



Dedicated to a better Brisbane

**Urban Management Division
Subdivision and Development Guidelines
Part C Water Quality Management Guidelines**

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12.0 EROSION AND SEDIMENT CONTROL

12.1 BACKGROUND

Council has developed an *Erosion and Sediment Control Standard* (refer Appendix 2 of Part C of this document) that sets specific performance criteria against which land-disturbing developments are assessed. Note that this Standard is intended to apply to all land disturbing developments except residential building sites, as an Erosion and Sediment Control (ESC) Code is being developed by the State Department of Communication, Information, Local Government and Planning to apply to all residential building works in Queensland. This Code will (when finalised and adopted) have power under the *Building Act*.

Note also that the Standard calls up a number of technical guidelines to help developers meet the Standard. Those that are relevant to developments and subdivisions are summarised in Section 12.3 below. These guidelines help identify relevant erosion and sediment controls (a type of Stormwater Quality Best Management Practice) for the site.

12.2 KEY ISSUES/DESIGN CRITERIA

For detail, refer to the *Erosion and Sediment Control Standard* (Appendix 2 of Part C of this document). Key issues for Brisbane include:

- The need to plan carefully for adequate erosion and sediment control by preparing an ESC Program or ESC Management Plan¹ that set out the required measures for the site over all stages of development (not just at one point in time). These Programs/Plans should be prepared in full accordance with Council's recommended guidelines (see below).
- Note that for developments like large residential subdivisions, the ESC Program must address all key phases of construction, not just one point in time. To do this, several plans showing the layout and sequencing of controls may be necessary. In normal circumstances, these must include:
 - an ESC management plan for each bulk earthworks stage of a development (most important);
 - an ESC management plan associated with road works; and
 - an ESC management plan for the building phase (on maintenance).
- The need to focus on erosion controls and well designed sediment basins in order to prevent fine sediment moving from developing areas into sensitive receiving waters like Moreton Bay. These fine sediments cause environmental harm as they stay in suspension and prevent light reaching valuable seagrass meadows.
- The need to pay particular attention to monitoring the performance of erosion and sediment controls (regularly and frequently, particularly after rain) and maintaining these controls in working order at all times.
- The need to ensure that works comply with Council's current ESC Standard at all times (note that Council's standard development conditions for sites with a high risk of erosion and/or turbidity generation makes compliance with the Standard a legal requirement).

¹ See definitions in the ESC Standard. Note that Council's development assessment process will determine which type of document is needed for the development. Typically, sites with a high risk of erosion and/or turbidity generation will need an ESC Program that is assessed by Council. Others will require an ESC Management Plan that may be self certified.



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- Sediment basin design should be in accordance with Council's *Sediment Basin Design Guidelines* (BCC, 2000), unless it can be demonstrated that more innovative designs can achieve a similar performance. That is, at least meet relevant 'Best Practice Discharge Guidelines' as defined in Council's *Guideline on Identifying and Applying Water Quality Objectives in Brisbane City* (BCC, 2000). Also, sizing requirements for sediment basins may be able to be relaxed, if the months that development will occur correspond with drier periods of the year, and the proponent can demonstrate that alternative sizing of basins will still provide receiving waterways with at least an equivalent level of protection.
- When checking the quality of water being released from sediment basins, field measurements of turbidity (without a corresponding total suspended solids TSS concentration) can be used, if a conservative correlation can be demonstrated between TSS and turbidity for relevant soils on the site. Typically this would involve at least 5 samples of TSS and turbidity from representative stormwater.

12.3 REFERENCES

1. The Institution of Engineers, Australia (Qld), 1996 (or later version). *Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites*. IEAust, Brisbane.
2. Brisbane City Council & Catchments and Creeks Pty Ltd, 2000 (or later version). *Sediment Basin Design Guidelines*. Brisbane City Council, Brisbane.
3. Brisbane City Council, Griffith University, Rust PPK, 1997 (or later version). *Erosion Treatment for Urban Creeks – Guidelines for Selecting Remedial Works*. Brisbane City Council, Brisbane.
4. Brisbane City Council and Gold Coast City Council, 2000 (or later version). *Guidelines for the Control of Stormwater Pollution from Building Sites* and accompanying fact sheets. Brisbane City Council, Brisbane.
5. Brisbane City Council, 1999 (or later version). *Temporary Signage for ESC Measures*. Brisbane City Council, Brisbane.
6. Brisbane City Council, 1999 (or later version). *Educative Poster: Environmental Management of Work Sites*. Brisbane City Council, Brisbane.