Material Handling

GENERAL CONSTRUCTION PRACTICE

Erosion and sediment control issues extend into the handling of construction materials such as concrete, sand, fuels and oils, paints, mulches and chemical because once these materials wash onto soil, they become part of the sediment runoff problem.

Best practice construction site management includes:

1. Emergency and pollution control procedures adopted on the site are commensurate with the site conditions, local environmental values, and the type, cost, scope and complexity of the construction activities.
2. On-site personnel involved in the handling and storage of flammable and combustible liquids, including all liquid chemicals, are appropriately trained and/or supervised, as required in order to allow such personnel to appropriately preform such activities.
3. All pollutants washed or blown from the site are collected and secured as soon as practicable.
4. All liquid chemicals, including petroleum products, that could potentially be washed or discharged from the site in association with sediment, are stored and handled on-site in accordance with relevant standards such as AS1940 *The storage and handling of flammable and combustible liquids*.
5. Impervious bunds are constructed around all storage areas containing more than $1m^3$ of petroleum and oil-based products such that the enclosed volume is large enough to contain 110% of the volume held in the largest, individual storage tank.
6. Road surfacing equipment is parked overnight on drip pans or filter cloth sheeting to retain oil-based matter.
7. Cement-laden runoff, concrete waste, and chemical products (including petroleum and oil-based products), are managed on-site in accordance with current best management practice, including taking all reasonable and practicable measures to:
    - prevent the release of cement-laden runoff, concrete waste, and chemical products (including petroleum and oil-based products), into an internal or external water body, completed internal drainage systems, or any external drainage system, excluding those on-site drains and water bodies specifically designed to contain and/or treat such material;
    - ensure all solid and liquid waste from concrete production, and concreting equipment (including delivery and placement vehicles), is fully contained within the property;
    - ensure cement residue from work activities is retained on a pervious surface (e.g. grass, open soil, or excavated trench), filtered through a fine-grained, porous earth embankment; or collected and disposed of in a manner that minimises ongoing environmental harm.
8. Activities involving brick, tile and masonry cutting, or the washing of tools and painting equipment, are carried out in a manner that:
    - complies with current State guidelines, policies, and legislation; and
    - fully contains any contaminated waste water for later treatment and/or disposal; or
    - appropriately filters (e.g. through a fine-grained, porous earth embankment) any contaminated slurry/water prior to its release from the immediate work area; or
    - appropriately infiltrates all contaminated liquid matter into an area of porous grass or open soil (only applicable to the washing of tools and painting equipment).
9. Sweeping newly sealed hard-stand areas, such as roads, driveways and car parks, as soon as practical after surfacing to minimise the risk of the surfacing materials (e.g. bitumen and gravel) entering stormwater drains.

If significant concreting is to occur on the site, then concrete disposal areas should be established. Such areas must be enclosed by permeable, earth filter-banks, or other appropriate filter systems to full retain the waste. These areas should also be well signed so that contractors and delivery drivers are able to identify their location.

Photo 1 – Washing-out a concrete truck

Photo 2 – Waste concrete receptor

The safe storage of equipment and chemical is essential on all construction sites.

Photo 3 – Safe storage of equipment and chemicals

Photo 4 – Waste and litter receptor bins

Appropriate end-of-day site clean-up procedures are essential for the containment of a wide range of pollutants. All clean-up procedures need to be conducted on the site and in a manner that fully contains any wash-off.

Photo 5 – Paint wash-out station

Photo 6 – Building activities should not be conducted outside the property boundaries