

## Session 4

### Inspection of Erosion and Sediment Controls

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## MCO SWMP '2023'

- Project ESCPs prepared as part of the Ground Disturbance Permit (GDP) process
- Responsibilities:
  - Project Managers (Preparation, Inspection and Maintenance)
  - Env. & Community Superintendent (Approval)
  - Env. & Community Advisor (Inspections)
- Final responsibility for inspection and maintenance will be nominated in the individual ESCP (or by Supervisor)

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## Purpose of ESC Inspections

- Determine if site activities are compliant
- If adopted plan (ESCP) is still appropriate
- Controls are being properly implemented
- Controls comply with relevant standards
- Controls are properly maintained
- Determine if works are contributing to or have potential to cause environmental harm
- Determine if plan amendments are required

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## Blue Book Guidance

- Inspection and Test Plans (ITPs) are an identified element of all ESCP / SWMP
- As a minimum they must identify the:
  - Activity being undertaken
  - Standard or specification of compliance
  - Inspection methods and frequency
  - Responsible parties
  - Documentation and Reporting requirements
- 'Witness' and/or 'Hold Points' for project progress should be identified

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## ITP example

### INSPECTION AND TEST PLAN (Example – Revegetation)

Area Reference: \_\_\_\_\_ Sheet Number: \_\_\_\_\_ Location Description: \_\_\_\_\_

Construction Activity	Specification Description	Testing Standard	Product / Service Responsibility	Person Responsible	Testing Frequency	Test Result (Pass/Fail)	Hold Point (Yes/No)	Date	Hold/Witness Point Signature
Water quality	Water quality test	Code XX.XXX	Earthmoving contractor	John Citizen	1 per water source		No		
Surface preparation	Prepared to specification	Code XX.XXX	Earthmoving contractor	Operator	Each area		Yes		
	Watered at 5L/m <sup>2</sup>	Code XX.XXX	Earthmoving contractor	Operator	Each area		Yes		
Hydromulch	Certificate of seed analysis	Code XX.XXX	Revegetation contractor	Operator	Each load		No		
	Mulch	Code XX.XXX	Revegetation contractor	Operator	Each load		No		
	Application of mulch	Code XX.XXX	Revegetation contractor	Operator	Each load		No		
Completion	Instruction memo signoff	Code XX.XXX	Earthmoving contractor	Operator			Yes		
Maintenance watering	Watering	Code XX.XXX	Earthmoving contractor	Job manager	Each area		Yes		

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## IECA Best Practice Manual

- Provides tables outlining critical E&SC performance measures for focussing inspection procedures, based on:
  - Specific soil types (Table 7.1)
  - Specific topographic conditions (Table 7.2)
  - Various drainage conditions (Table 7.3)
  - Various receiving waters (Table 7.4)
  - Various weather conditions (Table 7.5)

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### Prior to Inspection

- Familiarise yourself with:
  - Legislative or approval requirements
  - Approved plans and proposed measures
  - Required E&SC performance standards
  - Current project activities
  - Project (local) environmental conditions (recent weather, soils, sensitivity of receiving areas)
  - Compliance history

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### Required Standards

- Compliance with the required standards and specification, including management plans, Blue Book and manufacturer advice:
  - Measures installed and located in accordance with the approved ESCP?
  - Measures installed in accordance with the adopted 'standard drawing' or site-specific design?
  - Materials used in control measures appropriate and operating in accordance with expectations?
  - Sediment and drainage controls sized according to minimum 'design' standards?

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### Environmental Conditions

- Remember, 'risk' is not static, as environmental conditions change, so do E&SC impacts
- Inspections need to consider:
  - Site disturbance activities (prior to inspection and proposed)
  - Recent and forecast weather conditions (have design thresholds been triggered?)
  - Changes to 'catchment area' characteristics (slope gradients, soil types/horizons?)
  - Has off-site sensitivity changed (water quality or discharge targets, compliance breaches?)

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### Measures commensurate with Risk?



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### Inspection Frequency

- Follow ESCP (weekly inspections per SWMP)
- Generally recommended to consider inspection of E&SC measures:
  - Daily (when rain is occurring)
  - Weekly (even when Site inactive)
  - Within 24 hours prior to significant rainfall events or extended periods of inactivity (e.g. shut downs)
  - Within 18 hours of rainfall event meeting 'design' or 'monitor' triggers
    - Sediment basin dewatering
    - Damage to control measures

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### "After Rain" Inspections

- Reviews adequacy of installed control measures (BMPs)
- Determines extent to which BMPs may need to be reinstated or made good
- Checks what cleaning and / or repairs are required
- Identifies need for sediment basins to be flocculated / dewatered

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### Adequacy of Controls



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### Reasons for Non-conformance

- Insufficient effort made to comply with relevant requirements
- Control measures inappropriate for the situation or conditions
- Site conditions have changed significantly from assumed conditions
- Adopted code or standard does not adequately cater for site conditions
- Unexpected damage or failure

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### Bear in Mind

- Are the site works and measures being operated in accordance with legislation?
- Is erosion being controlled?
- Is sediment leaving the site?
- Have failures resulted from storms beyond the design standard?
- Are all reasonable and practicable efforts being made to minimise environmental harm?

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### Inspection Reports

- Write clearly and accurately
- Note time, date, location and extent of area inspected / reported on
- Note areas / situations of non-conformance
- Record with photographs
- Retain samples (if collected)
- Note maintenance requirements and convey to responsible Site staff member (obtain signature)
- Provide immediate feedback with list of requirements and timeframe

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### IECA Manual Proformas/Checklists

- Section 7.8 provides:
  - Inspection and Test Plan
  - Non-conformance Report
  - Weekly Site Inspection
  - Site Inspection Checklists for various aspects of sites and measures. These detail specific aspects of sites, vegetation, soils, materials, waste, drainage, erosion controls, sediment controls, instream works and stabilisation

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