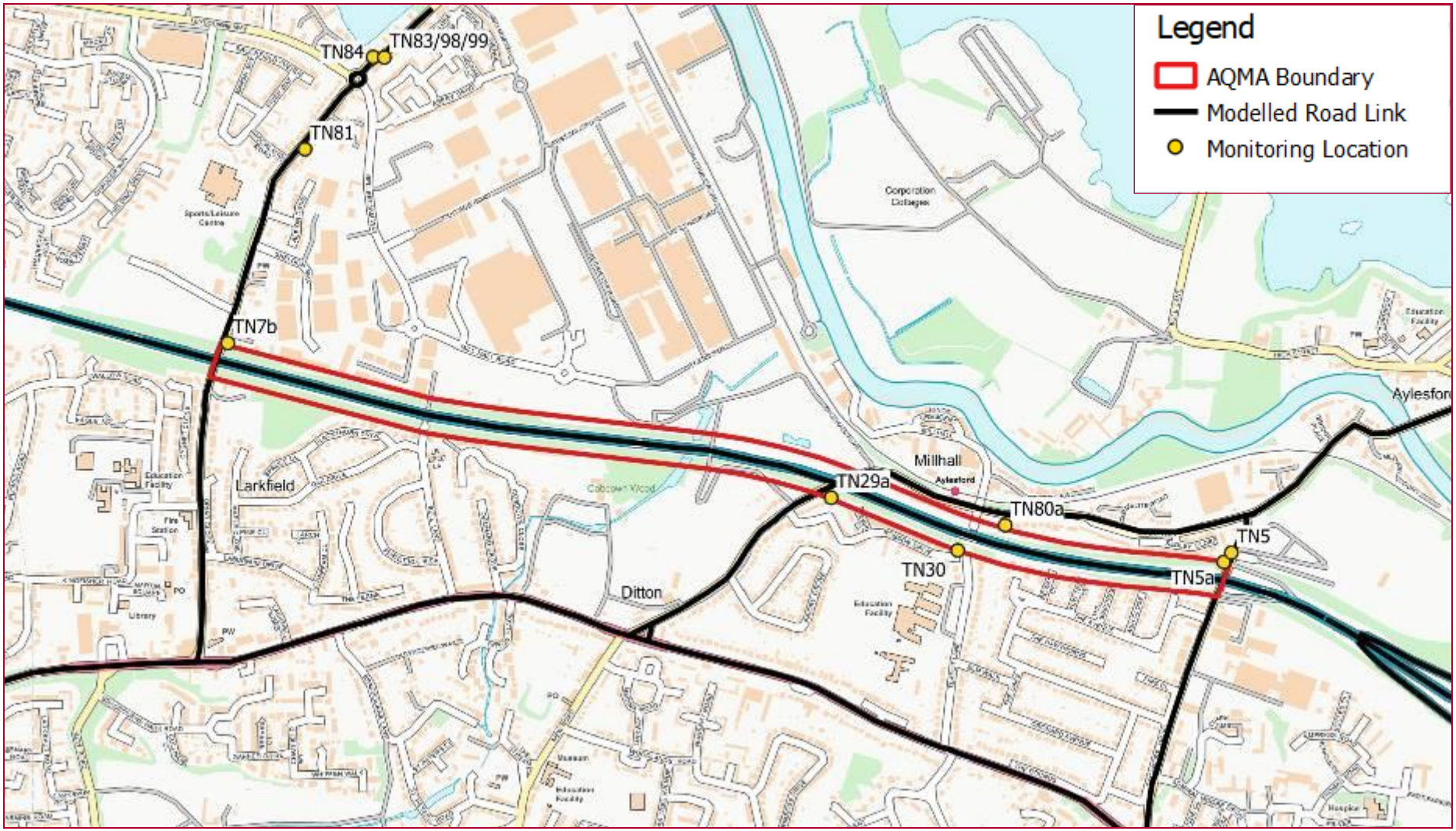
It can be seen that there have not been any exceedances of the annual mean NO_2 AQS objective within, or close to the AQMA for the past five years. The highest concentration recorded in 2018 was 34.9µg/m^3 at TN5, which since its inception in 2016 has recorded the highest annual mean concentration for the past three years.

Table 3.1 – Passive NO_2 Monitoring Within, and Close to AQMA 1

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration (µg/m^3)[1]				
						2014	2015	2016	2017	2018
TN5	R	572628	158566	4.85	YES	-	-	38.1	38.8	34.9
TN7b	R	570391	159032	33.3	YES	-	-	38.0	36.7	31.5
TN80a	R	572124	158627	35.8	YES	38.8	35.1	34.4	35.4	30.2
TN5a	R	572611	158545	26.7	YES	37.1	35.5	34.5	34.1	30.1
TN30	R	572018	158571	22	YES	28.3	29.3	29.7	26.7	25.5
TN29a	R	571736	158688	22.4	YES	24.9	25.4	28.0	25.2	24.1
TN83, 98, 99	R	570740	159667	4.1	NO	38.2	34.3	35.8	35.9	33.1
TN84	R	570715	159668	7.4	NO	31.1	30.0	29.9	29.6	26.7
TN81	R	570563	159463	5.4	NO	33.7	29.7	31.2	28.8	28.4
In **bold**, exceedance of the annual mean NO_2 AQS objective of 40µg/m^3 R= Roadside Details of diffusion tubes and results taken from the 2019 Tonbridge and Malling ASR										

[7] Tonbridge and Malling District Council, 2019 Annual Status Report (2019).

Figure 3.1 – AQMA 1, Modelled Roads and Monitoring Locations



3.1.2 Annual Mean NO_2

Table 3.2 provides the modelled annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. Of the 39 modelled receptor locations, exceedances of the annual mean NO_2 objective have been predicted at nine receptors, and one further receptor had an annual mean predicted to be within 10% of the AQS objective. From the annual mean NO_2 concentration isopleths presented in Figure 3.3-3.5, it can be seen that the extent of the predicted exceedances of the annual mean objective are similar to the existing AQMA boundary.

Table 3.2 – AQMA 1, Summary of Modelled Receptor Results (NO_2)

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective (µg/m³)	2018 Annual Mean NO_2 (µg/m³)	% of AQS objective
1|1	572517	158317	1.5	40	24.0	60.0%
1|2	572556	158400	1.5	40	27.7	69.2%
1|3	572130	158620	1.5	40	**44.8**	112.0%
1|4	571855	158712	1.5	40	**50.4**	126.1%
1|5	571742	158690	1.5	40	**42.9**	107.1%
1|6	571578	158632	1.5	40	24.6	61.4%
1|7	570320	158789	1.5	40	24.5	61.2%
1|8	570500	159382	1.5	40	30.7	76.8%
1|9	570640	159555	1.5	40	29.3	73.2%
1|10	570712	159684	1.5	40	24.2	60.6%
1|11	569534	159194	1.5	40	34.4	86.1%
1|12	569736	159233	1.5	40	38.3	95.8%
1|13	570016	159139	1.5	40	**41.3**	103.2%
1|14	572930	158854	1.5	40	23.3	58.4%
1|15	572854	158803	1.5	40	28.3	70.8%
1|16	572720	158703	1.5	40	24.3	60.6%
1|17	572519	158603	1.5	40	30.5	76.3%
1|18	572314	158653	1.5	40	30.9	77.2%
1|19	572176	158538	1.5	40	**44.7**	111.7%
1|20	571942	158596	1.5	40	35.5	88.7%
1|21	571816	158660	1.5	40	**41.6**	104.1%
1|22	571999	158652	1.5	40	**51.6**	129.1%
1|23	571667	158664	1.5	40	28.3	70.8%
1|24	571564	158572	1.5	40	23.7	59.3%
1|25	573236	158002	1.5	40	31.5	78.7%
1|26	573333	158280	1.5	40	**59.0**	147.6%
1|27	572620	158564	1.5	40	32.2	80.6%
1|28	570343	158746	1.5	40	26.1	65.1%
1|29	570346	158845	1.5	40	29.6	73.9%
1|30	570321	158896	1.5	40	25.6	64.0%
1|31	570332	158943	1.5	40	31.4	78.6%
1|32	570374	158940	1.5	40	34.2	85.5%
1|33	570392	159034	1.5	40	**44.4**	111.0%
1|34	570424	159099	1.5	40	32.5	81.4%
1|35	570479	159274	1.5	40	27.7	69.1%
1|36	570407	159407	1.5	40	21.5	53.7%
1|37	570562	159495	1.5	40	26.9	67.2%
1|38	570647	159609	1.5	40	25.9	64.7%
1|39	570772	159690	1.5	40	32.8	82.0%

Figure 3.2 – AQMA 1, Modelled Receptor NO_2 Concentrations

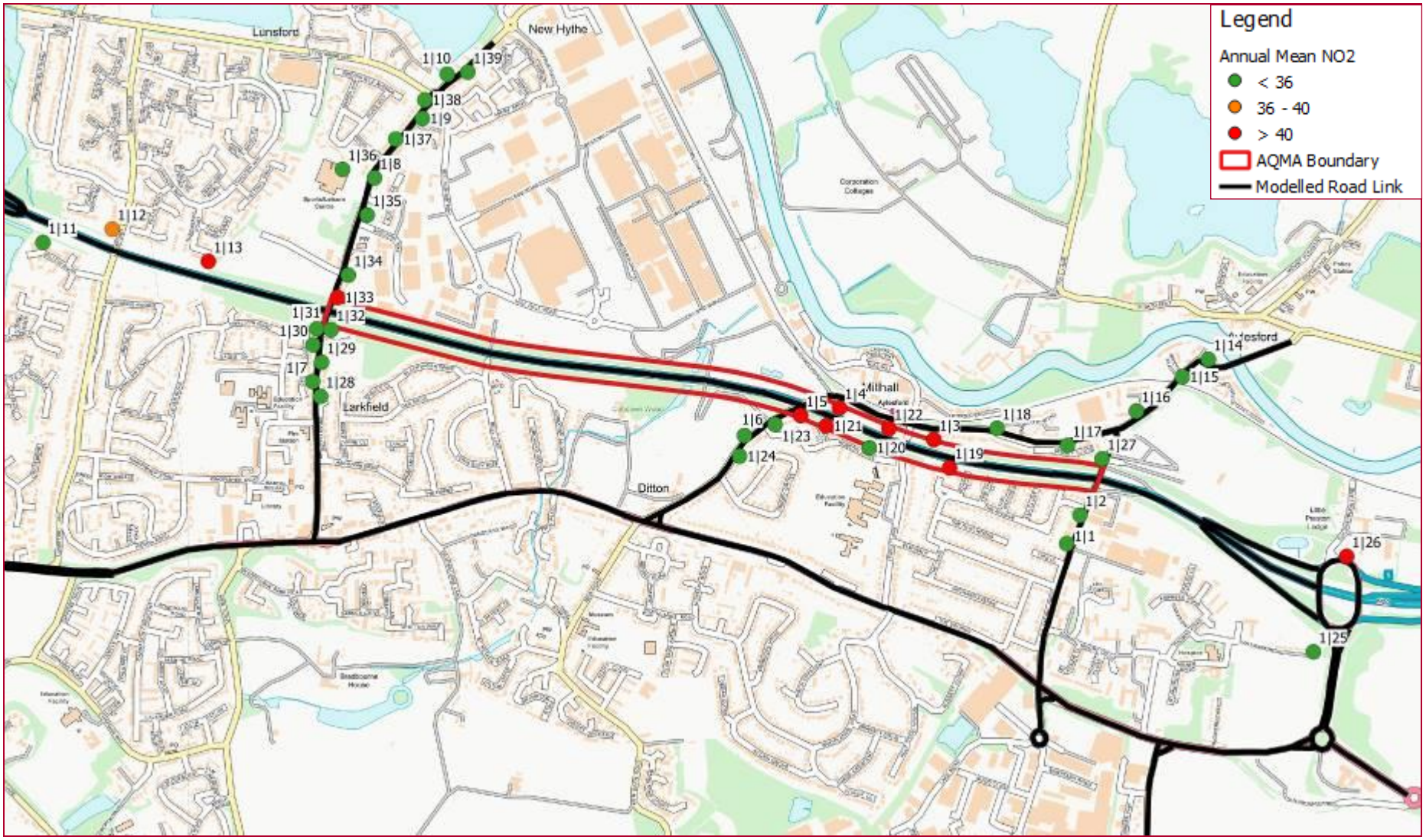


Figure 3.3 – AQMA 1, Modelled NO_2 Concentration Ispoleths, Western Section

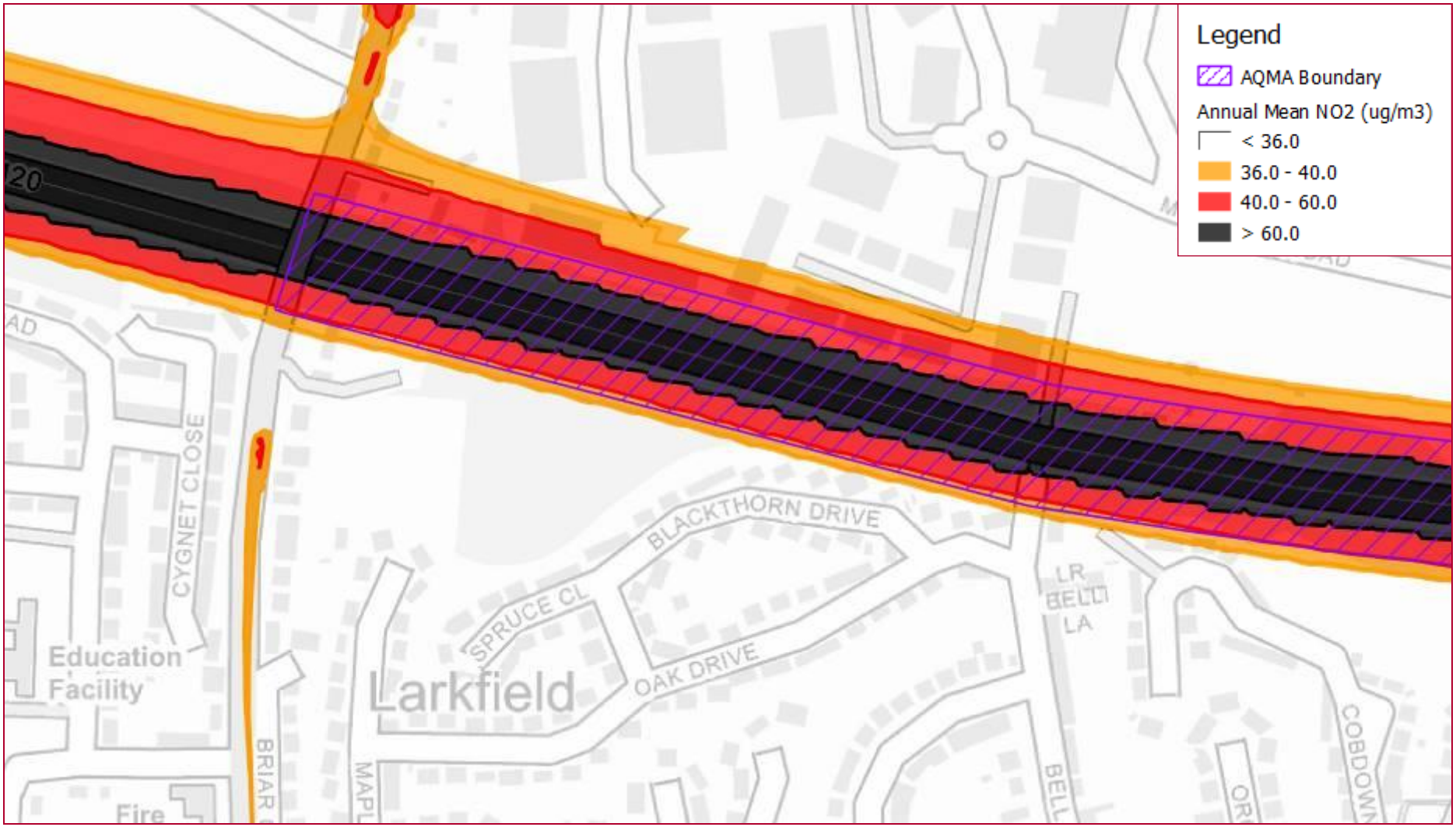


Figure 3.4 – AQMA 1, Modelled NO_2 Concentration Ispoleths, Central Section

Figure 3.5 – AQMA 1, Modelled NO_2 Concentration Ispoleths, Eastern Section

3.1.3 Daily PM_{10}

Table 3.3 provides the modelled mean 24-hour PM_{10} concentrations that are in exceedance of 50µg/m^3, the AQS objective in terms of 24-hour concentrations is that the concentration of 50µg/m^3 should not be exceeded more than 35 times within a calendar year. The AQS objective was not exceeded at any of the modelled receptor locations, the maximum number of 24-hour mean concentrations greater than 50µg/m^3 was 17 predicted at receptor 26.

Table 3.3 – AQMA 1, Summary of Modelled Receptor Results (PM_{10})

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS Objective (Daily Means > 50µg/m^3)	2018 Daily Means > 50µg/m^3	% of AQS objective
1|1	572517	158317	1.5	35	3	8.6%
1|2	572556	158400	1.5	35	4	11.4%
1|3	572130	158620	1.5	35	7	20.0%
1|4	571855	158712	1.5	35	9	25.7%
1|5	571742	158690	1.5	35	7	20.0%
1|6	571578	158632	1.5	35	3	8.6%
1|7	570320	158789	1.5	35	4	11.4%
1|8	570500	159382	1.5	35	4	11.4%
1|9	570640	159555	1.5	35	3	8.6%
1|10	570712	159684	1.5	35	2	5.7%
1|11	569534	159194	1.5	35	4	11.4%
1|12	569736	159233	1.5	35	5	14.3%
1|13	570016	159139	1.5	35	5	14.3%
1|14	572930	158854	1.5	35	3	8.6%
1|15	572854	158803	1.5	35	4	11.4%
1|16	572720	158703	1.5	35	3	8.6%
1|17	572519	158603	1.5	35	4	11.4%
1|18	572314	158653	1.5	35	4	11.4%
1|19	572176	158538	1.5	35	7	20.0%
1|20	571942	158596	1.5	35	5	14.3%
1|21	571816	158660	1.5	35	6	17.1%
1|22	571999	158652	1.5	35	9	25.7%
1|23	571667	158664	1.5	35	4	11.4%
1|24	571564	158572	1.5	35	3	8.6%
1|25	573236	158002	1.5	35	5	14.3%
1|26	573333	158280	1.5	35	17	48.6%
1|27	572620	158564	1.5	35	5	14.3%
1|28	570343	158746	1.5	35	4	11.4%
1|29	570346	158845	1.5	35	5	14.3%
1|30	570321	158896	1.5	35	4	11.4%
1|31	570332	158943	1.5	35	4	11.4%
1|32	570374	158940	1.5	35	5	14.3%
1|33	570392	159034	1.5	35	6	17.1%
1|34	570424	159099	1.5	35	3	8.6%
1|35	570479	159274	1.5	35	3	8.6%
1|36	570407	159407	1.5	35	2	5.7%
1|37	570562	159495	1.5	35	3	8.6%
1|38	570647	159609	1.5	35	2	5.7%
1|39	570772	159690	1.5	35	4	11.4%

3.2 AQMA 2 – Ditton

3.2.1 Council Monitoring Data

AQMA 2 incorporates an area in Ditton covering the Station Road/London Road A20 crossroads, and there are currently three diffusion tube monitoring sites located within the AQMA. Figure 3.6 illustrates the locations of the diffusion tube monitoring sites in the modelled area and monitoring results for the previous five years are detailed in Table 3.4. It can be seen that there have not been any exceedances of the annual mean NO_2 AQS objective within, the AQMA for the past five years. The monitoring site DF4, 5, 6 has recorded the highest annual mean concentration within the AQMA since 2015 when monitoring began at this location.

Table 3.4 – Passive NO_2 Monitoring Within, and Close to AQMA 2

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration ($\mu g/m^3$)[1]				
						2014	2015	2016	2017	2018
TN47	UB	571399	158375	23	YES	19.1	18.8	19.6	19.6	18.0
TN105	R	571305	158412	11.8	YES	-	-	25.8	24.1	21.2
DF4, 5, 6	R	571139	158427	1.9	YES	-	33.1	33.1	31.9	32.0
In **bold**, exceedance of the annual mean NO_2 AQS objective of 40µg/m^3 Bias Adjustment Factors listed with relevant year R= Roadside; UB = Urban Background										

3.2.2 Annual Mean NO_2

Table 3.15 provides the annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. There were no exceedances of the annual mean NO_2 objective at any of the 13 modelled receptor locations. The maximum annual mean concentration was 29.6µg/m^3 predicted at receptor 2, this equates to 75% of the annual mean objective. In addition, Figure 3.8 presents that all predicted concentrations above 36µg/m^3 are predicted to be within the road link and not at any locations of relevant exposure.

Table 3.5 – AQMA 2, Summary of Modelled Receptor Results

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective ($\mu g/m^3$)	2018 Annual Mean NO_2 ($\mu g/m^3$)	% of AQS objective
2|1	571306	158412	1.5	40	24.8	61.9%
2|2	571356	158377	1.5	40	29.6	74.0%
2|3	571183	158402	1.5	40	25.8	64.5%
2|4	571502	158488	1.5	40	22.0	55.0%
2|5	571399	158428	1.5	40	23.5	58.7%
2|6	571228	158383	1.5	40	25.5	63.8%
2|7	571283	158353	1.5	40	22.8	57.0%
2|8	571353	158342	1.5	40	24.7	61.7%
2|9	571401	158375	1.5	40	25.0	62.4%
2|10	571574	158329	1.5	40	24.5	61.3%
2|11	571624	158254	1.5	40	20.6	51.5%
2|12	571773	158210	1.5	40	24.1	60.3%
2|13	571919	158172	1.5	40	27.7	69.3%

Figure 3.6 – AQMA 2, Modelled Roads and Monitoring Locations

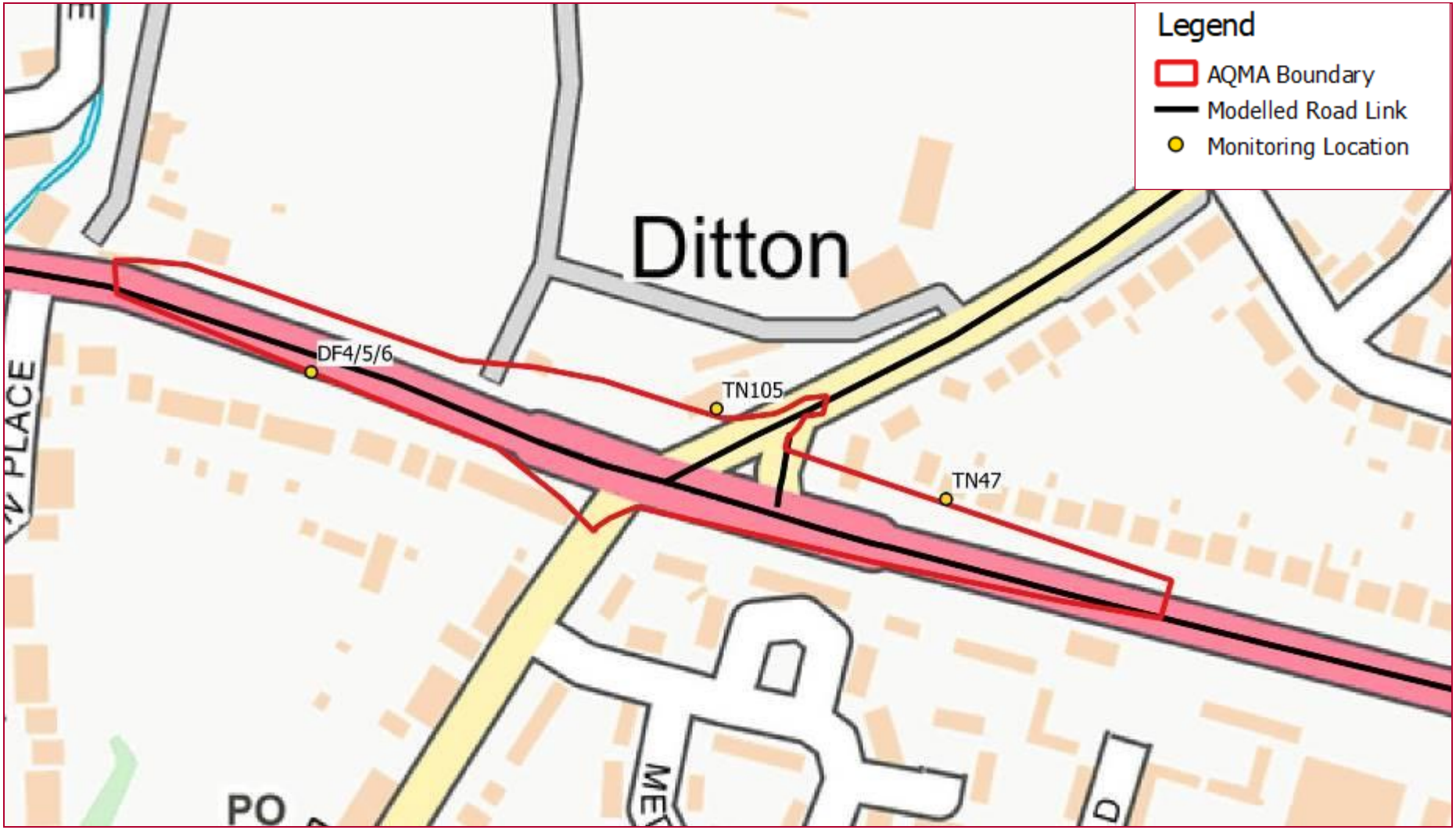


Figure 3.7 – AQMA 2, Modelled Receptor NO_2 Concentrations

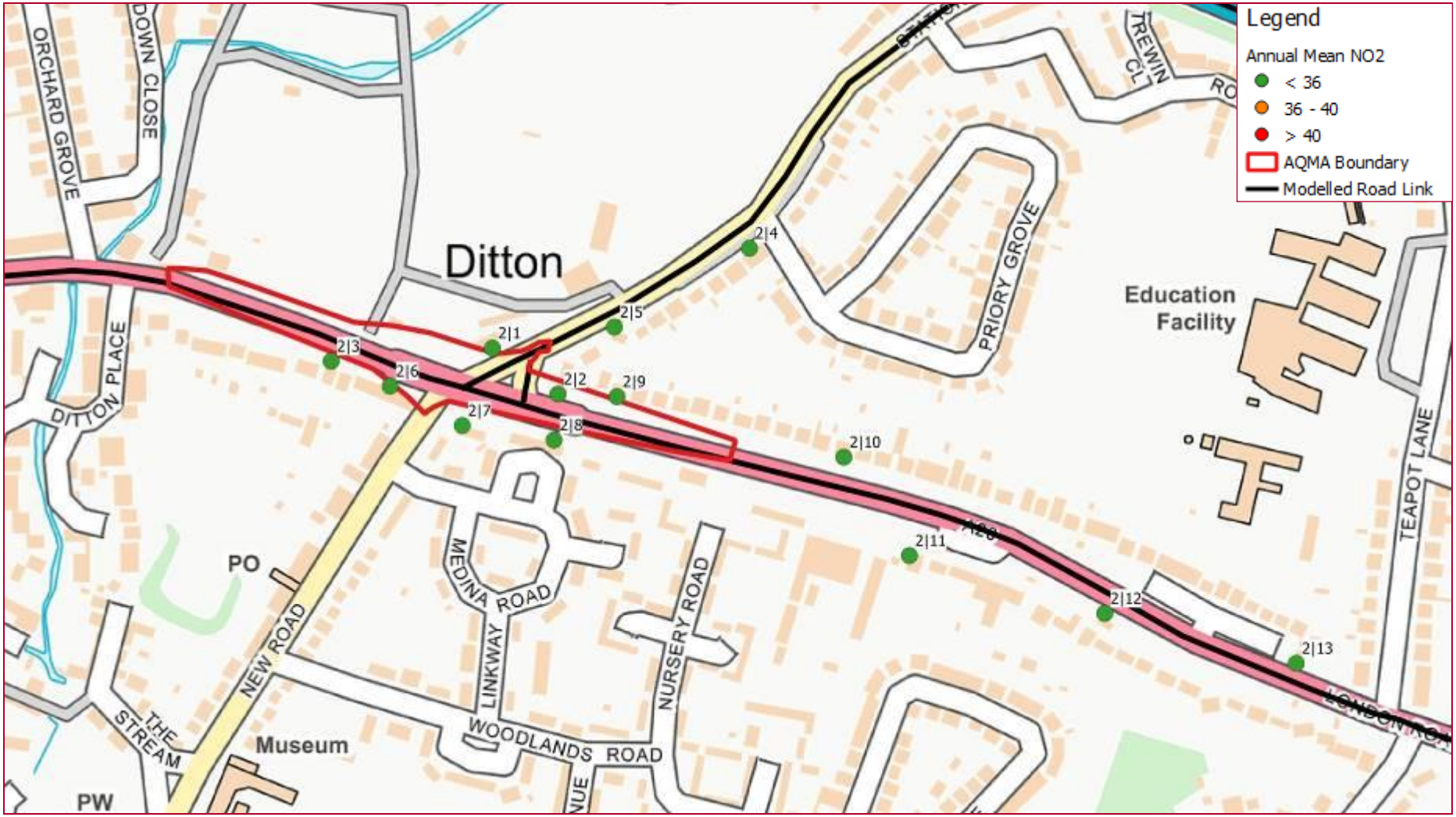


Figure 3.8 – AQMA 2, Modelled NO_2 Concentration Isopleths

3.3 AQMA 3 – Tonbridge High Street

3.3.1 Council Monitoring Data

AQMA 3 incorporates Tonbridge High Street, between New Wharf Road and the High Street/Vale Road roundabout in Tonbridge. There are currently seven diffusion tube monitoring sites located within, or close to the AQMA's area. In addition, historically the automatic site ZT5 has been located within the AQMA, this monitor was relocated to Wateringbury (AQMA 4) part way through 2018[8]. Figure 3.9 illustrates the locations of the monitoring sites within and close to the modelled area and monitoring results for the previous five years are detailed in Table 3.6.

2018 has been the first year over the previous five where there have not been any exceedances of the annual mean objective, it should be noted that the concentration at ZT5 has been annualised due to the monitor being moved to Wateringbury part way through the year. The number of monitoring sites that has exceeded the annual mean objective has reduced from four in 2014, to three in 2015, to two in 2017 and as stated above there were no exceedances in 2018.

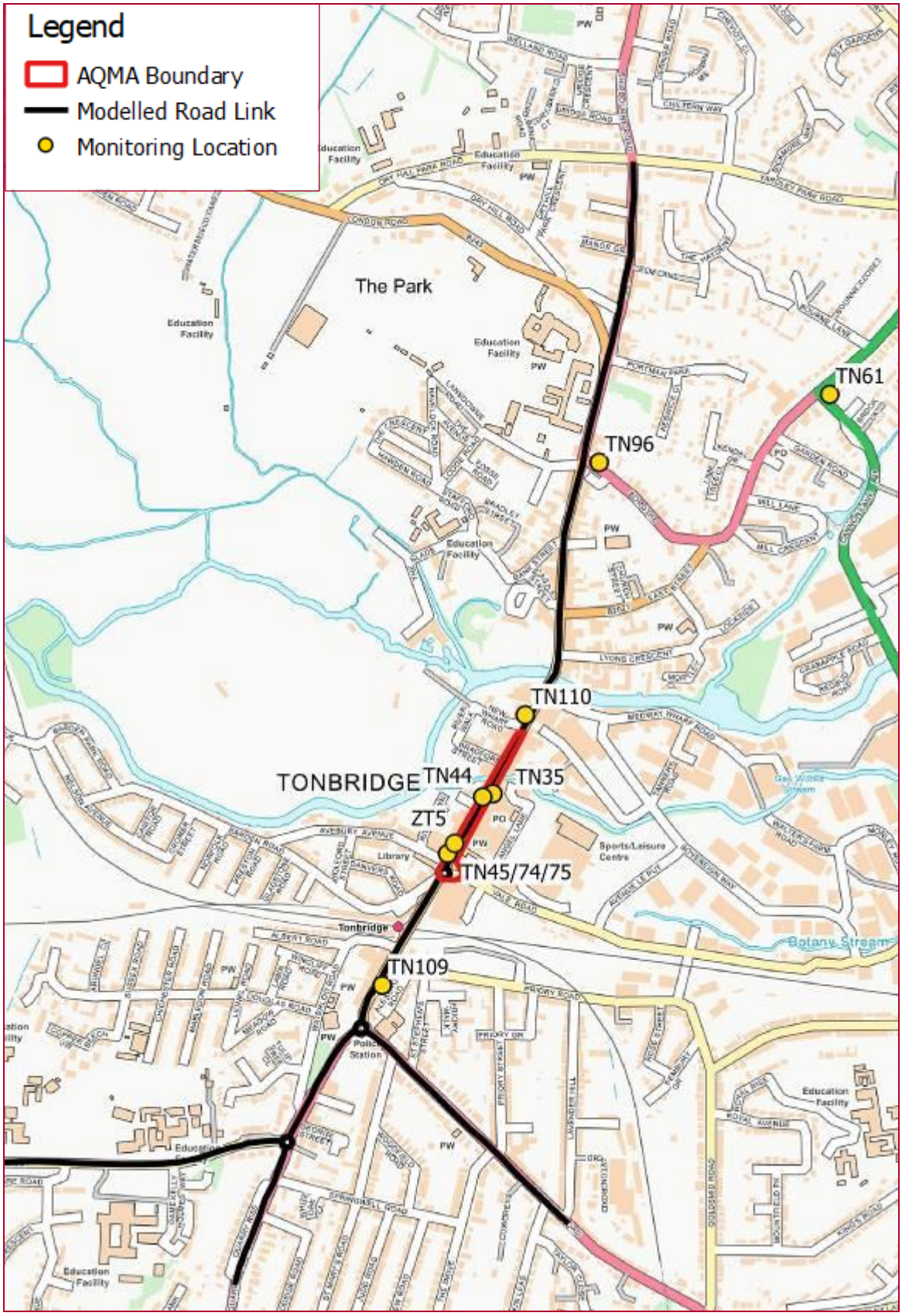
Table 3.6 – Passive and Automatic NO_2 Monitoring Within, and Close to AQMA 3

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration ($\mu g/m^3$)[1]				
						2014	2015	2016	2017	2018
TN35	UC	558948	146277	3.8	YES	**43.2**	36.7	34.6	37.5	36.4
TN44	UC	558929	146271	3.3	YES	**42.0**	**40.1**	**40.5**	38.4	35.2
ZT5*	UC	558877	146185	2.2	YES	**46.6**	**45.8**	**46.8**	**49.6**	34.9
TN45, 74, 75	UC	558864	146166	2.3	YES	**42.7**	**41.6**	**40.5**	**42.3**	39.0
TN61	R	559572	147017	6	NO	23.3	23.4	23.4	22.5	21.6
TN96	R	559145	146891	3.5	NO	34.9	33.3	34.0	30.5	30.1
TN110	R	559008	146423	4.6	YES	-	-	30.1	32.8	28.4
TN109	R	558743	145922	4	NO	-	-	36.0	34.3	33.9

In **bold**, exceedance of the annual mean NO_2 AQS objective of $40\mu g/m^3$
Bias Adjustment Factors listed with relevant year
R= Roadside; UC = Urban Centre
* The ZT5 automatic monitor was relocated from Tonbridge High Street to Wateringbury in June 2018

[8] ZT5 required annualisation in line with the LAQM TG.16 guidance for 2018 data.

Figure 3.9 – AQMA 3, Modelled Roads and Monitoring Locations



3.3.2 Annual Mean NO_2

Table 3.7 provides the annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. Of the 28 modelled receptor locations, an exceedances of the annual mean NO_2 objective has only been predicted at one location that is outside of the existing AQMA, and one further receptor, also outside of the existing AQMA, had an annual mean predicted to be within 10% of the AQS objective. There were no predicted exceedances of the annual mean objective within the AQMA.

It should be noted that receptors have been modelled at relevant heights in terms of relevant exposure derived from Box 1.1 of LAQM.TG(16)[1]. The majority of relevant exposure located on Tonbridge High Street is located at first floor height due to commercial premises at ground floor level. The changes in annual mean concentration in terms of height (1.5m and 3m) are presented within Figure 3.11 and Figure 3.12. At a receptor height of 1,5m exceedances of the annual mean objective run adjacent with Tonbridge High Street throughout the AQMA. When the receptor height is increased to 3m all exceedances are contained within the boundary of the road link.

Table 3.7 – AQMA 3, Summary of Modelled Receptor Results

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective ($\mu g/m^3$)	2018 Annual Mean NO_2 ($\mu g/m^3$)	% of AQS objective
3|1	557480	145156	1.5	40	13.3	33.3%
3|2	557578	145378	1.5	40	14.4	35.9%
3|3	557923	145602	1.5	40	14.4	36.0%
3|4	558548	145653	1.5	40	21.1	52.8%
3|5	558659	145782	3	40	30.5	76.4%
3|6	558661	145787	1.5	40	36.4	91.0%
3|7	558666	145791	5	40	24.5	61.3%
3|8	558706	145900	3	40	26.5	66.4%
3|9	558737	145952	3	40	25.2	63.0%
3|10	558834	146135	3	40	23.4	58.6%
3|11	558903	146241	3	40	25.2	62.9%
3|12	558953	146290	3	40	33.4	83.6%
3|13	559005	146384	3	40	35.5	88.9%
3|14	559012	146428	3	40	29.3	73.3%
3|15	559080	146639	3	40	34.5	86.1%
3|16	559072	146759	3	40	25.8	64.6%
3|17	559124	146914	3	40	35.9	89.7%
3|18	559113	146931	1.5	40	29.9	74.8%
3|19	559194	147194	3	40	31.1	77.8%
3|20	559197	147202	1.5	40	35.5	88.8%
3|21	559195	147335	1.5	40	25.8	64.4%
3|22	559214	147367	1.5	40	**40.5**	101.1%
3|23	558503	145431	1.5	40	29.0	72.6%
3|24	558776	145792	1.5	40	32.8	82.1%
3|25	558799	145745	1.5	40	22.2	55.6%
3|26	558859	145689	1.5	40	22.6	56.5%
3|27	558941	145634	1.5	40	29.3	73.3%
3|28	559016	145535	1.5	40	20.7	51.8%

Figure 3.10 – AQMA 3, Modelled Receptor NO_2 Locations

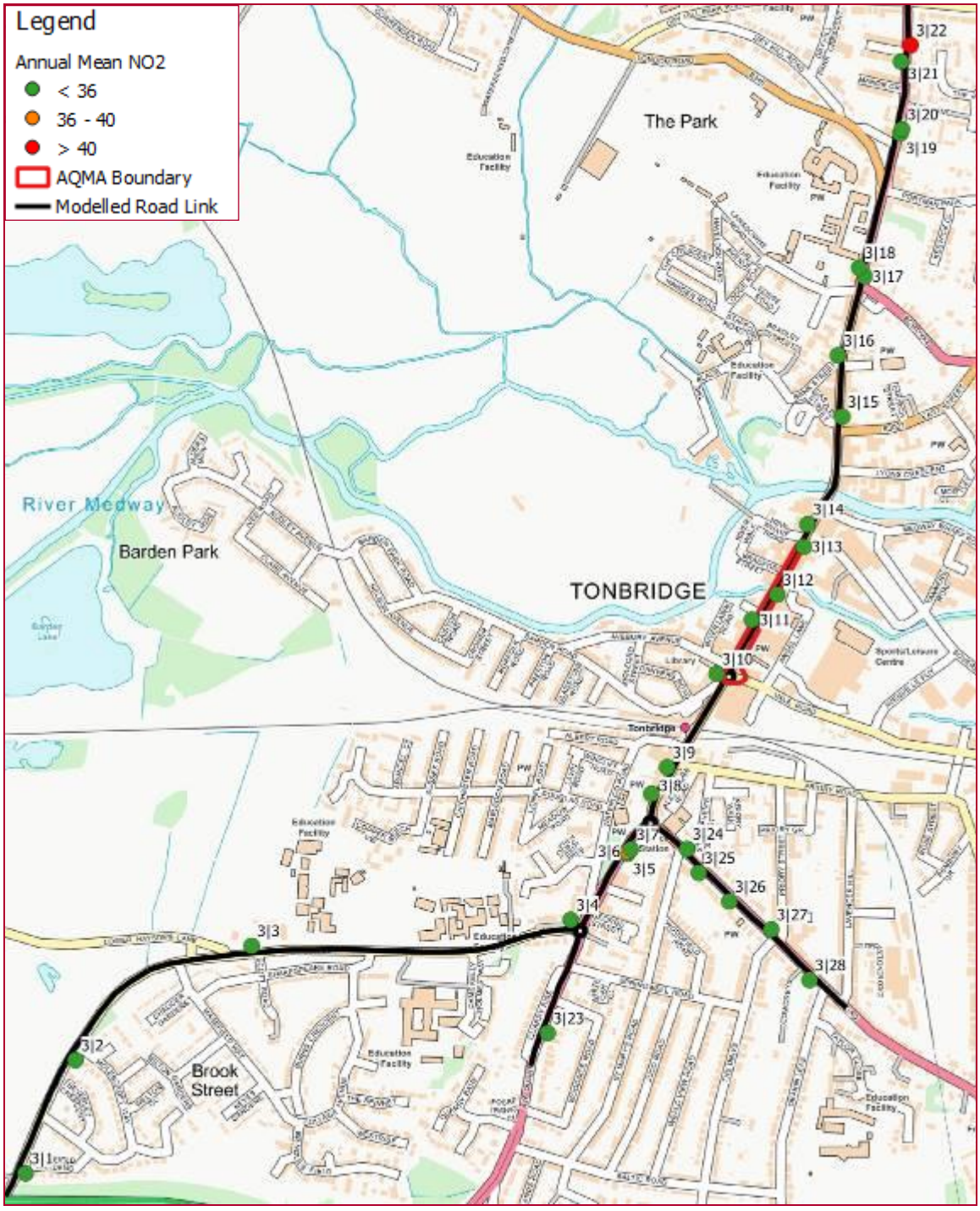


Figure 3.11 – AQMA 3, Modelled NO_2 Concentration Ispoleths (1.5m Height)

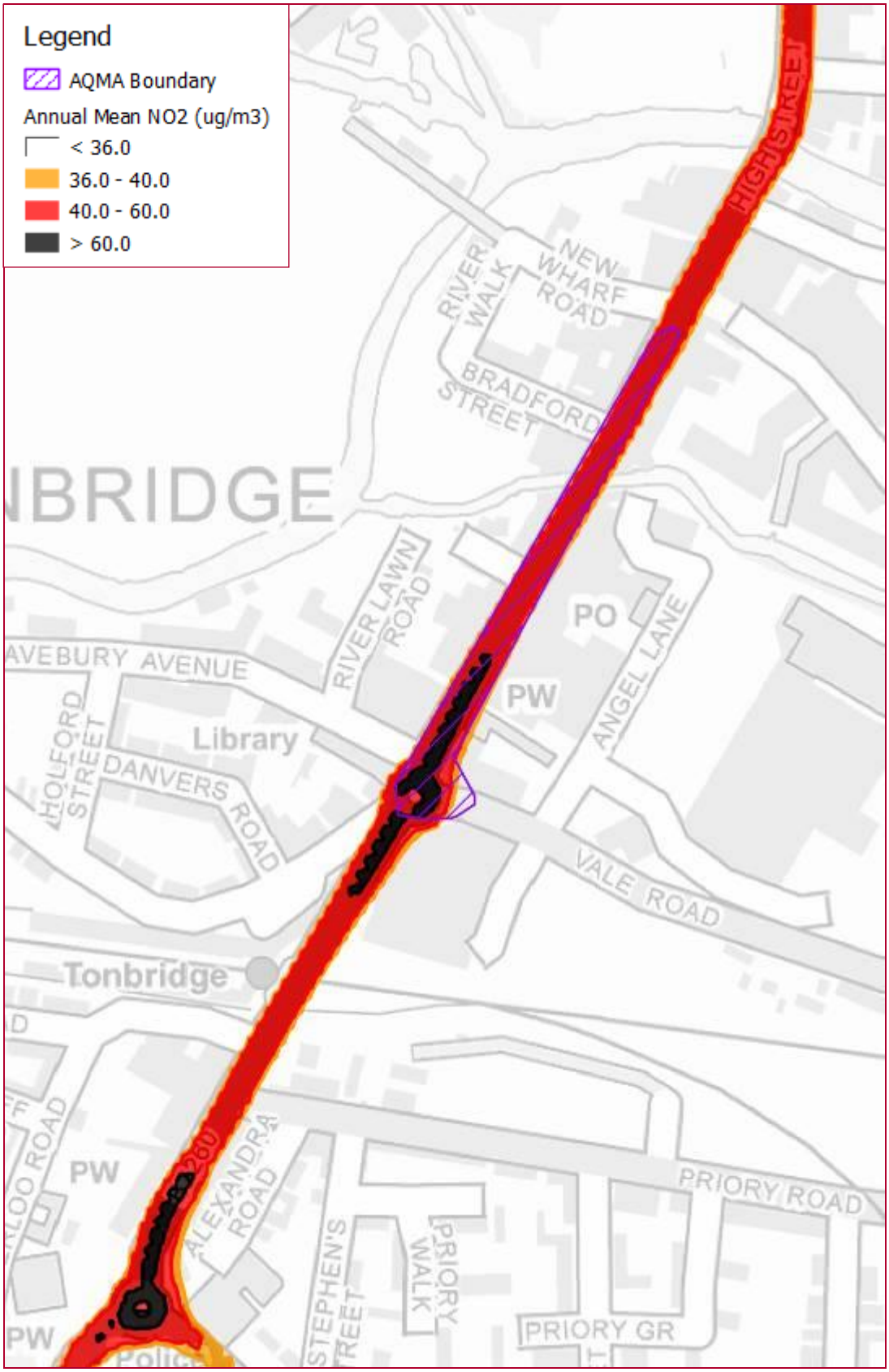
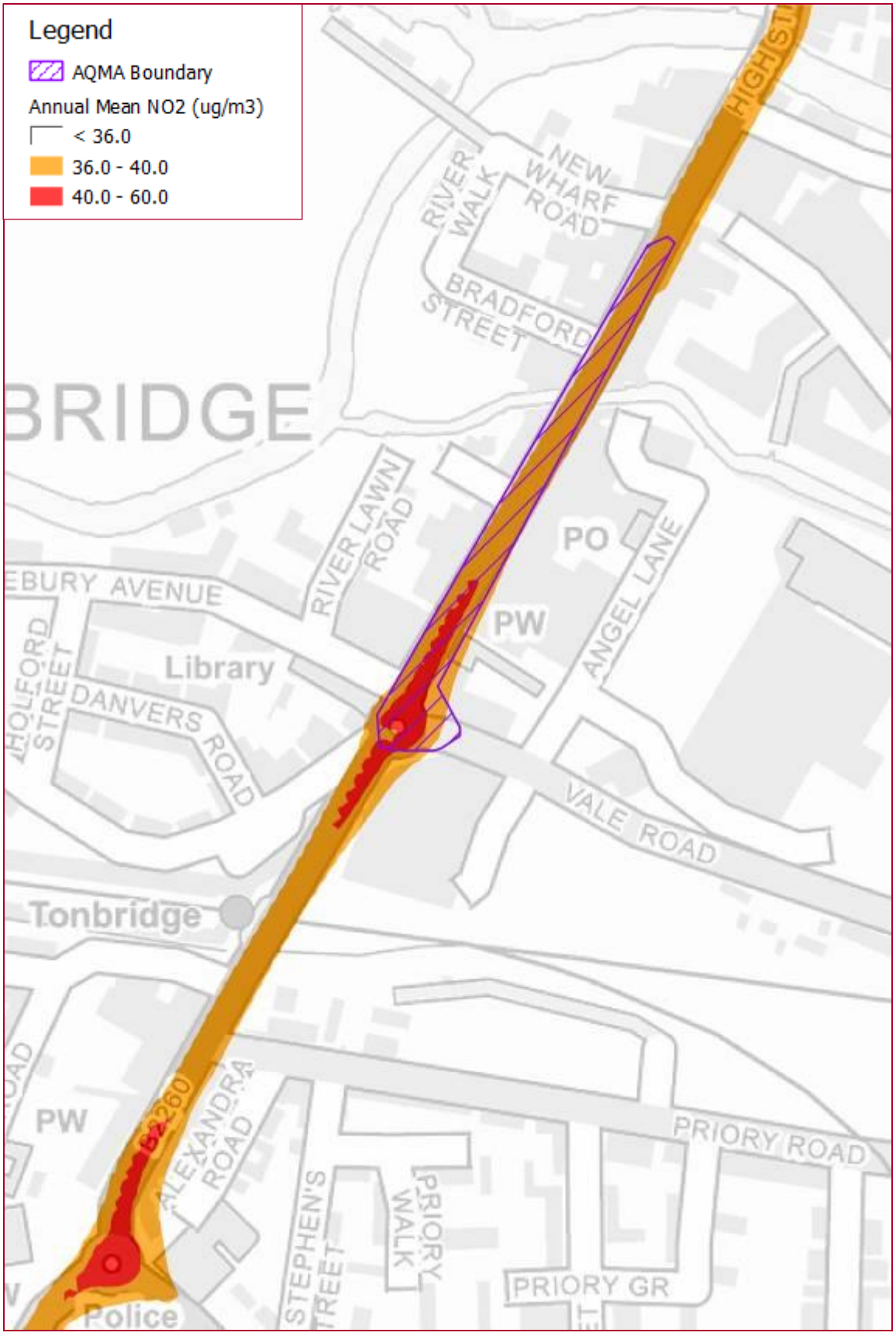


Figure 3.12 – AQMA 3, Modelled NO_2 Concentration Ispoleths (3m Height)



3.4 AQMA 4 – Wateringbury

3.4.1 Council Monitoring Data

AQMA 4 incorporates the Red Hill/Tonbridge Road A26 crossroads in Wateringbury. There are currently five diffusion tube sites located within, or close to the AQMA's area. In addition the automatic site ZT7, was established part way through 2018[9] after being relocated from Tonbridge High Street (ZT5). Figure 3.13 illustrates the locations of the monitoring sites within and close to the modelled area and monitoring results for the previous five years are detailed in Table 3.8.

Within AQMA 4 two monitoring sites have exceeded the annual mean objective for the past five years, with concentrations in excess of 60µg/m^3 experienced between 2014 and 2017 at site TN42, 76, 77. Between 2014 and 2018 there has been a reduction in annual mean concentration at site TN42, 76, 77 but it remained close to 60µg/m^3 in 2018 (58.1µg/m^3).

Table 3.8 – Passive and Automatic NO_2 Monitoring Within, and Close to AQMA 4

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration (µg/m^3)[1]				
						2014	2015	2016	2017	2018
TN33	R	569201	153486	1.25	YES	**52.7**	**51.9**	**56.4**	**53.6**	**51.9**
TN43	R	569187	153498	2.6	YES	38.2	38.2	39.1	38.7	35.7
TN42, 76, 77	R	569226	153475	1.3	YES	**64.8**	**63.5**	**64.8**	**61.3**	**58.1**
TN108	R	569056	153537	4	NO	-	-	23.0	23.7	20.9
TN115, TN116, TN117	R	569165	153493	1	YES	-	-	-	-	19.9
ZT7*	R	569165	153493	0.2	YES	-	-	-	-	23.6

In **bold**, exceedance of the annual mean NO_2 AQS objective of 40µg/m^3
Bias Adjustment Factors listed with relevant year
R= Roadside
* The ZT5 automatic monitor was relocated from Tonbridge High Street to Wateringbury in June 2018

[9] ZT7 required annualisation in line with the LAQM TG.16 guidance for 2018 data.

Figure 3.13 – AQMA 4, Modelled Roads and Monitoring Locations

3.4.2 Annual Mean NO_2

Table 3.15 provides the modelled annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. Of the 23 modelled receptor locations, an exceedance of the annual mean NO_2 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 AQS objective. There were no predicted exceedances of the annual mean objective outside of the AQMA.

Employing the same methodology as for AQMA 3, receptors have been modelled at relevant heights in terms of relevant exposure derived from Box 1.1 of LAQM.TG(16)[1]. Receptors 4, 6 and 9 have been modelled at a first floor height due to commercial premises at ground floor level.

From the annual mean NO_2 concentration isopleths presented in Figure 3.15, it can be seen that predicted exceedances of the annual mean objective are of a similar extent to the existing AQMA boundary.

Table 3.9 – AQMA 4, Summary of Modelled Receptor Results

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective (µg/m^3)	2018 Annual Mean NO_2 (µg/m^3)	% of AQS objective
4|1	569150	153418	1.5	40	23.2	58.1%
4|2	569136	153441	1.5	40	20.4	51.0%
4|3	569180	153466	1.5	40	34.2	85.4%
4|4	569167	153446	3	40	24.6	61.6%
4|5	569153	153495	1.5	40	23.4	58.5%
4|6	569180	153501	3	40	39.5	98.8%
4|7	569171	153508	1.5	40	25.3	63.2%
4|8	569156	153517	1.5	40	25.0	62.5%
4|9	569147	153523	3	40	20.9	52.2%
4|10	569014	153550	1.5	40	17.2	43.0%
4|11	568870	153602	1.5	40	17.6	43.9%
4|12	568598	153611	1.5	40	13.2	33.0%
4|13	567601	153502	1.5	40	14.4	36.0%
4|14	569189	153507	1.5	40	30.6	76.5%
4|15	569209	153529	1.5	40	21.0	52.4%
4|16	569251	153539	1.5	40	20.1	50.2%
4|17	569385	153631	1.5	40	14.7	36.6%
4|18	569209	153487	1.5	40	50.8	126.9%
4|19	569247	153470	1.5	40	32.7	81.7%
4|20	569288	153464	1.5	40	22.8	56.9%
4|21	569499	153409	1.5	40	20.1	50.1%
4|22	569814	153372	1.5	40	18.8	47.1%
4|23	570413	153375	1.5	40	21.4	53.4%

Figure 3.14 – AQMA 4, Modelled Receptor NO_2 Concentrations

Figure 3.15 – AQMA 4, Modelled NO_2 Concentration Ispoleths

3.5 AQMA 5 – Aylesford

3.5.1 Council Monitoring Data

AQMA 5 incorporates the A20 London Road in Aylesford, including the Hall Road and Mills Road Junction. There are currently seven diffusion tube monitoring sites located within, or close to the AQMA's area. Figure 3.16 illustrates the locations of the diffusion tube monitoring sites in the modelled area. Recent results for the monitoring sites are shown in Table 3.10.

Within AQMA 5 two monitoring sites have exceeded the annual mean objective for the past five years (TN60, 62, 63 and DF1, 2, 3), with all other monitoring sites recording compliance with the objective. Both TN60, 62, 63 and DF1, 2, 3 are located close to the Hall Road/Mills Road junction.

Table 3.10 – Passive NO_2 Monitoring Within, and Close to AQMA 5

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration ($\mu g/m^3$)[1]				
						2014	2015	2016	2017	2018
TN68	R	572430	157975	6.6	YES	31.9	30.8	30.8	31.4	28.3
TN104	R	572976	157726	8.2	YES	-	-	37.3	32.8	35.5
TN60, 62, 63	R	572423	157932	6.5	YES	**45.3**	**44.1**	**44.8**	**44.8**	**41.7**
DF1, 2, 3	R	572459	157904	2.5	YES	**-**	**42.6**	**44.3**	**44.1**	**40.1**
TN100	R	572998	156292	6.2	NO	21.5	21.8	22.9	24.4	21.4
TN102	R	572768	157186	14.5	NO	19.4	19.3	20.0	23.0	19.0
TN103	R	572739	157532	9.5	NO	20.6	20.9	23.9	21.5	21.7

In **bold**, exceedance of the annual mean NO_2 AQS objective of $40\mu g/m^3$
Bias Adjustment Factors listed with relevant year
R= Roadside

3.5.2 Annual Mean NO_2

Table 3.15 provides the modelled annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. Of the 16 modelled receptor locations, there was one predicted exceedance of the annual mean NO_2 objective (receptor 6), and one additional receptor had an annual mean concentration predicted to be within 10% of the AQS objective. Receptor 6 is located at a residential property close to the Hall Road/Mills Road junction.

From the annual mean NO_2 concentration isopleths presented in Figure 3.18, it can be seen that predicted exceedances of the annual mean objective are limited to the Hall Road/Mills Road junction. The only relevant receptor within the predicted exceedance area is the residential property at which receptor 6 has been located.

Table 3.11 – AQMA 5, Summary of Modelled Receptor Results

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective ($\mu g/m^3$)	2018 Annual Mean NO_2 ($\mu g/m^3$)	% of AQS objective
5|1	572996	156318	1.5	40	25.2	63.1%
5|2	572801	157090	1.5	40	22.5	56.2%
5|3	572741	157529	1.5	40	23.9	59.7%
5|4	572980	157726	1.5	40	34.0	84.9%
5|5	572782	157764	1.5	40	30.8	76.9%
5|6	572431	157922	1.5	40	**46.5**	116.2%
5|7	572431	157974	1.5	40	27.8	69.5%
5|8	572463	158052	1.5	40	28.3	70.6%
5|9	572526	158323	1.5	40	25.5	63.7%
5|10	572556	158400	1.5	40	27.7	69.2%

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective (µg/m^3)	2018 Annual Mean NO_2 (µg/m^3)	% of AQS objective
5|11	572421	157839	1.5	40	29.6	74.0%
5|12	572453	157797	1.5	40	38.9	97.1%
5|13	572497	157923	1.5	40	27.2	67.9%
5|14	572616	157879	1.5	40	23.2	58.1%
5|15	572452	157954	1.5	40	30.6	76.4%
5|16	573339	157664	1.5	40	24.2	60.6%

Figure 3.16 – AQMA 5, Modelled Roads and Monitoring Locations

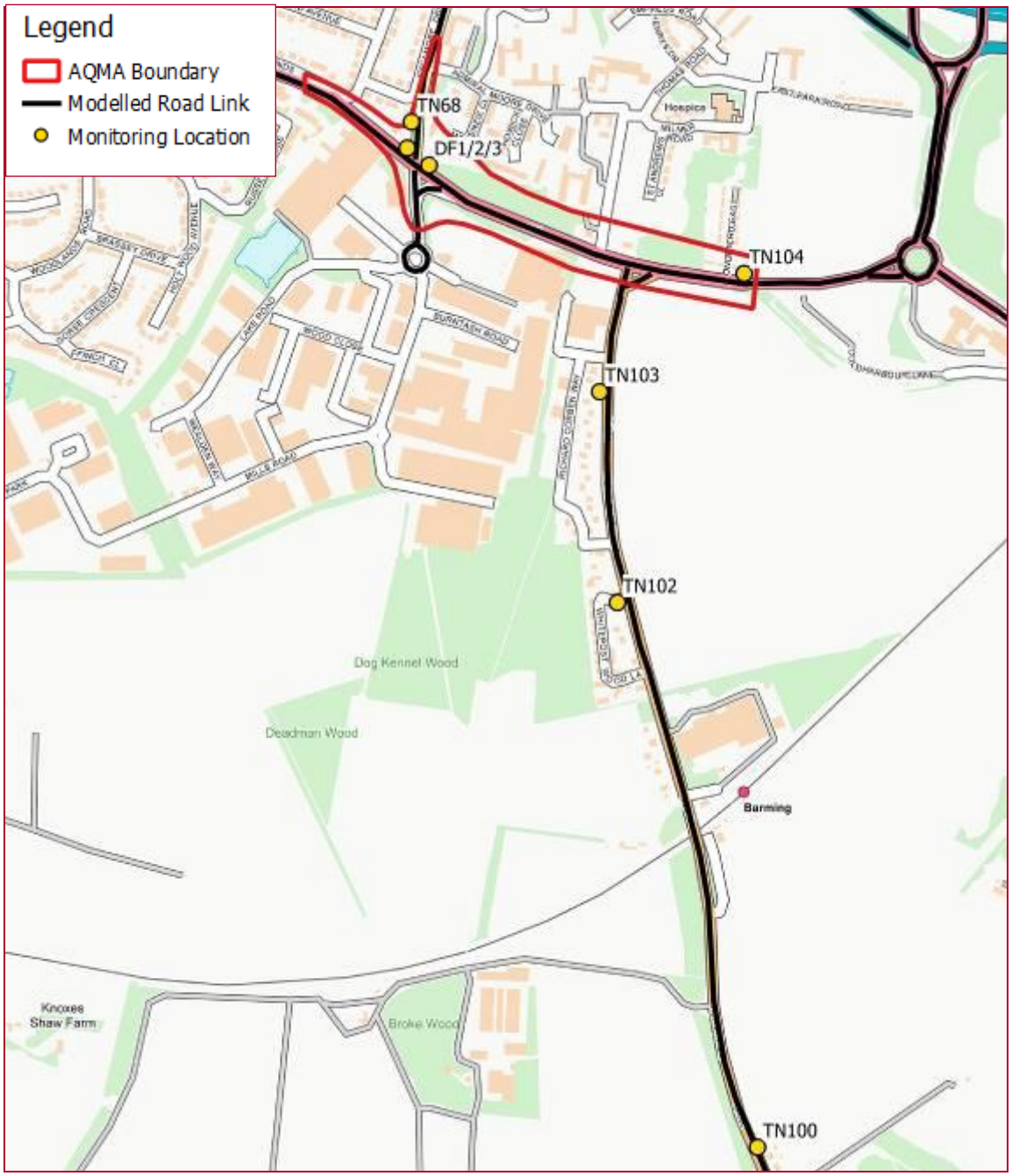


Figure 3.17 – AQMA 5, Modelled Receptor NO_2 Concentrations

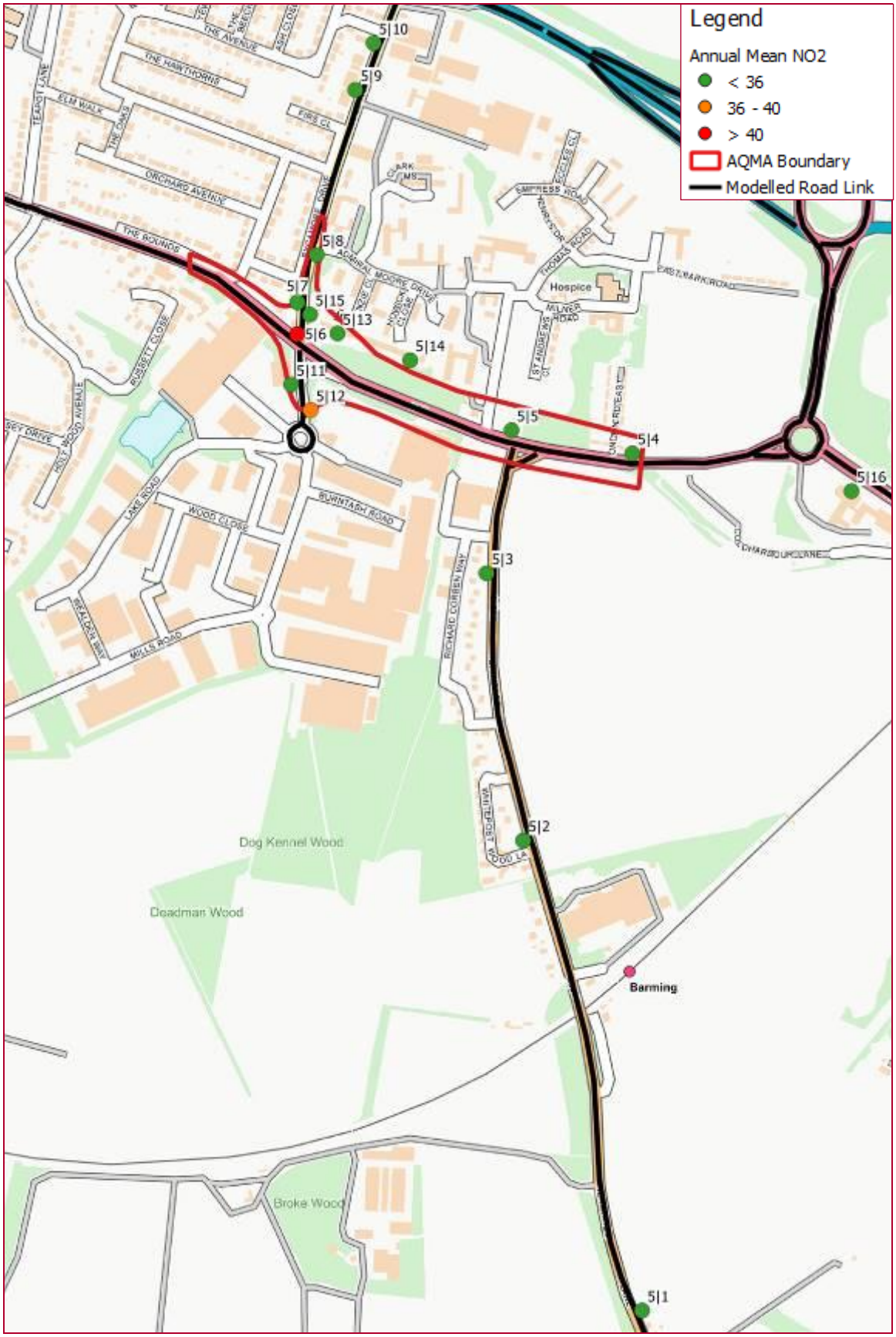


Figure 3.18 – AQMA 5, Modelled NO_2 Concentration Ispoleths

3.6 AQMA 6 – Larkfield

3.6.1 Council Monitoring Data

AQMA 6 encompasses the A20 London Road in East Malling, Larkfield and Ditton, including the New Hythe Lane junction. There are currently four diffusion tube sites located within the AQMA's modelled area. Figure 3.19 illustrates the locations of the diffusion tube monitoring sites in the modelled area. Recent results for the monitoring sites are shown in Table 3.12.

Within AQMA 6 monitoring site TN106 has exceeded the annual mean objective for the past three years, with all other monitoring sites recording compliance with the objective from 2017. TN106 is located on a residential façade therefore is sited at a location of relevant explore in relation to NO_2 annual mean concentrations

Table 3.12 – Passive NO_2 Monitoring Within, and Close to AQMA 6

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration ($\mu g/m^3$)[1]				
						2014	2015	2016	2017	2018
TN64	R	570948	158482	5	YES	30.6	29.0	31.0	29.4	29.0
TN57, 58, 59	R	570467	158328	4.82	YES	36.5	34.0	33.7	31.4	32.2
DF7, 8, 9	R	570386	158311	1.4	YES	-	35.2	**41.8**	35.0	32.8
TN106	R	570189	158326	2.25	YES	-	-	**43.9**	**43.2**	**42.0**
In **bold**, exceedance of the annual mean NO_2 AQS objective of $40\mu g/m^3$ Bias Adjustment Factors listed with relevant year R= Roadside										

3.6.2 Annual Mean NO_2

Table 3.15 provides the annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. There were no exceedances of the annual mean NO_2 objective at any of the nine modelled receptor locations. As stated above the monitoring site TN106 has exceeded the annual mean objective for the past three years, because of a poor correlation within the verification procedure when compared to all other verification monitoring locations, TN106 was removed from the verification calculations. Due to the monitored exceedance at TN106 it has been proposed within Section 5 that the AQMA boundary to the west of New Hythe Lane remain in its current designation.

The maximum annual mean concentration was $34.1\mu g/m^3$ predicted at receptor 1, this equates to 85.3% of the annual mean objective. In addition Figure 3.21 presents that all predicted concentrations above $36\mu g/m^3$ are predicted to be within the road link and not at any locations of relevant exposure.

Table 3.13 – AQMA 6, Summary of Modelled Receptor Results

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective ($\mu g/m^3$)	2018 Annual Mean NO_2 ($\mu g/m^3$)	% of AQS objective
6|1	570816	158457	1.5	40	34.1	85.3%
6|2	570343	158413	1.5	40	32.3	80.7%
6|3	570323	158486	1.5	40	22.8	56.9%
6|4	569884	158302	1.5	40	21.1	52.8%
6|5	569487	158266	1.5	40	27.9	69.8%
6|6	568907	158220	1.5	40	22.6	56.5%
6|7	568702	158298	1.5	40	19.9	49.8%
6|8	569028	158233	1.5	40	20.5	51.3%
6|9	569339	158269	1.5	40	21.5	53.7%

Figure 3.19 – AQMA 6, Modelled Roads and Monitoring Locations

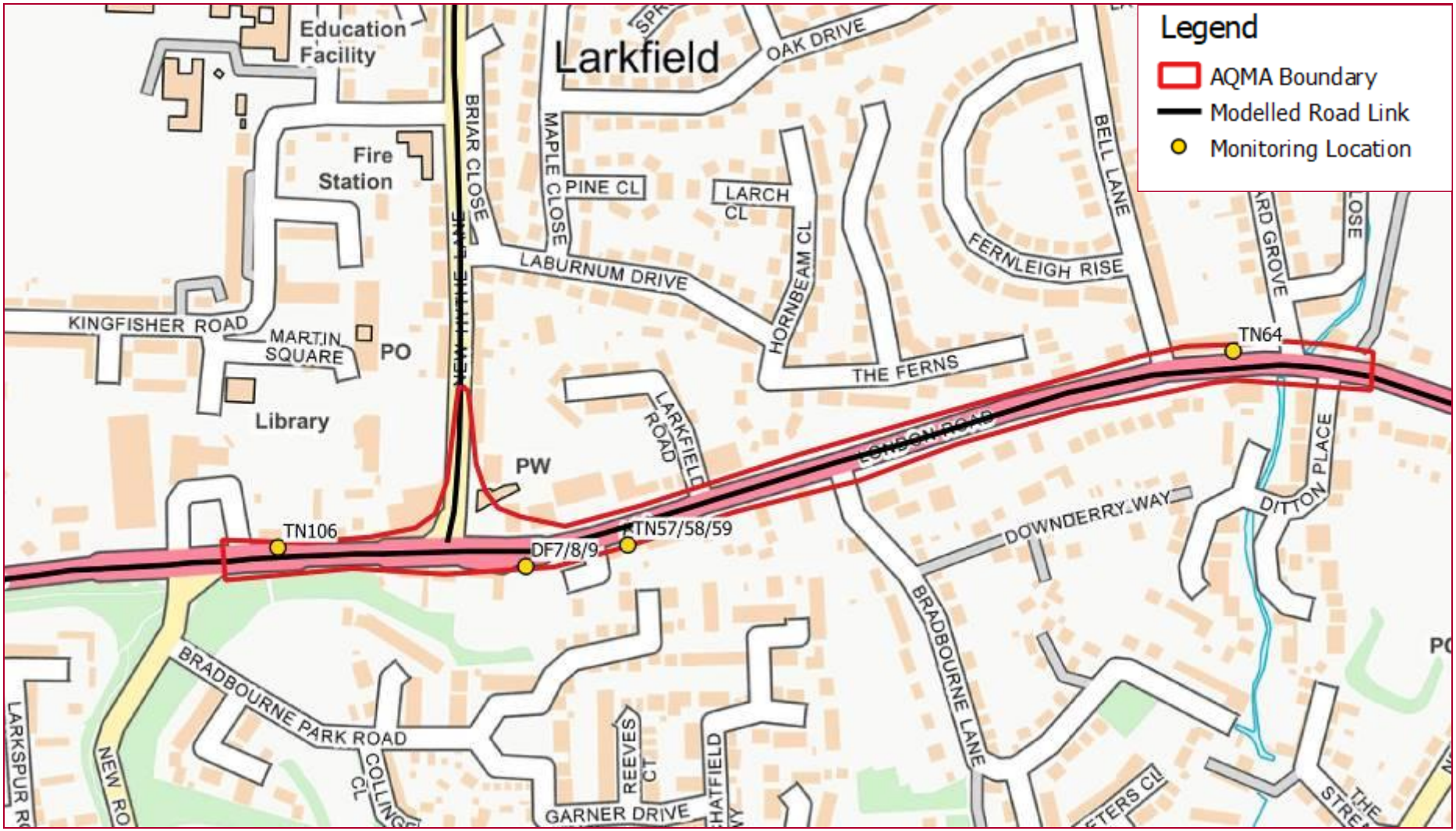


Figure 3.20 – AQMA 6, Modelled Receptor NO_2 Locations

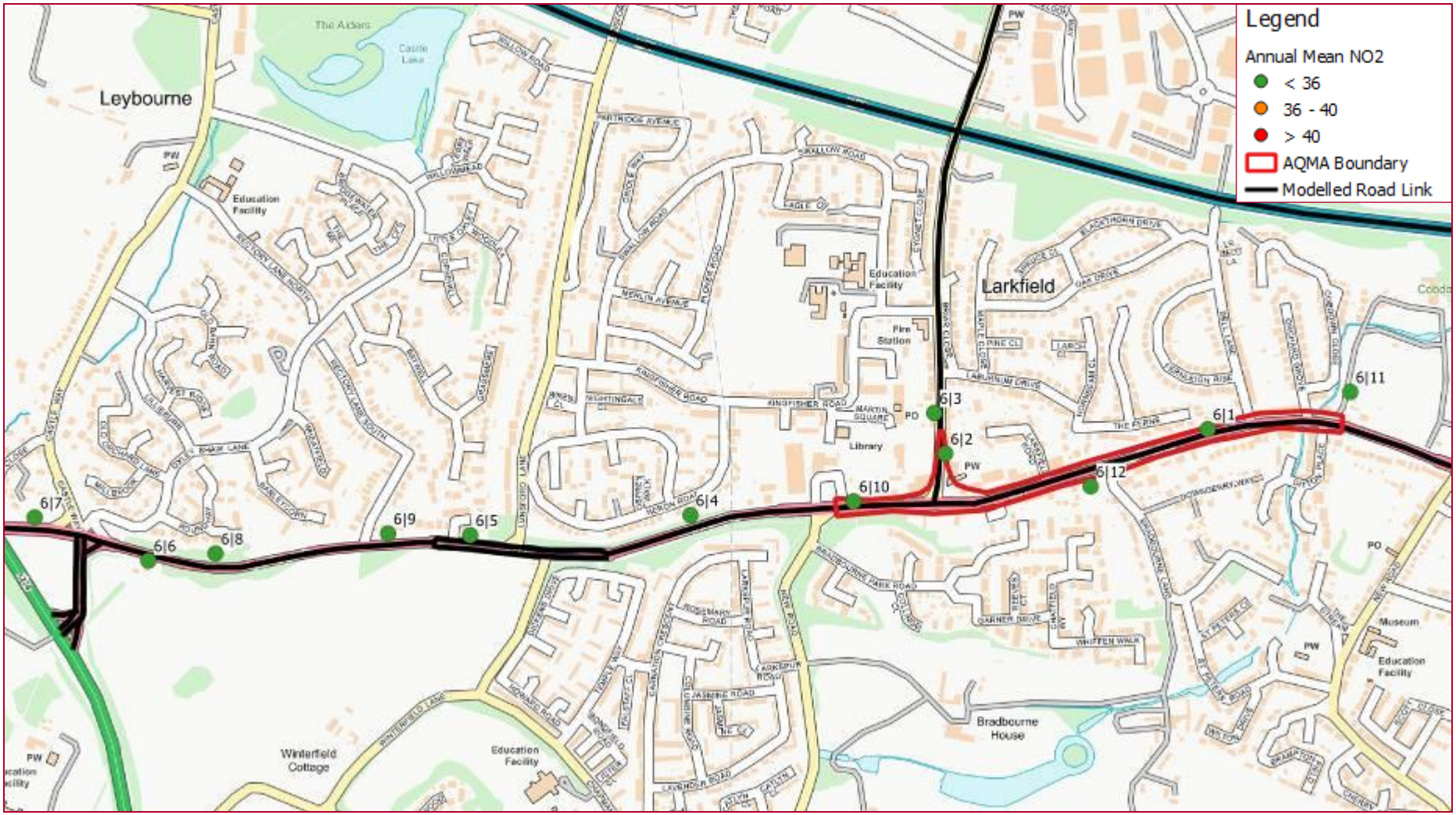


Figure 3.21 – AQMA 6, Modelled NO_2 Concentration Ispoleths

3.7 AQMA 7 – Borough Green

3.7.1 Council Monitoring Data

AQMA 7 includes a number of sections of Sevenoaks Road (A25), Western Road and Borough Green High Street. There are currently 12 diffusion tubes monitoring sites located within or close to the AQMA's modelled area. Figure 3.22 illustrates the locations of the diffusion tube monitoring sites in the modelled area. Recent results for the monitoring sites are shown in Table 3.14.

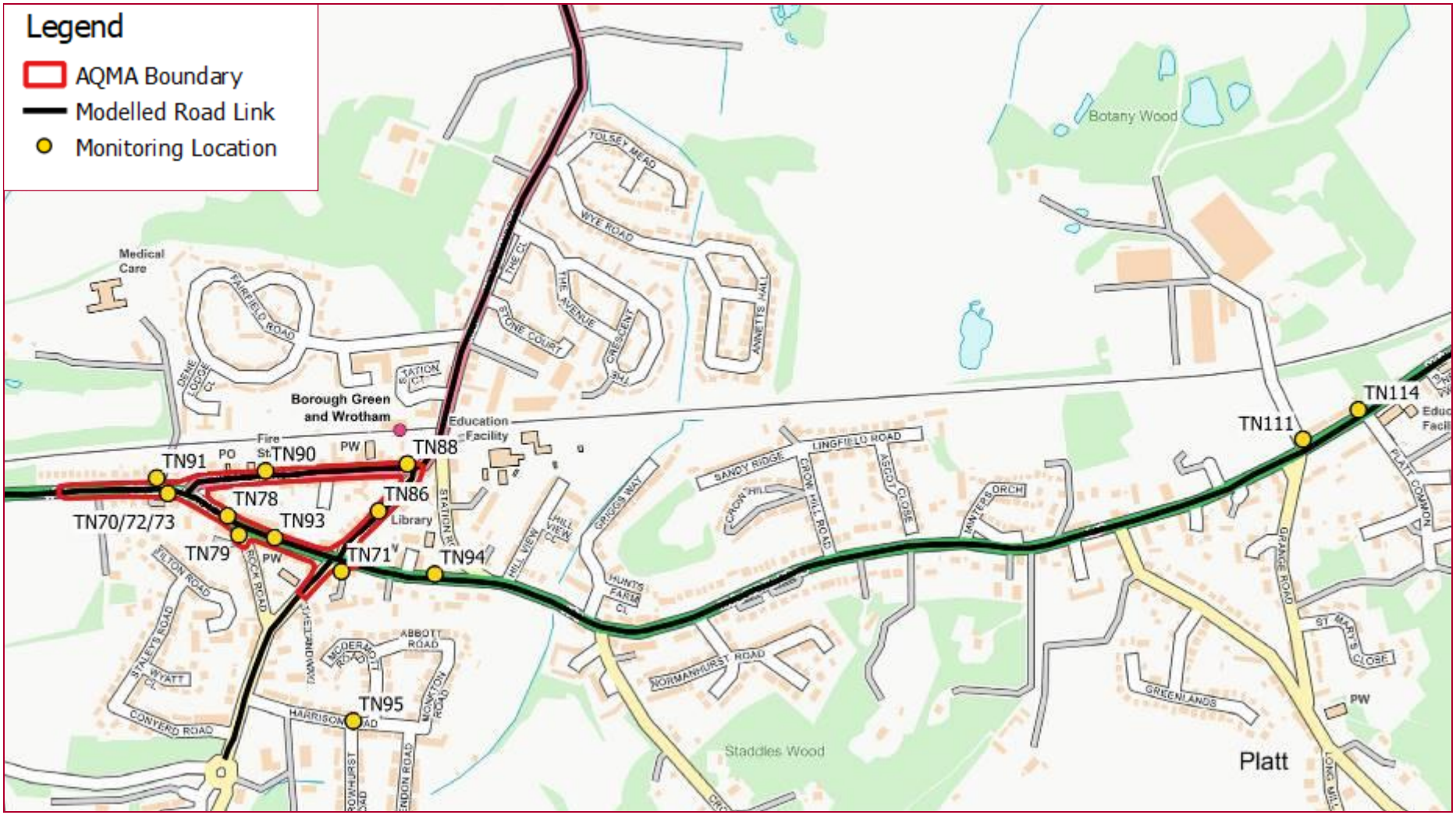
2018 has been the first year over the previous five years where there have not been any exceedances of the annual mean objective, monitoring site TN70, 72, 73 remained within 10% of the objective with 2018. Aside from sites TN70, 72, 73 and TN93, there have not been any annual mean concentrations above 30µg/m^3 since 2016.

Table 3.14 – Passive NO_2 Monitoring Within, and Close to AQMA 7

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Road (m)	Located In AQMA	Annual Mean NO_2 Concentration (µg/m^3)[1]				
						2014	2015	2016	2017	2018
TN78	R	560654	157296	3.1	YES	-	-	33.6	28.7	27.8
TN79	R	560670	157269	7.2	YES	29.3	29.0	31.2	27.6	25.7
TN86	UC	560869	157303	2.46	YES	24.6	22.6	25.0	24.5	22.0
TN88	R	560910	157370	4.3	YES	24.9	23.8	26.8	23.5	22.2
TN90	R	560708	157360	4.5	YES	24.2	22.2	25.7	25.6	22.7
TN93	R	560721	157265	1.5	YES	34.8	34.0	39.8	35.8	34.6
TN94	R	560949	157213	4.3	NO	29.1	28.1	28.5	27.3	24.3
TN114	R	562264	157447	6.5	NO	-	-	26.1	22.3	20.1
TN70, 72, 73	R	560569	157328	2.06	YES	**42.2**	**42.1**	**45.6**	**43.0**	39.6
TN111	R	562185	157405	2.2	NO	-	-	-	-	16.9
TN95	UB	560833	157004	1.7	NO	15.3	14.8	16.1	14.6	13.6
TN91	R	560553	157350	14.2	YES	18.4	16.5	18.6	18.2	16.3

In **bold**, exceedance of the annual mean NO_2 AQS objective of 40µg/m^3
Bias Adjustment Factors listed with relevant year
R= Roadside; UC = Urban Centre; UB = Urban Background

Figure 3.22 – AQMA 7, Modelled Roads and Monitoring Locations



3.7.2 Annual Mean NO_2

Table 3.15 provides the annual mean NO_2 concentrations predicted at existing residential receptor locations for 2018. Of the 49 modelled receptor locations, all receptor locations were predicted to be in compliance with the annual mean NO_2 objective, and there was one receptor predicted to have an annual mean to be within 10% of the AQS objective.

The concentration isopleths presented in Figure 3.25 show that the concentrations in exceedance of the annual mean objective are mostly predicted to be within the road links, with relevant exposure only within the exceedance isopleths on Sevenoaks Road to the west of the AQMA close to receptor 3 and diffusion tube TN70, 72, 73.

Table 3.15 – AQMA 7, Summary of Modelled Receptor Results

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective (µg/m^3)	2018 Annual Mean NO_2 (µg/m^3)	% of AQS objective
7|1	560399	157344	1.5	40	28.4	71.0%
7|2	560504	157320	1.5	40	28.3	70.7%
7|3	560562	157327	1.5	40	37.7	94.3%
7|4	560581	157322	1.5	40	33.6	83.9%
7|5	560604	157350	1.5	40	27.8	69.4%
7|6	560624	157355	3	40	25.3	63.2%
7|7	560671	157342	1.5	40	24.5	61.2%
7|8	560881	157371	1.5	40	25.5	63.8%
7|9	560912	157358	1.5	40	34.5	86.3%
7|10	560904	157344	3	40	28.7	71.8%
7|11	560918	157331	1.5	40	28.3	70.8%
7|12	560822	157268	1.5	40	30.0	75.0%
7|13	560746	157248	1.5	40	25.3	63.3%
7|14	560782	157252	1.5	40	29.6	73.9%
7|15	560651	157299	1.5	40	33.6	83.9%
7|16	560600	157317	1.5	40	34.6	86.5%
7|17	561036	157620	1.5	40	27.3	68.2%
7|18	561075	157770	1.5	40	22.8	57.0%
7|19	561063	158228	1.5	40	20.6	51.5%
7|20	561196	157143	1.5	40	27.4	68.5%
7|21	561349	157152	1.5	40	22.1	55.4%
7|22	561489	157243	1.5	40	20.4	51.0%
7|23	561781	157238	1.5	40	21.0	52.5%
7|24	561867	157275	1.5	40	27.5	68.8%
7|25	562075	157324	1.5	40	25.4	63.5%
7|26	562209	157420	1.5	40	20.3	50.6%
7|27	562391	157512	1.5	40	25.4	63.5%
7|28	562770	157841	1.5	40	22.9	57.3%
7|29	562949	157947	1.5	40	22.0	55.0%
7|30	560786	157225	1.5	40	35.4	88.4%
7|31	560746	157163	1.5	40	24.2	60.5%
7|32	560695	157054	1.5	40	19.5	48.8%
7|33	560663	157003	1.5	40	19.7	49.2%
7|34	560053	157255	1.5	40	21.3	53.2%
7|35	560478	157345	1.5	40	31.4	78.4%
7|36	560692	157282	1.5	40	28.2	70.6%
7|37	560771	157368	1.5	40	22.0	55.0%
7|38	560898	157194	1.5	40	20.0	50.1%
7|39	561025	157185	1.5	40	19.8	49.6%
7|40	561020	157380	1.5	40	16.7	41.8%
7|41	560969	157499	1.5	40	22.9	57.3%
7|42	561021	157679	1.5	40	18.0	44.9%
7|43	561082	157726	1.5	40	24.0	60.0%
7|44	561120	157866	1.5	40	20.3	50.7%

Receptor ID	OS Grid X	OS Grid Y	Height (m)	AQS objective (µg/m^3)	2018 Annual Mean NO_2 (µg/m^3)	% of AQS objective
7|45	561132	157842	1.5	40	34.3	85.7%
7|46	561082	158262	1.5	40	25.1	62.8%
7|47	561072	158159	1.5	40	18.5	46.2%
7|48	561149	158377	1.5	40	30.5	76.3%
7|49	561106	158626	1.5	40	20.5	51.3%

Figure 3.23 – AQMA 7, Modelled Receptor NO_2 Locations (Wide view)

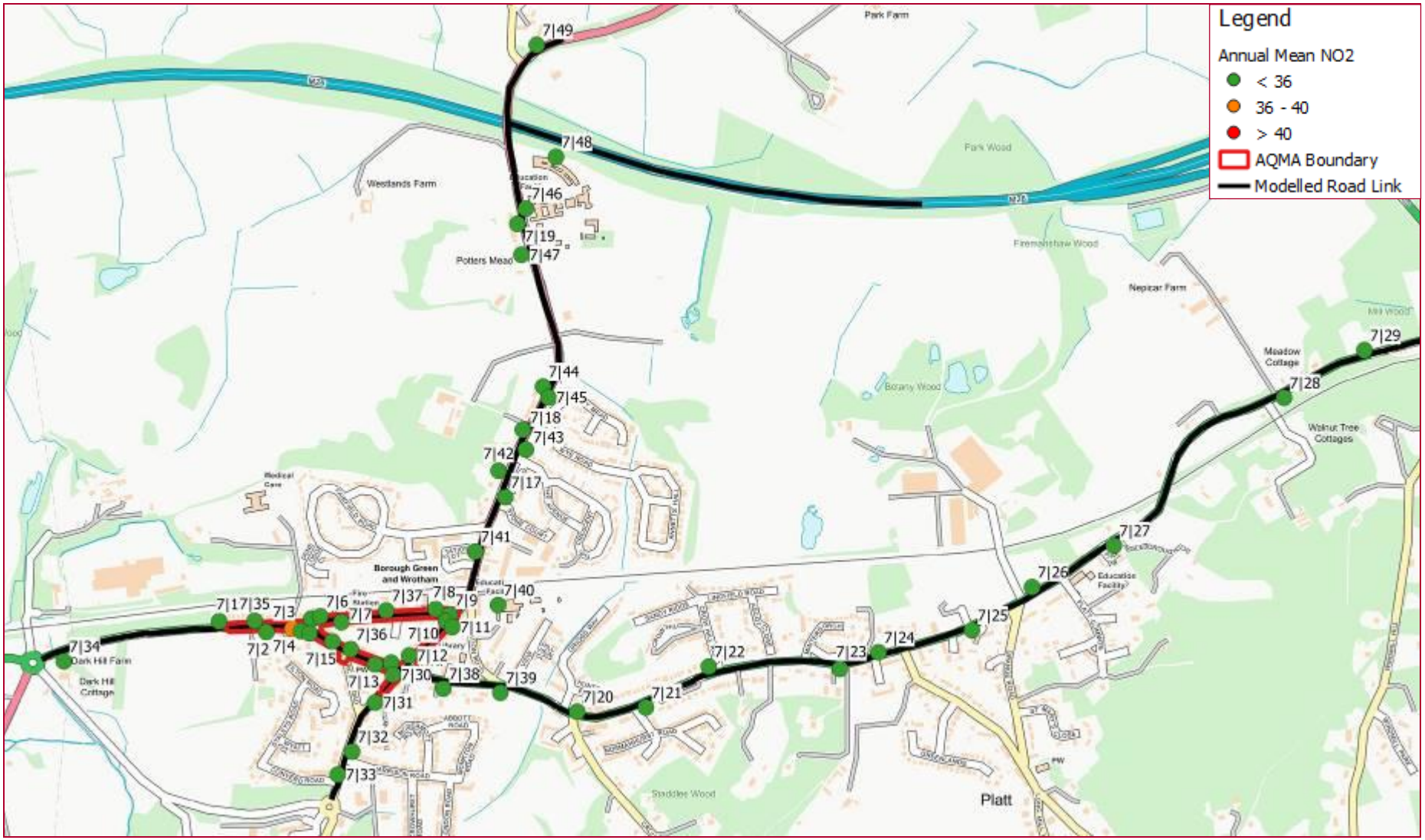


Figure 3.24 – AQMA 7, Modelled Receptor NO_2 Locations (Close up to AQMA)

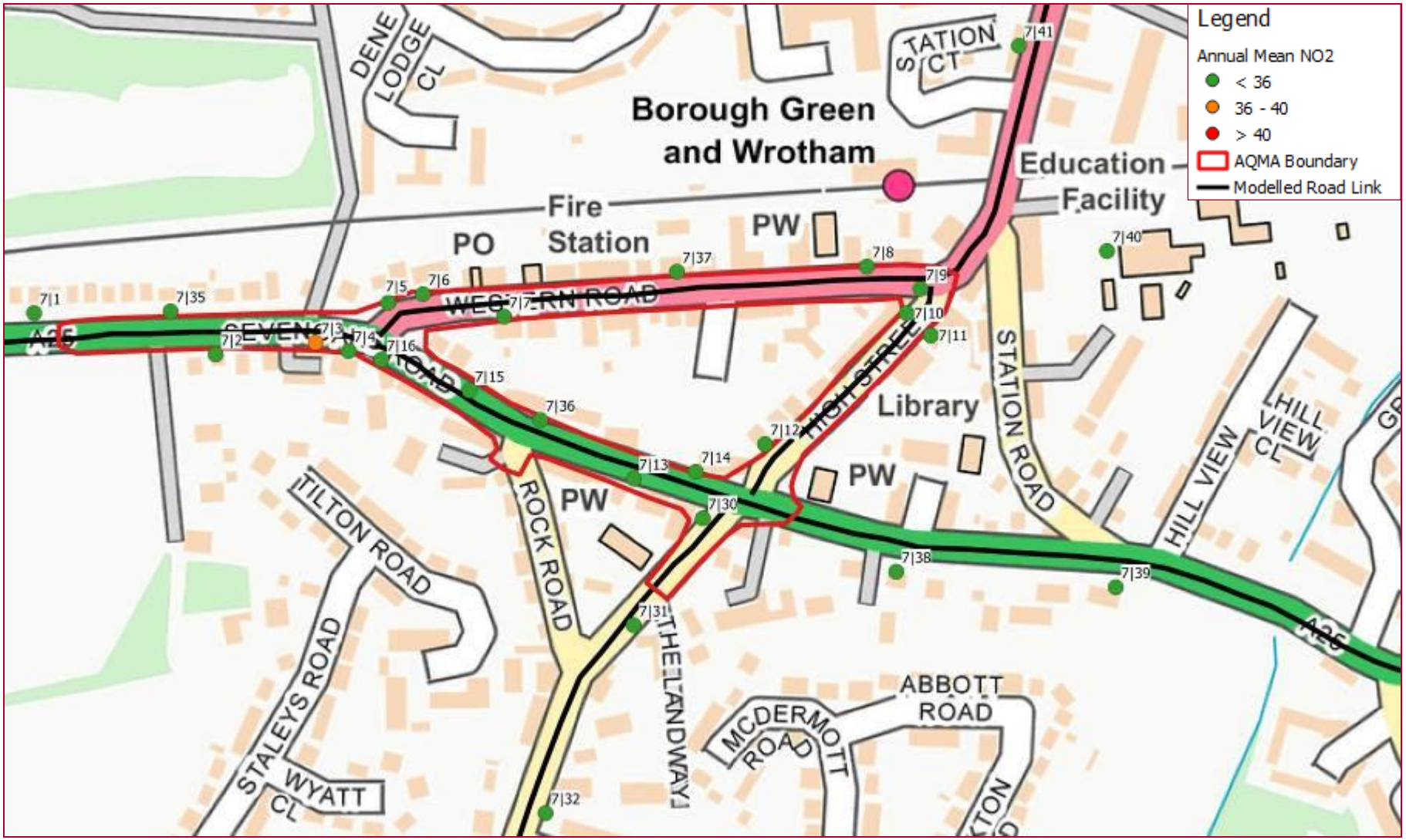


Figure 3.25 – AQMA 7, Modelled NO_2 Concentration Ispoleths

4 Source Apportionment

To help inform the development of measures as part of the action plan stage of the project, NO_x source apportionment exercise was undertaken for the following vehicle classes:

- Cars;
- Light-Goods Vehicles (LGVs);
- Heavy-Goods Vehicles (HGVs);
- Bus and Coaches; and
- Motorcycles.

This provides vehicle contributions of NO_x as a proportion of the total NO_x concentration, which will allow the Council to develop specific AQAP measures targeting a reduction in emissions from specific vehicle types.

It should be noted that emission sources of NO_2 are dominated by a combination of direct NO_2 (f-NO_2) and oxides of nitrogen (NO_x), the latter of which is chemically unstable and rapidly oxidised upon release to form NO_2. Reducing levels of NO_x emissions therefore reduces concentrations of NO_2. As a consequence, the source apportionment study has firstly considered the emissions of NO_x, which are assumed to be representative of the main sources of NO_2, and secondly emissions of NO_2.

With regards to the discrete receptor locations, consideration has been given to the following groups of receptors:

- The average NO_x and NO_2 contributions across all modelled locations. This provides useful information when considering possible action measures to test and adopt. It will however understate road NO_x concentrations in problem areas;
- The average NO_x and NO_2 contributions across all locations with modelled NO_2 concentration greater than 40µg/m^3. This provides an indication of source apportionment in problematic areas (i.e. only where the AQS objective is exceeded). As such, this information should be considered with more scrutiny when testing and adopting action measures;

Table 4.1 details the source apportionment results for NO_x concentrations, whilst Figure 4.1 presents pie charts illustrate the results.

When considering the average NO_x concentration across all modelled receptors, road traffic accounts for 39.4µg/m^3 (61.9%) of total NO_x concentration. Of this 39.4µg/m^3, Cars account for the most (28.8%) of any of the vehicle types, followed by LGVs (17.8%). HGVs and Buses/Coaches account for a similar total road-NO_x, with HGVs at 9.0% (4.3µg/m^3) and Buses/Coaches at 6.1% (2.9µg/m^3), whilst Motorcycles are found to contribute <1%.

When considering the average NO_x concentration at receptors with NO_2 concentration greater than 40µg/m^3, road traffic accounts for 71.5µg/m^3 (78.0%) of 91.6µg/m^3. Of this 71.5µg/m^3, Cars account for the most (32.4%) of any of the vehicle types, followed by LGVs (20.5%), HGVs (13.2%), Buses/Coaches (5.2%), and Motorcycles contributing <1%.

Table 4.1 – NO_x Source Apportionment Results

Results	All Vehicles	Car	LGV	HGV	Bus	Motorcycle	Background
Average across all modelled receptors							
NO_x Concentration (µg/m³)	29.4	13.7	8.5	4.3	2.9	0.1	18.1
Percentage	61.9%	28.8%	17.8%	9.0%	6.1%	0.2%	38.1%
Percentage Road Contribution	100.0%	46.6%	28.8%	14.5%	9.9%	0.3%	-
Average Across All Receptors With NO_2 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	78.0%	35.4%	22.4%	14.4%	5.6%	0.2%	22.0%
Percentage Road Contribution	100.0%	45.3%	28.7%	18.5%	7.2%	0.2%	-

Figure 4.1 – Pie Charts showing NO_x Source Apportionment Results

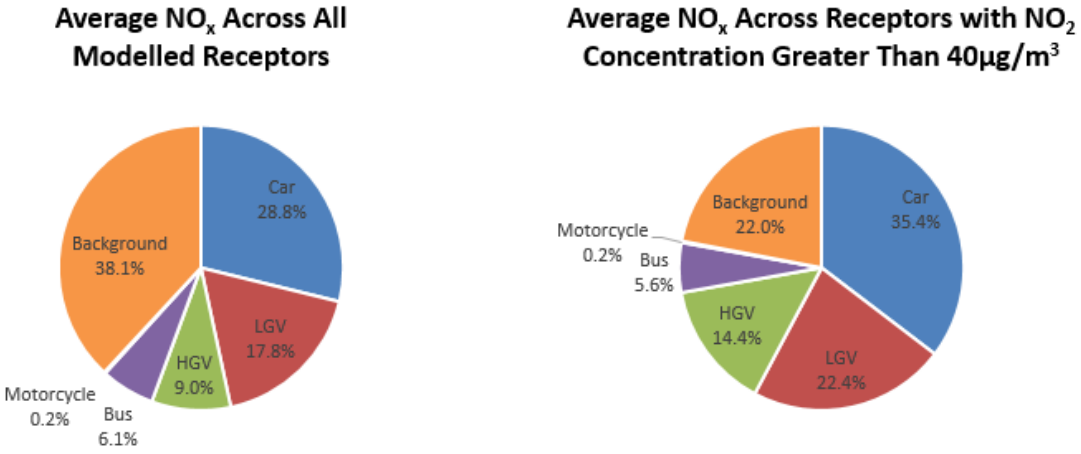


Table 4.2 details the source apportionment results for NO_2 concentrations, whilst Figure 4.2 presents pie charts illustrate the results.

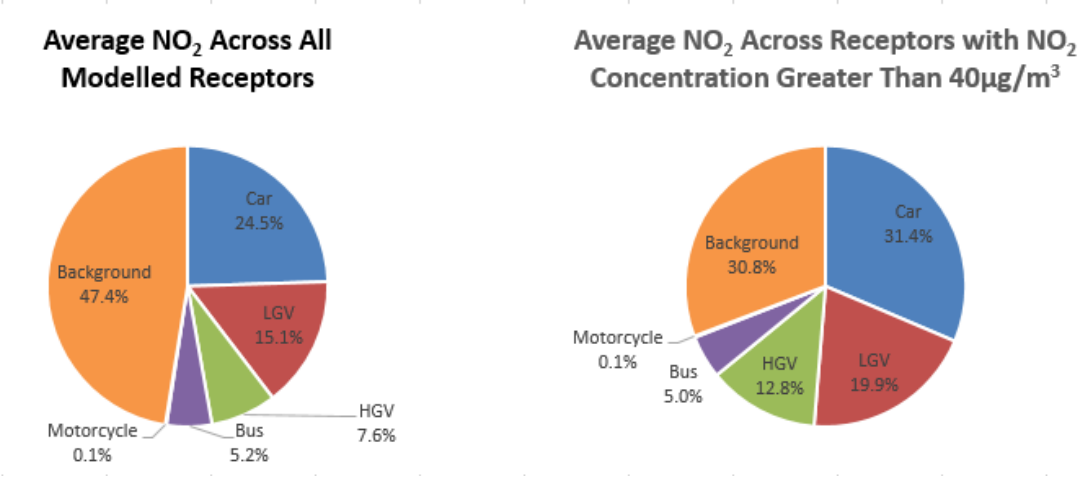
When considering the average NO_2 concentration across all modelled receptors, road traffic accounts for 14.4µg/m³ (52.6%) of total µg/m³. Of this 14.4µg/m³, Cars account for the most (24.5%) of any of the vehicle types, followed by LGVs (15.1%). HGVs and Buses/Coaches account for a similar total road-NO_2, with HGVs at 7.6% (2.1µg/m³) and Buses/Coaches at 5.2% (1.4µg/m³), whilst Motorcycles are found to contribute <1%.

When considering the average NO_2 concentration at receptors with NO_2 concentration greater than 40µg/m³, road traffic accounts for 32.2µg/m³ (69.2%) of 46.5µg/m³. Of this µg/m³, Cars account for the most (31.4%) of any of the vehicle types, followed by LGVs (19.9%), HGVs (12.8%), Buses/Coaches (5.0%), and Motorcycles contributing <1%.

Table 4.2 – NO_2 source Apportionment Results

Results	All Vehicles	Car	LGV	HGV	Bus	Motorcycle	Background
Average across all modelled receptors							
NO_2 Concentration (µg/m^3)	14.4	6.7	4.1	2.1	1.4	0.0	13.0
Percentage	52.6%	24.5%	15.1%	7.6%	5.2%	0.1%	47.4%
Percentage Road Contribution	100.0%	46.6%	28.8%	14.4%	9.9%	0.3%	-
Average Across All Receptors With NO_2 Concentration Greater Than 40µg/m^3							
NO_2 Concentration (µg/m^3)	32.2	14.6	9.3	6.0	2.3	0.1	14.3
Percentage	69.2%	31.4%	19.9%	12.8%	5.0%	0.1%	30.8%
Percentage Road Contribution	100.0%	45.4%	28.8%	18.5%	7.2%	0.2%	-

Figure 4.2 – Pie Charts showing NO_2 Source Apportionment Results



5 Conclusions and Recommendations

Following the completion of the analysis of both monitoring data and modelled concentrations across all of the assessed area a number of recommendations have been made in terms of the AQMAs within Tonbridge and Malling.

5.1 AQMA 1 – M20

AQMA 1 is currently designated for both concentrations of annual mean NO_2 and 24-hour PM_{10}, monitoring is completed within, and close to the AQMA using NO_2 diffusion tubes. There has been no PM_{10} monitoring completed since the designation of the AQMA. There have not been any monitored exceedances of the NO_2 annual mean objective within the past five years but the modelling has predicted concentrations of 40µg/m^3 to have a similar extent to the existing AQMA boundary.

Based upon the analysis of results it is recommended for the AQMA to remain in force with its current boundary in relation to the annual mean NO_2 objective and be revoked in terms of 24-hour PM_{10} objective. The M20 is a Highways England controlled road and therefore the measures to be developed would have to be a collaboration between the Council and Highways England. Works are currently being undertaken to install a Smart Motorway between Junction 3 (West Malling) and Junction 5 (Aylesford), with the aim to improve traffic flow and therefore this may have beneficial impacts for air quality in the area.

In addition to possible collaborative measures, further borough-wide initiatives should be developed that may not have a large direct impact upon AQMA 1 but would bring about improvements across the borough.

5.2 AQMA 2 – Ditton

There have not been any monitored exceedances of the NO_2 annual mean objective within the AQMA over the past five years. In addition the modelling results predicted a maximum annual mean of 29µg/m^3 at a location of relevant exposure and all concentrations in excess of 40µg/m^3 are restricted to within the boundary of the road link.

Due to the ongoing compliance presented within the monitoring completed, and the concentrations predicted through the dispersion modelling, it is recommended that AQMA 2 is revoked.

5.3 AQMA 3 – Tonbridge High Street

There were no monitored exceedances recorded during 2018. This is the first year that no exceedances have occurred in the past five years. A downward trend in annual mean concentrations within the AQMA is visible between 2014 and 2018. In addition, there were no modelled exceedances predicted within the AQMA at relevant locations of exposure. This would suggest that concentrations of NO_2 are improving within the area without the application of specific measures for the AQMA. Due to the High Street environment of commercial usage at ground floor level and residential at first floor level, NO_2 concentration predictions were completed at varying heights to present the change in concentrations in relation to changing heights.

Due to the general downward trend that is apparent within the AQMA it is recommended that a mixture of area specific and borough wide initiatives be implemented regarding Tonbridge High Street. Although the concentrations are not yet at a level whereby the AQMA should be revoked, if they continue to remain below the annual mean objective this should be considered in the future.

5.4 AQMA 4 – Wateringbury

Diffusion tube monitoring sites within AQMA 4 have consistently recorded exceedances of the annual mean objective over the past five years, with concentrations of over 60µg/m^3 recorded at

one location between 2014 and 2017. Monitored concentrations are consistently higher on the eastern approach to the central junction within Wateringbury compared to the western approach. The automatic monitor ZT7 was re-located to the western approach to the central junction in June 2018, with the annualised 2018 annual mean recorded as 23.6µg/m^3.

The completed modelling within Wateringbury broadly agrees with the monitored data, with the highest annual mean concentrations predicted at properties on the northern side of Tonbridge Road.

Due to the monitored and modelled concentrations within the Wateringbury AQMA being the highest within the borough it is recommended that in addition to borough-wide measures being implemented, measures specific to Wateringbury are also developed and implemented. These should specifically target the central junction where concentrations are at their highest.

5.5 AQMA 5 – Aylesford

There are two diffusion tube monitoring locations within the Aylesford AQMA that consistently exceed the annual mean NO_2 objective, these are located close to the junction of the A20, Hall Road and Mills Road. In addition this is the only location where a modelled exceedance of the annual mean objective was predicted. In terms of relevant exposure only a small number of properties fronting the A20 are within areas predicted to be in exceedance of the annual mean objective.

Due to the spatial extent of the monitored and predicted exceedances it is recommended to revise the AQMA boundary from its existing form to that which encompasses the small area of exceedance on the north western corner of the main junction. Concentrations are not yet at a level within the AQMA to revoke therefore a mixture of area specific and borough wide initiatives should be implemented.

5.6 AQMA 6 – Larkfield

There was one diffusion tube monitoring location that exceeded the annual mean objective in 2018. This tube has experienced an exceedance each year since monitoring commenced at the location in 2016. The diffusion tube is sited on a residential façade and therefore is located at a location of relevant exposure. From the modelling completed there were no exceedances of the annual mean NO_2 objective at any of the modelled receptor locations, and the concentration isopleths display that all concentrations in excess of 40µg/m^3 are contained with the modelled road links.

Due to the location of the monitored exceedance it is recommended to revise the AQMA boundary, retracting the eastern boundary of the AQAM to the junction if London Road and New Hythe Lane. This would incorporate the monitoring location that is currently showing an exceedance, and the junction whereby predicted concentrations are at their highest. Due amendment rather than revocation being recommended, a mixture of AQMA specific and borough wide initiatives should be implemented.

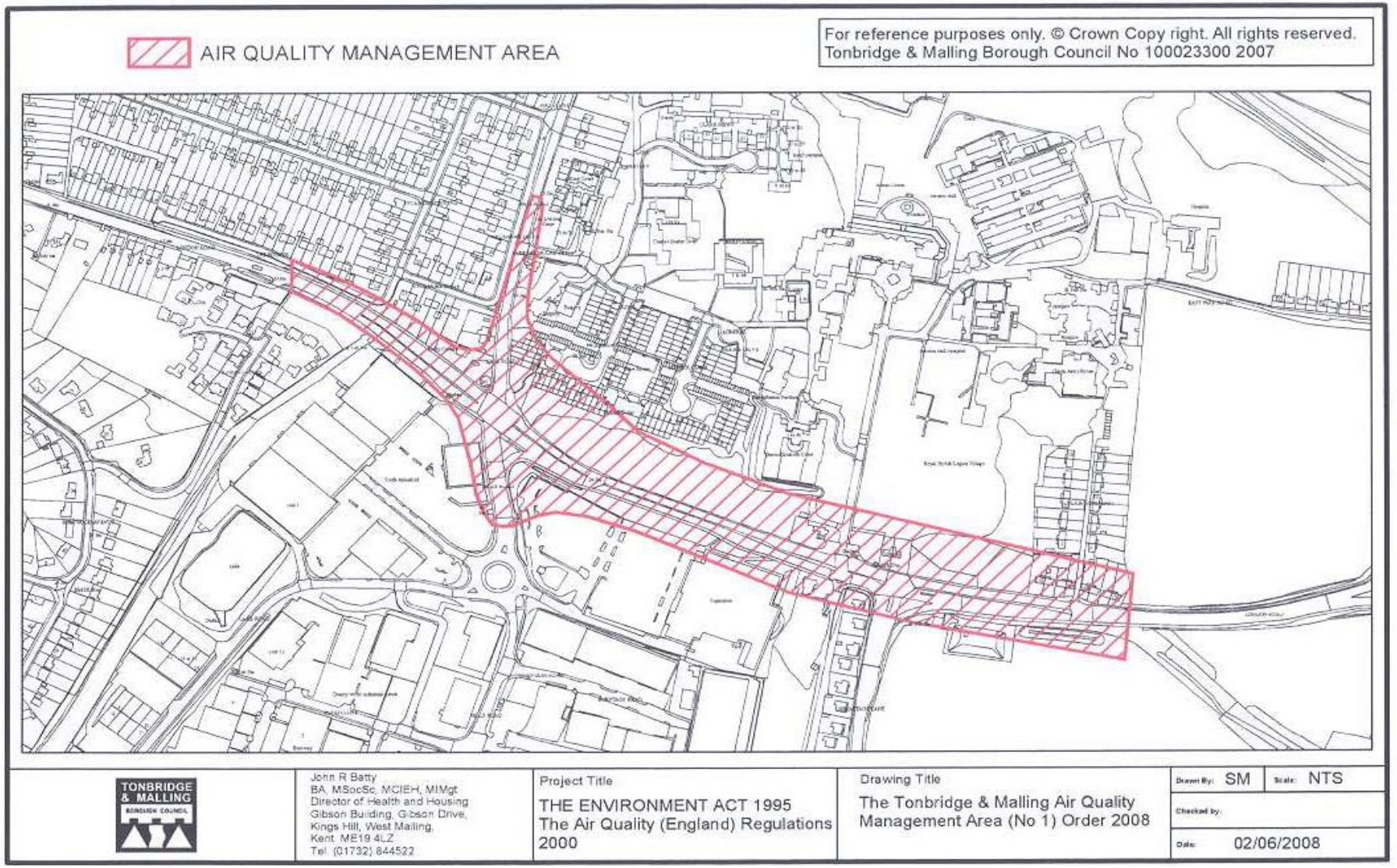
5.7 AQMA 7 – Borough Green

There were no monitored exceedances recorded during 2018, which is the first time this has occurred over the past five years. One monitoring location (TN70, 72, 73) has consistently been in exceedance of the annual mean objective, within 2018 this was below, but within 10% of the objective (39.6µg/m^3). Across the majority of the monitoring sites within the AQMA a downward trend in annual mean concentrations within the AQMA is visible between 2014 and 2018. In addition there were no modelled exceedances predicted within the AQMA at relevant locations of exposure, but there was one receptor concentration predicted to be within 10% of the objective at a location close to TN70, 72, 73. The concentration isopleths display that exceedances of the annual mean objective are mostly predicted to be within the boundaries of the road links, with this encroaching to relevant receptors only in the locality of TN70, 72, 73.

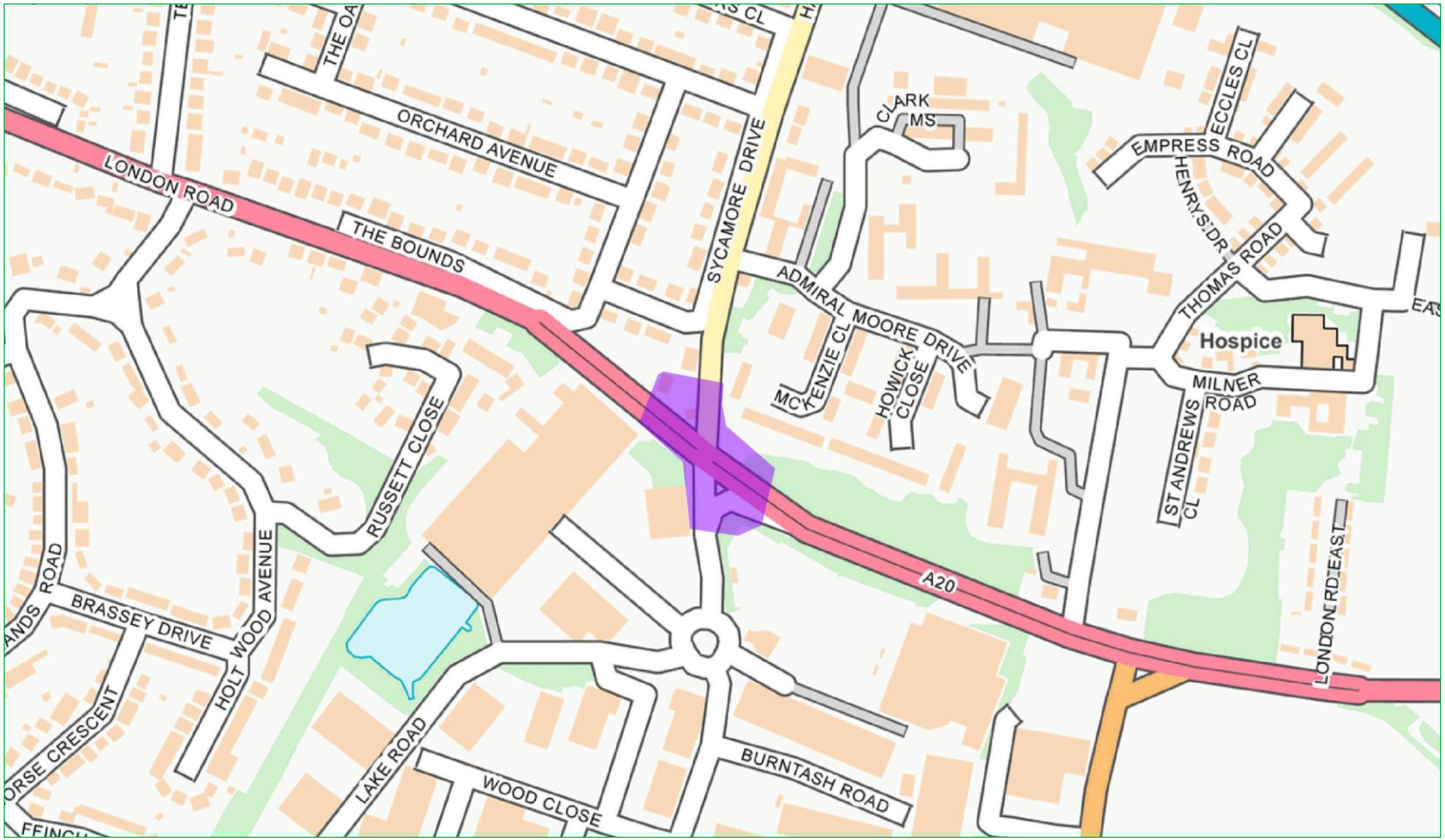
Due to the location of the monitoring site, and modelled receptors that are within 10% of the annual mean objective it is recommended to revise the current AQMA boundary. As all other monitoring sites and modelled receptors show compliance with the objective the boundary should remain around the junction of Sevenoaks Road and Western Road to the west of the current AQMA. Due amendment rather than revocation being recommended, a mixture of AQMA specific and borough wide initiatives should be implemented.

Annex 2

AQMA Aylesford existing

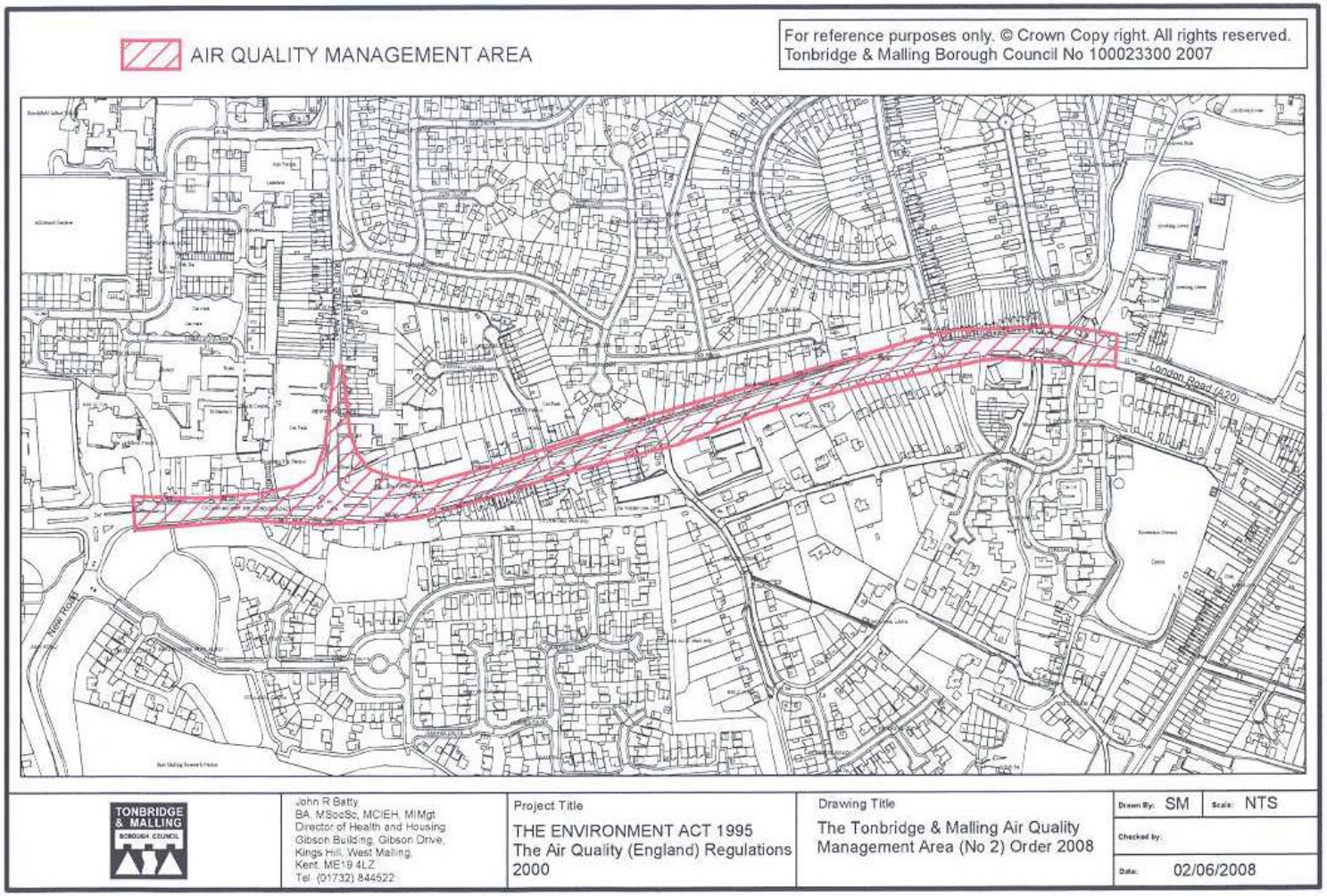


AQMA Aylesford proposed

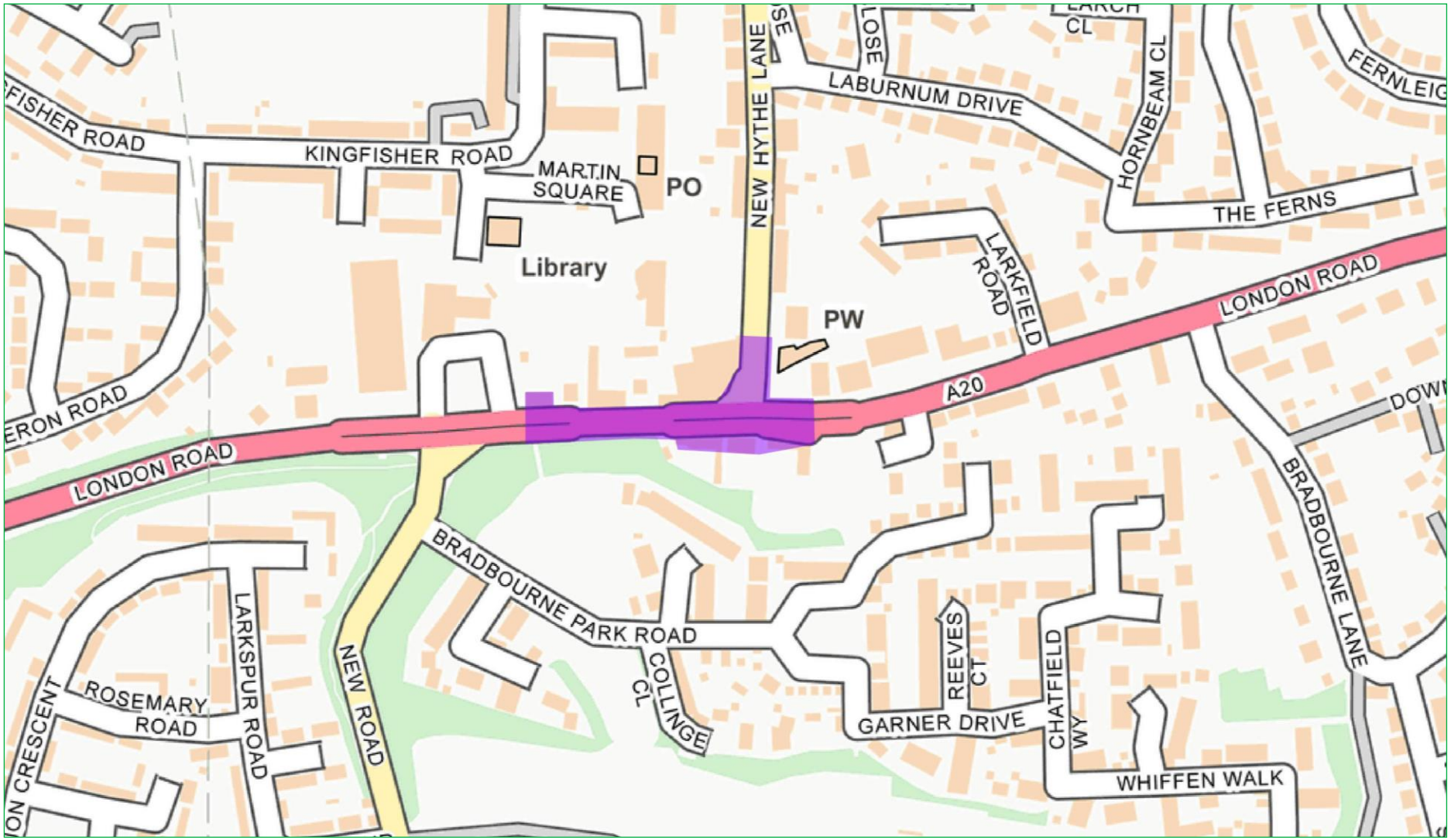


Annex 3

AQMA Larkfield existing

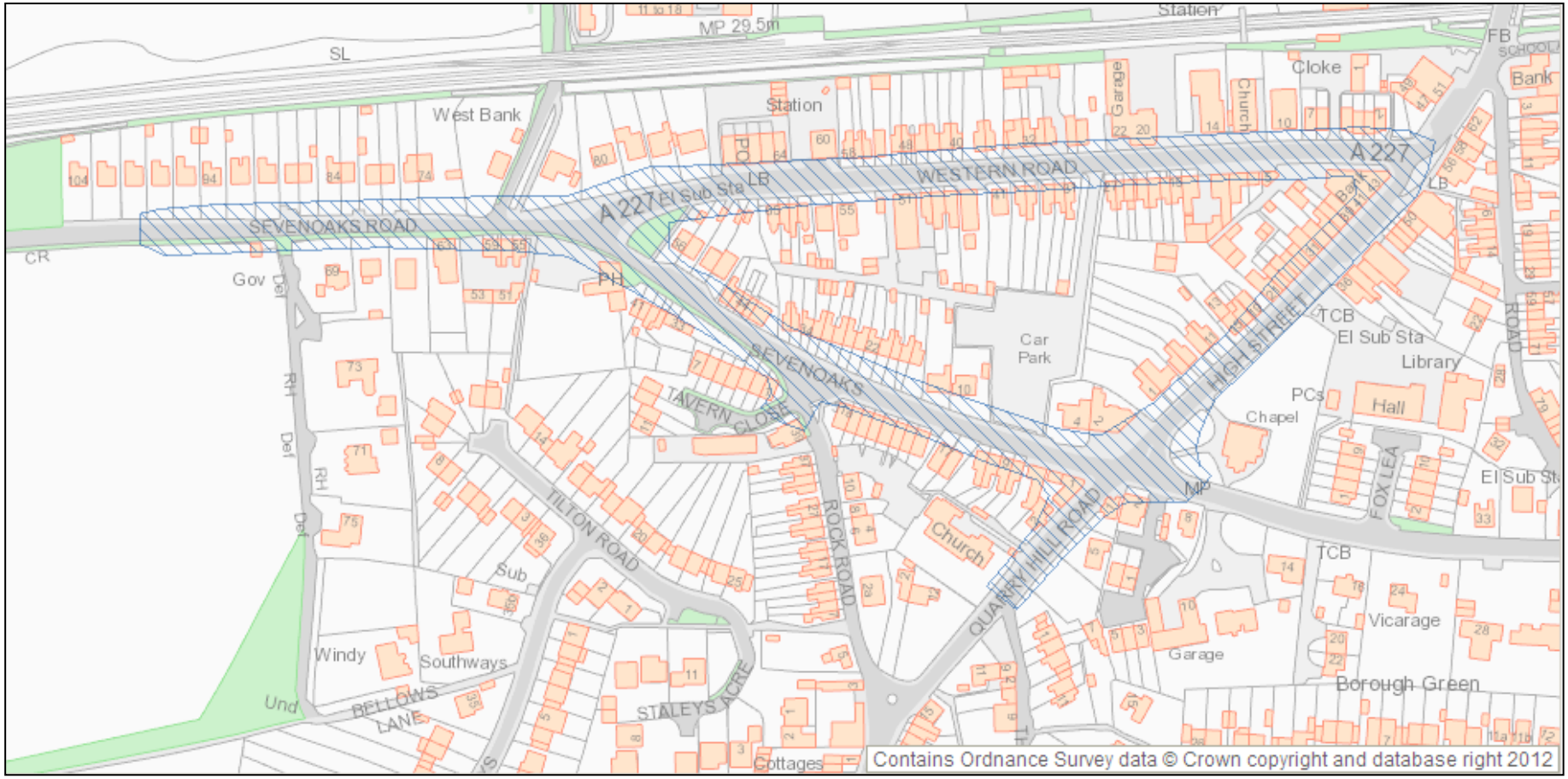


AQMA Larkfield proposed

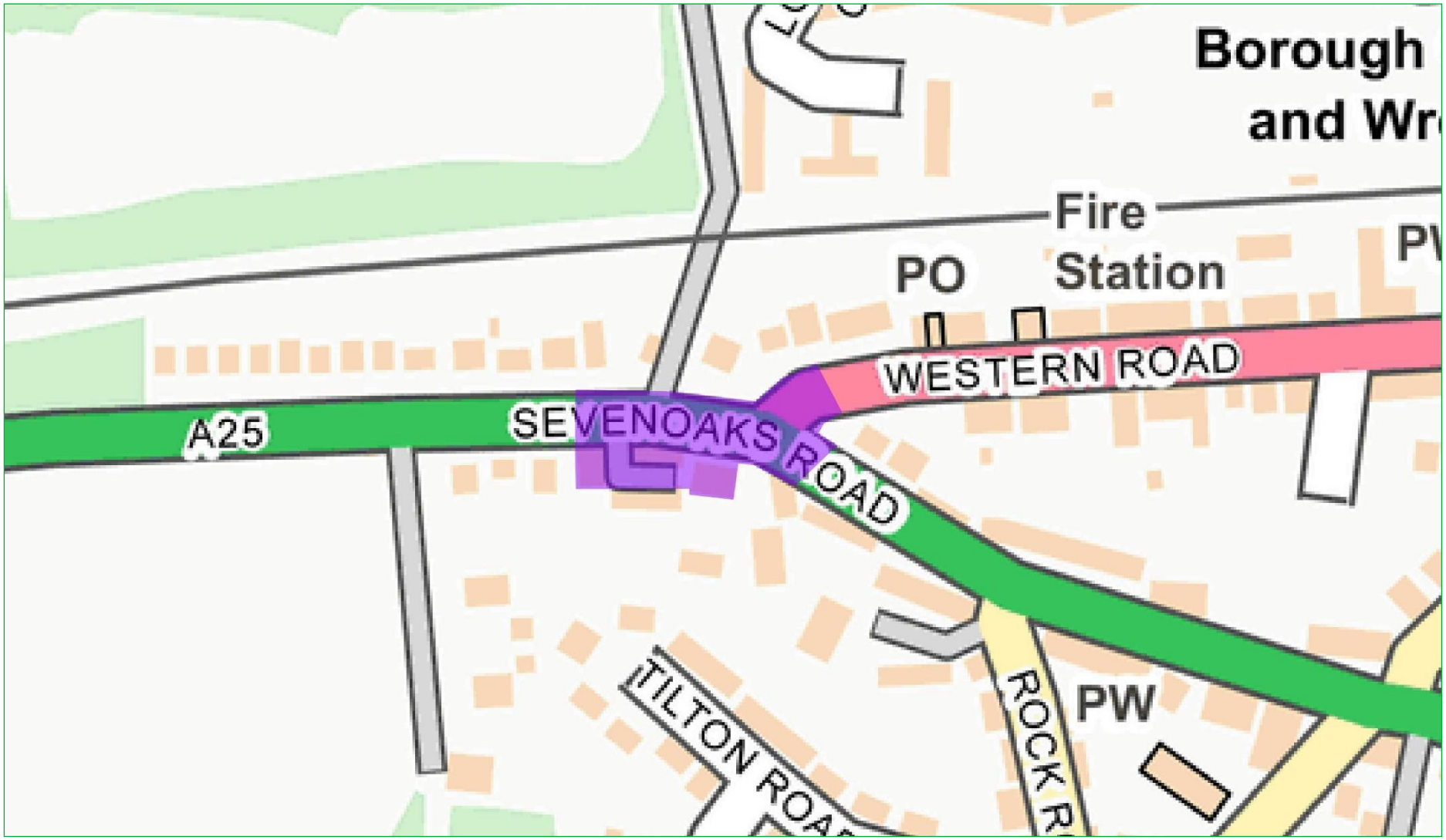


Annex 4

AQMA Borough Green existing



AQMA Borough Green proposed



TONBRIDGE & MALLING BOROUGH COUNCIL

STREET SCENE and ENVIRONMENT SERVICES ADVISORY BOARD

05 March 2020

Report of the Director of Planning, Housing & Environmental Health

Part 1- Public

Matters for Information

1 PRIORY WOOD, TONBRIDGE – LANDFILL GAS INVESTIGATION UPDATE

SUMMARY

1.1 In August 2019 TMBC began a yearlong detailed landfill gas investigation at the Priory Wood site in Tonbridge which now comprises a public open space owned and maintained by the Council. Seventeen new boreholes were installed across the site and Methane and Carbon Dioxide levels have been monitored fortnightly since then. During installation the core samples of each borehole were also sent off for analysis. Soil analysis has identified made ground in all locations with one borehole recording a single shard of asbestos cement at 0.5m depth and another borehole recording high Hydrocarbon levels at 2.8-3m depth. Given these depths there is considered to be no risk to health whilst the areas remain undisturbed. The first quarter gas monitoring report has highlighted hot spots of methane and carbon dioxide across the site but there is no evidence that these gases are migrating off site.

1.2 Background

1.2.1 The site known as Priory Wood is a closed landfill site which now consists of a public open space that is popular with dog walkers. The site lies to the southeast of Deakin Leas in Tonbridge and is bordered on its eastern and southern sides by the Tonbridge to Hastings railway line and the A21 respectively (See attached plan in **Annex 1**). The site was quarried before accepting waste between approximately 1956 and 1975.

1.2.2 Gas monitoring has been undertaken by TMBC since 1988 at a selection of boreholes. Over time monitoring boreholes have become lost by overgrown vegetation or unusable due to ground movements breaking connections, and before commencement of this study only 2 remained along with an additional monitoring point on the gas pump.

1.2.3 Prior to the appointment of Ecologia Ltd to carry out the site survey, Leap Environmental Ltd carried out a desktop study of the Priory Wood site. That study found that whilst there were no current peaks in landfill gas levels recorded at Priory Woods, there was a lack of monitoring coverage given only two boreholes remained

in use along with a monitoring point on the gas pump. The conclusions of the desktop study stated that there are potentially unacceptable risks from the perspective of Part 2A of the Environmental Protection Act 1990, relating primarily to elevated ground gas levels. It was recommended that due to the limitations in the data available, an intrusive investigation including the installation of new gas monitoring boreholes and an extended period of monitoring should be undertaken, to allow a robust gas risk assessment to be made.

1.2.4 Following a report to members in June 2019, Ecologia Ltd were appointed to carry out the detailed survey and began work in August 2019.

1.3 Current Progress

1.3.1 Soil Sample analysis

1.3.2 During the installation of the new boreholes to a depth of 3m, core samples were taken for laboratory analysis. A plan of the site showing the borehole locations along with their reference numbers is shown in **Annex 2**. Highlights of findings include;

- Made ground encountered across the site as expected.
- Domestic waste recorded within all boreholes except WS1 – 3 and WS12.
- A hydrocarbon odour was recorded within WS10, WS16 and WS17.
- One piece of asbestos cement was encountered within WS4 at a depth of 0.5m below ground level.
- Three exceedances of hydrocarbon values for Public Open Spaces, all recorded within WS17 at a depth of 2.8 to 3 meters below ground level.

1.3.3 With reference to those findings listed in 1.3.2 it is the view of the Councils Contaminated Land officer that given the depths at which exceedances were noted, no further action in respect of these soil analysis findings need to be taken so long as there is no further disturbance of the top soil in those areas.

1.4 Gas Pump Servicing

1.4.1 As part of the desktop study, Leap Environmental Identified that the gas pump installed as part of the original gas control measures on the site did not have a regular service contract. Landfill Systems Maintenance Ltd have now inspected the pump and advised it is in good working order. The company have been retained to carry out servicing in the future.

1.5 1st Quarter Gas Monitoring Results

1.5.1 The first quarter results submitted by Ecologia detail the results of 6 monitoring rounds between 29 August and 7 November 2019.

1.5.2 During the 6 rounds, the following peak conditions were noted.

- The Maximum Carbon Dioxide concentration was 50.5% in WS5 during round 6 (7 November).

- The maximum Methane concentration was 71.8% in WS9 during round 5 (29 October).

1.5.3 The results do not appear to show any correlation between changes in atmospheric pressure and concentrations in Methane or Carbon Dioxide.

1.5.4 The results show three potential areas (Hot Spots) of high levels of both Methane and Carbon Dioxide. These are located around WS4, WS5, WS9 and WS13. To the North West, East and South West of the site. All are to the East of the gas vent trench installed as part of the original remediation works in the early 1990's and there is no indication as this stage that gas is migrating across the site.

1.5.5 Although recorded concentrations are high in some locations, as there is no evidence of gas migration or elevated levels to the West of the gas vent trench towards residential properties on Deakin Leas, no further action other than the continuation of monitoring is recommended at this time.

1.6 Legal Implications

1.6.1 Part 2A of the Environmental Protection Act 1990 places a duty on all local councils to investigate where land in its area might have been contaminated because of the way it was used in the past or how it is currently used. The council then has to put any sites they find in order of priority based on the risk they might cause to human health or the wider environment. By beginning this detailed study, we have been doing this in line with our Contaminated Land Inspection Strategy.

1.6.2 Having identified a potential issue at this location, it is our duty to carry out further investigations. The initial intent of this investigation is to demonstrate that there are no significant issues that can be reasonably identified, in which case no further action need be taken other than an appropriate regime of future monitoring. Should the investigation demonstrate high levels of gas production which are migrating from the site, then we will then need to assess whether the gas is capable of entering homes, so further monitoring inside dwellings may be required in the future, which the Council would be required to fund.

1.6.3 On the conclusions of investigations and in the context of advice from our consultants and expert legal advice the Council will need to consider whether the site should be 'declared' under part 2A of the Contaminated Land regime and, if appropriate, develop a remedial strategy with affected homeowners.

1.7 Financial and Value for Money Considerations

1.7.1 No provision for the cost of these investigative works is, or could reasonably have been, specifically included in the Council's budget and funds for this initial study are being found from reserves. Should it be necessary to extend the nature of investigations to include residential properties then additional funds will need to be identified in due course.

1.7.2 The company retained 'Ecologia' have provided the cheapest quote and provided references including work for other Local Authorities, before work commenced.

1.8 Risk Assessment

1.8.1 Part of the investigation into potential contaminated land required under Part 2A of the Environmental Protection Act 1990 includes the creation of a detailed risk assessment for the site. The purpose of these works is to obtain sufficient data for a robust risk assessment to be created.

1.9 Policy Considerations

This investigation is in line with the Councils Contaminated Land inspection strategy updated in 2016 which can be found online at https://www.tmbc.gov.uk/services/environment-and-planning/pollution/pollution-control-contaminated-land.

The Director of Planning, Housing & Environmental Health confirms that the proposals contained in the recommendation(s), if approved, will fall within the Council's Budget and Policy Framework.

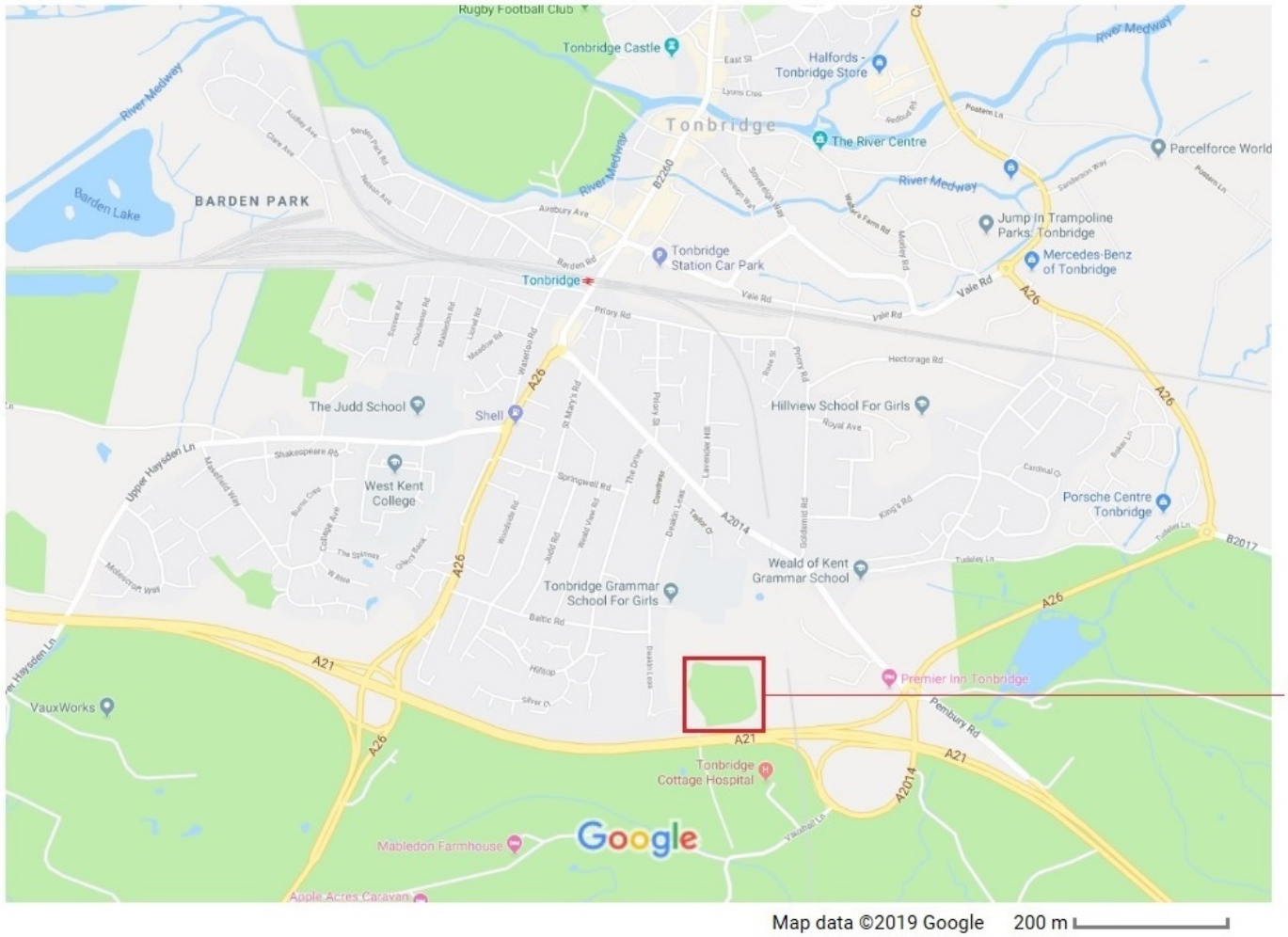
Background papers:

Nil

contact: Linda Hibbs
Crispin Kennard

Eleanor Hoyle
Director of Planning, Housing and Environmental Health

Priory Wood


Rugby Football Club
Tonbridge Castle
Halfords - Tonbridge Store
Tonbridge
The River Centre
Parcelforce World
River Medway
Barden Lake
BARDEN PARK
B2260
Jump In Trampoline Parks Tonbridge
Tonbridge Station Car Park
Mercedes-Benz of Tonbridge
Tonbridge
Vale Rd
A26
Priory Rd
Hectorage Rd
The Judd School
Shell
Hillview School For Girls
Upper Haysden Ln
West Kent College
Porsche Centre Tonbridge
A2014
B2017
Weald of Kent Grammar School
Tonbridge Grammar School For Girls
Baltic Rd
A21
Premier Inn Tonbridge
VauxWorks
Pembury Rd
Tonbridge Cottage Hospital
Mabledon Farmhouse
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Apple Acres Caravan
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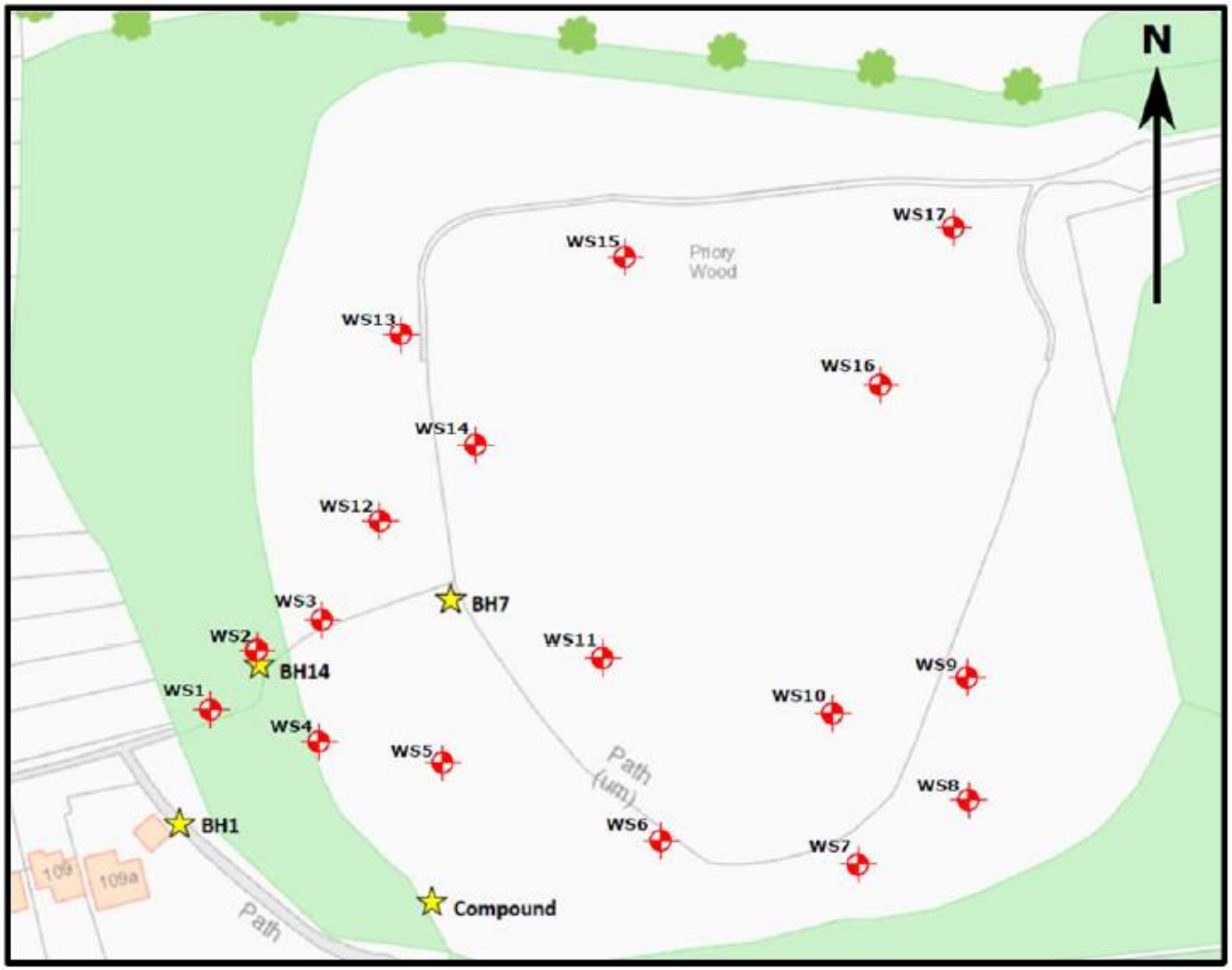

Plan 1: Gas Monitoring Well Locations

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Any other items which the Chairman decides are urgent due to special circumstances and of which notice has been given to the Chief Executive.

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The Chairman to move that the press and public be excluded from the remainder of the meeting during consideration of any items the publication of which would disclose exempt information.

ANY REPORTS APPEARING AFTER THIS PAGE CONTAIN EXEMPT INFORMATION

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Any other items which the Chairman decides are urgent due to special circumstances and of which notice has been given to the Chief Executive.

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