



LOUISE CARTWRIGHT

Principal Environmental Scientist

Louise specialises in providing teams with understandings on how contamination impacts the end value of assets including technical insights, program timeframes and sharing lessons learnt. She provides input across a range of contaminated land projects such as PFAS management, Remediation Options Appraisals and baseline soils and groundwater quality.

Louise has a PhD in Soil Science from the University of Adelaide and since 2004 has been recognised as a Certified Professional Soil Scientist (CPSS). In 2018 she obtained the specialised competency Contaminated Site Assessment and Management (CSAM).

SKILLSETS

Contaminated Land and Remediation



Soil Science



Contaminated Land Auditing



Groundwater



Strategic Advisory



Expert Witness



MARKET SECTORS



Property



Construction



Defence



Government



Industrial



Resource

CONTACT

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QUALIFICATIONS

1998 University of Tasmania / Bachelor of Agricultural Science (Honours, Soil Science)

2004 University of Adelaide / Doctor of Philosophy – Soil Science

MAJOR PROJECTS

- Assessment and remediation of gasworks sites including Hull (UK), Barangaroo and Wagga Wagga (NSW)
- Defence and Airport sites including Brisbane, Gold Coast and Sunshine Coast Airports, RAAF Amberley and HMAS Cerberus
- Regulatory approvals and licencing for waste and remediation facilities

AFFILIATIONS & APPOINTMENTS

- Certified Professional Soil Scientist (CPSS) (2004)
- CPSS - Contaminated Site Assessment & Management (CPSS-CSAM) (2018)
- Standards Australia: Committee member for review of Wastes, sediments and contaminated soils - Preparation of leachates AS 4439.2:2019 (2017-2019)
- 2018 National Soils Conference – Special Symposium “PFAS in soils – behaviour, fate, risks and remediation”; Co-organiser and Chair (November 2018)
- Australasian Land and Groundwater Association (ALGA): Brisbane Committee member (2014 - 2018); Brisbane Committee Chair (2018); Asbestos-In-Soils Special Interest Group member (2017-2018)
- Soil Science Australia Queensland Branch: President (July 2011 – October 2012); Vice President (July 2010 – July 2011); Immediate Past President (October 2012 – October 2013)
- Certified Professional Soil Scientist: Board Member (June 2014 – June 2018); Deputy Chair of CPSS board (April 2016 to April 2017); Co-Chair of CSAM Development Committee (2015-2018); CSAM Assessment Committee member (2018-present)

EXPERIENCE

SOIL, SOIL VAPOUR AND GROUND WATER CONTAMINATION AND REMEDIATION

- **Richmond, former GTV9 site, VIC.** Louise provided a technical review of consultant work and developed recommendations for management of soil vapour, groundwater and soil contamination at a large and complex site. She co-ordinated consultants and auditors to obtain a Statement of Environmental Audit.
- **RNA Showgrounds, QLD.** Louise provided a technical review of consultant work with consideration of specific project risks and objectives. She detailed remediation forecasting for the precinct including consideration of statutory and environmental planning requirements and management of soil and groundwater phases.
- **Europa Package (Australia wide).** Louise provided technical support for the bioremediation of 30 sites with petroleum impacted soil and groundwater.
- **Yennora, NSW.** Louise provided technical support for remediation of soil and groundwater contaminated by perchloroethylene (PCE) and other chlorinated compounds (TCE, VC).
- **Legal review, NSW.** Louise provided a review of soil investigation reports, remediation plan and remediation costings and provided response to queries on these documents (predominately hydrocarbon impact).
- **Legal review, NSW.** Louise provided a review of soil investigation reports, remediation plan and remediation costings. She also provided response to queries on these documents (predominately TCE impact).
- **Jemena, NSW.** Louise provided technical review of methodologies for the remediation of gasworks contamination.
- **Pine Valley, QLD.** Louise carried out a preliminary site investigation for due diligence.
- **Shoreline, QLD.** Louise carried out a review of SQP investigation and risk assessment.
- **Yarrabilba, QLD.** Louise provided a technical review of SQP asbestos investigation and preliminary site investigations.
- **Solahart Technologies, WA.** Louise provided technical support for investigation, remediation and validation of Hexavalent Chromium Impacted Soil and Groundwater.
- **Hamilton, NSW.** Louise provided a technical review of SQP soil and groundwater investigation, RAP, remediation works and validation to remove site from the EMR.
- **Bulimba, QLD.** Louise provided a technical review of SQP investigation which found asbestos, PFAS and metal impacted soil and groundwater
- **Forest Hills, VIC.** Louise provided a technical review of third party investigation of soil and groundwater for due diligence purposes
- **Nelsons, NSW.** Louise provided a technical review of soil and groundwater investigation, RAP, remediation works and validation to ensure works met DA to allow development
- **Hopelands UCG Plant, QLD.** Louise carried out groundwater monitoring reporting.
- **Brisbane Airport, QLD.** Louise carried out groundwater monitoring of USTs
- **Kurnell Sustainable Soil Recycling Facility, NSW.** Louise provided early expert advice and ongoing technical advice for the Caltex bioremediation facility in NSW. The project won a gold medal in the International 2016 Edison awards for the category of Reuse and Reclamation, which were announced in New York in April 2016
- **QUT, QLD.** Louise oversaw treatment trials for aldrin and dieldrin impacted soil with zero valent iron
- **Colac, VIC.** Louise assisted with a 24-hour constant discharge and recovery test to assess remedial options for dissolved gasworks NAPL plume.
- **Cross River Rail, QLD.** Louise acted as technical reviewer of soil contamination during tender process to determine volumes, management costs, further investigations required, and risks associated.
- **Amberley Airbase, QLD.** Louise provided early expert advice including review of Draft RAP and ongoing technical advice for the remediation of PFAS and Hydrocarbon impacted soils.
- **Kurnell, NSW.** Louise provided remediation of creosote impacted soil
- **Catherine Hill Bay, NSW.** Louise provided technical support of bioremediation of impacted soils including review of delineation works and RAP
- **Alexandria, NSW.** Louise was involved in immobilisation trials and application to NSW EPA for a specific immobilisation approval.
- **Evans Heads Memorial Aerodrome NSW.** Louise provided technical support for bioremediation of TRH impacted soil
- **Tighes Hill, NSW.** Louise provided technical support for a soil remediation trial involving ISCO, bioremediation and SVE
- **Coffs Harbour, NSW.** Louise co-ordinated Laboratory Trials of TBT contaminated material
- **Stony Head Military Training Area Stop Butt, TAS.** Louise carried out a technical review of investigation, development of RAP and support of remediation.

GASWORKS ASSESSMENT AND REMEDIATION

- **Project Manager, Hull Gasworks, United Kingdom.** Louise co-ordinated the bioremediation of 50,000 m³ of tar impacted soils including chemical fingerprinting characterisation; sustainable remediation appraisal; and research into the influence of laboratory sample handling on data QA/QC.
- **Clyde St Gasworks, NSW.** Louise provided early expert advice including review of Draft Remediation Action Plan (RAP) and preparation of a detailed data gaps analysis report
- **Barangaroo, NSW.** Louise provided technical support for the management of gasworks (TRH and PAH) impacted sediment and groundwater.
- **Wagga Wagga Gasworks, NSW.** Data review (tender stage), technical support on the management of tar and ash impacted soils (project stage).
- **GRS Melbourne, VIC.** Louise assisted with site remediation which included the treatment of tar impacted material by bioremediation
- **Project Manager, Carnegie Children's Centre, VIC.** Louise was responsible for site investigation and remediation of a childcare centre impacted by gasworks waste

PER - AND POLY-FLUOROALKYL SUBSTANCES (PFAS)

- **Technical Advisor, PLIFT Project Gold Coast Airport, QLD.** Louise provided technical advice for the management of PFAS impacted soil and groundwater.
- **Technical Advisor, Amberley RAAF Base, QLD.** Louise lead technical discussions on the management of all PFAS waste streams (groundwater, soil, slurry from vac excavation and construction dewatering); as well as technical advice for foam system testing in hanger.
- **Technical Reviewer, Brisbane Airport, QLD.** Louise provided a technical review of the PFAS groundwater treatment plant.
- **Technical Review, Brisbane Airport, QLD.** Louise provided a technical review of the PFAS management strategy.
- **Brisbane Airport, QLD.** PFAS Short Term Stockpile Assessment.
- **Sunshine Coast Airport.** Monthly Monitoring for PFAS.
- **Petrie, QLD.** Stockpile characterisation of PFAS impacted material for off-site management.
- **Defence, Nationwide.** Assistance with development of the PFAS Construction and Maintenance Framework.
- **RAAF Williamstown, NSW.** Technical Advisor for foam system testing in hanger.
- **Townsville, QLD.** Louise provided technical advice on the management of PFAS impacted material relocated off-site; technical review of groundwater monitoring data (PFAS impacted) to determine suitable management practices.
- **RAAF Tindal, NT.** Louise provided a technical review for NACC development works and FOI media requests
- **Cerberus, VIC.** Louise provided advice on the management of PFAS impacted soil and groundwater with consideration of immediately adjacent RAMSAR site.
- **Oakey, QLD.** Technical support for stabilisation trial of soil impacted with PFAS.
- **Fiskville, VIC.** Louise provided technical support for stabilisation trial of soil impacted with PFAS.
- **Lendlease, Nationwide.** Louise carried out a review of all assets to determine risk of PFAS contamination and site prioritisation in accordance with NEMP.

HUMAN HEALTH AND ENVIRONMENTAL RISK ASSESSMENTS

- **Williamstown, NSW; Tindal, NT. Cerberus, VIC & Gold Coast, QLD.** Louise carried out a technical review of occupational exposure risk assessment for PFAS.
- **Hastings, NZ.** Louise carried out a Risk-based assessment on arsenic levels in soil at a former orchard with work presented at Waste MINZ Conference.
- **Shoreline, QLD.** Technical review of SQP risk assessment for development of site specific ecological criteria.
- **Ballarat, VIC.** Louise provided assistance with Human Health Risk Assessment for arsenic impacted material at a former mine tailings site.
- **Takura, QLD.** Louise provided assistance with health and ecological risk-based assessment, and remediation criteria development at a timber treatment plant.
- **Yurbi, QLD.** Louise provided assistance with environmental evaluation and risk based assessments for soil, surface water and groundwater at a concentrate ore rail loading facility.

REMEDIATION FACILITIES & COMPLEX REGULATORY APPROVALS

- **Melbourne, VIC.** Louise provided legislative approval management for the establishment of a thermal treatment facility.
- **Corio, VIC and Birkenhead, SA.** Louise carried out Feasibility Assessments for the development of Soil Recycling facilities for Caltex including development of Soil Acceptance Protocol and Validation Plan and Quality, Health, Safety and Environment Plan for each site.
- **Confidential, NSW.** Louise carried out an options appraisal for the off-site management of radioactive impacted material.
- **Confidential, NSW.** Louise managed HCB impacted soil from initial identification of material; regulatory review with State and Federal Agencies to meet International Treaties; and approval for offsite disposal to an interstate facility.
- **Project manager, Cootamundra, NSW.** Louise was engaged to obtain approval from NSW EPA for a soil treatment facility.
- **Tasmania.** Louise managed of the regulatory approvals for transfer of regulated waste from Tasmania to Queensland.
- **Melbourne, VIC.** Louise carried out the technical review of site data during remediation of a waste management facility.
- **Hobart, TAS.** Louise assisted with obtaining a license from the Tasmanian EPA to operate a soil treatment facility in Southern Tasmania.
- **Patawalonga, SA.** Louise managed the regulatory approvals for reclassification of material for beneficial reuse.

ACID SULFATE SOIL ASSESSMENT AND MANAGEMENT

- **Paynesville, VIC.** Louise managed the Liming trial and validation of neutralised ASS.
- **Lakes Entrance.** Louise Managed the Investigation of PASS and AASS.
- **Flemington Racecourse VIC.** Louise Managed the Liming trial and validation of neutralised ASS.
- **Qantas site.** Louise provided technical support for management of acid sulfate soils.
- **Brisbane Airport.** Louise carried out the PFAS and ASS assessment for five major drains and additional proposed drain widening.

LANDFILLS

- **Inverell, NSW.** Louise managed the Landfill monitoring and assessment.
- **Harpley, Vic.** Louise provided former landfill assessment and management to allow residential development.

POSITION SUMMARY

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| ● 2020 - Present | Principal Environmental Scientist | Epic Environmental Pty Ltd |
| ● 2019 – 2020 | Principal | PSK Environmental |
| ● 2017 – 2019 | Technical Remediation Manager | Lendlease |
| ● 2012 – 2017 | Principal Soil Scientist & Technical Remediation Manager | Enviropacific Services Pty Ltd |
| ● 2004 – 2012 | Manager/ Senior Soil Scientist | Environmental Earth Sciences International |
| ● 1998 – 2000 | Soil Surveyor | Forestry Tasmania |