



AUS-SPEC

Infrastructure Specifications

0241 Landscape – Walling and Edging



0241 LANDSCAPE – WALLING AND EDGING

IMPORTANT: This document has been adapted from the NATSPEC suite of specification templates for use in the MidCoast Council area by both Council and industry. NATSPEC regularly updates the base templates (currently in April and October each year), and Council may incorporate changes into its version of AUS-SPEC from time to time. To assist in highlighting any changes made by Council to the NATSPEC templates, the following conventions are used.

- See ANNEXURE M at the end of this document which contains (where practical) MidCoast Council customisations (also known as 'office master' text). References to the Annexure are to also be inserted at relevant clauses in the main body of the document.
- Where content is added to the main body of the document, it is to be shown **in brown text like this**.
- Where content is deleted or excluded from the main body of the document, it is to be shown ~~struck through like this~~. Such clauses are to have no effect.

Where there is a conflict between main body text and MidCoast Council specific clauses, Council's specific clauses shall prevail.

1 GENERAL

1.1 RESPONSIBILITIES

General

Requirement: Provide landscape walling and edging, as documented.

1.2 CROSS REFERENCES

General

Requirement: Conform to the following:

- **0136 General requirements (Construction)**.
- ~~—0171 General requirements.~~

1.3 SUBMISSIONS

Samples

Submit samples as follows: **If specific product brands are not documented on the Drawings, the Contractor's proposed masonry units or timber units for use in walling or edging.**

1.4 INSPECTION

Notice

Inspection: Give notice so inspection may be made of the following:

- **Witness Point:** Set out before starting construction.
- **Witness Point:** Geotextiles and subsurface drainage in place before backfilling.

2 PRODUCTS

2.1 TIMBER

Durability

Natural durability class to AS 5604: Class 1.

Hazard class to AS 1604.1: As documented, or specified in DA consent conditions.

Preservative treatment

Timber type: Provide only timbers with preservative treatment appropriate to the Hazard class.

Cut surfaces: Provide supplementary preservative treatment to all cut and damaged surfaces.

CCA treated timber: If proposed, provide details. **Do not use where use is not permitted on the Drawings.**

Hardwood

General: To AS 2796.1 Section 2.

Grade to AS 2796.2: As documented.

Stress grade to AS 2082: As documented.

Softwood

General: To AS 4785.1 Section 2.

Grade to AS 4785.2: As documented.

Stress grade to AS 2858: As documented.

2.2 STEEL

Steel tubes

Posts, rails, stays: To AS/NZS 1163.

- Grade: C350L0.

Wire

Chainwire, cable wire, tie wire and barbed wire: To AS 2423.

Coating: As documented.

2.3 CONCRETE

General

Exclusion: This clause does not apply to structural or engineered concrete uses. Refer to the relevant worksection.

Standard: To AS 1379.

Exposure classification: To AS 3600 Table 4.3.

Grade, if there are cast-in metal items: To AS 3600 Table 4.4.

2.4 DRY STONE WALLS

Walling stone

Natural stone: Stone of uniform quality, sound and free from defects liable to affect its strength, appearance or durability.

Field stone: Local weathered uncut random sized natural stones.

Quarried stone: Cut or uncut random or regular size stone.

Source of supply: As documented.

Minimum unit size (mm): As documented.

Pattern or bond: As documented.

Face finish: As documented.

2.5 SLEEPER WALLS

Sleepers

Hardwood: Sound durability class or preservative treated hardwood sleepers to AS 3818.2.

Softwood: Sound preservative treated softwood sleepers.

Concrete: Proprietary system of concrete sleepers and concrete or galvanized steel posts.

Source of supply: As documented.

2.6 CRIB WALLS

General

Type: Proprietary system of interlocking precast concrete or preservative treated timber cribs with selected backfill placed and compacted progressively with the crib to form a retaining wall.

Product: As documented.

2.7 MASONRY SEGMENTAL WALLS

General

Type: Proprietary system of interlocking masonry segmental units with selected backfill placed and compacted progressively to form a retaining wall.

Masonry segmental retaining wall units: To AS/NZS 4455.3.

Product: As documented.

2.8 GABIONS

General

Type: Proprietary system of rock filled wire baskets.

Product: As documented.

2.9 EARTH REINFORCEMENT

General

Type: Proprietary system of galvanized steel strips or steel mesh strips placed in layers with compacted selected fill and connected to precast concrete facing panels to form vertical retaining walls. Provide the necessary accessories including levelling pad, bearing pads, and joint fillers or covers to keep the selected fill material out of the panel joints.

Product: As documented.

2.10 GEOTEXTILES

General

Type: Polymeric fabric formed from a plastic yarn composed of at least 85% by weight of propylene, ethylene, amide or vinylidene chloride and containing stabilisers or inhibitors to make the filaments resistant to deterioration due to ultraviolet light.

Identification and marking: To AS 3705.

Product: As documented.

2.11 EDGING

Log

Timber: As documented.

Size (length x average diameter): As documented.

Sawn timber

Timber: As documented.

Size: As documented.

Pegs: As documented.

Sleeper

Timber: As documented.

Concrete

Standard: To AS 1379 – Grade N20.

Edge strip profile: As documented.

Concrete kerb profile to AS 2876 (see Appendix A): As documented.

Steel

Product: As documented.

Size and profile: As documented.

Finish: Hot-dip galvanized.

Brick

Brick type: As documented.

Laying pattern: As documented.

3 EXECUTION

3.1 GENERAL

Set-out

General: Set out the position of walls and edging and mark the position of furniture.

Clearing

Extent: Except for trees or shrubs to be retained, clear vegetation within 1 m of the landscape walls. Grub out stumps and roots of removed trees or shrubs and trim the grass to ground level, but do not remove the topsoil.

Excavation

Extent: Excavate for foundations and footings.

Geotextiles

Storage and handling: Store clear of the ground and out of direct sunlight. During installation do not expose the filter fabric to sunlight for more than 14 days.

3.2 DRY STONE WALLS

Construction

Generally: Select the stones for their locations and lay in the wall with minimum stonecutting as follows:

- Each stone is stable, non-rocking, and firmly interlocked with adjacent stones without mortar.
- The wall face shows reasonably regular, flat and vertical stone faces.
- Vertical joints or perpends between stones are spanned by the next stone above.
- Stones are laid generally as through stones whenever possible.
- At least 50% of footings, 30% of wall stones, and all coping stones are laid as through stones.

Footings: Select the largest, flattest and most regular stones for footings, and set them one third of their depth into the ground.

Copings: Select stones of reasonably uniform size and finish the top of the wall to a level line.

Retaining walls

Construction: If dry stone walls act as retaining walls, construct the stonework to be free draining through the wall. Secure the top course of the wall with cement mortar bedding. Backfill progressively, with a layer at least 300 mm thick of porous material, such as coarse aggregate or crushed rock in the size range 20 to 40 mm.

Minimum thickness: 300 mm.

Wall face batter: Batter back the wall face 50 mm to 70 mm for every 300 mm in height.

Rip-rap retaining walls

Construction: Construct as dry stone retaining walls with large random sized boulders recovered from excavations, to form gravity walls retaining, and supported by, embankments. Place boulders with large face down and stepped back from boulders below.

3.3 SLEEPER WALLS

Construction

Timber sleeper wall: Erect sleeper posts at 2 m centres, buried one third. Brace wall at half height above ground with sleepers returned into embankment, spiked to posts. Lay sleepers in stretcher bond behind the verticals and securely spike together at joints and at 2 m centres. Back with geotextile and place a 100 mm draining layer of coarse sand or fine gravel between the fabric and backfill.

Concrete sleeper wall: To manufacturer's recommendations.

Backing: Backfill to ground level with compacted fine crushed rock or gravels.

3.4 CRIB WALLS

Construction

Requirement: Construct walls to the manufacturer's recommendations.

3.5 GABIONS

Assembly

Requirement: Assemble the baskets and join together by wiring along the horizontal and vertical edges before placing the rock fill. Fix the top of the basket by wiring to the sides and the diaphragms.

Filling

Requirement: Place rocks, by hand, at the front and other exposed faces to form a neat face free of bulges, depressions and voids.

3.6 EARTH REINFORCEMENT

Construction

Requirement: Construct walls to the manufacturer's written recommendations.

3.7 EDGING

Log edges

Installation: Excavate to lay logs at least half diameter into the ground. Spike through logs with two 13 mm diameter galvanized mild steel rods per log, penetrating a minimum of 500 mm into the subgrade. Drive the rods flush with the upper surface of the log. Butt the logs together to a close neat fit. Select adjacent logs with similar diameter.

Sawn timber

Installation: Set edgings flush with adjoining surfaces. Drive pegs into the ground at 1200 mm centres on the planting side of the edging and on both sides of joints between boards, with peg tops 15 mm below top of edging. Fix the pegs with galvanized nails, two per fixing.

Curving: Space the pegs to hold edging to a uniform curve. Reduce edging thickness to 15 mm if required for bending.

Sleeper

Installation: Spike through sleepers with two 13 mm diameter galvanized mild steel rods per sleeper, penetrating a minimum of 500 mm into the subgrade. Drive the rods flush with the upper surface of the sleeper. Arris the upper exposed sleeper edges to produce a 15 mm wide face at 45 degrees to the edges.

Concrete

Edging strip: Place in a shallow trench between timber forms. Wood float finish flush with the adjacent finished level. Provide control joints, filled with resilient bituminous material, at 3 m maximum centres.

Concrete kerb: Fixed form, extrusion or slip forms to AS 2876.

Steel

Fixing:

- Angle section: Fixed in place by the mass of surrounding soil works.
- Flats: Fix in place with 250 mm long x 10 mm galvanized steel spikes driven through 50 x 50 mm fixing plates. Weld holed plates at right angles to the face of the flat at 1000 mm centres on alternate sides set parallel and 25 mm below the top of the edging.

Spade edge

Edges: Define mass planting beds by cutting through soil with garden spade at approximately 70° to vertical. Remove sods from garden beds and spread throughout grassed areas.

Finish: Free from kinks in alignment with one curve grading evenly into the next, and free of straight sections.

Brick

Setting: On a 1:1:6 (cement:lime:sand) mortar haunch.

Joints: 3 mm struck flush.

Alignment: Even and free from dips, humps and bends.

Cleaning: Wash off mortar progressively.

4 REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 1163	2016	Cold-formed structural steel hollow sections
AS 1379	2007	Specification and supply of concrete
AS 1604		Specification for preservative treatment
AS 1604.1	2012	Sawn and round timber
AS 2082 purposes	2007	Timber - Hardwood - Visually stress-graded for structural
AS 2423 general use	2002	Coated steel wire fencing products for terrestrial, aquatic and

AS 2796		Timber - Hardwood - Sawn and milled products
AS 2796.1	1999	Product specification
AS 2796.2	2006	Grade description
AS 2858	2008	Timber - Softwood - Visually stress-graded for structural purposes
AS 2876	2000	Concrete kerbs and channels (gutters) - Manually or machine placed
AS 3600	2018	Concrete structures
AS 3705	2012	Geotextiles - Identification, marking, and general data
AS 3818		Timber - Heavy structural products - Visually graded
AS 3818.2	2010	Railway track timbers
AS/NZS 4455		Masonry units, pavers, flags and segmental retaining wall units
AS/NZS 4455.3	2008	Segmental retaining wall units
AS 4785		Timber - Softwood - Sawn and milled products
AS 4785.1	2002	Product specification
AS 4785.2	2002	Grade description
AS 5604	2005	Timber - Natural durability ratings

5 ANNEXURE M – MIDCOAST COUNCIL SPECIFIC CLAUSES

M1.	Variations to or non-conformances with Council's AUS-SPEC are to be evaluated with reference to the procedure in Council's <i>Development Engineering Handbook</i> . Acceptance is to be obtained in writing from: a) an authorised representative of Council's Director of Infrastructure and Engineering Services, or b) an accredited certifier where they are the Principal Certifier and hold the relevant accreditation category for the type of work.	Variation procedure
M2.	This specification applies in addition to any development consent (DA) conditions. If there is any inconsistency, the conditions of consent shall prevail.	DA conditions
M3.	Refer to the MidCoast Council <i>Development Engineering Handbook</i> for final inspection, works-as-executed and handover requirements.	Completion

6 AMENDMENT HISTORY

0	14/12/2020	First Published
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