



Llywodraeth Cymru  
Welsh Government

Air Quality Expert Group  
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17 Smith Square  
London  
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20 June 2011

Dear Air Quality Expert Group,

The Welsh Government welcomes the publication of the Air Quality Expert Group Advice Note, *Understanding PM<sub>10</sub> in Port Talbot*, and would like to thank the group for their contribution towards improving air quality in Port Talbot. It will assist our systematic approach to further our understanding of the potential sources of particulate matter (PM<sub>10</sub>). Establishing a robust evidence base is crucial to the development and implementation of a fit for purpose management strategy to reduce PM<sub>10</sub> concentrations.

Minimising the impacts of air pollution is a core priority of the Welsh Government. Our driver is not only the European legislation we are obligated to comply with, but our commitment to protect human health and the environment. We will continue to work hard to reduce pollution and improve the air quality in Port Talbot. It is this commitment and responsibility that led to our requesting advice from the Air Quality Expert Group.

You will be aware that we have been working in partnership with industry, regulators and local government. This is predominately approached through a number of collaborative working groups: The PM<sub>10</sub> Steering Group, The PM<sub>10</sub> Data Team and the PM<sub>10</sub> Regulators Group. Key members and stakeholders in these groups include the Environment Agency, Neath Port Talbot County Borough Council, Tata Steel, Harsco, Tarmac and the Welsh Government. It is clear that air quality improvements can only be achieved if all of us work together.

The PM<sub>10</sub> Data Team is the technical working group that currently scrutinises the further evidence needed to improve PM<sub>10</sub> concentrations in Port Talbot. It will take responsibility for addressing the recommendations and revise the work programme to account for your Advice Note. The Welsh Government recognises that many of the actions necessary to address air quality in Port Talbot are the responsibility of site operators and their regulators. The Welsh Government chairs the PM<sub>10</sub> Data, Steering and Regulator Groups and will continue to provide leadership for this process.

The Welsh Government invited all Data Team members to contribute to this response as the successful implementation of the recommendations requires actions from all stakeholders. The attached document provides an agreed response to each of the Advice Note's recommendation by the PM<sub>10</sub> Data Team. It also constitutes a more detailed reply from the Welsh Government in addition to this letter.

Yours Sincerely

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## PM<sub>10</sub> Data Team Response to the AQEG recommendation

The PM<sub>10</sub> Data Team is a technical working group tasked with furthering the evidence base needed to help improve air quality in the Port Talbot area. Membership of this group includes: Environment Agency Wales; Tata Steel; Neath Port Talbot County Borough Council; and Welsh Government.

The PM<sub>10</sub> Data Team welcomes the AQEG advice note Understanding PM<sub>10</sub> in Port Talbot and recognises the value of such studies in developing our existing knowledge. We are pleased that the note largely confirms that the data team's intended approach to data analysis is correct. Whilst individual members of the data team may not agree or accept all of the content of the advice note we are keen to address its recommendations. The key recommendations made by the advice note are summarised and discussed below.

Participation in this response does not preclude organisations from providing an individual response to the Air Quality Expert Group. This response only comments on the recommendations of the Advice Note and not the text of the main body of the report. The Data Team intend to carry out the actions fully subject to the necessary funding and detailed scoping of some tasks. Our work programme will be revised to account for our response to the recommendations.

### Recommendation 1-4: Modelling

#### **1. AQEG recommends that a priority for further work should be to model the impact of all the sources within industrial complex on PM<sub>10</sub> concentrations observed in Port Talbot.**

The Data Team welcome this recommendation. Developing a robust modelling evidence base and supporting emissions inventory is viewed as a priority. Work, already started, will continue to develop an emissions inventory and periodic dispersion modelling exercises will be completed, accounting for the influence of terrain and buildings. Difficulties have been experienced in identifying all possible impacting sources and how they vary over space and time, however, it is acknowledged that this will be an iterative process with robustness and accuracy being developed as further work is completed and new information becomes available. Tata Steel and other operators at the Steelworks already undertake an on-site measurement programme to quantify fugitive emissions and will continue to develop this, whilst also ensuring it feeds into the development of the emissions inventory.

**Lead organisations:** Tata will be responsible for delivering an updated dispersion model and comprehensive emissions inventory for the industrial complex. This will be periodically updated as new information becomes available. The Data Team will be fully engaged in developing the scope and reviewing outputs from this process.

#### **2. AQEG recommends that an initial dispersion modelling exercise should be carried out using readily available information on emissions from all sources, which can be supplemented over time with a more detailed time-resolved emission inventory.**

The Data Team welcome this recommendation and consider it a priority. Work to develop a dispersion modelling programme, alongside a comprehensive emissions inventory is outlined above in response to Recommendation 1. An initial dispersion model has already been undertaken for known Steelwork's emissions by Tata Steel but it is recognised that this requires updating to incorporate the latest and more comprehensive information. As already outlined, the iterative nature of this process is integral to enhancing the accuracy of a dispersion model. However, the use of this process to also enhance the emissions inventory is acknowledged and this feedback loop will be incorporated within the dispersion modelling framework. The scope for the overall programme for completing dispersion modelling will be considered by the Data Team within the resource constraints which it operates. The data group are, however, committed to an initial dispersion model exercise based on current and readily available information.

**Lead organisations:** Tata will lead this activity with full input from the Data Team (see Recommendation 1).

**3. AQEG recommends that an early review should be carried out of the available meteorological data to establish whether the meteorological monitoring sites are sufficient to characterise the air flows over the industrial complex and the surrounding area.**

The Data Team welcome this recommendation and acknowledge that improved meteorological data will be beneficial. The Data Team will review the quality of current meteorological data as soon as possible and if necessary, will take measures to re-site or extend the current network of monitoring sites. Implementation of additional sites will, however, be subject to resource availability.

**Lead organisations:** A sub group of the data team (including the EA and NPTCBC who are responsible for implementing monitoring) are to lead a review the adequacy of the current meteorological data before deciding the next steps.

**4. AQEG recommends that CFD (computational flow dynamic) modelling at the building scale would be of limited benefit and should not be pursued.**

The Data Team agree that CFD modelling is not a high priority at this stage and commit to proceed with characterising wind flows at a lower resolution within the modelling exercise outlined in the recommendations. CFD modelling will not be pursued as part of the Data Team work programme.

**Lead organisations:** none required.

## PM<sub>10</sub> Monitoring: recommendation 5-7

**5. AQEG recommends that all of the monitoring sites currently in operation should be retained for a minimum of a further two years.**

The Data Team view a high level of data capture from all monitoring sites as a priority. We also acknowledge that retaining a consistent long-term data set is a central component of the management strategy. Recent enhancements have also been made at Princes Street with the existing TEOM being supplemented with an FDMS instrument (as recommended) and a Partisol monitor shortly to be installed at the site. Reference equivalent hourly data for will now be available from all existing monitors surrounding the industrial complex. We also consider the current network of one AURN (fire station) site, six NPTCBC sites and one Environment Agency Wales site sufficient to characterise PM<sub>10</sub> in the urban area. This provides sufficient data to allow for robust data analysis. Each of these sites will remain in place for a minimum of two years

**Lead organisations:** Respective responsibilities for the organisations responsible for operating the existing monitoring sites.

**6. AQEG recommends that an FDMS monitor should be located to the west of the industrial complex on the coast, co-located with a wind monitor 10m from the ground.**

The Data Team recognise the value of locating an FDMS monitor on the coast, which will provide an indication of the proportion of observed emissions that can be attributed to regional/transboundary sources during elevated PM<sub>10</sub> levels. However the Tata beach site is not appropriate for this undertaking due to it being impacted by industrial and non industrial particles. Consideration will therefore be given to the most appropriate site location for a monitor to characterise PM<sub>10</sub> imported into the area for data assessment.

**Lead organisation:** NPTCBC and the Environment Agency will be responsible for determining a suitable site, agreed by the Data Team.



**7. AQEG recommends that a central repository, ideally web-based, should be established to hold all long-term monitoring data**

The Data Team agree that appropriate storage of and access to all monitoring data is a high priority. However all Port Talbot Air Quality Management Area data is currently available via the Welsh Air Quality website ([www.welshairquality.co.uk](http://www.welshairquality.co.uk)). The data team will consider including additional on-site data if it is made available. Whilst the Welsh Air Quality website may currently be a fit-for-purpose solution it should be pointed out that the purpose of the website is to provide information, advice and data to stakeholders across Wales and this must not be affected. Careful consideration will be given for the most appropriate method of hosting a central repository if and when additional monitoring data becomes available.

**Lead Organisation:** to be agreed by the Data Team

## Chemically speciated measurements: recommendation 8-9

**8. AQEG recommends that a high time resolution monitoring programme in support of a multivariate receptor modelling study should be developed**

The Data Team accept that a high time resolution monitoring programme in support of a multivariate receptor modelling study could provide a useful tool for identifying the potential on-site sources. This is a resource intensive exercise that may require a Cost Benefit Analysis to be undertaken. We need to carefully consider how an exercise such as this is developed and run.

**Lead organisation:** The Data Team will carry out a scoping study to assess the outputs, their benefits, the feasibility and resource implications from undertaking such an exercise.

**9. AQEG recommends that an on-site measurement programme should be developed to quantify the emissions from fugitive sources**

The Data Team agree that improving the understanding of and data available for fugitive sources within the industrial complex is extremely important. Improving this evidence base is currently incorporated as a key part of developing a comprehensive emissions inventory (see Recommendation 1). As already outlined Tata and other operators on the Steelworks site have already initiated an on-site measurement programme to quantify fugitive emissions and will continue to develop this. The development of robust emissions factors and activity data associated with fugitive emissions is a key aim for this work.

**Lead organisation:** Tata will be responsible for undertaking an on-site measurement programme. The Data Team will have input into the on-going development and review of outputs from this programme.

## Organisation: recommendation 10-12

**10. AQEG recommends that the actions set out in this advice note should be developed as a programme of work to be taken forward in a coherent and consistent manner**

The Data Team are committed to using the recommendations contained within the advice note to review the data team action plan (existing work programme of the group) and revise the existing work programme, which will be overseen by the Steering Group.

**Lead organisation:** All organisations in the Data Team.

**11. AQEG recommends that the working arrangements currently in place should be continued, with all parties contributing in an open and transparent manner**

The Data Team welcome this recommendation. The Welsh Government will continue to chair the Data Team and overarching Steering Group and provide continued leadership. However, each organisation within the Data Team recognises the importance of their individual role and responsibilities and are committed to delivering against these. Data Team members also recognise the importance of working in partnership and reaffirm the agreed terms of reference of the group. A strong working relationship between organisations has been established and the Data Team is committed to continue to work collectively in a pragmatic open and transparent manner.

**Lead organisation:** the Data Team and each organisation involved

**12. AQEG recommends that there would be merit in the involvement of external peer reviewers to help ensure that the future programme remains focussed and is making best use of the scientific data and analysis resources [12].**

The Data Team value the benefit of including external peer reviewers to independently assess the quality and progress of the measures to be contained within the revised work programme. A key priority will be to review the existing action plan and work programme. External peer reviews shall be undertaken by a party that is impartial to the stakeholders of air quality at Port Talbot

**Lead organisation:** the Data Team