

MARTIN PARSONS

Manager

Martin has had over fifteen years experience in air quality issues. His experience includes working for both government and private enterprise. Martin has extensive expertise in air quality studies including air quality modelling, dust monitoring analyses and mitigation studies, odour investigations and development of air quality control strategies in the mining, commercial and industrial sector.

EDUCATION

1997-2000

Bachelor of Environmental Science (Honours)

Murdoch University, Perth, Australia

LANGUAGE SKILLS

English, Spanish

PROJECTS

Boeing

Assisted in research of Chromium VI sampling methodologies historically undertaken in California as part of litigation work.

BP

Undertook scientific literature review for contamination associated with the BP Deepwater Horizon disaster litigation.

Ontario Ministry of Environment

Undertook a review of relevant current and proposed air pollution regulations and associated guidance and methods that regulate airborne contaminant discharges from fugitive sources in Australia as part of an overall jurisdictional review.

Tankstore

Undertook air quality assessment of fugitive emissions from the Tankstore facility on Jurong Island in Singapore.

Alcoa

Multiple tasks including:

- Review of compound selection in relation to baseline emissions.
- Model validation work on behalf of Alcoa on a range of models in relation to baseline emissions work.
- Modelling of event days associated with complaints and elevated concentrations of a number of pollutants in the Wagerup region.



CONTACT INFORMATION

Martin Parsons

mparsons@ramboll.com

Ramboll Environ
Level 2
200 Adelaide Terrace
6004 East Perth
Australia

- Modelling of emissions from proposed oxalate kiln.
- Modelling of emissions and health risk assessment (HRA) associated with expansion.
- Modelling of combined emissions from liquor burner.

Tronox

Undertook an air dispersion modelling assessment for an event from the Tronox chemical plant in Kwinana looking at chlorine emissions.

Cristal

Undertook a stack height determination exercise for emissions from the Cristal Kemerton Titanium dioxide pigment plant

CSBP

Assisted in the preparation of CSBP's draft assessment report for the Department of Environment including air dispersion modelling of fertilizer plant operations.

Fortescue Metals Group

Developed best practice guidelines for the control of particulate emissions associated with operations at the Port Hedland port facility.

Holcim

Assisted Holcim in the implementation of its dust control strategy for its Gosnell's Quarry in Western Australia. Also currently (and for the last nine years) undertake monthly and annual reporting of ambient particulate monitoring.

Fortescue Metals Group

Compared emissions monitoring data against manufacturer's specifications for the North Star power station in the Pilbara region of Western Australia.

Fortescue Metals Group

Developed boundary monitoring network trigger alarm thresholds as part of FMG's boundary monitoring network at its Port Hedland operations.

Alcoa

Have assisted in numerous air dispersion modelling assessments for Alcoa's Portland, Victoria smelter.

Boodarie Power Station

Undertook air quality assessment for emissions from the proposed Boodarie Power Station in South Hedland.

ExxonMobil

Undertook air dispersion modelling from refinery at Jurong Island in Singapore

BP Texas City

Assisted in air dispersion modelling assessment as part of litigation effort for Squire Sanders.

Quadrant Energy

Assisted Apache in the renewal of its license through the Re-Engineering for Industry Regulation and Environment (REFIRE) approach as designated by the Department of Environment Regulation.

Arrium

Completed an Air Quality Assessment for the proposed expansion of operations at the OneSteel Iron Ore Port & Rail facility in Whyalla, South Australia.

Nickel West

Designed an ambient ammonia monitoring network for the Kwinana Refinery.

Griffin Coal

Conducted regional air dispersion modelling of particulate emissions from the proposed Muja South Coal mine.

Phoenix Energy

Assisted with air quality assessment associated with a proposed waste to energy plant in Kwinana.

Atlas Iron

Undertook air dispersion modelling of particulates at the proposed Mt Dove Iron Ore facility located in the Pilbara region of Western Australia.

Talison Lithium

Undertook multiple air quality assessments of emissions associated with Talison Lithium's proposed processing facility in Kwinana.

Rey Resources

Undertook air dispersion modelling as part of an environmental assessment associated with Rey Resources proposed coal exporting facility at Derby, Western Australia.

ZEON Corporation

Undertook air dispersion modelling of flare sources associated with the ZEON Corporations Pollution Control Study and ABS at Jurong Island, Singapore.

Xstrata Coal and Rio Tinto

Undertook an assessment into the particulate emissions associated with operations at Rio Tinto's Bengalla Coal Mine and Xstrata's Liddell Coal mine as part of the state government mandated Pollution Reduction Programs (PRP's) aimed at ensuring best practice controls and management of particulates at the sites in the Hunter region of New South Wales.

Wells Environmental

Undertook an air quality assessment including air dispersion modelling and assisting in the maintenance of an air monitoring network associated with the proposed Mt Penny Coal Mine, New South Wales.

Oyu Tolgoi

Completed air dispersion modelling of emissions sources at Oyu Tolgoi Gold Mine on behalf of Ivanhoe Mines as part of an EISA a funding application to a number of lenders including the European Bank for Reconstruction and Development.

Sustainability

Undertook air dispersion modelling and screening health risk assessment as part of funding application to the International Finance Corporation (World Bank) as well as assisting in the establishment of a particulate monitoring network at the Bakyrchik Gold Mine in Kazakhstan.

Owens-Illinois

Completed air dispersion modelling of emissions for proposed Glass manufacturing facility located in Recife, Brazil on behalf of Owens-Illinois.

Resolute Mining

Completed air dispersion assessment of emissions emanating from Resolute Mining's Syama Gold Roaster.

Nickel West

Completed air dispersion modelling for the proposed furnace upgrade at the Kalgoorlie Nickel Smelter and production increase on behalf of BHP Billiton NickelWest.

Griffin

Assisted with a dust management plan for Griffins proposed Bluewaters power station located near Collie, Western Australia.

Shell

Undertook a number of air dispersion modelling assessments for emissions associated with the Shell refinery located on the industrial island of Pulau Bukom in Singapore.

Western Power

Conducted air dispersion modelling and reported on potential occupational health risks associated with the Cockburn power gas turbine operating in the Kwinana Industrial Area.

Parsons Brinkerhoff

Completed air dispersion modelling of emissions on behalf of Parsons Brinkerhoff for the proposed Carnarvon power station in the Gascoyne region of Western Australia.

WG Carpenter

Odour modelling on behalf of WG Carpenter for cattle feedlot and abattoir.

KCGM

Assisted with air dispersion modelling for KCGM of existing and anticipated dust emissions generated from activities within the Super-Pit for the proposed expansion.

Total Waste Management

Particulate management plan for Total Waste Management which was used to help mitigate potential health and amenity issues associated with particulates generated at a company facility.

Griffin Energy

Completed multiple tasks including:

- Air dispersion emissions for the proposed Bluewaters I, II, III and IV coal fired power stations on behalf of Griffin Energy.
- Air quality management plans.
- Dust management plans.
- Assessment of emissions from carbonisation plans.

CBH

Conducted air dispersion modelling and reported on potential significant emissions associated with the shiploading of grain for CBH at its Kwinana shiploading facility.

Rio Tinto

Completed air dispersion modelling for Rio Tinto's Mineração Corumbaense Reunida operations in Brazil with TAPM and CALPUFF.

Fortescue Metals Group

Completed multiple air quality assessments of dust and a dust management plans for FMG stockpiling and shiploading facilities at Port Hedland.

BGC

Completed Commonwealth EIA air quality assessment for BGC's proposed new brickworks.

MEMBERSHIPS

Australian Institute of Energy

Clean Air Society of Australia and New Zealand (CASANZ)

RUTH PEIFFER

Lead Consultant

Ruth Peiffer is an environmental scientist with more than 15 years' consulting experience and particular expertise in air quality management. Ruth has conducted numerous air quality assessments and has experience with air dispersion modelling and analyses, development of air quality monitoring programs, dust monitoring analyses, development of dust management strategies, odour investigations and health risk assessments. She also has extensive experience in National Pollutant Inventory (NPI) and National Greenhouse and Energy Reporting (NGER) and the compilation of emissions inventories for clients in the mining and energy sectors. Ruth has undertaken reviews of state-based and national policies in relation to air quality regulation, providing technical advice for mining and energy operations. In addition, Ruth has experience in compliance auditing, annual environmental reporting and environmental approval applications. Ruth has applied her skills across a variety of sectors, including mining and resource extraction, industrial processing, oil and gas processing, chemical manufacturing and energy generation. Ruth has extensive project experience throughout Western Australia, as well as having conducted projects both nationally and internationally.

Ruth has also been involved with the preparation of environmental management plans, monitoring wetland ecosystems, management of environmental health projects and the development of assessment material for human health toxicology training. Ruth has undertaken training in Health Impact Assessment and has experience liaising with local government and community organizations for the development of environmental management programs. She has also manned a government advice line, providing environmental health advice to members of the community.



CONTACT INFORMATION

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Ramboll
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6000 East Perth
Australia

CAREER

2011-present

Lead Consultant, Ramboll

2006-2011

Environmental Consultant, Ramboll Environ

2003-2006

Research Assistant, Edith Cowan University, School of Natural Sciences

2003-2006

Research Assistant, Edith Cowan University, Consortium for Health and Ecology

EDUCATION

1998-2002

Bachelor of Science (Environmental Management) Honours

Edith Cowan University, Perth, Australia

COURSES/CERTIFICATIONS

Health Impact Assessment, University of NSW, 2014

PROJECTS

2019

CSBP, Kwinana Air Quality Assessment

Completion of an air quality impact assessment for the proposed upgrade of the Kwinana Sodium Cyanide Manufacturing Facility, in support of environmental approvals sought under Part V of the Western Australian *Environmental Protection Act 1986*. The predicted results were used to demonstrate compliance with health protective guidelines, in support of regulatory approval for the proposed upgrade.

2018-2019

Kwinana Industries Council Redetermination of Maximum Permissible Sulphur Dioxide Quantities

Air dispersion modelling in support of a redetermination of sulphur dioxide maximum permissible quantities specified in the Environmental Protection (Kwinana) (Atmospheric Waste) Policy 1999 (Kwinana EPP). This project involved the use of the air dispersion model DISPMOD, a model developed by the Western Australian environmental regulatory authority to simulate shoreline fumigation and to assess air quality impacts in the Kwinana Industrial Area.

2019

Cleanaway Karratha Waste Treatment System Air Quality Assessment

Completed an air quality impact assessment for a proposed thermal waste treatment plant located at Cleanaway's Karratha facility, in support of environmental approvals sought under Part V of the Western Australian Environmental Protection Act 1986.

2019

Kalgoorlie Consolidated Gold Mine, Review of FAQMP Dust Monitoring System

Ramboll Australia was engaged by KCGM to undertake a review of ambient dust monitoring data in support of the triennial review of the Fimiston Air Quality Management Plan

2019

DWER NPI EET Manual Updates

Update and revision of Emission Estimation Technique (EET) manuals for the purposes of the National Pollutant Inventory (NPI) on behalf the Department of Water and Environmental Regulation (DWER).

2018

South32 Manganese Dust Reduction Strategy

Development of a dust management strategy for the South 32 Groote Eylandt Mining Company (GEMCO) manganese mining operations. The project involved identification of key sources of fugitive dust emissions across the Groote Eylandt operations and development of a dust control management strategy to achieve compliance with targets for ambient air quality manganese concentrations at sensitive receptor locations.

2010-2020

Kalgoorlie Air Quality Monitoring Reporting

Analysis and interpretation of air quality and meteorological monitoring data recorded by the Kalgoorlie Air Monitoring Network (KAMN), including review of network operation, maintenance and compliance with regulatory reporting requirements. Preparation of monthly summary reports for submission to the Department of Water and Environment Regulation.

2018-2020

Northern Star Provision of Air Quality Control Support

Provision of ongoing (ad-hoc) Air Quality Control (AQC) support to Northern Star Resources with regard to atmospheric emissions in relation to roasting operations, in particular roaster start-up advice and post incident/event analysis.

2007-2018

BHP Billiton Nickel West NPI Reporting

Preparation of annual National Pollutant Inventory (NPI) reports for Nickel West's Western Australian mining and processing operations, including the development of site-specific reporting and calculation tools and compilation of emission and waste transfer inventories.

2017-2019

KCGM Fimiston Emission Reduction Project Commissioning Report

Review of air emission testing results and preparation of the Commissioning Report for the Fimiston Operations Emission Reduction Project.

2017

BHP Group Environmental Advisor - Secondment

Provision of in-house project management services and specialist air quality advice to support the day-to-day operations of the environment team for an international resource company.

2010-2019

Kwinana Peaking Power Station Annual Compliance Audit and Environmental Reporting

Annual Compliance Audits and Annual Environmental Reporting (AER) for the Kwinana Peaking Power Station, Western Australia. The site was audited against the requirements of the environmental protection licence issued under the Environmental Protection Act 1986, with an AER prepared for the Department of Water and Environment Regulation (DWER).

2018-2020

GNT Resources NPI and NGRS Reporting

Development of an internal reporting tool to determine whether National Pollutant Inventory (NPI) and National Greenhouse Energy Reporting Scheme (NGERS) reporting thresholds have been triggered for Gascoyne Resources' Dalgaranga Gold Mine.

2010-2019

Western Energy Kwinana National Pollutant Inventory Reporting

Preparation of annual National Pollutant Inventory (NPI) reports for Western Energy's Kwinana Peaking Power Station, including the development of site-specific reporting and calculation tools and compilation of emission and waste transfer inventories.

2018

Regis Resources NPI Reporting Tool Review

Review and update of the internal National Pollutant Inventory database and reporting tool to be used by site personnel to process the data required to determine whether reporting thresholds have been triggered and if so, to calculate the necessary emissions and transfer estimates for the Moolart Well, Garden Well and Rosemont sites.

2018

Palisade Asset Management Merredin Energy Audit & AER

Ramboll was engaged by Palisade Asset Management to undertake an environmental compliance audit at the Merredin Energy Power Station and complete the 2017-18 Annual Environmental Report, to be submitted to the Department of Water and Environment Regulation in line with requirements of Merredin Energy's operating environmental licence.

2017

Kalgoorlie Air Monitoring Network Compliance Assessment

Compliance assessment of the Kalgoorlie Air Monitoring Network (KAMN) against Australian Standards for ambient sulphur dioxide and meteorological monitoring and regulatory requirements of the Department Water and Environment Regulation (DWER). Identification of areas of concern and improvement opportunities.

2017

Kwinana Mercury Treatment Plant Works Approval Application

Preparation of environmental approvals documentation for the Kwinana Mercury Treatment Plant, in compliance with Regulator requirements. Identification of potential environmental issues and management options to reduce associated risks.

2017

Air Dispersion Modelling of Chlorine Release Event

Air dispersion modelling was undertaken to assess the potential health and safety impacts associated with a release of chlorine emissions from a chemical processing facility. The screening model MAXMOD was applied to predicted ground level impacts under 'worst-case' meteorological conditions. The toxicity of predicted impacts was assessed against toxic impact criteria, occupational exposure standards and ambient air quality criteria.

2016-2017

Newmarket Gold Water Management Plan

Revision of the Water Management Plan (WMP) for Newmarket Gold's Cosmo Project, in compliance with requirements of the NT regulator. Collation, review and analysis of water quality data, identifying historical trends and assessing the effectiveness of water quality management actions. Participation in onsite Environmental Risk Assessment workshop and incorporation of outcomes into the WMP.

2016

Development of Assessment Questions for Human Health Toxicology Training Course

Development of assessment questions for an online human health toxicology training course. The assessment questions were designed to reinforce knowledge learnt and test understanding of concepts taught. Topics included toxicokinetics, immunotoxicity, dose response assessment and endocrine toxicity.

2015

Review of South Australian Environmental Protection (Air Quality) Policy

Review of South Australia's draft Environmental Protection (Air Quality) Policy 2016 and provision of technical advice in relation to proposed ambient air quality objectives and implications for local mining and processing operations. The review involved comparison of the draft SA Air Quality EPP to other state-based legislation within New South Wales, Victoria, Queensland and Western Australia.

2014

Kwinana Waste-to-Energy Project Air Dispersion Modelling Assessment

Air dispersion modelling and air quality impact assessment for the proposed Kwinana Waste-to-Energy (WtE) Project, in support of the Public Environmental Review (PER) for the proposed facility. The assessment included air dispersion modelling of point source emissions as well as fugitive odour emissions associated with the operations at the site.

2014

Review of Air Quality Standards

Conducted a review of global and local regulatory standards for particulate matter, identifying jurisdictional trends and drivers in particulate regulation and standards.

2015

3rd Party Environmental Authority Audit

Assisted with a third party environmental authority audit for Glencore's, Mt Isa Mines (MIM) mining operations and processes. The audit covered mining operations associated with copper ore from the Enterprise and X41 Underground Mines and zinc-lead ore from Black Star Open Cut, George Fisher Underground and Handlebar Hill Open Cut Mines, as well as MIM's processing activities located adjacent to the city of Mount Isa.

2015

Long Victor Mine Annual Environmental and Compliance Reporting

Prepared the Annual Compliance Audit Report (AACR), Annual Environmental Report (AER) and Groundwater Monitoring Summary (GMS) for the Independence Long Long Victor Nickel Complex. The site was audited against the requirements of the environmental protection licence issued under the Environmental Protection Act 1986. The AACR, AER and GMS were submitted to the relevant regulatory authorities, in compliance with the site's licence requirements.

2014

Nimbus Mercury Air Dispersion Modelling Assessment

Assessment of potential air quality impacts associated with mercury emissions from the proposed processing facility at the Nimbus Silver-Zinc-Gold Project in Western Australia. The air quality assessment was completed in support of regulatory approvals for the proposed recommencement of mining and processing operations at the Nimbus site, as required by the Department of Environment Regulation.

2013-2014

Varanus Island Operations Air Dispersion Modelling Assessment

Provision of technical advice and expertise in relation to atmospheric emissions from Quandrant Energy's Varanus Island (VI) operations and the renewal of their Environment License under the Department of Environment Regulation (DER) Re-Engineering for Industry Regulation and Environment (REFIRE) approach. The project included air dispersion modelling of emissions from point and fugitive emission sources on VI; development of an emissions testing program for key emissions sources; and development of an ambient air quality monitoring program.

2012

Kintyre Uranium Project Air Dispersion Modelling Assessment

Air dispersion modelling of particulate emissions associated with Cameco's proposed Kintyre Uranium Project, with reference to adequately demonstrating the health impacts associated with atmospheric emissions from the Project.

2012

Nickel West NDS1 Project Dust Modelling Assessment

This work involved the identification, quantification and assessment of emission sources associated with Nickel West's Nickel Disseminated Sulphides Project, including onsite vehicle movements and transport of product via haul-trucks. Following determination of source dimensions and emission rates, air dispersion modelling was carried out to determine the associated air quality impacts and assess predicted impacts against health protective guidelines.

2010

Port Hedland Port Air Dispersion Modelling Assessment

Conducted particulate modelling and assisted with the Ambient Air Quality Assessment for Fortescue Metals Group's proposed future expansion of its Port Hedland port operations, WA. Provision of technical advice to Fortescue regarding compliance to national air quality standards and management of emissions sources according to best practice standards.

2014-2017

Merredin Power Station Compliance Audit & Annual Environmental Report

Annual Compliance Audits and Annual Environmental Reporting (AER) for the Merredin Power Station, Western Australia. The site was audited against the requirements of the environmental protection licence issued under the Environmental Protection Act 1986, with an AER prepared for the Department of Environment Regulation (DER).

2013-2017

National Inventory Pollutant Reporting

Preparation of annual National Pollutant Inventory (NPI) reports for Perth Energy's Merredin Power Station, including the development of site-specific reporting and calculation tools and compilation of emission and waste transfer inventories.

2013

Kwinana Sodium Cyanide Manufacturing Facility Air Dispersion Modelling Assessment

Assessment of air quality impacts associated with proposed upgrade of the Kwinana Sodium Cyanide Facility. The air dispersion modelling was undertaken in line with the requirements of the regulator and the predicted results were used to demonstrate compliance with health protective guidelines, in support of regulatory approval for the proposed upgrades.

2011

Whyalla Steelworks Air Quality Impact Assessment

Assessment of air quality impacts and health implications associated with operations at Onesteel's Whyalla Steelworks, SA.

2010

Brickworks Air Quality Impact Assessment

Conducted air dispersion modelling assessments for Austral Bricks' Caversham and Bellevue Brickworks to assess the potential air quality impacts associated with proposed upgrades at each facility. The air dispersion modelling was undertaken in line with the requirements of the regulator and the predicted results were used to demonstrate compliance with health protective guidelines, in support of regulatory approval for the proposed upgrades.

2009

Kwinana Power Station Air Dispersion Modelling Assessment

Conducted air dispersion modelling and assisted with the Ambient Air Quality Impact Assessment in support of regulatory approval for Verve Energy's proposed High Efficiency Gas Turbines. This work included a cumulative impact assessment of NOx emissions from the proposed HEGTs along with other proposed sources of NOx emissions within the Kwinana area, drawing on publicly available emissions information for background sources.

2009

Kintyre Uranium Project Development of Dust Monitoring Program

Design of a meteorological and ambient dust monitoring program to provide climatic and background ambient air quality data for the Kintyre Uranium Project, WA.

2009

Anketell Port Facility Air Dispersion Modelling Assessment

Conducted particulate modelling and assisted with the Ambient Air Quality Assessment for Australian Premium Iron Management's proposed port operations, Anketell, WA.

2009

Air Quality Impact Assessment for Waste Treatment Plant

Undertook air dispersion modelling to investigate potential air quality impacts associated with odorous emissions from a proposed biofilter treatment system at a waste treatment plant, in support of regulatory approvals.

2008-2009

Atlas Iron Port Hedland Rail Siding Air Dispersion Modelling Assessment

Conducted particulate modelling and assisted with the Ambient Air Quality Assessment in support of regulatory approvals for Atlas Iron's proposed rail siding, Port Hedland, WA

2010-2014

National Inventory Pollutant Reporting

Preparation of annual National Pollutant Inventory (NPI) reports for Independence Group's Long Victor operations, including the development of site-specific reporting and calculation tools and compilation of emission and waste transfer inventories.

2009

Kwinana Environmental Protection Policy Sulphur Dioxide Emissions Redetermination

Assisted with air dispersion modelling of cumulative impacts of sulphur dioxide emissions from the Kwinana Industrial Area (KIA) in order to define regulatory emissions limits for major industries within the KIA. This project involved the use of the air dispersion model DISPMOD, a model developed by the Western Australian environmental regulatory authority to simulate shoreline fumigation and to assess air quality impacts in the Kwinana industrial area. Ground level concentrations of sulphur dioxide were predicted for a wide range of emission scenarios and liaison with industry representatives was required to modify emission scenarios such that the modelling results demonstrated compliance with the Kwinana Environmental Protection Policy (EPP) criteria.

2010-2012

First Quantum Minerals National Pollutant Inventory Reporting

Preparation of annual National Pollutant Inventory (NPI) reports for First Quantum Mineral's Ravensthorpe Nickel Operations, including the development of site-specific reporting and calculation tools and compilation of emission and waste transfer inventories.

2008

Shell Bukom Refinery Air Dispersion Modelling Assessment

Assisted with the Pollution Control Study and Air Dispersion Modelling Assessment for Shell Eastern Petroleum Limited's Long Residue Cracking Unit Revamp Project, Bukom Refinery, Singapore.

2008

Lynas Malaysia Advanced Materials Plant Air Quality Impact Assessment

Conducted air dispersion modelling and assisted with the Air Quality Impact Assessment for Lynas Malaysia's proposed Advanced Materials Plant, Malaysia.

2008

Kupe Gas Project Air Quality Impact Assessment

Conducted air dispersion modelling and assisted with the Air Quality Impact Assessment for Technip Oceania's proposed Kupe Gas Project, New Zealand.

2009

OCGT Peaking Plant Air Dispersion Modelling Assessment

Conducted air dispersion modelling and assisted with the Air Quality Impact Assessment in support of regulatory approvals for Perth Energy's proposed Open Cycle Gas Turbine Peaking Plant, Perth.

2006

Readymix Quarry Development of a Dust Control Monitoring Network

Assisted with the design and implementation of an early warning dust control network for Readymix's quarry operations, Gosnells, WA. The dust control strategy includes a predictive component to identify whether additional control measures are required based on forecast conditions, and a reactive component based on real-time ambient meteorological and dust monitoring data.

PUBLICATIONS

2009

Wetland invertebrate richness and endemism on the Swan Coastal Plain, Western Australia.

Marine and Freshwater Research, 60, 1006-1020.

Authors: Horwitz P, Rogan R, Halse S, Davis J, & Sommer B.

2008

Human exposure to metals in groundwater affected by Acid Sulphate Soil disturbance.

Archives of Environmental Contamination and Toxicology, 55 (3), 538-545.

Authors: Hinwood A, Horwitz P, & Rogan, R.

2005

Nowhere to hide: an exploration of awareness and perceptions of change, and relationships with place.

Journal of Environmental Psychology, 25, 147-158.

Authors: Rogan R, O'Connor M, & Horwitz P.

OTHER ACTIVITIES

2000

Royal Society of Western Australia Medal

Best science graduate at Edith Cowan University, 2000

2000

Alcoa World Alumina Australia Prize

Most outstanding student completing the requirements in the Bachelor of Science (Environmental Management), 2000

MEMBERSHIPS

Clean Air Society of Australia and New Zealand (Committee Member - WA Branch)

Environmental Consultants Association (Member)

Environmental Health Australia (Member)

GREER LAING

Lead Consultant

Greer is an air quality specialist with experience working across a range of project phases and industries. She has worked on specialist studies for rail, road transport, ports, water, urban design & strategy, power & energy, airports, construction, manufacturing, mining, agriculture, Defence, government and research.

Greer has demonstrated skills in the following:

- Air quality and odour impact assessment
- Air quality and odour monitoring projects and programs
- Dispersion modelling, including simulation using CALMET, CALPUFF, TAPM, AUSPLUME, TANKS etc
- Stack/source monitoring design and advice
- Development of monitoring programs and management plans
- Environmental compliance auditing
- Meteorology monitoring and assessment
- Noise monitoring programs and assessments
- Greenhouse gas assessments
- Environmental monitoring program implementation and management, including water and soil sampling
- Research and development focussed on improved mitigation and control of air pollution

EDUCATION

2009 - 2010

MSc (Research, Environmental Science)

University of Auckland, Auckland, New Zealand

2004 - 2006

BSc (Environmental Science and Biology)

University of Auckland, Auckland, New Zealand

CAREER

2019 – present

Lead Consultant, Ramboll

2015 - 2019

Senior Environmental Scientist / Team Leader, Jacobs

2011 - 2015

Senior Environmental Scientist, Pacific Environment

2009 - 2011

Research Scientist, Aeroqual



CONTACT INFORMATION

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Ramboll

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2291 The Junction
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SELECTED PROJECT EXPERIENCE

ROAD TRANSPORT

2017-2019

WestGate Tunnel Design & Construct project, Melbourne, VIC

- Package lead on the design of stack monitoring systems for the tunnels
- Package lead on the design of the ambient air quality monitoring program

2012-2019

WestConnex Pre-construction and Design & Construct projects, Sydney, NSW

- Design of the stack monitoring program (2017 – 2019)
- Design of the operational ambient air quality monitoring network (2016 – 2017)
- Project management for pre-construction air quality monitoring program (2012 – 2015)

2018

Roads and Maritime M1 to Raymond Terrace noise monitoring

Monitoring of baseline noise to inform the highway upgrade, in Raymond Terrace, NSW.

2015-2016

Ward Civil Sensitive Area Plans

Preparation of SAPs to inform upgrades to the Great Western Highway Safety Upgrade, Mount Victoria, NSW.

2016-2018

Roads and Maritime air quality monitoring program, Berry Highway upgrade

Project management, field work and reporting to determine the baseline air quality prior to construction of a new highway in Berry, NSW.

2016

Douglas Partners Woolgoolga to Ballina highway upgrade air quality management plan

Preparation of an AQMP for use on construction of the highway upgrade, Ballina, NSW.

2017

Roads and Maritime Western Harbour & Beaches Link air quality monitoring location review

Independent review of air quality monitoring station locations, Sydney, NSW.

2017/2018

Supercars Australia Newcastle noise monitoring and community consultation

Door knocking and monitoring to inform the community of potential impacts from the Newcastle race of Supercars, Newcastle, NSW.

2017

Roads and Maritime Reservoir Road upgrade noise monitoring program

Noise monitoring to inform road construction project in Blacktown, NSW.

2018

Confidential due diligence project for large Sydney road tunnel network

Analysis and identification of risks for purchase of roads tunnels in Sydney, NSW.

RAIL

2020

John Holland Rail Lead Management Air Quality Monitoring Program

Technical lead, analysis and reporting for air quality monitoring program in Tarago, NSW

2018-2019

Australian Rail Track Corporation Bylong Tunnel No. 3 air quality monitoring program

Design, implementation and reporting of air quality exposure to inform increases to network capacity, Hunter Valley, NSW.

2016

Australian Rail Track Corporation Inland Rail background air quality report

Baseline air quality study to inform construction Calvert to Kagaru section of Inland Rail, QLD.

2017

Aurizon coal train opacity monitoring program

Establishment of an opacity monitoring program to inform management of the coal train network in QLD.

2015-2016

Transport for NSW Lower Hunter Freight Corridor environmental advice

Advice to support community engagement for the LHRC, Hunter Valley, NSW.

AGRICULTURE

2015 - 2016

Longacres poultry odour assessment

Modelling and reporting for a new poultry farm development near Gunnedah.

2015-2016

Gundamain feedlot odour assessment

Modelling and reporting to determine the potential odour impact of a cattle feedlot expansion in NSW.

PORTS

2016-2017

Department of Premier and Cabinet NSW Cruise Plan options review

Review of environmental factors to inform options for a new cruise terminal, Sydney, NSW.

2017-2018

Noakes Berry Bay floating dry dock noise monitoring

Project management of a multidisciplinary team and monitoring and reporting to inform the noise assessment, Lavender Bay, NSW.

2015-2016

Port Authority of NSW White Bay air quality assessment

Review of emissions and recommendations for improvement at a port in Sydney, NSW.

2017

Newcastle Coal Infrastructure Group meteorological monitoring review

Review and implementation of meteorological monitoring at NCIG port site, Kooragang Island, NSW.

2017

Boral air quality monitoring program

Monitoring to inform dust complaints at the Port site, Kooragang Island, NSW.

2018

Coreview Sydney Cruise Terminal project

Air quality inputs to inform a new cruise terminal in Sydney, NSW.

2015

Queensland Bulk Handlings dust monitoring program

Analysis and reporting of Port of Brisbane dust monitoring program, Brisbane, QLD.

2018-2019

GrainCorp Port Kembla continuous emissions monitoring review

Compliance review of grain terminal emissions, Port Kembla, NSW.

2018-2019

GrainCorp NSW review of environmental monitoring and management systems

Review of compliance against environmental management requires at Port Kembla and Newcastle Carrington Terminal.

WATER

2017

Infrastructure NSW Walsh Bay Arts Precinct Integrated Water Management Plan

Preparation of an IWMP for application to proposed construction projects, Sydney, NSW.

2017

Sydney Water Erskineville flood zone noise monitoring

Noise monitoring to inform works to improve flood risk, Sydney, NSW.

2015

Boneo Sewage treatment plant greenhouse gas assessment

Greenhouse gas assessment to inform STP upgrade, Mornington Peninsula, Victoria.

2016

Queensland Urban Utilities Lowood sewerage schemes upgrade noise monitoring

Noise monitoring to inform proposed upgrades to the WTP, Lowood, QLD.

2018

Yarra Valley Water Aurora Waste to Energy stack monitoring compliance

Review of licensing, commissioning and monitoring for EfW facility in Victoria.

URBAN DESIGN & STRATEGY

2016

Port Authority of NSW Glebe Island options review

Air quality constraints analysis to inform major infrastructure transformation project in the Bays Precinct, Sydney, NSW.

2017

NSW Government Liverpool CBD concept design noise monitoring

Baseline noise monitoring to inform concept design of Liverpool CBD transformation, Sydney, NSW.

2016-2019

Office of Environment and Heritage Audits

Project management and reporting for various audits to determine the cost effectiveness and efficiency of the Upper Hunter and Newcastle Local air quality monitoring networks, Newcastle and the Hunter Valley, NSW.

POWER

2020

Resolute Syama Gold Mine Air Quality Assessment and Review

Air quality monitoring review and advice for a gold mine in Mali, Africa.

2017

Energy Australia Yallourn landfill air quality monitoring program

Project management, field work and reporting to determine the impacts of various air quality sources near the power station.

2016-2018

Santos Moomba solar monitoring program

Monitoring and reporting to determine the solar output for a potential solar development.

2016-2019

Sunset Power solar monitoring program

Monitoring and reporting to determine the impact of a range of environmental conditions for a potential solar development in NSW.

2018

Snowy Hydro Hunter Economic Zone power station air quality assessment

Analysis and reporting of data to apply for modification to site EPL, Hunter Valley, NSW.

2017

Delta Vales Point Power Station emissions controls review

Review of controls to inform Pollution Reduction Program, Central Coast, NSW.

2018

Delta Vales Point noise monitoring complaint monitoring

Various monitoring programs to inform complaint handling in Central Coast, NSW.

2018

AGL Bayswater turbine replacement projects

Air quality assessment to inform upgrade works, Hunter Valley, NSW.

AIRPORTS

2016-2017

Sydney Airport air quality monitoring program design

Project manager and reporting to develop a suitable monitoring program for the airport.

CONSTRUCTION

2019 – 2020

Holcim Environmental Monitoring Program, NSW

Project manager of a multidisciplinary team and reporting

2015-2018

Holcim Environmental Monitoring Program, Rooty Hill

Project manager of a multidisciplinary team, field work and reporting

2015

Holcim Lynwood Quarry air quality assessment review

Independent review of environmental assessment prepared for environmental impact statement.

2017

Downer Teralba asphalt plant air quality assessment

Modelling and reporting to inform the environmental impact statement of a proposed plant in Central Coast, NSW.

MANUFACTURING

2015-2016

Orora noise monitoring program

Monitoring and reporting to inform the impact of the Orora paper mill in Botany, NSW.

2016-2019

Costco annual return preparation

Project manager, modelling and reporting for a range of sites, in preparation of the requires NSW EPA Annual Return.

2016

Veolia storm event analysis

Modelling and reporting to inform damage insurance claims following a significant storm event, Botany Bay, NSW.

MINING

2020

South32 Dendrobium Mine Response to EPA

Project management, data analysis, modelling and reporting for a mine in Wollongong, NSW

2020

Rio Tinto Oyu Tolgoi Air Quality Monitoring Advice

Advice and reporting for a mining project in South Gobi Desert, Mongolia

2020

Erdene Resources Bayan Khundii Air Quality Assessment

Air quality assessment for a gold mining project in Khundii, Mongolia

2016-2018

Glencore Bulga Annual Review

Analysis of environmental data for input into mine annual return.

2015-2019

Yancoal Moolarben forecasting system

Maintenance of an environmental forecasting system to inform operation of Moolarben mine in Ulan.

2017

Glencore Mt Owen air quality assessment

Modelling and reporting to assess the air quality impacts of a proposed modification.

2016

Coal & Allied Mount Thorley Warkworth audit

Review of environmental data to determine compliance, Hunter Valley, NSW.

2015

Yancoal Moolarben environmental audit

Review of environmental data to determine compliance, Hunter Valley, NSW.

2018-2019

Glencore Mt Owen haul road monitoring

Project management, field work and reporting to determine the emissions from the mines haul road network.

2016

Glencore Collinsville air quality monitoring program design

Review of data and advice to improve monitoring program for a mine near Bowen, QLD.

2016

Glencore Mt Owen air quality management plan gap analysis

Review of regulatory documents against AQMP, Hunter Valley, NSW.

2015

United Wambo review

Review of environmental monitoring data to inform an environmental impact statement, Hunter Valley, NSW.

2017

Glencore Bulga air quality monitoring data review

Review of environmental data to inform Annual Return, Hunter Valley, NSW.

2018

Glencore blast fume drone monitoring validation

Analysis, review and recommendations to improve drone blast monitoring at Ravensworth, NSW.

DEFENCE

2017

Australian Federal Police canine monitoring program

Project manager, field work and reporting to determine the impact of aviation fuel on scent detection dogs' abilities and health, Sydney, NSW.

2017-2019

University of Sydney Commercial Developments and Industry Partnerships canine scent detection research program

Researcher developing machine-assisted learning scent detection devices to improve detection programs for narcotics and explosives.

2015-2016

Department of Defence Garden Island noise monitoring program

Noise monitoring to inform proposed developments at Garden Island, Sydney NSW.

2018

Darwin RAAF base dust complaint investigation

Review of air quality and meteorological conditions to inform investigation, Darwin, NT.

CREDENTIALS

AWARDS

Clean Air Society of Australian and New Zealand - Young Achiever award, 2015 for excelling in the field of air quality science.

MEMBERSHIPS

Clean Air Society of Australian and New Zealand

- Deputy Chair of Measurement Special Interest Group, 2015 - present
- Chair of the Emerging Professionals Branch, 2013 - 2017

TRAINING

- Leading People, 2019
- Rail Industry Worker - Australian Railway Association, 2018
- Machine Learning in Python - Sydney Informatics Hub, University of Sydney, 2018
- First aid training (cardiopulmonary resuscitation, basic emergency life support and first aid) - CBD College, 2018
- Next Horizon emerging leader program, 2018
- CALPUFF Modelling training course - Clean Air Society, 2017
- Sound propagation theory - Bruel and Kjaer, 2016
- Project Management training, 2015
- Winning Proposal Strategies - Shipley Asia Pacific, 2015
- Operate and maintain a 4WD - Getabout Training Services, 2015
- Emissions Reduction Fund auditor training - Clean Energy Regulator, March 2015.
- General Induction for Construction. WorkSafe, December 2014
- Ambient Air Quality Monitoring course - Clean Air Society, 2014
- NSW Energy Saving Scheme Auditing Training - IPART, 2013
- AUSPLUME Dispersion Modelling course - Clean Air Society, 2011
- Meteorology for Air Dispersion course - Clean Air Society, 2011

PUBLICATIONS

2018

Critical review of dog detection and influences of physiology, training, and analytical methodologies

Talanta, Volume 185, 499 – 512

Authors: Hayes J, McGreevy P, Forbes S, Laing G, Stuez R

2015

Development of Australia-Specific PM₁₀ Emission Factors for Coal Mines

ACARP, C22027, September 2015

Authors: Roddis D, Laing G, Boulter P, Cox J

2015

Mobile Sampling of Dust Emissions from Unsealed Roads

ACARP, C20023, January 2015

Authors: Cox J, Laing G

2015

Development of a novel sampling technique (T-REX) for the measurement of PM plumes, and application to coal mining operations

Clean Air Society Conference, Melbourne 2015

Authors: Laing G, Roddis D, Cox J, Boulter B

2015

Finalisation of Australian specific PM₁₀ emissions factors for coal mines

Clean Air Society Conference, Melbourne 2015

Authors: Roddis D, Laing G, Cox J, Boulter P

2013

Validation of low-cost ozone measurement instruments suitable for use in an air-quality monitoring network

Measurement Science and Technology. Volume 24, number 6.

Authors: Williams D E, Henshaw G S, Bart M, Laing G, Wagner J, Naisbitt S, Salmond J A

2013

Measuring variability of vehicle generated PM₁₀ concentrations on coal mine haul roads to determine best practice management control

Clean Air Society of Australia and New Zealand, Sydney 2013

Authors: Cox J, Laing G, Isley C, Watson J, Gale M

2012

The influence of vegetation on the horizontal and vertical distribution of pollutants in a street canyon

Science and Technology of the Total Environment, 443

Authors: Salmond J A, Williams D, Laing G, Kingham S, Dirks K, Longely, I, Henshaw G

2012

A low-cost continuous instrument for measuring roadside atmospheric aromatic hydrocarbons

Air and Waste Management Association - Air Quality Measurement Methods and Technology Conference, Durham, North Carolina, USA, 2012

Authors: Laing G, Henshaw G S, Prince B, Williams D, Salmond J, Bart M

2011

Measurement of atmospheric hydrocarbons in Auckland air using low cost temperature programmed desorption instruments and mobile SIFT-MS

Clean Air Society of Australia and New Zealand Conference, Auckland 2011

Authors: Henshaw G, Laing G, Prince B, Williams D

2011

Spatial and temporal variation of benzene, toluene, ethylbenzene and xylenes (BTEX) in an area of complex urban terrain

Meteorological Society of New Zealand, 2nd Annual conference proceedings, Nelson, 2011

Authors: Laing G, Salmond J, Henshaw G, Williams D

2011

Comparative measurements of urban atmospheric hydrocarbons using a simple temperature programmed desorption bed instrument and mobile SIFT-MS

USEPA National Air Quality Conference, San Diego 2011

Authors: Laing G, Williams D, Henshaw G, Prince B

2010

Low-cost ozone and nitrogen dioxide measurement instruments for monitoring air quality at outdoor networked sites

National Air Quality Conference, Raleigh, 2010

Authors: Henshaw G, Laing G, Salmond J A, Wagner J, Williams, D E

2009

Development of low-cost ozone and nitrogen dioxide measurement instruments suitable for use in an air quality monitoring network

2009 IEEE Sensors, 1099 – 1104

Authors: Williams, D E, Salmond, J, Yung Y F, Akaji J, Wright B, Wilson J, Henshaw G, Wells D B, Ding G, Wagner J, Laing G