



# PROFESSIONAL SHORT COURSES 2017



**ESC 3 - ADVANCED TRAINING  
PLAN PREPARERS, DESIGNERS & AUDITORS**

## COURSE OVERVIEW

The ESC 3 course is delivered over 2 days (16 PDUs) and is specifically focussed at those tasked with preparing, implementing or assessing erosion and sediment control plans. The course will provide attendees with valuable knowledge which will improve ESC decision making at all project stages (tendering to final project delivery). In addition, it will cover the theory required to suitably prepare candidates to complete the IECA assessment requirements (fundamentals exam and take home plan preparation assignment) to attain CPESC qualification.

It is not a prerequisite for attendees to have completed ESC 1 or ESC 2, however 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.

Completion of the ESC 3 course will assist attendees in developing or assessing an ESC plan which is in accordance with the requirements of the IECA 2008 "Best Practice Erosion and Sediment Control" guideline.

Courses are delivered by Terry Clark (Director of Topo), who has trained over 1,500 construction and public works personnel within QLD, NSW, VIC, NT and TAS. 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 infrastructure, development and public works projects.



## LEARNING OUTCOMES

- + Knowledge of the IECA (2008) Best Practice Erosion and Sediment Control Manual
- + Awareness of the impacts of poor onsite ESC management on the receiving environment
- + Review of relevant legislation and requirements
- + Soil types, properties and management techniques
- + Awareness of what is considered best practice for managing ESC and the associated limitations
- + Appreciation of why some erosion and sediment control techniques are more effective than others
- + An understanding of construction and maintenance requirements for drainage, erosion and sediment control measures (relevant to cost control, resource planning and efficiency onsite)
- + Construction site hydrology and hydraulics
- + Design and operation of sediment basins (including auto dosing)
- + Achieving successful revegetation on all sites
- + Water quality monitoring (turbidity, TSS, pH)
- + Inspection and auditing requirements per IECA (2008)
- + ESC plan preparation process

## COURSE PRESENTER

Terry is an Environmental Engineer with over 13 years direct experience in the area of soil and water management, specifically erosion and sediment control. Terry regularly presents a range of ESC training courses and is highly respected within industry as both a technical expert but also someone who can clearly communicate and provide a practical perspective. Terry has been invited by Griffith University to sessional lecture Engineering Design and has previously presented ESC training at Sydney TAFE.



Terry is a Certified Practitioner in Erosion and Sediment Control (CPESC), a Certified Professional Soil Scientist (CPSS), a Registered Professional Engineer of QLD (RPEQ) and holds a Cert IV in Training and Assessment. Terry has broad experience within the environmental field having previously worked within both private industry and Government. He has developed an appreciation and detailed understanding of the entire development process from the initial project conception, design and construction phases and subsequent final delivery.



## COURSE PROGRAM - DAY 1

### 1. INTRODUCTION, EROSION RISK & SOILS

- + Introduction to the issue of erosion and consequences of sedimentation on our environment
- + Overview of relevant legislation
- + Forms of erosion and erosion drivers
- + Erosion risk assessment (RUSLE) and selection of appropriate sediment and erosion control measures
- + Key soil properties (physical and chemical)
- + Soil sampling and analysis
- + Sodic & dispersive soils
- + Soils as a growing media

### 2. SEDIMENT CONTROL

- + 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 including auto dosers (rainfall and flow based activated) and rapid settling coagulants & flocculants
- + 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



## COURSE PROGRAM - DAY 2

### 4. PLAN PREPARATION

- + Requirements of a ESC plan and process to develop one
- + Plan preparation exercise to prepare staged plans, identify control measures, locate and size sediment and drainage control measures and identify suitable erosion control practices
- + Sit the IECA Fundamentals Exam (optional)

### 3. DRAINAGE CONTROL

#### INCLUDING CONSTRUCTION SITE HYDROLOGY & HYDRAULICS

- + Principles of drainage design and construction standards for temporary drains and diversions
- + Use of clean and dirty water diversion drains to manage runoff and control erosion generation
- + 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



## COURSE FEES

### PRIVATE COURSE

- + Presentation onsite (maximum 10 attendees to ensure high quality learning environment)
- + Flexible timing to suit work rosters
- + Printed course notes, electronic resources (USB comprising copy of course notes, design resources)
- + Certificate of attendance for attendees (16 PDUs)
- + **\$14,500 ex gst**
- + Travel expenses for presenter may be additional depending on site/venue location

### PUBLIC COURSE

- + Attendance at one of the advertised courses
- + Limited to 10 attendees
- + Includes catering (morning tea, lunch and refreshments), venue hire and training tools
- + Printed course notes, electronic resources (USB comprising copy of course notes, design resources)
- + Certificate of attendance for attendees (16 PDUs)
- + **\$2,250/person ex gst**

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