

Installation Guide

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How to Build A Retaining Wall with Concrete Sleepers



For those seeking instruction on how you should build a retaining wall constructed from Nationwide Precast Concrete Sleepers, the following guide will enable you to easily plan and layout your construction area in preparation for building the wall and the procedures you should then follow to construct your completed retaining wall or garden bed.

STEP 1: SETTING UP

Always check with your local council before you start as to whether you need council approval for your retaining wall.

- Clear and level your site where you plan to build the retaining wall.
- Ensure you leave 300mm to 400mm behind the retaining wall area for backfill

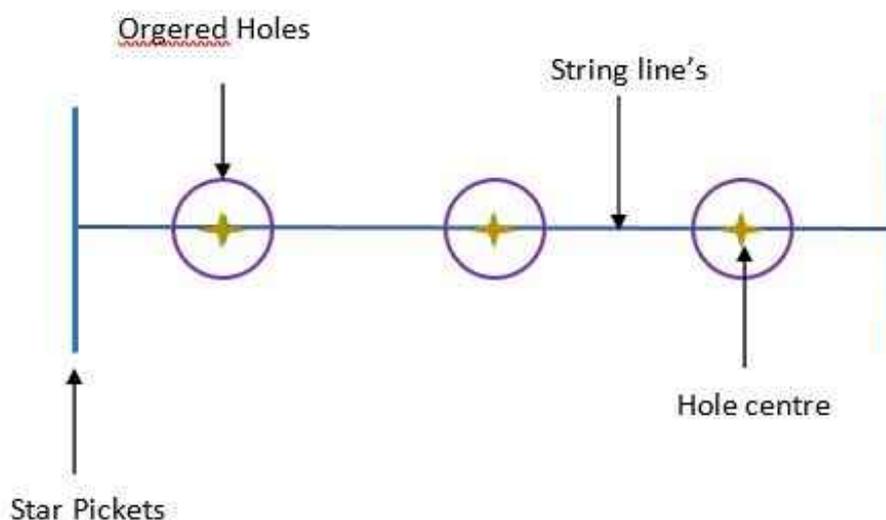
STEP 2: ALIGNMENT

Place a star picket at both ends of the proposed wall

- Attach a string line to the top and bottom of the pickets to give you alignment of the wall, usually 1 in 4 (25mm lean over 1 meter)

STEP 3: MARKING OUT HOLES

- Starting from one end of the wall, mark a cross on the ground every 2 meters to drill holes for galvanized posts
- Set Galvanized posts to correct height



STEP 4: AUGER HOLES

Auger Holes as per following engineer specifications

RETAINING WALL PROPERTIES						
WALL HEIGHT H	PIER DEPTH D	PIER DIAMETER B	INTERMEDIATE POST	END POST	HEIGHT OF DOUBLE SLEEPER	HEIGHT OF SINGLE SLEEPER
600	800	450	100UC14.8	100PFC	-	600
800	1000	450	100UC14.8	100PFC	-	800
1000	1200	450	100UC14.8	100PFC	-	1000
1200	1400	450	100UC14.8	100PFC	-	1200
1400	1600	450	100UC14.8	100PFC	-	1400
1600	1600	600	150UC23.4	150PFC	-	1600
1800	1800	600	150UC23.4	150PFC	-	1800
2000	2000	600	150UC23.4	150PFC	-	2000
2200	2300	600	150UC30.0	150PFC	200	2000
2400	2600	600	150UC30.0	150PFC	400	2000
2600	3000	600	150UC37.2	200PFC	600	2000
2800	3300	600	200UC46.2	200PFC	800	2000
3000	3700	600	200UC46.2	200PFC	1000	2000
3200	4200	600	200UC46.2	200PFC	1200	2000

STEP 5: POURING CONCRETE

- Pour Concrete into holes, make concrete stiff. Concrete mix should be 20/25, 60 slump
- Set your post by lowering into ground level with the top string line
- Ensure there is a minimum lean back of 25mm for every 1.0m in height
- Measure down from top of post to get height of concrete footing correct. The concrete footing will be taking the weight of the sleepers.

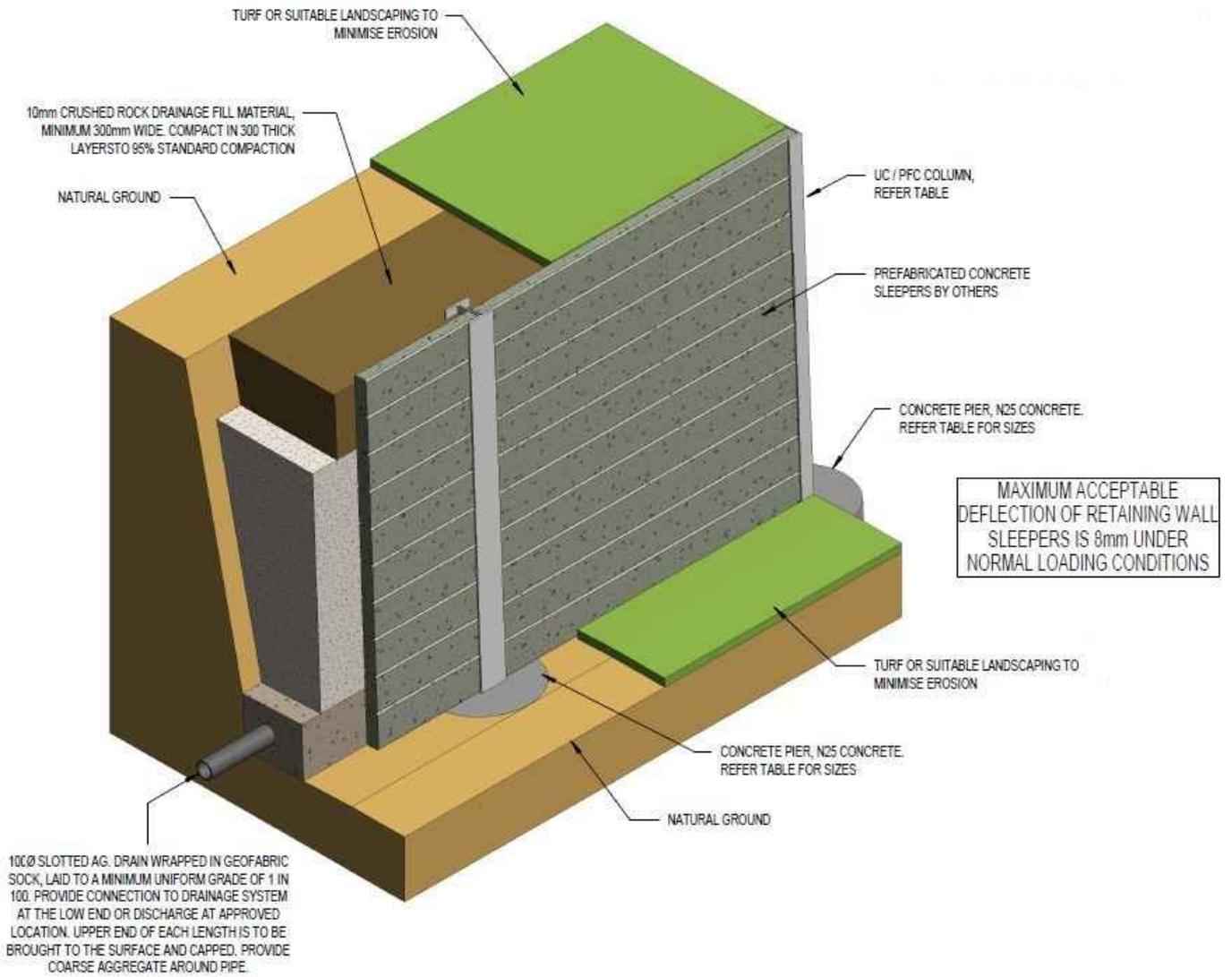
STEP 6: CHECKING POSTS

- Use spirit level to make sure all your posts are aligned with the string lines to check your front face is correct
- Double check distance between posts top & bottom with the concrete sleepers being used

STEP 7: AGPIPE AN BACKFILL

- Allow the concrete to cure for 2 days before you place your sleeper's in
- Place agpipe at the base of the wall then backfill with gravel to 200mm from top

NO CONSTRUCTION LOADS ALLOWED WITHIN 1.5 x HEIGHT OF WALL OF TOP OF WALL
HAND COMPACTION EQUIPMENT TO BE USED ONLY



NOTE:

It is not advisable to backfill for a few days as concrete in footing may not be fully cured.

Geotech report to be done by others

Installation Guide for Concrete Sleeper Retaining Walls