



UNIVERSITY OF  
BIRMINGHAM



Natural  
Environment  
Research Council

# WM-AIR IMPACT REPORT:

Executive Summary

March 2025



WM-AIR  
CLEAN AIR SCIENCE FOR  
THE WEST MIDLANDS

# Executive Summary

WM-Air enabled regional partners, ranging from local authorities to SMEs, to access state-of-the-science research expertise to improve policy and actions for clean air, providing environmental, societal and economic benefits for the people of the West Midlands and beyond. Co-designed with stakeholders and supported by NERC funding from 2019-2024, WM-Air has worked collaboratively with over 100 organisations and end-users of research to deliver 45 impact projects which have informed, influenced and improved local and regional actions for clean air. WM-Air impact has been delivered through over 160 engagement events, producing over 200 reports and other outputs, 16 regional policy briefings and guidance notes, leveraging and influencing over £40m of investments, and delivering GVA benefit estimated to reach £34m by 2028. Media reach is estimated at >650m from over 150 stories, interviews and reports.

The project has trained and developed a regional air quality Community of Practice, now supported through legacy funding via the WMCA, produced 46 scientific journal articles and supported 25 student (PhD, MSc, BSc) projects. Ranging from implementation of the first regional Clean Air Framework with the WMCA; development of new products with start-up businesses; projects with all regional local authorities and a range of other bodies; public exhibitions, citizen panels and a “sounding out pollution” artwork, the project has delivered Clean Air Science for the West Midlands, and an exemplar for regional impact from NERC environmental science.

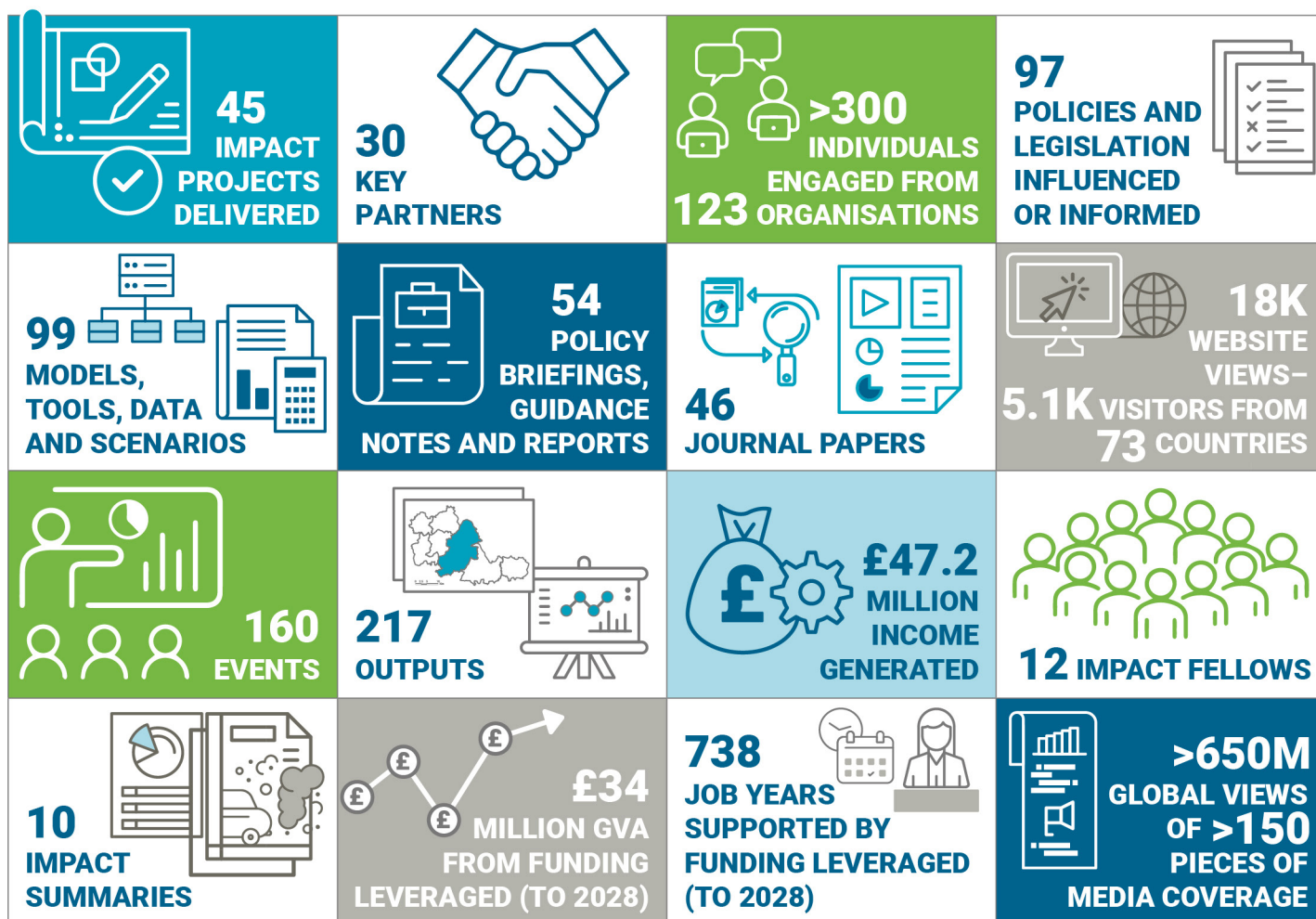


Figure 1: WM-Air in numbers

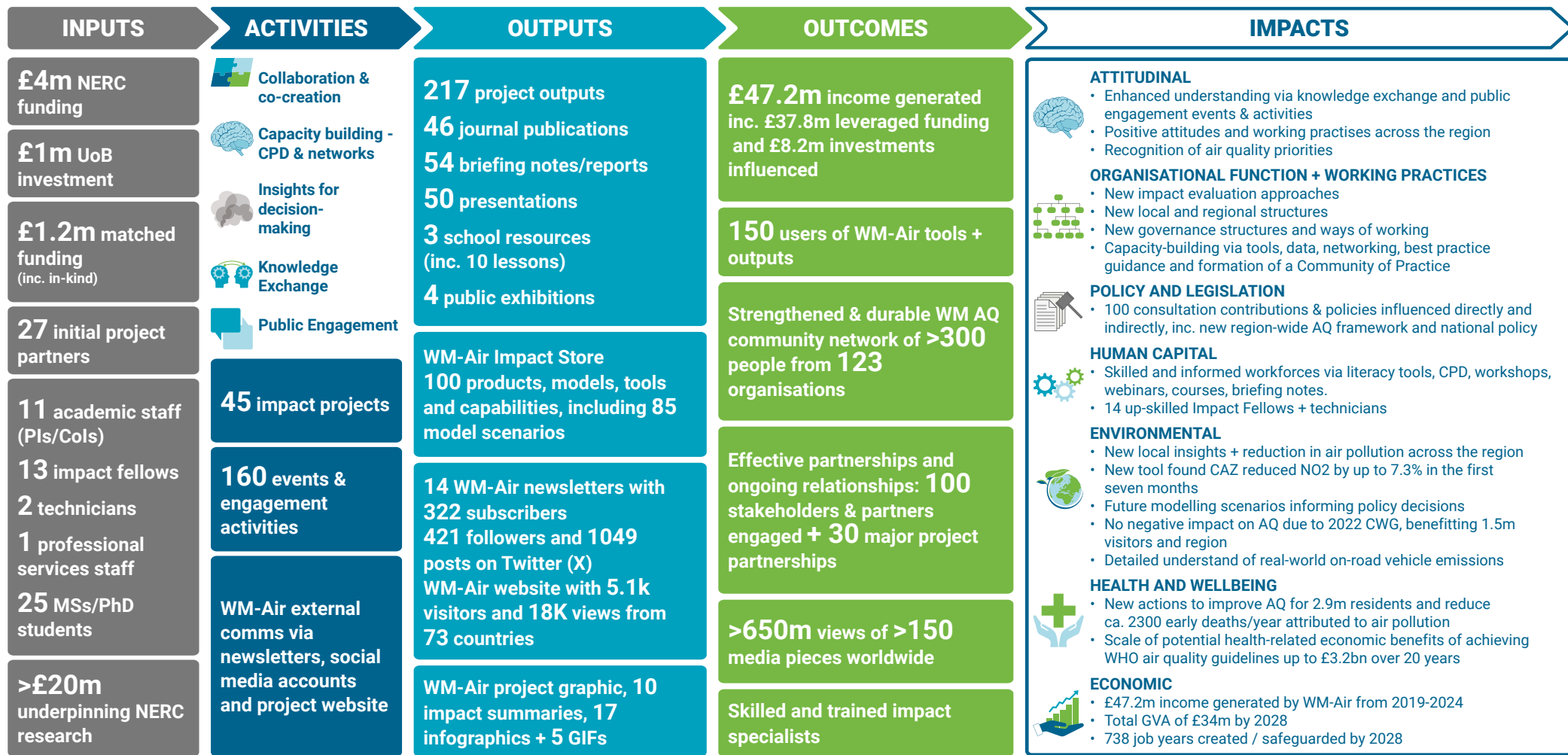
## Impact Highlights:

- Supporting the development of the **first West Midlands Air Quality Framework**, now formally adopted by the West Midlands Combined Authority (WMCA) to enable, drive and coordinate future air quality policy actions across all Local Authorities (2.8m inhabitants), and which has led to further £1.5m central government and £370k regional funding.
- Working with local authorities and the Clean Air Justice Network to provide a methodology to assess the **health and healthcare economic benefits** from clean air policy interventions, supporting change through business case development, with the new methodology adopted by other local authorities and healthcare providers elsewhere.
- Enabling Birmingham City Council (BCC) to **quantify impacts of the new Birmingham Clean Air Zone**, of Low Traffic Neighbourhood initiatives, and of Covid-19 on NO<sub>2</sub> levels, whilst **supporting air quality education** and engagement projects for all Schools in Birmingham.
- Working with the Commonwealth Games Organising Committee to make **air quality a key environmental focus of the 2022 Games** (held in Birmingham); providing daily operational capability during the games, and minimising (and then assessing) the impact of the Games' travel policy on air quality.
- Supporting University Hospitals Birmingham (UHB) NHS Foundation Trust to understand their air quality environment and impacts from NHS activities, leading to pilot interventions to reduce air pollution. **Developing guidance for monitoring air quality at NHS sites**, evaluated with Sandwell and West Birmingham trusts, shared nationally.
- Delivering the **first Climate Risk and Vulnerability Assessment (CRVA)** for BCC, leading directly to Birmingham receiving A-list city status for climate action by the Carbon Disclosure Project for the first time. Subsequently extended to the whole of the West Midlands, and assessment of transport infrastructure risk and vulnerability.
- Undertaking **air quality and emissions analyses** for Birmingham Country Football Association (BCFA) as part of their 'Save Today, Play Tomorrow' initiative for grassroots football. Following a number of sustainability awards, the work was expanded nationally.

- Applying WM-Air air quality tools and modelling capabilities to a **portfolio of impact projects** across the region. Examples including quantifying the air quality co-benefit from growth of the Electric Vehicle (EV) fleet for different policy options; investigating the impact of railway emissions with the Rail Safety & Standards Board; modelling air quality across the region in support of local and regional status reports; and supporting Transport for the West Midlands (TfWM) rapid transit route prioritisation decisions.
- Providing evidenced advice for the use of Green Infrastructure in urban environments, and best practice guidance for local authorities, planners and practitioners including an **AQ Design Charter**, briefing notes and CPD events.
- Input to **national policy** development, including working with UK-100 promoting clean air/net zero policy co-benefits, evidence provision in support of design of the national 2021 Environment Act targets, air quality target development in Wales, and the 2022 and 2024 Chief Medical Officer's reports.

WM-Air has supported **public understanding and engagement** ranging from lesson plan materials for Schools to a major exhibition "The Air We Breathe" at The Exchange public venue in Birmingham City Centre; over 150 media pieces with reach estimated at over 650m, public and interest group talks and events ranging from Clean Air Day to Sustainability West Midlands, and a collaboration with sonic artist Robert Jarvis to produce air quality-driven musical compositions featured in outlets ranging from Mixmag to Glastonbury.

The legacy of WM-Air includes bringing to maturity a West Midlands Clean Air **Community of Practice** (CoP) through technical and networking events (now adopted by WMCA), and wider outcome dissemination through the UKRI Clean Air SPF. Examples of amplifying and **follow-on funding** include WM-Adapt (£2m, supporting regional climate adaptation decision making); the Wellcome Trust WM-Net Zero (£2m, identifying climate and air quality co-benefits); EPSRC Clean Energy & Equitable Transport Solutions (CLEETS) network (£5m, expanding WM-Air modelling work into new regions and overseas), UKRI Indoor Habitability during the Transition to Net Zero Housing (INHABIT) Hub (£5.5m, addressing housing retrofit challenges), and EU Climate Resilient Development Pathways in Metropolitan Regions of Europe (CARMINE), expanding WM-Air legacy overseas.



2019

2024 and beyond

### Selected WM-Air inputs, activities, outputs, outcomes and impacts

Notes:

- Outcomes (to end 2024) are reported quantitatively where known, to show the scale and magnitude of outcomes. However, data shown are a conservative estimate.
- Impact provides a high-level summary of short-term impacts (i.e. those achieved to end 2024). The majority of WM-Air impact is 'attitudinal' or 'organisational function/practice', so providing the foundation needed to deliver transformational change over longer timescales (to 2030 and beyond), via 'policy & legislation' and beyond to tangible change in 'environmental', 'health and wellbeing' and 'economic' impact. 'Human Capital' impacts reflect WM-Air's influence on the project team and beyond through benefits delivered via training, guidance, CPD and sharing of impact approaches, delivery and evidencing resources.
- Quantified impacts are shown where data are available, and impacts can be proportionately attributed to WM-Air activities and outcomes. Some impact types are best expressed qualitatively due to challenges of attribution. This is achieved via testimonials and surveys.
- Whilst WM-Air formally ended in December 2024, longer-term benefit will accumulate into the future, especially changes to air quality itself, the West Midlands economy, and the health and wellbeing of its population and visitors. WM-Air activities and outputs have laid the foundations for this to happen.

Web: [wm-air.org.uk](http://wm-air.org.uk) • Contact: [wmair@contacts.bham.ac.uk](mailto:wmair@contacts.bham.ac.uk) • Full report: [wm-air.org.uk/wp-content/uploads/2025/03/WM-Air-Impact-Report.pdf](http://wm-air.org.uk/wp-content/uploads/2025/03/WM-Air-Impact-Report.pdf)