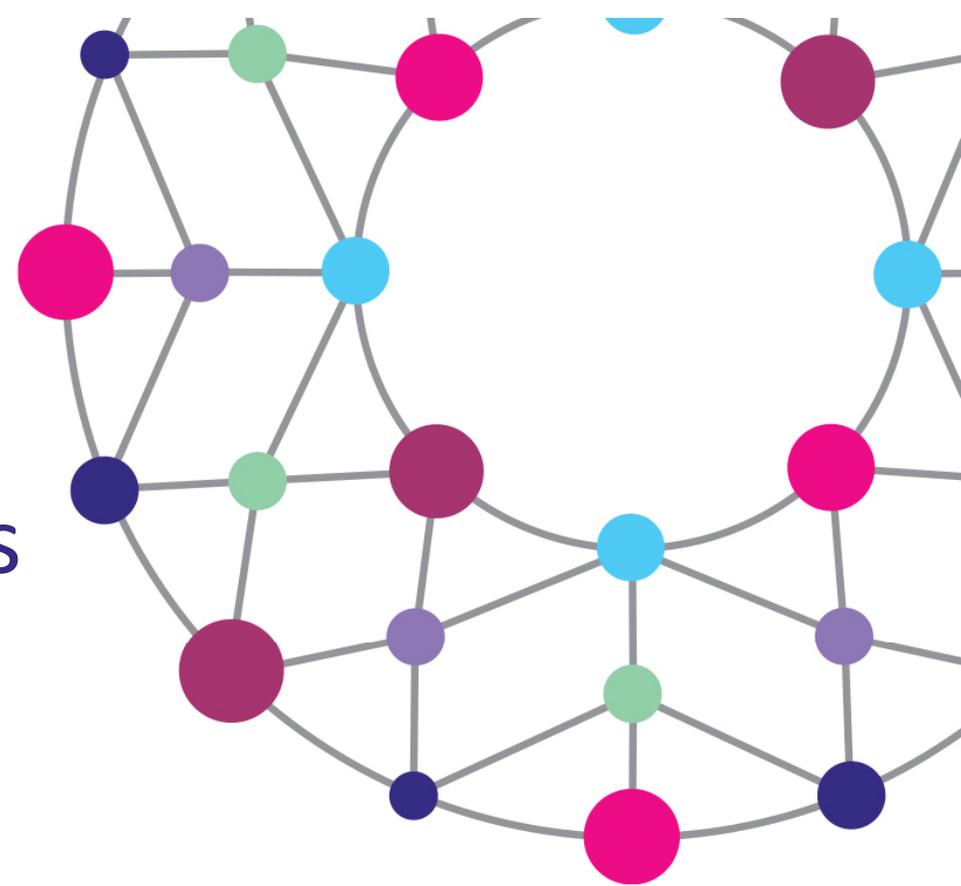




Indoor/Outdoor Bioaerosols Interface and Relationships Network

Frederic Coulon



Grant Ref: NE/V002171/1





Network launch event – 11 December 2020 – 10:00 – 14:30

Part 1: BioAirNet network overview (Biological particulate matter at the indoor/outdoor interface)

10:00	Introduction to BioAirNet	Frederic Coulon (Cranfield)
10:10	BioPM sources and dynamics at the indoor/outdoor (Theme 1)	Ian Colbeck and Sean Tyrrel (Essex/Cranfield)
10:20	BioPM sampling and characterisation (Theme 2)	Corinne Whitby (Essex)
10:30	Human health, behaviour and wellbeing (Theme 3)	Simon Jackson (Plymouth)
10:40	Policy and public engagement (Theme 4)	Mark Lemon (De Montfort)
10.50	Break	



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Part 2: Existing work and Stakeholder perspectives

11:00	Air quality and public health challenges	Prashant Kumar (Surrey)
11:20	Overview on inhaled allergens	Catherine Sutton (Airborne allergy action)
11:40	Biological Particle Matter and health effects	Flemming Cassee (RIVM)
12:00	Bioaerosols and design for new build housing	Yann Bomken (OneNinety Manufacturing)
12:20	BSI committee EH/002/05 Emissions to internal environments	Derrick Crump (Chair of BSI committee EH2/5)
12:40	EA R&D and regulations on bioaerosols	Rob Kinnersley (EA)
13:00	Lunch break	



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Part 3: Getting involved with BioAirNet and next steps

13:30	How could you get involved with BioAirNet?	Frederic Coulon (Cranfield)
13:45	Group discussion on how you would like to work with us and your thoughts on how to make the network successful via Chat or 'Holding up' your hand	Zaheer Nasar (Cranfield)
14:15	Wrap up	Frederic Coulon (Cranfield)
14:30	End of the workshop	



Who are we?



Prof Frederic Coulon
(PI, Cranfield University)



Dr Gill Drew
(Co-I, Cranfield University)



Prof Sean Tyrrel
(Co-I, Cranfield University)



Prof Ian Colbeck
(Co-I, University of Essex)



Prof Kamaldeep Bhui (CBE)
(Co-I, University of Oxford)



Dr Zaheer Ahmad Nasar
(Researcher Co-I and Network
Manager, Cranfield University)



Dr Simon Parker
(Project partner, DSTL)



Dr Corinne Whitby
(Co-I, University of Essex)



Prof Simon Jackson
(Co-I, Plymouth University)



Prof Mark Lemon
(Co-I, De Montfort University)



Dr Philippa Douglas
(Co-I, Public Health England)



Prof Rob Kinnersley
(Project partner, EA)



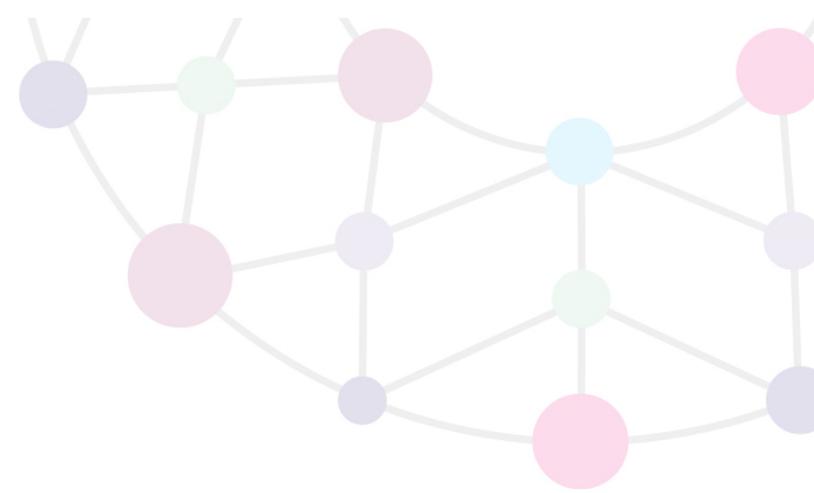
Network motivation and ambition

- Clean Air Strategy 2019, the UK has committed to tackle **all sources of air pollution**.
- Among all air pollution sources, Public Health England (2019) concluded that, in the UK, between 28,000 and 36,000 deaths a year can be attributed to long-term exposure to **particulate pollution**.

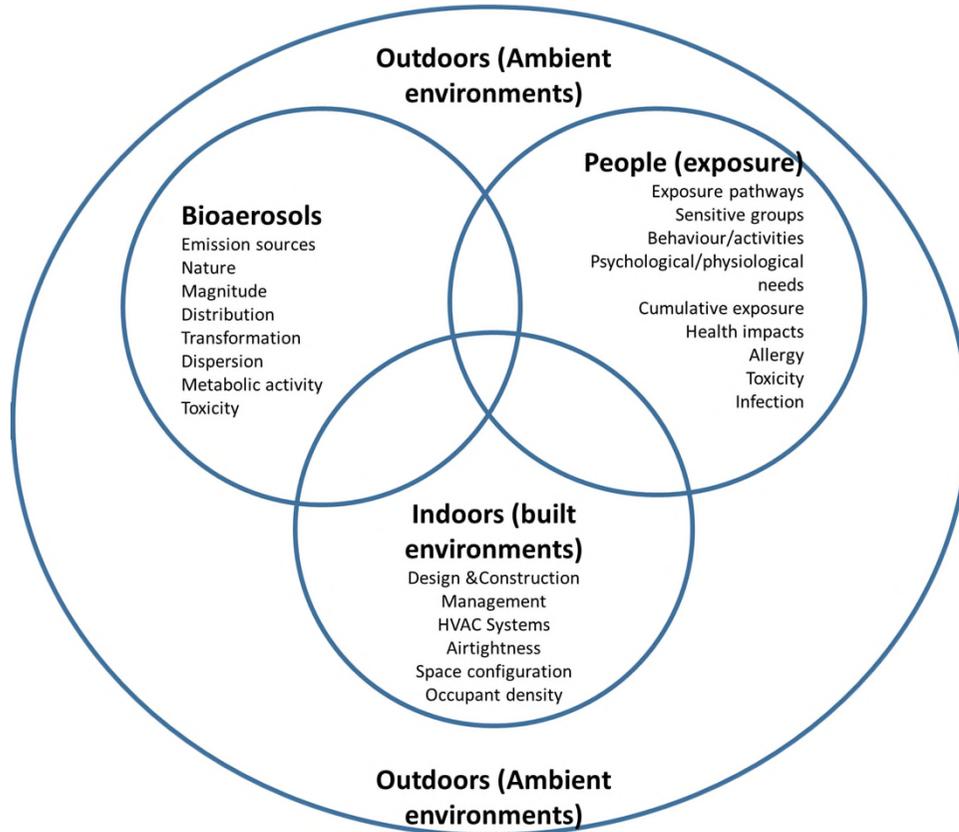
*However, we still do not know what **role particulate matter of biological origins (BioPM) or bioaerosols** play in this **health burden** nor the precise impact of exposures within the **indoor or outdoor continuum**.*

Therefore, we don't yet know how to control BioPM.

- UKRI SPF Clean Air programme highlights the evolving nature of the air quality challenge, and the lack of **cohesion in the research and user community**, limiting both research and innovation developments and making application of new science inefficient to **support policy and action**

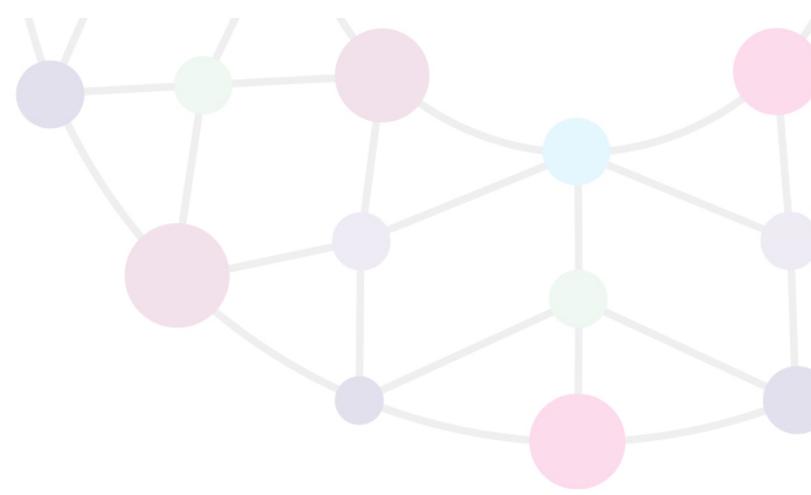


The interdisciplinary challenge



Need for a transdisciplinary approach

1. To understand the complexity and connectivity among people, BioPM exposure and health impacts across the indoor/outdoor continuum
2. To inform interventions development, prioritisation and assessment of environmental and health intervention.



Network's Aim

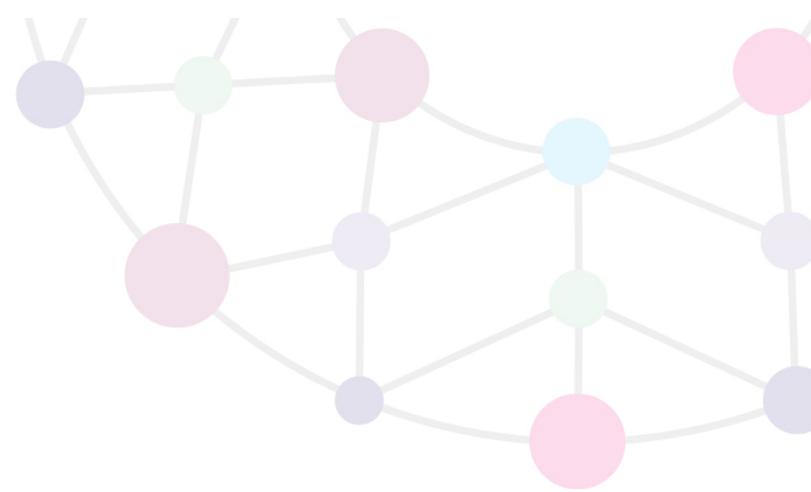
- To act as the leading voice for the UK BioPM science community by taking a transdisciplinary approach to understand the complexity and connectivity among people, BioPM exposure and the indoor/outdoor continuum
- To inform interventions development, prioritisation and assessment of environmental and health



Network's Objectives

- **To coordinate, widen and inform community interactions** across academic, business and other community-based stakeholders
- **To promote discovery science** that underpins pressing scientific questions on the indoor/outdoor air bio-exposome and impacts on health, and provide a unique opportunity for in-depth cross fertilization of knowledge and cross-disciplinary collaboration;
- **To attract and stimulate the next generation of academic leaders;**
- **To develop effective engagement pathways** with all stakeholder groups through collaborative research projects and knowledge exchange activities;
- **To translate the knowledge of the network beyond the UK**





Network's themes

- **Theme 1: BioPM sources and dynamics at the indoor/outdoor environments - Chairs**
Prof Ian Colbeck (Essex) and Prof Sean Tyrrel (Cranfield)

.....to prioritise the research for BioPM and develop a road map and white paper for implementation; and to identify and interact with all stakeholders in promoting solutions and influencing policy.

- **Theme 2 BioPM sampling and characterisation – Chairs** Dr Corinne Whitby (Essex) and Prof Frederic Coulon (Cranfield)

..... to facilitate the translation of advances in fundamental science into technological solutions and process enhancements for end-users, stakeholder and regulators.

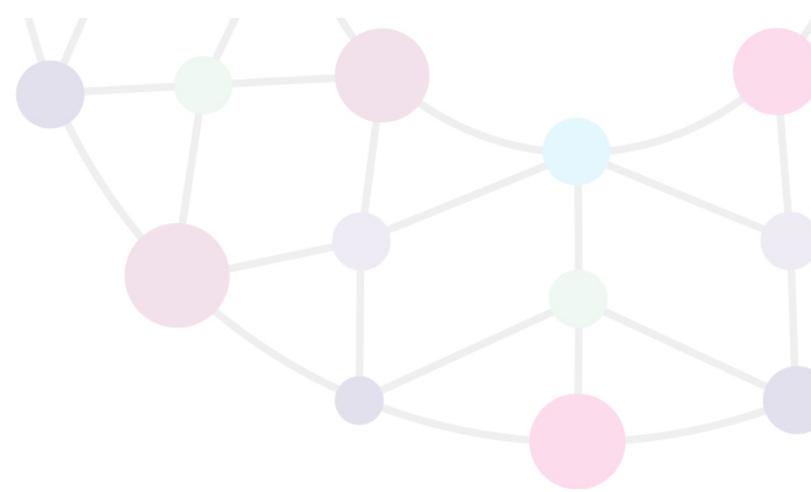
Network's themes

- **Theme 3: Human Health, behaviour and wellbeing** Chairs: Dr Philippa Douglas (Dr Emma Marczyklo) (PHE) and Kamaleep Bhui (Oxford) and Prof Simon Jackson (Plymouth)

.....to translate the knowledge about BioPM sources and composition (Themes 1 & 2) to better understand the longer-term human exposure to BioPM and environmental impacts using computational modelling to estimate impact over large spatial scales.

- **Theme 4: Policy and Public Engagement** – Chairs Dr Gill Drew (Cranfield) and Prof Mark Lemon (De Montfort)

.....to understand the factors that might help influence regulatory framework and engage with potentially vulnerable actors from a number of different indoor -outdoor environments and to elicit their perception of that environment, any perceived airborne risks and how their behaviours are influenced by these.



BioAirNet's Activities

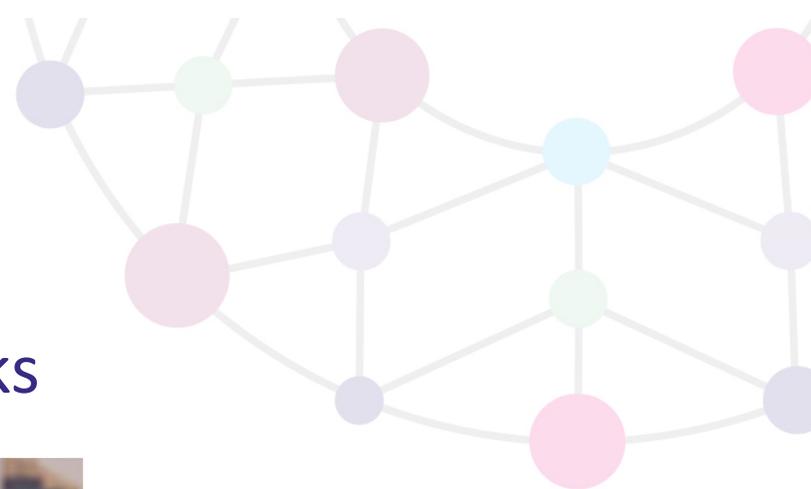
- Outreach: Social media, university press office, Website
- Annual stakeholders network events
- Theme group meetings - Roadmap ; White paper
- Joint event with other Air Networks

Promoting discovery science through specialist workshops and translational research

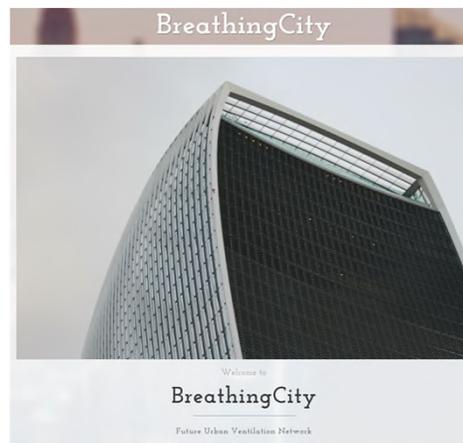
- Cross network engagement
- Sandpit workshops

Training and empowerment of early career researchers and professionals

- Exchanges and short-term industrial placements
- Cross-disciplinary skills training
- Annual ECR event



Engagement activities with other networks



Air Pollution Solutions for Vulnerable Groups
(CleanAir4V)

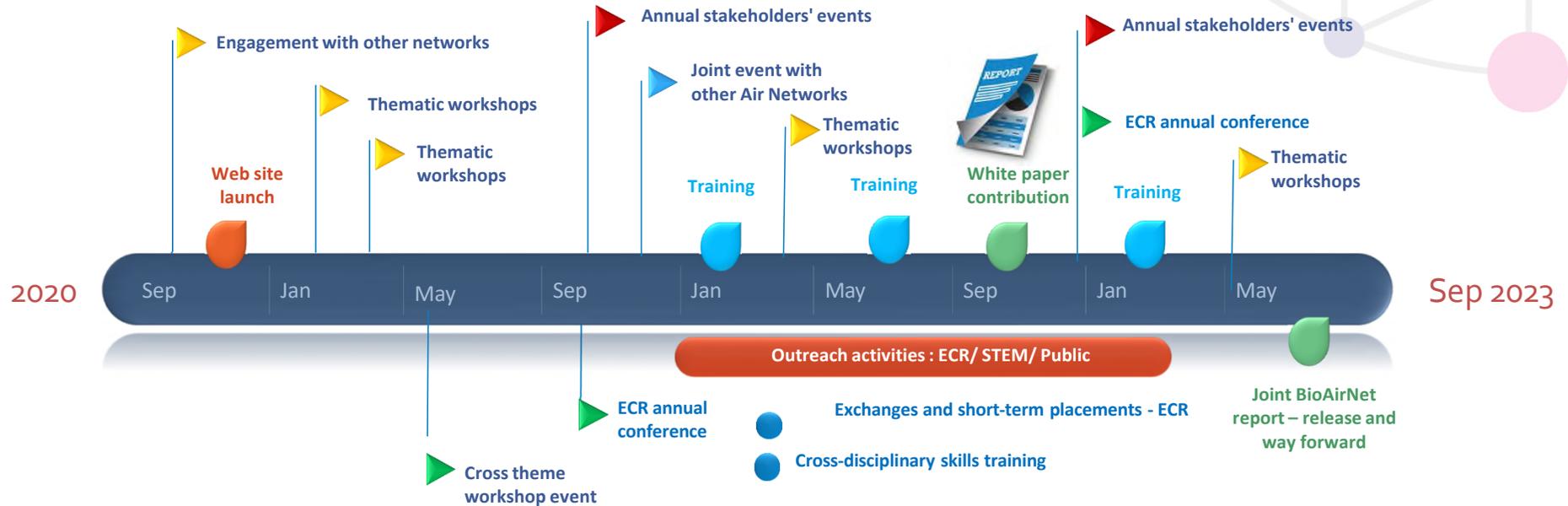


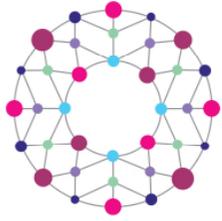


Some of stakeholders



Network timeline





BioAirNet.

Get in touch contact@bioairnet.co.uk

Follow us  <https://twitter.com/BioAirNet1>

www.bioairnet.co.uk

