

UNIVERSITY OF
BIRMINGHAM



WM-Air Introduction

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WM-AIR
CLEAN AIR SCIENCE FOR
THE WEST MIDLANDS



Aims of Today

- Update on project progress and next steps
- Discussion of opportunities for WM-Air impact arising from
 - Partner interests and opportunities
 - new Situational Awareness
 - new Capability
 - changing regulatory and policy context
- Foci for WM-Air Impact Fellow activities
- Visit new Air Quality Supersite
- Networking Opportunity



Background to WM-Air: the NERC opportunity

NERC: Natural Environment Research Council

RISE: Regional Impact from Science of the Environment

- RISE aims to bring research organisations together with businesses, policy bodies and other actors contributing to economic development specific to their location to deliver significant regional impact from NERC environmental science.

Funding will be provided to support

- Translation of existing data, knowledge and/or expertise to meet user needs;
- Decision-support tools;
- Model synthesis, merging and manipulation;
- Direct embedment of new knowledge in user organisations;
- Commercialisation focused upon taking academic outputs further towards
- Exploitation for likely economic return (including costs avoided)



WM-Air design (to date)...

- RISE funding call focus: to apply **existing NERC environmental science expertise** to deliver transformative regional impact
- Built on our track-record of regional engagement :
 - Funded work (NERC, EPSRC, DoT); informal collaborations, links
 - “*Air Pollution and Health in Birmingham*” meeting
 - Focussed WM-Air proposal development workshops, discussions / visits



Arup Environmental @ArupEnviro · Jan 25

Two members of our #Environmental #Consulting team from our #Midlands office along with a member of our Advanced Technology and Research team recently visited the @unibirmingham to discuss potential #Arup involvement in @NERCscience #research #NERC #Collaboration @ArupUKMEA



The Opportunity: Air Quality in the West Midlands

Strategic and Political Opportunity

- Industrial Strategy: Clean Growth challenge
- Formation of WMCA; Mayor of West Midlands
- “Devo-2” regional devolution deal (Nov 2017)

Key Challenges

- Major regional developments
- Current focus upon AQ nationally
- (emerging) UK Government AQ Strategy

Developing context

- Health and economic costs of air pollution in region: 1500 deaths; £860m yr⁻¹
- Traditional Local Air Quality Management, action plans – compliance focus
- Shift to Health and Carbon focii
- New Clean Air Strategy
- Environment Bill
- Climate Emergency



WM-Air...

- Project fully funded, announced 19th Oct, started 1 Jan 2019
- 5-year duration
- Series of **planned** and **to-be-confirmed** activities and opportunities around AQ in the West Midlands
- Dissemination, Legacy
- Ongoing co-design process
- Emerging opportunities
- Maximise impact from NERC investment
- Leverage additional funding draw-down



WM-Air Structure and Outcomes

WM-Air
Themes

- **1 Situational awareness**
- **2 Predictive Capability**
- **3 Applications, Impact Fellows**

Situational
Awareness

Strand 1: Observational capability

Strand 2: Sources & vehicle emissions

Predictive
Capability

Strand 3: Horizon-scanning AQ prediction

Strand 4: Lifecourse health & care impacts

Strand 5: Putting AQ into economic strategy

Strand 6: Green Infrastructure for AQ

Applications to further Impact

Strand 7:
Policy Scenarios / Impact Fellows

Strand 8: Dissemination, Legacy



WM-Air...

- Air pollution is a critical environmental science issue, affecting 2.8m in the W Midlands
- Unique opportunity to deliver transformative impact from NERC science in the UK's second city, building upon formation of the WMCA and the devolution agenda
- WM-Air has been co-designed to deliver air quality, public health and economic benefits, enabling the region to deliver key aspects of the Industrial Strategy and Devo-2 deal
- Within programme and legacy impact on deaths avoided, costs saved, improved (equity in) life expectancy, reduction of AQ-derived economic growth penalty



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NHS Birmingham & Solihull STP



Walsall Council



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