

Doctoral Training Policy and Evidence Placement

Project: PhD student placement opportunity

Title: **Air Quality Evidence:** *Industrial Air Pollution - Review of Air Quality and Welsh Government Short-Term Action Plan for Port Talbot*

Purpose of the Post

The Air Quality Evidence, Monitoring and Assessment Branch is responsible for developing and implementing evidence-based air quality policy and legislation. Air quality is a high-profile policy area. [The Air Quality Strategy for Wales](#) includes a commitment to undertake a review of our Short-Term Action Plan for Port Talbot, to ensure it remains effective and fit for purpose in its aim of minimising short term air pollution (PM₁₀) episodes in the area.

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 potential major contributor. In addition, there are also emissions derived from other industrial installations outside of this complex including road transport, domestic sources, construction projects, natural sources (such as sea spray) and transboundary sources. In 2000 Neath Port Talbot County Borough Council established an Air Quality Management Area (AQMA) in Port Talbot for PM₁₀ and a range of actions have been taken to improve the quality of air in the area. Welsh Government introduced the Short-Term Action Plan for Port Talbot in 2012 in recognition of the risk to exceeding the legal limit of PM₁₀ and to ensure systems, process and defined actions were in place to minimise exceedances of PM₁₀. Welsh Government coordinates partnership working between the industrial operators, Natural Resources Wales and Neath Port Talbot Local Authority to identify potential sources and solutions for high PM₁₀ levels.

The post will involve a review of the following:

- **Air quality data Analysis**
 - **Time Series Analysis:** Create time series plots of PM₁₀ concentrations over the year. This will help identify daily and seasonal patterns in PM₁₀ levels.
 - **Trend Analysis:** Use statistical techniques to detect long-term trends in PM₁₀ concentrations. (Review historic data to fully understand trending in the exceedances).
 - **Descriptive Statistics:** Calculate basic statistics for PM₁₀ concentrations, including the mean, median, standard deviation, and percentiles. This provides an overview of PM₁₀ levels and their variability.
 - **Statistical Significance:** Conduct statistical tests to determine the statistical significance of any trends or differences in PM₁₀ concentrations.
 - **Correlation Analysis:** Examine correlations between PM₁₀ concentrations and other variables, such as weather conditions (e.g., temperature, wind speed) or industrial activities in the area. This can provide insights into potential sources and factors influencing PM₁₀ levels.
- **Short term Action Plan:** Review of the Short-Term Action Plan for Port Talbot to ensure that appropriate controls are in place to mitigate air pollution.

The post holder will work extensively with regulators, local authorities, and industry. With support and direction from the Branch, the post holder will help to build valuable working relationships, broaden their knowledge and understanding of Welsh Government policy work and have the opportunity to identify and develop initiatives to support the effective delivery of evidence-based policy.

Details

Skills required:

Key Skills

- Excellent research skills
- Ability to analyse complex information and data.
- Ability to write clearly and concisely.

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	<ul style="list-style-type: none"> • Ability of presenting technical material in an accessible format. • Presentation skills. • Creative thinking. • Ability to apply an innovative approach.
Outputs:	As agreed with line manager and in relation to the above priorities.
Host Organisation:	Welsh Government
Placement Start Date	Early 2024
Development Opportunities	<p>The placement provides an opportunity to gain insight into the functioning of Welsh Government and evidence-based policy development at the highest level. The post-holder will work in an interesting and diverse team, contributing to the shaping of a future policy direction. The post-holder will be expected to work independently within parameters and guidelines provided by the Welsh Government. Working closely with a wide range of colleagues the successful candidate will build valuable working relationships, broaden their knowledge of public policy-making and enhance their existing transferable skills.</p> <p>The student will join an analytical team managing a diverse evidence-base and delivering technical and advisory support to the policy team's programme. This is an interesting and diverse role, working on a high-profile programme across Welsh Government portfolios which will allow the student to gain a broad knowledge and understanding of Welsh Government policy work. With support from their WG supervisor, the student will be expected to take responsibility for managing and delivery of work commitments during the placement period.</p>
Duration, location, working arrangements and environment:	<p>The role will be full-time and is normally based with the policy team in one of Welsh Government's regional offices. In line with the flexible working policy, the post-holder will be able to work from home, and office working will also be an option.</p> <p>Post-holders will be provided with a laptop to facilitate regular contact with the policy team members and line management, other policy teams and external partners. Due to the remote nature of working, the policy team will ensure that the post-holder is fully supported during the placement and will endeavour to ensure that the placement is as close to the in-team office-based experience as possible.</p> <p>The placement will be for a 3-month period and will focus on delivering the objectives set out in the job specification. The option to extend for a further 3 months is possible if the project team feel there is merit in doing so and if it is compatible with the post-holder's university research schedule and DTP/CDT arrangements.</p> <p>The Welsh Government is a bilingual organisation and Welsh language skills are considered an asset to the organisation. We encourage and support staff to use their Welsh language skills during a placement.</p> <p>Start date will be agreed following successful Welsh Government security clearance.</p>
Application criteria	Welsh Government can only accept applications to the PhD student placement programme from registered students. All applicants must seek approval from their academic supervisor before applying
Funding	
The placement will be funded by Welsh Government and will match the current UKRI PhD stipend rate, payable in one sum at the beginning of the placement (to minimise financial administration).	



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To avoid delays to students receiving payments, it is preferable that the student's PhD stipend is not paused during the placement and that, instead, it continues and that WG reimburse the university for the time the student is not undertaking research. **Please note: we do not pay students directly**

Contact

Name:

Contact Stephany Aymerich (Research & Academic Engagement Manager) via

researchplacements@gov.wales

The Welsh Government takes the protection of your data seriously. If you contact the Welsh Government then our **Privacy Notice** explains how we use your information and the ways in which we protect your privacy.

Application process

Please submit CV and covering letter to Stephany Aymerich. **NOTE: All applicants must confirm that they have received authorisation to undertake a placement from their academic supervisor**

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

If you have an impairment or health condition or use British Sign Language and need to discuss reasonable adjustments for any part of the placement programme, or wish to discuss how we will support you if you are to be successful, please contact Stephany Aymerich as soon as possible to discuss your requirements and any questions you may have.