

CURRICULUM VITAE

Michael Evans

Principal Environmental Scientist

Michael Evans is a professional and motivated Principal Environmental Scientist with 20 years experience in the contaminated land management industry. Michael provides technical expertise for the assessment of contaminated land and specialises in developing effective, risk-based management strategies to mitigate risks and contaminated-related liabilities, and revitalise brownfield land for beneficially reuse.

Michael has extensive experience providing specialist advice and technical services across a range of sectors, including motorway construction, asset management, road and rail infrastructure maintenance, the oil and fuel industries, mining and industrials, Government due diligence and property development.

Michael has managed contamination investigation and remediation projects comprising industrial, commercial, open space and residential properties; refuelling facilities; landfill evaluation and closure; operational railyards and maintenance facilities; the integration of contamination management within transport and infrastructure development projects; and the implementation of risk-based contamination protocols into construction and urban renewal projects.

Michael has expertise in the investigation of contaminated soil, groundwater, sediment and air quality issues at many properties throughout Australia, ranging from due diligence audits and site-specific assessments, to multi-million dollar remediation projects and extensive contamination liability and asset management programs.

Michael has experience within both the private and public sectors, where he has worked with industry leading environmental consultancies, providing technical and project management expertise. In these roles Michael has successfully delivered outcomes for a range of clients including RailCorp, Transport for NSW, Roads & Maritime Services, Sydney Motorways Corporation, Transurban, Department of Defence, Bluescope, Mobil Oil, Caltex Australia, CSR, Waste Service NSW, and private development companies.

Michael is currently the principal subject matter expert (SME) on contamination assessment and management for Australia's largest transport infrastructure project, the WestConnex initiative. In this role Michael provides technical advice across all phases of the project to the various delivery authorities, including design, transaction, delivery, construction and completions, to mitigate construction risks, promote environmentally sustainable outcomes and to ensure the overall success of the project.



CONTACT INFORMATION **Michael Evans**

mevans@metech.consulting
+61 (0)434681148

Metech Consulting Pty Ltd
Level 1, 29 Kiora Road, Miranda
NSW 2228

PROFESSIONAL QUALIFICATIONS

Bachelor Environmental Science (Hons) – University of Wollongong (1998)

Certified Environmental Practitioner – Site Contamination Specialist (CEnvP SCS)

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

Environment Institute of Australia and New Zealand (EIANZ)

Australian Land and Groundwater Association

PROFESSIONAL ACHIEVEMENTS

- Demonstrated technical excellence in the management of land and water contamination issues, including successful completion of over a thousand contamination investigation, management and remediation projects.
- Demonstrated experience in critically evaluating contamination issues, undertaking data-gap analysis and developing integrated, sustainable assessment and remedial strategies to mitigate risks and maximise property values and redevelopment opportunities.
- Australian Land & Groundwater Association (ALGA) Board Sub-Committee member for Governance and Nominations, assisting the Board develop and implement a succession plan with respect to members of the Board; overseeing the selection and composition of committees of the Board of directors; reviewing the performance of the CEO; and reviewing the Constitution, Board Charter, Board sub-committee Charters, Board Policies and the operational sub-committee Charters to ensure good governance of the association.
- Extensive experience with negotiation and liaison with the NSW EPA relating to the management and regulation of contamination and waste management issues under the Contaminated Land Management Act and the Protection of the Environment Operations Act.
- Appointed by Sydney Motorways Corporation (now Transurban) as the principal technical advisor for the assessment and management of contamination for the WestConnex project, providing technical expertise, management support, liability evaluation and strategic planning advice across Stage 2 (New M5) and Stage 3A (M4:M5 Link).
- Appointed by Roads & Maritime Services as the principal contamination technical advisor for the Rozelle Interchange (Stage 3B of WestConnex) and the Sydney Gateway projects, providing technical expertise in matters relating to the Environmental Impact Statements (EIS), design, cost and constructability of the projects.
- Appointed by Sydney Motorways Corporation (now Transurban) as the Environmental Planning & Compliance Manager for Stage 2 (New M5) of the WestConnex project. Role forms part of the project delivery leadership team, with key responsibilities being the management of interfaces between client, regulator and Contractor, and the management of post approval requirements under the State Significant Infrastructure approval granted by the NSW Minister of Planning.
- Appointed to the Transport for NSW (Transport Projects Division) environmental planning services panel as a contamination management Subject Matter Expert (SME), providing technical expertise, advice and management support across a range of transport infrastructure projects across NSW.

- Former Environment Group manager and subject matter expert (SME) on contamination management for Rail Corporation NSW, providing technical advice across a range of NSW rail development projects, including liaison with the NSW EPA, RailCorp executive and the NSW Minister of Transport.
- Extensive experience with negotiating environmental approvals with the NSW Department of Planning, local Council and the NSW Heritage Branch, as well as managing environmental approvals under Part 5 of the Environmental Planning and Assessment Act, utilising planning instruments such as SEPP 55, the Infrastructure SEPP and the Codes SEPP.
- Successful negotiation of a strategy for the development and transition of the Environmental Protection Licences (EPLs) with the NSW EPA for the New M5 project (WestConnex Stage 2).
- Successful negotiation with the NSW EPA and subsequent development and implementation of the General Resource Recovery Exemption (RRE) for the recycling and reuse of ballast spoil recovered from rail maintenance operations (the Recovered Railway Ballast Exemption 2008).
- Successful development and implementation of a specific Resource Recover Exemption and Order for Bluescope, to enable the beneficial reuse of general fill wastes across the Port Kembla steelworks facility to rehabilitate the land and enable contemporary reuse and revitalisation of the disused and under-utilised areas of the heavy industrial facility.
- Development and implementation of corporate level procedures to identify, register, assess and meet statutory compliance with the Underground Petroleum Storage Systems Regulation 2008.

PROJECT EXPERIENCE

- WestConnex Stage 2 (New M5) & Stage 3A (M4:M5 Link), Technical Advisor (Contamination & Waste) and Environmental Planning & Compliance Manager (Transurban): Principal subject matter expert on contamination assessment and remediation to facilitate the closure and remediation of the former non-putrescible Alexandria Landfill, required prior to the construction of a motorway interchange. Key roles include the provision of technical expertise to the project team; lead technical designer; evaluation of project requirements; negotiations and liaison with regulators (EPA) and key project stakeholders (Department of Planning, Office of Water, local Councils); responsible for negotiation and development of the Environmental Project Licence (EPL) for the New M5 (Stage 2); technical review/approver of EIS for contamination and waste management as part of the State Significant Infrastructure projects. Other roles include management of environmental planning approvals and compliance required for the delivery of the design and construction of the New M5; manager of the New M5 Environmental team and the technical support and advice to the M4-M5 Link project team, principally with respect to Contractor claims management associated with contamination, waste and residual risks associated with the former Alexandria Landfill.
- Rozelle Interchange (WestConnex Stage 3B), Technical Advisor (Contamination) (Sydney Motorways Corporation & Roads and Maritime Services): Provided technical advice and professional services on the design of contamination investigations undertaken across the Rozelle Railyards as part of the early works contract commissioned to mitigate key contamination-related risks to the future development of Rozelle Interchange; technical support to the RMS transaction team throughout the tender stage for Rozelle Interchange (Stage 3B) to assess, evaluate and quantify contamination-related risks; technical lead relating to contamination during tender evaluation relating to design, constructability, risk sharing and environmental management.

- Sydney Gateway, Technical Advisor (Contamination) (Roads and Maritime Services): Provision of technical advice in relation to key contamination-related risks and mitigate measures required to be considered and integrated into the design of the Sydney Gateway project. Key issues requiring assessment included contamination associated with construction across and within the former Tempe Tip; existing landfill closure infrastructure, including interactions with a groundwater cut-off wall along Alexandra Canal; disturbance of sediments within Alexandra Canal that are subject to a current Remediation Order; and the management of extensive PFAS contamination associated with land and groundwater in the vicinity of Sydney Airport. Key roles include the provision of technical advice to both the technical design and commercial teams; lead discussions and negotiations with key stakeholders including NSW EPA, Sydney Water and Inner West Council.
- Resource Recovery Exemption & Order, Port Kembla Steelworks (Bluescope Steel Limited): Developed through negotiation with NSW EPA and Bluescope a specific Resource Recovery Exemption and Order to facilitate the beneficial reuse of general fill materials at the Port Kembla Steelworks, for the primary purpose of rehabilitating derelict, abandoned and under-utilised assets to enable contemporary reuse of the heavy industrial facility. Michael developed through negotiation with the NSW EPA and Bluescope Steel Limited (BSL) a site-specific Resource Recovery Exemption and Order to enable the beneficial reuse of general fill materials at the Port Kembla Steelworks. The successful development, approval and implementation of the Exemption and Order enabled BSL to rehabilitate derelict, abandoned and under-utilised assets across the facility through the re-use of low risk, but otherwise contaminated waste materials, that enable contemporary reuse of the heavy industrial facility. The project demonstrated effective use of the NSW waste management framework to facilitate and promote the sustainable use of resources, which provided sound environmental and financial outcomes to all stakeholders. Michael continues to manage the implementation of the waste management project for Bluescope, to ensure ongoing compliance is demonstrated to NSW EPA.
- Contamination Assessment, Remediation and Hazardous Materials Survey, North Narrabeen (Private Developer): Design and implementation of a detailed contamination assessment of large commercial/industrial property that formerly operated as a service station, mechanical workshop and carsales yard. To facilitate the proposed redevelopment, a remediation strategy was also designed to manage a range of contamination issues including asbestos-contaminated fill materials, both an abandoned and a decommissioned underground fuel storage tank and localised soil and groundwater contamination. Scope of works also comprised a hazardous materials survey of existing buildings to inform contractors prior to demolition.
- Due Diligence Contamination Assessment, Design of Contamination Investigation and Management Program, Inglis Stables, Randwick (Cbus Property): Detailed technical evaluation of existing contamination assessment and remediation reports for the Inglis Stables and surrounding properties proposed for acquisition and redevelopment into the Newmarket Green residential, commercial and parkland precinct. Works comprised thorough assessment of the data to characterise the overall contamination status of the facility, identify the potential risks for significant contamination issues to be present, data gap analysis and preparation of a contamination assessment and management framework to estimate requirement and potential costs to mitigate contamination-related liabilities.
- Contamination Assessment, Remediation and Validation, Former Moss Vale Service Station (Private Developer): Development and implementation of a series of environmental investigations across the former service station to evaluate contamination risks and liabilities; assess the nature and extent of contamination; design a risk-based remediation strategy; and preparation of a

Remediation Action Plan (RAP) outlining the remediation and validation requirement to enable the site to be made suitable for a proposed future residential subdivision and redevelopment. MEtech Consulting were also engaged to implement the RAP, which included the demolition of structure, removal of an Underground Petroleum Storage System (UPSS) and all associated infrastructure; excavation of contaminate soils; on-site bioremediation of contaminated soils; validation of the Site and reinstatement of the Site.

- Hazardous Materials Survey and Register, Sydney Trains, Pendle Hill, Croyden, Blacktown and Wentworthville Stations (Transport for NSW): Hazardous materials assessments and preparation of updated hazardous materials registers for four operational trains stations proposed for upgrade and refurbishment. The assessments were undertaken to provide a current hazardous materials register for each station to ensure that the ongoing management of any identified asbestos and other hazardous materials were managed appropriately during future planned work to be undertaken as part of the easy access and station upgrade program, as well as to inform tenderers on the condition of the buildings and hazardous materials management requirement.
- Contamination Assessment and Remediation, Corrimal Colliery (Private Developer): Development and implementation of a staged assessment and remediation strategy of the historic colliery. Complex contamination issues present due to multiple contaminate source zones, the sensitive environmental setting of the Site and heritage listing on various items across the property. Works involved detailed evaluation and critique of past investigation works, data-gap analysis, detailed investigation works to delineate extent of contamination, remediation works involving targeted excavation and on-site enhanced bioremediation, human health and ecological risk assessment.
- Remediation Strategy & Remedial Action Plan, Residential Development and Subdivision (Warrawong Nominees): Remediation strategy designed to encapsulate identified asbestos-contamination issues across a 2 ha property beneath the road infrastructure. Strategy incorporates risk-based principals, including an industry leading approach to the assessment, quantification and management of asbestos. RAP developed and endorsement by key stakeholders, including the NSW EPA-accredited Site Auditor and Wollongong City Council. Implementation of the remedial strategy is in progress.
- Former Works Depot, Bourke (Roads & Traffic Authority): Assessment, remediation design, preparation of remediation trials and implementation of RAP to remediate a heavily contaminated site impacted with petroleum-based tar, polycyclic aromatic hydrocarbons, petroleum hydrocarbons and heavy metals. Remediation included a combination of immobilisation, bioremediation and landfill disposal of soils initially classified as hazardous waste.
- Contamination Assessment and Remediation, Shell Service Station, Berry (Private Owner): Preparation of a staged, risk-based and cost-effective assessment strategy to evaluate the significance a range of previously identified contamination issues. Works included a thorough critique of previous assessment reports of various quality to facilitate the preparation of a Sampling, Analysis and Quality Plan (SAQP) for endorsement by the NSW EPA-accredited Site Auditor.
- Phase 1 Environmental Site Assessment, FedEx Depot, Sydney Airport (FedEx Corporation): A due diligence preliminary site investigation of a portion of Sydney airport to identify and evaluate the presence of any potentially significant contamination issues, as part of the lease renewal process.
- Environmental Site Assessment and Remediation, Seven Hills, (Waste Service NSW): Investigation design, site assessment and development of Stage 1 and Stage 2 Environmental Site Assessment (ESA) reports and a Remedial Action Plan (RAP) for the assessment and remediation of the former

bulk waste oil recycling/reprocessing facility. Site works included extensive soil and groundwater contamination investigations, delineation of off-site impact and assessment of a significant plume of phase separated petroleum hydrocarbons in groundwater.

- Due Diligence Assessment, Former Industrial Lands, Somersby (Reds Global): Detailed technical evaluation of previous contamination assessment, remediation and validation reports for the former Boral Quarry facility as part of the pre-purchase due diligence. Works comprised thorough assessment of the data to characterise the overall contamination status of the facility, identify the potential for any significant contamination issues to be present that would preclude and/or constrain the use of the property for future development and preparation of a management strategy to address the key issues identified, including remediation budgets and timeframes.
- Industrial Landuse Portfolio Management Program (RailCorp): 5-year, \$10M contamination investigation & remediation program across 296 industrial land use properties to mitigate contamination liabilities & maximise asset values.
- Residential Lease Portfolio Management Program (RailCorp): Developed and implemented a 5-year, \$7 million investigation and remediation program across 220 occupied residential properties. Program involved extensive consultation with a range of stakeholders, including RailCorp's executive management team, the Office of Rail Heritage, Office of Environment & Heritage, legal counsel, local Councils, tenants, property managing agents and community groups.
- Management Options and Strategies Review, Cooks River Freight Terminal (State Rail Authority): Due diligence assessment of contamination issues and liabilities to develop a contamination management strategy for long-term operation and management of the facility. Review included formulation of potential remediation scenarios required to effectively manage contamination issues and the calculation of potential costs to facilitate divestment and privatisation of the asset.
- Port Kembla Fuel Depot (Mobil Oil Australia): Decommissioning, remediation and validation of the bulk fuel terminal, comprising the decommissioning of fuel storage and refuelling infrastructure, removal/disposal of underground and aboveground fuel tanks, excavation and bioremediation of 5,500 m³ of hydrocarbon impacted soils, validation and reinstatement of the property to facilitate divestment for industrial use.
- Remediation, Mona Vale Service Station, (Caltex Australia): Design, management & enhancement of a biosparge groundwater remediation system, including management of groundwater monitoring events, evaluation and enhancement remediation system and the assessment of natural attenuation of dissolved phase hydrocarbon contamination in the local groundwater aquifer
- Environmental Assessment & Remediation, Gynea Service Station (Mobil Oil Australia): Assessment of groundwater contamination and offsite migration of hydrocarbon vapours from the operational service station. Works included delineation of groundwater contamination plume, routine groundwater monitoring, removal of phase separated hydrocarbons via vacuum extraction, management and preparation of technical paper detailing the specifications and performance of the remediation system (impermeable barrier and associated vapour cut-off trench).
- Infrastructure Upgrades (NSW Office of Rail Heritage): Assessment of contamination issues across rail heritage precincts located at Thirlmere, Broadmeadow and Valley Heights, and development of contamination management strategies to integrate the remediation and long-term management of contamination issues into the develop program to mitigate risks and enable beneficial reuse of the facilities, including use by the general public.

- Investigations and Remediation, Thornton Park (Depart of Defence): Site management / supervision involving asbestos remediation and removal of buried drums containing tar and other hydrocarbon by-products to facilitate long-term redevelopment of the former Department of Defence depot for residential use.
- Ore Spill Sites – Nyngan, Tallawang and Mudgee (State Rail Authority): Design and implementation of innovative, sustainable and cost effective remediation strategies, including the stabilisation and in-situ management of properties significantly impacted by mineral ore resulting from train derailments.
- Environmental Site Assessment, Leura, (Roads and Traffic Authority of NSW): Environmental site assessment of a parcel of land being acquired by the RTA for road widening works along the Great Western Highway. Scope of works included the development and implementation of a stage investigation program, evaluation of identified contamination risks and calculation of contamination-related liabilities to facilitate the land acquisition.
- Due Diligence Contamination Assessment, Ourimbah (Private Resident): Contamination assessment to determine the potential risks posed by contamination to a residential property in relation to the presence of an adjacent operation petrol / service station. Assessment required for diligence as part of as property transaction to satisfy financiers requirement.
- Chullora Railyards, Contamination Management Program (RailCorp): Contaminated land management strategy for the operational railway workshops, involving Stage 1 & 2 assessments, soil vapour assessment, remediation works (UPSS removal and product recover), ecological risk assessment, asbestos risk assessment.
- Environmental Investigations, former Ampol Terminal, Botany (Confidential Client): Investigation and delineation of a hydrocarbon plume, including a detailed human-health risk assessment to evaluate the effectiveness of the groundwater remediation system and the requirement for further remediation prior to redevelopment of the property.
- Eveleigh Railyards, Contamination Management Program (Sydney Metropolitan Development Corporation): Technical review and provision of executive level advice for the remedial design for the redevelopment of the former 11ha railyard site, involving on-site immobilisation and containment of contaminated soils.

EMPLOYMENT HISTORY

Dec 2012 – current	Principal Environmental Scientist, Metech Consulting
May 2004 – Apr 2013	Manager, Contaminated Land Management, RailCorp NSW
Dec 2001 – May 2004	Environmental Scientist, Parsons Brinckerhoff Australia
Nov 1998 – Dec 2001	Environmental Scientist, Egis Consulting Australia
Jun 1998 – Oct 1998	Waste Officer, BGI Consulting
Mar 1998 – May 1998	Environmental Waste Officer, Shoalhaven City Council

COURSES/CERTIFICATIONS

WorkCover NSW, General Induction for Construction Work in NSW (2004)

ICAM Lead Investigator – Environmental Incidents (2008)

Rail Industry Safety Induction (RISI) (2011)

Conduct Asbestos Assessment Associated with Removal – CPCBC5014 (2014)

REFERENCES

Ken Reynolds

WestConnex / Transurban

Project Director, New M5

0419 801 807

Cameron Penny

Sydney Trains

Principal Environmental Advisor

(02) 8575 0507

Luke Speechley

Nation Partners

Principal Partner

0466 436 266

Chris Bugeja

Illawarra Engineering Services

Technical Manager

0407 904 647