



MERTHYR TYDFIL
County Borough Council

Cyngor Bwrdeistref Sirol
MERTHYR TUDFUL

Merthyr Tydfil County Borough Council Air Quality Action Plan

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

2018

Merthyr Tydfil County Borough Council

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Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Merthyr Tydfil between 2018 and **2020**.

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³. Merthyr Tydfil County Borough Council is committed to reducing the exposure of people in Merthyr Tydfil to poor air quality in order to improve health.

The potential actions considered may be grouped under the following eight broad topics. Those which have resulted in the development of proposed actions, additional to the Council's normal operating activities, are marked in bold:

- Alternatives to private vehicle use
- Freight and delivery management
- Policy guidance and development control
- Promoting low emission transport
- **Promoting travel alternatives**
- **Transport planning and infrastructure**
- **Traffic management**
- Vehicle fleet efficiency

Whilst our main aim has been to reduce traffic movement in the Twynnyrodyn Road AQMA we have sought to achieve this primarily by modifying the town centre transport infrastructure to provide more direct traffic routes and lower traffic congestion. Doing so reduces journey times and distances overall; producing a wider reduction in vehicle emissions, and public exposure to them, rather than just in the AQMA. Other, more localised, methods of reducing exposure to traffic pollution in the

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

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AQMA have also been considered and, where considered viable, offered for public consultation. Our key priorities, detailed in Section 3.5 below, were firstly local road traffic emissions and, secondly, general town centre traffic emissions..

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional and central government on policies and issues beyond Merthyr Tydfil's direct influence.

Responsibilities and Commitment

This AQAP was prepared by the Environmental Health Department of Merthyr Tydfil Council with the support and agreement of officers of the following departments:

Highways Engineering

Planning and Development

Countryside Planning

Fleet Management

Town Centre Regeneration

The consultation options of the draft AQAP were approved for issue by:

Cabinet on 7th February 2018 and Full Council on 7th March 2018. The finalised AQAP was presented to Full Council on 27th June 2018 for approval for submission to WG and DEFRA.

This AQAP is a component of the Councils Environmental Wellbeing Objective and will be subject to regular review by the Councils scrutiny process. Progress each year will also be reported in the Annual Status Reports (ASRs) produced by Merthyr Tydfil, as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to Llewellyn Patrick at:

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1 Introduction

This report outlines the actions the Merthyr Tydfil County Borough Council will deliver between 2018 and 2020 to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to Merthyr Tydfil.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Merthyr Tydfil's air quality ASR.

2 Summary of Current Air Quality in Merthyr Tydfil

Air quality in the Borough has been monitored for many years and is generally good. Being a semi-urban area surrounded by countryside and with no significantly polluting industries all but one of the national air quality objectives are met.

However, the Borough has a number of trunk roads running through it and several key road links carry a substantial volume of road traffic. The Council's annual Air Quality Progress Reports, including the most recent 2017 report, identify road vehicle emissions of nitrogen dioxide as a significant air pollutant.

Due to the detection of exceedances of the nitrogen dioxide annual mean air quality objective in the Twynyrodyn Road area an air quality management area (AQMA) was declared on 30th January 2017.

Diffusion tube monitoring in 2016 established that nitrogen dioxide concentrations continued to either exceed the annual mean air quality objective, or be within 10% of it, at several locations in the vicinity of 55 Twynyrodyn Road. All sites of concern are within the declared AQMA.

The exceedance of the air quality objective in this area is the specific reason for the development of this action plan.

3 Merthyr Tydfil's Air Quality Priorities

In 2016 the Council commissioned Fluidyn France, specialists in air pollution dispersion modelling, to model the distribution of a number of air pollutants across the town centre and Twynyrodyn Road. The model output corresponded with the air pollution monitoring results available at the time and confirmed the Borough had a very localised air quality problem resulting from nitrogen dioxide emissions.

Their study included an examination of the general background nitrogen dioxide level in the area of the town centre and of the local background level resulting from space heating and other local sources. This clearly established that pollutant levels in the area of exceedance were very substantially a result of vehicles using Twynyrodyn Road.

The Council's approach to dealing with the air quality exceedance has therefore primarily centred on reducing emissions from this traffic. Examination of the composition of the traffic revealed it to consist largely of private cars and light goods vehicles with a small percentage of heavy goods vehicles and passenger service vehicles. The small proportion of the latter ruled out serious consideration of altering the composition of the traffic as doing so could be expected to have comparatively little effect.

Reducing the numbers of vehicles and improving the manner in which they are driven in the affected area therefore became the main priority. The distance between the emission point (the general position of the line of vehicle exhaust pipes) and the receptors (taken as being the frontages of the houses in this case) has a significant bearing on the amount of pollution the receptors are exposed to. This therefore became a second focus of attention.

The traditional approach to reducing the numbers of vehicles on a particular section of road has been to provide a diversionary route. This has been considered and one of the options proposed suggests a diversionary route. However, whilst employing a diversionary route would reduce traffic and therefore emissions in the area of exceedance it necessarily increases traffic and emissions on the diversionary route. In this instance both areas would have pollutant concentrations below the objective level but, as the diversionary route runs through a residential area, more people will be exposed to the pollutant. Since there is no established threshold level of nitrogen

dioxide exposure below which it produces no adverse effects this is not an ideal solution.

A better solution involves lowering nitrogen dioxide concentrations in the area of exceedance whilst also lowering emissions overall. Where changing the composition of the vehicle fleet is not an option this requires the reduction of travelling distances and times. The majority of the Council's efforts have therefore concentrated on examining the source of the traffic on Twynyrodyn Road to determine why it is using this link and possibly provide more direct routes. If these alternative routes have fewer people living in close proximity then public exposure will be reduced as well as emissions. Several options involving changes to the town centre traffic flows were found to have potential for achieving this. The options finally put forward were chosen on the basis that they meet the air quality requirements whilst providing other beneficial effects and minimising other adverse effects.

Other methods of reducing traffic in the AQMA have, and are still being, considered but whilst these have some potential their expected impact is likely to be small. Such measures include finding alternative routes for the Council vehicle fleet currently using the area.

Traffic calming measures have already been put in place close to no. 55 Twynyrodyn Road with the intention of dissuading drivers from accelerating uphill in the area where nitrogen dioxide concentrations are high. This appears to have had a measurable beneficial effect without causing a significant adverse effect on the other side of the calming. Unfortunately, due to the size of the area and current traffic volumes, further calming might cause a deterioration, rather than an added improvement, in air quality. Being unpredictable in effect in this location, further calming of this nature has not been pursued.

When the traffic calming was being provided the road centre-line was moved by approximately half a metre away from the facades of the houses on the uphill side of the carriageway. This was intended to increase the distance between the vehicle exhausts and the houses and thus increase the opportunity for the dispersion of the vehicle emissions. The detected improvement in air quality is expected to have resulted in part from this measure and in this case there is potential to obtain a further improvement by extending it.

The proposal involving the provision of a chicane on the uphill side of the carriageway is intended to move the vehicle exhausts even further toward the centre of the space between the houses on either side of the road.

Fluidyn's modelling of the pollutant concentrations resulting from the provision of a chicane showed a longer chicane would have a greater beneficial effect than a short chicane. This is to some extent a result of improving dispersion over a longer period of time but longer chicanes will also have a greater effect on traffic flows as, for road safety reasons, they require the provision of traffic lights at each end of the chicane. In this instance, this is more likely as there is a bend in the road close to where the chicane would be installed and, to improve road safety for pedestrians, a crossing may also be provided.

3.1 Public Health Context

Local Air Quality Management Policy Guidance (PG16) and Local Air Quality Management Technical Guidance LAQM.TG16 provide advice on the relationship between air quality and public health.

These refer particularly to exposure to fine particulates which is another type of air pollutant closely associated with emissions from road vehicles. Although particulate concentrations were modelled by Fluidyn France and not found to be present at excessive levels in the study areas these are also pollutants with no identified exposure threshold. Any action resulting in reduced public exposure to particulates will therefore improve public health.

The measures considered for in this Action Plan for reducing nitrogen dioxide emissions also have the added benefit of reducing particulate emissions.

Further details on the effects of air pollution on mortality from cardiovascular and respiratory conditions, including lung cancer, may be found in the report published in 2010 by the Committee on the Medical Effects of Air Pollutants (COMEAP) entitled 'The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom'. This estimated the mortality burden of existing levels of air pollution on the population of the UK as being equivalent to 29,000 deaths and an associated loss to the population of 340,000 life-years.

COMEAP have considered the health effects of exposure to a number of other air pollutants including nitrogen dioxide. Their reports and statements on these issues may be found at <https://www.gov.uk/government/collections/comeap-reports>

3.2 Planning and Policy Context

In Merthyr Tydfil, although there is no specific planning policy for air quality, the Local Development Plan requires protection and enhancement of the environment. To this end the Environmental Health Department, as a statutory consultee, takes the impact of proposed developments on the environment including air quality into consideration. Where deterioration in air quality is considered possible the Environmental Health Department will, as part of the planning process, require an air quality assessment. Any development identified as being likely to result in a breach of the air quality standards would be objected to. Planning conditions designed to protect air quality are recommended to Development Control as necessary.

3.3 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within Merthyr Tydfil's area.

A source apportionment exercise was carried out by Merthyr Tydfil in 2016. This identified that within the AQMA, the percentage source contributions were as follows:

Background nitrogen dioxide (from heating and general town traffic)	27%
Local road traffic emissions	73%

3.4 Required Reduction in Emissions

The Council's 2017 Air Quality Progress Report identified a required reduction in nitrogen dioxide concentration of 8.5ug/m3.

3.5 Key Priorities

Based on the results of the source apportionment exercise referred to in Section 3.3 the following areas were prioritised for action.

- Priority 1 – Local road traffic emissions
- Priority 2 – General town traffic emissions

4 Development and Implementation of the Merthyr Tydfil AQAP

4.1 Consultation and Stakeholder Engagement

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

- Via information distributed directly to residents and traders in the AQMA and in areas likely to be affected by Action Plan proposals
- Through direct consultation with specific government and trade bodies.
- Via detailed information placed on the Merthyr Council website
- Through articles placed in local newspaper and social media
- Through meetings with stakeholders at drop-in centres and online question and answer sessions

The response to our consultation stakeholder engagement will be summarised in Appendix A of the finalised report.

Table 4.1 – Consultation Undertaken

Yes/No	Consultee
Yes	the Secretary of State
Yes	Natural Resources Wales
Yes	the highways authority
Yes	all neighbouring local authorities
Yes	other public authorities as appropriate, such as Public Health officials
Yes	bodies representing local business interests and other organisations as appropriate

4.2 Steering Group

The Council's Steering Group has been led by the Deputy Chief Executive with primary input from Environmental Health and Highways Engineering officers. Other specialist officers have been consulted at various points as their expertise in specific areas has been needed. These include Planning and Development, Countryside Planning, Waste Management and Fleet Management, Town Centre Regeneration and Development.

Meetings of group members have been organised on an ad hoc basis but larger group meetings under the Chairmanship of the Deputy Chief Executive were held on a fortnightly basis as the draft AQAP approached the final stages of development.

Individual members of the group have consulted external bodies and specialists at certain points as specific issues have arisen. These include consultants in highways issues and public health specialists.

Elected members have contributed significantly to the progress and development of the draft Action Plan, providing knowledge and input from constituents and trade bodies.

5 AQAP Measures

Table 5.1 shows the Merthyr Tydfil AQAP measures. It contains:

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

NB: Please see future ASRs for regular annual updates on implementation of these measures

Table 5.1 – Air Quality Action Plan Measures

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	Reversal of one-way traffic on both Pontmorlais High Street and Church Street.	Transport Planning and Infrastructure	Strategic highway improvements	MTCBC	Completed	Application for Traffic Order in September 2018. Construction work to commence March 2019. Initial assessment of traffic flows on High Street and Twynyrodyn Road June 2019. Implementation of secondary measures if necessary. Initial assessment of air quality monitoring results for the High Street and Twynyrodyn Road March 2020.	Traffic reduction on Twynyrodyn Road.	10ug/m ³	Feasibility study completed. Implementation agreed in principle subject to consultation response.	Construction work by April 2019	See 'Draft Air Quality Action Planning Consultation' in Appendix D for details.

Appendix A: Response to Consultation

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

Consultee	Category	Response
Local residents, traders and other interested parties.	General Public	94% in favour of reversing the direction of traffic on Pontmorlais High Street (51% of these in favour of reversing the direction of traffic on Church Street and 43% in favour of opening this link to two-way traffic). 3% in favour of a chicane on Twynyrodyn Road. 3% in favour of a diversionary route for traffic around the affected section of Twynyrodyn Road.
Public Health Wales	Public authority	In favour of reversing the direction of traffic on Pontmorlais High Street
Cwm Taf Health Board	Public authority	In favour of reversing the direction of traffic on Pontmorlais High Street
Neighbouring local authorities	Public authorities	No adverse response.
Traffic Wales	the Highways authority	No adverse response.
Natural Resources Wales	Public authority	No adverse response.
Secretary of State		No adverse response.
Noise Abatement Society		No adverse response.
Dawn Bowden AM	Elected representative	No adverse response.
Gerald Jones MP	Elected representative	No adverse response.

AQMA Consultation Process 16 March – 08 June 2018

Mail Drop

112 letters had been sent out in January 2017 to declare the AQMA.

515 letters were sent out in March 2018 advising residents in the AQMA and diversionary routes of the public consultation and a further 11 letters were sent to elected representatives, statutory consultees, public authorities and other bodies. These letters provided links to further details available on-line and details of how to obtain this information through other means.

Figure A.1 – Embedded Copy of Public Consultation Letter

Ellis Cooper BSc. (Hons) Dirprwy Brif Weithredwr Deputy Chief Executive	Civic Centre, Castle Street, Merthyr Tydfil, CF47 8AN Canolfan Ddinesig, Stryd y Castell, Merthyr Tudful, CF47 8AN
The Occupier Address, Merthyr Tydfil.	Tel/fon: (01685) 725000 Fax/Ffacs: (01685) 722146 www.merthyr.gov.uk
Postcode.	
Dyddiad/Date:	
Ein Cyt/Our Ref. : Eich Cyt/Your Ref.:	Llinell Unlonyrchol/Direct Line: Gofynnwch am/Please Ask For : E-Bost/E-mail:
Dear Sir/Madam,	
Public Consultation on Air Quality Action Plan for the Twynroddyn Air Quality Management Area.	
You may be aware that on 30th January 2017 the Council declared an Air Quality Management Area (AQMA) after finding that the air quality on a section of Twynroddyn Road did not meet national air quality standards.	
After declaring an AQMA the Council is required to consider methods of improving the air quality in the affected area and to consult the public on its findings. During the last twelve months a wide range of measures has been considered but only three of these are expected to be capable of improving the air quality without causing significant adverse effects elsewhere.	
These measures are;	
1. To reduce the volume of traffic on Twynroddyn Road as a whole by providing an alternative northbound route for vehicles using the roundabout outside Tesco, 2. To reduce the volume of traffic on the section of Twynroddyn Road where the air quality is poor by closing the road to west-bound traffic at Queens Road. West-bound traffic leaving at Queens Road would be able to re-join Twynroddyn Road via Windsor Terrace. 3. To install a chicane on the uphill carriageway of the affected section of Twynroddyn Road to improve the dispersion of air pollution from vehicles using the road.	
All of these measures provide advantages and disadvantages to residents, traders and others living in both the affected and nearby areas. As you are one of those who is more likely to be affected by the proposals you are specifically invited to comment on them.	
Merthyr Tydfil ... a place to be proud of	Merthyr Tudful ... lle i fod yn falch ohono

Figure A.2 – Embedded Copy of Specified Consultee's Letter



Option 1 was sub-divided into two choices in which 1a proposed reversing the traffic flow on Church Street whilst 1b proposed allowing two-way traffic on this link to permit some traffic to continue to flow from the High Street to Tramroadside. The consultation on the three options to be considered opened on Friday 16th March 2018.

In addition to this, we also asked the public to put forward other suggestions for consideration by giving them the option to add comments to their response.

Consultation Responses

A total of 5 emails were received via publichealth@merthyr.gov.uk and 13 comments submitted via the face-to-face consultation, which did not specify a preferred option as set out in the consultation. These results have therefore been dealt with separately.

Response from Public Health Wales

The response on behalf of Public Health Wales was received by e-mail from Public Health England on 11th May 2018. This stated:-

‘Thank you for the opportunity to comment on the 2018 Air Quality Action Plan (AQAP). We have reviewed the report and make the following observations;

The AQAP provides a detailed and thorough review of the options available to improve air quality affecting Merthyr Tydfil. It is clear that MTCBC recognises the public health impact of air pollution and is committed to improve local air quality; we support the air quality improvement efforts outlined.

The AQAP prioritises the need to improve air quality in Merthyr Tydfil, specifically Twynrodyn Road. It also recognises that actions should be taken in Merthyr town centre should not result in unintended consequences at other locations. This is especially important from a public health perspective given the ‘non-threshold’ status of some air pollutants. Air pollution concentrations should be reduced wherever possible in order to minimise health risks; statutory air quality objectives should not be seen as ‘safe’ levels to pollute up to. We support the “1a option” that protects the public through reduced traffic in the air quality management area (AQMA) and does not increase traffic in other areas.

Additionally, we would support actions that not only improve air quality in localised AQMAs but across communities and the County Borough as a whole. Encouraging combinations of active travel, low emission and more sustainable forms of transport present a win-win opportunity to improve air quality and public health beyond the boundary of AQMAs. Any improvement in active travel, whether in an AQMA or not, will have positive health consequences and will also support and benefit interventions targeting other health outcomes, such as active travel and increased physical activity.

You’ll get a similar response from the health board shortly too.’

Figure A.3 – Response from Cwm Taf University Health Board



NB: Double-click on the icon to view the response.

Consultation Questionnaire

An online questionnaire was published via the 'Cwm Taf Community Engagement Hub' and was available in both English and Welsh.

Stakeholders could take part in the consultation electronically via the Cwm Taf Hub, online via the Social Media session and with paper questionnaires available at the consultation sessions and also by request from Corporate Communications, Consultation & Engagement Department at the Civic Centre.

The consultation questionnaire consisted of 2 questions:

Question 1

Please select one of the following four options as your preferred proposal:

Please select one option only.

- | | |
|-----------|-----------------------|
| Option 1a | ☐ |
| Option 1b | ☐ |
| Option 2 | ☐ |
| Option 3 | ☐ |

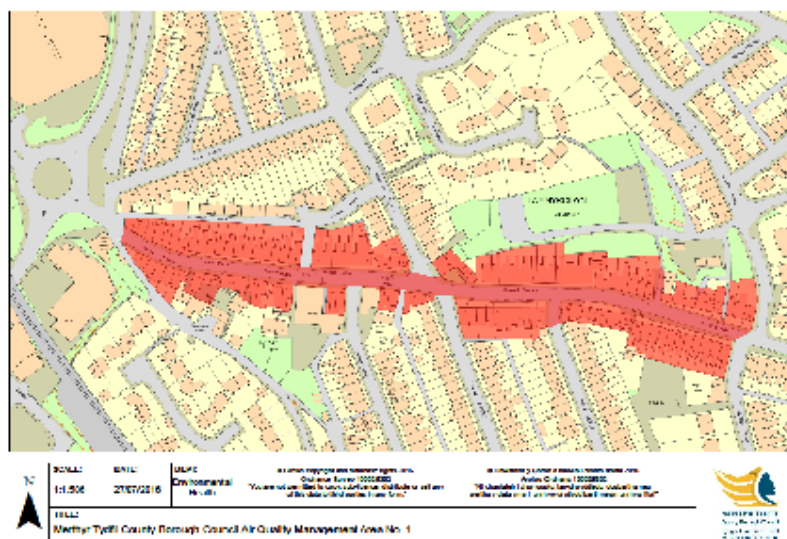
• Question 2

Do you have any comments?

Alongside these questions, members of the public were given a number of information documents. These were:

- Detailed descriptions of each option, with an accompanying map to give a visual description
- An FAQ document
- The Executive Summary of the Draft Air Quality Action Plan
- A map showing the Twynnyrodyn Air Quality Management Area

The Council declared an Air Quality Management Area (AQMA) on 30th January 2017. This covered the area of exceedance and also the section of Twynyrodyn Road down to the roundabout outside Tesco as shown on this plan:



1

The full technical study from which these options were chosen, the air quality modelling report and other background documents were also made available on request by emailing publichealth@merthyr.gov.uk .

Council Web Pages

The Council's Air Pollution web pages and consultation pages were updated to include information on the consultation, including links to the Cwm Taf Hub, as well as all of the available documentation.

An eye-catcher was also created for the homepage of the website so that anyone visiting merthyr.gov.uk could see at a glance that the consultation was taking place and quickly link through to the relevant information.

Analytical data for the Air Pollution page tells us that during the consultation period 92 people viewed the information. This is in comparison to 0 views for the period from January 1, 2018 up until the start of the consultation.

Contact Newspaper

An article was placed in issue 53 of Contact Newspaper, which was distributed in April 2018. Contact Newspaper is distributed to all households within the County Borough (approximately 29,000).

Social Media

The consultation was promoted and users were signposted to the Cwm Taf Hub and Council's corporate website via Facebook and Twitter on various occasions throughout the consultation period.

Analytical data for Facebook tells us that the posts had a reach of 37.1k users.

Analytical data for Twitter tells us that the Tweets had a reach of almost 17k users.

Consultation Events

In order to give members of the public the opportunity to speak with Officers, a number of drop-in sessions were arranged, as follows:

Date	Time	Location
Tuesday 17th April, 2018	2.00pm - 4.00pm	Merthyr Labour Club
Thursday 3rd May, 2018	3.30pm - 5.00pm	Twynnyroddyn School
Thursday 31st May, 2018	2.00pm - 4.00pm	Redhouse
Wednesday 6th June, 2018	5.00pm - 7.00pm	Merthyr Labour Club

These events were advertised on the Cwm Taf Hub, the Council's website, as posters at the locations and as Events on Facebook.

Merthyr Tydfil County Borough Council

In attendance at each session were the following MTCBC Officers, as well as some Ward Councillors and Cabinet Members:

Officers
Environmental Health Manager
Environmental Health Officer
Environmental Health Officer
Engineering and Traffic Manager
Senior Traffic Engineer
Corporate Communications, Consultation & Engagement Officer
Corporate Communications, Consultation & Engagement Manager
Town Centre Manager (Redhouse session only)

The Redhouse drop-in session was earmarked as a session for local businesses, specifically from Pontmorlais, to attend. This is due to Options 1a and 1b proposing to change the flow of traffic through Pontmorlais, which would ultimately affect the businesses there. They were invited by hand-delivered letter.

Social Media Session

For people who were unable to attend the drop-in sessions, we also held a Social Media session on Tuesday 8th May 2018 from 4.00pm - 6.00pm via Facebook, where people were invited to ask their questions via Facebook.

The same officers were in attendance at the drop-in sessions (detailed above).

Analytical data shows that posts regarding the session reached over 4.5k users.

Feedback from the Public Consultation

Respondents were asked to use the questionnaire to respond formally to the consultation, either via the Cwm Taf Community Engagement Hub, by paper copy or by emailing publichealth@merthyr.gov.uk.

Consultation Responses

In total **156** responses were received.

- 108 received via the online questionnaire
- 48 received via the paper questionnaire

The paper questionnaires were entered in to the Cwm Taf Hub, enabling all responses to be collated in to one results report, as shown below.

Questionnaire Results

Table A.2 - Responses to question 1

Response	Number of Respondents	Percentage of Respondents
Option 1a	79	51%
Option 1b	67	43%
Option 2	5	3%
Option 3	5	2%

As can be seen from the Table A.2 above, the majority of respondents (51%) voted in favour of Option 1a, with the second preferred option being Option 1b (43%).

Options 2 and 3 combined were the preferred option of just 6% of respondents.

Responses to question 2:

66 respondents provided comments in response to question 2.

A substantial number of these comments yielded suggestions with potential for further improving traffic flow and air quality in the area. These have been marked for deeper consideration and possible implementation. Table A.3 below lists all of the comments received, responses made and shows those flagged for further study.

Table A.3 - Responses to question 2

Responses to Consultation Questions		Response to Consultation Comment	Issue for Further Consideration by :	
Q1 - Preferred proposal:	Q2 - Do you have any comments?		Highways Engineering	Police
1b	1b is the best option here in my opinion but it will likely create issues at end of Brecon Road/Lantern area traffic lights. I believe another option is reversing traffic direction on Glebeland Street and give traffic coming down the High St the option of left up Church St or right down Glebeland St. Taxis could then leave the rank area by turning left at Belle Vue to go down Glebeland St and then open up the dead end by the Station Cafe to allow taxis out to East side of town. Also, why not open up the top of the tram road again at bottom of Penyard hill - one way only with a direction out of town like it used to be. It's so quiet there that drug users are congregating.	The reversal of traffic flow along Glebeland Street was considered in conjunction with various other changes to the local road network. Some advantages were found to doing this but the road has limited capacity and its arrangement is such that traffic pollution will not readily disperse and will become a risk to residents and traders. For these reasons, any options with a significant potential to increase traffic on Glebeland Street were ruled out. Opening up the Tramroad to the bottom of Penyard Hill has been considered but it is very narrow at certain points and this has raised safety concerns for the users of the road. This would be a particular problem if large numbers of vehicles attempted to use it.	Y	
1b	Access to Tesco needs to be considered. It causes traffic jams up twyn hill, increasing emissions . Also parking permits are in place on streets to the left of twyn hill however not on the right. I live in dyke street which is difficult to access during traffic as people block the street entrance and people park here to access town during the week and weekend. Please can speed bumps also be included in this street as the dominos delivery drivers drive at very high speed down the street. The one way system currently in place has had a detrimental impact on businesses at the top of town.	Observations on traffic agreed.	Y	Y
1a	Alter pedestrian crossing & Tesco roundabouts	Altering the pedestrestian crossing, and providing an additional crossing, has been suggested at the drop-in sessions and is considered to offer potential for worthwhile improvements.	Y	

NB: Double-click on the table to access the full list of comments and responses.

Appendix B: Reasons for Not Pursuing Action Plan Measures

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

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Strategic highway improvements	Reversal of one-way traffic on Pontmorlais High Street and Church Street opened to two-way traffic	The public consultation showed a substantial minority (45%) of those supporting modification of the High Street to be in favour of this variant. The additional work to Church Street might therefore be undertaken at some future time as long as it does not significantly impair air quality in any part of the town centre.
Strategic highway improvements	Provision of a chicane on Twynyrodyn Road between Windsor Terrace and Queens Road	Public consultation showed some support from for this option but, as this was from less than 5% of respondents it will not be pursued unless there is a substantial increase in traffic on this road.
Strategic highway improvements	Diversion of all west-bound traffic on Twynyrodyn Road at Queens Road with no left turn onto Queens Road for east-bound traffic	Public support for this option was negligible at less than 5%. This was not unexpected since the option would have had an adverse impact on the air quality and road safety of users of the diversionary route.

Appendix C: Other Measures Actioned / Under Consideration

TCM	Town Centre Management
P	Planning
E	Engineering
EH	Environmental Health
C	Countryside
CS	Corporate Services
	Already in place/actioned
	Twynroddyn Hill Measures
E	Twynroddyn Hill road centre-line re-alignment and traffic calming (Phase 1)
E	Restriction of HDVs on Twynroddyn Hill. MTCBC Traffic Engineers passed an Order with signage in place by end of 2014.
E	Monitoring of traffic flows on Twynroddyn Road, the town centre and surrounding areas to inform air quality modelling and traffic management planning.
E	ANPR study targeted at the Twynroddyn AQMA to permit a detailed study of traffic flows in the vicinity and the identification and assessment of a range of potential solutions. Completed July 2017.
	Planning Measures
P	Planning Policy : Consult on development plans and policies for the area to ensure that sustainable development considerations are included.
P	Development Control: Consult on planning applications to ensure that all relevant air quality issues are identified and mitigation measures implemented wherever reasonably practicable. Give particular consideration to developments within the AQMA and to developments in areas where increased vehicle traffic might result in the AQMA.
P/C	Development of closer working relationships between Planning/Countryside, Engineering and other services on the introduction of green infrastructure into traffic management schemes to reduce air-borne pollution and to provide and preserve areas of good ambient noise quality.
	Monitoring and Reporting
EH	Assist with Governmental research into the causes of air pollution and the development of policy to improve air quality on a local and regional basis.
EH	Monitor a range of air pollutants throughout the Borough establishing monitoring sites in locations where poor air quality is suspected. Ensure the air quality data obtained is both accurate and precise through the use of appropriate quality control measures.
EH	Evaluate the air quality monitoring results against the National Air Quality Objectives, identify areas of poor air quality and recommend action where appropriate.
	Declare Air Quality Management Areas where air quality does not meet the National Air Quality Objectives
EH	Undertake source apportionment studies to establish the origins of the air pollutants found within areas where air quality does not meet national objectives. Apply the results to obtain an assessment of the impact of proposed remedial measures.
EH	Monitor air quality, and related indicators, to quantify the actual impact of remedial measures and assess the effectiveness of the action being taken.
EH	Make monitoring and assessment information freely available to the public in an easily understood form; primarily electronically but also by other means on request. Provide air quality information through the Council's own web site and through links to the Welsh Air Quality Forum website.
EH	Continued liaison with Public Health Wales and the Cwm Taff PSB on community profiling to identify areas where populations have greater vulnerability to air pollution and assist targeting of resources.
	MTCBC Fleet Management : Minimisation of MTCBC's own vehicle fleet emissions.
	Carry out regular emissions testing of the MTCBC vehicle fleet to ensure that all vehicles comply with the law.
	Measures for better travel planning on MTCBC duties.
	The phased relocation of MTCBC staff to Pentrebach was implemented from 2017 to 2019 with the expectation that this would reduce vehicle activity on Twynroddyn Road.
	Public Travel Measures (including off-duty MTCBC staff)
	Vehicle standards
EH	Vehicle emission testing : Liaison with VOSA and the police to facilitate spot checks of vehicles in the area.
	Lifestyle
CS	Assess the likely impact, both on driver behaviour and financially, of introducing free parking in the college overflow car park.
	Staff cycle to work promotions carried out on several occasions

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		Other Engineering Measures
	E	Install bollards along the road centre line of Court Street preventing vehicles turning across the traffic flow into the Labour Club and Farm Foods.
Long term	E	Large scale ANPR survey to accurately determine traffic flows across the town centre as a whole and further inform wider traffic management planning including that needed to mitigate the effects of the Heads of the Valleys dualling project and possibly the Trago Mills development. May form part of the Welsh Government's preparations for the dualling project and not impact on MTCBC budgets.
	E	Diversionary signage 'Town Centre Avoiding Congestion' at eastern entrance to Twynrobyn Road directing local traffic via Pontmorlais and Plymouth Street.
	E	Diversionary signage 'Trago Mills Avoiding Congestion' at Dowlais Top and other trunk routes - needs to be in place before Trago Mills opens.
	E	Assess the viability and likely impact of introducing park and ride arrangements for the town centre and Trago Mills.
		Development of the existing Swan Street car park as a temporary (possibly free for one hour) car park.
		Re-opening of the existing Hollies car park as a temporary (possibly free for one hour) car park.
		MTCBC Fleet Management : Minimisation of MTCBC's own vehicle fleet emissions.
		Assess the feasibility of testing vehicle emissions when routine servicing is carried out.
		Establish and implement a rolling programme for replacing older more polluting vehicles with newer, cleaner, vehicles which comply with the prevailing EURO standard. In implementing the programme acquire, where practicable, vehicles using cleaner or alternative fuels such as electrically powered vans.
		Where appropriate fit pollution abatement equipment to older heavy goods vehicles to reduce air pollution.
		Undertake a baseline study into MTCBC fleet activity and fuel usage to enable improved vehicle fuel consumption efficiency.
		Promote the use of cleaner or alternative fuels where possible including the introduction of electrically powered vans.
		Measures for better travel planning on MTCBC duties.
		Undertake staff travel surveys to establish current travel patterns to and from Council premises on Council business.
		Develop a workplace travel plan for MTCBC
		Promote the use of alternative routes for business activities which will minimise vehicle movements within the AQMA e.g. when travelling to and from the Civic Centre on business.
		Where appropriate, establish car-sharing practices and encourage use of public transport among staff engaged in business activities.
		Encourage walking and cycling among staff on business activities.
		Public Travel Measures (including off-duty MTCBC staff)
		Vehicle standards
		Consider the provision of free vehicle emissions testing for motorists and supporting information about responsible car ownership
		Promote the use of cleaner or alternatively fuelled vehicles including electrically powered cars.
		Traffic Enforcement
		Enforcement of parking restrictions on Twynrobyn Road to prevent parking and obstruction of the highway at Gilfach Cynon
		Lifestyle
		Encourage walking and cycling.
		Promote the use of alternative routes to and from the Civic Centre avoiding the AQMA.
		Establish car-sharing practices and encourage use of public transport among staff when not on business.
		The development of Alternative Travel Plans targeted at households in and around an AQMA is a frequently used measure. This involves making contact with households to identify their individual travel needs, and methods of meeting their needs, as a means of motivating people to reconsider their day-to-day travel choices. Residents who do not regularly use sustainable transport modes are provided with tailor-made travel solutions encouraging alternatives other than the car. This measure aims to produce an overall reduction in car journeys (e.g. of 10–15%).

Appendix D: Links to supporting documents

Detailed assessment for Twynyrodyn Road dated 6th November 2015

Welsh Government Response to Detailed Assessment dated 24th November 2015

Fluidyn France Air Quality Study 2016

MTBC_Report_1.1_Final

Action Planning Options and Analyses Full Study Final

Draft Air Quality Action Planning Consultation

NO2 Fall-Off with Distance Calculator (Version 4.1)

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
...	...

References

Reports by the Committee on Medical effects of Air Pollutants available at <https://www.gov.uk/government/collections/comeap-reports> accessed on 18th June 2018.

Defra, 2009, Local Air Quality Management Technical Guidance LAQM.TG(09)

Environment Act 1995

National Assembly for Wales, 2010, Air Quality Standard (Wales) Regulations 2010

Welsh Government, 2016, Local air quality management interim policy guidance for Wales