

CABINET MEETING: 28 MARCH 2018

AIR QUALITY - WELSH GOVERNMENT DIRECTION**LEADER (COUNCILLOR HUW THOMAS)**

REPORT OF THE CHIEF EXECUTIVE**Reason for this Report**

To note that the Council has received a legal direction from Welsh Government titled Environment Act 1995 (feasibility study for Nitrogen Dioxide Compliance) Air Quality Direction 2018.

To enable Cabinet to approve the undertaking of a feasibility study as required by the legal direction from Welsh Government and;

To approve the procurement of a specialist consultant to undertake the feasibility study to identify options for improving air quality and delivering compliance with the legal limits for nitrogen dioxide in Cardiff.

Background

1. Poor air quality is now considered the largest environmental risk to public health in the UK.¹ There is clear scientific evidence that shows that air pollution exposure reduces life expectancy by increasing mortality and morbidity risk from heart disease, and strokes, respiratory diseases, lung cancer and other conditions.
2. In the UK, in the context of air quality management, the main air pollutants that are the primary public health concern are particulate matter and Nitrogen Dioxide (NO₂). In the UK, it has been estimated that an equivalent of 23,500 deaths can be attributed to long-term exposure to NO₂ each year.²
3. The principle source of these pollutants is from road transport emissions, particularly from diesel cars. In 2012, the International Agency for Research on Cancer listed diesel exhaust pollution as a

¹ 'Estimating local mortality burdens associated with particulate air pollution', Public Health England, (2014)

² 'Improving air quality in the UK: tackling nitrogen dioxide in our towns and cities: UK overview document' Defra (2015)

Class 1 carcinogen³ and extended this to all ambient air pollution in 2013.⁴

4. Public Health Wales has stated that poor air quality is the second greatest public health concern after smoking and is the most significant environmental determinant of health. In Wales, based on data for the period 2011-2012, it has been estimated that an equivalent of 1,100 avoidable deaths can be linked to NO₂ exposure each year.
5. Poor air quality does not only cause ill health, it also has a wider societal cost. Accounting for health service costs and reduced productivity through lost workdays in the UK this is significant, standing at around £20bn every year.⁵
6. Some people are more at risk than others. Air pollution can disproportionately affect vulnerable population groups (e.g. children, older people, people with underlying chronic disease), as well as those exposed to higher levels because of living or commuting in urban or deprived locations.⁶

Air Quality in Cardiff

7. Recent work by Public Health Wales estimates that the equivalent of over 220 deaths each year among people aged 30 and over in the Cardiff and Vale area can be attributed to NO₂, with many more citizens suffering ill health as a consequence of poor air quality.⁷
8. With regards the nature and scale of the problem in Cardiff, at this stage modelling undertaken by Defra suggests that the city is non-compliant on two major routes (two sections of the A48 and a section of A4232.). The modelling undertaken by Defra indicates that non-compliance will continue beyond 2023, if no additional improvement measures are implemented. Figure 1 represents the percentage of Nitrogen Oxides (NO_x)⁸ source apportionment for NO_x pollution on the A48 and A4232 as modelled by the Department for Environment, Food and Rural Affairs.⁹ It is clear from this figure that diesel cars account for the greatest source of pollution on this major road link in Cardiff.

³ International Agency for Research on Cancer, (June 2012)

⁴ International Agency for Research on Cancer, (October 2013)

⁵ 'Every breath we take: the lifelong impact of air pollution', Royal College of Physicians and Royal College of Paediatrics and Child Health (2016).

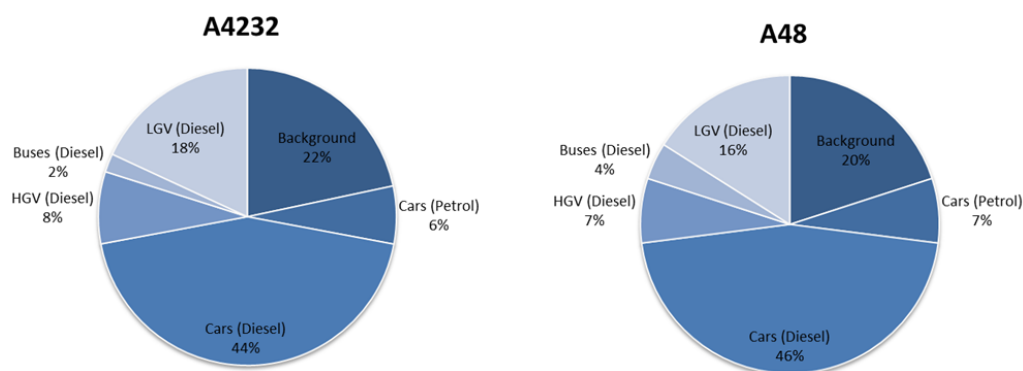
⁶ National Institute for Health and Care Excellence 2017; WHO Regional Office for Europe 2016

⁷ Estimating local mortality burdens associated with particulate air pollution, Public Health Wales (2014).

⁸ Nitrogen oxides are a group of gases that are composed of nitrogen and oxygen. Two of the most common nitrogen oxides are nitric oxide and nitrogen dioxide.

⁹ Defra/Department for Transport's Joint Air Quality Unit

Figure 1 - NOx Emission Source % Apportionment, JAQU



9. Furthermore, there are four locations in which Air Quality Management Areas (AQMA's) have been declared (Stephenson Court on Newport Rd, City Centre - Westgate St, Llandaff and Ely Bridge). Table 1 below summarises the average concentrations at residential facades within the 4 AQMAs since 2012. Datasets of the annual average NO₂ levels recorded at relevant public exposure locations within the AQMAs have shown signs of improvement. However, the levels are consistently elevated and are seen to be either exceeding or encroaching on the annual average NO₂ objective.

Table 1. Annual Average NO₂ Concentration (µg/m³) Air Quality Standard =40 µg/m³

AQMA	Annual Average NO ₂ Concentration (µg/m ³) Air Quality Standard =40 µg/m ³					
	2012	2013	2014	2015	2016	2017*
City Centre	41.5	42.1	42.1	38.2	38.7	39.6**
Stephenson Court	47.9	43.9	41.2	39.5	39.6	36.7
Ely Bridge	42.6	44.9	42.3	39.5	41.3	38
Llandaff	43.0	39.1	37.2	32.3	35.0	32.5

*data not fully ratified and figures may be amended in Annual Progress Report, due to be published before 30th Sept 2018

**2017 result includes all City Centre AQMA monitoring data. .

10. Although the 2017 data indicates that compliance is met in the four AQMAs, the Welsh Government has stated that *'air just barely compliant with the objectives is not 'clean' and still carries long-term health risks and while compliance with the national air quality objectives is essential, it is desirable to keep levels of pollution as low as reasonable practicable.'*¹⁰

Legal Direction from UK Government to English Cities

11. The UK and devolved Governments have a legal obligation to achieve nitrogen dioxide (NO₂) annual average limit value (40µg/m³) as set out

¹⁰ [Welsh Government Local air quality management in Wales Policy guidance June 2017](#)

in the EU Ambient Air Quality Directive (2008/50/EC) in the shortest possible time.

12. The UK is currently in breach of air quality limits so it must plan and take action to become compliant as quickly as possible. The European Union has already started infringement proceedings and should the UK not respond to its air quality problem effectively then the UK could face fines from the European Union.
13. The two most recent attempts to produce statutory national plans to achieve compliance with air quality legislation have been successfully challenged and labelled insufficient in UK courts, most notably in the UK High Court of Justice in February of this year (See Appendix 1). The respective rulings on these challenges have shown that UK Government has consistently failed to adequately assess the air quality challenge and produce the necessary plans to ensure that the UK will achieve compliance.
14. This has led to a range of further requirements for improvement being placed on a range of UK cities. In July 2017 legal directions with the exact same requirements as received by Cardiff from the Welsh Government (see below), but with different target dates, have been placed on a number of English cities, including Bristol, Greater Manchester and Sheffield. More specifically, three cities have been instructed to introduce a Clean Air Zone (CAZ): Birmingham, Leeds and Nottingham. Others have been required to develop effective local action plans by March 2018.
15. This followed the proposals in DEFRA's UK Air Quality Plan, published in December 2015, which identified five cities which will be required to implement a CAZ with penalty charges for the most polluting HGV's, buses and taxis by 2020. UK Government have allocated funding to support those local authorities mandated to introduce a CAZ.

Legal Direction from Welsh Government

16. Air quality is a devolved matter in the UK, meaning that the Devolved Administrations are responsible for developing domestic policies and legislation to improve air quality and reduce risks to human health. The Air Quality Standards Regulations 2010 transpose the Ambient Air Quality Directive requirements (2008/50/EC) into devolved legislation. These limits are identical across the UK and achievement is a mandatory requirement for Member States.
17. Welsh Government have exercised the powers conferred by section 85(5) of the Environment Act 1995 and issued the direction titled **Environment Act 1995 (feasibility study for Nitrogen Dioxide Compliance) Air Quality Direction 2018**. (Appendix 2)

18. The direction came into force, as signed by the Minister, on 15th February 2018, and was delivered to Cardiff Council on 09th March 2018. The direction has a schedule of specified activities, and states:

'Under the Environment Act 1995 (Feasibility Study for Nitrogen Dioxide Compliance) Air Quality Direction 2018, the Welsh Ministers make this direction having determined that it is necessary in order to meet obligations placed upon the United Kingdom under the EU Ambient Air Quality Directive.

Cardiff Council will undertake, as part of the UK plan for tackling roadside nitrogen dioxide concentrations 2017, a feasibility study in accordance with the HM Treasury's Green Book approach, to identify the option which will deliver compliance with legal limits for nitrogen dioxide in the area for which the authority is responsible, in the shortest possible time.'

19. Cardiff Council must therefore complete the following activities by the dates specified:

- i. **As soon as possible and by 31st March 2018 at the latest the initial scoping proposals:**
 - Setting out the proposed approach to the feasibility study and including scope of work, governance, resourcing, procurement approach, indicative costs and timings.
- ii. **As soon as possible and by 30th September 2018 at the latest the Initial Plan:**
 - Setting out the case for change and identifying, exploring, analysing and developing options for measures that the local authority will implement to deliver compliance in the shortest possible time, with indicative costs for those options.
- iii. **As soon as possible and by 30th June 2019 at the latest the Final Plan:**
 - Identifying in detail the preferred option for delivering compliance in the shortest possible time, and including a full business case setting out value for money considerations and implementation arrangements and timings.

20. Cardiff Council has a statutory duty under Part IV of the Environment Act 1995 & Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 to manage local air quality. A legal duty has therefore been placed on Cardiff Council to undertake the requirements of the direction as detailed above within the specified timescales. Within Wales, the direction received also applies to Caerphilly, although they have only one problematic road.

21. Cardiff Council are now therefore legally required to undertake a full and comprehensive feasibility study, within the specified timescales, to

identify the preferred option that will deliver compliance with legal limits of nitrogen dioxide in the shortest time possible. The feasibility study will rely heavily on detailed modelling to project transport trends, associated emissions and subsequent concentrations of nitrogen dioxide. Consultancy support will need to be sought to deliver a Modelling Needs Assessment, subsequent transport modelling and develop a Business Case for the preferred scheme.

22. Within the Minister's letter that accompanied the formal direction (Appendix 3) it was confirmed that finance would be made available for the production of the feasibility study and for the implementation of the chosen scheme. Council Officers will continue to work with Welsh Government Officers to establish a mechanism for achieving the necessary funds.

Improvement Measures

23. In order to achieve improvements in air quality it is likely that a programme of measures will need to be implemented. Welsh Government must be satisfied that the measures presented will achieve compliance in the shortest possible time. Many of the likely measures will be delivered over the medium to long term. Even if significant acceleration of delivery occurs, these actions may not be sufficient to demonstrate that legal compliance will be achieved in the shortest time possible.

Clean Air Zones

24. As a requirement of the legal direction, in terms of demonstrating compliance in the shortest possible time, it is expected that the introduction of a CAZ must be extensively analysed as an option and benchmarked against alternative emission reduction measures, many of which are already in development or proposed in the Council's Transport and Clean Air Green Paper.
25. A CAZ defines an area where targeted action is taken to improve air quality and resources are prioritised and coordinated in order to shape the urban environment in a way that delivers improved health benefits and supports economic growth. In CAZs access may be restricted, or charges may be imposed, for vehicles that do not meet certain emission standards. Likewise, there are often exemptions for newer vehicles that meet higher emission standards, emergency services vehicles, electric vehicles, scooters and mopeds.
26. Welsh Government have not yet produced a framework for a CAZ that sets out the classes of vehicles potentially subject to these measures. While it is envisaged that the Welsh CAZ framework will have similar categories as set out in the DEFRA Framework (details of which can be found in Appendix 4), officers from Cardiff Council will work alongside the Welsh Government to ensure that any measures are

appropriate to local circumstances, and can meet the twin outcomes of improving health benefits and supporting economic growth in Wales.

27. The reason a CAZ must be considered as the benchmark is detailed within the UK National Plan to Tackle Roadside NO₂, which states that CAZ's will likely bring compliance in the shortest time possible in addition to local measures.

*'The latest modelling undertaken by Defra identified areas across the UK that may need to implement a Clean Air Zone to achieve compliance in the shortest time. One area identified in Wales, for which, based on current projections, a zonal approach would accelerate compliance, is in Cardiff. The results of the modelling indicates that Cardiff may benefit from the introduction of a Clean Air Zone, in order to achieve compliance with the national annual mean NO₂ objective in the shortest time possible. Defra's report stipulates that should a CAZ be introduced in Cardiff by 2021 or earlier if possible this would ensure NO₂ compliance by 2022 or sooner.'*¹¹

That the CAZ will be the benchmark against which other measures are assessed does not imply that the CAZ will become the preferred option.

28. A fundamental point is that the Council needs to ensure that any proposals are proportionate to the scale of the problem and tailored to local circumstances, whilst ensuring compliance in the shortest time possible.
29. Council Officers will continue to work collaboratively with Welsh Government officers to ensure that all legal requirements are being met, establish a framework to work within and an appropriate funding mechanism. The Council will also seek to maximise the financial contribution from Welsh Government towards the implementation of any measures, including any potential Barnett consequentials relating to air quality.
30. Specialist Consultants, with a proven track record for delivering such requirements across the UK thereby enabling the Council to draw on their experience, initiatives and best practice solutions, will be procured to undertake the detailed analysis and modelling to satisfy the requirement of the Direction within the specified timescales.

Transport and Clean Air Green Paper

31. On 21 March 2018 the Council published a Green Paper on Transport and Clean Air (Appendix 5). The Green Paper sets out a series of options for consultation for tackling congestion and improving air quality in Cardiff. The consultation will be open until 1 July 2018, and the findings will be used alongside the feasibility study on air quality and outcomes from the recent consultation on the Council's Economic

¹¹ [Defra UK plan for tackling roadside nitrogen dioxide concentrations Detailed plan July 2017](#)

Green Paper to inform the development of a White Paper on Transport and Clean Air that will be published in the autumn of 2018. It is anticipated that the Green Paper proposals will be the subject of a debate at Full Council in June 2018.

Reason for Recommendations

To enable Cardiff Council to meet the requirements of the Welsh Government Legal Direction.

Financial Implications

As set out in the body of the report funding will be made available to the Council in order to carry out the feasibility study and the implementation of the scheme. Whilst, the details surrounding the mechanism of funding the implementation of the scheme are not required at this stage it is important that the funding limits or criteria needed to access the funding for the feasibility study are understood before commencement.

Legal Implications (including Equality Impact Assessment where appropriate)

Section 85(7) of the Environment Act 1995 states that it is the duty of a local authority to comply with any direction given to it. Cardiff Council therefore has a statutory duty to comply with the direction, which could be enforced through a court order.

Any procurement must comply with the Council's Contract Standing Orders and Procurement Rules and the relevant law.

Any specific proposals which are developed following the feasibility study will require appropriate consultation, equality impact assessment and evaluation in relation to the Council's wellbeing objectives.

RECOMMENDATIONS

Cabinet is recommended to:

1. approve the undertaking of a feasibility study as required by the legal direction from Welsh Government;
2. delegate authority to the Director of Planning, Transport & Environment, in consultation with the Cabinet Members for Clean Streets, Recycling & Environment and Strategic Planning & Transport, to commence the procurement of a specialist consultant to undertake detailed modelling to support the feasibility study, including the issuing of documentation; and deal generally with all aspects of the procurement process and ancillary matters up to and including award of contract;

3. note the publication of the Transport and Clean Air Green Paper and refer it to Full Council for debate.

PAUL ORDERS

Chief Executive

22 March 2018

The following appendices are attached:

Appendix 1 High Court Judgement

Appendix 2 Welsh Government Direction

Appendix 3 Welsh Minister Letter

Appendix 4 DEFRA Framework CAZ charging categories

Appendix 5 Transport and Clean Air Green Paper