



SKILLSETS

Environmental Impact Assessment



Expert Witness



Government Liaison



Stakeholder Management



Strategic Advisory



Ecology



MARKET SECTORS



Government



Transport & Logistics



Electricity & Renewables



Resource



Agriculture



Industrial

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MARK BREITFUSS

Principal Environmental Scientist/ Director

Mark is Principal Environmental Scientist and a Director of Epic Environmental. Mark has a proven track record in government liaison, negotiation, strategy development/implementation, strategic project approvals processes and executive communication and engagement. For the past 25 years, Mark has integrated with all levels of government, academia and industry to ensure the successful implementation of Feasibility Studies and Business Cases, Commonwealth EPBC referrals, Environmental Impact Assessments (including by EIS, REFs and EIARs), Community and Stakeholder Consultation Strategies, Cultural Heritage and Native Title negotiations, Infrastructure Master-planning and Governance Frameworks. Mark has held senior roles in State Government, with Special Purpose Vehicle Companies and in the Private Sector.

QUALIFICATIONS

- 1994** University of Queensland / Associate Diploma of Applied Science
- 1997** University of Southern Queensland / Bachelor of Science
- 1998** University of Southern Queensland / Bachelor of Science (Honours First Class)
- 2003** Griffith University / Ph.D Science

MAJOR PROJECTS

- Aeon Metals – Walford Creek EIS
- Glencore – Valeria Coal Mine EIS
- Multicom Resources - St Elmo Vanadium Mine EIS
- Sibelco - Minjerribah ML and EA Surrender Program
- Oresome Resources - Urquhart Point Bauxite Project
- Adani Infrastructure - Rugby Run Solar Farm

AFFILIATIONS

- Secretary, Environment Institute of Australia and New Zealand
- Certified Environmental Practitioner
- Adjunct Senior Lecturer, Earth and Environmental Sciences, University of Queensland

EXPERIENCE

ENVIRONMENTAL IMPACT ASSESSMENT, GOVERNMENT LIAISON AND STAKEHOLDER MANAGEMENT

- **Project Director, Aeon Metals – Walford Creek Copper/cobalt Project, Doomadgee, Queensland.** Managing EIS through coordinated project process, including EPBC referral.
- **Project Director, Findley Farms – Etta Plains Irrigation Project, Etta Plains, Queensland.** Managing environmental assessment and approvals process for large-scale irrigation project.
- **Project Director, Glencore Australia – Valeria Coal Mine, Emerald, Queensland.** Managing EIS through coordinated project process, including EPBC referral.
- **Project Director, Sunwater Ltd – Paradise Dam Essential Works, Queensland.** Managing assessment and approvals required for the essential works package of the Paradise Dam wall reduction program.
- **Project Director, Richmond Regional Council – Richmond Agriculture Project, Richmond, Queensland.** Developed EIA for large-scale agriculture project.
- **Project Director, Oresome Australia Pty Ltd – Urquhart Heavy Mineral Sands, Weipa, Cape York, Queensland.** Negotiated minor amendment to existing Environmental Authority for a heavy mineral sands mine.
- **Project Director, Central Petroleum/Incitec Pivot – Range Gas Project, Wandoan, Queensland.** Prepared preliminary environmental assessment, EPBC referral and site-specific Environmental Authority for new domestic gas project.
- **Project Director, Multicom Resources - St Elmo Vanadium Mine EIS, Julia Creek, Queensland.** Developed and implemented the approvals strategy with State and Commonwealth for a major resource project.
- **Project Director, Metallica Minerals – Urquhart Bauxite Mine Access Road, Weipa, Cape York, Queensland.** Development of an Environmental Authority to support new access road across existing RTAW mining lease.
- **Project Director, Carpentaria Gold – Ravenswood Gold Mine, Townsville, Queensland.** Developed assessment and reporting to support major amendment to Environmental Authority for existing gold mine.
- **Project Director, Sibelco - Minjerribah Mine Relinquishment and Surrender Program, North Stradbroke Island, Queensland.** Leading stakeholder engagement with all State agencies and key parties for surrender of EA obligations, EPBC requirements and ML relinquishment for rehabilitated lands.
- **Project Director, Oresome Resources - Urquhart Point Bauxite Project, Cape York, Queensland.** Led the project approvals (EA and EPBC) development through to approval by the Commonwealth and State.
- **Project Director, Sibelco Australia Pty Ltd – Phoenix Limestone Mine, South East Queensland.** Completed assessment and reporting to support new major amendment for expansion of the Phoenix and Aspinal mines.
- **Project Director, Adani Infrastructure - Rugby Run Solar Farm, Central Queensland.** Developed and implemented the approvals strategy, including ecological assessment.
- **Project Director, Sibelco Australia Pty Ltd – Mackay Magnetite.** Negotiated PDA approval.
- **Project Director, Aquila Resources.** Developed water supply options assessment.
- **Project Director, Incitec Pivot.** Environmental assessment and statutory approvals pathway for new gas resource.
- **Project Director, Multicom Pty Ltd.** EPBC referral process, Initial Advice Statement and voluntary EIS application for new vanadium mine.
- **Project Director, Oresome Australia Pty Ltd - Urquhart Bauxite Project, Weipa, Cape York, Queensland.** Prepared Preliminary Documentation, Offset Strategy and negotiated Commonwealth offset package.
- **Project Director, Tamar Lake Inc.** Prepared statutory approvals pathway and ecological assessment for proposed barrage across the Tamar Estuary in Tasmania.
- **Project Director, Seqwater.** Prepared aquatic impacts strategy to guide new water storage facilities.
- **Project Director, Metallica Minerals - Hey Point Bauxite Mine and Offloading Facility, Weipa, Cape York, Queensland.** Completed due diligence assessment of environmental approvals associated with bauxite mine and offloading facility on the Embley River. Assessment included assessment of facilities and approvals required from NQBP for transshipping activity and stockpiling of materials.
- **Project Director, Adani Infrastructure Pty Ltd:** Completed impact assessment and statutory approvals process for new solar farm in central QLD (Rugby Run).
- **Project Director, Adani Infrastructure Pty Ltd.** Preparation of ecological survey report and impact assessment under Commonwealth EPBC requirements for a proposed solar farm in central QLD (Crinum Creek).
- **Project Director, Oresome Australia – Urquhart Bauxite Project, Weipa, Cape York, Queensland.** Completed EPBC referral and EA for new bauxite mine. Negotiated conditions of approval through Commonwealth and State Departments.
- **Project Director, Coffs Harbour City Council.** Part 5 Assessment for dredging/drainage works.
- **Project Director, TasPorts Burnie Chip Export Terminal.** EMP and Fugitive Wood fibre Monitoring Plan.

- Wilson Oil: Desk-top assessment of environmental impacts associated with new significant mining and renewables development in northern Queensland.
- **Project Director, Goodman - Redbank Motor Park.** Ecological assessment of riparian corridor for new development.
- **Project Director, Coffs Harbour Regional Aerodrome.** Part 5 assessment and EPBC referral on vegetation obstructions into the Obstacle Limitation Surfaces of the aerodrome to achieve CASA compliance.
- **Project Director and Ecologist, Cleanaway - Willawong Remediation.** Developed a comprehensive environmental risk assessment, revegetation plan and vegetation management plan for the development.
- **Project Director, Adani Infrastructure - North Galilee Water Scheme.** Established overarching approvals strategy within Galilee State Development Area. The project progressed through approvals and design phases.
- **Project Director and EIS Lead, Adani Infrastructure - Abbot Point Coal Terminal 0 Tier 2 Approvals.** Led a new approvals process to maximize use of the State powers at the Port.
- **Project Director and Technical Lead, RCR Tomlinson - Moray Power thermal power station, Queensland.** Led government liaison and provided technical oversight for the approvals and assessment documentation provided to the QLD Coordinator-General and Department of the Environment.
- **Project Director, MetroMining - Bauxite Hills Mine, Cape York, Queensland.** Developed preliminary environmental assessment and approvals strategy for proposed new bauxite mine, transshipping / offloading facility and associated works.
- **Project Director, Shandong Resources - Hillalong Coal Mine EIS.** Established the pathway to approval for the EIS, technical studies and schedule. The EIS is published and being assessed by the State.
- **Project Director, Adani Infrastructure - Abbot Point Coal Terminal 0 EIS, Queensland.** Mark was responsible for overall quality and delivery of the EIS. The Commonwealth approved the project with conditions in 2013.
- **Project Director, Bandanna Energy - Dingo West Coal Mine EIA:** Managed the development of the EIA and associated technical studies in preparation for the proponent to lodge the application.
- **Project Director, NQBP - T4+ EIS and terminal development at Abbot Point: EIS, Queensland.** overseeing the quality and development of the document.
- **Project Director, Bandanna Energy - Springsure Creek EIS.** Reviewed and oversaw the EIS to ensure it met regulatory requirements. The project was approved by the Queensland Government in late 2013.
- **Strategic Approvals Manager, MCJV - QCLNG Export and Narrows Projects.** Advised Export and Narrows projects on regulatory and statutory requirements for delivery. Included approvals, permits, construction, landowner and stakeholder liaison to solve issues with terrestrial and estuarine matters.
- **Project Manager, Waratah Coal - China First EIS.** Responsible for delivery of a number of technical chapters and reports in support of the mine, rail alignment and port facility.
- **Network Corridor Manager, Northern Pipeline Interconnector Stages 1 and 2.** Mark was responsible for project start-up, securing funding (\$800 million), program, budget and limits; strategy for start-up and Alliance contract; statutory project approvals (including two significant project EISs), land acquisition (over 600 easements); and relevant aspects for delivery.
- **Environment/Corridor Manager, Southern Regional Water Pipeline.** With responsibility for all relevant environmental approvals; strategic input for land acquisitions (over 300 easements). Managed a significant project EIS through to Commonwealth Government approval with 10 months from commencement.
- **Principal Environmental Scientist, Nam Theun II Hydroelectric Project, Laos:** Riparian release study. I prepared an addendum to the Environmental Assessment and Management Plan covering the downstream releases from the dam on river and social resources.
- **Project Manager, Environmental Approvals Processes.** Mark was responsible for identification and development of a processes map for environmental approvals relevant to pipeline infrastructure projects
- **Principal Environmental Scientist, Fraser Straits Marina Development, Queensland.** Assessment of potential impacts on Matters of National Environmental Significance as covered under the EPBC Act.
- **Principal Environmental Scientist, Mt Chelona Quarry Development Approval, Queensland.** Production of a development application and environmental impact assessment for resumption of an extractive industry. Significant negotiation with state departments was required to finalize the application.
- **Principal Environmental Scientist, Gravity Fed Sewer Mains, State.** Field assessment of the potential impacts of proposed sewer mains on remnant vegetation communities. Proposed construction methods and the route alignment were modified to reduce impacts on vegetation. Environmental approvals were sought through NR&M.

EXPERT WITNESS and STRATEGIC ADVISORY

- **Expert Witness - Environment, DTMR.** Expert witness in land compensation case regarding statutory approvals and environmental impact.
- **Expert Witness - Environment, Maranoa Regional Council.** Expert witness in Planning and Environmental case regarding statutory approvals and environmental impact.
- **Project Director, SunWater.** Strategic assessment of priority dam upgrade works.
- **Expert Reviewer, AngloAmerican – Foxleigh Mine.** Expert assessment of offsets in support of Commonwealth and State EIS conditions. Completed ecotoxicological assessment of soil impacts.
- **Project Director, Wilson Minerals – Croydon Gold Mine.** Negotiated new FA to support development;
- **Expert Review, Due diligence of large infrastructure developments Queensland.** Mark has undertaken confidential reviews of a number of large infrastructure projects both in Queensland and nationally. These projects included new port developments, coal and metalliferous mines, as well as linear infrastructure in support of resources or energy expansions in Central Queensland.
- **Expert Witness, Development Application Refusal Appeal, Ashtan Service Centres Pty Ltd.** Provision of expert ecological advice concerning redevelopment of a site at Nudgee. The site was assessed against the Brisbane City Plan 2000 with regards to the Natural Assets Local Law, Biodiversity Code and Wetland and Waterways Codes.
- **Expert Witness, Development Application Refusal Appeal, Brisbane City Council.** Provision of expert advice concerning a proposed development that contravened the Brisbane City Plan 2000 in regards to Natural Assets Local Laws, the Biodiversity Code and Local Plans.
- **Principal Investigator, Stanmore Coal FA Assessment.** Completed a review and assessment of the Financial Assurance associated with a new infrastructure purchase.
- **Principal Environmental Scientist, Coombabah Creek Master Plan, Queensland.** Development of a master plan document detailing existing environmental values and constraints to Coombabah Creek and environs. Of importance was the identification of opportunities to develop novel and innovative plans to mitigate negative impacts.
- **Principal Environmental Scientist, Coombabah Waterfuture Project Effluent Discharge Options, Queensland.** Constraints Analysis: The analysis was based on desktop and field investigation of potential environmental constraints to proposed options. Identifying the potential for impacts on species of national significance was a priority. Results from the study will provide a basis for a future EIS.

ECOLOGY

- **Project Director, Aquila Resources.** Completed baseline ecological survey and environmental assessment in support of Walton Coal mine exploration approvals.
- **Principal Environmental Scientist, Proposed Water Mains, Coombabah—Assessment of Remnant Vegetation, Queensland.** Field assessment of the potential impacts of proposed water mains on remnant vegetation communities. The pipeline route was modified to reduce impacts on vegetation.
- **Principal Environmental Scientist, Whitsunday Lakes Development—Environmental Approvals and Management Plans, Queensland.** A number of plans were reviewed for submission in response to development approval conditions for the proposed construction at Airlie Beach.
- **Principal Environmental Scientist, Westgate Redevelopment Options—Constraints Analysis, QLD.** Desktop review identified a number of environmental constraints to adoption of particular development options. Field investigation was used to confirm Regional Ecosystem types and fauna components for the site.
- **Principal Environmental Scientist, Realignment of Water Mains—Assessment of Remnant Vegetation, QLD.** Field assessment of the potential impacts of proposed water mains on remnant vegetation communities. Construction methods were modified to reduce potential impacts on vegetation. Environmental approvals were sought through NR&M.
- **Principal Environmental Scientist, Port Douglas Marina Development, Queensland.** A desktop review of terrestrial environmental values and production of a synthesis of key issues and plans for mitigation.
- **Principal Environmental Scientist, Realignment of a Gravity Sewer Pipeline, Sandy Creek—Assessment of Remnant Vegetation, Queensland.** Field assessment of the potential impacts of a proposed gravity sewer on remnant vegetation communities. An alternative route was proposed with the aim of minimizing impacts on the vegetation. Environmental approvals were sought through NR&M.
- **Principal Environmental Scientist, Springwood Reservoir Environmental Scoping Plan, Queensland.** A field assessment of potential impacts from an upgrade to water infrastructure on environmental values.

- **Principal Environmental Scientist, Sewage Pump Station Upgrade and Detention Tank, Queensland.** A field assessment of potential impacts from an upgrade to sewage infrastructure on environmental values. Approval for the pump station upgrade gained through negotiation with DMR and Caboolture Shire.
- **Principal Environmental Scientist, Hinterland Bulk Water Supply Environmental Scoping Plan, QLD.** A field assessment was conducted to assess potential impacts from a proposed water main on environmental values.
- **Principal Environmental Scientist, Aquatic Ecological Values, Burgess Creek, Queensland.** Five scenarios for discharging effluent from Noosa Wastewater Treatment Plant were assessed for potential impacts on the aquatic environment of Burgess Creek.
- **Principal Environmental Scientist, Mt Chelona Quarry—Property Map of Assessable Vegetation, Queensland.** Mapping and assessment of Regional Ecosystem types for expansion of extraction site. PMAV application.
- **Principal Environmental Scientist, Biodiversity Assessment for Proposed Redevelopment, QLD.** Flora and fauna surveys of native and pest species to assess the redevelopment impact on local biodiversity.
- **Principal Environmental Scientist, Donnybrook Sand Extraction, Queensland.** A wetland monitoring program was developed in accordance with a DEH extractive industry licence for the project.

PUBLICATIONS

Environmental Impact Assessments

- Everleigh Solar Farm EPBC referral
- Multicom Pty Ltd (2019) St Elmo Vanadium Mine EIS
- Multicom Pty Ltd (2017) St Elmo vanadium mine: EPBC referral.
- Oresome Australia Pty Ltd (2017) Urquhart Bauxite Project: Preliminary Documentation Report.
- Oresome Australia Pty Ltd (2017) Urquhart Bauxite Project: Environmental Authority.
- Coffs Harbour Regional Airport (2016) Vegetation for OLS management: EPBC referral.
- Oresome Australia Pty Ltd (2016) Urquhart Bauxite Project: EPBC referral.
- Springsure Creek Coal Mine (2015): Environmental Impact Statement.
- Adani Pty Ltd (2013). Environmental Impact Statement – Abbot Point Coal Terminal 0.
- SRWP Co. (2008-2009). Environmental Impact Statements and EPBC referrals
 - Toowoomba Pipeline
 - Northern Pipeline Interconnector Stage 2. ISBN 1876821450X (series).
 - Southern Regional Water Pipeline Company Pty Ltd. (2007). Environmental Impact Statement – Northern Pipeline Interconnector Stage 1. ISBN 187682137X.
 - Southern Regional Water Pipeline Company Pty Ltd. (2006). Environmental Impact Statement – Southern Regional Water Pipeline. ISBN 187682123X (series).

Books or Book Chapters

- Spencer, J. A., Monamy, V. and M. Breitfuss (2009). Saltmarsh as a habitat for birds and other vertebrates. In: Australian Saltmarsh Ecology. CSIRO publishing, NSW. ISBN 9780643093713.
- Dale, P and Breitfuss, M. (2009). The ecology, control and public health implications of saltmarsh- breeding mosquitoes. In: Australian Saltmarsh Ecology. CSIRO publishing, NSW. ISBN 9780643093713.
- Breitfuss, M. J., Nevin, D. and Maynard, S. (2009). National draft recovery plan for the water mouse *Xeromys myoides* 2008-2011. Department of Environment and Water Resources. Department of Environment, Water Heritage and the Arts, Canberra. Australia.
- Breitfuss, M. J. (2008). Habitat Modification in Saltmarsh Environments. VDM Verlag Dr. Muller. Germany. ISBN 9783836497015.

Scientific Publications

- McAlpine, M. and Breitfuss, M. J. (2010). Planning for the environmental discharge of water from potable water transport infrastructure. September 2010 issue of the Australian Water Association Water Journal.
- Dale, P. E. R., Greenway, M., Chapman, H. and Breitfuss, M. J. (2007). Constructed wetlands for sewerage effluent treatment and mosquito larvae at two sites in subtropical Australia. Journal of the American Mosquito Control Association.
- Guest, M. A., Connolly, R. M., Lee, S. Y., Loneragan, N. R. and Breitfuss, M. J. (2006). Mechanism for small scale movement of carbon among estuarine habitats: organic matter transfer not crab movement. *Oecologia*, 148: 88-96.
- Rives, A. F. and Breitfuss, M. J. (2005). The toxic activity of *Bacillus sphaericus* in *Culex annulirostris* cadavers. *Arbovirus Research in Australia*, 9: 331-335.
- Moffatt, R., Cliff, L., Thomas, D., Breitfuss, M. J. and Hurst, T. (2005). A Local Government perspective: benefits of native fish for mosquito control and public relations opportunities. *Arbovirus Research in Australia*, 9: 252-254.
- Breitfuss, M. J., Hurst, T., Ryan, P. and Kay, B. (2005). Practical Freshwater Mosquito Control: Defining productive habitats and implementing effective control strategies. *Arbovirus Research in Australia*, 9: 52-57.
- Breitfuss, M. J., Connolly, R. and Dale, P. E. R. (2005). Habitat Modification: Significant Impacts on Saltmarsh Fauna? *Arbovirus Research in Australia*, 9: 58-63.
- Breitfuss, M. J., Chapman, H. F., Dale, P. E. R. and Thomas, P. (2004). Influence of saltmarsh habitat modification for mosquito control on shore crab populations in southeast Queensland. *Wetlands (Australia)*, 22(1): 1-10.
- Breitfuss, M. J. and Connolly, R. M. (2004). Consolidation and volumetric soil water content of coastal saltmarsh substrates following habitat modification for mosquito control. *Wetlands Ecology and Management*, 12: 333-342.

- Jones, J. Dale, P. E. R., Chandica, A. L. and Breitfuss, M. J. (2004). Distribution of the grey mangrove *Avicennia marina* (Forsk.) using large scale aerial colour infrared photographs: are the changes related to habitat modification for mosquito control? *Estuarine, Coastal and Shelf Science*, 61: 45- 54.
- Breitfuss, M. J. (2004) Review of information regarding design principles to mitigate mosquito breeding in constructed freshwater wetlands. *Bulletin of the Mosquito Control Association of Australia*, 16: 14-17.
- Breitfuss, M. J. and Dale, P. E. R. (2004). The endangered Illidge's ant blue butterfly, *Acrodipsas illidgei*, from an intertidal habitat managed for mosquito control. *Journal of the American Mosquito Control Association*, 20: 91-93.
- Breitfuss, M. J. Connolly, R. M. and Dale, P. E. R. (2004). Densities and aperture sizes of burrows constructed by *Helograpsus haswellianus* (Decapoda: Varunidae) in saltmarshes with and without mosquito control runnels. *Wetlands*, 24: 14-22.
- Breitfuss, M. J. and Hill, C. J. (2003). Field observations of the life history and behaviour of *Jalmenus evagoras eubulus* Miskin (Lepidoptera: Lycaenidae) in the southern Brigalow Belt of Queensland. *Australian Entomologist*, 30: 135-138.
- Breitfuss, M. J. (2003). Defining the characteristics of burrows to better estimate abundance of the grapsid crab, *Helograpsus haswellianus* (Decapoda, Grapsidae), in an Australian saltmarsh. *Crustaceana*, 76: 499-507.
- Breitfuss, M. J., Connolly, R. M. and Dale, P. E. R. (2003). Mangrove distribution and mosquito control: transport of *Avicennia marina* propagules by mosquito control runnels in southeast Queensland saltmarshes. *Estuarine Coastal and Shelf Science*, 56: 573-579.
- Breitfuss, M. J. (2001). Predicting the effects of tunnelling on non-target saltmarsh resources. *Arbovirus Research in Australia*, 8: 23-29.
- Breitfuss, M. J. (1999). Endangered species of the Queensland Brigalow Belt. Queensland Environmental Protection Agency.

POSITION SUMMARY

● 2015 - now	Director / Principal Environmental Scientist	Epic Environmental Pty Ltd
● 2010 –2014	Principal Environmental Scientist	CDM Smith
● 2009 - 2010	Manager Infrastructure Planning	LinkWater
● 2008 - 2010	Network Corridor Manager	LinkWater/LinkWater Projects
● 2004 –2008	Principal Environmental Scientist	KBR
● 2002 - 2004	Scientist, QIMR; Adjunct Lecturer	UQ & Griffith University
● 1999 - 2002	Senior Ecologist	Ecotone Environmental
● 1999 - 2002	Lecturer and Ph.D. student	Griffith University
● 1998 - 1999	Project Officer	EPA
● 1992 - 1998	Various lecturing and consultancy roles	UQ, USQ