

DEPARTMENT of INFRASTRUCTURE, ENERGY and RESOURCES, TASMANIA
BRIDGEWORKS SPECIFICATION
B50 - CRIB WALLS **April 2003**

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B50.1 SCOPE

This Specification sets out the requirements for the supply and construction of crib block walls as shown on the Drawings.

B50.2 REFERENCES

The following Standards are referenced in this Specification.

AS 2439 Perforated plastics drainage and effluent pipes and fittings
Specifications B1, B10, B11, B14 and R33

B50.3 MATERIALS

- (i) Precast concrete crib wall components shall comply with the requirements of the Drawings and Specification B14 - Precast Concrete Units.
- (ii) The concrete for the bases shall conform with Specification B10 - Supply of Concrete.
- (iii) Filling within the crib walls shall be crushed rock complying with the following grading:

A.S. SIEVE SIZE (mm) % PASSING BY MASS

53	80-100
19	48-100
9.5	35-100
4.75	25-60
2.36	20-45
0.425	5-20
0.075	0-5

The whole of the material shall be supplied from sound rock and shall be clean and free from clay and any deleterious material, weathered or disintegrated stone.

The stone when crushed shall be angular and shall be of the same grading throughout the period of supply.

The product of the plasticity index and the percentage passing the 0.425mm sieve shall not exceed 200.

- (iv) The agricultural drain pipe behind the wall shall be Class 1000 conforming with the requirements of AS 2439 - Part 1 for Type 1 perforated drainage pipe. It shall be wrapped in non-woven geotextile filter fabric with a minimum bursting strength of 1500 kPa and a minimum weight of 160 g/m².
- (v) Filter material shall consist of a coarse, no fines gravel or crushed rock with a maximum particle size of 19 mm and a minimum particle size of 4.75 mm. A uniformly sized aggregate with a particle size within the above limits shall be acceptable.

The filter material shall be free from lumps of clay or organic matter.

B50.4 EXCAVATION

Excavation shall be carried out in accordance with Specification B1 - Earthworks and Foundations.

B50.5 CONSTRUCTION

(i) The concrete bases shall be constructed in accordance with Specification B11 - Reinforced Prestressed and Mass Concrete.

(ii) Placing Crib Wall Units

Crib wall units shall be laid true to the lines, levels and cross-sections shown on the Drawings on the bases and shall bear evenly over their full lengths. Tolerances shall be in accordance with this Specification.

Erection of the wall shall be kept to a fairly uniform height throughout its length, no part being carried more than 1 metre above any other part. Stretchers shall be placed horizontally and each course of stretchers shall be even and horizontal throughout. Where necessary, packers consisting of not more than 2 layers of bituminous felt or other approved packing material, shall be placed between stretchers and headers to obtain a satisfactory alignment. Headers shall be plumb throughout.

The front face of stretchers and headers shall maintain an even batter as specified on the Drawings.

Each member shall be secured by interlocking details. Where multi-cell cribs are specified the cells shall be adequately interconnected to ensure that they act as a unit.

(iii) The agricultural pipe shall be laid in accordance with Specification R33 - Subsoil Drains in the position as shown on the Drawings.

(iv) Crib Wall Filling

Crib wall filling shall be spread in horizontal layers not exceeding 200 mm in thickness. Each layer shall be compacted by 5 passes of a vibrating plate having a minimum static weight of 50 kg.

Fill shall be placed progressively with the erection of crib wall units and the general level of fill shall not be more than 1 metre lower than the top course of crib wall units placed.

Care shall be taken in handling and placing the crushed rock filling to ensure that units are not displaced or damaged. Any such damage or displacement shall be made good at the Contractor's expense.

B50.6 TOLERANCES

(i)	Concrete Base	As per Specification B11.
(ii)	Crib Wall Construction	
	(a) Departure from plan position at base of wall shall not exceed	25 mm
	(b) Variation from specified batter	10 mm in 2.5 m
	(c) Maximum allowance for inequalities	10 mm in 2.5 m
	(d) Reduced level of top of wall	-25 to +25 mm

B50.7 HANDLING AND STORAGE OF CRIB WALL UNITS

The methods of handling and storage of crib wall units shall be such as to avoid damage and preserve true and even edges and corners.

B50.8 DAMAGE TO UNITS

In the event of any unit sustaining damage such as cracking or spalling, the unit shall be set aside until it has been inspected by the Superintendent who shall decide whether the unit shall be repaired by the Contractor, or rejected and removed from the site of the works.

The cost of repairs to damaged units and the cost of replacing rejected units, including the cost of transport to the site, shall be borne by the Contractor.

B50.9 PAYMENT

The rate in the Bill of Quantities for the supply and installation of crib wall units shall be based on the face surface area of the wall.

Payment for filling shall be based on the measured, compacted, in place volume as determined from design cross sections extending from the foundation level.