



CAPABILITY STATEMENT

Engineering Air Science Pty Ltd is an engineering and scientific consultancy specialising in standard air quality assessments and complex atmospheric and fluid flow modelling.

Utilising the experience gained from 20 years of local and international consulting and research, we have an unparalleled depth of knowledge of complex atmospheric flow and dispersion. Recognised for our attention to detail, we believe that ensuring consistently high standards and personalised service is the key to successful client outcomes.

Engineering Air Science can develop programmes to deliver an understanding of the air quality impacts of your business, both on-site and on the broader environment. Whilst regulatory models are adequate for many purposes, they are limited in what they can achieve in more complex situations, with the possibility of unreliable predictions.

Understanding of the interaction of emissions with each other, your site and the ambient environment provides for an improved representation of plume behaviour and air quality impact predictions.

World leading practical experience in complex atmospheric flow and dispersion modelling, using regulatory models, wind tunnels and Computational Fluid Dynamics (CFD), provide Engineering Air Science with the expertise to understand model strengths and limitations. We meld the application of advanced engineering and scientific tools to understand complex air quality and flow issues, developing integrated approaches to provide our clients with more refined impact assessments.

- » Model development wind tunnel studies
- » Building affected industrial flow and dispersion simulations
- » Landfill odours including 'Foot and Mouth' carcass disposal
- » Road junction and urban dispersion
- » OH&S ventilation issues
- » Dense gas and hazardous substance accidental release assessments
- » Mining pit retention and internal flow and climate studies
- » Industrial and agricultural odour assessments
- » Defence, industrial, and agricultural sector air assessments

RESEARCH AND DEVELOPMENT

POTENTIAL APPLICATIONS

- » Air Pollution Modelling and Assessment
- » General industrial and agricultural air assessments TAPM, CALPUFF, AUSPLUME, AERMOD, ADMS,...
- » Radiological dispersion and assessment

COMPLEX AIR QUALITY AND FLOW ISSUES

- » Customised complex flow and dispersion modelling
- » Urban air quality and road junction modelling
- » Complex plume behaviour characterisation
- » OH&S ventilation and on-site flow and dispersion studies
- » Integration of complex and regulatory modelling tools
- » Indoor air quality and ventilation
- » Workplace exposure
- » Accidental release assessments for emergency planning

WIND ENGINEERING

- » Wind action on building and structures
- » Environment flows within streets
- » Environmental flows on industrial sites
- » Wind energy

APPLIED METEOROLOGY

- » Climate statistics analysis
- » Meteorological measurement
- » Boundary layer meteorology

SERVICES

- » Meteorological and atmospheric flow modelling
- » Modelling and assessment for the impact of aerial emissions
- » Advanced fluid flow and thermodynamic modelling using Computer Aided Engineering and physical modelling tools
- » Specialist environmental advice and guidance
- » Development of improved parameterisations for complex dispersion issues and integration into regulatory models
- » Expert evidence for Environmental Litigation and Public Inquiries
- » Environmental monitoring programme design and implementation
- » Fugitive emission characterisation

INDUSTRY SECTOR

- » Mining and Resources
- » Power Generation
- » Nuclear
- » Defence
- » Waste Management and Landfill
- » Transport
- » Agriculture
- » Manufacturing and Process



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