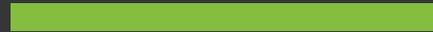




SKILLSETS

Contaminated Land & Remediation



Contaminated Land Auditing



Groundwater



PFAS



Strategic Advisory



Expert Witness



MARKET SECTORS



Property



Construction



Defence



Government



Transport & Logistics



Resource

CONTACT

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BRAD MAY

BEng, MTM, CPEng, MIEAust, APEC Eng, Int PE.

Principal Environmental Engineer/ QLD Contaminated Land Auditor/ NSW EPA Contaminated Site Auditor/ Director

Brad has extensive experience in the assessment, management and validation of contaminated sites throughout Australia and SE Asia. Brad's experience over the past 26 years in the assessment, management, remediation, and validation of contaminated sites ensures a pragmatic and practical approach to the statutory Auditor role. Brad is an approved Contaminated Land Auditor in Queensland under the EP Act and an NSW EPA appointed Contaminated Site Auditor. Brad has been engaged on a wide variety of complex and challenging projects as the Auditor. Brad is assisting clients such as Defence and Airport operators to develop outcomes associated with PFAS contamination. Brad works effectively with all project stakeholders to overcome uncertainties and provide clarity in the project outcomes. Brad's experience as a contaminated land consultant and environmental engineer will ensure his auditing approach is both practical and commercially astute. Brad has provided expert witness services.

QUALIFICATIONS

- 1994** University of Queensland / Bachelor of Environmental Engineering (Process)
- 2002** UNSW / Master of Technology and Business Management
- 2005** QLD DES / Accredited Suitably Qualified Professional (Site Contamination)
- 2015** QLD DES / Approved Contaminated Land Auditor (under the QLD EP Act 1994)
- 2017** NSW EPA / NSW Contaminated Site Auditor
- 2017** Registered Exemplar Certified Lead EMS Environmental Auditor

MAJOR PROJECTS

- Significant involvement in large scale and complex remediation projects exceeding \$500M AUD.
- Brad has provided technical expertise in a significant number of large scale infrastructure projects in NSW, Qld and Victoria assisting constructors and government clients manage contaminated land issues.
- He has assisted national clients including Defence and airport operators develop effective outcomes with PFAS contamination.
- Assisted client develop strategies for hazardous waste management, treatment, and disposal.

AFFILIATIONS

- Chartered Member, Institution of Engineers, Australia (CPEng)
- Register Professional Engineer of Queensland (RPEQ)
- Member, Environmental Engineering Society, Australia
- Member, Waste Management Association of Australia
- Member, Australian Contaminated Land Consultants Association
- Member, Australian Land and Groundwater Association
- Certified Environmental Practitioner Scheme (CEnvP) - Site Contamination.

Brad May – Principal Environmental Engineer/Auditor



EXPERIENCE

CONTAMINATED LAND AUDITS

- **NSW EPA Contaminated Site Auditor, CPBJH JV Westconnex Stage 3B – Rozelle Interchange.** The construction consortium of CPB and John Holland engaged Brad as the NSW EPA Statutory Auditor to facilitate the environmental compliance for the \$3.9 Billion road and tunnel project in central Sydney. As the Auditor Brad has technical oversight for the management of contamination in soil and groundwater and ensures the project meets its regulatory obligations and condition of approval. The Auditor role spans a period of 5 years with the delivery of Site Audit Statements across multiple areas of the project on completion of construction and remediation.
- **Qld Contaminated Land Auditor, DNRME/DES - Former Linc Energy Site, Hopelands.** Brad May was engaged directly by the Department of Environment and Sciences (DES) and later the Department of Natural Resources, Mines and Energy as the appointed contaminated land auditor for the assessment and rehabilitation of the former underground coal gasification pilot project in western Queensland. The program of works is ongoing and subject of litigation. Brads role was not only to complete a regulatory function but to provide overarching technical guidance across the wider assessment and management program for the Qld government.
- **Qld Contaminated Land Auditor, Urbex Development - East Point Development Mackay Harbour.** The 70Ha residential development south of Mackay Harbour was listed on the EMR due to the past association with the Port operations. Brad was engaged as the Auditor to oversee the assessment and remediation of the area to allow the residential development to proceed. In addition to asbestos and construction wastes affecting the site, low level PFAS groundwater contamination was identified. Brad assisted the development of a detailed review of PFAS risks and assessment of ambient PFAS impacts and effects on the environmental values for the site.
- **Qld Contaminated Land Auditor, Qld Dept of Resources, Former Sand Mining Facility, Rainbow Beach.** The Department of Natural Resources undertook a series of studies of the former sand mining facility to determine the risks associated with radiological impacts across the site. In addition to the impacts associated with the heavy mineral sands asbestos was also identified as a contaminant of concern. The Audit role was required to oversee the technical aspects of the assessment and remediation works to allow the site to be removed from the ERM and allow unrestricted recreation use.
- **Qld Contaminated Land Auditor, Bradken Resources – Runcorn Foundry Divestment.** Bradken Resources determined that the Runcorn Foundry, which had operated for over 110 years would be decommissioned and divested and would require a detailed environmental assessment program and possible remediation to be completed to allow the 80ha site to be taken to market. To provide the market with additional certainty of the environmental condition Brad May was engaged as the appointed Auditor to review and endorse the Detailed soil and groundwater investigation and proposed remediation and management options.
- **Defence Technical Advisor – Department of Defence PFAS Assessment and Remediation, RAFF Amberly.** The PFAS assessment and remediation program at RAFF Amberly required the services of a Technical Advisor (TA). Brad May was engaged as the TA for the Remediation assessment program that included the ongoing PFAS characterisation works including Lysimeters, wash own studies and the implementation of Automatic Sampling Devices. The program was designed to develop a series of PFAS remediation works to address key point of contamination flux and address the outcomes of the human health and ecological risk assessment.
- **Qld Contaminated Land Auditor. Shayher Group Bulimba Barracks Redevelopment.** The Shayher Group secured the former Bulimba Barracks development site to provide an integrated master planned development on the Brisbane River. The Site was affected by PFAS contamination in groundwater as well as oil impacts associated with radioactive weapon servicing and disused underground petroleum storage tanks. The engagement of the Auditor allowed for direct liaison with the regulator to allow the site to be removed from the EMR and allow unrestricted residential use.
- **Qld Contaminated Land Auditor Dulux Australia Pty Ltd. DES Environmental Evaluation PFAS Waste Rocklea.** Bradken Resources Dulux Australia was issues with an Environmental Evaluation by the Department of Environment and Science (DES) due to contamination migrating for wastes buried in the 1970s. Waste was disposed following the 1974 floods and subsequently allowed PFAS and heavy metal contamination to impact the surrounding environment. A solvent fire in the 1990s was also identified as a source of PFAS impacts and presented several challenges to developing a robust CSM. The Auditor engagement allowed the regulator to have confidence in the outcomes of the assessment program and subsequent management measures.
- **NSW EPA Audit- NSW Schools Infrastructure, Bankstown North Public School Remediation.** Schools Infrastructure required the services of an NSW EPA Auditor to review the remediation works required as part of the development of the Bankstown North School. The State Significant Development Conditions for the project required a Site Auditor to prepare a Site Audit Statement on completion of the expansion.

- **Qld Contaminated Land Auditor, Redland Shire Council, Judy Holt Landfill Remediation.** Brad was engaged as the Auditor to oversee the assessment program of the former landfill. The overarching objective was to develop a Site Management Plan for the current recreation fields following remediation works. The assessment program reviewed by the Auditor identified risks to the adjacent RAMSAR wetland through the migration of PFAS and ammonia through surface and groundwaters. The HHERA and subsequent assessment and remediation options were reviewed and endorsed by the Auditor prior to presentation to the regulator.
- **NSW EPA Audit. NSW Anglican School Association, Marsden Park School Development.** The Development Application for the school expansion required the preparation of a Site Audit Statement confirming the site was suitable for the school use.
- **NSW EPA Audit. Keymet Developments. Residential Redevelopment, Kogarah.** The proposed redevelopment of the former commercial site comprising 58 residential apartments, two levels of basement car parking and the provision of a publicly accessible communal open space. The former use of the site included a dry cleaning facility that required a detailed groundwater study to be requested by the Auditor. The removal of asbestos impacted soils and disposal of heavy metal affected soil was required prior to validation and Auditor endorsement to allow the Site Audit Statement to be prepared.
- **NSW EPA Audit. Hi-Quality. EPA Clean-Up Notice Asbestos Remediation, Bringelly.** As a result of a NSW EPA Clean up notice being issued to Hi Quality Group, Brad May was engaged as the NSW EPA Site Auditor to ensure compliance with the Notice. Brad required a detailed workplan to be developed to describe the works program to assess and remediate 400,000m³ of asbestos impacted stockpiles. The contractor was required to inspect and removed ACM impacted soils and produce a validation report for every 1000t processed. Each report was reviewed and endorsed prior to submission to the NSW EPA
- **NSW EPA Audit. Landfill Gas risk Assessment for Residential Development. Dural Sydney.** A Residential development was proposed for a parcel of land affected by filling. The Auditor was required to develop a Site Audit Statement for a new dwelling and reviewed the proposed SAQP. The works identified significant impacts associated with landfill gas and other soil and water contaminants within the 9m of fill and wastes at the site. The Auditor identified the requirement for a Section 60 notification due to elevated hazardous ground gases in close proximity to residential properties.
- **NSW EPA Audit. Austral St Anthony Padua School Development.** The SSD conditions for the development of the new school required an Audit of the asbestos assessment and remediation works required for the school development.
- **NSW EPA Audit. Develop My Land, Residential redevelopment Corrimal, Wollongong.** Wollongong Council conditions required that a NSW EPA Site Auditor was engaged as part of the development of residential development site in Corrimal. The Site comprised a derelict house but was affected by significant filling of wastes including asbestos. Brad was engaged to assess the reliability of the Investigations under the NEPM frameworks and NSW legislation to develop a Site Audit Statement detailing that the site could be made suitable following the implantation of an RAP.
- **Contaminated Land Auditor, Denmac Ford –Workshops Divestment, Darra.** Brad was engaged to review and endorse a series of investigation and validation reports to allow the proposed divestment site to be removed from the EMR. The site required the removal of a number of USTs and subsequent groundwater monitoring program that was ultimately found to be compliant, and a Site Suitability Statement prepared.
- **NSW Contaminated Site Auditor, Kaymet Corporation – Rachell Forster Hospital Remediation 134 Pitt Street, Redfern.** The proposed redevelopment of the former hospital site required remediation prior to the completion of the development comprising 158 residential apartments, two levels of basement car parking for 138 car parking spaces and the provision of a publicly accessible communal open space. The removal of asbestos impacted soils and disposal of heavy metal affected soil was required prior to validation and Auditor endorsement to allow the Site Audit Statement to be prepared.
- **NSW Contaminated Site Auditor, Property NSW - Peat Island Masterplan, Mooney.** Property NSW engaged Brad May as the appointed Contaminated Site Auditor to review the detailed investigation program and endorse the proposed management and remediation program as part of the masterplan for the 95Ha site. The site will require removal of several underground storage tanks and management of asbestos impacted fill at the former Peat Island Hospital site.
- **Qld Contaminated Land Auditor – O’Conner Developments - Taigum Child Care Centre.** Review of several investigation reports that identified lead and zinc impacted soils on the proposed child care development site. The Validation Report was endorsed by the Auditor to allow the site to be removed from the EMR and allow the development to proceed.
- **Defence Technical Advisor Contaminated Land Auditor, Department of Defence – Lavarack Barracks, Townsville.** The Department of Defence commissioned a detailed environmental assessment program at the

Lavarack Barracks in Townsville to assess the impacts from historical use of PFAS containing products. The Assessment included a detailed Human Health and Ecological Risk Assessment supported by comprehensive environmental sampling program. The sampling program include the collection of almost 1000 soil samples, the installation of over 68 groundwater monitoring bores and direct biota sampling. Groundwater was assessed as the primary transport media and would require a detailed hydrogeological model to assess transport mechanics and possible for migration to the deeper confined aquifer. Brad was engaged by Defence as the Technical Advisor and Site Auditor to review the investigation and ensure the works are conducted in accordance with the relevant legalisation, particularly NEPM (2013) framework and NEMP guidance. As the Auditor Brad provide technical oversight, liaison with State environmental and health regulators to ensure confidence in the investigation findings are technically sound outcomes.

- **NSW Contaminated Site Auditor, Australian Unity – Lane Cove Remediation and Development.** A former landfilled area was developed into a series of bowling greens in the Sydney suburb of Lane Cove. The site had been derelict for over 10 years and was to be developed to allow community use and retirement living. Brad was engaged as the NSW EPA Auditor under a statutory process to evaluate the appropriateness of the remediation works and reliability of the investigation works to develop a Site Audit Statement and supporting Audit Report.
- **Qld Auditor Ferny Grove Baptist Church Development – Landfill Gas Risk Assessment Audit.** Due to the presence of a significant former landfill managed by Brisbane City Council, Brad was engaged to provide an Audit Review and Report in response the planning condition for a new Community centre developed adjacent the site.
- **Qld Auditor Nudgee and Willawong Landfill Depots - Landfill Gas Risk Assessment Audit.** Transport depots were proposed for construction on land affected by landfilling at former landfill facilities. Planning requirements from BCC required that an Auditor certify a landfill gas risk assessment and the appropriateness of and design controls. On review of the LFG risk assessment the design controls were amended for each site to satisfy the Auditors review to allow the development to proceed.
- **Aquatic Achievers Wavell Height Landfill – LFG Risk Assessment Audit.** A recreation and swimming centre was proposed on the site of a former landfill that resulted in the need for a detailed landfill gas risk assessment. Brad was engaged to provide an Audit Review and Report in response the planning conditions. On review of the LFG risk assessment the design controls were amended for each site to satisfy the Auditors review to allow the development to proceed
- **NSW EPA Contaminated Site Audit- Thirroul Residential Development, Wollongong.** Wollongong Council conditions required that a NSW EPA Site Auditor was engaged as part of the development of a former bus Depot in Thirroul. The Site comprised a workshop and former and current UPSS systems. Brad was engaged to assess the reliability of the Investigations under the NEPM frameworks and NSW legislation to develop a Site Audit Statement detailing that the site could be made suitable following the implantation of an RAP.
- **NSW EPA Contaminated Site Audit – Croydon Mixed Use Development.** A former service station and workshop garage was proposed for redevelopment with mixed use commercial and residential land use. Inner West Council conditioned the need for a Site Audit Statement – B2 under the CLM Act as a condition to the Development Approval. Brad was engaged as the Auditor to complete the review of the soil and groundwater assessment and RAP and develop a supporting Site Audit Report.
- **Qld DES Contaminated Land Auditor, Toowoomba Regional Council – Former Stock Dip, Cabarlah.** Council intended to divest a parcel of land that was utilised as a regional stock dip for cattle and horses up to the early 1980s. TRC engaged Brad as the DES approved Auditor to facilitate the assessment and remediation of the property and to certify that the site was suitable for any use and could be removed from the EMR.
- **Qld DES Contaminated Land Auditor, Private Client – Former Sheep Dip, Stanthorpe.** A rural property was subdivided from larger parcel that comprised and former sheep dip and was subsequently placed on the EMR. Brad was engaged as the DES approved Auditor to facilitate the assessment and removal of the daughter lot and to certify that the site was suitable for any use and could be removed from the EMR.
- **Qld DES Contaminated Land Auditor, Lend Lease – Bruce Highway Upgrade, Townsville.** Appointed as the Contaminated Land Auditor to assist in the assessment and management and remediation of a former Defence training areas as part of the Elliot Springs Urban Development project. Waste disposal areas identified in the development areas required remediation and validation. Mr May was able to provide onsite support to the SQP to allow the site to be removed from the EMR.
- **Qld DES Contaminated Land Auditor, Bunnings Development – Dalby.** Mr May was appointed the Contaminated Land Auditor to assist in the redevelopment of a former service station site and allow the commercial development to proceed and the removal of the site from the EMR. Mr May was able to provide

onsite support to the SQP to ensure project risks were managed in accordance with the EP Act and a suitable contaminated land investigation documents prepared to allow the Audit to be completed.

- **Qld DES Contaminated Land Auditor, Lang O'Rourke – UPSS and EMR removal, Toowoomba.** Lang O'Rourke appointed Mr May as the Contaminated Land Auditor to assist in the removal and remediation of UPSS from the former works depot. The site was also found to be affected by historical foundry wastes that limited the removal of the site from the EMR. Mr May was able to assist the sale of the project the preparation of a Site Management Plan to manage the residual areas of contamination.
- **Qld DES Contaminated Land Auditor, Private Residence Goondiwindi.** Mr May was appointed the Contaminated Land Auditor to assist in validation of a former USTs location on a private property. The UST had been removed some 15 years prior. Areas of concern including asbestos and heavy metals were also managed under the program. Mr May was able to provide onsite support to the SQP to ensure the site was suitable for its intended purpose and allow the removal from the EMR.
- **Qld DES Contaminated Land Auditor, Sunshine Coast Regional Council – Landsborough Fill Remediation.** Site Investigation at an uncontrolled filling area identified contamination associated with creosote and heavy end hydrocarbons. Mr May was appointed the Contaminated Land Auditor to assist in the remediation of the area and review the potential risks for offsite users. Mr May was able to technical oversight to support the SQP and ensure the client acted within the requirements of the EP Act.
- **Qld DES Contaminated Land Auditor, Blueprint Developments – Underwood Asbestos Remediation.** Mr May was appointed the Contaminated Land Auditor to assist in the assessment and remediation of an asbestos impacted filled site. Mr May was able to assist the proposed development by providing technical and regulatory oversight the SQP to ensure project risks were managed in accordance with the EP Act.
- **NSW EPA Contaminated Site Auditor, Gurner Developments – Mixed Residential Development Alexandria NSW.** former electroplating facility within 8Km of the Sydney CBD was approved for a mixed commercial and residential development. Mr May was appointed as the NSW EPA Contaminated Site Auditor to assist in the assessment and remediation of the site that contained historical industrial fill. He was able to provide regulatory oversight to the project to ensure project risks were managed in accordance with the CLM Act and POEO Act.
- **NSW EPA Contaminated Site Auditor, Byron Shire Council – Mullumbimby STP Decommissioning.** Byron Shire Council appointed Mr May as the NSW EPA Contaminated Site Auditor to assist in the assessment of potential contamination at the former sewerage treatment plant. The Audit required a detailed review of both soil and groundwater risks and the development of a Remediation Action Plan to facility the decommissioning program and allow unrestricted residential landuse.
- **Qld DES Contaminated Land Auditor, Brisbane City Council – Melrose Park Compliance Permit.** Brisbane City Council engaged Brad May as the CLA as part of a compliance assessment process for a new childcare centre to be establish on an EMR listed property affected by historical landfilling. A review of a combined Stage 1 and 2 ESA as well as a Remediation Action Plan was required prior to the completion of a Detailed Site Investigation report and Audit review in accordance with s389 of the EP Act. On completion, a Compliance Permit was issued under Schedule 18 under the Sustainable Planning Regulation (2009).
- **QLD DES Contaminated Land Auditor, GrainCorp - Murarrie Redevelopment and SMP Development.** Brad May was engaged as the CLA by Graincorp to facilitate the demolition and divestment of the former GrainCorp oils refinery located at Murarrie, Brisbane. The facility was established in 1907 with all infrastructure to be removed to allow further development to occur. The CLA was required to inspect the works on numerous occasions to allow for and time constrained certification. A DSI was augmented by a number of validation reports as well as the preparation of an SMP for the entire 11Ha site. All documents were reviewed and certified by the Auditors to satisfy both regulatory and contractual requirements.
- **Qld DES Contaminated Land Auditor, Sunshine Coast Regional Council – Caloundra City Renewal.** Mr May was appointed the Contaminated Land Auditor to assist in the management and remediation of a number of USTs from the 1940s uncovered during construction. Two locations within the road reserve were affected in the roadworks that required on ground supervision and CLA support. Mr May was able to provide onsite support to the SQP to ensure project risks were managed in accordance with the EP Act.
- **Qld DES Contaminated Land Auditor, Cook Shire Council - Lakeland Pesticide Disposal Project.** Mr May was appointed the Contaminated Land Auditor to assess and certify the assessment and remediation of the Lakeland Pesticide Disposal area, located 100km south west of Cooktown. The assessment of the former agricultural dump area identified an area of drums and general wastes that was subsequently remediated. In addition to the site inspection and SQP liaison a review of a combined Stage 1 and 2 ESA was completed, and a Site Audit Summary Report was developed to demonstrate compliance of the CLID with s389 of the EP Act.

- **Qld Des Contaminated Land Auditor, Department of Transport and Main Roads – Cape River Bridge Dip Assessment.** Mr May was appointed the Contaminated Land Auditor to assess and certify the assessment and remediation of the EMR site listed for a former livestock dip, located 140km south west of Charters Towers. In addition to the site inspection and SQP liaison a review of a combined Stage 1 and 2 ESA was completed, and a Site Audit Summary Report was developed to demonstrate compliance of the CLID with s389 of the EP Act.
- **Qld DES Contaminated Land Auditor, Sekisui House Developments – West Village Development.** Mr May was appointed the Contaminated Land Auditor to assess and certify the assessment and remediation of the West Village Urban development precinct in West End Brisbane. The CLA role included the assessment and review of a Stage 1 and 2 ESA program across a multiple lots, Remediation Action Plans and various site inspections during the course of the works. The regulatory function in compliance with s389 of the EP Act with a Compliance Permit to be issued under the Sustainable Planning Act 2009. In addition to the site inspection and SQP liaison a review of a combined Stage 1 and 2, ESA was completed, and a Site Audit Summary Report was developed to demonstrate compliance of the CLID with s389 of the EP Act.
- **Qld DES Contaminated Land Auditor, Royal Duke Developments – 50 McLachlan Street.** Mr May was appointed the Contaminated Land Auditor to assess and certify the assessment and remediation of the Fortitude Valley site. The CLA role included the assessment and review of a Stage 1 and 2 ESA program across the development footprint, Remediation Action Plans and various site inspections during the course of the works. In addition to the site inspection and SQP liaison a review of a combined Stage 1 and 2 ESA was completed, and a Site Audit Summary Report was developed to demonstrate compliance of the CLID with s389 of the EP Act.

ENVIRONMENTAL AUDITING AND COMPLIANCE

- **Project Manager, State Transit Authority New South Wales, New South Wales.** Mr May conducted Environmental Risk Audits of 16 Bus Depot Facilities across NSW. The Environmental Risk Audits were designed to identify the key aspects of environmental non-conformance and operational risk and develop a register of activities to address the high-level risks.
- **Project Manager, Investa Property Group.** Mr May contributed to the development of an ISO 14001 Compliant EMS for entire group incorporating specific EMPs for business units and site specific EMP for development sites.
- **Project Manager, Phase 1 Environmental Assessments.** Mr May was involved in numerous Phase 1 Contamination Investigations for National Australia Bank, Commonwealth Bank, DPWS, RTA and various property developers and legal firms.
- **Project Manager, Hazardous Building Materials Inspection.** Mr May conducted inspections for clients such as Telstra, National Parks and the Business Land Group.
- **Project Manager, Berri Australia, Pty Ltd / Coca Cola Amatil.** Mr May's project work included Due Diligence Audits and series of comprehensive environmental audits throughout Australia of industrial facilities as part of the sale agreement.
- **Project Manager, Freightcorp, New South Wales.** This project included Environmental Due Diligence and Environmental Audits on Rail facilities throughout NSW.
- **Project Manager, Macquarie Bank / Fosters Australia.** This project included Environmental Audits on numerous hospitality sites throughout Queensland and NSW leading to Stage 2 assessment works.
- **Project Manager, Australian Broadcasting Corporation, NSW.** Mr May contributed to the development of an ISO 14001 Compliant EMS for Ultimo incorporating specific aspects and generic requirements for national roll out to all ABC facilities.

POSITION SUMMARY

● 2015 – Present	Managing Director/ Principal Environmental Engineer	Epic Environmental Pty Ltd
● 2011 - 2014	Managing Director/ Principal Environmental Engineer	CDM Smith Australia
● 2007 - 2011	Managing Director/ Principal Environmental Engineer	E3 Consult
● 2006 - 2007	Contaminated Land Manager (including Geochemical and Groundwater sections)	HLA Envirosiences
● 2004 - 2006	NSW Manager (responsible for establishing MPL Sydney Office and development NSW business	MPL

1997 - 2004

Contaminated Land Manager (NSW groundwater and geotechnical services group)

Sinclair Knight Merz