

Dr Leonie Andersen & Dr Felicity Melville, Directors

Who is Vision?

Vision Environment QLD was established in July 2008 by Felicity Melville and Leonie Andersen as an environmental consulting company specialising in local knowledge and expertise. The Directors were previously Senior Research Scientists at CQUniversity, working closely with industry particularly through the Port Curtis Integrated Monitoring Program (PCIMP), but also through a number of consulting projects for individual industries over the past ten years. Vision continues to have a close collaborative association with the University with both Directors holding positions of Adjunct Research Fellows at CQUniversity. The relationship allows collaborative arrangements for use of the facilities at the University should this be required.



Our Company

Vision Environment QLD Pty Ltd (ACN: 129 886 997), located in Gladstone, conducts rigorous scientific investigations to make sound recommendations to clients, working closely with industry, university, government and NRM groups. Our clients benefit from our extensive local knowledge coupled with our ability to draw on additional expertise through our collaborative partners.



Our Services

We have expertise in the following areas of environmental assessment:

- Water Quality (fresh and marine)
- Sediment Quality
- Contamination/pollution assessment
- Oil spill assessment
- Mangrove and seagrass assessment and monitoring
- Biological surveys & Biomonitoring
- Algal blooms and toxins
- Toxicity testing and reporting
- Introduced marine pests
- Design of sampling and analytical programs
- Compliance monitoring and reporting
- Statistical analysis and interpretation

Our Clients

Vision's core business stems from members of PCIMP which consists of the following organisations:

- Boyne Smelters Ltd.
- Queensland Alumina Ltd.
- Rio Tinto Alcan - Yarwun
- Gladstone Ports Corporation
- NRG Gladstone Operating Services
- Gladstone Pacific Nickel Ltd.
- Queensland Energy Resources
- Gladstone Area Water Board
- QLD Environmental Protection Agency
- Gladstone Regional Council
- Cement Australia
- ORICA
- Fitzroy Basin Association
- Queensland Gas Corporation
- Gladstone LNG
- CQUniversity

Vision Environment uses reputable and innovative techniques focusing on detecting biological effects, with the lead scientists associated with research programs at a number of national institutions. This ensures that the most up-to-date technologies are used in the monitoring and assessment programs.

The researchers from Vision Environment have a strong track record with a demonstrated capacity to undertake projects for a variety of clients. Projects are completed according to budget and within specified time frames, producing high quality outputs. Please see examples of the projects which the researchers from Vision Environment have implemented and been involved in.

Vision Environment holds current public liability and professional indemnity insurance, in addition to a well-developed and regulated Health, Safety & Environment Policy.

Dr Leonie Andersen,
Director

Leonie has been researching for local industry in Port Curtis for the past ten years, initially drawing on her veterinary background as Principle Investigator of the Gladstone mud crab shell disease investigation, and more recently as Coordinator of the Port Curtis Integrated Monitoring Program (PCIMP). Leonie was appointed to the position having established the collaborative PCIMP model, which involves members sharing the cost of monitoring, and sharing the ensuing results. A noteworthy output of the research is the compilation of data into an Ecosystem Health Report Card for Port Curtis of which Leonie was instrumental in compiling and successfully launching to the public in 2008. As assistant Project Leader Leonie was a member of the Coastal CRC contaminants team which undertook a series of valuable projects in Port Curtis over a six year period. Leonie has worked closely with PCIMP members and separately with individual industries on a variety of projects in Gladstone to investigate site issues and assist in minimizing and managing their environmental footprint.



Our Projects

Port Curtis Integrated Monitoring Program (PCIMP)

PCIMP is a collaborative project to assist in managing the ecosystem health of the Port of Gladstone. Currently there are fifteen participating industry and government members who pool their resources to sponsor the annual monitoring program and to share in the data. The program was designed and implemented by the Vision researchers in 2006 with the appointment of Leonie Andersen as PCIMP Coordinator. The program covers 175 sites across the harbour from the narrows to Colosseum Inlet and is valued at over \$750K per annum.

The researchers from Vision Environment are responsible for the experimental design of the project, the implementation of the fieldwork, laboratory analyses, statistical analysis and report preparation. Methodology closely adheres to US EPA and APHA protocols, and laboratory analyses are undertaken at reputable NATA accredited facilities. With the permission of the clients, summarized results have been included in the Port Curtis Ecosystem Health Report Card 2007 and re cited in Great Barrier Reef Marine Park Association publications.

Themes covered under PCIMP include:

1. Water Quality

A range of techniques are used to assess the water quality, including multiparameter water meters, data loggers, traditional water grab samples, passive samplers (DGT), biomonitor organisms and water column, algal and invertebrate communities.

2. Intertidal and Mangrove Monitoring

Under this program sediment physical properties and contaminant concentrations, mangrove condition and intertidal macrobenthic communities are assessed.

3. Oil Spill Assessment

Gladstone was impacted by an oil spill in January 2006, which was flagged as a national disaster. The researchers from Vision Environment undertook the mapping of the oil-impacted intertidal areas, in addition to an ecological risk assessment of the oil spill on Port Curtis intertidal areas. A series of short- and long-term field assessments were carried out on the intertidal areas over a two year period, in addition to toxicity testing of oil contaminated sediments. The results of these surveys have been published in international peer-reviewed publications.



4. Seagrass

Annual monitoring of seagrass beds in Port Curtis occurs in a collaborative project with QDPI&F and CQU. Under the program seagrass biomass, species composition and percentage cover are assessed using helicopter surveys. In addition data loggers deployed continuously record temperature, light and turbidity.



Dredge Assessment

The researchers from Vision Environment have undertaken several assessments of the impact of dredge activities in Port Curtis for the Gladstone Ports Corporation Ltd. since 2002, including the RG Tanna and Fisherman's Landing expansions. The design and methods established by the researchers were incorporated into GPCL Dredge Management Plan having been considered an acceptable approach by QEPA.

Discharge Monitoring

Several clients have enlisted the assistance of Vision researchers to design and implement monthly monitoring programs to monitor and assess the impact of their effluent in the mixing zone. When results are interpreted in combination with data gained from PCIMP monitoring for the extended receiving environment, we have been able to determine the extent of the impact and dilution of the effluent. Three years of continuous monitoring data has been gathered for one client providing an invaluable data set.

Dr Felicity Melville,
Director

Felicity has more than ten years of experience in environmental assessment, with particular focus on intertidal ecosystems and ecotoxicological analysis. Before coming to Port Curtis, Felicity was involved in projects with the NSW EPA, CSIRO Centre for Environmental Contaminants Research, Sydney Olympic Park Authority and the University of Technology, Sydney. Felicity also worked in one of Australia's best known commercial Ecotoxicology Laboratories, where she gained experience in a comprehensive array of toxicity testing. Since her move to Central Queensland, Felicity has been the Project Leader in the PCIMP Intertidal Monitoring Program and Oil Spill Assessment, which involved the experimental design, fieldwork, laboratory assessment and reporting of these projects. Felicity has extensive knowledge of the intertidal ecosystems along the east coast of Australia and has published several papers on this topic in international peer-reviewed publications.



Projects

Toxicity Testing

Apart from testing of the oiled sediments, several projects have been undertaken for clients to determine the toxicity of particular contaminants or discharges to locally relevant organisms. Results of toxicity tests can be used to develop standards for the 'safe concentration' of a contaminant or effluent, which may then be extrapolated to the ecosystem as a whole. Tests have included a range of organisms from algae and bacteria, to prawns and barramundi and have been conducted both in the laboratory and *in situ* (on site).

Other Projects

Vision researchers have undertaken several discrete projects for a number of clients including:

- Investigation of the toxicity and impacts of fluoride in the marine environment
- Risk assessment of an effluent in an estuarine environment
- Blue-green algae toxicity and accumulation in freshwater organisms (risk assessment)
- Biological effects of TBT contamination
- Biomarkers to detect environmental stress in marine organisms
- Gladstone mud crab shell disease investigation
- Contaminants in Gladstone freshwater barramundi
- Ecotoxicology of bitterns release
- Marine pest incursion investigation
- Fish kill investigations

Our Partners

Vision researchers continue to collaborate with scientists from other institutions including:

- CQUniversity
- Griffith University
- CSIRO Centre for Environmental Contaminants
- University of Western Australia
- University of Wollongong
- Marine Ecology Group, QDPIF



For further information please contact:



DR LEONIE ANDERSEN

PHONE: 61 7 4979 4400

FAX: 61 7 4979 4407

MOBILE: 0414 585 389

POST: PO Box 1267, GLADSTONE, QLD 4680

EMAIL: leonie@visionenvironment.com.au

www.visionenvironment.com.au