

Erosion and Sediment Control Plan Checklist

This checklist outlines the elements required in ESC plans. It must be completed by the ESC plan developer and accompany the ESC plan when submitted to Council. Council ESC plan assessing officers can also refer to the checklist to determine if a submitted ESC plan should be deemed suitable. If an ESC plan fails to comply with the essential checks, then it is suggested that the applicant is advised and the pre-start meeting is cancelled until an acceptable plan is resubmitted.

Erosion and Sediment Control Plan Checklist

The following checklist is to be completed and signed by the ESC plan developer and accompany the ESC plan submitted to Council.

Approval number:		Address/Development name and stage:		
Plan developer:	Name: Company: Postal address:	Plan developer qualifications:	RPEQ number: CPESC number (or proof of equivalent qualifications):	
Category:	Criteria:	Notes:	Criteria addressed!?	
			Plan Developer (Yes, No, NA)	Council Assessor ¹
Plan developer	The ESC plan must be prepared by a suitably qualified person such as a CPESC or a similar qualification, for example someone who has undertaken an advanced course in ESC and has a minimum three (3) years' experience in the preparation of ESC plans.			
	Where engineering structures (either temporary or permanent) such as basins, inlets, outlets and spillways form part of an ESC plan, the design and inspection of such structures must be undertaken and certified by a RPEQ engineer.			
Plan staging	The ESC plan must be staged and relate to each phase of the works including site clearing, bulk earthworks, civil construction, services installation, and final stabilisation/landscaping.			
	The staged plans must detail the type, location, sequence and timing of measures and actions to effectively minimise erosion, manage flows and capture sediment.			
	Separate drawings must be provided for each stage and phase of the works.			
Best practice standards	The ESC plan must be consistent with current best practice ESC standards as per the International Erosion Control Association (IECA) <i>Best Practice Erosion and Sediment Control</i> (latest version) to the extent that the standards are consistent with the conditions of approval and taking into account all environmental constraints, including erosion hazard, season, climate, soil, slope, catchment area, flow paths, and proximity to waterways.			
	The ESC plan must provide sufficient detail to demonstrate compliance with all conditions of this permit relating to ESC.			
Soil investigations	Undertake soil investigations and testing, including testing for dispersive soils and acid sulphate soils (if applicable).			

	Results of all soil investigations undertaken for the site must be provided in the plan, along with RUSLE calculations and erosion hazard risk assessments. The ESC plan must address the results of these investigations and manage the risks identified.			
	Dispersive soils: If the works disturb dispersive soils, provide a dispersive soil management plan that ensures soils are adequately managed and treated. Ensure risks from dispersive soils are considered and addressed in the ESC plan.	Notes must include amelioration of subsoil associated with drainage controls (i.e. either capping with topsoil or gypsum amelioration prior to lining) and amelioration of topsoil prior to revegetation.		
	Acid sulphate soils: If the works disturb acid sulphate soils, provide an acid sulphate soil management plan that ensures soils are adequately managed and treated. Ensure risks from acid sulphate soils are considered and addressed in the ESC plan.			
	Disturbance of groundwater: if the works involve the disturbance of groundwater provide a groundwater management plan that addresses the impact of the disturbance and any dewatering activities. Ensure impacts to groundwater and dewatering of groundwater are considered and addressed in the ESC plan.			
Site constraints and plan detail	Provide a set of contour drawings showing existing and design contours, including locations of cut and fill, for each phase of the works. Contours surrounding the site should also be shown so catchment boundaries can be considered.	At least existing and final contours need to be shown on separate plans in order to understand whether controls need to be repositioned during construction as contours change.		
	Provide the real property description(s), north point, plan scale, legend of symbols, site layout, boundaries and features.			
	Identify site offices, car parks, roads, structures and stabilised entry/exit points, stockpile locations, all proposed ESC measures on the plan.			
	Show all major features shown on the plan – waterways, riparian buffers, protected vegetation, full extent of disturbance needed to construct works.			
	Clearly identify areas of non-disturbance, vegetation protection areas and waterway corridors. Detail how these sites will be delineated and protected during construction. All ESC measures are to be located outside of these areas.			
	Identify areas of potential dispersive soils, acid sulphate soils, high and extreme erosion risk areas and how these areas will be protected or managed during the construction phase.			

	Indicate the location and diagrammatic representations, including detailed cross-sectional drawings and design details, of all ESC measures included in the plan.			
	Detail the timing for implementation and decommissioning of controls, as well as hold points.	Prior to land clearing and commencement of works , major controls (basins, diversion drains) need to be implemented prior to topsoil stripping in the catchment. Post-construction, catchments must be stabilised prior to basins being decommissioned or converted to bioretention.		
Minimising soil exposure and erosion	Stage the works to minimise the area of soil exposed at any one time. Soil disturbances must be staged into manageable sized areas of no greater than ten (10) hectares to ensure adequate ESC management and progressive stabilisation of disturbed surfaces.			
	Any areas not actively worked must be left undisturbed or if disturbance is unavoidable, must be immediately stabilised.			
	Provide plans and specifications detailing soil stabilisation and rehabilitation methods. Describe the scheduling of progressive and final rehabilitation of exposed soil areas as civil works progress, including the stabilisation of upslope catchments prior to sediment basin decommissioning.			
	Timing and methods of stabilisation must be specified and be consistent with the conditions of approval.			
	Include a technical note on suitable dust control measures consistent with IECA <i>Best Practice Erosion and Sediment Control</i> (latest version)	Refer to Book 1, Chapter 4: Design standards and technique selection, Section 4.4.5: Dust control techniques, and Chapter 6: Site management, Section 6.13: Dust control/		
Drainage and stormwater control	Detail how clean water will be diverted around or through the site and illustrate catchment areas and flow paths. Explain how manner of diversion will keep stormwater clean (i.e. will not cause erosion).	If clean water is not able to be diverted, it must be managed as dirty runoff and site sediment controls (basins) need to be sized to account for this additional hydraulic loading.		
	All drainage structure designs (including diversion drains, chutes, and spillways) must include calculations and linings consistent with expected velocities.	Design ARIs for drainage structures are provided in IECA <i>Best Practice Erosion and Sediment Control</i> (latest version), Table 4.3.1. Detail of drainage structures shall include minimum dimensions (including any specified freeboard) and lining or velocity control requirements to provide non-erosive flow up to the design ARI.		

<p>Sediment capture and minimising contaminant releases</p>	<p>Detail how the sediment basins will meet the following performance criteria: <i>All exposed areas greater than 2500 m² must drain to a sediment basin which is designed, implemented and maintained to a standard which will achieve at least 80% of the average annual runoff volume of the contributing catchment treated (i.e. 80% hydrological effectiveness) to 50 mg/L Total Suspended Solids (TSS) or less, and pH in the range (6.5 – 8.5).</i></p>	<p>High efficiency sediment basins are the most effective way to meet this criteria. If an alternative option is proposed, the ESC plan must specify:</p> <ol style="list-style-type: none"> 1. Why the site is not able to accommodate a HES basin. 2. How the alternative option will be designed and maintained with sufficient storage capacity to capture runoff from the design rainfall event and treat the water to meet the required water quality standards, to the equivalent of or greater than a HES basin. 3. How water will be treated and tested prior to release to achieve the necessary discharge water quality standards of 50 mg/L TSS or less and a pH of 6.5 – 8.5. 		
	<p>Sediment basins designs must include:</p> <ol style="list-style-type: none"> a) Sizing and hydraulic calculations that demonstrate compliance with the performance criteria (above). b) Hydraulic structures such as inlets, outlets, forebays, level spreaders, and spillways designed in accordance with IECA <i>Best Practice Erosion and Sediment Control</i> (latest version). c) A basin layout that is suitably designed and positioned in accordance with IECA <i>Best Practice Erosion and Sediment Control</i> (latest version). d) Access for maintenance including sediment removal, dewatering and water treatment. e) Details of the materials to be used in its construction, including compaction levels and liners. f) Details on the proposed coagulants/flocculants and automatic dosing systems, including jar testing results. Must also demonstrate the suitability of the proposed coagulant/flocculant having regard to the downstream receiving environment and water quality. Automated systems must demonstrate how they will be adequately designed and suitable for catchment size to achieve the performance criteria (above). g) Description of the ongoing operation and maintenance of the basin. 	<p>Refer to IECA <i>Best Practice Erosion and Sediment Control</i> (latest version). Dosing method should consider basin type and layout (particularly inflow into basin). Aluminium chlorohydrate (ACH) and chitosan have low ecotoxicity, negligible effect on pH, and low dose rates, so are considered suitable for most applications. For other products refer to: https://www.austieca.com.au/documents/item/818</p>		
<p>Work within waterways</p>	<p>Demonstrate that all necessary approvals for works within waterways has been obtained, including riverine protection permit (if applicable).</p>			
	<p>Provide details of scheduling and timing to ensure works within waterways will be only undertaken during the lower rainfall months between June to October.</p>			

	Show all waterways (perennial and non-perennial) and locations of any works within waterways including temporary crossings.			
	Provide design details for all temporary waterway crossings. Temporary vehicular crossings of waterways are to be designed and constructed to convey flows for the 63% AEP and remain stable for all rainfall events up to the 10% AEP event of critical duration.	Temporary crossings must have a low-flow culvert and must be constructed of rock (not an earth embankment) so they will not erode when overtopped.		
	For works within waterways (i.e. bridges and culverts) provide details of a system of flow diversion specified consistent with IECA BPESC (latest version) Appendix I.			
	Ensure instream works are undertaken in accordance with IECA BPESC (latest version) Appendix I – Instream works.			
Monitoring and maintenance	Specify maintenance requirements and schedules for all ESC measures.			
	Specify inspection schedules that include and are in addition to any mandatory inspections specified in the conditions of approval.			
Design certificates	Complete, sign and attach a <i>Design Certificate for Erosion and Sediment Control</i> to the plan using the prescribed form.			
Documentation and document control	ESC plans must be implemented and modified as required. All modifications must be signed by a suitably qualified person and be kept on site at all times.			
	The ESC plan, design certificate, inspection certificates and any updated versions of the ESC plan must be kept on site at all times and made available for inspection by Council officers upon request.			

¹ C = Conformance, NC = Non-conformance, N/A = Not applicable, NFV = Not fully verifiable

² Non-conformance with one or more of the criteria indicates ESC plan is not acceptable.

To be completed by Council ESC plan reviewer:

Plan reviewer/s (Council officer name):		Date reviewed:	
ESC plan acceptable or not acceptable²?		Comments:	