Erosion & Sediment Control
Level 3

Overview
The Erosion & Sediment Control Level 3 course will provide attendees with the opportunity to improve their decision-making process with regards to erosion and sediment management at all stages of the project from concept through to completion. Participants will gain knowledge and skills to develop and/or assess an Erosion and Sediment Control (ESC) plan against the requirements of the IECA 2008 “Best Practice Erosion and Sediment Control” guideline.

This course will also address the theory component for candidates wishing to complete the IECA assessment requirements (fundamentals exam and take home plan preparation assignment) to attain CPESC qualification.

Learning outcomes
Participants will gain:
- An awareness of the impacts of poor onsite ESC management on the receiving environment
- An understanding of relevant legislation and requirements
- Knowledge of soil types, properties and management techniques
- An awareness of current best practice for managing ESC and the associated limitations
- An appreciation of the effectiveness of different erosion and sediment control techniques
- An understanding of construction and maintenance requirements for control measures (including cost control, resource planning and onsite efficiency)
- An understanding of construction site hydrology and hydraulics
- Knowledge of sediment basin design and operation
- An understanding of how to achieving successful revegetation on all sites
- An awareness of water quality monitoring (turbidity, TSS, pH)
- Knowledge of inspection and auditing requirements
- An understanding of ESC plan preparation process

Who should attend
This course has been specifically designed for people tasked with preparing, implementing or assessing erosion and sediment control plans.

Typical attendees include:
- Planners
- Designers
- Auditors

Attendees must have an existing understanding and experience with erosion and sediment control. A base level of knowledge surrounding soils and the fundamentals of hydrology and hydraulics is preferable.

Content
Introduction
- Erosion risks and soils
- Overview of relevant legislation
- Forms of erosion and erosion drivers
- Erosion risk assessment (RUSLE) and selection of appropriate control measures
- Key soil properties (physical and chemical)
- Soil sampling and analysis
- Sodic & dispersive soils
- Soils as a growing media

16 hours CPD Points for CPEng & RPEQ
Sediment and erosion controls
- Role of sediment control measures and compliance requirements for capture of sediment laden runoff
- Effectiveness and limitations of sediment controls
- Construction and maintenance requirements for all types of sediment controls
- Sediment basin design standards, operation, treatment and maintenance requirements
- Emerging treatment technology
- Using erosion control techniques to manage soil stockpiles, stabilised site access, temporary work areas and to achieve final site stabilisation
- Comparison of various erosion control products performance, suitability for nominated works and installation and maintenance requirements

Drainage control
- Drainage design principles and standards
- Managing runoff and controlling erosion
- Comparison of drain lining options and rock check dams
- Works within a waterway and temporary crossings
- Calculating peak flow using rational method
- Manning’s equation and sizing of drains and chutes
- Design sizing for sediment basins and spillways

Plan preparation
- Process and requirements for preparing an ESC plan
- Plan preparation – practical exercise
- Complete the IECA Fundamentals Exam (optional)

Delivery (2 Days)
This course is delivered in partnership with Terry Clark of the Topo Group. Terry has trained over 1,000 public works personnel within QLD, NSW and NT. Terry holds the internationally recognised accreditation ‘Certified Professional in Erosion and Sediment Control’ (CPESC) and has many years of experience in planning, implementing and managing ESC aspects on a wide variety of public works projects.

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