TOPO.

ESC 3 Advanced Training

PLAN PREPARERS, DESIGNERS & AUDITORS

Course overview

The ESC 3 course is delivered over 3 days (24 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) and assist developing or assessing an ESC plan which is in accordance with the requirements of the IECA 2008 “Best Practice Erosion and Sediment Control” document and its revised appendices.

The course has been developed to be practical and engaging, with attendee numbers limited to provide the best learning environment.

Registration for the ESC 3 course includes attendance of Topo’s Type A, B & D sediment basin design course (day 3).

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

View course dates & secure your spot for ESC 3 advanced training here →

IECA
International Erosion Control Association
APPROVED TRAINING

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 Type A, B and D basin sizing)
- Achieving successful revegetation on all sites
- Water quality monitoring (turbidity, TSS, pH)
- Inspection and auditing requirements per IECA (2008)
- ESC plan preparation process

Course program

DAY 1

1. INTRODUCTION AND EROSION RISK

+ Introduction to the issue of erosion and consequences of sedimentation on our environment
+ Environmental impacts and construction phase water quality performance objectives
+ Overview of relevant legislation
+ Forms of erosion and erosion drivers
+ Erosion risk assessment (RUSLE) and selection of appropriate sediment and erosion control measures

2. SOIL PROPERTIES AND MANAGEMENT

+ Key soil properties (physical and chemical)
+ Soil sampling and analysis
+ Understanding sodic & dispersive soils
+ Acidic or alkaline soils
+ Soil fertility, compaction and handling
+ Management techniques for problem soils
+ Soils as a growing media

3. 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

4. DRAINAGE CONTROL

+ 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

DAY 2

5. EROSION CONTROL & REVEGETATION

+ 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

6. HYDROLOGY & HYDRULICS

+ Principles of drainage design and construction standards for temporary drains and diversions
+ Calculating peak flow using rational method
+ Manning's equation and sizing of drains and chutes
+ Design sizing for sediment basins and spillways
+ Worked examples and design excercises

7. 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

DAY 3

8. TYPE A, B & D DESIGN COURSE

+ Design considerations to maximise basin performance and efficiency
+ Basin construction and QA
+ Performance monitoring and adaptive management
+ Learnings from past success and failures

Download Type A, B & D Sediment Basin Design Course brochure for more information →

Course presenters

TERRY CLARK

Terry Clark is an Environmental Engineer with over 18 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 is a Certified Practitioner in Erosion and Sediment Control (CPESC) and Director of the Australasian Sector of the International Erosion Control Association (IECA). He is also a Registered Professional Engineer of Queensland (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.

KYLE ROBSON

Kyle is recognised as a specialist and thought leader in the field of erosion and sediment control and has been involved in some of the largest projects in Australia, as well as policy and industry guideline preparation. Kyle is a Registered Professional Engineer of Queensland (RPEQ) and Certified Professional in Erosion and Sediment Control (CPESC). In addition, he is a former President of the Australasian Sector of the International Erosion Control Association (IECA).

Kyle has been at the forefront of high efficiency sediment basin design in Australia and was the Project Manager and member of the Technical Committee responsible for producing the revision of Appendix B, Sediment Basin Design and Operation (IECA, 2018). Kyle has presented a range of training courses and delivered a number of technical talks at industry events. He has also written and subsequently had published a paper titled “An assessment of the performance of current best practice sediment basins Vs high efficiency sediment basins based on modelling and field studies”.

Course inclusions

+ Engaging and insightful course developed and presented by industry experts (see previous page)
+ Attendance of Topo's Type A, B & D sediment basin design course
+ Design exercises to prepare detailed ESC plans, including sizing of critical sediment and drainage measures
+ Supply of detailed course notes, design tools, jar testing kit and certificate of attendance
+ Full catering (morning tea, lunch, afternoon tea and refreshments)

Course fees

PUBLIC COURSE

+ Attendance at one of the advertised courses, including Topo's Type A, B & D basin design course
+ Limited to 10 attendees (days 1 and 2)
+ Includes venue hire and catering (morning tea, lunch, afternoon tea and refreshments)
+ Course notes, electronic resources (USB comprising copy of course notes, design resources)
+ Certificate of attendance for attendees (24 PDUs)
+ **$2,950/person ex gst**

View course dates & secure your spot here →

PRIVATE COURSE

+ Presentation onsite at your place of work or online
+ Flexible timing to suit work rosters
+ Course notes, electronic resources (USB comprising copy of course notes, design resources)
+ Certificate of attendance for attendees (24 PDUs)
+ Enquire for a fee proposal to meet your training needs

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