It takes all disciplines to improve sediment management - what are the available tools?

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The problem

- Lack of management and control of wind and/or water-borne sediment (dust and sand) from development sites
  - Bulk earthworks and construction of infrastructure
  - Construction of building/dwelling
- Sediment enters the drainage system and impacts newly constructed WSUD treatments
- Reduces water quality in waterways and wetlands
- Increases maintenance of drainage systems

Control mechanisms and management actions

Development stage	Land clearing and construction of subdivision and lot creation	Vacant lots and house construction	Redevelopment
Control mechanism (local government enforced)	Scheme provisions Conditions of subdivision Unauthorised discharge regulations (EP Act)	Local laws Building licence Conditions of development Permits and bonds	Local laws Building licence Conditions of development Permits and bonds
Responsibility	Developer	Landowner and builder	Developer/ builder
Management actions	Dust Management and Sediment Control Plan Retaining vegetation Timing of works Water carts Temporary sediment basins Suppressive material (eg hydromulch) once subdivision works are complete	Perimeter fencing (shade cloth) Stabilised and controlled vehicle access Hydromulch (preferred), seeding Verge cover Sand bags and management of stockpiles Temporary surface water management Geotextile socks Education of builders	Perimeter fencing (shade cloth) Stabilised and controlled vehicle access Hydromulch (preferred), seeding Verge cover Sand bags and management of stockpiles Temporary surface water management Geotextile socks Education of builders

State-level mechanisms

- Enforcement of Unauthorised Discharge Regulations (Environmental Protection Act 1986)
  - Local Government Environmental Health Officers to be authorised inspectors under the EPAct
  - At time of infringement
  - Fines/revenue ($) go to the local government
  - Only applicable where sediment comes from commercial activities
  - Requires policing and support from DWER

Scheme provisions – apply at subdivision and development stages

City of Armadale - Part 4 general development requirements

4.8: Management of construction sites

4.8.1 In addition to any requirements which may be imposed as conditions of development, construction sites are to be managed so as to **minimise soil erosion or the degradation of any water resource** due to the action of wind or water and protect as far as practicable, the natural resource values of the site and of the adjacent area

*Note: Where a construction site is, in the opinion of the local government, being managed in such a way as to cause **undue erosion of soil** or the **pollution of any water resource**, the local government may, in accordance with Section 218 of the Planning and Development Act 2005, require the owner to **take steps to prevent any further erosion or pollution and remediate the site.** Such action may include stabilisation of soil or re-instatement of vegetation cover and **repair of any damage to the land or water resources**.*

Conditions of subdivision

- Model condition D4: “The land being … stabilised to ensure that… stormwater is contained on-site”
- Model condition D9: Preparation of a management plan managing risks to nearby waterbodies/ reserves…if recommended by DBCA
- Incorporated into Urban Water Management Plan (condition D2)

  - Should control erosion from whole property
  - But emphasis is on pollution to water resources and not just the drainage systems
  - And erosion may still occur where limited LG monitoring/compliance
  - Generally better performance than at development stage as it is a single developer and hydromulch is generally standard practice

At development stage

- Conditions of development
  - Where a development application is required
  - Construction of a single house generally does not require a DA
- Building licence
  - Required to construct the premises
  - Generally the licence defers to the BCA which is ineffective in controlling sediment and dust
  - Requires policing and enforcement to be effective
- Asset protection bonds or permits
  - Verge bonds, drainage system bonds
  - Requires appropriate administrative and financial systems and processes and compliance

Local Government local laws

- Potential to be more effective than other controls
- Currently vary considerably across local governments
- Notice issued at time of contravention by compliance officer
- Requires infringements/ penalties as alternative to prosecution
- Potential to raise revenue to help fund enforcement

Other Local government actions

- Street sweeping programs
- Eduction of drainage systems
- Local government investment in sediment control – installation of gross pollutant traps, drainage pit/s, detention basins, stormwater inlet filters, sediment traps, soak wells and diversion drains
- Control of timing of earthworks
- Subsidised mulch or hydromulch
- Monitoring (including community reporting)
- Education

Improving outcomes requires action at each phase

- Need a focus on better sediment management at all phases – structure planning, subdivision, development, building, maintenance, compliance – understand and use the tools at each stage
- Recognise the role of others and support where you can
- Educate the community
- Outcomes are improved where there is high level corporate understanding and support

Planning

Engineering

Environment

Landscape

Asset Management

Community Members

New WAter Ways

Thank you for listening

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