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Clean Air for Port Talbot

Short Term Action Plan 2012

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Contents

Contents	1
1. Introduction	2
2. Background	4
3. Responsibilities	12
4. Governance	14
5. Short Term Actions	16
6. Monitoring and Evaluation	24
Annex 1: Monitoring Record	25
Annex 2: Evaluation Record	26
APPENDICES	27
1. Roles and Responsibilities	28
2. UWE report	34
3. AQEG advice note	34
4. Regulators Permit Review	35
5. NPTCBC Air Quality Action Plan	36
6. Clean Air Charter	37
7. Port Talbot PM₁₀ Data team work programme	37
8. Terms of Reference for working groups	38
9. Industrial Heritage	39
10. Air Quality - the legislative context	40
11. Abbreviations and Glossary	43

1. Introduction

The Welsh Government issued a Short Term Competent Authority Action Plan (STCAAP) for Particulate Matter below 10 microns in diameter (PM₁₀) in the Swansea Urban area (which includes Neath Port Talbot) in 2008. That plan was prepared pursuant to the requirements imposed on the Welsh Ministers by regulation 11 of the Air Quality Standards (Wales) Regulations 2007.

Regulation 11 required the Welsh Ministers to produce an action plan indicating the short term measures to be taken within any zone in the event of circumstances in which the Welsh Ministers consider there is a risk that one of the following will be exceeded:

- (a) a limit value¹;
- (b) the alert threshold for nitrogen or sulphur dioxide²; or
- (c) the alert threshold for ozone³.

Based on monitoring data, the Welsh Ministers considered there was a risk of the PM₁₀ limit value being exceeded in the South Wales Zone, in particular the Neath Port Talbot area. The 2008 Short Term Competent Authority Action Plan (STCAAP) indicates the measures to be taken within that zone:

- to reduce the risk that a relevant limit value or alert threshold will be exceeded; or
- where it is not possible to prevent the occurrence, to limit its duration or severity.

There is no longer a legal requirement for a STCAAP. The Air Quality Standards (Wales) Regulations 2010 have replaced the 2007 Regulations. Part 5 article 21 (5) states that a Short-Term Action Plan (STAP) may be drawn up where there is

¹ see Schedule 1 of the 2007 Regulations for the limit values of Group A pollutants which are available at:

<http://www.legislation.gov.uk/wsi/2007/717/schedule/1/made>

² see Schedule 2 of the 2007 Regulations for the alert thresholds which are available at:

<http://www.legislation.gov.uk/wsi/2007/717/schedule/3/made>

³ see regulation 11(2), (3) and (4) of the 2007 Regulations which are available at:

http://www.opsi.gov.uk/legislation/wales/wsi2007/wsi_20070717_en_1

a risk that any of the limit values (for example PM₁₀) will be exceeded. However the Welsh Government sees it as an essential tool in improving air quality in Port Talbot. Since the 2008 STCAAP was published there have been developments in the understanding of air pollution in Port Talbot:

- The Welsh Government commissioned an independent study to review the work undertaken in respect of PM₁₀ pollution in the Neath Port Talbot area since 2000. This was carried out by the University of the West of England (UWE) and published in 2009. The study also provided advice to the Welsh Ministers on further measures to pinpoint sources of Particulate Matter. (See Appendix 2)
- In 2010, the Welsh Government asked the Air Quality Expert Group (AQEG) to provide an independent expert opinion on: (See Appendix 3)

“What methodologies or approaches are required to advance the evidence base in order to assess the impact of the different current particle sources within the Port Talbot area on the resultant Particulate Matter (PM) levels in the local area?”

- A key component of the 2008 short term action plan was for the environmental regulators to review the environmental permits held at Port Talbot steelworks for Particulate Matter emissions. (See Appendix 4)

The Welsh Government, the regulators (Natural Resources Wales (NRW), Neath Port Talbot County Borough Council (NPTCBC)) and industry operators are working in partnership to implement the recommendations from these reviews.

In light of these developments the Welsh Government has updated and revised the 2008 STCAAP to produce this Clean Air for Port Talbot Short Term Action Plan. The role of this plan is to show the actions, over and above the day to day existing activities, that will be taken where there is a risk of exceedence.

This is to be a dynamic and evolving document to ensure that the findings from any future studies can be incorporated when appropriate.

This plan will also be the sign posting to other information, reports and action plans working towards improving air quality in Port Talbot.

2. Background

Historically, Port Talbot has a high level of pollution that is generally attributed to the industrial nature of the area. The large industrial complex that operates at the boundary of the Air Quality Management Area (AQMA) is recognised as a potentially major contributor. This industrial complex is shown in Figure 1. Fugitive emissions from the industrial site are also likely to be a significant factor. In addition, there are also emissions derived from other industrial installations outside of this complex, road transport, domestic sources, construction projects, natural sources (such as sea spray) and transboundary sources.

A combination of these potential sources in the Port Talbot area has led to difficulties in meeting the air quality standards for PM₁₀ since their introduction in the Air Quality Strategy 2000, later revised in 2007. There are specific requirements for local authorities to make improvements in local air quality. In addition, the Welsh Ministers have ongoing concerns of the potential risk that concentrations of PM₁₀ within Port Talbot may exceed the relevant daily mean limit value set in Directive 2008/50/EC on ambient air quality and cleaner air for Europe and transposed in the Air Quality Standards (Wales) Regulations 2010. Both the standard and the limit value state that the daily mean concentration of 50 µg/m³ is not to be exceeded more than 35 times in a calendar year.

Figure 1: Aerial Photograph of the Neath Port Talbot County Borough Council Air Quality Management Area for Taibach/Margam outlined in red.



0 0.1 0.2 0.4 Miles
|-----|-----|-----|-----|

Figure 2: Map of the Neath Port Talbot County Borough Council Air Quality Management Area for Taibach/Margam outlined in red and shaded.

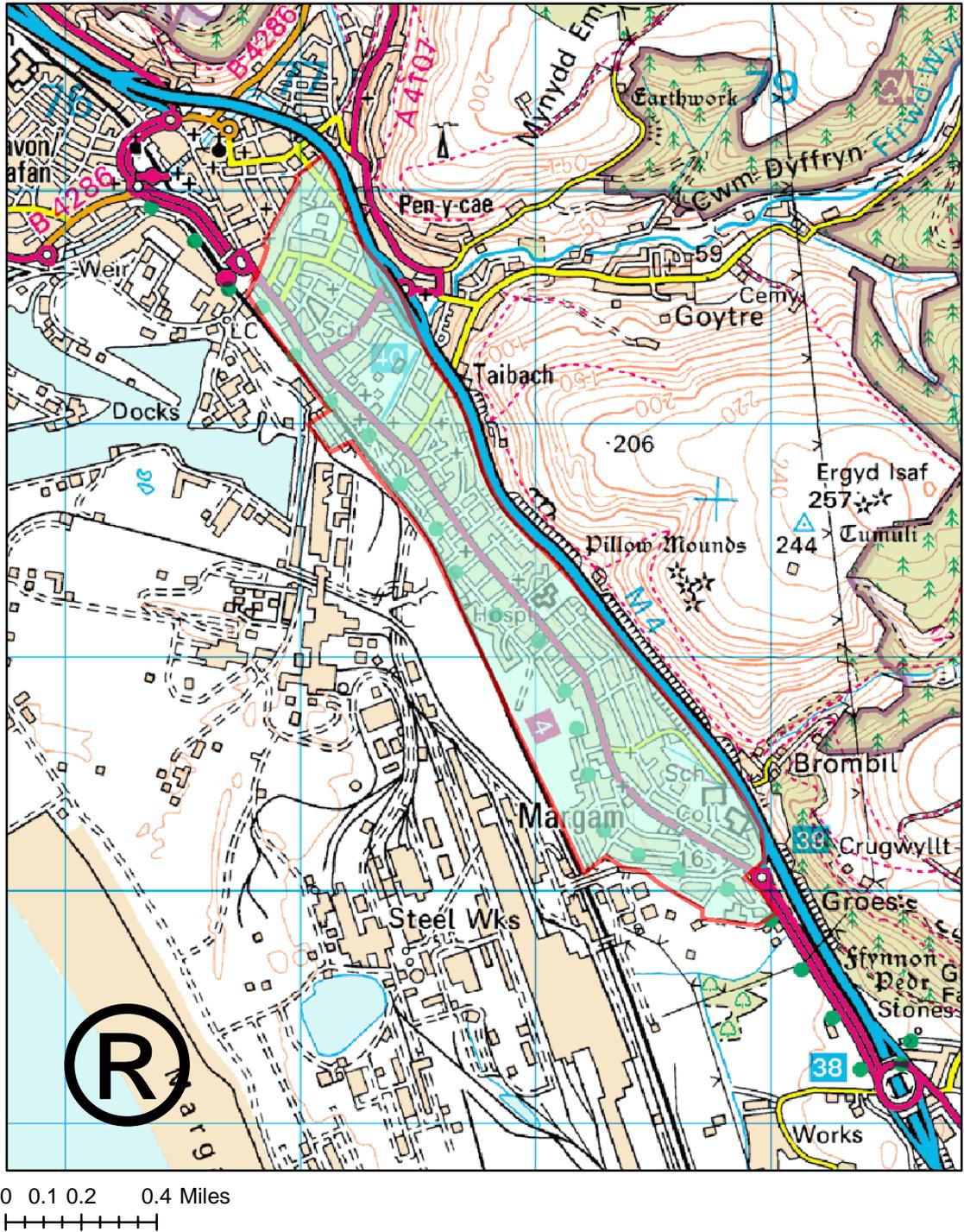


Figure 3 PM₁₀ monitor locations in Port Talbot and exceedances during 2011



Key:
Yellow squares are monitors operated by NPTCBC.
Yellow cross is monitor operated by Natural Resources Wales.

Making information on air pollution levels available to the public

Pollutants covered by Directive 2008/50/EC on ambient air quality and cleaner air for Europe are monitored by the Automatic Urban and Rural Monitoring Network (AURN) and by other monitors, including local authority sites, affiliated to the AURN. Data from these monitors are made publicly available. They are continuously assessed in detail by air quality experts under contract to the Welsh Government, including by formal periodic quality assurance audits, to ensure their accuracy and robustness

The Welsh Ministers make available to the public up-to-date information regarding zones, concentrations, and alerts of breaches of air quality standards through the UK Air Quality website and the Welsh Air Quality Website which may be found at the following links:

Welsh air quality website: <http://www.welshairquality.co.uk>

UK air quality website: <http://www.airquality.co.uk>

Notwithstanding that data from the AURN system and affiliated sites require expert validation and calibration before it can be regarded as a completely reliable assessment of air quality and the potential for exceedences, the Welsh Ministers will consider all the available data from AURN sites in assessing the risk that a relevant limit value or alert threshold will be exceeded. Data from other relevant monitoring sites outside of the AURN may also be considered where operation of instruments and quality assurance of data is also completed to a proven high standard. However, AURN sites only can be used to provide official comparison with statutory limit values. This is due to an assurance that the instruments used, data management and quality assurance systems applied in the AURN meet strict Directive 2008/50/EC on ambient air quality and cleaner air for Europe requirements. An overview of PM₁₀ monitoring stations in the Port Talbot Area is provided in Table 1.

Table 1: Overview of existing Monitoring sites in the Port Talbot Area

Location	Site Type	Pollutants Monitored	Network	Date site established	Type of monitor
Port Talbot Margam – the fire station	Urban Industrial	Particulates (PM ₁₀ and PM _{2.5}), Nitrogen Dioxide, Sulphur Dioxide, Carbon Monoxide, Ozone	AURN	24/07/2007	FDMS + Partisol
Port Talbot Little Warren	Urban Industrial	Particulates (PM ₁₀)	Local Authority	24/01/2012	FDMS
Port Talbot Docks	Urban Industrial	Particulates (PM ₁₀)	Local Authority	13/10/2008	FDMS
Port Talbot Talbot Road	Roadside	Particulates (PM ₁₀)	Local Authority	15/01/2009	FDMS
Port Talbot Theodore Road	Urban Industrial	Particulates (PM ₁₀)	Local Authority	01/04/2009	FDMS
Port Talbot Prince Street	Urban Industrial	Particulates (PM ₁₀ and PM _{2.5}), Sulphur Dioxide, Carbon Monoxide,	Natural Resources Wales	01/01/2010	FDMS + Partisol + TEOM
Port Talbot Twll-yn-y-Wal Park	Roadside	Particulates (PM ₁₀)	Local Authority	13/12/2008	FDMS
Port Talbot Dyffryn School	Urban Background	Particulates (PM ₁₀)	Local Authority	16/07/2007	FDMS

Table 2: Historical PM₁₀ monitoring data for Port Talbot 2007 to 2012

Number of Exceedences (% annual data capture rate)						
Site / Year	2007	2008	2009	2010	2011	2012
Port Talbot	31 (53.69)					
Port Talbot Dyffryn School	1 (45.42)	10 (95.58)	4 (99.29)	6 (99.02)	2 (70.17)	3 (86.11)
Port Talbot Margam (FDMS)	14 (42.67)	34 (92.48)	15 (97.4)	3 (50.51)	29 (98.32)	12 (96.81)
Port Talbot Margam (Partisol)				11 (82.47)	32 (97.53)	7 (60.64)
Port Talbot Docks		0 (21.45)	7 (99.47)	2 (92.42)	11 (98.33)	5 (98.12)
Port Talbot Twll-yn-y-Wal Park		0 (5.09)	9 (99.2)	14 (98.5)	21 (93.55)	8 (98.2)
Port Talbot Talbot Road			6 (94.86)	1 (96.32)	14 (94.02)	8 (79.96)
Port Talbot Theodore Road			3 (73.06)	2 (97.53)	12 (97.33)	2 (94.34)
Port Talbot Prince Street				19 (94.43)	50 (98.17)	11 (60.02)
Port Talbot Little Warren						2 (85.25)
Port Talbot Prince Street (FDMS only)						12 (64.13)

Source: http://www.welshairquality.co.uk/data_and_statistics.php on 09/10/2012. note: number of exceedance days is calculated using data stored on the Welsh Air Quality Database. Currently the database only stores measured concentrations to integer values and so the number of exceedance days may vary from those calculated based on the source data submitted. This approach is consistent with current EC Directive requirements and the precision/accuracy of the instruments.

3. Responsibilities

Here is a summary of the roles and responsibilities of Welsh Government, Natural Resources Wales and Neath Port Talbot County Borough Council in their work to improve air quality in Port Talbot. Further details can be found in Appendix 1.

- The Welsh Government

Improving air quality is a key objective for the Welsh Government. We are committed to tackling the sources of PM₁₀ and ensuring people's right to clean air. Air quality has been improving in recent years, but there is still much to be done so we will continue to work towards further improvements.

The Welsh Government holds ultimate responsibility for meeting limit values and ensuring Directive 2008/50/EC on ambient air quality and cleaner air for Europe is complied with in Wales. We take our obligation to reduce air pollution very seriously. However, our driver is not only European legislation, but our very strong commitment to protecting human health and the environment.

To make real progress on dealing with air quality issues in Port Talbot, there needs to be clear leadership, which is provided by the Welsh Government. See Chapter 5 on Governance Arrangements.

- Natural Resources Wales

Natural Resources Wales has a number of duties related to air quality in Wales:

Natural Resources Wales regulates emissions from industrial facilities under EU legislation and therefore have a role in ensuring the UK complies with EU obligations on integrated pollution prevention and control (IPPC), Directive 2008/50/EC on ambient air quality and cleaner air for Europe, Directive 2004/107/EC relating to As, Cd, Hg, Ni and PAHs in ambient air and Directive 2001/81/EC on National Emissions Ceilings.

The Natural Resources Wales support local authorities in improving local air quality.

- Neath Port Talbot County Borough Council

Neath Port Talbot County Borough Council (NPTCBC) has a duty under section 84 of the Environment Act 1995 to assess air quality and declare an Air Quality Management Area (AQMA) where it is considered that there is likely to be a breach of an air quality objective. Consequently the Taibach Margam AQMA was declared in 2000 and an Air Quality Action Plan (AQAP) adopted in 2002. The Council has recently reviewed the AQAP in order to ensure that it continues to be relevant and up to date.

The Council continues to regulate Civil & Marine Slag Cement, a sub-contractor at the steelworks site, in accordance with the permit and completed a review of the permit as requested by the Welsh Government in 2008.

The Council monitors PM₁₀ at seven locations in Port Talbot.

4. Governance

Ensuring that we take the appropriate action to improve air quality in Port Talbot is paramount. That action must be built on a sound evidence base to ensure that measures are targeted and effective both in the short term and for the future. We aim to ensure that the success of the current partnership working between Government, Regulators and Operators continues.

The 2008 STCAAP set out the governance arrangements. We regularly review these arrangements in order to refresh and improve them. The Welsh Government continually wishes to improve our working relationships with our partners in order to improve the air quality for the residents of Port Talbot.

Welsh Government officials meet regularly with the steelworks operators, Natural Resources Wales and Neath Port Talbot County Borough Council to identify potential sources of and solutions for high PM₁₀ levels.

This collaborative approach takes place in the following fora:

- Steering Group, meeting three times a year, with the purpose of reviewing ongoing work and directing resources appropriately.
- Regulators Group, meeting three times a year, tasked with reviewing the actions being taken by the regulators and Welsh Government in Port Talbot.
- Data Team, meeting monthly, tasked with reviewing the data on PM₁₀ and improving the management and interpretation of the data across the different organisations.

These arrangements were approved in the recent AQEG review. The terms of reference for the groups have been drawn up with input from the Environment Agency Wales (now part of Natural Resources Wales), Neath Port Talbot County Borough Council, Harsco, Tarmac and Tata Steel UK. They reflect the action being taken to reduce PM₁₀ pollution in Port Talbot and ensure excellent communication between the partner organisations.

See Appendix 8 for the Terms of Reference documents for each group.

The Port Talbot PM₁₀ Data Team

The Data Team is the technical working group that scrutinises existing evidence and defines what future work is required to maintain and improve it. This evidence base underpins the development of effective actions to reduce PM₁₀ concentrations in Port Talbot. It is tasked with reviewing the information on PM₁₀ and improving the management and interpretation of data across the different organisations. This group assesses the outcomes of analytical work, the effectiveness of investments and trials and seeks to ensure implementation of recommendations from the UWE Report (Appendix 2) and the AQEG advice note (Appendix 3).

The group includes representatives from the Welsh Government, Natural Resources Wales, NPTCBC and local industries. It facilitates a close working relationship between all parties in analysing and understanding air quality in the Taibach/Margam AQMA.

The meetings involve discussion of progress against each item within this PM₁₀ work programme. This includes:

- monitoring,
- data quality,
- data analysis,
- source apportionment,
- chemical speciation measurements, and
- dispersion modelling.

The Port Talbot PM₁₀ Data Team provides updates to the Steering Group to enable their strategic and resource planning.

The work of the PM₁₀ Data Team is externally peer reviewed [1] to help ensure that the work programme remains focussed on its objective to provide a fit for purpose and robust evidence base, and that it is making best use of the scientific data and methodologies.

[1] External peer review is carried out by the University of the West of England under Welsh Government Contract Number: C-135/2011/12

5. Short Term Actions

As stated earlier the Welsh Government is committed to protecting human health and the environment as well as meeting limit values and ensuring Directive 2008/50/EC on ambient air quality and cleaner air for Europe is complied with in Wales. The short term actions identified are part of the mechanism to deliver all of these aims.

Action will be taken in the event of a disproportionately high number of breach days (days when the daily average exceeds $50\mu\text{g}/\text{m}^3$) in Port Talbot during any given calendar year. Welsh Government assesses data from all monitors across the town rather than just the official monitor at Port Talbot Margam – the fire station.

The Welsh Government will work with Neath Port Talbot County Borough Council, Natural Resources Wales, other expert bodies and relevant Welsh Government departments in order to ensure that action is taken to identify positively the potential sources of pollution that may contribute to the risk of exceedances.

Timing

The appropriate intervention time for these actions is decided by the following model.

To help minimise the risk of having more than 35 breach days (occasions when the daily average exceeds $50\mu\text{g}/\text{m}^3$) by the end of a calendar year an escalation model has been developed. The model and thresholds were developed by an Environment Agency Wales (now part of Natural Resources Wales) Technical Specialist and based on historical data trends. The model will aid our decision-making process and indicate when we should consider actions or interventions that exceed our standard activities.

The model compares the number of breach days relative to the current position within the calendar year, and indicates whether the number of breach days is

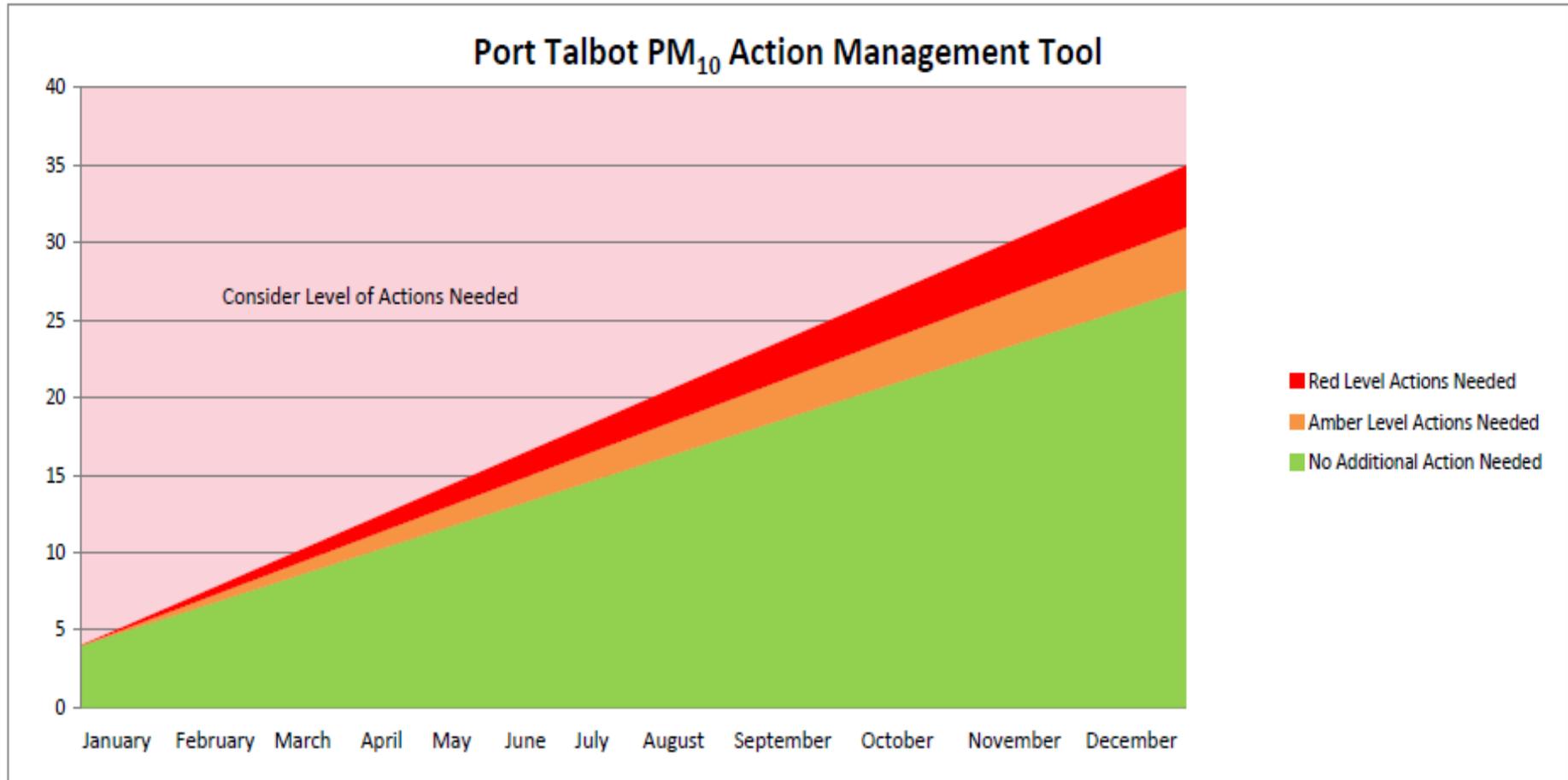
disproportionately high. For example, a total of 20 breaches within the first six months of a year would be of great concern, and would trigger more stringent interventions, than reaching a total of 20 breaches by December.

The escalation model contains four indicators of the required actions:

- Green – the number of breaches is low for the current point in the year and the existing wide ranging control measures are effectively minimising PM₁₀ emissions.
- Amber – the number of breaches is approaching a high level relative to the current point in the year, therefore, additional interventions would be initiated and preparations would be made by the relevant organisations to minimise the risk of reaching the red area.
- Red – the current rate of breaches has the potential to reach 35 by the end of the calendar year, therefore the Welsh Government would call a meeting of the relevant organisations to consider the initiation of the Short Term Actions. These Short Term Actions are designed to have an immediate effect to improve air quality.
- Pink – if at any point during the year the rate of breaches has the potential to exceed 35, consideration will be given to what additional measures should be initiated.

Where breaches of the daily average are largely attributable to the effect of natural sources^[1] or transboundary pollution (i.e. pollution generated in one country and transported to neighbouring countries), the selection of control measures will be adjusted accordingly. In these cases there maybe no/few local actions that may lead to a significant reduction in the air pollution in Port Talbot.

[1]contributions from natural source shall mean emissions of pollutants not caused directly or indirectly by human activities, including natural events such as volcanic eruptions, seismic activities, geothermal activities, wild-land fires, high-wind events, sea sprays or the atmospheric re-suspension or transport of natural particles from dry regions. For further details see: <http://ec.europa.eu/environment/air/quality/legislation/assessment.htm>



Implementation

Measure code	Wales_001
Measure	Identification of appropriate short term actions given the particular circumstances at the time.
Measure description	The Welsh Government will convene a meeting to bring together all relevant parties (including Natural Resources Wales and Neath Port Talbot County Borough Council (NPTCBC)) to identify the appropriate short term actions given the particular circumstances at the time.
Lead Organisation	Welsh Government

Measure code	Wales_002
Measure	Monitor actions.
Measure description	The Welsh Government will monitor progress on any agreed actions and their outcomes.
Lead Organisation	Welsh Government

The Welsh Government will consider issuing formal directions to the environmental regulators to ensure actions are implemented.

Actions

The selected actions are likely to be derived from (but will not be restricted to) the following:

Measure code	Wales_003
Measure	Regulation of steelworks
Measure description	Natural Resources Wales to carry out further compliance checks on the adherence of the steelworks operators to the requirements in their Air Quality Management Plan (as introduced in the Variation Notices issued February 2012).
Lead Organisation	Natural Resources Wales

Measure code	Wales_004
Measure	Further action from steelworks site
Measure description	Natural Resources Wales to discuss with the steelworks operators the further short term improvements that they can make to reduce levels of PM ₁₀ from their site. This should be based on the improvement programme requirements that were included in the Variation Notices issued February 2012. (Note – Whilst initial responses were provided April 2012 the detailed response is due by the end of June 2013).
Lead Organisation	Natural Resources Wales

Measure code	Wales_005
Measure	Escalation model.
Measure description	Natural Resources Wales to continue to use their “escalation model” in the regulation of industrial activities on the steelworks site. This includes contacts at increasingly senior levels within the organisations.
Lead Organisation	Natural Resources Wales

Measure code	Wales_006
Measure	On-site traffic control checks
Measure description	Natural Resources Wales to review the on-site traffic controls within the steelworks site (Tata Steel UK, Harsco and Tarmac). This would include an assessment of company actions to remind drivers of traffic controls and their audit plans for assessing compliance. It may include actual traffic checks. Appropriate speeds lead to reduced fine dust creation and lift off, especially from unmade roads
Lead Organisation	Natural Resources Wales

Measure code	Wales_007
Measure	Modify construction works
Measure description	NPTCBC and Costain jointly to halt, modify or reduce activity on the Peripheral Distributor Road (PDR) construction (prior to its completion).
Lead Organisation	Neath Port Talbot County Borough Council

Measure code	Wales_009
Measure	Motorway traffic restrictions
Measure description	Welsh Government may consider installing average speed enforcement on the M4 through Port Talbot with an aim of ensuring a smooth flow of traffic.
Lead Organisation	Welsh Government

Measure code	Wales_010
Measure	Suppressants on site roads
Measure description	Natural Resources Wales to encourage the steelworks to use chemical suppressants on their site roads. Consideration will be given to trialling various suppressants for example calcium magnesium acetate (CMA). (This has been used in trials in London).
Lead Organisation	Natural Resources Wales

Measure code	Wales_011
Measure	Suppressants on local authority roads
Measure description	NPTCBC to consider a trial of dust suppressant on main roads within Port Talbot. (For example, CMA which has been used in trials in London).
Lead Organisation	Neath Port Talbot County Borough Council

Measure code	Wales_012
Measure	Reduction of industrial activity
Measure description	Natural Resources Wales to discuss with 3 Port Talbot steelworks operators (Tata Steel UK, Tarmac and Harsco) or any other NRW permitted industrial site, the voluntary temporary reduction in plant throughput or rescheduling of non-urgent maintenance.
Lead Organisation	Natural Resources Wales

Measure code	Wales_013
Measure	Reduction of industrial activity
Measure description	NPTCBC to discuss with their local regulated sites (including Civil & Marine) the voluntary temporary reduction in plant throughput or rescheduling of non-urgent maintenance.
Lead Organisation	Neath Port Talbot County Borough Council

Measure code	Wales_014
Measure	Planning controls
Measure description	NPTCBC to consider the temporary restriction or modification of construction operations on high PM ₁₀ days on any local developments with NPTCBC planning permission (during planning permission process).
Lead Organisation	Neath Port Talbot County Borough Council

Measure code	Wales_015
Measure	Suspension of Environmental Permit
Measure description	Welsh Ministers to consider exercising any appropriate powers of direction to direct Natural Resources Wales or Neath Port Talbot County Borough Council to suspend environmental permits at relevant regulated facilities.
Lead Organisation	Welsh Government

The above actions are to be taken at a stage in the calendar year to ensure the annual number of exceedances is not more than 35. Many actions already take place on a day to day basis to reduce the risk of an exceedance. For example see appendix 5 for the local authority's air quality action plan and appendix 7 for the PM₁₀ Data team work programme.

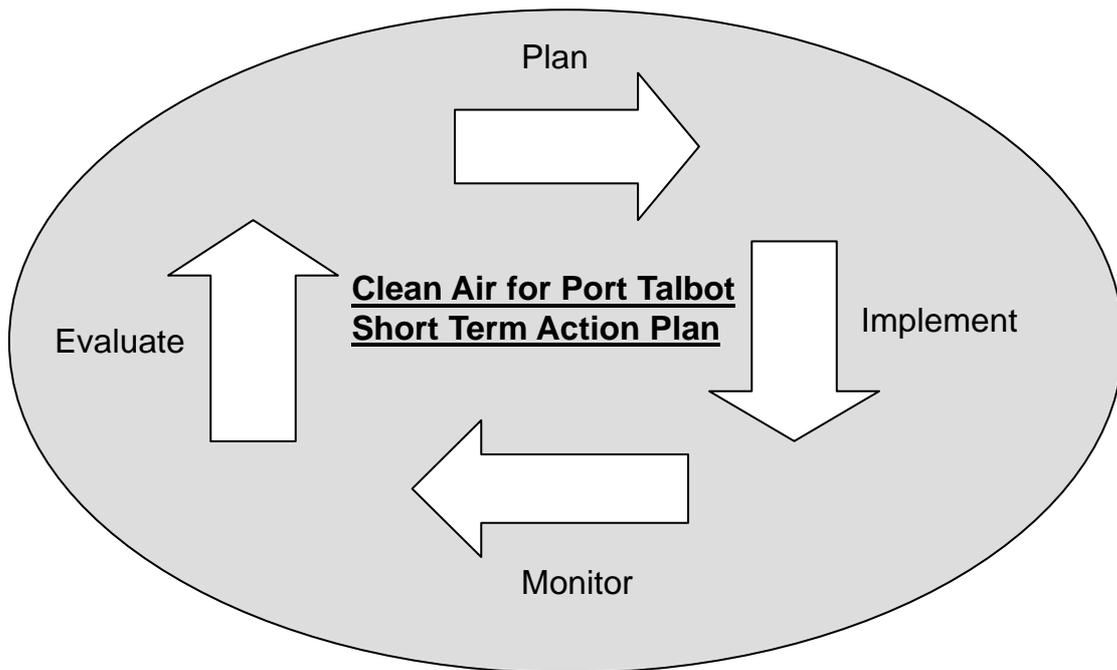
When an exceedance occurs the results from similar monitors across South Wales and beyond are looked at. This will establish whether this is a local issue or wider issue. If only local monitors are affected, the steelworks will launch an investigation and check whether any of their work or that of contractors could be causing the problem. If they are responsible, they may modify their site activities.

Neath Port Talbot County Borough Council undertakes an assessment into potential contributors to the exceedance where the meteorological information is indicating that the source is from an alternative direction than the steelworks site.

All exceedance day investigations are discussed at the PM₁₀ Data team meetings.

6. Monitoring and Evaluation

Monitoring and evaluation is an integral part of this Clean Air for Port Talbot Short Term Action Plan.



Upon implementation of the plan the following records will be completed as a record of the meetings held under Measures Wales_001 and Wales_002.

Information on the implementation of this plan will be made publicly available on request.

Annex 1: Monitoring Record

Where are we now?

Date of implementation meeting:	
Organisations present:	
Date of latest exceedance:	
No. of exceedances this year:	

Understanding the present situation

For each exceedance this calendar year the following table will be completed.

Exceedance number:	
Date of exceedance:	
Type of exceedance:	Regional / localised
Cause of exceedance:	

Action implementation

For each action to be initiated the following points will be discussed;

- What action will be implemented?
- Who will implement the action?
- When will the action be implemented?
- What resources are required?
- Who will monitor the action?
- How will the action be monitored?
- When will the action be reviewed?
- What are the indicators for success?
- What outcome are we working toward?
- Who has approved this action?

Annex 2: Evaluation Record

Date of evaluation meeting:	
Organisations present:	
Date of latest exceedance:	
No. of exceedances this calendar year:	

For each action initiated the following points will be discussed.

- What action was implemented?
- Who implemented the action:?
- When was the action implemented?
- Status of action? Completed / in progress / delayed
- Who monitored the action?
- How was the action monitored?
- Was it successful?
- Effectiveness of action?
- Data used?
- Lessons learned?
- Who has approved this evaluation?

APPENDICES

There are several reports and plans working towards improving air quality in Port Talbot. They have been included as appendices to this Clean Air for Port Talbot Short Term Action Plan so that they are accessible to the public.

1. Roles and Responsibilities

- The Welsh Government

Improving air quality is a key objective for the Welsh Government. We are committed to tackling the sources of PM₁₀ and ensuring people's right to clean air. Air quality has been improving in recent years, but there is still much to be done so we will continue to work towards further improvements.

The Welsh Government holds ultimate responsibility for meeting limit values and ensuring Directive 2008/50/EC on ambient air quality and cleaner air for Europe is complied with in Wales. We take our obligation to reduce air pollution very seriously. However, our driver is not only European legislation, but our very strong commitment to protecting human health and the environment.

We work closely with local authorities, Natural Resources Wales, industry and other stakeholders to protect and improve air quality in Wales. Sometimes our role involves applying pressure and challenge to these organisations to ensure the effects of air pollution are minimised in the most cost-effective way.

To make real progress on dealing with air quality issues in Port Talbot, there needs to be clear leadership, which is provided by the Welsh Government. See Chapter 5 on Governance Arrangements.

The Welsh Government is responsible for national monitoring networks in Wales and for reporting data to the European Commission that assesses compliance with all limit values. The Welsh Government manages a range of national air quality monitoring networks including the AURN, Metals, Hydrocarbons, pollution deposition and their effects as well as the National Atmospheric Emissions Inventory. We have also developed and continue to manage the Welsh Air Quality Database (WAQD). This is a repository for all air quality monitoring data gathered, with records stretching back as far as 1986 for some sites. This data is made publicly available as an archive and for some sites in 'real-time' alongside air

quality forecasts for Wales on the Welsh air quality website:
<http://www.welshairquality.co.uk>

A range of other information, including health advice and information on individual pollutants is also provided on the website. In addition the WAQD provides a range of technical and analytical support to local authorities in Wales to help manage air quality more effectively at the local level and fulfil their responsibilities under Local Air Quality Management (LAQM).

The combination of the networks, WAQD, website and associated technical support functionality provides a fit-for-purpose monitoring network evidence base that is compliant with EU Directive requirements in Directive 2008/50/EC on ambient air quality and cleaner air for Europe and Directive 2004/107/EC relating to As, Cd, Hg, Ni and PAHs in ambient air.

Many areas including Health, Economic Development, Transport, Planning and Rural Affairs are involved in the Welsh Government's holistic approach to dealing with air quality issues. For example, the Welsh Government considers air quality during development of policy in areas such as planning, transport and Technical Advice Notes (TANs).

The Welsh Government engages with the European Commission to improve understanding and awareness of PM₁₀ health implications (for example keeping up to date with World Health Organisation studies) and the understanding of transboundary pollution.

In summary the Welsh Government is obliged to comply with European and Domestic legislation and is totally committed to protecting human health and improving the environment.

- Natural Resources Wales

Natural Resources Wales has a number of duties related to air quality in Wales:

Natural Resources Wales regulate emissions from industrial facilities under EU legislation and therefore have a role in ensuring the UK complies with EU obligations on integrated pollution prevention and control (IPPC), Directive 2008/50/EC on ambient air quality and cleaner air for Europe, Directive 2004/107/EC relating to As, Cd, Hg, Ni and PAHs in ambient air and Directive 2001/81/EC on National Emissions Ceilings.

Natural Resources Wales support local authorities in improving local air quality.

The Role of Natural Resources Wales:

Natural Resources Wales regulates the release to air of pollutants from large or more complex industrial installations in England and Wales under The Environmental Permitting (England and Wales) Regulations 2010. Those Regulations transpose the requirements of the current Directives on integrated pollution prevention and control (IPPC), large combustion plants, waste incineration and activities using volatile organic solvents. Those Directives have been recast into Directive 2010/75/EU on Industrial Emissions which has to be transposed by 7 January 2013. It will maintain and in some aspects strengthen the requirements of the component Directives^[1].

The Integrated Pollution Prevention and Control Directive ^[2] requires that the operator uses the Best Available Techniques (BAT) to provide a high level of protection for the environment as a whole. Where it is necessary to meet an environmental quality standard set out in European legislation Natural Resources Wales is required to set stricter conditions than those which would otherwise be required under BAT. Natural Resources Wales also applies its pollution control powers to ensure that regulated sites deliver their fair contribution to meet national or international targets ^[3], taking account of other sources.

1 For a full list of those Directives see paragraph (1) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32010L0075:EN:NOT>

2 This IPPC Directive has now been incorporated into the Industrial Emissions Directive.

3 For example, the National Emission Ceilings Directive set obligations on the UK to achieve targets for the national releases of ammonia, nitrogen dioxide, non-methane VOCs and sulphur dioxide by 2010.

The Role of Natural Resources Wales in Local Air Quality Management:

The Environment Act 1995 required the Secretary of State to publish a national Air Quality Strategy and establish the system of Local Air Quality Management (LAQM). The Air Quality Strategy for England, Scotland, Wales and Northern Ireland sets out air quality objectives and the government's policy for improving air quality in the UK. The government and devolved administrations have overall responsibility for ensuring the UK meets limit values.

The Local Air Quality Management process places a statutory responsibility on local authorities to review and assess air quality for seven pollutants; particles (PM₁₀), nitrogen dioxide, sulphur dioxide, benzene, 1,3-butadiene, carbon monoxide and lead. If the objectives for these pollutants are not likely to be met then the local authority must declare an Air Quality Management Area and produce an Air Quality Action Plan (AQAP) to work towards meeting the objectives.

Natural Resources Wales work with local authorities in Wales to provide information on regulatory processes to enable them to undertake their air quality Review and Assessment. They will investigate what improvements can be made if an installation they regulate is contributing significantly to the breach of a national objective or is projected to do so. Where necessary they will require an operator to carry out *ad hoc* monitoring of local air quality or to install longer term monitoring stations.

Monitoring of air quality in Wales:

Most air quality monitoring is carried out by Government or local authorities. As part of their pollution control responsibilities they carry out short term monitoring campaigns in the vicinity of processes they regulate. Usually these are put in place for between three to six months using a Mobile Monitoring Facility (MMF).

Following the Buncefield Incident in 2005, Defra commissioned the Environment Agency to set up an air quality coordination and monitoring capability to provide information to the Strategic Command Structure. This became fully operational in April 2010. The capability in Wales is now provided by Natural Resources Wales. The service is provided through two monitoring teams dispersed across Wales.

Air Quality in Port Talbot:

Natural Resources Wales work with the Welsh Government and Neath Port Talbot County Borough Council and other stakeholders such as Public Health Wales, Harsco, Tarmac and Tata Steel UK, as part of the governance arrangements in place to examine and improve air quality. This includes meetings of the Local Service Board, PM₁₀ Data Team, Regulators Group, Steering Group and helping to respond to the Air Quality Expert Group (AQEG) recommendations.

- Neath Port Talbot County Borough Council

Neath Port Talbot County Borough Council (NPTCBC) has a duty under section 84 of the Environment Act 1995 to assess air quality and declare an Air Quality Management Area where it is considered that there is likely to be a breach of an air quality objective. Consequently the Taibach Margam AQMA was declared in 2000 and an Air Quality Action Plan adopted in 2002.

The Council has recently reviewed the Air Quality Action Plan (AQAP) in order to ensure that it continues to be relevant and up to date. This was also a recommendation of the UWE independent report (Appendix 2). A consultation was undertaken and due consideration was given to the comments made. The AQAP specifies the actions to be taken by the Council and others in pursuance of a resolution to the PM₁₀ issue in Port Talbot. It also states the limits of NPTCBC's direct powers in respect of addressing the most significant sources of PM₁₀ in Port Talbot.

The Council continues to regulate Civil & Marine Slag Cement, a sub-contractor at the steelworks site, in accordance with the permit and completed a review of the permit as requested by the Welsh Government in 2008. Regulation of the mobile crushing and screening of blast furnace slag has now been transferred to Natural Resources Wales which is considered to provide for better integrated regulation.

The Council monitors PM₁₀ at seven locations in Port Talbot. The most recent addition is a monitor at Green Stars Rugby Club in Little Warren. This was deployed as a consequence of a recommendation from AQEG. A 10m meteorological mast and sensors have also been deployed. Data from all of these monitoring stations are shared with partners in order to investigate the source of PM₁₀ on exceedance days.

The Council runs an email alert system which is designed to provide prompt warnings of deteriorating air quality to relevant groups. These groups use the information in order to try to intercede and prevent the occurrence of PM₁₀ exceedance days.

The Council continues to fulfil its requirements to assess air quality under the Local Air Quality Management (LAQM) regime. This includes Progress Reports, Updating and Screening Assessments and Detailed Reports where necessary.

The Council has engaged in regular dialogue with managers of the Peripheral Distributor Road (PDR)^[1] in order to ensure that the PM₁₀ impact of the construction project upon Port Talbot is minimised.

The Council is committed to follow up any reports of dusty aggregate trains and has previously contacted Freightliner to resolve such issues.

The Council takes part in regular PM₁₀ Data Team, Steering Group and Regulators Group meetings in order to further the aims and objectives of each group. The Council will continue to carry out activities identified for NPT action by AQEG recommendations or under the Data Team Work Programme.

The Council aims to ensure that new developments do not adversely affect PM₁₀ levels in Port Talbot. This is achieved in part through the Unitary Development Plan and future policy will be considered as part of the Local Development Plan (LDP). The Council is working with Natural Resources Wales in this regard.

¹ Harbour Way is the largest transport project for Wales since the creation of the M4. It will provide a 4.8km link to the motorway at Junction 38 (Margam) into Port Talbot and the Docks, serving a vital link to West Wales, the UK motorway network and mainland Europe. For further details see: <http://www.harbourwayproject.com/>

The Council will continue to engage in the Local Service Board Air Quality Project. The project has a wider remit than Port Talbot PM₁₀ which is nonetheless the principal focus. This involves a significant level of engagement with industry and the public. To this end an event was organised in Port Talbot in July 2010 and a second event took place in Neath in March 2012. There are plans for future events.

Councillors and officers meet regularly with industrial operators in the Port Talbot area to ensure communication at all levels of the organisations.

The Council also maintains air quality pages as part of its [website](#). This website enables users to investigate historic and current air quality levels from the Council's seven PM₁₀ monitors, provides access to all Council air quality reports and provides general information to the public about air quality. The Council developed a new non-technical [website](#) in conjunction with the public and local schools in 2012.

2. UWE report

The Welsh Government commissioned an independent expert review of PM₁₀ monitoring and modelling work within the Neath Port Talbot area from the University of the West of England to provide advice to Ministers on further measures which might be used to pinpoint sources of Particulate Matter.

The findings of this review were published in November 2009. The report made several detailed recommendations for further work, which are either complete or currently being implemented. The UWE report is available on the Welsh Government [website](#).

3. AQEG advice note

In 2010, Welsh Government asked the Air Quality Expert Group (AQEG) to provide an independent expert opinion on:

“What methodologies or approaches are required to advance the evidence base in order to assess the impact of the different current particle sources

within the Port Talbot area on the resultant Particulate Matter (PM) levels in the local area?"

AQEG held a one-day open evidence session to inform this work in Port Talbot in November 2010, and held additional information gathering meetings with Tata Steel UK. The regulators, industry operators, academics, local residents, and pressure groups attended and gave evidence at the open session, providing an overview of current knowledge and opinion in the area.

Based on this evidence AQEG produced an Advice Note entitled *Understanding PM₁₀ in Port Talbot* in March 2011. The Advice note contained 12 recommendations for furthering the evidence base on source contribution and particulate concentrations in the areas to be taken forward in partnership by Welsh Government, regulators and industrial operators. The AQEG advice note is available on the Defra [website](#).

4. Regulators Permit Review

A key component of the 2008 short term action plan was for the environmental regulators to review the environmental permits held at Neath Port Talbot steelworks for Particulate Matter emissions. The environmental regulators are responsible for determining permit conditions for installations covered by the Environmental Permitting (England and Wales) Regulations 2010.

The environmental regulators in this case are the Environment Agency Wales (now part of Natural Resources Wales) and Neath Port Talbot County Borough Council (NPTCBC).

The executive summaries of the regulators review can be found on the Welsh Government [website](#)

A copy of the Environment Agency Wales review full report may be obtained from:

Natural Resources Wales
Maes Newydd,
Britannic Way West ,
Llandarcy,

SA10 6JQ

Tel: 03708 506506

A copy of the Neath Port Talbot County Borough Council's review full report may be obtained from:

Neath Port Talbot County Borough Council
The Quay,
Brunel way,
Baglan energy park,
SA11 2GG.

5. NPTCBC Air Quality Action Plan

The Environment Act 1995 requires local authorities to review and assess air quality within their districts. Where any of the government's air quality objectives are not likely to be met, local authorities must declare an Air Quality Management Area (AQMA). An Action Plan must then be produced which describes how air quality within the AQMA will be brought back into compliance.

Neath Port Talbot County Borough Council first declared an Air Quality Management Area in the Taibach and Margam area of Port Talbot in 2000. This was necessary because levels of fine particulates (PM₁₀) were exceeding the proposed short term Air Quality Objective. An Air Quality Action Plan was drawn up in 2002 following extensive public consultation. The current document updates this plan.

This Action Plan recognises the limitations of the Council's powers in directly controlling emissions from the Port Talbot steelworks. Regulation on this site is mainly the responsibility of Natural Resources Wales. The Action Plan also recognises the primary importance of joint action by various organisations in attempting to investigate and resolve local sources of PM₁₀. These organisations include Natural Resources Wales, Welsh Government, Neath Port Talbot County Borough Council, Tata Steel UK, Cambrian Stone Limited, Harsco Metals Limited, Costain, Local Service Board members and others.

This Action Plan is formulated with due recognition of all other corporate and strategic policies and strategies of the Council e.g. health, social care and wellbeing, community plan and environment strategy. It has been the subject to widespread consultation and has been modified where appropriate.

This Air Quality Action Plan can be downloaded from the NPTCBC [website](#).

6. Clean Air Charter

Neath Port Talbot County Borough Council and its partner agencies are dedicated to bring and maintain all areas of the County Borough within national standards for air quality. To help provide a focus for achieving this we have developed a Clean Air Charter. The charter is supported by political leaders at national, regional and local level, by partner organisations and by businesses within the area. The charter explains what NPTCBC will do to protect the health and well being of citizens, residents, businesses and visitors to Neath Port Talbot. The Charter can be found on the NPTCBC [website](#).

7. Port Talbot PM₁₀ Data team work programme

The Port Talbot PM₁₀ Data Team is made up of staff from the Welsh Government, Neath Port Talbot County Borough Council, Natural Resources Wales and local industry operators. It is the technical working group that scrutinises the further evidence needed to improve PM₁₀ concentrations in Port Talbot. It is tasked to review the data on PM₁₀ and to improve the management and interpretation of the data across the different organisations.

The work of the group has been developed in to this PM₁₀ Data team work programme to ensure it is taken forward in a coherent and consistent manner. The Welsh Government provides leadership to this work programme.

Each task has a lead organisation and progress updates are made to the document every two months.

The work programme document can be found on the Welsh Government [website](#).

8. Terms of Reference for working groups

Ensuring that we take the appropriate action to improve air quality in Port Talbot is paramount. That action must be built on a sound evidence base to ensure that measures are targeted and effective both in the short term and for the future. We hope that the success of the current partnership working between Government, Regulators and Operators continues.

Welsh Government officials meet regularly with the steelworks operators, Natural Resources Wales and Neath Port Talbot County Borough Council to identify potential sources and solutions for high pollution levels.

This collaborative approach takes place in the following fora:

- Steering Group, meeting three times a year, with the purpose of reviewing ongoing work and direct resources appropriately.
- Regulators Group, meeting three times a year, to review the actions being taken by the regulators and WG in Port Talbot.

Data Team, meeting monthly, tasked to review the data on PM₁₀ and to improve the management and interpretation of the data across the different organisations.

The work programme document can be found on the Welsh Government [website](#).

9. Industrial Heritage

Port Talbot is a reminder of South Wales' proud industrial heritage. The development of the coal and iron industries allowed the area to become a hub of activity during the Industrial Revolution. It is important to understand the historical background of the area as this explains the nature of the town today.

Early development of the iron industry began in South Wales due to the close proximity of iron ore and coal from the South Wales Coalfield and also local supplies of limestone; this progressed into steel production over the years. The tinsplate industry developed as an off shoot of the iron and steel industry, as did other industries such as several chemical works, sheet steel, gas works and engineering firms. These sites were influenced by the geographical considerations and were consequently located near to rivers and the coastal region. Small settlements such as Port Talbot, became a major industrial centre with the consequent immigration of workers.

The area is highly regarded around the globe for its industrial strengths and taking the lead in sector developments in manufacturing and life sciences. For hundreds of years the towns within Neath Port Talbot have played an important part in heavy industry.

10. Air Quality - the legislative context

European Directive

Directive 2008/50/EC on ambient air quality and Cleaner Air for Europe - known as the CAFÉ Directive - came into effect on 11 June 2008. It consolidates and repeals previous ambient air quality legislation with the exception of the Fourth Daughter Directive. The Fourth Daughter Directive relates to arsenic, cadmium, mercury, nickel and polycyclic hydrocarbons in ambient air.

Wales Regulations

The Air Quality Standards (Wales) Regulations 2010 incorporate the CAFÉ Directive and the Fourth Daughter Directive into Welsh law, and replace the Air Quality Standards (Wales) Regulations 2007. The Regulations come into force on 11 June 2010.

UK Air Quality Strategy (AQS)

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS) which was published in June 2007, sets out the objectives and policies to improve air quality in the UK in the long term under section 80 of the Environment Act 1995.

It identifies the actions to be taken at international, national and local level and provides a framework which allows relevant parties such as industry and local government to identify the contributions they can make to ensuring that the objectives are met.

It contains policies for tackling air pollution and sets air quality standards for eight key air pollutants. This takes into account the latest research findings and conclusions on the health effects of air pollution and technical developments and policy evolution.

The Strategy:

- sets out a way forward for work and planning on air quality issues
- sets out the air quality standards and objectives broadly in line with those set within EU Directives
- introduces a new policy for tackling fine particles
- Identifies potential new policies which could give further health benefits and move closer towards meeting the Strategy's objectives

A link to that document can be found at: [The UK Air Quality Strategy](#)

Local Air Quality Management (LAQM)

Local Authorities must carry out regular reviews and assessments of air quality in their area against standards and objectives in the National Air Quality Strategy under the local air quality management regime (LAQM) under section 84 of the Environment Act 1995.

Where these standards and objectives are unlikely to be met authorities must:

- designate air quality management areas (AQMAs); and
- prepare and implement remedial action plans.

The aim of such reviews is to make sure that national air quality standards are met and the potential risk of health effects from air pollutants is as low as possible.

Several Local Authorities have declared AQMAs with nitrogen dioxide being the main pollutant responsible for this. However, in Port Talbot the pollutant of concern is PM₁₀ (broadly defined as airborne Particulate Matter below 10 micrometres aerodynamic diameter).

The Environmental Permitting Regime (EPR)

The Environmental Permitting Regime (EPR), which flows from the Environmental Permitting (England and Wales) Regulations 2010, is a regulatory regime for controlling pollution from certain industrial activities. Depending on the nature of the operation concerned, the regime is administered by Natural Resources Wales or local authorities (the regulators).

The primary aim of the EPR is to ensure a high level of environmental protection. Operators of installations carrying out activities that fall within the scope of the Environmental Permitting (England and Wales) Regulations 2007 are required to hold an “environmental permit”. The environmental permit will specify the conditions under which the activity can be carried out.

The Welsh Ministers have issued statutory guidance to the regulators on the application of the EPR. This can be found at the DEFRA [website](#):

Under the regulations, the Welsh Ministers may direct the regulators with respect to the carrying out of their functions.

Further information on the EPR regime can be found at the Welsh Government [website](#).

11. Abbreviations and Glossary

µm	Micrometers
µg.m ⁻³	Micrograms per cubic metre
AQMA	Air Quality Management Area
AQAP	Air quality action plan
AURN	Automatic Urban and Rural Monitoring Network
AQS	Air Quality Strategy
BAT	best available techniques
CO	carbon monoxide
CO ₂	carbon dioxide
NO	nitric oxide
NO ₂	nitrogen dioxide
NOX	oxides of nitrogen, the sum of NO and NO ₂
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EC	European Commission
EPR	Environmental Permitting (England and Wales) Regulations 2010
EU	European Union
NRW	Natural Resources Wales
IPPC	Integrated Pollution Prevention and Control Directive
LAQM	Local Air Quality Management
O ₃	ozone
PAHs	polycyclic aromatic hydrocarbons
PM ₁₀	Particulate Matter which passes through a size-selective inlet with a 50% efficiency cut-off at 10µm aerodynamic diameter
PM _{2.5}	Particulate Matter which passes through a size-selective inlet with a 50% efficiency cut-off at 2.5µm aerodynamic diameter