

SCRUTINY COMMITTEE REPORT

Date Written	14 th November 2019
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Service Area	Neighbourhood Services
Committee Date	13 th January 2020

To: Chair, Ladies and Gentlemen

Update on the Implementation of the Twynyrodyn Air Quality Action Plan

1.0 SUMMARY OF THE REPORT

- 1.1 The implementation phase of the Air Quality Action Plan (AQAP) designed to reduce levels of nitrogen dioxide (NO₂) to acceptable levels within the Twynyrodyn Air Quality Management Area (AQMA) is underway.
- 1.2 In November 2018 the Highways and Engineering Department issued Traffic Regulation Orders. On 28th May 2019 traffic flow was reversed in accordance with the Welsh Government approved action plan i.e. reversal of traffic along Pontmorlais High Street and Church Street aimed at reducing the volume of traffic on Twynyrodyn Road as a whole, by providing an alternative northbound route for vehicles using the roundabout outside Tesco.
- 1.3 Traffic build-up appears to have decreased with fewer queues developing on Twynyrodyn Road. Traffic surveys reveal a reduction in the volume of traffic travelling along Twynyrodyn Road (the AQMA). There is an increase in traffic along Avenue De Clichy but this is not considered likely to pose a public health risk. indications are that change in traffic distribution will result in the necessary improvement in air quality within the AQMA. Sites within the AQMA have shown significant reductions in NO₂ from monthly diffusion tube monitoring. Two sites on or near the traffic flow reversal have shown small increases in NO₂, predicted to remain well below 36µg/m³.

2.0 RECOMMENDATION(S)

- 2.1 That the scrutiny committee discusses and comments on the issues set out in the report.
- 2.2 That the scrutiny committee identifies any further information they would like to Receive.

3.0 INTRODUCTION AND BACKGROUND

- 3.1 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.
- 3.2 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 NO₂ concentrations. Meteorological data and traffic data are also taken into account when analysing the levels of NO₂.
- 3.3 As a result of the monitoring undertaken within the Borough elevated levels of NO₂ have been detected on Twynyrodyn Road. National Air Quality Standards for the annual mean NO₂ concentration of 40 µg/m³ have been exceeded.
- 3.4 Where elevated levels of pollutants have been identified a detailed assessment is required to be undertaken. A detailed assessment relating to the levels of NO₂ on Twynyrodyn Road has been made and published.
- 3.5 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.
- 3.6 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 NO₂ to an acceptable level. The plan must be completed and submitted to Welsh Government (WG) within 18 months of the declaration of the AQMA.
- 3.7 An AQAP has been produced and 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.
- 3.8 The AQAP was 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 NO₂ to an acceptable level.

- 3.9 The results of the consultation exercise were 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.

4.0 WHERE WE WERE

- 4.1 A report on the Twynyrodyn AQMA, and at the time proposed AQAP designed to bring about a reduction in NO₂ levels to within acceptable parameters, was last brought before scrutiny on 18th June 2018.
- 4.2 A report requesting approval of the AQAP was agreed by full Council on the 27th June 2018. Immediately following Council approval the AQAP was submitted to Welsh Government for inspection and was agreed on 17th July 2018.
- 4.3 A report requesting approval to create a permanent Traffic Regulation Order under the Road Traffic Regulation Act 1984 to reverse the traffic flow in Pontmorlais High Street was agreed by Cabinet on the 24th October 2018.
- 4.4 Following a tender process in accordance with the Councils procurement regulations Alun Griffiths were awarded the contract to carry out all necessary works to reverse the traffic flow through Pontmorlais High Street. Work commenced on the 29th April 2019 with the implementation of the reversal on the 28th May 2019. The scheme cost £105,264.

5.0 WHERE WE ARE NOW

- 5.1 We are now in the implementation phase of the AQAP. The purpose of this report is to give members an update on the air quality and the overall impact of the traffic management changes resulting from the implementation of the AQAP to date.
- 5.2 On 28th May 2019 traffic flow was reversed in accordance with the approved action plan. Traffic flow has been reversed along Pontmorlais High Street and Church Street, with the aim of diverting traffic away from Twynyrodyn Road.
- 5.3 Traffic surveys carried out prior to and after the reversal of traffic through Pontmorlais High Street reveal a reduction in the volume of traffic travelling along Twynyrodyn Road by an average of 428 vehicles on a Friday where traffic volumes are at the highest point of the week. This evidence indicates the reversal has diverted traffic away from Twynyrodyn Road, with MTCBC staff observing fewer traffic queues along this section of road. This indicates the reversal has been successful in reducing traffic through the AQMA, and it is hoped this will be reflected in the annual mean NO₂ concentrations along Twynyrodyn Road.
- 5.4 The reversal of Pontmorlais High Street has resulted in an increase of traffic along Bethesda Street and Avenue De Clichy. An additional weekday average of 677 vehicles have been recorded along Avenue De Clichy, however this is unlikely to be of public health concern as the West side of the street is bounded by the River Taff,

making canyon effects unlikely. On the East side there are a small number of residential flats (Cae Draw) set back from the road by at least 6.5m, which is a sufficient distance that any deterioration in air quality will remain well below the air quality standard. To provide public reassurance that modelling is correct, a diffusion tube was installed at Caedraw Flats, Avenue de Clichy in August 2019.

- 5.5 Traffic surveys indicate an increase of traffic travelling through Pontmorlais High Street by a weekday average of 1433 vehicles. Pontmorlais High Street may be subject to canyon effects. Modelling predicted an increase in traffic would not result in a breach of the air quality standard, and diffusion tubes and the automated real time Electrochemical Cell Monitor have been installed in the area to confirm this.
- 5.6 At this time there is limited statistical data for comparison of levels of NO₂ before and after the reversal. Definitive data will not be available until the reversal has been in place for at least 12 months. Nitrogen dioxide monitoring stations on Pontmorlais High Street and many of the NO₂ monitoring stations on Twynyrodyn Road have been retained to determine whether the reversal has had the predicted effect. In addition the network of diffusion tube monitoring has been extended to include the traffic reversal area and some surrounding streets where it is possible that people could take alternative routes. This started in January 2019, therefore in 2020 12 months data will be available for bias adjustment and review. As the reversal took place from 28th May 2019, particular attention will be given to how monitoring periods 6-12 compare to previous years where sites also operated in 2018.
- 5.7 There are 14 diffusion tube locations within or near the AQMA, or on or near the traffic flow reversal. In order to get a sense of whether the AQAP is on track data from monitoring periods 6-9 of 2018 and 2019 have been compared. An interim report is contained at Appendix 1. At all sites within the AQMA the mean NO₂ concentration for the combined period 6-9 has reduced. The reduction is of a level where we are cautiously optimistic that the annual mean will be below 36µg/m³ following bias adjustment. There has been a slight increase in the mean NO₂ concentration at the Imperial Hotel, Pontmorlais High Street, and at the Civic Centre. The increase is relatively small and it is highly likely the annual mean will be below 36µg/m³. At this juncture we are not concerned that there will be any need to extend the AQMA or declare another AQMA.
- 5.8 Our 2019 annual air quality progress report was submitted to Welsh Government and Department for Environment, Food and Rural Affairs (DEFRA) in September 2019. At the time of writing we are waiting to see whether the report has been approved.
- 5.9 Immediately following the traffic reversal there was some negative feedback from members of the public but this was limited. There were two corporate complaints relating to the traffic reversal. Both complainants reside in Cae Draw flats. They raised a number of concerns including an increased volume of traffic on the Avenue De Clichy, noise from traffic, air pollution, an increased risk of road accidents and the impact of the new bus station going forward.
- 5.10 The complainants were advised that the effect of the changes were considered in development of our action plan, which has been approved by Welsh Government, and the Council conducted air quality monitoring and modelling prior to the traffic reversal. The results indicated that any increase in exposure would be small with no

risk of a breach of the air quality objectives, even with the new bus station working at capacity. Assurance was given that we are continuing to monitor the effect of the traffic reversal on NO₂ levels. An additional NO₂ monitoring station, located outside Cae Draw flats, has also been added post traffic reversal to the existing network. Two periods of data are available for the diffusion tube at Cae Draw flats. The NO₂ concentration measured is similar to other town centre locations and do not give any cause for concern.

- 5.11 The complainants were also advised that the number of vehicles was recorded prior to the reversal and the Highways Engineers will monitor this going forward.
- 5.12 Initially there were also some negative comments made on social media about the effect of the reversal in relation to traffic queuing along the Avenue De Clichy at peak times.
- 5.13 There have been no further complaints.

6.0 WHERE WE WANT TO BE

- 6.1 If the traffic reversal is successful in improving air quality on Twynyrodyn Road by reducing the annual mean NO₂ concentrations within the AQMA to less than 36µg/m³ this will enable the AQMA to be revoked by 2021. If unsuccessful additional works will be considered in updated action plans.

7.0 WHAT WE NEED TO DO NEXT

- 7.1 Continue to monitor the levels of NO₂ and review the results to establish whether the traffic management changes are effective in reducing the levels of nitrogen dioxide below the air quality management objective in the AQMA.
- 7.2 Monitor the impact of the changes on air quality outside of the AQMA to ensure that other areas have not been adversely affected by the changes such that the air quality objective is breached.
- 7.3 On the 20th January 2020 Alun Griffiths will be starting work at Bethesda Street to re-phase the traffic signals and alterations will be made to the traffic lanes on approach to the traffic signals. The left lane will become 'Left Only' and the right lane will be changed to 'Straight On' and 'Right Turn'. This will increase the stacking distance for vehicles between the two sets of traffic lights and improve traffic flow. Queuing at Bethesda Street has been noted at peak times therefore following completion of this work waiting times will be reduced thereby minimising potential traffic congestion.
- 7.4 Further traffic surveys will be conducted on Twynyrodyn Road, Pontmorlais High Street and Avenue De Clichy to monitor traffic flows.

8.0 CONTRIBUTION TO WELLBEING OBJECTIVES

- 8.1 The implementation of the AQAP contributes to the Council's wellbeing objective Environmental Wellbeing. In producing and implementing the AQAP the 5 ways of working have been considered. The plan is designed to secure long term benefits to public health. We have used data to identify trends in air quality and taken action to prevent deterioration which would negatively impact on health and wellbeing. If successful the Plan will deliver health benefits to the local population long into the future. We have integrated our approach and have been mindful of the impact of our actions on others and any potential unintended consequences. The success of the plan is reliant on co production and collaboration between departments to secure a successful outcome. Stakeholders have, and continue to be involved in the development of the plan and are important contributors to monitoring and review.

JUDITH JONES
CHIEF OFFICER FOR PLANNING &
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COUNCILLOR DAVID HUGHES
CABINET MEMBER FOR PLANNING &
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BACKGROUND PAPERS

Title of Document(s)	Document(s) Date	Document Location
Detailed Assessment for Twynyrodyn Road	16/11/15	https://www.merthyr.gov.uk/media/1822/mtcbc_detailed_assessment2015.pdf
Welsh Government Local air quality management interim policy guidance for Wales	March 2016	http://gov.wales/topics/environmentcountryside/epq/air_qualitypollution/airquality/guidance/policy-guidance/?lang=en
2017 Air Quality Progress Report	2017	https://www.merthyr.gov.uk/media/3368/mtcbc_pr2017.pdf
Air Quality Action Plan	June 2018	https://www.merthyr.gov.uk/media/4192/aqap-final-approved-for-submission-no-tracked-changes.pdf
Air Quality Progress Report	2018	https://www.merthyr.gov.uk/media/4189/ar2018_mtcbbc.pdf
Does the report contain any issue that may impact the Council's Constitution?		No