



FULL COUNCIL REPORT

Date Written	11 th June 2018
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Service Area	Environmental Health/Highways Engineers
Exempt/Non Exempt	Non Exempt
Committee Date	27 TH June 2018

To: Mayor, Ladies and Gentlemen

Approval of Air Quality Management Area Action Plan

1.0 SUMMARY OF THE REPORT

- 1.1 The Environment Act 1995 introduced a system of Local Air Quality Management for the UK to ensure pollutant concentrations are within National Air Quality Standards, designed to protect public health and the environment.
- 1.2 The Local Authority, through the Environmental Health Department, carries out routine air quality monitoring to determine whether air quality standards, which are prescribed in law, are being breached. This includes monitoring short term, monthly and annual nitrogen dioxide concentrations. Meteorological data and traffic data are also taken into account when analysing the levels of nitrogen dioxide.
- 1.3 As a result of the monitoring undertaken within the Borough elevated levels of nitrogen dioxide have been detected on Twynyrodyn Road. National Air Quality Standards for the annual mean Nitrogen dioxide concentration of 40 µg/m³ have been exceeded.
- 1.4 Where elevated levels of pollutants have been identified a detailed assessment is required to be undertaken. A detailed assessment relating to the levels of nitrogen dioxide on Twynyrodyn Road has been made and published.
- 1.5 The assessment concluded that it was necessary to declare an Air Quality Management Area (AQMA) in accordance with our duty under the Section 83(1) of the Environment Act 1995, which requires the Local Authority to designate those areas where the air quality objectives are not being met and where people are likely

to be regularly present. The AQMA was subject to a previous Council report and was declared on the 31st January 2017.

- 1.6 Following the declaration the Local Authority is required to produce an air quality action plan (AQAP) detailing the measures that will be undertaken to reduce the level of nitrogen dioxide to an acceptable level. The plan must be completed and submitted to Welsh Government (WG) within 18 months of the declaration of the AQMA.
- 1.7 An AQAP has been produced from a draft which considered a range of measures including, in detail, a number of engineering / traffic management changes. From these possible changes viable options for resolving the air quality problem have been identified.
- 1.8 The AQAP has been subject to a 12 week period of public consultation to seek views on it both generally and specifically on the engineering /traffic management changes which are potential solutions for bringing about a reduction in the levels of nitrogen dioxide to an acceptable level. The consultation closed on 8th June 2018.
- 1.9 The results of the consultation exercise have been analysed by Environmental Health Officers and Highways Engineers in conjunction with Corporate Communications. The majority of the public and other stakeholders, including Public Health Wales and the Cwm Taf Health Board favoured option 1a which proposed **reducing the volume of traffic on Twynyrodyn Road as a whole** by providing an alternative northbound route for vehicles using the roundabout outside Tesco.

2.0 RECOMMENDATIONS that

- 2.1 Council approve the AQAP which recommends the implementation of option 1a, to provide an alternative northbound route for vehicles using the roundabout outside Tesco, and agrees to it being submitted to WG by 31st July 2018 for inspection and agreement. Failure to submit the AQAP by the deadline will result in intervention by WG.

3.0 INTRODUCTION AND BACKGROUND

- 3.1. Air pollution affects mortality from cardiovascular and respiratory conditions, including lung cancer. In its report on 'The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom', published in 2010, the Committee on the Medical Effects of Air Pollutants (COMEAP) 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. Reduced exposure is particularly important for vulnerable groups such as those with circulatory or respiratory conditions.
- 3.2 Through the Local Air Quality Management (LAQM) regime local authorities are required to assess air quality in their area and designate Air Quality Management Areas (AQMAs) if improvements are necessary. The air quality objectives for nine pollutants (benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur

dioxide, PM₁₀ and PM_{2.5} and ozone) are prescribed within the Air Quality (Wales) Regulations 2010.

- 3.3 The air quality objective for nitrogen dioxide is non exceedance of a concentration of 40 µg/m³ when measured as an annual mean (the parameter being breached on Twynyrodyn Hill) and 200 µg/m³ not to be exceeded more than 18 times a year when measured as a one hour mean.
- 3.4 Road transport is the main source of nitrogen dioxide associated with air quality issues. High levels of nitrogen dioxide are associated with damage to lung function and enhancement of the response to allergens in sensitive individuals. In addition, nitrogen dioxide contributes to acidification and/or eutrophication of habitats. This effect does not necessarily impact on the local environment but can impact great distances from the source. Nitrogen dioxide has a contribution to global warming and hence climate change as it acts as a greenhouse gas and is 290 times more potent as a greenhouse gas than methane.

4.0 NITROGEN DIOXIDE LEVELS ON TWYNYRODYN ROAD

- 4.1 An area of Twynyrodyn Road has been found to have an exceedance of the annual air quality objective for nitrogen dioxide. This exceedance was decreasing in line with improving air quality throughout the district and as a result of action the Council has taken. However, recently this trend has been reversed as there has been a marked increase in nitrogen dioxide levels following changes to traffic flow in Merthyr Tydfil town centre. Results of monitoring have shown that levels of nitrogen dioxide had reached in excess of 60 µg/m³ annual mean. It has now stabilised at a level above the Air Quality Objective.
- 4.2 Local authorities have a duty under Section 83(1) of the 1995 Act to designate those areas where the air quality objectives are not being met, or are likely to be shown to be at risk of not meeting them, and where people are likely to be regularly present, as Air Quality Management Areas. An AQMA was declared on 31st January 2017.

5.0 ACTION PLAN AFTER AN AQMA IS DECLARED

- 5.1 Once an AQMA is designated, local authorities are required to prepare a separate air quality action plan within 12 to 18 months following the date of designation. The plan must identify the nature of the problem whilst detailing measures that are or will be actively implemented to improve air quality and quantify their impact over time.
- 5.2 To ensure that the air quality and environmental effects of all planned interventions on the road network are thoroughly understood before they are implemented, Environmental Health Officers have worked in partnership with the Local Authority's highways engineers and expert advisor. In addition a specialist external consultancy, Fluidyn Environment, has been engaged to scientifically model both existing air quality and the effect of a number of alternative solutions.
- 5.3 Various options have been evaluated by Environmental Health Officers in discussion with highways engineers and a draft action plan was produced. Although a wide

range of potential solutions has been considered only three are expected to be capable of improving the air quality without causing significant adverse effects elsewhere. In broad terms, as nitrogen dioxide is associated with traffic emissions solutions to reduce the speed, improve the flow and reduce the amount of traffic are necessary. The Local Authority has formally consulted on the following options for a period of 12 weeks:

- To reduce the volume of traffic on Twynyrodyn Road as a whole by providing an alternative northbound route for vehicles using the roundabout outside Tesco.
- To install a chicane on the uphill carriageway of the affected section of Twynyrodyn Road to improve the dispersion of air pollution from vehicles using the road.
- To reduce the volume of traffic on the section of Twynyrodyn 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 Twynyrodyn Road via Windsor Terrace.

5.4 A total of 156 responses were received from members of the public and responses have also been received from other consultees including Public Health Wales and Cwm Taf Health Board. Details of the full consultation process can be found as a background paper.

5.5 The feedback received clearly shows that option 1 is the favoured solution of the majority of the respondents including Public Health Wales and Cwm Taf Health Board. 55% of these favoured variation 1a, which involves reversing the direction of traffic on Church St between Tramroadside and Pontmorlais High Street rather than variation 1b, which involved making it 2 way.

5.6 The AQAP has been finalised ready for submission to WG by the end of July 2018.

6.0 IMPLEMENTATION OF THE AQAP

6.1 Following acceptance of the AQAP by WG and DEFRA, the Council would progress Option 1a to reverse the traffic flow on High Street. To achieve this, Cabinet approval would be necessary, seeking authorisation to publish a new Traffic Regulation Order that includes a statutory 3 week objection period giving the opportunity for objections to be received from the public. If objections are received, these would be considered by an Appeals Committee. If no objections are received the Order can be made.

6.2 The timescale associated with a new Traffic Order and statutory process typically takes 5-6 months. The new Traffic order would have to be in place prior to reversal of flow. Some alteration involving construction work would be required at certain junctions. The estimated timescale for construction is approximately 2 months.

6.3 To avoid disruption in the High Street in December leading up to the Christmas period, consideration will need to be given to construction commencing after Christmas - early 2019. Following reversal of the one-way system, it will be necessary to monitor traffic in the area to determine effect on the road network.

- 6.4 Environmental Health Officers will continue to monitor the air quality in general but will do so with a particular focus on Twynyrodyn Road and Pontmorlais High Street. This will allow an assessment of whether the measures have produced an acceptable reduction in the levels of nitrogen dioxide on Twynyrodyn Road without causing an unacceptable rise in nitrogen dioxide levels on the High Street..
- 6.5 The Environment Act 1995 requires that Action Plans be periodically reviewed, with the technical guidance specifying a further assessment within 12 months of declaring the AQMA. The effectiveness of measures in the action plan should be assessed and due consideration given to amending or revoking the AQMA in light of any improvements in air quality.

7.0 FINANCIAL IMPLICATION(S)

- 7.1 The estimated cost of Option 1a for reversal of the one-way system including changes to Traffic Regulation Orders and construction is approximately £100,000. It should be noted detailed costs would be known upon return of contactors tenders.

8.0 EQUALITY IMPACT ASSESSMENT

- 8.1 An Equality Impact Assessment (EqIA) form has been prepared for the purpose of this report. It has been found that a full assessment is not required at this time. The form can be accessed on the Council's website/intranet via the 'Equality Impact Assessment' link.

ALYN OWEN
CHIEF OFFICER COMMUNITY
REGENERATION

COUNCILLOR GERAINT THOMAS
CABINET MEMBER FOR
REGENERATION AND PUBLIC

BACKGROUND PAPERS		
Title of Document(s)	Document(s) Date	Document Location
Detailed Assessment for Twynirodyn Road	16/11/15	https://www.merthyr.gov.uk/media/1822/mtcbc_detailedassessment2015.pdf
Welsh Government Local air quality management interim policy guidance for Wales.	March 2016	http://gov.wales/topics/environmentcountryside/epq/airqualitypollution/airquality/guidance/policy-guidance/?lang=en
2017 Air Quality Progress Report	2017	https://www.merthyr.gov.uk/media/3368/mtcbc_pr2017.pdf
Full study leading to the Potential solutions consulted upon	2017 - 2018	This document is available via the Environmental Health Department
Air Quality Action Plan	June 2018	This document can be found via the Background Papers link.
Consultation Process	June 2018	This document can be found via the Background Papers link.
Consultation Responses	June 2018	https://www.merthyr.gov.uk/media/3934/consultation-campaign-results-with-comments.pdf
Does the report contain any issue that may impact the Council's Constitution?		No

Consultation has been undertaken with the Corporate Management Team in respect of each proposal(s) and recommendation(s) set out in this report.