



TOPO.

An aerial photograph of a wide, winding river in a dry, arid landscape. The river is a deep brown color, contrasting with the light tan, sandy soil. The river meanders across the frame, with a prominent U-shaped bend in the lower half. The surrounding land is flat and sparsely vegetated with small, dark shrubs. In the top right corner, there are five vertical teal bars of varying heights. The overall scene conveys a sense of environmental challenge and the need for engineering and education.

**Environment.
Engineering.
Education.**



The lean engineering firm

Topo is a boutique consultancy stripped of the non-essentials. Topo was formed on the premise to be agile, adaptable and progressive. We provide value to our clients where it matters.

No hierarchy. No bureaucracy

A team of ambitious professionals is more powerful than an organisation constrained by bureaucracy, titles and internal competition. By encouraging teamwork, we increase quality and efficiency of our services.

Experienced and driven

All Topo staff are highly experienced and recognised as leaders in their respective fields. When you engage Topo, it is this experience that you receive. We pride ourselves on delivering innovative, practical and efficient solutions for our clients.





OUR CORE SERVICES

Erosion & Sediment Control

Topo are industry leaders in ESC, having wide ranging experience and providing innovative yet practical ESC solutions to clients.

Environmental Management

Topo's environmental expertise extends across several specific disciplines as well as providing broad site based environmental management assistance.

Stormwater Management & Flood Assessment

Topo staff have considerable experience in hydrologic and hydraulic modelling and water sensitive urban design.

Education & Training

Topo's professional training courses aim to educate our clients and peers in key areas of our discipline. We offer formalised training as public and private courses.



Erosion and Sediment Control



Topo has four staff that hold the internationally recognised Certified Professional in Erosion and Sediment Control (CPESC) accreditation. Two of our Topo Directors, Kyle Robson and Terry Clark have been elected and are currently serving on the board of directors of the Australasian Sector of the International Erosion Control Association (IECA).

We have developed significant practical experience with respect to ESC through our planning, field and secondment project experience acting in contractor, client and regulatory roles. Combined, this enables us to develop certifiable and practical ESC plans and provide experienced advice in the field. We pride ourselves on the quality of our plans and advice and strive to provide innovative, effective and efficient solutions.

We provide:

- + Conceptual and detailed ESC plans
- + CPESC and RPEQ review and certification
- + Auditing and compliance assessment
- + Site advice and support
- + Strategic planning and Policy
- + Education and Training
- + Expert witness
- + Water quality monitoring and planning
- + Sediment basin design and operational advice
- + Coagulant/Flocculent jar testing and advice





Environmental Management

Topo's environmental expertise extends across several specific disciplines as well as providing broad site based environmental management assistance. Our specific environmental management skills centre around soil, water, air quality, noise & vibration and sustainability. These supporting and complementary skills provide our clients with practical advice to plan and manage investigations and effectively plan and manage onsite environmental risks. Our skills and experience in environmental management perfectly compliment our entire service offering and allows us to holistically approach specific problems or scenarios. Our advice in the field of soil management is supported by past accreditation as a Certified Professional Soil Scientist (CPSS).

We provide:

- + Soil testing and analysis
- + Soil characterisation and mapping
- + Dispersive soils investigation and development of Dispersive Soils Management Plans (DSMP)
- + Interpretation and rehabilitation advice
- + Acid Sulfate Soils (ASS) investigations and planning, including ground and surface water impact assessment, ASS Management Plans and onsite ASS sampling and verification
- + Noise, vibration and air quality (dust) investigation, assessment, reporting and site management
- + Dust Monitoring assessments, investigations, planning and reporting
- + Contractor Environmental Management Plans
- + Infrastructure and Sustainability (ISCA) planning and reporting, drawing upon our expertise in construction and industry based environmental best practices
- + Project based environmental advisor/manager roles



Stormwater Management & Flood Assessment

Topo staff have considerable experience in hydrologic and hydraulic modelling and have undertaken a number of large scale flooding and hydraulic impact assessments for projects throughout Queensland, northern New South Wales and South Australia. We have experience in stormwater quality modelling using 'MUSIC' and the design of stormwater treatment systems to achieve relevant water quality objectives. Topo is skilled in the design of detention systems and is very familiar with many of the specific council requirements for WSUD in Queensland.

Topo has 3 principal engineers who are proficient in hydraulic modelling and planning. Our principals are all Registered Professional Engineers of Queensland (RPEQ) and have the technical expertise and practical experience to develop effective solutions in the field of stormwater management and flood assessment.

We provide:

- + Hydrologic and hydraulic modelling (both 1- dimensional and 2-dimensional)
- + Flooding and hydraulic impact assessments
- + High Efficiency Sediment (HES) Basin and Detention basin design
- + Stormwater quality modelling
- + Flood risk assessments and management plans
- + Drainage and spillway design



ENGINEERS
AUSTRALIA





Education & Training

At Topo we aim to educate our clients and peers through all areas of our discipline. We adopt an interactive approach to project delivery and are serious about providing the support required for the success of the greater project, even after we have delivered our specific component. We are unlikely to identify a problem without offering a solution.

We also offer more formalised training, and our Director, Terry Clark, holds a Certificate IV in training and assessment. He regularly presents ESC training to a range of audience groups (field, compliance, office based). Terry has trained over 3,000 people in QLD, NSW, VIC, NT and TAS. Terry's wealth of experience and qualifications (RPEQ, CPESC & prior CPSS) provide attendees with an engaging and insightful courses which are approved by the International Erosion Control Association (IECA).

Topo offers customised training packages as well as a standardised programme, including:

ESC 1 – Introductory Course for General Site Personnel

ESC 2 – Intermediate Course for Site Supervisors, Engineers, PM's and Advisors

ESC 3 – Advanced Course for Plan Preparers, Designers, Auditors and Specialists seeking CPESC accreditation

Type A, B & D Sediment Basin Design – Suitable for those designing, constructing or operating sediment basins

Acid Sulfate Soil training – Introductory awareness training for field staff and Intermediate level training for environmental, planning or construction personnel and managers







OUR MANAGEMENT TEAM

The Topo management team has been working together for over a decade, with a combined experience exceeding 50 years.

We have grown and developed our skills together and continue to deliver all of our projects as a team.

Combined, we have an exceptional level of practical and technical skills that our clients find invaluable.



Kyle Robson

MANAGING DIRECTOR

BEng (Civil) (Hons), EMBA, RPEQ, CPESC, Director of IECA



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), Certified Professional in Erosion and Sediment Control (CPESC), Director and past President of the Australasian Sector of the International Erosion Control Association (IECA). Kyle also has significant experience in water quality and hydrologic and hydraulic modelling, Water Sensitive Urban Design (WSUD) and civil construction.

Kyle has experience in a wide range of sectors including urban development, infrastructure, mining, and gas and is experienced in the planning and design phase as well as the construction and operational phases. Kyle has performed contractor, consultant, client and regulatory roles and has extensive knowledge of regulatory requirements and policy as well as a broad understanding of the constructability and efficiency of engineered stormwater solutions. Kyle has also been heavily involved in the update to the Best Practice Erosion and Sediment Control document (IECA) to include contemporary sediment basin design.

Kyle is an experienced project manager and technical specialist who brings extensive knowledge to projects. Kyle provides his clients with exceptional time management, knowledge and team work abilities, whilst providing cost-effective and practical solutions.

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Steven Chamberlain

PRINCIPAL ENGINEER | DIRECTOR

BEng (Env.) (Hons), RPEQ, CPESC



Steven's key skills focus on drainage design. He is a principal environmental engineer with over 15 years experience in the environmental consultancy industry, and as a Certified Professional in Erosion and Sediment Control (CPESC) and Registered Professional Engineer of Queensland (RPEQ), provides clients with high quality designs and reports.

Steven is experienced in developing Erosion and Sediment Control Plans and has worked on several linear infrastructure and high profile projects. His experience extends from the development of plans, to undertaking site audits, providing field advice and acting as an Expert Witness in relation to erosion and sediment control.

Steven has significant experience in water quality and hydrologic/hydraulic modelling, and is experienced in Water Sensitive Urban Design (WSUD) for commercial, industrial and residential developments. Steven has considerable experience and an interest in the design and implementation of stormwater management systems for landfill sites.

Throughout his career, Steven has also undertaken flood studies and hydraulic impact assessments ranging in size from small overland flows to regional catchment assessments. Steven has undertaken the design of detention basins to alleviate flooding, and assessed flood mitigation options.

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Terry Clark

PRINCIPAL ENGINEER | DIRECTOR

BEng (Env.) (Hons), RPEQ, CPESC, TAE40110, Director of IECA



Terry is recognised a specialist in the field of soil and water management, specifically erosion and sediment control (ESC). Prior roles have seen Terry appointed to undertake the planning, design, supervision and/or auditing roles for ESC on some of Australia's largest infrastructure projects.

Terry holds the internationally recognised qualification of Certified Professional in Erosion and Sediment Control (CPESC) as well as being a Registered Professional Engineer of Queensland (RPEQ) allowing certification of design drawings and prescribed engineering services. He is currently a Director of the Australasian Sector of the International Erosion Control Association (IECA) and has previously obtained the Certified Professional Soil Scientist (CPSS) qualification, further supporting his ESC technical ability.

Over his career, Terry has developed a broad background of experience within the environmental field having previously worked within both private industry and Government. Experience gained within these roles have provided him with a comprehensive understanding of the entire project delivery process from the initial project conception, design and construction phases and subsequent final delivery.

Terry regularly presents a range of ESC training courses in accordance with best practice standards including IECA (2008) and the Blue Book (2004). He has trained over 1,500 people in QLD, NSW, VIC, NT and TAS. He has been invited by Griffith University to sessional lecture Engineering Design and has previously presented ESC training at Sydney TAFE.

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Tom Bailey

SENIOR ENGINEER | DIRECTOR

BEng (Env.), CPESC



Tom is a senior engineer and Certified Professional in Erosion and Sediment Control (CPESC) with a history of project experience gained through a range of secondments on large scale construction projects. Tom's strengths lie in his construction experience supported by technical expertise, allowing him to develop practical and effective solutions to site based soil and water problems.

Tom is a hardy, enthusiastic engineer with a strong work ethic and a commitment to getting the job done. He has completed a number of stormwater treatment projects as the Construction Superintendent for local government and private parties. Tom has also provided specialist ESC support to numerous clients on a range of projects, ranging from small-scale residential developments projects to some of the largest infrastructure projects in Queensland, such as the Cooroy To Curra Bruce Highway Upgrade, Toowoomba Second Range Crossing and Curtis Island LNG projects.

Across a variety of roles, Tom has supported both clients and contractors and understands the intricacies of contract management from both perspectives. Through his technical expertise and experience Tom has also been requested to provide Expert Witness support.

Tom is proficient in his adaptability to site work and a wide range of roles, while maintaining a combination of technical and practical skills.

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PROJECT EXPERIENCE

Topo has been built on the foundation of technical and practical experience coupled with the desire to provide effective and efficient solutions. Our staff have been involved in some of the largest projects in Australia, but have also delivered countless smaller projects with the same level of commitment. We work in an area that is itself developing, so we have strived to develop with it, innovating and educating to better the industry in which we work.

Erosion and Sediment Control



Caloundra Road to Sunshine Motorway (CR2SM) –
Planning, ongoing advice and expert inspections and reporting



Mackay Ring Road –
Preparation of detailed construction ESC plans and ongoing advice



Sunshine Coast Airport Expansion –
ESC planning, advice and inspections for ongoing contractor compliance



Aura Residential Development (Caloundra South) – ESC planning and stakeholder liaison



Aura Residential Development (Caloundra South) – Planning, design & auditing for civil contractors



M1 Pacific Motorway Upgrade Mudgeeraba to Varsity Lakes –
ESC planning and ongoing technical advice



Cooroy to Curra Bruce Highway Upgrade Section C –
Planning and ongoing advice



Cooroy to Curra Bruce Highway Upgrade Section B –
ESC auditing and reporting



Rockhampton to Gracemere Duplication – ESC planning and ongoing technical advice



Invitation for technical review of TMR's MRTS52 Erosion and Sediment Control specification



Houghton River Floodplain Upgrade (Bruce Highway) –
Planning, ongoing advice and expert inspections/auditing and reporting



Inland Rail Project (Parks to Narromine)
Planning, ongoing advice and expert inspections/auditing and reporting



Toowoomba Second Range Crossing
Plan preparation, design and auditing



Moreton Bay Rail Project
Plan development and ongoing advice for principal contractor



Gold Coast Light Rail Stage 1
ESC plan development and onsite auditing



Expert Witness for BCC vs LCCT
ESC compliance



Wiggins Island Coal Export Terminal
Soil and Water Management Planning



Curragh and Curragh North Mine
Water balance and ESC planning



Nambour and Caloundra landfills
Soil and stormwater plans, design and construction specifications for High Efficiency Sediment Basins



Noosa landfill
ESC and stormwater planning, including design and construction specifications for High Efficiency Sediment Basins



Dakabin, Bunya Caboolture and Redcliffe landfills
Stormwater management planning, including High Efficiency Sediment Basin design



Melbourne Airport Upgrades (Taxiway Zulu and Northern Access Route)
Planning, ongoing advice and expert inspections and reporting



GLNG Santos LNG Facility
2 year secondment as expert stormwater and ESC advisor to Santos management, contractors and government



Manage development of IECA Appendix B Amendment

Erosion and Sediment Control (continued)

Expert review and CPESC / RPEQ certification of contractor ESCP's for multiple projects:



Preparation and technical input and leadership of key industry documents, guidelines and policy:



Development of standard work methods and individual ESC planning and certification for Santos GLNG, QGC, APLNG and Arrow Energy upstream activities (Well Pads, Roads, Camps and Pipelines). Additional specialised ESC services for APLNG included revegetation options assessment for failed areas:



Residential developments throughout SEQ council areas – planning and design per Council approval conditions, SPP compliance and CPESC/RPEQ design certification and ongoing inspection.



Environmental Management



Dispersive soil assessments and management plans per ICC implementation guideline 28 and best practice principles for multiple contractors and civil consultants



Batter and drainage stabilisation assessment



Aura Residential Development (Caloundra South) – ASS investigation for services and civil works



Aura Residential Development (Caloundra South) – ASS management plans and verification assessment of treated soils



The Haven Residential Development – Dust monitoring and reporting



Development of rapid ground cover assessment procedure for rehabilitation and right of way assessment

Onsite environmental management roles for a range of contractors and projects:



Provision of soil assessment, laboratory analysis interpretation and rehabilitation management for many urban (residential and commercial developments) and linear infrastructure projects (roads, rail and pipelines).

Stormwater management and flood assessments



Duncan Street, Highbury Drive and Rosewood – Ipswich food studies and risk management strategies



Boyne River and Moody Creek – Catchment food modelling, including future capital works assessment and prioritisation



Remondis waste recovery facility Petrie – Stormwater upgrade design, construction specifications and site supervision

Hydraulic Impact Assessment for Mary River catchment, including stormwater & lake water management plan, water balance modelling and assessment of ongoing lake water quality

Flood assessment for historic and design storm events, design of mitigation options to reduce existing flooding concerns and accommodate future development, damage assessment and formulation of risk management strategies for many small and large scale developments.



Education and Training



Delivery of IECA approved training courses tailored to various industry groups, audience levels, experience and course duration



Delivery of advanced training and ongoing support to assist in gaining CPESC accreditation (issued via IECA)



Sediment basin design and operation (Type A, B and D) including practical exercises for jar testing and basin design



ESC capacity building training to over 500 attendees throughout the Sydney Catchment Authority



Customised ESC training courses for TMR staff to improve knowledge of construction phase risks and management techniques



Presentation of ESC essentials for compliance specific to the building industry



Presentation of ESC essentials for compliance specific to the building industry



Dispersive Soil and training courses presented onsite to various industry groups including Alliance Projects, Tier 1 and 2 contractors. Local Government and Regulators



Acid Sulfate Soil training courses tailored to client requirements

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