

SC 10 Stormwater management design objectives

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10.1 Construction Phase

Table 10.1.1 - Construction Phase

Element	Design objectives
<p>Drainage control</p> <p>Temporary drainage works</p>	<p>a. Design life and design storm for temporary drainage works:</p> <ul style="list-style-type: none"> i. Disturbed area open for <12 months - 1 in 2 year ARI event. ii. Disturbed area open for 12-24 months - 1 in 5 year ARI event. iii. Disturbed area open for >24 months - 1 in 10 year ARI event. <p>b. Design capacity excludes minimum 150mm freeboard.</p> <p>c. Temporary culvert crossing - minimum 1 in 1 year ARI hydraulic capacity.</p>
<p>Erosion control</p> <p>Erosion control measures</p>	<ul style="list-style-type: none"> a. Minimise exposure to disturbed soils at any time b. Divert water run-off from undisturbed areas around disturbed areas c. Determine the erosion risk rating using local rainfall erosivity, rainfall depth, soil loss rate or other acceptable method. d. Implement erosion control methods corresponding to identified erosion risk rating.
<p>Sediment control</p> <p>Sediment control measures</p> <p>Design storm for sediment basins</p> <p>Sediment basing dewatering</p>	<ul style="list-style-type: none"> a. Determine appropriate sediment control measures using: <ul style="list-style-type: none"> i. Potential soil loss rate; or ii. Monthly erosivity; or iii. Average monthly rainfall. b. Collect and drain stormwater from disturbed soils to sediment basin for design storm event: <ul style="list-style-type: none"> i. Design storm for sediment basin sizing is 80th% five day event or similar c. Site discharge during sediment basin dewatering:

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	<ul style="list-style-type: none"> i. Total suspended solids: <50 mg/L TSS; ii. Turbidity not >10% receiving waters turbidity; iii. pH 6.5-8.5.
<p>Water quality</p> <p>Litter and other waste, hydrocarbons and other contaminants</p>	<ul style="list-style-type: none"> a. Avoid wind-blow litter; b. Remove gross pollutants; c. Ensure there is no visible oil or grease sheen on released waters; d. Dispose of waste containing contaminants at authorised facilities.
<p>Waterway stability and flood flow management</p> <p>Changes to the natural waterway hydraulics and hydrology</p>	<p>For peak flow for the 1 year and 100 year ARI event, use constructed sediment basins to attenuate the discharge rate of stormwater from the site.</p>

Note - This schedule is in accordance with SPP (July 2017). Where a new SPP has been released, the development will need to adopt the latest SPP in place at the time of the development application.

10.2 Post Construction Phase

Table 10.2.1 Post Construction Phase

Application	Design objectives				Notes
	Minimum reductions in mean annual load from unmitigated development (%)				
	Total suspended solids (TSS)	Total phosphorus (TP)	Total nitrogen (TN)	Gross pollutants >5mm	
All catchments and zones	80	60	45	90	-
Emerging community zone	<p>In the Emerging community zone, development is to achieve the greater pollutant removal of:</p> <ul style="list-style-type: none"> a. the above reductions in mean annual load for unmitigated development; or b. no worsening (no increase in pollutant loads of the existing land uses) of TSS, TP, TN and gross pollutants. 				Achievement of no-worsening may require implementation of a solution across the structure plan area.

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All	Waterway stability management Limit the peak 1 year ARI event discharge within the receiving waterway to the pre-development peak 1 year ARI event discharge.	For peak flow for the 1 year ARI event, use co-located storages to attenuate site discharge rate of stormwater.
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