

## Bath & North East Somerset Council

MEETING/ DECISION MAKER:	<b>Cllr Bob Goodman, Cabinet Member for Development and Neighbourhoods</b>	
MEETING/ DECISION DATE:	<b>On or after 30<sup>th</sup> June 2018</b>	EXECUTIVE FORWARD PLAN REFERENCE:
		<b>E 3065</b>
TITLE:	Proposed boundary of the Air Quality Management Area in Farrington Gurney	
WARD:	High Littleton	
<b>AN OPEN PUBLIC ITEM</b>		
<p><b>List of attachments to this report:</b></p> <p>Appendix 1: Map of the proposed Air Quality Management Area boundary, pre consultation</p> <p>Appendix 2: Map of the proposed Air Quality Management Area boundary, post consultation</p> <p>Appendix 3: The National Air Quality Objectives for Nitrogen Dioxide</p> <p>Appendix 4: The Farrington Gurney 2017 provisional monitoring data</p> <p>Appendix 5: The Consultation Report</p>		

### 1 THE ISSUE

- 1.1 Under Part IV of the Environment Act 1995 local authorities are required to review and assess air quality within their area. Following a review of the air quality across the district an area within Farrington Gurney has been identified as exceeding the Government's annual average objective for Nitrogen Dioxide (NO<sub>2</sub>) concentrations (in Appendix 3). The 40 micrograms per cubic metre (µg/m<sup>3</sup>) annual average objective was exceeded at three diffusion tube locations in 2017, by 2 to 14 µg/m<sup>3</sup>. The authority is therefore required to declare an Air Quality Management Area (AQMA) for the area of exceedance in Farrington Gurney. A consultation exercise has been undertaken to obtain public views on the proposed AQMA, and to gauge agreement on its proposed boundary. The Cabinet Member is being asked to approve the recommended AQMA boundary.

### 2 RECOMMENDATION

The Cabinet Member is asked to;

- 2.1 Agree the proposed Air Quality Management Area (AQMA) boundary, which has been derived from the monitoring of Nitrogen Dioxide (NO<sub>2</sub>) in Farrington Gurney and through a public consultation.

### **3 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)**

3.1 The work undertaken for this project has been funded from existing budgets within Public Protection and Health Improvement.

### **4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL**

4.1 The Council is legally required under Part IV of the Environment Act 1995 to declare an Air Quality Management Area, due to exceedances of the National Air Quality Objectives for Nitrogen Dioxide in Farrington Gurney.

4.2 The Sustainable Community Strategy contains the ambition; 'To lead Bath and North East Somerset to an environmentally sustainable, low carbon and climate resilient future'. Reducing air pollution is a strategic issue that is addressed to achieve this. The action plan may also work in synergy with other issues, such as infrastructure planning, transport and green infrastructure.

4.3 Long and short term exposure to air pollution is known to have adverse effects on human health, and especially effects the most vulnerable. One of the six areas of focus as stated within the Council's Corporate Strategy 2016-2020 is 'Cleaner, greener and healthier communities'. Declaring an Air Quality Management Area and the subsequent development of an Air Quality Action Plan will positively contribute to this and is in line with the Council's 2020 vision and directorate plans.

### **5 THE REPORT**

5.1 The ongoing review and assessment of air quality in the Bath and North East Somerset Council district has identified an area in Farrington Gurney that exceeds the National Air Quality Objectives for Nitrogen Dioxide (NO<sub>2</sub>). The 40 µg/m<sup>3</sup> annual average objective was exceeded at three diffusion tube locations in 2017, by 2 to 14 µg/m<sup>3</sup>. In line with Part IV of the Environment Act 1995 the Council is required to declare an Air Quality Management Area here.

5.2 A public consultation exercise was carried out in accordance with Statutory Guidance issued by the Department for Environment, Food and Rural Affairs (Defra) – the Local Air Quality Management Policy Guidance (PG16). This consultation exercise focused on the boundary of the proposed AQMA and took place between Monday 19<sup>th</sup> February and Friday 23<sup>rd</sup> March 2018. Details and results from the consultation can be reviewed in Appendix 5: The Consultation Report.

5.3 Results from the consultation showed a 79% agreement with the proposed AQMA boundary. 5 requests were received to include the A362, which joins the A37 in Farrington Gurney, within the AQMA. In response to these views the proposed boundary has been altered.

5.4 A map of the proposed AQMA and its boundary pre and post consultation can be viewed in Appendix 1 and 2 respectively.

### **6 RATIONALE**

6.1 The Council has a statutory obligation under Part IV of the Environment Act 1995 to declare an Air Quality Management Area where objectives have been

exceeded. The proposed Air Quality Management Area is outlined in Appendix 2. This area includes an area along the A37 through Farrington Gurney which exceeds the 40 µg/m<sup>3</sup> annual average objective for Nitrogen Dioxide (NO<sub>2</sub>) concentrations; as annual averages of 42 µg/m<sup>3</sup>, 52 µg/m<sup>3</sup> and 54 µg/m<sup>3</sup> were recorded at the three exceeding diffusion tube locations in 2017.

## 7 OTHER OPTIONS CONSIDERED

- 7.1 Not to declare an Air Quality Management Area. This is not a viable option as the Council would be in breach of its duty under Part IV of the Environment Act 1995.
- 7.2 To declare the original Air Quality Management Area, which does not incorporate any part of the A362. This option is ruled out due to the views of the public which emerged during the consultation period. The altered boundary fully incorporates the A37/A362 junction and the vehicle queues which emanate east along the A362.

## 8 CONSULTATION

- 8.1 All parties were consulted in line with statutory guidance provided by the Department for Environment, Food and Rural Affairs (Defra) – the Local Air Quality Management Policy Guidance (PG16).
- 8.2 External consultees include: the Environment Agency, Highways England, All local authorities neighbouring Bath and North East Somerset Council, Other public authorities, Bodies representing local business interests and other organisations, the Farrington Gurney Parish Council and local residents.
- 8.3 Internal consultees include: the Ward Councillor, the Cabinet Member for Development and Neighbourhoods, the Cabinet Member for Transport and Environment, the Director of Public Health, Monitoring Officer, Section 151 Finance Officer, the Group Manager for Public Protection and Health Improvement, and other departments and staff.

## 9 RISK MANAGEMENT

- 9.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.

<b>Contact person</b>	<i>Lucy Boulton, 01225 396493</i>
<b>Background papers</b>	<i>None</i>
<b>Please contact the report author if you need to access this report in an alternative format</b>	

# Appendix 1

## Map of the proposed Air Quality Management Area boundary, pre consultation

### Proposed AQMA in Farrington Gurney

Author: N Courthold

Date: 16/11/17

Scale: 1:3000

Bath & North East  
Somerset Council



## Appendix 2

### Map of the proposed Air Quality Management Area boundary, post consultation

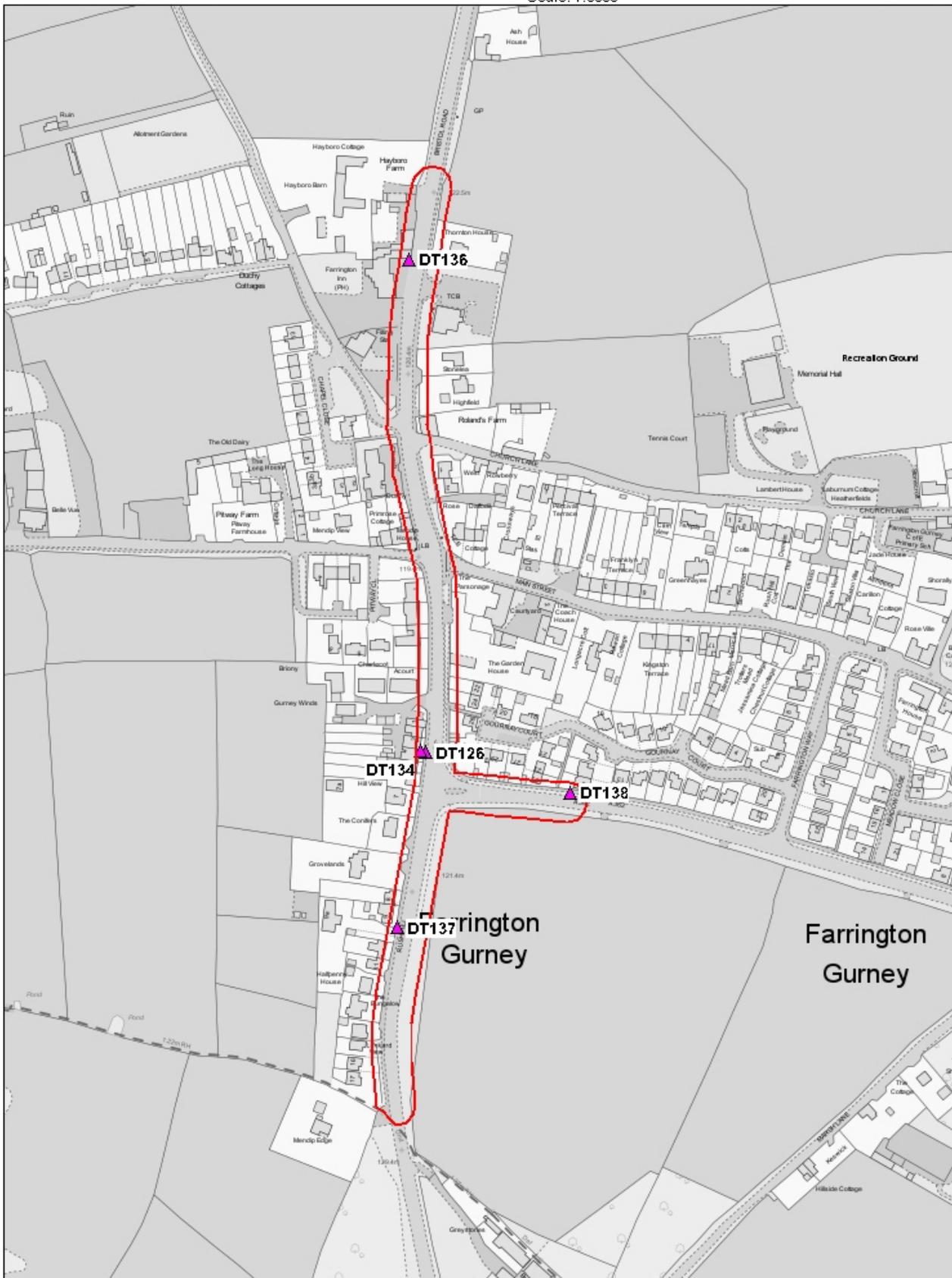
#### Proposed AQMA in Farrington Gurney Post consultation

Author: N Courthold

Date: 08/05/2018

Scale: 1:3000

Bath & North East  
Somerset Council



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**Appendix 3**  
**The National Air Quality Objectives for Nitrogen Dioxide**

<b>Objective</b>	<b>Concentration measured as</b>	<b>Date to be achieved by (and maintained thereafter)</b>
200 µg/m <sup>3</sup> (not to be exceeded more than 18 times a year)	1-hour mean	31.12.2005
40 µg/m <sup>3</sup>	Annual mean	31.12.2005

## Appendix 4

### The Farrington Gurney 2017 provisional monitoring data (awaiting peer review)

Site	Provisional data for 2017	Provisional data at Façade
DT126 – Farrington Gurney 1	<b>54</b>	<b>40</b>
DT134 – Farrington Gurney 2	<b>52</b>	<b>52</b>
DT136 – Farrington Gurney 3	<b>42</b>	<b>42</b>
DT137 – Farrington Gurney 4	28	22
DT138 – Farrington Gurney 5	39	32

Note: Nitrogen Dioxide (NO<sub>2</sub>) concentrations measured in µg/m<sup>3</sup>.

Exceedances of the NO<sub>2</sub> annual mean objective of 40 µg/m<sup>3</sup> are shown in **bold**.

# **Consultation Report:**

Air Quality Management Area  
(AQMA) in Farrington Gurney

June 2018

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<b>Report Reference Number</b>	E3065
<b>Date</b>	June 2018

## **Executive Summary**

In accordance with Part IV of the Environment Act 1995, where monitoring of air pollutants identifies exceedances of the National Air Quality Objectives an Air Quality Management Area (AQMA) must be designated.

Monitoring of Nitrogen Dioxide (NO<sub>2</sub>) has highlighted a stretch of A37 road through Farrington Gurney as exceeding the 40 µg/m<sup>3</sup> annual average objective. Therefore, Bath and North East Somerset Council have begun the declaration process for an AQMA in Farrington Gurney with a public consultation period on its proposed boundary. The consultation ran from Monday 19<sup>th</sup> February until Friday 23<sup>rd</sup> March 2018. Several methods of consultation were used throughout the consultation period including: an online survey, attendance at the village Parish Council meeting, a public drop in event, social media, delivery of leaflets and emailing key consultees.

Results taken from the online survey, showed a 79% agreement with the proposed AQMA boundary. There were 5 suggestions from respondents to include the A362 within the AQMA; this was reviewed post consultation and the proposed AQMA has been altered to fully incorporate the A37/A362 junction.

Post consultation, the formal agreement of the Air Quality Management Area boundary in Farrington Gurney will be a Cabinet Single Member Decision. The declaration of the area then follows a legal process, by which an order is created. During this time, the overall project moves on to Action Planning and drafting the Air Quality Action Plan (AQAP). Actions and measures suggested during this consultation on the proposed AQMA boundary will be considered, if viable, for the AQAP which is then, itself, subject to a further process of consultation.

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## 1 Introduction

Under Part IV of the Environment Act 1995, Local Authorities are required to review and assess air quality within their area. Bath and North East Somerset Council has a widespread monitoring network across the district. The results from monitoring air pollutants are compared to National Air Quality Objectives; which are derived from the European Directive limit values. The Department for Environment, Food and Rural Affairs (Defra) has issued guidance surrounding Local Air Quality Management (LAQM) for local authorities: Technical Guidance LAQM.TG16 and Policy Guidance LAQM.PG16.

Where exceedances of the National Air Quality Objectives occur, an Air Quality Management Area (AQMA) must be declared. Following this declaration, an Air Quality Action Plan (AQAP) is developed to identify actions, or measures, that will improve the air quality. The process to be followed is set out in the Defra guidance which local authorities are required to take account of.

Monitoring of the air pollutant Nitrogen Dioxide (NO<sub>2</sub>) within the Bath and North East Somerset district has identified an area of exceedance in the village of Farrington Gurney which is located along the A37 road (that runs from Bristol to Dorchester). Consequently, the Council is required to declare an AQMA in the village. A statutory period of public consultation forms part of the process; to agree the boundary and extent of the AQMA.

Setting the boundary of an AQMA involves an element of judgement as to the extent of the exceedance based on monitoring data, sources, receptors and other local factors. The dispersive nature of NO<sub>2</sub> results in concentrations quickly decreasing only a few metres from the source. Table 1 below lists the relevant exposures that must be considered when determining the boundary, along with the National Air Quality Objectives for Nitrogen Dioxide.

Table 1: The National Air Quality Objectives for NO<sub>2</sub>, and where they apply

Objective (concentration in micrograms per cubic metre, µg/m <sup>3</sup> )	Objectives should apply at:	Objectives should not generally apply at:
<p><b>Annual mean:</b> <b>40 µg/m<sup>3</sup></b></p>	<p>All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc.</p>	<p>Building façades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.</p>
<p><b>1-hour mean:</b> <b>200 µg/m<sup>3</sup> (18 exceedances per year)</b></p> <p><b>Guidance indicates that an annual mean NO<sub>2</sub> concentration greater than 60 µg/m<sup>3</sup> may indicate an exceedance of the 1-hour objective.</b></p>	<p>All locations where annual mean objective would apply, together with hotels. Gardens of residential properties. Kerbside sites (for example, pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor location where members of the public might reasonably be expected to spend one hour or more.</p>	<p>Kerbside sites where the public would not be expected to have regular access.</p>

This report discusses the air quality of Farrington Gurney, and details the public consultation which has taken place surrounding the proposed AQMA boundary. It does not cover appropriate actions and measures to be included in the Air Quality Action Plan in any detail as these will be covered in a later report. Responses from the consultation are discussed in Section 4.

## 2 The Issue

### 2.1 Background

The A37 through Farrington Gurney is relatively flat. No street canyons or avenue canyons, where high buildings trap air pollution in narrow stretches of road, are present (Vardoulakis *et al.* 2014).

The NO<sub>2</sub> monitoring in Farrington Gurney, which began in 2017, has identified two locations of exceedance. Firstly, the traffic light controlled junction where the A37 meets the A362. Secondly, near the Farrington Inn pub; this experiences high volumes of vehicular movement from the pub car park, the neighbouring petrol garage and the Co-operative supermarket car park opposite.

The main source of the NO<sub>2</sub> concentrations in Farrington Gurney is vehicle emissions. A small fraction of NO<sub>2</sub> is directly emitted from vehicle exhausts; however the majority forms in secondary reactions within the atmosphere.

### 2.2 The Monitoring

The NO<sub>2</sub> provisional monitoring data for 2017 is displayed in Table 2 below. The locations of the diffusion tube monitoring sites can be viewed in Figure 1.

*Table 2: Farrington Gurney 2017 provisional monitoring data (awaiting peer review)*

Site	Provisional data for 2017	Provisional data at Façade
DT126 – Farrington Gurney 1	<b>54</b>	<b>40</b>
DT134 – Farrington Gurney 2	<b>52</b>	<b>52</b>
DT136 – Farrington Gurney 3	<b>42</b>	<b>42</b>
DT137 – Farrington Gurney 4	28	22
DT138 – Farrington Gurney 5	39	32

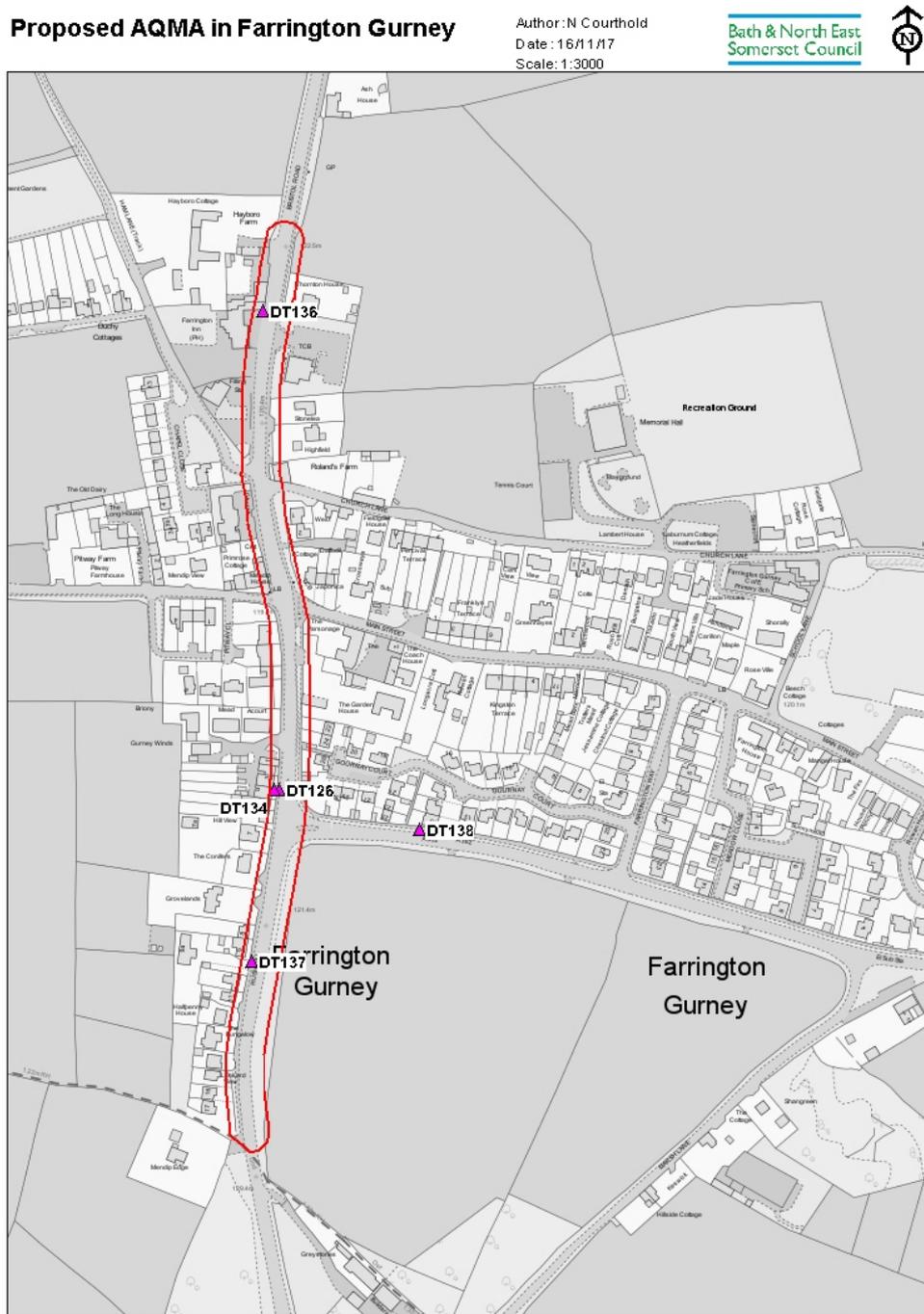
Note: Exceedances of the NO<sub>2</sub> annual mean objective of 40 µg/m<sup>3</sup> are shown in **bold**.

Based on the monitoring results and the exceedances of 40 µg/m<sup>3</sup>, the AQMA will be declared for the annual mean objective.

## 2.3 The Proposed Air Quality Management Area

The proposed AQMA boundary starts approximately 160 metres north of the A37/Church Lane junction and runs south along the A37 through Farrington Gurney to the Bath and North East Somerset Council boundary, as marked in red in Figure 1 below. The area will measure approximately 12 metres from the centre of the road, and incorporates part of the junction where the A362 meets the A37. Any relevant building façades touched by or within this boundary are included in the AQMA.

Figure 1: Map of the proposed AQMA boundary in Farrington Gurney



### **3 The Consultation**

The public consultation on the proposed Air Quality Management Area boundary ran from Monday 19<sup>th</sup> February, 9:00 to Friday 23<sup>rd</sup> March, 17:00.

The primary aims of the consultation were to:

- Gain opinion on the proposed Air Quality Management Area boundary
- Raise public awareness of the air quality issue within the village
- Encourage public engagement with the process; throughout the declaration of the Air Quality Management Area and then onto the Action Planning.

Within the Policy Guidance LAQM.PG16, 'Chapter 6: Consultation' lists the key statutory consultees in line with Schedule 11 of the Environment Act 1995. For England authorities, outside of London they are as follows:

- Defra;
- Environment Agency;
- All local authorities neighbouring the local authority in question;
- The County Council (if a District Council);
- Any National Park authority as appropriate;
- Other public authorities as appropriate; and
- Bodies representing local business interests and other organisations as appropriate.

An email was sent to all statutory consultees as listed above, and also to Highways England and the West of England Combined Authority (WECA), notifying them of the air quality issue in Temple Cloud and the subsequent AQMA boundary consultation. The relevant internal Bath and North East Somerset Council departments and consultees were also notified; including the Director of Public Health, the Ward Councillor, the Cabinet Member for Development and Neighbourhoods and the Cabinet Member for Transport and Environment.

The launch of the consultation deliberately coincided with a Parish Council meeting in the village. Two members of the Bath and North East Somerset Council Environmental

Monitoring team attended and presented at the Farrington Gurney Parish Council meeting on Monday 19<sup>th</sup> February. This marked the start of the consultation period. The presentation gave an overview of the air quality issue, as well as presenting the proposed AQMA boundary and explaining details about the declaration process and the consultation. Time for questions and answers was allocated at the end of the presentation.

An online survey was designed, which can be viewed in Appendix 2. The survey was kept as short as possible; to maximise response rate and focus the respondents attention onto a few key questions.

A drop in event was organised in the village at Farrington's Farm Shop Café on 14<sup>th</sup> March, 2 – 4 pm. This public engagement session enabled members of the public to chat with officers, raise concerns, and ask questions. The social media platforms Facebook and Twitter were used throughout the consultation period to advertise the drop in event, and also the survey and proposed AQMA boundary.

An information leaflet was designed and printed for the consultation to provide details of the air quality issues, the legislation, the survey and the drop in event. Approximately 100 of these leaflets were delivered to residences in Farrington Gurney; focusing on the houses near the A362 and along the A37. The leaflets were also available at the drop in event to take away. In addition, summary posters displaying the consultation details were put at several locations within the village; on available notice boards for example.

Finally, the local village journal was utilised and an article was prepared by the Bath and North East Somerset Council Communications team for the March Farrington Gurney journal.

Although this consultation period was solely on the proposed AQMA boundary, conversations and questions inevitably turned to proposed actions and measures that would help to improve the air quality. All suggestions and ideas were recorded and will be taken into consideration for the draft AQAP, if viable. However, the conclusions drawn from this report will focus on the AQMA boundary.

## 4 Consultation Responses

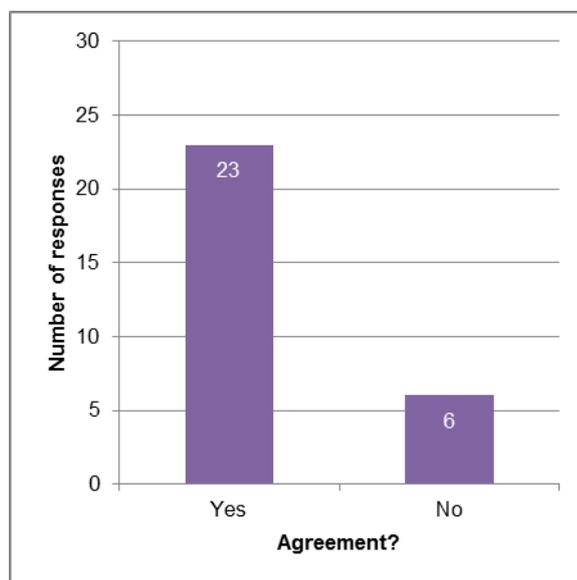
This section of the report discusses the consultation responses received. The majority of responses were received via the online survey. However, comments were also collected via email, and from face-to-face discussions throughout the consultation. The printable version of the online survey can be viewed in Appendix 2.

### 4.1 Online survey

The online survey received 29 responses, 23 in agreement and 6 not, as displayed below in Figure 2. The breakdown of responses by question is discussed below:

*Question 1: Do you agree with the proposed Air Quality Management Area boundary?*

	Yes	No
Number of responses	23	6
Percentage (%)	79	21



*Figure 2: Graphical representation of the agreement with the proposed AQMA*

Respondents who answered 'No' to question 1 were encouraged to provide the reasoning behind their answer. The full list of these reasons can be viewed in Appendix 1.

A common suggestion was to extend the AQMA to include the A362, which stretches to the east of Farrington Gurney from its junction with the A37. This was stated within 5 comments. In addition, 1 comment suggested the AQMA be extended more widely across the village.

The comments which requested the inclusion of the A362 road within the AQMA were considered post consultation. The diffusion tube DT138 does not record NO<sub>2</sub>

concentrations over the annual average objective of  $40 \mu\text{g}/\text{m}^3$ . However, to fully incorporate the A37/A362 junction, and the vehicle queues which emanate east along the A362, the proposed AQMA has been altered post consultation. The altered AQMA is as described in Section 2.3, and additionally extends 80 metres east of the junction to include the stretch of A362 road up to DT138. The width of the AQMA is 12 metres from the centre of the road at all points.

Actions within the Air Quality Action Plan are not allowed to favour one area at the expense of another; and actions cannot be implemented on the A37 if they negatively affect any part of the A362. Therefore, it is expected that measures within the AQAP will positively affect both roads. The planned development of the Somer Valley Enterprise Zone at Old Mills is also expected to have an impact on the A362, and this is discussed in more detail in Section 4.4.

### *Question 2: Any further comments*

Question 2 was designed to give respondents the opportunity to leave further comments and initial thoughts in regard to the Air Quality Action Plan. 18 comments were received. A full list of these comments can be viewed in Appendix 1.

The comments from the survey were reviewed, in order to pick out recurring themes or suggestions. These are displayed below in Table 3.

*Table 3: The themes and suggested actions from Question 2 of the online survey*

<b>Theme</b>	<b>Number of mentions</b>
Concerns of vehicle displacement, and rat running through the village	2
Volume of vehicles	2
Questions on the proposed actions that will help to improve the air quality	2
Health/general concerns	4
The Somer Valley Enterprise Zone	2
'Sunnyside' (the section of road near where Paulton Road meets the A362) and the queues here	1

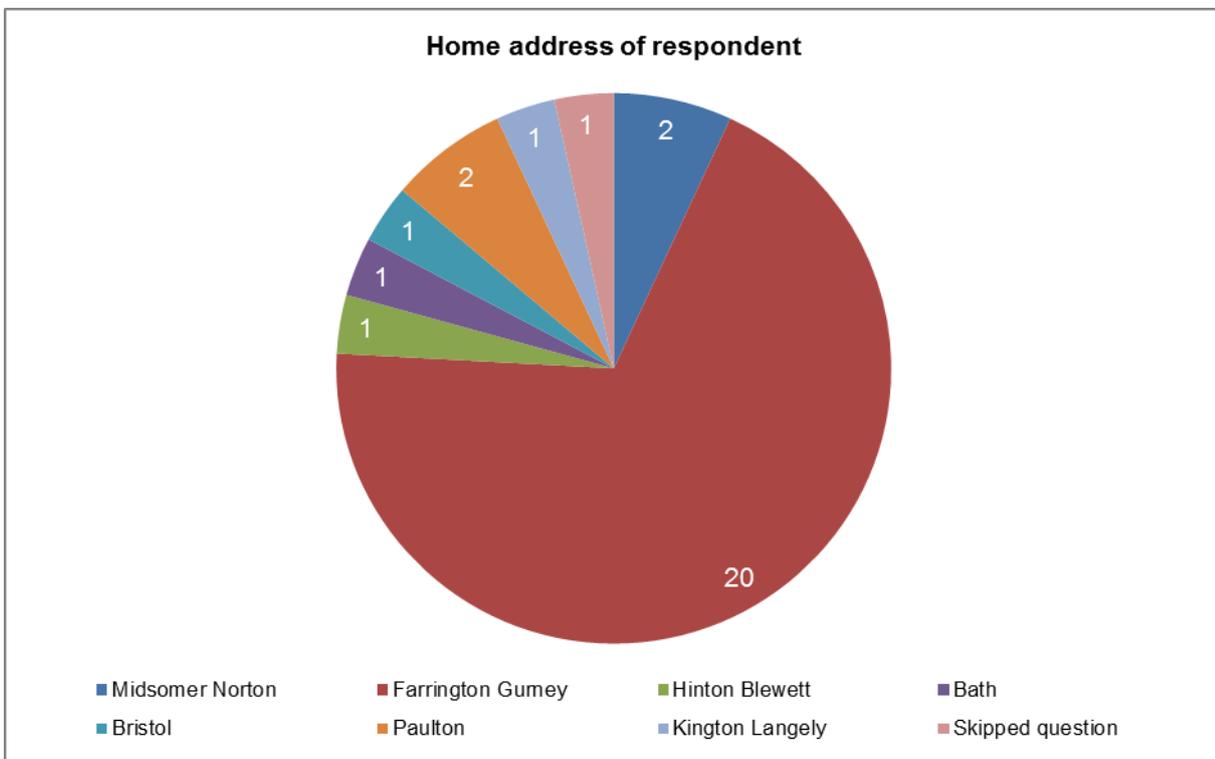
<b>Suggested action</b>	<b>Number of mentions</b>
A roundabout at the A37/A362 instead of traffic lights	2
A bypass	1
A362 speed reduction to 30mph	1
Widen the A362 junction to increase the space for vehicles that are travelling south on the A37	2
Tree planting and green screening	3
Review the traffic light signals to ease flow and minimise queuing	1

*Question 3: What is your home postcode?*

This question was designed to provide the home address of the respondent; to provide insight into whether the members of the public engaging with the consultation were from Farrington Gurney, or further afield.

This question had a 97% response rate with only 1 incidence where it was skipped; the breakdown of addresses can be reviewed in Figure 3 below. From the 28 known addresses, the majority of respondents lived in Farrington Gurney, 71%. As air quality issues can be very localised and unique to a certain location, as is the case in Farrington Gurney, it is unsurprising that many of the respondents are residents.

*Figure 3: Graphical representation of the home address of the respondents*



## 4.2 Google analytics

Google analytics was utilised to obtain the number of views on the Council's Farrington Gurney air quality website page; [www.bathnes.gov.uk/fgbreathe](http://www.bathnes.gov.uk/fgbreathe). The analytics were recorded every Friday throughout the consultation period. On each Friday the views noted are from the seven days prior to that date. As seen in Table 4 below, the number of views decreased throughout the consultation period. The spike in views at the beginning may be attributed to a few facts or events: the website page was new, the consultation details were newly released, key internal and external consultees were emailed at the start of the consultation period, and the Parish Council meeting took place.

*Table 4: The google analytics recorded throughout the consultation period*

<b>Date checked on</b>	<b>Views</b>
16 <sup>th</sup> February 2018	104
23 <sup>rd</sup> February 2018	57
2 <sup>nd</sup> March 2018	37
9 <sup>th</sup> March 2018	24
16 <sup>th</sup> March 2018	13
23 <sup>rd</sup> March 2018	7

### 4.3 Drop in event

The main purpose of this event was to gain public opinion on the proposed AQMA boundary. In addition, it gave members of the public an opportunity to raise concerns and ask questions. The event was positively received and 9 members of the public attended. Some lengthy discussions took place and Table 5 below summarises the feedback and comments received.

*Table 5: Summary table of suggestions, ideas and concerns which were raised*

<b>Suggestions, ideas and concerns</b>
Concerns over the queues which form at 'Sunnyside' – the section of road near where Paulton Road joins the A362
Comments on the lack of pavements on the side roads in Farrington Gurney
Talk of the Somer Valley Enterprise Zone regeneration; and concerns over the potential increase in vehicle numbers from this.
Including the A362 in the AQMA was discussed
Methods to reduce exposure were discussed; specifically for residents near the exceedances.
The budget for actions
The vehicle queues which form as a result of the traffic light signals, especially at peak times.
A suggestion to reduce the 40mph speed limit to 30mph along the A362; as this is seen to encourage acceleration around the corner onto the A362.
Replace the current three-way traffic lights with a roundabout
Actions to improve vehicle flow would be welcomed
Support for planting or green screening along the A362
Concerns of rat running through the village, if the traffic lights were made to favour the A37
Support for making the A362 wider at the A37/A362 junction; to ease queues and increase vehicles ability to turn left/head south.

As often occurred throughout the AQMA boundary consultation, discussions at the drop in event also covered proposed actions. This proved inevitable as members of the public were eager to know what action was proposed in Farrington Gurney to improve air quality.



The project team for the 'Development of Somer Valley Enterprise Zone – A37 to A362 Improvements Full Business Case' responded to the consultation on the proposed AQMA boundary in Farrington Gurney. The response can be viewed in Appendix 3.

To discuss, the proposed works to the A37/A362 junction including the widening of the westbound left turn lane on the A362 may result in improvements to air quality at the junction due to improved vehicle flow. Additionally, the provision of a cycling route or increased safety for cyclists along the A362 may encourage cycling as a mode of travel. The effect of this on vehicle trips is currently unknown due to the uncertainty of the Enterprise Zone's use; but it may be expected to have a positive influence on the frequency of active travel.

The Environmental Monitoring team will liaise with the project team for the development of the Somer Valley Enterprise Zone throughout the project. This input will form an action within the Air Quality Action Plan (AQAP).

## 5 Conclusions

The consultation was well received in Farrington Gurney. When reviewing the consultation responses and the proposed AQMA boundary, the 5 comments from the online survey which suggested including the A362 were considered. To fully incorporate the A37/A362 junction, and the vehicle queues which emanate east along the A362, the proposed AQMA has been altered post consultation. The proposed AQMA post consultation extends 80 metres east of the junction to include the stretch of A362 road up to DT138. It otherwise remains unchanged. A map of the altered AQMA can be viewed in Figure 5 on Page 20.

The proposed improvements to the A37/A362 junction and the provision of a cycle route along the A362 as part of the Somer Valley Enterprise Zone project could be expected to have a positive influence on the air quality at the junction due to improved traffic flow and uptake of active travel. The Environmental Monitoring team will liaise with the project team as part of the Farrington Gurney Air Quality Action Plan (AQAP).

However, there were concerns raised over the potential increase in traffic volumes as a result of the development. Monitoring along the A362 will continue, and NO<sub>2</sub> concentrations will continue to be reviewed. In addition, an extra diffusion tube is due to be installed further east of the current DT138. The section of road near the properties known as 'Sunnyside' was highlighted during the consultation, and therefore a suitable location near here is being considered.

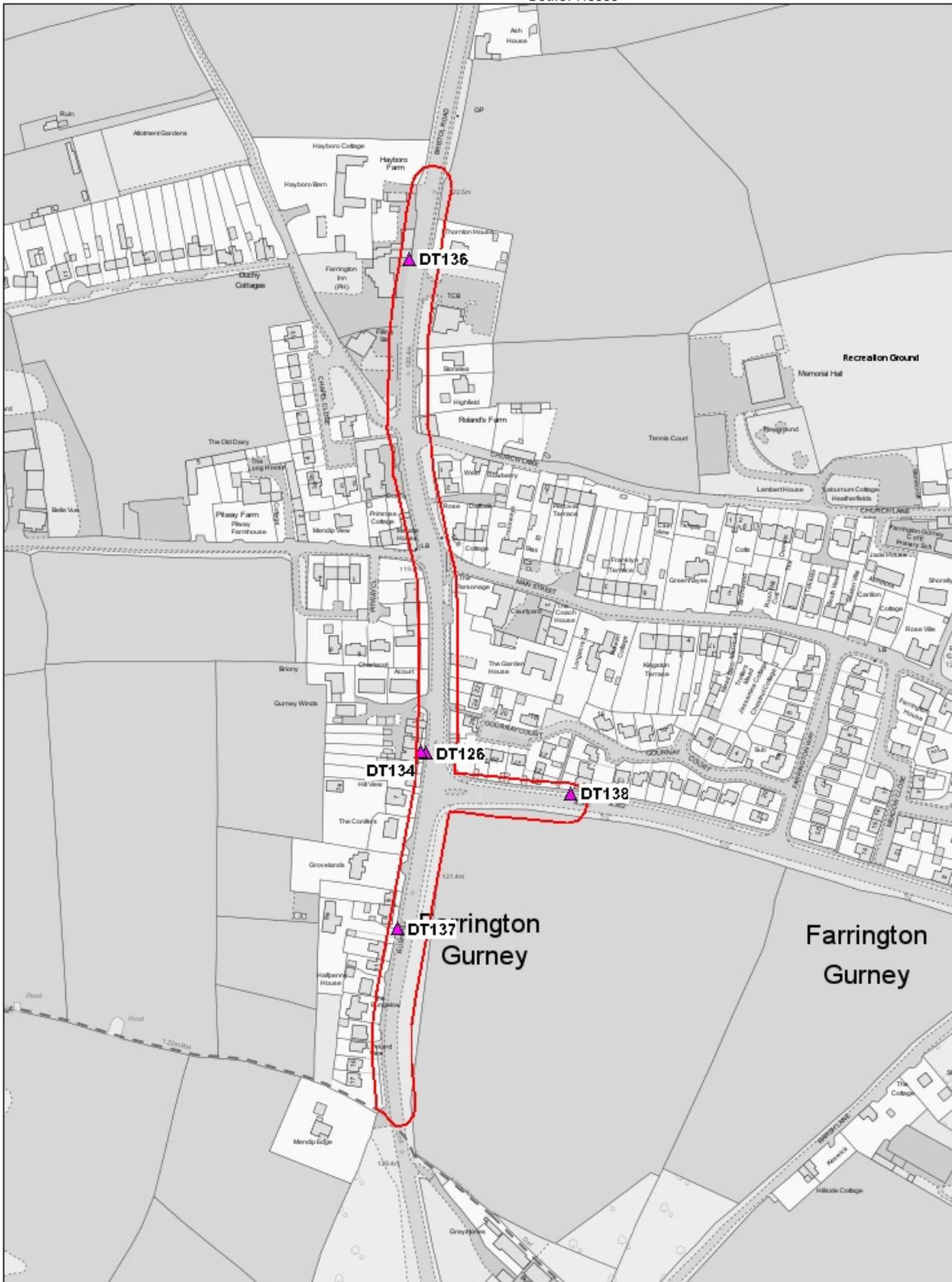
Post consultation, the formal agreement of the Air Quality Management Area boundary in Farrington Gurney will be a Cabinet Single Member Decision. The declaration of the area then follows a legal process, by which an order is created. During this time, the project moves on to drafting the AQAP; when potential actions and measures suggested during this consultation will be considered. They are recorded in this report for the sake of completeness. A second public consultation on the draft AQAP will take place later in the year.

Figure 5: Map of the proposed AQMA boundary in Farrington Gurney, post consultation

**Proposed AQMA in Farrington Gurney**  
**Post consultation**

Author: N Courthold  
 Date: 08/05/2018  
 Scale: 1:3000

Bath & North East  
 Somerset Council



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## 6 Abbreviations

$\mu\text{g}/\text{m}^3$	Micrograms per cubic metre
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
Defra	Department for Environment, Food and Rural Affairs
HGV	Heavy Goods Vehicle
LAQM	Local Air Quality Management
LAQM.PG16	Local Air Quality Management Policy Guidance
LAQM.TG16	Local Air Quality Management Technical Guidance
$\text{NO}_2$	Nitrogen Dioxide

## 7 References

Bath and North East Somerset Council (2018) Funding boost for Somer Valley Enterprise Zone at Old Mills; <http://www.bathnes.gov.uk/latestnews/funding-boost-somer-valley-enterprise-zone-old-mills>

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Jeanjean, A. P. R., Buccolieri, R., Eddy, J., Monks, P. S. & Leigh, R. J. (2017) Air quality affected by trees in real street canyons: The case of Marylebone neighbourhood in central London, *Urban Forestry & Urban Greening* 22, 41-53

Vardoulakis, S., Fisher, B. E. A., Pericleous, K. & Gonzalez-Flesca, N. (2014) Modelling air quality in street canyons: a review, *Atmospheric environment* 37 (2), 155-182

## Appendix 1: Comments from the Farrington Gurney online survey

### Question 1: Do you agree with the proposed Air Quality Management Area boundary?

Number	Comment	Suggestion/Theme
1	The air quality management area only essentially covers the road itself - I appreciate the pollution emanates from the road but this doesn't take into consideration that the wind is always from a S/W direction meaning the pollution blows across the majority of the houses. Also can the area cover the other A road that goes to Midsomer Norton as this is very busy too - there is also a grass verge here that trees could be planted on to deflect/absorb the fine particulate pollution - this would cheaply help address the problem	Include wider area over village Include A362 Tree planting on A362
2	Has the A362 through Farrington Gurney been considered? The A362 is also a high volume A road and the houses at the far end of the village along this road are much closer to the road side than those near the A37 junction. The proposals for the enterprise zone at Old Mills indicate there is going to be an up lift in the traffic count along the A362. The A362 is also the HGV route to MSN and Radstock. There is also traffic calming along the A362 which also increase the stop start traffic.	Include A362 Somer Valley Enterprise Zone concerns
3	Restricting the A37 will push traffic onto minor roads	Concerns of displacement
4	It's not big enough and should cover the MsN Road.	Include A362
5	There are often significant queues of polluting vehicles on the A362 between Farrington Way and the Junction, thus, this area should be within the AQMA boundary as well.	Include A362
6	Whilst I believe this area is likely to have the highest levels of NO2 in Farrington Gurney, I think it is also worth investigating the area along the A362 at Sunnyside where there is now increased congestion following the 'build-out' construction.	Include A362 'Sunnyside' concerns

## Question 2: Any further comments

Number	Comment	Suggestion/Theme
1	Nope	n/a
2	Both Temple Cloud and Farrington Gurney need a bypass. Although this is part of the strategic road network the existing road simply hasn't sufficient capacity to take the volume of traffic in Farrington Gurney and the size of traffic in Temple Cloud. Previously there was a bypass planned for Temple Cloud but this was removed from the Placemaking Plan following the Greater Bristol Transport Study which stated that a bypass would only provide local relief and would not be a strategic intervention. Now we're at the point where legally the Council are required to do something to improve air quality. Given this route is part of the strategic road network I don't see that small interventions will make the necessary reductions required, a bypass however would remove traffic from the village as well as having an additional benefit of improving community cohesion as the route of the A37 currently leads to community severance.	Bypass Volume of vehicles
3	What does an AQAP mean? To limit traffic in this area would have a significant detriment to the local area. I note that else where there are proposals to improve access to this section of road from the Somer Valley side	Somer Valley improvements Against limitations on vehicles
4	Thank you for helping with this, the traffic is very bad here with vehicles racing away from the lights all the time. The wind blows the pollution over the majority of houses and perhaps planting trees would help as there is sufficient space, I think it would be helpful if all the A roads were 30mph also (the road to MSN is a 40mph for some reason and this means that the cars race away trying to attain this speed or higher)	Volume of vehicles Tree planting A362 speed limit reduction
5	There has been no publicity around this apart from it being located on the council website.	Lack of publicity
6	N/A	n/a
7	I live 2 feet from the main road and the dirt and dust from vehicles coats the house and enters through the roadside double glazed windows.	General comment
8	What action is proposed?	Action
9	It is clearly very disappointing that areas of Farrington Gurney exceed the legal limits, considering that this exceedance figures equate to some London averages. As a local, living very close to the highest levels of air pollution, I would ask that air pollution data is measured in and around the village (e.g. Gournay Court, Pitway Lane, Ham Lane, perhaps by the school and farmshop) to gauge how isolated this is to main roads and to put residents at ease who live by the roads. This is a serious concern considering this is a rural village where you would hope levels would not exceed legal limits and it is not known how long this area has been breaching safe nitrogen oxide levels. I would also like to know measurements for other gases such as Carbon Dioxide.	Monitor around the rest of the village Concern over levels
10	No	n/a
11	The sequence/timing of the traffic lights both within Farrington Gurney and Hallatrow greatly increases the amount of traffic contained within the proposed area.	Review traffic light signals

	At peak times traffic is stationary.	
12	The health of people that live along this corridor should be considered above all other considerations (e.g. traffic simply moving through)	Health concerns
13	What actual measure will be taken?	Action
14	None	n/a
15	<p>a) A roundabout is needed at the junction of the A37/A39 trunk road &amp; its intersection with the A362 which is currently traffic-light controlled. All current research indicates that over a 24 hour period of mixed traffic loading on the junction a roundabout would lead to reduced overall queuing when compared with traffic lights. There is ample land available to install such a roundabout. As a resident living less than a 100 yards from the diffusion tubes measuring the highest concentration of Nitrogen Dioxide I can confirm that during the majority of the day the current traffic lights induce unnecessary queuing which must be a significant contributor to the high nitrogen dioxide readings. There is nothing more polluting than a stationary queuing vehicle with its engine running.</p> <p>b) As a secondary point it is an obvious observation that the current width of the A362 at its junction with the A37/A39 is too narrow. Traffic wishing to proceed southbound from the A362 has to queue behind traffic waiting to proceed northbound on the A37/A39. Roadworks some years ago widened the A362 at its approach to the junction but stupidly made the carriage way wide enough for one and a half cars but not two lanes. The evidence is there to be seen in the form of tyre marks on the grass verge as vehicles leave the A362 carriage way and mount the grass verge in their attempt to proceed southbound on the A37/A39. This would not happen &amp; traffic flow would be greatly improved if the A362 carriageway approaching the junction were just 3 - 4 feet wider!</p> <p>c) As a further point it is a well understood statistical fact that roundabouts are considerably safer to negotiate than traffic lights. The current traffic light-controlled junction has an appalling accident record thus the introduction of a roundabout to reduce pollution would provide the added bonus of improved safety.</p>	<p>Roundabout at A37/A362 junction</p> <p>Queues at the traffic lights</p> <p>Widen A362 at junction</p> <p>Increased safety with a roundabout</p>
16	<p>a) A roundabout is desperately needed at the junction of the A37/A39 trunk road &amp; its intersection with the A362 which is currently controlled by an inefficient and primitive set of traffic-lights. A roundabout is needed because all current research indicates that over a 24hour period of mixed traffic loading on any busy junction a roundabout leads to reduced overall queuing when compared with traffic lights. There is ample land available to install such a roundabout. As a resident living in the prevailing wind direction less than a 100 yards from the diffusion tubes measuring the highest concentration of Nitrogen Dioxide I can confirm that during the majority of the day the smell of toxic traffic fumes in the middle of the Village is significant and getting worse and worse. The current traffic lights induce unnecessary queuing throughout the day which must be a significant contributor to the high nitrogen dioxide readings. There is nothing more polluting than</p>	<p>Roundabout at A37/A362 junction</p> <p>Queues at the traffic lights</p> <p>Widen A362 at junction</p> <p>Increased safety with a roundabout</p>

	<p>an unnecessarily stationary queuing vehicle with its engine running.</p> <p>b) As a secondary point (in relation to the existing road layout at this junction) it is an obvious observation that the current width of the A362 at its junction with the A37/A39 is too narrow. Traffic wishing to proceed southbound from the A362 has to queue behind traffic waiting to proceed northbound on the A37/A39. Roadworks some years ago widened the A362 at its approach to the junction but stupidly made the carriage way only wide enough for one and a half cars but not two lanes. The evidence is there to be seen in the form of tyre marks on the grass verge as southbound vehicles often leave the A362 carriage way and mount the grass verge in their attempt to proceed southbound on the A37/A39. This would not happen &amp; traffic flow would be greatly improved if the A362 carriageway in its several hundred meters approaching the junction were just 3 - 4 feet wider such that there could be separate lanes for north and southbound traffic, therefore halving the queuing time for all these stationary vehicles.</p> <p>c) As a further point it is a well understood statistical fact that roundabouts are considerably safer to negotiate than traffic lights. The current traffic light-controlled junction in Farrington Gurney has an appalling accident record including fatalities caused by the difficult to understand, primitive, traffic light system currently in place, thus the introduction of a roundabout to reduce pollution would also provide the added bonus of improved safety.</p>	
17	<p>I am concerned that it has been suggested that in order to reduce the 45 micro grams currently recorded along the A37 traffic flow could be increased by altering the traffic light sequence to delay traffic on the A362. Currently it would appear there is 'room to play' with the levels recorded making this a possible option. However by increasing the waiting time along this stretch of road from the current approx time of a couple of minutes is likely to feel unreasonable to many motorists, cause significant hold up of traffic (currently can be queued for several hundred yards at peak times) and thereby result in motorists attempting to drive through the back lane of the village. This lane is single track, has essentially no pavement and passes the primary school. This is what used to happen before the instillation of the traffic lights and traffic was delayed on the A362. The idea of some sort of 'green screening' was mentioned at the drop-in session but this would only be possible on the east side of the road.</p>	<p>Concerns over rat running if the traffic signals are altered to prioritise the A37 over the A362 Green screening on east side</p>
18	<p>Traffic has increased dramatically over the last 5 years and it is a worry as the primary school is so near.</p>	<p>General concerns</p>

## Appendix 2: Farrington Gurney online survey

Welcome to the consultation...

#### Background

Bath and North East Somerset (BANES) Council is legally required to review air quality under Part IV of The Environment Act 1995.

We monitor the air pollutant Nitrogen Dioxide (NO<sub>2</sub>) because of its known adverse effects on human health.

Motor vehicles are the dominant source of NO<sub>2</sub>.

There are two **National Air Quality Objectives** for NO<sub>2</sub> concentrations;

Objective	Micrograms per cubic metre (µg/m <sup>3</sup> )
1-hour average	200 (18 exceedances per year)
Annual average	40

Where exceedances of these objectives occur, we are required to declare an Air Quality Management Area (AQMA). Following the declaration of an AQMA an Air Quality Action Plan (AQAP) is developed to identify actions to reduce the NO<sub>2</sub> concentrations.

#### Farrington Gurney

There have been consistent exceedances of the annual average NO<sub>2</sub> objective. As a result an AQMA will be declared.

The proposed AQMA boundary is marked in red on the map below.

#### Key

DT = Diffusion tube, monitor NO<sub>2</sub> concentrations

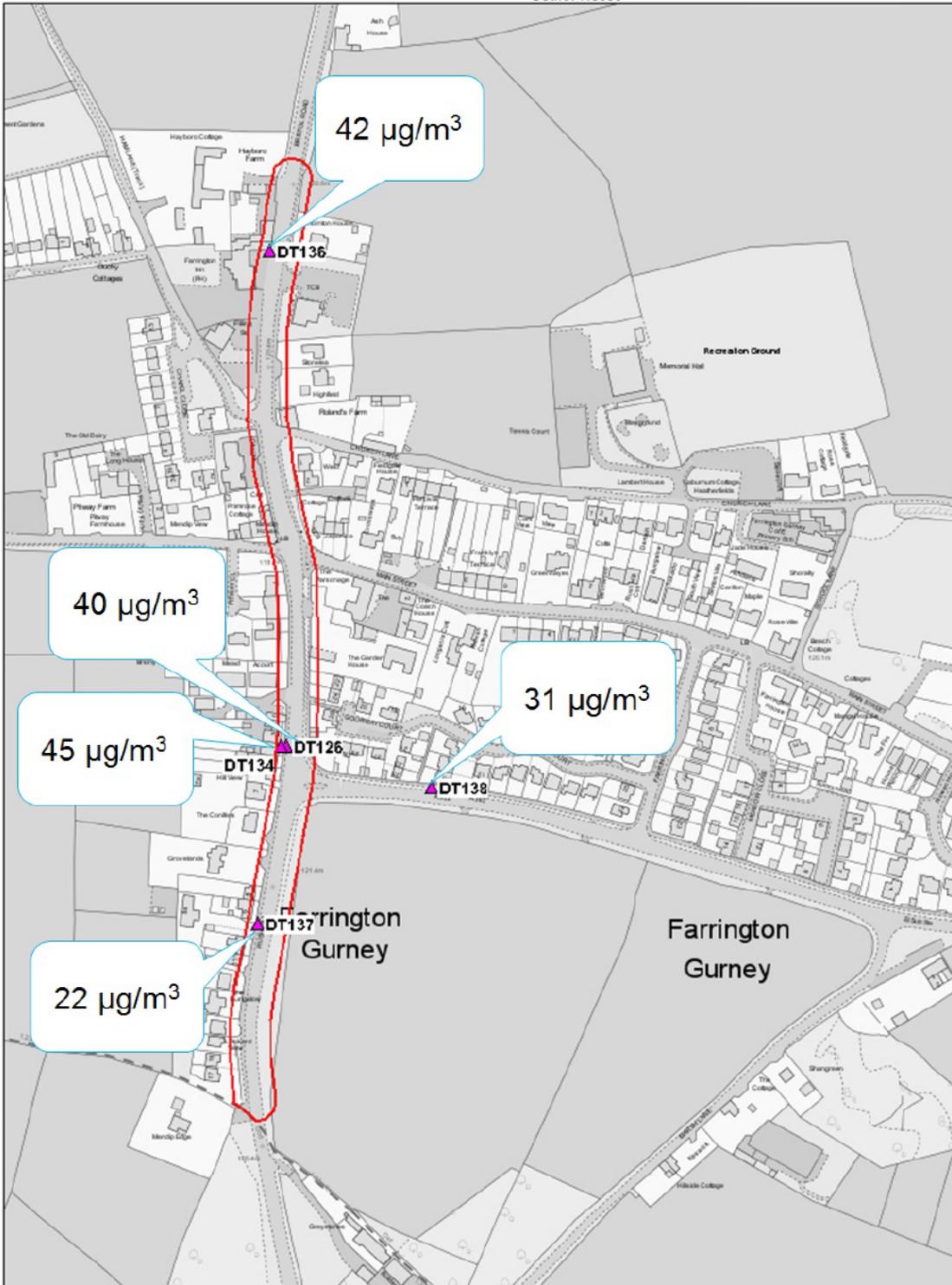
Speech bubble values = Provisional annual average 2017 monitoring data (adjusted to the nearest exposure) at given location

# The proposed AQMA boundary

## Proposed AQMA in Farrington Gurney

Author: N Courthold  
Date: 16/11/17  
Scale: 1:3000

Bath & North East  
Somerset Council



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\* 1. Do you agree with the proposed Air Quality Management Area boundary?

- Yes
- No, because...

Later in 2018 we will be launching a further public consultation, that will relate to the draft Air Quality Action Plan.

We will be asking for your thoughts and suggestions then, but if you have any immediate thoughts please comment below.

2. Any further comments

3. What is your home postcode? (this will be used for survey analysis only, not communications)

Many thanks for taking the time to respond.

Environmental Monitoring Team  
Environmental\_Monitoring@bathnes.gov.uk

[www.bathnes.gov.uk/fgbreathe](http://www.bathnes.gov.uk/fgbreathe)

### **Appendix 3: Consultation response from the 'Development of Somer Valley Enterprise Zone – A37 to A362 Improvements Full Business Case' project team**

“As such we do not have any views on the proposed AQMA boundaries but we would like to inform you of our scheme in development that may be relevant to the AQMA.

Under the auspices of the development of the Somer Valley Enterprise Zone being led by the Regeneration team, the Highways department has obtained WECA funding to develop a business case for improvements to the A362 between its junction with the A37 (in Farrington Gurney) and the 'Old Mills' site west of Midsomer Norton.

These improvements are intended to mitigate changes in trip generation and thus delays etc. experienced by drivers on the A362 arising from creation of the Enterprise Zone. It would ultimately be for the Regeneration team to comment on the nature of that trip generation however this would be difficult at this stage given the composition and uses of the site are not finalised.

We intend that the improvements will also increase the attractiveness of non-car modes of travel particularly cycling along the route, which may also affect (reduce) levels of motorised traffic on the A362 compared to the non-intervention scenario.

Specifically in terms of the proposed AQMA our preliminary design immediately to the east of the A37/A362 junction (and outside the proposed AQMA boundary) includes widening of the westbound left turn lane to increase junction capacity (drawing can be supplied to you on request). In addition alterations to the signal timings but possibly also phasing/sequencing, thereby affecting traffic flows, behaviour etc. within the proposed AQMA may be considered.

The changes to the signalled junction will optimise the capacity of the junction in order to optimise traffic flows and minimise traffic delays which should be beneficial to air quality.”