

# TWEED SHIRE COUNCIL

## DEVELOPMENT CONSTRUCTION SPECIFICATION

C211

# CONTROL OF EROSION AND SEDIMENTATION

VERSION 1.2

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**SPECIFICATION C211 – CONTROL OF EROSION AND SEDIMENTATION**

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**DEVELOPMENT CONSTRUCTION SPECIFICATION C211**

**CONTROL OF EROSION AND SEDIMENTATION**

**GENERAL**

**C211.01 SCOPE**

1. This Specification is for the construction of structures and the implementation of measures to control erosion and sedimentation in accordance with the approved Erosion and Sediment Control Plan (ESCP) or Storm Water Management Plan (SWMP) included in the design plans. These may be temporary or permanent.
2. The Subdivider shall plan and carry out the whole of the Works to avoid erosion and sedimentation of the site, surrounding country, watercourses, waterbodies and wetlands.
3. All measures for erosion and sedimentation control shall be designed, installed and maintained by the Subdivider in such a manner so as not to present a potential hazard to any person or property.

**C211.02 REFERENCE DOCUMENTS**

1. Documents referenced in this Specification are listed in full below whilst being cited in the text in the abbreviated form or code indicated.

***Documents  
Standards Test  
Methods***

**(a) Council Specifications**

- D7 - Stormwater Quality
- C212 - Clearing and Grubbing
- C213 - Earthworks
- C224 - Open Drains, Including Kerb and Gutter
- C273 - Landscaping

**(b) NSW State Legislation**

Protection of the Environment Operations Act 1997

**(c) Other**

- NSW Department of Housing (DOH)
  - Managing Urban Stormwater, Soils and Construction, 4th Ed., Mar 2004
- NSW Department of Land and Water Conservation
  - "The Constructed Wetlands Manual" 1998
- NSW Environmental Protection Authority
  - "Managing Urban Stormwater" – Council Handbook (Draft 1997)
  - "Treatment Techniques" November 1997
- Assmac – "Acid Sulphate Soils manual", 1998
- The Institution of Engineers, Australia – Queensland Division
  - "Soil Erosion and Sediment Control for Queensland Construction Sites", June 1996

**(d) Standard Drawings that apply to this Section:**

S.D.501 Erosion and Siltation Prevention Devices - Sheet 1  
S.D.502 Erosion and Siltation Prevention Devices - Sheet 2

**C211.03 EROSION AND SEDIMENTATION CONTROL PLAN**

1. All works that involve any disturbance to the surface of land are to be carried out in accordance with an approved Erosion and Sediment Control Plan (ESCP).

***Erosion and Sediment Control Plan (ESCP) see D7***

Erosion and sediment control shall be carried out in accordance with an Erosion and Sediment Control Plan (ESCP) prepared in accordance with specification D7 Stormwater Quality.

**C211.04 EROSION AND SEDIMENTATION CONTROL MEASURES**

1. Erosion and sedimentation control measures shall be in accordance with the ESCP.

***Scope***

**C211.05 EARTHWORKS FOR EROSION AND SEDIMENTATION CONTROL BASINS**

1. Earthworks for erosion and sedimentation control basins shall be to the planned levels and dimensions shown on the approved design plans.
2. The entire storage and embankment foundation area of erosion and sedimentation control basins shall be cleared in accordance with the Specification for CLEARING AND GRUBBING and shall be stripped of topsoil and any unsuitable material under embankments removed in accordance with the Specification for EARTHWORKS.
3. The embankments shall be constructed in accordance with the specification for EARTHWORKS.

***Planned Levels***

***Site Preparation***

**C211.06 INLETS, SPILLWAYS AND LOW FLOW OUTLETS FOR SEDIMENTATION CONTROL BASINS AND SEDIMENT TRAPS**

1. Inlets and spillways shall be constructed in accordance with the approved ESCP.

**C211.07 DROP INLET SEDIMENT CONTROL**

1. Drop inlet sediment traps and inlet control banks shall be constructed on completion of each gully pit unless otherwise directed by the Certifying Engineer. These drop inlet sediment traps and inlet control banks are additional to the temporary sedimentation control measures that may be required under Clause C211.10 during construction of the gully pits.
2. The drop inlet sediment traps are intended to remove sediment from the surface flow before it enters the drainage system. The inlet control banks shall be constructed as required to prevent the surface flows bypassing the gully pits.
3. The drop inlet sediment traps shall be constructed as shown on the design plans. The associated inlet control banks shall consist of at least two (2) courses of sandbags containing a 10:1 sand/cement mix. The bags shall be keyed at least 25 mm into the surface, dampened sufficiently to ensure hydration of the cement and tamped lightly to provide mechanical interlock between adjacent bags.

***Time of Construction***

***Purpose***

***Control Banks***

**C211.08 CLEANING SEDIMENTATION CONTROL STRUCTURES**

1. The Subdivider shall clean out permanent sedimentation control structures, cleaning out whenever the accumulated sediment has reduced the capacity of the structure by 70 per cent or more, or whenever the sediment has built up to a point where it is less than 300 mm below the spillway crest. All permanent sedimentation control structures shall be cleaned out by the Subdivider prior to Practical Completion of the Works.

***Subdivider's Responsibility***

## **CONTROL OF EROSION AND SEDIMENTATION**

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2. Accumulated sediment shall be removed from permanent sedimentation control structures in such a manner as not to damage the structures. The sediment removed shall be disposed of in such locations that the sediment will not be conveyed back into the construction areas or into watercourses. The Subdivider shall provide and maintain suitable access to permanent sedimentation control structures to allow cleaning out in all weather conditions.

***Removal of Sediment***

### **C211.09 RESERVED**

## **TEMPORARY EROSION AND SEDIMENTATION CONTROL**

### **C211.10 GENERAL**

1. The Subdivider shall ensure that effective erosion and sedimentation control is provided at all times during the subdivision works and until all disturbed surfaces are fully restored or revegetated to the satisfaction of the Certifying Engineer.
2. Runoff from all areas where the natural surface is disturbed by construction, including access roads, depot and stockpile sites, shall be free of pollutants. The Subdivider shall be responsible for all temporary erosion and sedimentation control measures required for this purpose.
3. The Subdivider shall provide and maintain slopes, crowns and drains on all excavations and embankments to ensure satisfactory drainage at all times. Water shall not be allowed to pond on the works unless such ponding is part of an approved ESCP.

***Subdivider's Responsibility***

***Pollutant Free***

***Maintenance by Subdivider***

### **C211.11 TEMPORARY DRAINS**

1. Runoff from areas exposed during the work shall be controlled in accordance with the approved ESCP.

***Control of Runoff***

### **C211.12 TEMPORARY SEDIMENT TRAPS**

1. Temporary sediment-trapping devices shall be provided during construction in accordance with the approved ESCP to remove sediment from sediment-laden runoff before it enters natural watercourses or adjacent land.

***Sediment Traps***

### **C211.13 BATTER PROTECTION**

1. The Subdivider shall take all necessary action to protect batters from erosion during the subdivision works.
2. Scour of newly-formed fill batters during and after embankment construction shall be minimised by diverting runoff from the formation away from the batter until vegetation is established.

***Subdivider's Responsibility***

***Scour Control***

### **C211.14 MAINTENANCE AND INSPECTION**

1. The Subdivider shall be responsible for operation, monitoring, cleaning out, maintenance, repair and rectification of erosion and sediment control works as specified in the approved ESCP.
2. The Subdivider shall provide and maintain access from within the road reserve or from other locations acceptable to the Certifying Engineer, for cleaning out sedimentation control works.

***Subdivider's Responsibility***

***Access***

### **C211.15 REMOVAL**

1. All temporary erosion and sedimentation control works shall be removed by the Subdivider when revegetation is established on formerly exposed areas before the end of the subdivision works. All materials used for the temporary erosion and sedimentation control works shall be removed from the site.

***Subdivider's Responsibility***

**SPECIAL REQUIREMENTS**

**C211.16 RESERVED**

**C211.17 RESERVED**

**C211.18 RESERVED**

**C211.19 RESERVED**