Maturing to Tangible Impact Assessment (IA) on Small-scale Construction Projects

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Agenda

• Introduction
• Environmental Legislation Evolution
• Environmental Culture on a Construction Site
• Impact Assessment during Construction
• Conclusion
• Questions
Sediment Pollution

Sediment pollution costs $16bn in environmental damage annually and is the most common pollutant affecting watercourses.

- EPA, USA, 2018 Factsheet

In Australia – the effect of sediment on the Great Barrier Reef… $8.2 bn as clean up costs
Environmental Legislative Evolution
Environmental Legislations

South Africa

NSW, Australia
Environmental Planning and Assessment Act, 1979 (Act No. 203 of 1979) (“EPA Act”)

Universal Principles:
- Stakeholder Consultation
- Impact Identification
- Impact Assessment
- Mitigation Measures
Small-scale Road Project

South Africa

- South African National Roads Agency Limited (SANRAL)
- Independent Consultant appointed for BA / EIA
- SANRAL cannot make environmental decisions as responsibility and jurisdiction with DEA

NSW, Australia

- Roads & Maritime Services (RMS)
- Environmental team within RMS does environmental assessment “fullest extent possible” (using EIS / REF)
- RMS is a determining authority, as delegated by the EPA Act sharing responsibility
- Does not overburden the EPA
What are the results of such an evolution?

One environmental authority model

- Focus on infrastructure delivery while considering environmental matters
- Responsible and capable environmental team
- Unsuccessful if subjected to corruption and sub-standard assessment

Shared determining authority model
Environmental Culture on a Construction Site
Large-scale Project

Type of culture to be tolerated and encouraged with a focus on:

• Communication
• Safety standards
• Methodology of construction
• Contractual obligations
• Project team
• Environmental risks

Small-scale Project

Type of culture to be tolerated and encouraged with a focus on:

• Communication
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• Environmental risks
Low Environmental Risk → High Environmental Impact
Impact Assessment During Construction
Significance = 
(Duration + Extent + \textbf{Intensity}) \times \text{Probability}
Erosion and Sediment Control Plans

Maturing to Tangible IA on Construction Projects
What can YOU consider?

1. As the ‘one environmental authority model’ in South Africa evolves and matures, could elements from the ‘shared determining authority model’ of NSW be considered?

2. Environmental representative to advise on small-scale construction projects to help the PM / Engineer manage environmental risks.

3. ESCP for tangible and prompt environmental risk management, even on small-scale construction projects.