

Eric Claus, BSc(Civil Eng), MSc (Civil & Env. Eng)

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General

I have worked in civil and environmental engineering for over 25 years. Since June 2001, I have worked as an independent environmental consultant. My general professional goal is to provide engineering solutions to environmental problems using the most appropriate methods of communication (written reports, oral and visual presentations (PowerPoint, video) engineering and schematic drawings, Photo shopped photos). I've worked in a variety of areas including water quality, wastewater treatment, hydrology, Pipeline network analysis, noise, EIS, EMP and works approval preparation, Life Cycle Assessment, ESC Plans, air quality and guidance on negotiation with EPA and Council.

Education

M.Sc., Civil and Environmental Engineering, Utah State University, Logan, Utah, USA 1980

B.Sc., Civil Engineering, Loyola Marymount University, Los Angeles, California, USA 1978

M.A. (not completed) Political Science, Stanford University, California, USA, 12 units completed, 1984-85

Registration and Certification

California Registered Professional Civil Engineer No. 34481 (since 18 August 1982 – not renewed)

Other Skills

- Visual Presentations with MS PowerPoint
- Digital image modification with Photoshop and Paint Shop Pro
- Hydraulic analysis with HEC-RAS
- Noise Analysis with Renzo Tonin Environmental Noise Model
- Website design
- Digital movie production with Sony Video Camera, digital photos and Sony Movie Studio Platinum
- Water Pipeline Network Analysis using Pipes++ and InfoWorks WS
- Engineering Drafting, Analysis and Illustrations with SketchUp

Training

ASCE Hydrology and Hydraulics Short Course, A Practical Approach to the Hydraulic Design of Storm Sewers, Long Beach, California, USA, 26-27 October, 1991

Managing People at Work, 6-day course, Institute of Administration, Little Bay, NSW, September 1994

Project Management Skills, APESMA, Tom Crow, Lecturer, 3-4 Mar 2000

Effective Personal Productivity, prepared by Paul J. Meyer, Leadership Management International, December 2000 to February 2001

Environmental Management Systems/Lead Auditor Training Course. NCSI Training and Development 3-7 April 2006. Certificate of Attainment 002567, 8 May 2006

Australian Building Greenhouse Rating Scheme Accredited Assessor Training Course, September 2004

Claus Environmental Engineering, June 2001 to Present

DLM Environmental Consultants, Albury, NSW, March 2007 to present

Corowa Shire Council, Design 3.5km recycled water pipeline

Bland Shire Council, Operations and Maintenance Manual for West Wyalong Sewage Treatment Plant, Advice and Troubleshooting on changeover from Trickling Filter + Pasveer to Pasveer alone
Upgrading of Sewerage Infrastructure, Capital Works Program

Murray Shire Council Water network analysis using Pipes++, Moama Stormwater Harvesting Study including modelling the optimisation of storages over wet and dry years under varying runoff

Wagga Wagga City Council, Auditing of National Performance Report Indicators, Sewage Collection and Treatment

Forest Hill Sewage Treatment Plant, Operational Advice

Tumut City Council, Water Supply Network Analysis using InfoWorks WS, Batlow Water Supply Infrastructure Options Report, Sewage Treatment Options, Planning / Approvals for 50 ML storage on Little Gilmore Creek

Heinz Wattie, Wagga Wagga, Review of Wastewater Treatment Plant Operation

Pandrol Pty Ltd, Sept 2010 to present

ISO14001 Certification, Preparation of Environmental Management Systems, Certification received November 2011, Re-Certification 2014, ongoing training, legislation review, Environmental Audits, engineering advice

Teys Australia / Cargill Foods Australia Bomen Abattoir – 2001 to present

Expert Witness in Water Pollution incident. Preparation of wastewater, effluent irrigation, stormwater management and groundwater sections of the EIS. Statement of Environmental Effects for Irrigation Area

Austral Brick, Craigieburn, Victoria, Sept 2009 – present

Preparation of Works Approval for Vic EPA including coordination of AUSPLUME modelling

Austral Tiles / Eureka Tiles, Punchbowl, Sept 2001 – present

Noise Impact Assessment – Noise monitoring and determination of project specific Noise Levels from EPA Industrial Noise Policy. Modelling the surrounding residential areas using Environmental Noise Model (by Renzo Tonin and Associates) and developing strategies for meeting EPA noise requirements.

Landfill Action Plan – Development of procedures and monitoring program for safe management of the closed down landfill site. Design of landfill gas venting system.

Monitoring Groundwater and Landfill Gas - Monitoring and evaluation of results for EPA.

Stormwater Management Plan – Design of Stormwater ponds and review of existing erosion and sedimentation controls according to Dept of Housing Blue Book.

Air Quality, Noise Compliance and Landfill Management Reports - for Renewal of EPA Licence
Statement of Environmental Effects to Canterbury Council for approval of installation of 40m stack and thermal reactor to combust odours from kiln. PowerPoint presentation with digitally modified photos included.

Thermal Reactor Report – EPA requested a report on the specifications and operating conditions of the thermal reactor

Request for change to EPA Licence – NSW EPA / DEC has imposed changes to the EPA Licence on a few occasions that Eureka Tiles wished to contest. Reports were prepared to show that EPA's goals could be accomplished with some agreed changes to the Licence.

Response to EPA requests reports – It is often more efficient to prepare a written report including all the relevant data and submit it to the EPA for their review rather than have meetings where often more data is requested and questions are left unanswered dragging the resolution out. Several of this type of report have been prepared for Eureka Tiles.

Eureka Tiles, Ballarat, Victoria, September 2003 – July 2004

Environment Improvement Plan as a result of inspection and request by EPA Victoria

Waterways Constructions, 2006-09

Presentations for Environmental Management (including legal, sedimentation, booms, spills, noise, role playing and a quiz) and Project Planning (Quality, Safety, Environmental, JSA's)

Baiada Poultry, June-Sept 2008

Expert Witness in Land and Environment Court

Streets Ice Cream, Minto, NSW March to June 2007

Preparation of wastewater treatment system Feasibility Study with DLM Consulting

Walter Construction Group, May 2002 – February 2005

Environmental Management Presentations for projects at Kurri Kurri Wastewater Treatment Plant, Dendrobium Coal, Illawarra Wastewater Treatment Plant and Pipeline, Transgrid Sydney Tunnel, Georges River and Parramatta Station Upgrade. Four hour presentations for workers, engineers and subcontractors incorporating specific environmental requirements of each job and environmental legislation.

Christmas Island IRPC and Construction Village EMPs – Preparation of EMP's to meet of federal government requirement that the site be constructed using "best practice in environmental management." Also included final audit of the site in May 2003 when the job was closed for redesign.

Safety Course Environmental Presentation – 90 minute basic environmental presentation as part of 4 day safety course given to every WCG employee

Environmental Audits of about 15 Construction and Building sites, preparation and presentation of 11 Environmental Training four hour environmental training courses for construction managers and engineers, Member of the Barton Group EBETF

Transgrid Tunnel Water Quality – Assessment of the water quality (primarily Manganese and Iron) of the discharge from tunnel seepage and impacts on receiving water

Hunter Environmental Services, Nov 2002 – September 2004

Mt Annan GPT – Design and drafting of GPT at Mt Annan Botanical Gardens, construction supervision

Glen Innes GPT – Design and drafting of GPT on Rocky Ponds Creek in public park

Meeks Crescent Faulconbridge, Rain Garden – Design and drafting of a rain garden to reduce hydraulic impact on local stream and provide visual amenity

Sand Testing - As part of the Meeks Crescent project, various sands were tested for hydraulic conductivity to ensure that the rain garden would work as required.

Ecoflex Australia, Sept 2002 - present

Life Cycle Assessment – Comparison of greenhouse, water pollution, air pollution, solid wastes and other environmental impacts from Ecoflex products and competing technologies

Water quality impact of tyres in the environment review of literature on tyres and rubber in aquatic environments. Paper to be presented at Environmental Engineering Conference July 2005

Durability of tyres – Assessment of thousands of years for breakdown of tyres in the environment

Water quality monitoring program for Ecoflex projects in Newcastle area

Corporate environmental advice for discussions with Councils, DIPNR, EPA

Boulderstone Hornibrook Bilfinger Berger Cross City Tunnel Joint Venture, April 2003 to Jan 2005

Erosion and Sedimentation Control Consultant, Site inspections and worker presentations

Boulderstone Hornibrook, Brisbane, June 2004 to 2006

Christmas Island Stage 2 EMP – Preparation of Environmental Management Plan and liaison with Environmental Officer, Indian Ocean Territories and Conservator CI National Park.

Christmas Island Audits – IRPC site, Village site, Central Area Workshops site, Northwest Point Road including movie showing locations of stockpiles on roadside
Applications for Works Approval and work in National Park

Arengo, Silverwater, NSW, June-Sept 2007
Environmental Management Presentations

Sainty and Associates, Jan 2002 – Feb 2004

Porters Creek Wetland Water Quality, Assessment of the impacts of a new road and water main through the wetland and recommendations for mitigation measures.

HEC-RAS Analysis of flow through Railway Road Culverts / Bridges Assessment of water quality impacts on Porters Creek wetland resulting from new road construction. The assessment included analysis of flows under various conditions using HEC-RAS

Barnett's Rainbow Reach Oysters, South West Rocks, March-April 2002

Assessment of wastewater requirements and evaluation of options for treatment and disposal

HLA-Envirosciences, Sydney, NSW, Manager, Construction Environmental Management and Principal, Water and Wastewater Engineering , 1992 to June 2001

Syntroleum Sweetwater Project Environmental approvals and facilitation, 1999-August 2001

Syntroleum proposed to build a natural gas to Liquid Hydrocarbons Plant in Western Australia. My role was to complete the environmental approval and facilitate the other approvals such as native title and works approval. Secondary roles include liaison with the client regarding bureaucratic and political conditions in WA, liaison with government authorities (DRD, DME, DEP, Main Roads, Western Power, Water Corporation, ISO, etc), financial institutions, NWSGas, Apache Energy, Industrial Relations and suppliers and other general assistance in getting approval and funding for the project. I also prepared the documents for the Works Approval and prepared an environmental review for a Temporary Offloading Ramp at Hearson Cove 2.5km from the site.

Expert witness in the Land and Environment Court

2001 - Trade waste from a factory in Botany – Assessed quantity and quality of the waste stream, made calculations relative to potential flow in the receiving water and made assessment of environmental harm

1999 – Failure of erosion controls on a construction site near Orange - Assessed quantity of sediment flow and deposition in impacted creek and made assessment of environmental harm

1999 – Impact of development on creek in Hornsby shire - Assessment of potential damage from erosion and sedimentation

1998 – Trade waste overflow from factory in Sydney - Assessed quantity and quality of waste discharged and quality of the receiving water and made assessment of environmental harm

1996 - Trade waste overflow from factory in Wagga Wagga - Assessed quantity and quality of waste discharged (BOD' phosphorus and nitrogen) and made assessment of environmental harm

Cargill Foods Australia, Bomen Abattoir, Wagga Wagga, EIS, 1997-98

Cargill's proposal was to irrigate the treated effluent onto its paddocks. The EIS required an analysis of the soils and irrigation rate including a model of the wastewater application. I prepared the model using a simple spreadsheet, based on the NSW EPA model for the utilisation of treated effluents for irrigation.

Homebush Olympic Site, Occupational Health and Safety Monitoring, Waste Services, 1995-2000

Waste Services require daily dust and air monitoring at the sites being rehabilitated for the Olympic site. I managed the onsite operation which also included hazardous materials testing.

Environmental Monitoring and Management, M5, M4, M2 Motorways and Airport Link Railway
Dust Deposit Gauge, High Volume Air sampler and PM10 HVAS monitoring, reporting and advice
Noise and Vibration monitoring, reporting and advice. Water sampling, analysis, reporting and advice.

New Sydney Showground Construction, John Holland Construction and Engineering, 1995-96
I was the Site Environmental Representative for the Construction of the New Sydney Showground. My role was site monitoring and liaison with EPA

City West Redevelopment, Department of Public Works, 1993 – 1994
I was the Site Environmental Representative for the Construction of the City West Redevelopment around Darling Harbour and Pyrmont. My role was site monitoring and liaison with EPA

Rouse Hill Infrastructure Project, John Holland Construction and Engineering, 1992-95
I managed a staff of three that covered the entire 50 square kilometre site from JHCEs site offices in Castle Hill. The primary task was construction environmental monitoring including air, water, flora and fauna, landfill leachate, vibration and noise, advice to JHCE and liaison with EPA, Blacktown Council and Baulkham Hills Council. Secondary tasks included the preparation of 12 erosion and sedimentation control plans and about 30 Noise Impact Statements.

Plumpton Park Wetlands Water Sampling and Assessment, Blacktown Council, 1993-95
Blacktown Council built a wetlands in Plumpton Park in an effort to control runoff quality and peak flows from a 50 hectare residential catchment. I collected water quality data in wet weather events and assisted Geoff Hunter in the assessment of the data. The research resulted in a paper given at the Wetlands conference in Townsville, September 1995.

Erosion and Sedimentation Control Plans. 1992-2001
I've prepared more than 50 Erosion and Sedimentation Control Plans (sometimes called Soil and Water Management Plans) for construction, rural and industrial sites. The Calculation of peak runoff is done using Australian Rainfall and Runoff. Recently other factors have been determined based on the NSW Department of Housing "Blue Book."

Noise Impact Statements, 1992-2001
I've prepared more than 30 Noise Impact Statements primarily for construction projects and EIS's to assess whether the predicted noise levels for construction or a proposed development would remain below the EPA or Council Criteria. Simple distance attenuation models or the Renzo Tonin model were used.

Life Cycle Assessments, 1994 – 2001
Ecoflex Walls – Comparison of recycled tyre walls with conventional block walls and timber construction walls
Austral Pipe – Comparison of PVC and Clay pipe
Macquarie Generation – Comparison of alternative Fuels to Black Coal
Concrete Constructions – Comparison of road building materials and bridges

Civil Engineer, Haaland and Associates Consulting Engineers, Thousand Oaks, California, 1990 to 1992

Haaland and Associates was a Civil Engineering consultant for residential and commercial developments in the Thousand Oaks, Simi Valley and Ventura County area in Southern California. My principal role was as designer of earthworks and grading, stormwater, roads, residential developments and sewers. I did Hydrology and hydraulics for 5 to 80 hectare developments including inlet grate frequency and sizing and pipe and channel sizing for approval by the local authority. Planning studies and flora and fauna studies. Bob Haaland would often present several fully designed options to the Planning commission at the Planning commission hearing so that the client could get an approval on

the night rather than being forced to re-apply and lose valuable time. My role was often to work out the technical problems with grading, stormwater, sewers and roads so that the options would be acceptable to the engineers at Council.

Lecturer, Centre for Waste Management, University of New South Wales, Joint Departments of Civil Engineering and Applied Science, 1986 to 1990

As the first lecturer in the internal and external post graduate Waste Management course, I was required to establish the framework of the course in conjunction with Dr. David Barnes and Dr. Michael Knight. I also prepared the course notes, assignments, lectures, taught and assessed the students enrolled in five of the subjects that were part of the course. The courses included Waste Management Science (Geology, Microbiology, Chemistry), Solid Waste Management (Landfill Design), Management of Wastes (Collection, Treatment and Recycling), Industrial Waste Management, Hazardous Waste Management. I also taught Management of Dangerous Materials in the Department of Safety Science.

I also coordinated and was the primary lecturer in the Centre's one week Short Courses in Solid Waste Management.

Director of Basketball Coaching, NSW Basketball Association, June 1985 to December 1985

My role was to "coach the coaches" in the Associations around the State and run the "Satellite" junior program, with the intention of preparing NSW junior players for the AIS

Graduate Student, Political Science, Stanford University, Palo Alto, California 1984-85

I completed 12 units toward a Masters Degree in Political Science. Subjects included Macroeconomics, Game theory, Political theory, Statistics and Econometrics. I also did research on voting trends of US congressmen and Appropriation of Funds to Government Departments.

Semi-Professional Basketball, Bankstown Bruins, NBL, 1983-84

I played two seasons in the National Basketball League as one of Bankstown's allowed "imports." We were 12-10 in 1983 and 10-14 in 1984. During this time I also coached High School teams at Trinity Grammar and Knox Grammar and taught a Basketball class to Physical Education majors at Ku-ring-gai College of Advanced Education.

Civil Engineer, Lee and Ro Consulting Engineers, Los Angeles, California, USA, 1980 to 1983

Lee and Ro was a small Civil and Mechanical Engineering firm with only 6 people when I joined in 1980. This meant that I did everything that was required from field investigation, preparation of specifications, small civil and mechanical design jobs, report preparation and accounting. Lee and Ro had 27 people when I moved to Australia in 1983 including an office in San Diego, which I manned for them from August 1982 to January 1983.

Graduate Student and Research Assistant, Utah State University, Logan Utah, 1978 to 1980

Graduate Course in Water and Wastewater Treatment, Research Project: *Lagoon and Intermittent Sand Filter Treatment of Dairy Wastewaters*, Major Professor Joe Middlebrooks. My research required repairing the sand filters, pumps and pipes, establishing a sampling program, sampling and doing the analysis of the water into the lagoon, into the filters and out of the filters and analysing the data for the research report and my thesis. Subjects included Wastewater Treatment, Potable Water Treatment, Analytical Chemistry, Physical Chemistry, Microbiology, Limnology, Computer Science and Statistics.