



Andrew Macleod

B.Sc (Hons.) CPSS CPESC

Director and Principal Scientist



SEEC

Strategic Environmental and Engineering Consulting

Andrew is an expert in all aspects of soil and water management. He is a recognised industry leader in construction-phase erosion and sediment control and conducts regular training, consulting and expert witness services in this field.

Andrew has worked on a wide range of sites including mines, gas projects, major infrastructure projects (road and rail), pipelines and subdivisions. He is also the President of the International Erosion Control Association (IECA) in Australasia.

Andrew is a Director of SEEC and one of our Principal Environmental Scientists. He is a Certified Professional in Erosion and Sediment Control (CPESC) and a Certified Professional Soil Scientist (CPSS).

Qualifications

- Bachelor of Science (Applied Physical Geography) with Honours. UNSW (1999)
- Certified Professional in Erosion and Sediment Control (CPESC #3678)
- Director, International Erosion Control Association (IECA) Australasian Chapter 2011 to present
- Certified Professional Soil Scientist (CPSS # 1152)
- President, International Erosion Control Association (IECA) Australasian Chapter 2012 to present
- Director, Bowral Cricket Club 2011 to present
- Member of the Australian Society of Soil Science Incorporated (ASSSI)
- Member of the International Erosion Control Association (IECA)

Awards

- Kevin Bennet Memorial award for the Best Paper: "MUSIC Calibration Based on Soil Conditions." Stormwater Industry Association (SIA) NSW and Qld Joint Annual Conference, 2008.
- Merit Commendation for Education or Innovation: SEEC Half-Day Erosion and Sediment Control Workshop, Stormwater Industry Association Awards, 2010.

Papers Presented

- "50 Shade of Blue Book: Erosion and Sediment Control Compliance." IECA, SIA NSW, EA Joint Conference, Sydney, 2015
- "Watching the Grass Grow – A Field Study of Rehabilitation in Southern Queensland". IECA National Conference, Wellington, NZ 2014.
- "Erosion reductions using spray-on soil stabilisers." IECA National Conference, Gold Coast 2013, and IECA Environmental Connection Conference, Nashville, Tennessee, USA 2014.
- "CSG: Coal Seam Gas or Crops, Soils, Grasses. Lessons for Effective Rehabilitation on Gas Projects" IECA Mining Rehabilitation Conference, Hunter Valley 2013.
- "From Construction Phase to Completion: Sediment Pollution in Stormwater" SIA NSW and Vic Joint Annual Conference, Albury 2009.
- "MUSIC Calibration Based on Soil Conditions." SIA NSW and Qld Joint Annual Conference, Gold Coast 2008.

Areas of Expertise

- Construction site erosion and sediment control
- Water sensitive urban design
- Soil survey/soil landscape/land capability mapping
- Water quality modelling and surface water management
- Site rehabilitation and revegetation
- Research projects and field trials
- Dryland salinity (rural and urban)
- Fluvial and landscape geomorphology
- Onsite wastewater management
- Environmental impact assessment
- Presentation of seminars/workshops on soil and water management
- Water treatment, sediment and nutrient control

Short Courses/Workshops Completed

- WorkCover Occupational Health and Safety General Induction for Construction Work (CGI01253136SEQ1)
- Rail Industry Safety Induction Certificate (NSW Railcorp - No 0010052440)
- GIQ – Coal Industry Surface Induction. January 2013
- MUSIC Version 2 and 3 Training, CRC for Catchment Hydrology (now eWater). March 2004 and May 2005
- Arrow Energy Induction. January 2013
- Microsoft Access Database Management and Design Training. March 2001
- ESRI ArcGIS 8 Training. September 2003
- Air Photo Interpretation Course. November 2000
- Advanced driver training. December 2010
- 4WD Safe Operations. June 2001

Career Highlights

Director, SEEC; August 2007 to present.

- Staff, client and business management.
- Recruitment and training.
- Budgeting and project management.
- Expert advice on erosion and sediment control and soils.
- Expert advice on water cycle management and water quality modelling issues.
- Preparation and delivery of teaching programs on erosion and sediment control and soils.

Spatial Analyst, NSW Department of Infrastructure, Planning and Natural Resources; March 2003 to Jan 2004.

- Soil landscape mapping
- Map analysis and derivation using GIS
- Derivative map development
- Spatial database maintenance and development.

Recent Projects

- Expert soil conservationist and erosion and sediment control specialist for road and rail projects including Tarcutta Hume Alliance, Bruce Highway C2CA3 and Section C, Gateway Upgrade North, South-West Rail Link, Southern Sydney Freight Link, North-West Rail Link, WestConnex 1b and 2.
- Concept erosion and sediment control design and management plans for RangeLink tender, Toowoomba Second Range Crossing and for Lend Lease C2CA2, C2CA3 and C2C-C tender.
- Wet-season ESCPs for Ichthys Project, Darwin.
- Wet season NT EPA auditing and certification of contractor works for Ichthys Project, Darwin.
- Teaching comprehensive 4-day workshops about erosion and sediment control on construction sites. Recent workshops run over four days have been conducted in Sydney and Brisbane.
- Review of soil and water management procedures for the NSW Transport Construction Authority (TCA).
- Preparation of Surface Water and Soils Assessments for Dargues Reef Gold Mine, Majors Creek via Braidwood. Plus expert witness in the NSW Land and Environment Court for same project.
- Preparation of Technical Guidance Manual for cross-formation drainage and erosion and sediment control during major road construction (for NSW RTA).

Environmental Scientist, Morse McVey & Associates; Jan 2004 to Aug 2007.

- Preparation of soil and water management studies and reports.
- Preparation of water quality modelling and management plans.
- Preparation of erosion and sediment control plans.
- Teaching workshops on erosion and sediment control on construction sites.

Soil Surveyor and Technical Officer, NSW Department of Land and Water Conservation; Feb 2000 to March 2003.

- Development and maintenance of soil landscape database
- Field soil survey and mapping
- Soil conservation and land management
- Interpretation of laboratory results.

- Expert witness in the NSW Land and Environment Court on water quality issues, proposed subdivision in sensitive upland swamp and escarpment areas, Maddens Plains.
- Preparation of Surface and Ground Water Management Plans, Nowra Brickworks Quarry, Dargues Reef Gold Mine, Rocla Green Valley Quarry, Tomingley Gold Project.
- Erosion and sediment control management for MCJV Narrows, Gladstone Qld.
- Pipeline erosion management, Oberon, NSW (APA Group) and Moranbah (Arrow Energy).
- Expert witness in the NSW Land and Environment Court on fluvial geomorphology and erosion and sediment control, The Oaks.
- Preparation of demonstration erosion and sediment control drawings for inclusion in Technical Guides, Sunshine Coast City Council (SE Queensland).
- Preparation and delivery of half and full-day workshops on best-practice erosion and sediment control throughout NSW and Qld. Recent clients include Camden Council, Wyong Council, Burton Contractors, Gympie Shire Council, Hunter Water, Leighton Contractors, Fulton Hogan, Gold Coast City Council, Downer EDI, Transport for NSW, Railcorp and Arrow Energy.
- Develop and prepare template deemed-compliance Erosion and Sediment Control Plans (ESCPs) for Arrow Energy gathering network, Surat and Bowen Basins, Qld and for Santos, NSW Pilliga Gas Exploration.
- Preparation and delivery of erosion and sediment control workshops on main road and rail projects. For the Centre for Environmental Training (CET).
- Expert advice regarding erosion and sediment control for Sydney rail projects including Glenfield to Leppington Rail Line, Southern Sydney Freight Link, Glenfield Transport Interchange.
- Expert advice and planning for soil and water management - proposed downhill mountain bike track, Hassans Walls (Lithgow).
- Pre-tender and design assessment of construction-phase soil and water management issues; proposed Nelligen Bridge, NSW, Bega Bypass, NSW, Burrill Bridge upgrade, NSW, Kapooka Bridge realignment, Wagga Wagga, NSW.
- Coordination of rehabilitation trials, Dalby Qld (Surat Basin). For Arrow Energy.
- Prepare and deliver toolbox training sessions for all contractors on the commuter carparks program, Sydney Greater Metropolitan area; TfNSW.
- Preparation of many Water Cycle Management Studies and Surface Water Management Plans for various projects including:
 - Rural residential subdivision, Goulburn
 - Golf resort, Darkes Forest
 - Quarry and mine developments, Southern Highlands and Central West.
- Coordination of field trials of soil stabilisers to determine erosion reductions under rainfall, Toowoomba, Qld and Picton, NSW.
- Soil surveys to identify development constraints and opportunities for proposed bypass road, Orange.
- Fluvial geomorphology assessment of parts of the Nepean and Georges Rivers for proposed Sewage Treatment Plant discharge points (Sydney Water).
- Preparation of Onsite Wastewater Management Studies for numerous rural and rural residential developments; Southern Highlands, Hunter, Blue Mountains etc. Also for a commercial and tourist development at Darkes Forest.
- Preparation of Construction-phase Soil and Water Management Plans for various developments including:
 - Residential and industrial subdivisions, Southern Highlands
 - Majura Parkway, ACT
 - North-West Rail Link, Sydney.
- Assessment of water sensitive urban design principles for proposed redevelopment of Lawson Town Centre in the Blue Mountains.
- Preparation of water cycle modelling templates and input data for MUSIC modelling. Direct appointment tenders by the Sydney Catchment Authority (SCA).
- Expert advice and planning for soil and water management - proposed upgrade of moto-cross facility, St Ives Showground.

Contact Details

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