

Brad Dermody

Principal Environmental Scientist / WA DWER Accredited Contaminated Sites Auditor



QUALIFICATIONS

Bachelor of Science (Geology, Land and Water Management), First Class Honours (Geology) at the University of Western Australia 2003

WA DWER Contaminated Sites Auditor FT:0089 23 August 2022

PROFESSIONAL PROFILE

Over the past 18 years, Brad has conducted contaminated site assessments and/or remediation at hundreds of residential, commercial and industrial sites in Perth, regional Western Australia, NSW, Victoria, NT, ACT, Tasmania, South Australia and Southeast Asia.

Brad has specific skills and experience in applying the scientific method to soil, groundwater, surface water, sediment, soil vapour and asbestos investigations and interpretation of field and laboratory data. He has prepared numerous qualitative and quantitative risk assessments for contaminated sites assuming exposure scenarios for residents, employees, recreational land users and the environment.

Brad has broad experience acting as Project Director and Project Manager of contamination assessment and site remediation projects involving sub-contractors and OHS elements on a variety of types of sites.

Brad always seeks to understand a client's strategic objectives to provide reliable and effective advice particularly in relation to a client's obligations and desired end-point classifications under the *Contaminated Sites Act 2003*.

AREAS OF EXPERTISE

- Contaminated site assessment
- Soil, soil vapour, ground gas, asbestos, acid sulfate soil, surface water and groundwater investigations and assessment
- Human health and environmental risk assessment
- pXRF data collection and assessment
- Data quality assessment
- Sustainable remediation planning and implementation
- Site management planning and implementation
- Environmental management and monitoring
- Community consultation and regulatory liaison
- Site supervision and management
- Waste management
- Scientific and geological interpretation
- Project management and direction
- Project design and strategic advice across multiple disciplines

SELECTED PROJECT EXPERIENCE

Contaminated Sites

Department of Planning, Lands and Heritage:
Northampton Lead Tailings Project. Phase 1 -
Investigation/Assessment (2013-2015) and
Phase 2 – Remediation (2017-2020)

Aurora was engaged to conduct a town-wide investigation into the presence of lead tailings in Northampton in Western Australia's mid-west region. Through his project manager role, Brad was extensively involved in all aspects of project, which included:

- community consultation;
- sampling design and data collection (using portable X-Ray Fluorescence (XRF) devices) at >700 properties;
- data management and reporting using a built for purpose database;
- a bioaccessibility study; and
- risk assessment and remediation planning.

Brad acted as Project Director for the remediation phase of the project which resulted in 137 properties being subjected to remediation works over 12 months. The remediation works were audited and documented to facilitate classification under the CS Act. The estimated total value of Aurora work on Phases 1 and 2 was \$2M.

Department of Planning, Lands and Heritage:
Dampier Peninsula Hazardous Material
Removal and Related Environmental
Assessment Services

Aurora assisted the DPLH and Department of Communities to mitigate potential health risks associated with hazardous materials and contamination at four Aboriginal communities on the Dampier Peninsula as part of the Essential Municipal Services Upgrade Program. Aurora conducted soil and groundwater investigations, building surveys, developed remediation plans and sub-contracted a remediation contractor to undertake the work. There was a strong focus on consultation and engagement with the local Aboriginal community including employment and training opportunities. Brad was the Project

Director. The project value was implemented between 2019 and 2021 (with a hiatus due to COVID restriction) with an approximately value of \$1.4M.

Main Roads Western Australia: Tonkin
Highway Extension Risk Assessment for Reuse
of Material

Brad undertook a Tier 1 risk assessment to evaluate the suitability for low-level PFAS impacted soil from the Forrestfield Airport Link (FAL) to be reused as fill on the proposed extension of the Tonkin Highway between Byford and Mundijong. Brad evaluated existing soil and leachate data on the FAL material, comparing them to baseline data and applicable assessment criteria in accordance with the PFAS NEMP.

Water Corporation: Mid-West WWTP
Environmental Site Assessments

Aurora undertook groundwater investigation at six WWTP sites at near coastal locations in the Mid-West region. Groundwater investigations comprised design and installation of monitoring well networks, data collection and evaluation and assessment of risk to environmental and human health receptors. Brad oversaw the project as Project Director.

Department of Planning, Lands and Heritage:
Former Wheal Ellen Mine Site Detailed Site
Investigation

Aurora undertook a comprehensive DSI at this former mine site to assist in the planning of remediation works of lead tailings and characterise the site. Soil, sediment and groundwater investigation was undertaken, along with an evaluation of naturally occurring background heavy metal concentrations to derive site-specific assessment and validation criteria and a detailed hydrogeological assessment. Aurora utilised pXRF measurement data, which was supported by the contaminated sites auditor. Brad conducted technical elements and acted as Project Director.

Department of Planning, Lands and Heritage: Wheal Ellen Mine Site Remediation

Aurora supported the remediation and onsite encapsulation of approximately 32,000m³ of lead tailings and impacted soils in a permanent containment cell. The containment cell was designed and constructed as a Class IV landfill under the EP Act. Aurora prepared the Remediation Action Plan (approved by a contaminated sites auditor), conducted validation sampling (using Aurora's site-specific criteria and pXRF data) and documented the remediation works. Brad acted as Project Director, even undertaking a portion of the validation works onsite.

Craigcare Pty Ltd: Lot 7 Guildford Road and Lot 8 Third Avenue, Maylands.

Aurora commenced providing advice to the client in late 2012 in relation to an environmental due diligence for purchasing the Site which was previously used as a service station and workshop. The client plans to redevelop the Site for an aged care residential facility. Aurora undertook a range of soil, groundwater and soil vapour investigations, oversaw the remediation of contaminated soils and conducted validation works. Brad acted as the project manager and director and completed the technical elements of the investigations, including a quantitative health risk assessment. The site was ultimately classified under the CS Act as "Decontaminated" following recommendation by a contaminated sites auditor in a VAR.

DevelopmentWA: Kensington Redevelopment Project

Aurora prepared a comprehensive Environmental Review and contributed to a process to evaluate opportunities and constraints associated with the redevelopment of the DPIRD (former Agriculture department) site. Brad reviewed the contaminated status of the Site and interfaced with the multi-disciplinary team assisting DevelopmentWA with the conceptual design options analysis. Brad also managed the project.

DevelopmentWA: Additional Investigation, Kensington Redevelopment Project

Aurora conducted an investigation to facilitate potential redevelopment of a portion for an upgraded DPIRD facility. The investigation comprised soil, groundwater and landfill gas investigations. The additional investigation was reviewed and endorsed by a contaminated sites auditor and the area was recommended for re-classification under the CS Act to "Not contaminated – unrestricted use" by the auditor.

Water Corporation: Tier 2 Asbestos Risk Assessment

Aurora designed a study to assess the potential for asbestos fibres to be released from ash and soils on an asbestos contaminated site via motor bike riding. The study design and implementation were reviewed by the DoH, WorkSafe and a Certified Occupational Hygienist. The study comprised three phases of data collection and used a purpose designed and built sampling enclosure. The risk assessment used semi-quantitative techniques. Brad was one of the primary authors of the study and risk assessment.

DevelopmentWA and Department of Planning, Lands and Heritage: Former Harvey Agricultural College

Brad directed a project to conduct Preliminary Site Investigation and two stages of Detailed Site Investigation at a site which was formerly used for agriculture education and military training activities. The site is being planned for future use by the State Government, including portions for potential residential land use. The project included removal disused underground fuel storage infrastructure, considered heritage issues and assessment of UXO. Brad provided strategic advice of obtaining desired classifications under the Contaminated Sites Act 2003.