



WAMBO COAL PTY LTD

ABN: 13 000 668 057

100 Melbourne Street
South Brisbane Qld 4101

PMB 1
Singleton NSW 2330
Australia
Tel + 61 (0) 2 6570 2200
Fax+ 61 (0) 2 6570 2290

23 April 2020

Department of Planning and Environment
Senior Planning Officer, Resource Assessments
Level 30, 320 Pitt Street
Sydney NSW 2001

By email: melanie.hollis@planning.nsw.gov.au

**RE: WAMBO COAL PTY LTD (WCPL)
APPOINTMENT OF SUITABLY QUALIFIED AND EXPERIENCED PERSONS
FOR MANAGEMENT PLANS**

Dear Melanie,

The modified Development Consent (DA 305-7-2003) issued after the determination of the United Wambo Joint Venture Project (MOD 16) requires the preparation of updated management plans.

Experts have been appointed by the Secretary to provide advice for the Blast and Noise Management Plans (in letters dated 9 December 2019 and 28 February 2020 respectively). The Department also endorsed suitably qualified experts to assist in the preparation of the Extraction Plan and associated management plans on 28 February 2020. It is unclear that this endorsement extends to the general management plan updates.

Experts currently endorsed for the Extraction Plan and associated management plans are outlined in **Table 1**.

Table 1 – Suitably Qualified Experts Endorsed for Extraction Plan Preparation

Team Member	Appointed Role
Dr Noel Merrick (SLR Consulting Pty Ltd)	Provision of advice on groundwater monitoring and management for the Groundwater Management Plan
Mr Rohan Lucas (Alluvium)	Provision of advice on surface water monitoring and management for the Surface Water Management Plan
Mr Peter Kuskie (South East Archaeology)	Provision of advice on monitoring and management of Aboriginal cultural heritage sites.
Mr Martin Sullivan (Eco Logical Australia)	Provision of advice on biodiversity monitoring and management measures for the Biodiversity Management Plan

The following additional experts are proposed to assist with the preparation of the remaining management plans, required by the Development Consent (MOD16).

Table 2 Suitably Qualified Experts Proposed for Endorsement for Management Plans

Team Member	Role
Claire Stephenson (SLR Consulting Pty Ltd)	Provision of advice on groundwater monitoring and management for the Groundwater Management Plan
Shane Lakmaker (Jacobs)	Provision of advice on air quality monitoring and management for the Air Quality and Greenhouse Gas Management Plan

Background of Suitably Qualified and Experienced Persons

WCPL considers that the team already approved in **Table 1** for the Extraction Plan remain appropriate for the provision of advice for the general management plans. As Dr Noel Merrick is now semi-retired, an alternative groundwater expert, also from SLR is provided. Wambo Coal is sourcing suitably experienced persons to assist with the Traffic Management Plan and the Rehabilitation Management Plan and will seek endorsement at a later date.

The curriculum vitae of the suitably qualified and experienced persons listed in **Table 2** are attached with a summary provided below.

Claire Stephenson

*Principal Hydrogeologist - Hydrology and Geology, Asia Pacific
SLR Consulting Pty Ltd*

Claire has over 13 years' experience in environmental consulting across Australia. Claire has extensive experience managing complex groundwater projects, with diversified skills and experience in mine groundwater management, water supply development, planning and approvals (i.e. annual reviews, operational studies and groundwater impact assessments), field investigation programs, numerical groundwater modelling and independent auditing (Exemplar Global AU TL QM EM OH). Claire has additional expertise in groundwater modelling, groundwater monitoring network design and installation, field program design and implementation, stakeholder engagement, and independent auditing.

Claire has worked extensively on projects across NSW and managed the Groundwater Impact Assessment for the United Wambo Open Cut. This has provided an understanding of the local and regional groundwater systems.

Shane Lakmaker
Principal (Air Quality)
Jacobs

Shane obtained a Bachelor of Technology (Atmospheric Science) degree from Macquarie University in 1997 and is a Principal (Air Quality) with Jacobs. He has over 20 years' experience in the environmental field with specific expertise in air dispersion modelling and air quality assessment, meteorology, greenhouse gas inventories and software development. Shane has experience in a range of industry sectors including open cut and underground mining, power generation, transport infrastructure (roads, motorways and tunnels), waste management, and wastewater treatment. He is experienced in the use of a wide range of meteorological and air dispersion models (MM5, TAPM, CALPUFF, AERMOD, AUSPLUME, ISC, EDMS, CALINE, TAPM-CTM) and has installed over 30 meteorological stations.

Could the Department please provide endorsement for the experts listed in **Table 1** and **Table 2** for the provision of advice for management plans required by the Development Consent (MOD16).

If you require anything further please get in touch.

Yours sincerely,



Nicole Dobbins
Senior Environmental Advisor
Contract
Wambo Coal Pty Ltd
Phone: (02) 6570 2209
ndobbins@peabodyenergy.com

Enclosure 1. Curriculum Vitae for Claire Stephenson
Enclosure 2. Curriculum Vitae for Shane Lakmaker

ENCLOSURE 1

MS CLAIRE STEPHENSON CURRICULUM VITAE

CURRICULUM VITAE



CLAIRE STEPHENSON

PRINCIPAL

Hydrology & Hydrogeology, Asia-Pacific

QUALIFICATIONS

MBA	2018	Master of Business Administration (with Distinction), Griffith University, QLD,
AU, TL, QM, EM, OH	2017	Exemplar Global Integrated Management Systems Auditing Lead QMD ISO9001:2015, EMS ISO14001:2015 AND OHSMS AS/NZS 4801:2001
BFor (Hons)	2007	Bachelor of Forestry (1 st Class Honours), University of Melbourne, VIC, Australia
BSc (Geology)	2007	Bachelor of Science (Geology), University of Melbourne, VIC, Australia

EXPERTISE

- Hydrogeological Conceptualisation
- Groundwater Impact Assessments
- Independent Auditing
- Project Management and Stakeholder Liaison

Claire has over 13 years' experience in environmental consulting across Australia with extensive experience managing complex groundwater projects.

She has diversified skills and experience in mine groundwater management, water supply development, planning and approvals (i.e. annual reviews, operational studies and groundwater impact assessments), field investigation programs, numerical groundwater modelling and independent auditing (Exemplar Global AU TL QM EM OH).

Claire has additional expertise in groundwater modelling, groundwater monitoring network design and installation, field program design and implementation, stakeholder engagement, independent auditing and expert advice.

PROJECTS

Independent Audit

Centennial Coal – Newstan – Independent Peer Review (Groundwater)

Conducted independent peer review for groundwater impact assessment for proposed extension of underground operations. Work included review of the conceptualisation and model setup with a staged approach with provision of feedback and findings, in accordance with the 2001 Australian Groundwater Modelling Guidelines (Middlemis et al. 2001).

Australian Pacific Coal - Dartbrook Underground Mine – Independent Audit Groundwater Technical Expert, NSW

Provided technical review the performance of the project against groundwater related requirements stipulated within Development Consent conditions and management plan commitments. Review conducted in accordance with the NSW Government Independent Audit Guideline and included assessment of the adequacy of strategies, plans or programs in addressing groundwater issues, and provision of observations and recommendations to help improve the environmental performance.

Baralaba Coal Company – EA Compliance Review, QLD, Australia

Lead auditor in conducting a review of compliance against conditions within the EA, focused on groundwater. The review included desktop review of available documentation and a site visit. The findings were reported and included recommendations for improvement, where relevant.

Glencore – Mangoola Coal Mine Groundwater Extraction License Independent Audit, NSW, Australia	Conducted independent audit of compliance against Groundwater Extraction License 20BL172598, in accordance with AS/NZS ISO 19011:2014 and NSW government Post Approval Guidelines – Independent Audits (October 2015).
Glencore – Ulan Coal Mine Independent Audit Groundwater Technical Expert, NSW, Australia	Provided technical review the performance of the project against groundwater related requirements stipulated within the EA and EPL. The review included assessment of the adequacy of strategies, plans or programs in addressing groundwater issues, and provision of recommendations to help improve the environmental performance of the project.
	Expert Witness
Provision of expert advice under legal privilege and assistance in provision of evidence for Land Court/CMEE process and legal cases	<p>Assistance in development of expert advice for Cook Colliery legal case (McLarens).</p> <p>Development of expert advice for confidential client on implications associated with development consent conditions relating to water infrastructure and EPBC self-referral (Minter Ellison).</p> <p>Development of expert advice for confidential client on impacts associated with tailings seepage on groundwater and surface water, and subsequent work to address EPA conditions (Minter Ellison).</p> <p>Assistance in document review and preparation of expert advice for Land Court case (CMEE process) for limestone quarry (Carter Newell).</p> <p>Assistance in preparation of expert evidence for Pembroke Resources for Land Court case (CMEE process) (Allens).</p>
	Water Resource Investigation
Hera Gold Mine	Desktop assessment of available geological and hydrogeological data to identify a potential groundwater supply option for domestic and industrial use.
Avon Catchment Council, Groundwater Resource Assessment, WA, Australia	Project aimed at identifying groundwater resources suitable for domestic supply within the Avon Catchment. The project involved field programs including geological and geophysical surveys, bore census and groundwater sampling.
Department of Water – Murray Drainage Project, WA, Australia	Project involving targeted sonic drilling to delineate the Leederville aquifer to support the DoW' Murray drainage and water management plan, and regional groundwater model. Project also involved installation of monitoring bores for collection of data to determine potential impacts for selected registered wetlands.
Mandurah Property Development, Water Supply Project, WA, Australia	Water supply study to support residential development. The study identified potential resource within the Mandurah Groundwater Management subarea. Project involved drilling and construction of a deep water supply bore.
BHP Billiton Iron Ore – Pilbara Water Resources Project, WA, Australia	Assessment of non process water supply and disposal, including review of existing and potential borefields for groundwater supply.

Rio Tinto Iron Ore – Tom Price Airport Water Supply, WA, Australia	Assessment into potential groundwater resources for the Tom Price Airport, including drill planning, drill supervision, testing and reporting.
	Environmental Impact Assessment
Preparation of groundwater assessments	<p>Coordinated and completed multiple groundwater impact assessments across NSW and Queensland. Work included field investigations, collation of data to build conceptual groundwater model, development of numerical groundwater models and model review, impact assessment reporting, as well as communication of findings with various stakeholders.</p> <p>Olive Downs South Coking Project (QLD), Newlands Girrah Project (QLD), Broughton Project (QLD), Boundary Hill South SEIS (QLD), Taraborah (QLD), Mackenzie North (QLD), Ensham Mine (QLD), Maxwell Project (NSW), Hunter Valley Operations Modification 5 (NSW), Hunter Valley Operations Modification 6 (NSW), HVO Barrys Pit Extension (NSW), HVO Out of Pit Emplacement (NSW), United Wambo Project (NSW)</p>
Mine Closure Assessments	Newlands Mine – Saddlers Pit (QLD), Bluff Colliery (QLD), Ensham Mine (QLD), CCL701 (NSW), Duralie (NSW) and confidential projects for underground longwall operations in NSW.
	Groundwater Compliance/Local Studies
Infrastructure and industry projects	Department of Main Roads (Queensland) - groundwater field investigation and data analysis as part of larger geotechnical investigation (CRR). Granville Landfill field program to establish monitoring network and assessment of hydrogeological regime for site management.
Mine groundwater compliance – assessment of groundwater quality and level data and review of environmental factors and site investigations	Olive Downs South Coking Project (QLD), Newlands Mine Complex (Glencore), Ensham Mine (Ensham Resources), Poitrel (BMA), Buck Reef West (Carpentaria Gold), Ernest Henry Mine (Glencore), Monakoff Mine (Glencore), Daunia (BMA), Eagle Downs (Aquila/South32), Cook Colliery (Bounty Mining), Eagle Downs South (Aquila), Saraji East (BMA), Jellinbah (Jellinbah Resources), Hunter Valley Operations (HVO), Mt Thorley Warkworth (Yancoal), Ulan (Glencore), Metropolitan (Peabody), Dendrobium (South32), Mt Owen Complex (Glencore), Moolarben (Yancoal), Maules Creek (Whitehaven), Burton (Peabody), Bylong (KEPCO), Wilpinjong (Peabody), South Walker Creek (BMC), Tarrawonga (Whitehaven), Vickery (Whitehaven).
Coordinate field investigations, including monitoring bore checks, installation and testing	Mine sites including Baralaba North and Baralaba South (Cockatoo Coal/Mount Ramsay Coal), Ensham Mine (Ensham Resources), Jellinbah (Jellinbah Resources), Dingo Project, Duania (BMA), Poitrel (BMA), North Surat (New Hope), Hunter Valley Operations (HVO), United (Peabody), Chichester Operations/Cloudbreak (FMG), Ulan (Glencore).
	Contaminated Site Assessments

Preliminary to Detailed site investigations	Town of Kwinana – Contaminated Site Investigations (WA), Masbate (WA), Hudswell Road PSI (WA), Cardup/Byford (WA), Newcrest Mining – Telfer Gold Mine (WA),
	Training and Presentations
Pale Sub-Basin - 2019	Training on development of conceptual groundwater models as part of Pale Sub-Basin Groundwater Modelling training course for staff from Irrigation Water Utilisation Management Department (IWUMD) Myanmar (Activity Number: 660239.75)
AGC - 2019	Presentation on <i>Communicating Science to Reduce Cognitive Strain</i> , Brisbane
AGC - 2015	Presentation on <i>Hydrogeological variability across the Sydney-Bowen Basin</i> , Canberra
ICEWarm - 2013	Presenter at International Centre of Excellence in Water Resource Management (ICE Warm) 4th Groundwater Essentials Course, 2013, Gold Coast, QLD. Presentation of groundwater fieldwork, practices and methodology.
2nd International Salinity Forum - 2008	Groundwater Response to Partial Plantings on Discharge Zones at Five Sites in the Southwest of Western Australia. Presented at 2nd International Salinity Forum: Salinity, Water and Society – Global Issues, Local Action. Adelaide, 2008.
MEMBERSHIPS	
Member	Geological Society of Australia
Member	International Association of Hydrogeologists

ENCLOSURE 2

MR SHANE LAKMAKER CURRICULUM VITAE



Shane Lakmaker

AIR QUALITY

Shane obtained a Bachelor of Technology (Atmospheric Science) degree from Macquarie University in 1997 and is a Principal (Air Quality) with Jacobs. He has over 20 years' experience in the environmental field with specific expertise in air dispersion modelling and air quality assessment, meteorology, greenhouse gas inventories and software development.

Shane has experience in a range of industry sectors including open cut and underground mining, power generation, transport infrastructure (roads, motorways and tunnels), waste management, and wastewater treatment. He is experienced in the use of a wide range of meteorological and air dispersion models (MM5, TAPM, CALPUFF, AERMOD, AUSPLUME, ISC, EDMS, CALINE, TAPM-CTM) and has installed over 30 meteorological stations.

EDUCATION / QUALIFICATIONS

Bachelor Technology (Atmospheric Science), 1997 Macquarie University, NSW.

MEMBERSHIPS AND AFFILIATIONS

Member of the Clean Air Society of Australia and New Zealand

LANGUAGES

English

OTHER

Principal (Air Quality)

2013 to present: Jacobs

2008 to 2013: SKM

1998 to 2008: Holmes Air Sciences

Areas of Expertise

- Air quality assessment and dispersion modelling
- Greenhouse gas inventories
- Meteorology
- Software development

Relevant Project Experience

Environmental Forecast Systems, Australia

Client: Glencore

Title: Air Quality Control System

Start/End Dates: 2011 to present

Scope/Description: Glencore required support with the implementation of a proactive and reactive air quality management system to comply with their Development Consents at all their major open cut coal mines in NSW and Qld.

Responsibilities: Shane developed and implemented site-specific meteorological, dust and noise forecasting systems. These systems created a greater awareness of potential environmental issues and was the winner of the 2013 NSW Minerals Council Environment & Community Excellence Award.

Hunter Valley, NSW

Client: Glencore

Title: Glendell Continued Operations Project

Start/End Dates: January 2019 to December 2019

Scope/Description: Air quality impact assessment of the proposed Glendell Continued Operations Project.

Responsibilities: Shane completed the air quality impact assessment to support the Environmental Impact Statement. This involved preparation of dust emission inventories, analysis of air quality monitoring data, meteorological data collection and air dispersion modelling to address the environmental assessment requirements.

NSW, Qld, Vic, SA, NT, WA (Australia)

Client: Various

Title: Air quality impact assessments

Start/End Dates: 1998 to 2019

Scope/Description: Air quality impact assessments of proposed brownfields and greenfield developments.

Responsibilities: Shane has completed air quality impact assessments for over 100 mining projects, many to support Environmental Impact Statements. These assessments involved the preparation of dust emission inventories, analysis of air quality monitoring data, meteorological data collection and air dispersion modelling for open-cut and underground mines.

General

- Preparation and review of Air Quality Management Plans. Examples include plans for Mt Owen Mine, Mangoola Mine, Collinsville Mine, Clermont Mine, United Wambo Mine.
- Audit of air quality compliance with approval conditions at mining operations, landfills, coal terminals. Examples include audits at Mt Arthur Mine, Mt Thorley Warkworth Mine, Hunter Valley Operations – North and South, Maules Creek mine, Moolarben Mine, Mangoola Mine and Newcastle Coal Infrastructure Group Coal Export Terminal.
- Air quality impact assessments for several major roadway projects in Australia including Brisbane North South Bypass Tunnel (EIS), Brisbane Airport Link Tunnel (EIS), Brisbane Northern Link Tunnel (EIS), Cross River Rail, Sydney Cross City Tunnel (EIS), Sydney Lane Cove Tunnel (EIS), M4 East Tunnel (Concept Design), and F3 to M2 (Concept Design).
- Air quality impact assessments for rail infrastructure projects including Maldon to Dombarton Rail Link, Cross River Rail, Lower Hunter Freight Corridor and Western Sydney Freight Line.
- Air quality assessment for the Brisbane Airport New Parallel Runway and Melbourne Airport Third Runway.
- Odour impact assessments for wastewater treatment plants (over 50), waste treatment and composting facilities.
- Developed the Jacobs greenhouse gas activity and emissions management system, known as CarbonEasy™. CarbonEasy™ provides a simple interface between the activities of an organisation and its reporting requirements (compliance, legislative, and internal).
- Air quality assessments for power generation projects including ENAP Refinery Cogeneration and Combined Cycle Project (Chile), Latrobe Valley Air Quality Control Region, Yallourn CCGT Power Station Project, Mt Piper Power Station Extension Project, Muja AB Power Station (Collie Region of WA). Modelling was undertaken using CALPUFF and TAPM, Munmorah power station OCGT, BlueScope Illawarra Co-generation Project (ICP) and others.
- Management of long-term dust monitoring programs.
- Installation and management of more than 30 weather stations around Australia, including data analysis, verification and monthly reporting.
- Peer reviews of air quality impact assessments.

- Expert Witness in proceedings for Land and Environment Court, Independent Hearing and Assessment Panel, Commission of Inquiry, and Planning and Assessment Commission.

Published Papers

- Holmes K T and Lakmaker S (2000), "Queensland Cattle Feedlot Guidelines Revisited", Proceedings of Enviro 2000 Conference, Sydney 9-13 April 2000.
- Holmes K, Lakmaker S, Lott S and Patricks R (2003), "Accounting for feedlot management practices in odour dispersion modelling", Proceedings of National Clean Air Conference, Newcastle, 23-27 November 2003.
- Cox J, Holmes K, Lakmaker S, Beyers C, Richardson C, Lilley W and Camamo M (2007) "An Air Quality Screening Tool for Roadway Analysis", Proceedings of the 14th IUAPPA World Congress, Brisbane, QLD, September 2007.
- Holmes N and Lakmaker S (2007) "The Performance of Dispersion Models in Predicting Maximum 24-hour PM10 concentrations from Open Cut Mines", Proceedings of the 14th IUAPPA World Congress, Brisbane, QLD, September 2007.
- Holmes N, Lakmaker S and Richards A (2009) "Meteorological Modelling for the Hunter Valley", Proceedings of the 19th Clean Air and Environment Conference, Perth, WA, September 2009.
- Davies M, Lakmaker S and Marlin H (2009) "Issues associated with air quality assessment of ships", Proceedings of the 19th Clean Air and Environment Conference, Perth, WA, September 2009.
- Holmes N and Lakmaker S (2009) "Meteorological Modelling for the Hunter Valley", ACARP Research Project C12036.
- Holmes N and Lakmaker S (2012) "Use of Meteorological Models to Predict Dust Risk Indices for Mining Areas in the Hunter Valley", ACARP Research Project C19034.

Court related work

Shane has been an Expert Witness in proceedings for Land and Environment Court, Independent Hearing and Assessment Panel, Commission of Inquiry, and Planning and Assessment Commission. Experience includes:

- Melbourne Metro Rail Project IAC
- Drayton South Coal Project (Planning Assessment Commission). Provision of specialist advice to the Department of Planning and Infrastructure to assist with their assessment of air quality impacts relating to the Drayton South Coal Project.
- Anvil Hill Coal Project (Independent Hearing and Assessment Panel). Expert witness support for matters relating to potential dust impacts from the Anvil Hill Coal Mine Project.
- NCIG Coal Export Terminal (Independent Hearing and Assessment Panel). Expert witness on matters relating to dust from the proposed NCIG Coal Export Terminal (Kooragang Island).
- Rooty Hill Regional Distribution Centre (Land and Environment Court). Blacktown Council v Minster for Planning and Readymix. Expert witness

for assessment of dust impacts from the Rooty Hill Regional Distribution Centre.

- Eastern Creek 2 landfill (Commission of Inquiry). Expert witness on matters relating to dust and odour from the Eastern Creek 2 landfill proposal.
- Moresload Quarry (Land and Environment Court). Provision of specialist advice to Port Stephens Council in Land and Environment Proceedings relating to the operation of the Moresload Quarry.

Reference/s

Nigel Holmes
Atmospheric Physicist
NH2 Dispersion Sciences
0412 619 718