



**engenium**  
smart project delivery

## Degradation Mitigation

Consideration of environmental effects is key to the long-term durability of assets.

Engenium has the appropriate knowledge to control the impact of the environment on your assets to minimise degradation at the design stage or devise mitigation strategies for existing assets.

The material categories on which we can advise include concretes, metals, plastics, composites, paints, rubbers and even proprietary materials.

We deliver engineering advice at all stages of the project and asset lifecycle to ensure appropriate project delivery.

### Our Capabilities

#### Design Engineering and Consulting

- Asset life design
- Adverse environmental factor identification
- Materials selection
- Design for environmental degradation mitigation
- Concrete technologies and preparation.

#### Risk Mitigation and Maintenance

- Structural evaluation and risk assessment
- Maintenance schedule and plan development.

#### Condition Inspections and Surveys

- On-site inspection and measurement surveys
- Aerial (drone) inspection
- Non-destructive testing and sampling
- Degradation prediction and monitoring
- Inspection/survey review.

#### Extensive Degradation Analysis Capability

- Chloride diffusion
- Concrete carbonation
- Water proofness
- Chemical attack
- Maintenance strategies
- Cathodic protection
- Early age cracking of concrete

#### Project Execution

- Quality assurance and control
- Independent testing
- Advice on construction methodologies
- Non-conformance remediation guidance
- Inspection and monitoring.

**Delivering Value. Delivering Results.**