SKILLSETS

Contaminated Land and Remediation

Groundwater

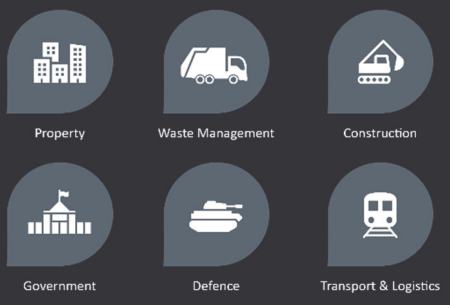
Asbestos

Acid Sulfate Soil

Construction Management

Landfill Design and Waste

MARKET SECTORS



CONTACT

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LUKE AMIES

Associate Environmental Scientist

Luke is a qualified Environmental Scientist, Licenced Asbestos Assessor and certified Site Contamination Specialist with over fourteen years of experience in contaminated land and environmental consulting throughout Australia. Luke has acted as acted as a Suitably Qualified Person (SQP) in accordance with Section 564 of the Queensland Environmental Protection Act 1994 on a wide range of soil and groundwater contamination and remediation projects.

Luke has developed and implemented remediation strategies to identify and address environmental risk at a variety of complex sites including former gas works and gold mining sites. Key investigations, and subsequent remediation projects, have included the assessment of soil, sediments and groundwater, groundwater and soil gas modelling, and the preparation of health risk assessments.

QUALIFICATIONS

2003 University of Queensland / Bachelor of Environmental Science

2016 WHSQ / Licenced Asbestos Assessor

2018 EIANZ / Certified Environmental Practitioner (CEnvP)

2018 EIANZ / CEnvP Site Contamination Specialist

MAJOR PROJECTS

- Linear infrastructure projects including Cross River Rail, Gold Coast Light Rails Stage 2, Moreton Bay Rail Link, Bruce Highway C2C Section C & Mackay Ring Road
- Defence and Airport sites including Gold Coast Airport Project LIFT & RAAF Amberley 5FLT Heron
- Major urban remediation sites including the West End Gasworks, Mt Taylor Gold Mine, Northshore Hamilton & Tennyson Power Station and Yeerongpilly DPI Animal Research Facility
- Marine Pre-Dredging including GLNG Western Basin Capital Dredging and Materials Offloading Facility, Scarborough Boat Harbour & Aquarium Passage

AFFILIATIONS

- Member, Environment Institute of Australia and New Zealand (EIANZ)
- Member, EIANZ Contaminated Land Special Interest Section (EIANZ CL SIS) and PFAS working group
- Member, Australasian Land and Groundwater Association (ALGA)
- Member, Australian Contaminated Land Consultants of Australia (ACLCA)

EXPERIENCE

CONTAMINATED LAND & REMEDIATION

- **Project Manager, Cross River Rail, Brisbane, Queensland.** Luke is currently working with the Cross River Rail (CRR) Delivery Authority with the implementation of the CRR Contamination Strategy which requires the establishment of a framework for the identification and management of contaminated land during the design, construction and operational phases. Acting as he Suitably Qualified Person (SQP), Luke is overseeing the implementation of a baseline contamination assessment across the entire CRR works footprint to inform the proposed design, construction and operational phases of the work. In addition, Luke is overseeing remediation and validation works associated with the former Goprint, Land Centre and South Brisbane Dental Hospital sites. Remediation works are required to enable the site to be utilised as the staging area and launch site for the CRR Tunnel Boring Machines (TBMs) and Roadheaders, with a new underground rail station to be constructed.
- **Project Manager, Gold Coast Light Rail Stage 2, Southport, Queensland.** Luke was project manager and technical lead for environmental monitoring as part of the expansion of the Gold Coast Light Rail Stabling Yard. The existing stabling yard was constructed over a portion of the former Baratta Street landfill, and as part of the proposed expansion works, CPB were required to confirm that construction works did not worsen the contamination status of the construction site or the off-site contamination risk arising from the construction site. As part of site works, Luke oversaw the installation of addition groundwater and landfill gas monitoring infrastructure to establish baseline conditions at the site and provide a benchmark against which conditions can be monitored, before developing robust methodology to ensure earthworks processes were carried out whilst posing minimal risk to human, or environmental health. Regular monitoring of groundwater and landfill gas was undertaken during, and following the construction program to ensure that site works were not impacting on the landfill cell and the surrounding environment.
- **Project Manager, RAAF Amberley 5FLT Heron, Amberley, Queensland.** Luke was Project Manager and lead assessor for site investigation works associated with construction of additional aircraft shelters and a training simulator as part of the RAAF Base Amberley's transition from F-11 to F/A-18F Super Hornets. Luke undertook a soil sampling and characterisation program to assess potentially contaminated areas within the construction footprint and determine management requirements to be implemented at the site.
- **Project Manager, Brunswick Heads Sewage Treatment Plan, Brunswick Heads, New South Wales.** Luke was Project Manager and lead assessor for environmental assessments as part of the decommissioning of the Brunswick Heads Sewage Treatment Plant (STP). Soil, groundwater and sediment investigations were undertaken to assess the site to assess potential risks to human health and the environment and determine the suitability of the site for public recreation and open space land uses. Results from site investigations were used to inform the preparation of a Remediation Action Plan (RAP) to provide a framework for remediation and management works required as part of decommissioning of the site.
- **Project Manager, Ipswich City Council Closed Landfill Risk Assessment, Ipswich, Queensland.** Luke undertook a risk assessment at ten closed landfill sites throughout the Ipswich region. The sites were known or suspected to have been subjected to controlled and uncontrolled landfilling operations over the past 60 years. Works included the completion of a detailed site history review of each of the ten sites, along with groundwater, landfill gas and intrusive investigations. The results of site history and intrusive works were used to provide ICC with a comprehensive Risk Analysis that identified the severity, and likelihood of harm caused through historic landfilling activities, the risks to human health posed by landfill gas presence and/or emissions resulting from landfilling operations and remaining waste material and a detailed breakdown of the impacts on groundwater, and surrounding environment resulting from the presence of historic landfill waste. Based on the findings of the Risk Analysis, site specific mitigation measures along with monitoring regimes were recommended in order to minimise impact and ensure the safe and effective management of the 10 sites.
- **Project Manager, Telegraph Road Stage 1B, Fitzgibbon, Queensland.** Widening of the existing road corridor as part of the Telegraph Road Stage 1B works, encroached on a historic landfill, requiring management of contaminated land and landfill risks including landfill gas and leachate. Luke performed the role of suitably qualified person and oversaw the management of leachate, installation of a leachate collection system and contaminated land.
- **Project Manager, Telegraph Road Stage 2, Fitzgibbon, Queensland.** Telegraph Road Stage 2 works involved the dewatering and excavation of a former landfill area to facilitate the construction of a new single span road bridge over Cabbage Tree Creek. Luke performed the role of a suitably qualified person and licenced asbestos assessor with key tasks including preparation of dewatering, acid sulfate soils and asbestos management plans

for approval by BCC and the contaminated land auditor, completion of baseline surface water and groundwater monitoring, supervision of dewatering works, including construction monitoring of groundwater, surface water and airborne asbestos fibres, acid sulfate soils and excavation and removal of contaminated soil and waste materials.

- **Project Manager, Ripley Town Centre Livestock Dip Remediation, Ripley, Queensland.** Luke project managed the investigation, remediation and validation of a former livestock dip located within the construction footprint of the Ripley Town Centre development. Remediation and validation works were completed in accordance with regulatory requirements, and the satisfaction of the Contaminated Land Auditor enabling the site to be removed from EHP's Environmental Management Register. Works were completed in a timely and efficient manner, facilitating development of Stage 1 of the Ripley Town Centre.

GROUNDWATER

- **Project Manager, Gold Coast Airport Project LIFT, Coolangatta, Queensland.** Luke project managed the implantation of an environmental monitoring program at the Gold Coast Airport to satisfy the requirements of the approved Construction Environmental Management Plan (CEMP) as part of the civil works package of the Gold Coast Airports' project "Let's Invest for Tomorrow (LIFT)". Historical activities within the airport site had resulted in contamination of the shallow groundwater beneath the site with petroleum hydrocarbons and Perfluoroalkyl and Polyfluroalkyl Substances (PFAS) (including perfluoro octane sulfonate (PFOS) and perfluorooctanoic acid (PFOA)) which required monitoring and management as part of dewatering work associated with the relocation of the perimeter drain and other inground works. Works completed included baseline sampling to establish existing site conditions, the completion of fortnightly groundwater and surface water monitoring over an 18-month period. Works also comprise daily inspections and site monitoring during dewatering works, completion of environmental management requirements in accordance with the CEMP and dewatering, contaminated land and acid sulfate soils management sub-plans and establishment appropriate controls to manage environmental and human health risks associated with the presence of PFAS and other identified contaminants at the site, to ensure the safe completion of the proposed civil construction works.
- **Project Manager, Groundwater and Surface Water Assessment and Management, Former Landfill, Queensland**. Luke is currently project managing the investigation of ammonia impacted groundwater at a former landfill site. Works are required to be completed to assess potential offsite impacts to sensitive receptors and determine appropriate remedial actions required. The program to date has included the installation of groundwater monitoring wells in difficult ground conditions, completion of a number of groundwater monitoring event and preliminary groundwater modelling to assess potential risk and determine additional works required to be completed.
- **Diesel Spill, Queensland**. Luke project is currently project managing investigations and remediation works following a diesel spill resulting in the loss of approximately 80,000L of diesel product to ground. Works have included the completion of several groundwater monitoring events (GMEs), with a total fluids extraction remediation system currently being installed at the site.
- **Project Manager, Hydrogeological Assessment – Coorparoo Creek Park, Coorparoo, Queensland.** Luke project managed a hydrogeological assessment of the proposed Coorparoo Creek Park development to assess potential impacts from acid sulfate soils and contamination previously identified at the site. The assessment comprised field investigations and three-dimensional computer modelling of groundwater flow and contaminant migration to determine potential impacts from alterations to existing groundwater flow patterns and lowing of groundwater levels as a result of the proposed development.
- **Project Manager, Crude Oil Pipeline Spill Remediation, Western Queensland.** Luke project managed the operation and maintenance of a groundwater remediation system follow a crude oil pipeline spill in Western Queensland. The system comprised a network of groundwater monitoring wells installed with passive product skimmers extracting phase separated hydrocarbons (PSE) from the aquifer below. As part of ongoing monitoring of the site, quarterly groundwater monitoring events (GMEs) were completed within the vicinity of the spill along with a wider network of groundwater monitoring wells to assess the extent of dissolved phase hydrocarbons enabling assessment of the effectiveness of the remediation system and determination of potential offsite risks to nearby sensitive receptors. During an operational period of two and a half years,

regular maintenance of the system along with completion of a five-day Multi-Phase Extraction (MPE) event lead to a significant reduction in PSE.

ASBESTOS

- **Project Manager, Asbestos Remediation and Validation, Eagle Farm, Queensland.** Luke project managed remediation and validation works comprising the excavation and offsite disposal of over 125,000t of asbestos contaminated soil. As part of remediation and validation works, Luke undertook clearance inspections and oversaw and assisted with works completed by the Licenced Asbestos Assessor (LAA) including asbestos air monitoring and clearance inspections. Luke also established and monitored protocols to ensure the safety of site workers and the general public during the remediation, validation and bulk earthworks phases of the project while ensuring management of remediation works was undertaken in accordance with State and Commonwealth Guidelines.
- **Technical Advisor, Asbestos Remediation and Validation, Curtis Island, Queensland.** Luke was engaged as a technical advisor for the remediation of asbestos impacted mulch from an industrial site. Luke undertook an independent program of visual inspections across areas of the site suspected to have been impacted, sampling of soils and imported mulch materials and an asbestos air monitoring program to establish baseline conditions at the site. Luke subsequently acted as an independent third-party reviewer and technical advisor for the principal contractor during remediation and validation works, which comprised review of remediation and validation documentation (including asbestos management and control plans and work procedures) and supervision of asbestos removal and validation works.
- **Project Manager, Asbestos Remediation and Validation, Banyo Rail Stabling Yard, Queensland.** Luke project managed and undertook investigation works to characterise spoil material requiring off-site removal as part of development of the Banyo Rail Stabling Yard. Working with the LAA, Luke developed an environmental assessment program for the site to assess potential risks to human health and the environment and determine the extent of soil contamination and asbestos impacts within the existing rail formation.
- **e** Luke project managed and undertook supervision of remediation and validation works at the former Banyo Defence Facility. Remediation works comprised the excavation and removal of asbestos impacted soils over an approximate 20,000m2 area, with visual inspection and validation sampling undertaken following completion of remediation works.
- **Project Manager and Technical Lead, Asbestos Remediation and Validation, Former Army Depot, Fortitude Valley, Queensland.** Luke project managed and undertook supervision of remediation and validation works at a former Army Depot in Fortitude Valley QLD. Remediation works comprised the excavation and removal of contaminated soils and asbestos impacts, with visual inspection and validation sampling undertaken following completion of remediation works.
- **Project Manager, Asbestos Remediation and Validation, High-rise Residential Development, Fortitude Valley, Queensland.** Luke project managed and undertook supervision of remediation and validation works following the identification of asbestos impacted fill material at a high-rise residential development in Fortitude Valley QLD. Remediation works comprised the excavation and removal of contaminated soils and asbestos impacts, with visual inspection and validation sampling undertaken following completion of remediation works.
- **Site Supervisor, Asbestos Remediation and Validation, Former Telstra Training Facility, Chermside, Queensland.** Luke was the site supervisor and environmental consultant for the remediation of the former Banfield Street Telstra Training Facility. Remediation and validation works comprised the systematic removal and subsequent validation of in ground asbestos infrastructure previously used for training purposes. Luke supervised remediation works to assist in the identification of unmapped underground infrastructure, undertook validation sample collection and visual clearance while assisting in the implementation of the asbestos air monitoring program.
- **Site Supervisor, Asbestos Remediation and Validation, Australian Catholic University, Mitchelton, Queensland.** Luke was the site supervisor and environmental consultant for the remediation of asbestos impacted soils at the former Australian Catholic University Mitchelton campus. Luke supervised remediation works and undertook validation sample collection and visual clearance of remediated areas.

ACID SULFATE SOILS

- **Project Manager, Sideling Creek Dam Upgrade (Lake Kurwongbah), Kurwongbah, Queensland.** Management of ASS impacts were required as part of the proposed upgrade of the Sideling Creek Dam abutment. Luke was the project manager and technical lead for additional investigation works and development of an acid sulfate soils management plan (ASSMP) to manage impacts from ASS identified at the site. Investigation works were completed in challenging ground conditions, comprising areas within the existing Sideling Creek alignment, with the ASSMP enabling work to proceed whilst ensuring the protection of the surrounding sensitive environment (headwaters of Sideling Creek and the wider Pine Rivers Catchment).
- **Project Manager, Acid Sulfate Soil Investigation, Curtis Island, Queensland.** Luke project managed an acid sulfate soils investigation within the proposed 190ha onshore footprint of the GLNG facility located in China Bay, Curtis Island. Results from investigations were used to assess potential impacts of proposed construction works and develop management procedures to mitigate potential on-site and off-site environmental impacts. In addition, environmental and ASS investigations were undertaken at the proposed Materials Offloading Facility (MOF) located on the southern end of China Bay, Curtis Island. As part of the scope of work, Luke worked closely with the client and the dredging contractor to develop an ASSMP to control potential acid generation during dredge operations and manage potential on-site and off-site environmental impacts.
- **Project Manager, Western Basin Dredging Operations, Gladstone, Queensland.** Luke was Project Manager and lead assessor of an environmental and acid sulfate soils investigation as part of capital dredging works within the Western Basin of Gladstone Harbour as well as Gladstone Liquefied Natural Gas Facility Materials Offloading Facility. Luke prepared and implemented an environmental investigation program to determine the suitability of dredge materials for offshore disposal at the approved East Banks Sea Disposal Site.
- **Third Part Auditing of Acid Sulfate Soils Management Plans, Gladstone Queensland.** Luke completed third party auditing and advisory services for completion of the Wiggins Island Coal Export Terminal (WICET) and Western Basin Reclamation Area (WBRA) projects located in Gladstone QLD. Auditing included the assessment for compliance or otherwise of the earthworks and/or dredging contractor(s) against provisions set out in the EHP approved ASSMPs as part of the construction phase of these projects.
- **Project Manager, Woongoolba Flood Mitigation Scheme, Woongoolba Queensland.** Luke project managed acid sulfate soils investigations as part of the Woongoolba Flood Mitigation Scheme. Investigation works were completed within existing drainage channels and flow paths to assess acid sulfate soil impacts associated with proposed widening and repair works across a network of existing surface water channels. Works were successfully completed in challenging ground conditions, with the majority of works completed within existing drainage channels and low-lying areas adjacent to sugarcane fields.
- **Site Supervisor, Greenheart Urban Parkland, Robina Queensland.** Luke undertook investigations within low-lying floodplains of Mudgeeraba Creek associated with the proposed Greenheart urban parkland development. In order to assess potential impacts associated with changes to groundwater flow regimes, and potential migration of acid generated during development works, a network of groundwater monitoring wells were installed across the site and groundwater modelling completed. Results were used to inform the proposed development to minimise impacts associated with acid sulfate soils and establish adequate management procedures to be implemented during works.

POSITION SUMMARY

2017 – Present	Associate Environmental Scientist	**Epic Environmental Pty Ltd**
2015 – 2017	Senior Environmental Scientist	**Epic Environmental Pty Ltd**
2009 – 2015	Associate Environmental Scientist	**Butler Partners**
2007 – 2009	Senior Environmental Scientist	**Butler Partners**
2004 - 2007	Environmental Scientist	**Butler Partners**