



Appendix 4

Study Team

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1. STUDY TEAM

1.1 EIS Team

Person	Company	Project Responsibility
Peter Allen	Environmental and Licensing Professionals (ELP)	Project Director
Richard Oldham	ELP	Senior Project Manager
James Ross-White	ELP	Project Manager and Coordinator
Adele Swanton	ELP	Project Manager and Coordinator
Tara Kennedy	ELP	Project Approvals
Sam Fergusson	ELP	GIS

1.1.1 Peter Allen

Peter holds a Bachelor of Engineering (Environmental) from the University of Queensland and is a Principal Environmental Engineer and Environmental Services Group Manager at Environmental and Licensing Professionals Pty Ltd (ELP). Peter has significant experience in the fields of environmental impact assessment and environmental management, in a variety of sectors both in Australia and overseas. He has worked in both private consultancies, government owned corporations and government agencies.

1.1.2 Richard Oldham

Richard holds a Masters of Environmental Management from the University of Queensland. Richard is a Senior Environmental Consultant at ELP. Richard has significant experience in the fields of coal and coal seam gas environmental and tenure approvals, and environmental management. He has worked in private consultancies and has been seconded to industry.

1.1.3 James Ross-White

James holds a Master of Science (Advanced Methods in Taxonomy and Biodiversity) from Imperial College and the Natural History Museum in London and a Bachelor of Science (Hons) degree in Ecology, from Dundee University, Scotland. James is a Senior Environmental Consultant at ELP with 10 years of experience in environmental impact assessment and environmental management in Australia and the UK applied across a variety of private and government sectors.

1.1.4 Adele Swanton

Adele holds a Bachelor of Science (Environmental Science) from Griffith University and is an Environmental Consultant at ELP. Adele has significant experience in the fields of environmental management. She has worked in various private consultancies.

1.1.5 Tara Kennedy

Tara is an Environmental Consultant at ELP, she holds a Bachelor of Law (Hons) from the University of Queensland and a Master of Environmental Resources Law (2013) from Queensland University of Technology. Tara has extensive experience in the regulatory and policy frameworks that underpin

environmental approvals for resource projects. She has previously worked for the former Queensland Department of Environment and Resource Management.

1.1.6 Sam Fergusson

Sam is a Geographic Information Systems (GIS) Consultant at ELP holding a Bachelor of Science (Geography & Environmental Science) from the University of Tasmania, and a post-graduate Diploma in GIS from the University of Queensland. Sam has 5 years of GIS experience in both industry, graduate & post-graduate education, including studying an advanced GIS program under scholarship overseas in The Netherlands.

1.2 Mine Design

Person	Company	Project Responsibility
Russell Aspland	Minserve	Mine Design, Cartography, Technical Illustration
Lutz Sprengel	Minserve	Mine Design

1.2.1 Russell Aspland

Russell holds an Associate Diploma in Cartography and has cartographic expertise in every aspect of mine planning and operations from the coal face to the port. Russell is a Director at Minserve with 20 years of experience in cartography and technical illustrations. He has expertise in Autocad Civil 3d, Mapinfo, Global Mapper, Adobe, Coreldraw and Vulcan software facilitating mine planning and operations through tailored mapping to suit the subject matter, be it environmental analysis, geological exploration, or open cut mine stage plans.

1.2.2 Lutz Sprengel

Lutz is a Mining Engineer with a Bachelor of Engineering in Mining and over 16 years of experience in open-cut and underground mining. He also holds a West Australian First Class Mine Managers Certificate (No.640) and a West Australian Underground Supervisors Certificate (No.1090). His background comprises of operational, contracting and consulting roles in surface and underground mining operations. Key skills include mine planning, mine design, mine costing, optimisation, financial evaluation, reserve statement generation and tender preparation. Lutz is a skilled user of Vulcan, Whittle and other mining software packages.

1.3 Waste Rock and Rejects

Person	Company	Project Responsibility
Dr. Ian Swane	Terranus Earth Sciences	Environmental Geochemistry and Waste Rock Management
Dr. Alan Robertson	RGS Environmental	Mining Geochemistry

1.3.1 Dr Ian Swane

Ian is a Director and Principal Consultant of Terrenus Earth Sciences and holds a Bachelor of Environmental Science in Geology (Hons) from the University of Wollongong and a PhD (Hydrogeochemistry) from the University of Melbourne. Ian has more than 15 years of professional experience (and a further 5 years of paraprofessional experience) as an earth and environmental

scientist, with specialist technical knowledge and experience in the fields of hydrogeochemistry, geochemistry, geology and hydrogeology; particularly related to mining, quarrying and mineral processing. He has managed and participated in numerous projects for private-sector, government and nongovernment organisations throughout Australia, Asia, Africa, South America, Pacific Islands and Europe.

Ian is a member the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG).

1.3.2 Dr Alan Robertson

Alan is a Principal Geochemist with RGS Environmental. He holds a PhD (Pure and Applied Chemistry), is a Member of AusIMM. Alan and has over 17 years of industrial and consulting experience in completing geochemical, acid and metalliferous drainage (AMD) projects for the mining and mineral processing industry. He has provided input into a wide variety of studies for major mining companies ranging from stand alone reports to integral components of bankable feasibility studies. He has worked on projects in Australia, Asia, Africa, Europe and South America.

Alan has particular expertise in coal and metalliferous mine waste characterisation, development of AMD management plans, and design of mine waste storage facilities from project conception through to mine closure.

1.4 Groundwater

Person	Company	Project Responsibility
Robert Lait	Rob Lait Associates	Groundwater impact assessment

1.4.1 Robert Lait

Robert Lait is the Director / Principle Hydrogeologist at Rob Lait Associates. Robert holds a Master of Science (Qualifying) Geology and a Master of Applied Science (Hydrogeology). Robert has project experience in groundwater, environmental audits, site contamination and remediation and surface water and river management. Robert is a member of the International Association of Hydrogeologists and the Australian Institute of Geoscientists.

1.5 Water Management, Surface Water Quality, Final Voids, Hydrology and Hydraulics

Person	Company	Project Responsibility
David Nevin	Kellogg Brown & Root Pty Ltd (KBR)	Flooding, Water Balance and Management, Final Void, Surface Water Quality
Chris Gimber	KBR	Flooding, Water Balance and Management, Final Void, Surface Water Quality
Andrew Chapman	KBR	Flooding, Water Balance and Management, Final Void, Surface Water Quality

1.5.1 David Nevin

David Nevin is a senior environmental scientist with a strong consultancy background in environmental impact assessment and management. His current role at Kellogg Brown & Root Pty Ltd (KBR) is Industry Lead, Environment. David holds a Bachelor of Science (Genetics) degree and a Bachelor of Commerce

(Finance) degree from the University of Queensland. David recently authored a number of technical components of the Newlands Coal Extension Project EIS and is currently managing the water quality and land components of the supplementary EIS. David was also the environmental study manager for the Salisbury to Beaudesert Rail Corridor Study, which involved coordinating a team of technical specialists, managing a constraints mapping and options analysis process, and authoring a review of environmental factors and a non-statutory environmental impact statement. During his earlier tenure with KBR, David worked on a variety of linear infrastructure projects.

1.5.2 Chris Gimber

Chris Gimber is Technical Advisor (Environmental Engineering) at KBR, Brisbane. Chris holds a Bachelor of Engineering (Environmental) degree and has broad ranging experience, primarily within the environmental industry. He has led specialist teams, managed environmental business units (both within Australia and overseas) and provided peer review on some of Australia's largest projects. Chris has particular technical expertise in water management and hydro geochemistry. He has provided expert evidence within the international arena, and has presented at a number of international conferences. Chris is a member of the Institution of Engineers Australia.

1.5.3 Andrew Chapman

Andrew Chapman holds a Bachelor of Engineering (Civil) (Hons) from the University of Queensland. He has ten years of experience as a civil engineer in Australia and the UK. He has extensive experience in hydrologic analysis, flood modelling and water resource modelling. Andrew's career experience has encompassed a variety of flood related projects including Ipswich City Council Urban Flood Studies, Bonogin Watercourse Improvement Study, the Ensham Mine Flood Study and the Toddbrook Reservoir Breach Analysis. He has also developed his water resources skills on the Brisbane Airport Lake Irrigation Study, water resource modelling for the south-east Queensland region and water quality and tidal exchange investigations for a lagoon at Beachmere.

1.6 Geology, Topography and Soils

Person	Company	Project Responsibility
John Broughton	Natural Resource Assessments (NRA)	Geology, Topography and Soils
Neil Boland	NRA	Geology, Topography and Soils
Terry Reis	NRA	Geology, Topography and Soils
Susan Walker	NRA	GIS

1.6.1 Neil Boland

Neil was a past Director of the International Erosion Control Association Australasia (IECAA) and is currently Company Director at NRA. He is a Principal Environmental Scientist who has practised environmental science in Queensland since graduating in 1980. He holds a BSc in Environmental Science from Griffith University and is a Certified Lead Environmental Auditor (QSA 013742).

Neil has 25 years of experience in managing environmental impact assessments in the infrastructure, defence and mining industries. This experience includes impact assessment, environmental planning and regulation, specialist ecological studies, rehabilitation ecology, water quality monitoring and management, erosion control and environmental management systems. Neil's experience has been recognised through his engagement to provide expert witness advice to the former Queensland Department of Environment and Resource Management, the Commonwealth Department of

Sustainability, Environment, Water, Population and Communities, City Councils and the Environmental Defenders Office.

His project management experience has been as an adviser in a long-term capacity to a number of mining operations in northern and western Queensland and, in the defence industry, as the HLA Defence Alliance NQ coordinator from 2004-2007. Neil has project managed the preparation of impact assessments for large-scale infrastructure projects and directed specialist terrain analysis and ecology studies (flora, fauna, limnology, water quality). In this role he has also been responsible for client liaison and presentations to government departments, local authorities, traditional owners, company boards and the community.

1.6.2 Dr John Broughton

John is an Environmental Earth Scientist with more than seven years of experience in the fields of earth sciences, environmental regulation and public health. John holds a Bachelor of Science degree and a PhD. For his PhD, John examined the geochemical changes that occur during the remediation of actual acid sulphate soils. John has conducted detailed geochemical investigations into acid mine drainage issues and the remediation of acid sulphate soils, and he typically applies his expertise in geochemistry and analytical methods to geological environmental issues. John also conducts geological and soil surveys and has previously worked as an environment and public health manager and regulated and managed environmentally relevant activities. John has considerable experience in the geochemical analysis of a range of sample types, including rock, soil, chemical precipitate, sediment and vegetation. He is also experienced in the use of a range of laboratory and analytical methods and has investigated the bioavailability of elements in soils and element accumulation by plants. John has presented a number of public seminars on various aspects of his research, most notably at the International American Geophysical Union conference held in Cairns in 2008.

1.6.3 Terry Reis

Terry holds a Bachelor of Science degree (Hons) in Australian Environmental Studies and joined NRA in late 2010, bringing with him more than 30 years of knowledge and field experience from a range of roles throughout Australia. Terry has extensive experience in impact assessment, environmental planning and regulation, specialist ecological studies, management plans and project management and design.

Terry has expert knowledge of the taxonomy, distribution, habitat requirements and behaviour of terrestrial vertebrate fauna, and extensive experience with a wide variety of methods for recording the presence and abundance of vertebrates and invertebrates.

Terry is a specialist in habitat assessment of terrestrial vertebrates, with particular emphasis on significant species. He is a member of the Records Appraisal Committee of Birds Queensland (Queensland Ornithological Society) assessing rare bird sightings in Queensland.

1.6.4 Susan Walker

Susan has well-developed GIS skills in data management, data capture and manipulation, image rectification, mapping of flora, fauna and soil information, and habitat suitability modelling.

1.7 Land Use and Land Contamination

Person	Company	Project Responsibility
Joanne Salmon	ELP	Land Use and Land Contamination

1.7.1 Joanne Salmon

Joanne holds a Master of Engineering (Environmental Engineering) from Griffith University and a Bachelor of Applied Science (Chemistry/Industrial Chemistry) from Queensland University of Technology. She has 9 years of experience in private industry and consulting in the waste management and environmental management fields. Joanne has experience in the development approval process, preparation of site based management plans and environmental management plans, waste audits for major heavy industry facilities, contaminated land remediation, waste assessment and waste treatment method development.

1.8 Environmental Offsets

Person	Company	Project Responsibility
Alan Key	Earthtrade	Environmental Offsets
Jade Gesell	Earthtrade	Environmental Offsets

1.8.1 Alan Key

Alan Key is the Managing Director at Earthtrade. Alan holds an Associate Diploma in Rural Techniques (Agriculture) and a Diploma in Financial Planning. He has 20 years of experience in the Queensland Government (former Department of Environment and Resource Management) (former Natural Resources and Water, Natural Resources and Primary Industry) working directly on farm lands, as an Experimentalist in the Land Research Branch, a Soil Extension Officer - Resource Management, a Regional Vegetation Management Officer, a Natural Resource Officer and a Principal Natural Resource Officer. More recently Alan has worked within private consultancies as an environmental broker specialising in offsets required by government to meet development approval requirements under various Acts including vegetation offsets, biodiversity offsets, Koala offsets, marine coastal offsets, and fisheries offsets.

1.8.2 Jade Gesell

Jade has admission into the Queensland Supreme Court as a Legal Practitioner and a holds Bachelor of Laws (undergraduate) from Bond University. She is the in house Legal Counsel at Earthtrade with knowledge in corporate, business, commercial property law, residential property law and environmental law. Jade has prepared submissions to facilitate environmental offset agreements between developers and landowners to allow for compliance with the Queensland Government Environmental Offset Policy.

1.9 Ecology and Matters of National Environmental Significance

Person	Company	Project Responsibility
David Stanton	AMEC	Terrestrial Flora and Matters of National Environmental Significance
Bruce Thomson	AMEC	Terrestrial Fauna and Matters of National Environmental Significance
David Moore	AMEC	Aquatic Ecology and Matters of National Environmental Significance
Jason Richard	AMEC	Matters of National Environmental Significance

Person	Company	Project Responsibility
Jeromy Claridge	AMEC	Matters of National Environmental Significance
Kate Hourigan	AMEC	Matters of National Environmental Significance

1.9.1 David Stanton

David holds a Bachelor of Science (Hons) from James Cook University and has 17 years of experience in the disciplines of impact and ecological risk assessment, resource mapping, flora assessment and conservation planning. He has worked across a range of industry sectors including mining, infrastructure and as a consultant to government organisations throughout Queensland, the Northern Territory, North-Western Australia and Papua New Guinea. His particular expertise lies in tropical forest ecology including floristic and structural classification, and associated mapping of those features.

During a consultancy period to the Wet Tropics Management Authority spanning 14 years in association with Peter Stanton, David's comprehensive mapping of flora associations within the world heritage area greatly increased the understanding of ecological function in one of the world's most botanically diverse regions. The culmination of this work, a series of 38 1:50 000 scale vegetation community maps and descriptive reports form the basis for regional ecosystem classification in Queensland's Wet Tropical Bioregion. David's professional career was initiated in the resources industry working as a regional exploration geologist in Papua New Guinea (Milne Bay Province). He has also recently completed several major landform and geological assessments on properties throughout northern Australia.

1.9.2 Bruce Thomson

Dr Bruce Thomson holds a Bachelor Applied Science from the University of Canberra, and a PhD from the University of Queensland. He has approximately 30 years of experience in a broad range of conservation, environmental assessment and management areas. He has provided consulting services since 2008 as a Principal Ecologist with a Brisbane-based firm where he has worked primarily with gas and mining sectors to conduct fauna habitat assessments, fauna surveys and specialist botanical services.

1.9.3 David Moore

David holds a Bachelor of Applied Science (Ecology and Environmental Science) and has AUSRIVAS Bioassessment Accreditation. He is also a Senior Operator in Electrofishing Practice. David is an aquatic ecologist with 10 years of consulting experience on projects undertaken in QLD, NSW, ACT, VIC, NT and PNG. Most recently David has been involved in various aquatic assessments for pipelines and gas field developments in the Surat and Bowen basins. David has been engaged by the Cooperative Research Centre for Freshwater Ecology to assist with a four state and territory assessment of streams, including testing and comparison of biological methods for analysing stream health. He has also been engaged by the Australian Government to assist with the ecological characterization of marine, estuarine and freshwater wetlands of the Cobourg Peninsula, NT – Australia's first listed Ramsar site.

David maintains a strong understanding and application of best practice methods for assessing aquatic ecosystem health. He has been the lead aquatic ecologist on numerous mining and gas projects, responsible for the delivery of aquatic ecology impact assessment components for EISs, baseline assessments and ongoing monitoring of river health.

1.9.4 Jason Richard

Jason Richard holds a Bachelor of Applied Science in Conservation Biology from Southern Cross University and a Masters degree in Wildlife Management from Macquarie University. He is an ecologist with approximately 16 years of professional consulting experience. During this time, he has worked in technical leadership, team management and project management roles within both boutique ecological consultancies and multi-national corporations.

His industry experience spans surface and subsurface mining operations (metalliferous and coal), coal seam gas, electricity generation and distribution, communications infrastructure development, urban development and transport infrastructure projects. Jason has also worked on a range of strategic environmental planning projects, biodiversity monitoring studies and integrated pest and threat management plans for government clients.

Jason's technical expertise is based on extensive field survey experience in NSW, Qld, the Northern Territory and South-east Asia. He has well developed knowledge of policy and legislation pertaining to biodiversity management across Australia (and abroad) including the various state and Commonwealth nature conservation and vegetation management frameworks, associated offset policies and approval processes. He has contributed to a large number of referrals under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999)* and the review and negotiation of approval conditions for many Significant Projects in Queensland.

Jason is a Certified Environmental Practitioner and is a member of the peak Environmental and Ecological Societies of Australia. He formerly sat on the national review panel for both terrestrial flora and fauna for SKM and has been engaged as an independent peer reviewer for technical studies by a range of multi-national corporations for domestic and international projects, including mining projects in Vietnam, the Philippines and Papua New Guinea.

He has extensive remote area experience on large ecological survey projects including biodiversity studies for the Australian Government (Department of Defence) in the Northern Territory and the Queensland Government (Foreign Aid) in Sumatra.

Jason's core expertise relates to the ecosystems and species of Queensland, and particularly biodiversity values of the South-east Queensland, Brigalow Belt, Gulf Plains and Mt Isa Inlier Bioregions.

1.9.5 Jeromy Claridge

Jeromy holds a Bachelor of Science (Honours Botany) and a Master of Environmental Management from the University of Queensland. He has extensive environmental impact assessment and project management experience over 17 years, providing environmental advice through all project development phases from preliminary planning and site/route selection through to project feasibility, environmental assessment and approvals and on-site environmental management. He also has experience coordinating and obtaining environmental approvals for the construction of rail, roads, power, gas and mining projects.

Jeromy has managed multidisciplinary teams undertaking environmental impact assessments often for complex projects involving numerous approvals and environmental issues. Through these projects he has undertaken extensive consultation with federal, state and local government agencies, facilitated community engagement and gained a comprehensive understanding of environmental legislation at the Commonwealth, state and local government level.

1.9.6 Kate Hourigan

Kate holds a Bachelor of Arts (Environmental Studies) from the University of Melbourne and is a member of the Queensland Environmental Law Association. Kate is a Senior Environmental Planner with 10 years of experience in development, assessment and the preparation of multi-disciplinary studies for

major infrastructure projects. On recent projects, she has been involved with the scoping and management of technical studies and a principal coordinator and joint author of several environmental impact statements under the *Environmental Protection Act 1994*, *State Development and Public Works Organisation Act 1971* and the *Environment Protection and Biodiversity Conservation Act 1999*.

Kate has provided advice on environmental constraints, approval and offset requirements to project teams in the mining, rail and water sectors. She is experienced at liaising with clients and project design teams to develop and refine projects to respond to these constraints. Kate has a background in ecological assessment and has written and managed a number of terrestrial flora and fauna baseline studies, and impact assessments, for mining and linear infrastructure projects.

1.10 Stygofauna

Person	Company	Project Responsibility
Garry Bennison	GHD	Stygofauna Impact Assessment
Kim Piercy	GHD	Stygofauna Impact Assessment
Gavin Williams	GHD	Stygofauna Impact Assessment

1.10.1 Garry Bennison

Garry holds a Bachelors in Zoology and Botany from the University of Tasmania. He is a Principal Consultant and Team Leader of the Queensland Water Sciences Group. Garry has over 30 years of experience in environmental research, assessment, monitoring and management of freshwater, estuarine and groundwater systems in Australia. Garry has considerable experience in the design and management of complex, multidisciplinary environmental projects for a broad range of government, private industry and community based clients. Garry has held senior scientific and managerial positions with the Rural Water Corporation of Victoria, Melbourne Water Corporation, Water Ecoscience, Australian Water Technologies (AWT Victoria and Queensland), Ecowise Australia and Australian Laboratory Services (ALS).

1.10.2 Kim Piercy

Kim holds a Masters Degree in GIS and Remote Sensing from Charles Sturt University. She has over 12 years of experience in survey, monitoring, investigation and research of freshwater and marine ecosystems. Kim is an experienced project manager with expertise in project design, field sampling, data analysis and interpretation, project reporting and client liaison.

1.10.3 Gavin Williams

Gavin holds an Advanced Diploma Aquatic Resource Management from Central Queensland University and has over 10 years of experience in macroinvertebrate taxonomy, biology and ecology. Gavin is AUSRIVAS accredited and is proficient in the use of AUSRIVAS modelling software.

1.11 Air Quality, Greenhouse Gas, Noise and Vibration

Person	Company	Project Responsibility
Mark Simpson	Noise Mapping Australia (NMA)	Air Quality, Greenhouse Gas, Noise and Vibration Impact Assessment

Person	Company	Project Responsibility
Chris Simpson	NMA	Air Quality, Greenhouse Gas, Noise and Vibration Impact Assessment

1.11.1 Mark Simpson

Mark holds a Bachelor of Engineering (Mechanical) degree from the University of Queensland and is a principal consultant at NMA with 28 years of experience as a consulting engineer. Mark specialises in the technical fields of acoustics, vibration, air quality and greenhouse gas assessment (including software development) for major projects and sectors including the mining sector.

Mark is a member of the Australian Acoustical Society, the Clean Air Society of Australia and New Zealand and is a Registered Professional Engineer of Queensland.

1.11.2 Chris Simpson

Chris holds a Bachelor of Engineering (Electrical) degree from the University of Queensland and has carried out numerous odour, noise, dust, and vibration monitoring programmes. Chris has a particular expertise in computer software packages including extensive involvement in writing the Soundweb and Dustweb systems (remote monitoring systems designed to record data for extended periods whilst maintaining active internet connections). Chris has been significantly involved in air pollution modelling of mines using TAPM. Chris is a Graduate Member of the Institution of Engineers Australia.

1.12 Landscape and Visual Amenity

Person	Company	Project Responsibility
Stacey Broadbeck	Envisage Consulting Pty Ltd	Landscape, Lighting and Visual Impact Assessment
Derek Mascarenhas	Integrated Design Solutions (IDS)	Photomontage
Ana Ouriques	IDS	Photomontage

1.12.1 Stacey Broadbeck

Stacey is Director at Envisage and is a Certified Practising Planner and a Registered Landscape Architect. She holds a Masters of Environmental Planning from Macquarie University and Bachelors in Landscape Architecture from University of NSW. She is a long-term appointee on a number of independent government advisory panels. Stacey has 23 years of professional experience in both consulting and local government, working both in Australia and internationally. She has significant project experience in urban design (master planning, urban design guidelines, landscape design, visual assessment) and environmental planning, landscape architecture, recreational planning, project management and community consultation. Stacey is a Registered Landscape Architect.

1.12.2 Derek Mascarenhas

Derek studied Structural Engineering at the Institute of Technology in Sydney. He is a digital specialist with professional experience in engineering. For over 20 years Derek has provided visual communication services including graphic design, technical illustration and 3D visualisation / animation, specifically for development applications, environmental approvals and stakeholder engagement. He founded Integrated Design Solutions (IDS) in 1999 as a niche design studio and has been responsible for delivering digital services for hundreds of state significant projects for various consultancies. Derek

specialises in the design, production and co-ordination of environmental approval and reporting documentation that supports environmental managers, regulators and key stakeholders.

1.12.3 Ana Ouriques

Ana Ouriques holds a Bachelor of Environmental Science in GIS from the Australian Catholic University. She is an experienced GIS specialist and the GIS business unit leader at IDS. With formal qualification in forestry engineering and the sciences Ana specialises in delivery of GIS services primarily for environmental reporting and approvals.

1.13 Waste Management

Person	Company	Responsibility
Troy Uren	ELP	Waste Impact Assessment

1.13.1 Troy Uren

Troy holds a Bachelor of Applied Science Honours in Environmental Health from Queensland University of Technology and a Master of Business (Logistics Management) from RMIT University. Troy is a highly skilled professional who has held senior positions in the public and private sectors. With qualifications in environment, business and finance, Troy has a track record in delivering complex infrastructure and service delivery projects in Australia and overseas. Troy has specific experience in business strategy, feasibility, procurement and logistics, infrastructure planning and delivery, and has managed a number of infrastructure delivery projects through all phases of the delivery life cycle. Troy is a former Queensland Branch President of the Waste Management Association of Australia (WMAA), and has been an invited speaker and lecturer in waste management, procurement and indigenous public health.

1.14 Traffic and Transport

Person	Company	Project Responsibility
Daniel Suman	Lambert and Rehbein (L and R)	Traffic and Transport Impact Assessment – Project Director
Chris Howarth-Crewdson	L and R	Traffic and Transport Impact Assessment – Project Leader
Cameron Messer	L and R	Additional Traffic Engineering Resources
Alicia Heritage	L and R	Additional Traffic Engineering Resources

1.14.1 Daniel Suman

Daniel Suman holds a Bachelor of Engineering (Civil) and is a Member of the Institution of Engineers, Australia. He is the Traffic and Transport Manager at Lambert and Rehbein (L and R). Daniel has over 15 years of experience in all aspects of traffic and transport engineering. He has been involved in a significant number of traffic investigations throughout Queensland and is also a sort after expert traffic engineering witness for Planning and Environment Court appeals.

1.14.2 Chris Howarth-Crewdson

Chris Howarth-Crewdson holds a Bachelor of Engineering (Civil) and is a Chartered and Registered Professional Engineer. He is a member of the Institution of Engineers Australia. He is a Senior Traffic and Transport Engineer at L and R. Chris has over 13 years of experience in all aspects of traffic and transport

engineering. He has been involved in a number of traffic engineering assessments for mining projects in Central and North Queensland. He has also a fully accredited senior road safety auditor with the Queensland Department of Transport and Main Roads.

1.14.3 Cameron Messer

Cameron Messer holds a Bachelor of Engineering (Environmental) and is a Member of the Institution of Engineers Australia. He is a Senior Traffic and Transport Engineer at L and R. Cameron has over 11 years of experience in all aspects of traffic and transport engineering in both Australia and the United Kingdom. He has been involved in a number of mining projects in central and north Queensland as well as being a fully accredited senior road safety auditor with the Department of Transport and Main Roads.

1.14.4 Alicia Heritage

Alicia Heritage holds a Bachelor of Engineering (Civil) and is a member of the Institution of Engineers Australia. She is a Traffic and Transport Engineer at Lambert and Rehbein with over 5 years of experience in all aspects of traffic and transport engineering. She has had significant involvement in a number of traffic impact assessment projects throughout central and north Queensland and is also a fully accredited road safety auditor with the Department of Transport and Main Roads.

1.15 Indigenous and Historical Cultural Heritage

Person	Company	Project Responsibility
Elizabeth Hatte	Northern Archaeology Consultancies Pty Ltd (NAC)	Indigenous cultural heritage – desk top report Non-indigenous history – technical report
Penny Cook	NAC	Non-indigenous history – technical report
James Sunter	ELP	Indigenous Cultural Heritage EIS and Historical Cultural Heritage impact assessment
Emma Lewis	ELP	Indigenous Cultural Heritage EIS and Historical Cultural Heritage impact assessment

1.15.1 Elizabeth Hatte

Elizabeth Hatte is the Director at Northern Archaeology Consultancies Pty Ltd (NAC), Townsville. As part of this role Elizabeth undertakes archaeological field studies throughout Queensland, prepares cultural heritage survey/assessment reports, cultural heritage management plans and undertakes archival and historical research. She also conducts consultation with traditional owners and acts as a general liaison between traditional owner groups, clients, government bodies and other relevant interest groups.

Elizabeth has held PhD candidature and teaching position in James Cook University, she holds a Cultural Heritage Management diploma from Charles Sturt University, preliminary Master of Arts (Archaeology) from LaTrobe University, Bundoora, Victoria and a Bachelor of Education from LaTrobe University (Post-graduate degree, anthropology and history).

1.15.2 Penelope Cook

Penelope Cook holds a Bachelor of Arts degree from the University of Western Australia and has extensive experience gained through government positions, working within the National Trust of Australia and the National Trust of Queensland as well as private consulting.

1.15.3 James Sunter

James holds a Bachelor of Laws from Queensland University of Technology and is admitted as a Solicitor of the Supreme Court of Queensland. He is a Member of the Queensland Resources Council Indigenous Affairs Committee.

James is the Group Manager (Native Title) of ELP and has over 25 years of experience gained in senior government positions as well as private consulting. He has strong skills and experience in the fields of native title, cultural heritage advice, negotiation and consultation, exploration and mining tenement licensing and land access, as well as interpretation and application of legislation. James also has strong experience in alternative dispute resolution and other mediation techniques including those developed by indigenous organisations. He has worked closely with indigenous groups as well as resource companies and legal firms. He has a comprehensive understanding of the native title process.

1.15.4 Emma Lewis

Emma holds a Bachelor of Arts in Environmental Studies (Hons) from Dickinson College, Pennsylvania, and a Bachelor of Arts in Anthropology (Hons) from the University of Queensland. Emma is a Cultural Heritage Officer with the Native Title section of ELP and has an extensive understanding of the legislative and practical requirements for managing Indigenous and historical cultural heritage. She has experience in cultural heritage policy development and compliance with the Queensland Department of Transport and Main Roads.

1.16 Social

Person	Company	Project Responsibility
Chris Mahoney	Coffey Environments	Social Impact Assessment
Dr Helen Johnson	Coffey Environments	Social Impact Assessment

1.16.1 Chris Mahoney

Chris holds a Masters in Urban and Regional Planning (Environmental Planning) from Griffith University and a Bachelor of International Economic Development from Griffith University. In 2011 Chris was appointed the Technical Leader of the Social Performance Practice for Coffey Environments. Chris is responsible for delivery of social impact assessments, community investment and community and stakeholder engagement programs.

Chris possesses specific expertise in the areas of social and economic development, impact assessment, infrastructure planning, strategic planning, and the design and delivery of international development projects. Chris has knowledge and experience across the fields of social planning, environmental science and economic analysis. In both the public and private sector he has lead and collaborated with cross disciplinary teams to guide projects to successful outcomes.

1.16.2 Dr Helen Johnson

Helen holds a PhD and a Bachelor of Arts (Anthropology) from Monash University. She has 20 years of experience in social science, anthropology, gender studies and community relations. Helen has worked

in both academic and consulting capacities for projects in Australia, Britain, Canada, France, Hong Kong, Iraq, Malaysia, New Caledonia, Palau, Papua New Guinea, Singapore and the Solomon Islands, and can operate in five languages (English, French, Spanish, German, and PNG Tok Pisin).

Helen's experience and social research skills include capacity building, household and village surveys, gender impact assessment, gender and development training, facilitation of visioning and post project/closure workshops, project design and management, social impact assessment, and stakeholder engagement and community consultation.

1.17 Economic

Person	Company	Project Responsibility
Anthony Dunn	Flinders Advisory Services	Economic Impact Assessment
Darren Black	Flinders Advisory Services	Economic Impact Assessment
Bridget Luke	Flinders Advisory Services	Economic Impact Assessment

1.17.1 Anthony Dunn

Anthony Dunn holds a Bachelor of Business (Marketing) from Queensland University of Technology. He is the Commercial Manager at Flinders Advisory Services. Anthony has five years of experience with the major project feasibility, on both social and economic infrastructure. This experience was gained through developing business cases for the Moreton Bay Rail Link and Sunshine Coast University Hospital projects.

Prior to commencing with Flinders Advisory Services, Anthony was Commercial Manager on the Eastern Busway Business Case and Project Manager for the Business Case Development stage of the Moreton Bay Rail Link Project.

1.17.2 Darren Black

Darren Black holds a Bachelor of Business (Hons) from Queensland University of Technology and a Bachelor of Business (Economics / Banking and Finance). He is the Commercial Lead at Flinders Advisory Services. He is a Commercial Manager with 10 years of experience in social and economic infrastructure projects, providing project direction, management and strategic advice to a variety of stakeholders and staff.

Darren has experience as a project director and manager, leading and working with teams to ensure that project outcomes can be achieved within limited timeframes and budgets. Previously the Director of Major Project Evaluation at Queensland Department of Transport and Main Roads, Darren established and directed a team of evaluation specialists within the Department.

1.17.3 Bridget Luke

Bridget Luke is a Commercial Analyst at Flinders Advisory Services. Bridget holds a Bachelor of Business (Accountancy and Professional Accountancy) degree, a Graduate Diploma of Business (International Business) and a Masters of Business (International Business) (expected completion 2013).

Bridget has worked in both the public and private sectors providing strategic and commercial advice for major infrastructure projects. Utilising her qualifications in business and accountancy, Bridget has provided business advice and drafted a number of high-level documents for numerous transport and infrastructure projects including the Moreton Bay Rail Link Project, Sunshine Coast Transport Project and Bruce Highway Upgrade Project.

1.18 Health, Safety, Hazard and Risk

Person	Company	Project Responsibility
Lana Shoesmith	ELP	Hazard and Risk Assessment, Emergency Management Plan, Health and Safety Assessment

1.18.1 Lana Shoesmith

Lana is a Principal EMS Consultant. Lana holds a Bachelor of Science (Hons), a Graduate Diploma in Environmental Studies and a Bachelor of Education (Adult and Workplace Education). Lana has 20 years of experience across many industries including mining, construction, power, water, waste, manufacturing, agriculture and government. She has specialised in environmental management systems, environmental auditing and environmental training. Lana is Certified Environmental Practitioner and a RABQSA registered Senior Environmental Auditor.

Lana has extensive experience in facilitating the implementation of Environmental Management Systems (EMS) on client sites, assisting clients in achieving ISO 14001 certification and improving EMS processes and practices on site. She has also undertaken environmental risk assessments, preparing risk management plans, gap analysis audits, EMS audits, environmental compliance audits and site inspections, environmental training requirements for various clients, undertaking training needs analysis, developing environmental training programs and delivering environmental training.