

# Retaining Wall Engineering

This engineering schedule demonstrates the retaining wall capacity and minimum installation parameters, (site, soil, drainage and angle of influence clearance), required for our tanks. Be prudent and conservative in your approach to projects, for advice speak to your structural engineer, if you don't have a structural engineer, we recommend Partnear Engineering ([www.parnear.com.au](http://www.parnear.com.au)). Partnear Engineering performed the calculations on which this schedule is based and have a first-hand understanding of the structural and retaining capacities of our tanks.

**Minimum Installation Requirements**

**Soil Retaining Design Parameters:**

1. Max fill density = 18kN/m<sup>3</sup>
2. Fill soil friction angle = 30°
3. Minimum soil bearing capacity = 100kPa
4. Surcharge = 2.5 kPa
5. Designed as fully drained
6. Minimum 50mm crushed rock base.

**Note :**

1. Ensure lid to be filled with soil prior to backfilling .
2. Sand bedding is not acceptable

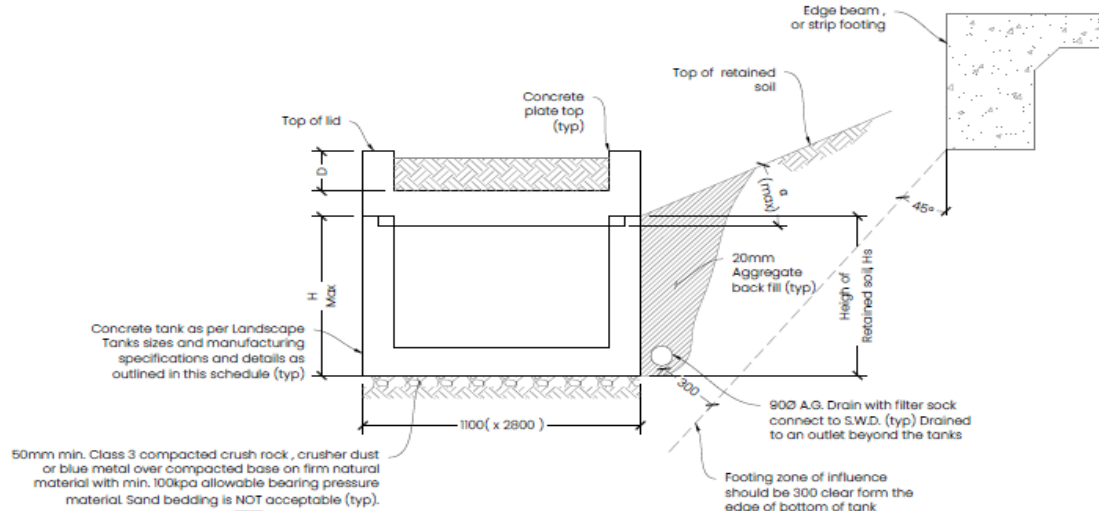
**Maximum Retained Soil Parameters**

H (mm)	D (mm)	Max Retain Soil Batter (a)	Max Retained Soil Height, Hs (mm)
830	STD	20	1000
	DEEP	14	1095
110	STD	10	1170
	DEEP	10	1365
1430	STD	20	1200
	DEEP	15	1300
1430	STD	10	1655 *
	DEEP	10	1655 *

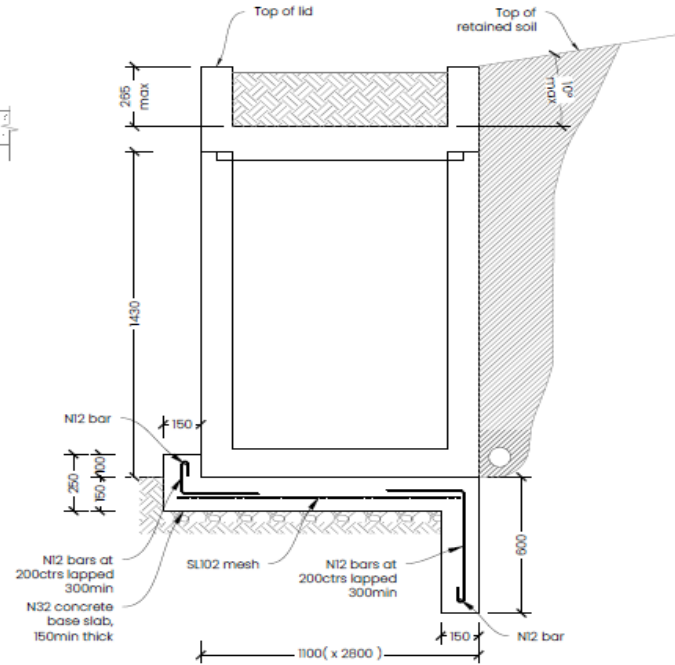
\* - Denotes additional footing required. Refer to Detail B.

**General Notes:**

- G1 These drawings shall not be used for construction until issued as "Approved for Construction" by Partner.
- G2 During Construction, the Contractor shall be responsible for maintaining the structure and all excavations in a stable condition and ensuring no part is over stressed by construction activities.
- G3 Workmanship and materials are to be in accordance with the relevant Australian Standards, the Building Code of Australia, Occupational Health and Safety Regulations and the local statutory authorities' requirements.
- G4 Any discrepancy or ambiguity between these drawings and other disciplines should be approved by the client and/or Project Manager before work commences.
- G5 No responsibility shall be taken for material or workmanship errors during construction or discrepancies with the schedules and details provided.
- G6 Products specified in these drawings must be adopted and departure is only permissible with approval by Partner.
- G7 Do not scale from the drawings.
- G8 The structure has been designed to be installed and to be lifted at the locations noted. Any alternative proposed loading scenario, lifting or temporary propping must be discussed with Partner.
- G9 Foundation material to be firm natural material or approved compacted material with minimum allowable bearing capacity of 100kPa. Foundations to be engineer inspected prior to installation of the structure to confirm stability of founding material.



**Water Storage Tank  
Battered Retained Soil Detail**  
Not to scale



**Detail B  
Battered Retained Soil Detail**

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Patent Granted # 2010286347

Last updated July 24

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