

# Concrete Sleeper Installation Guide

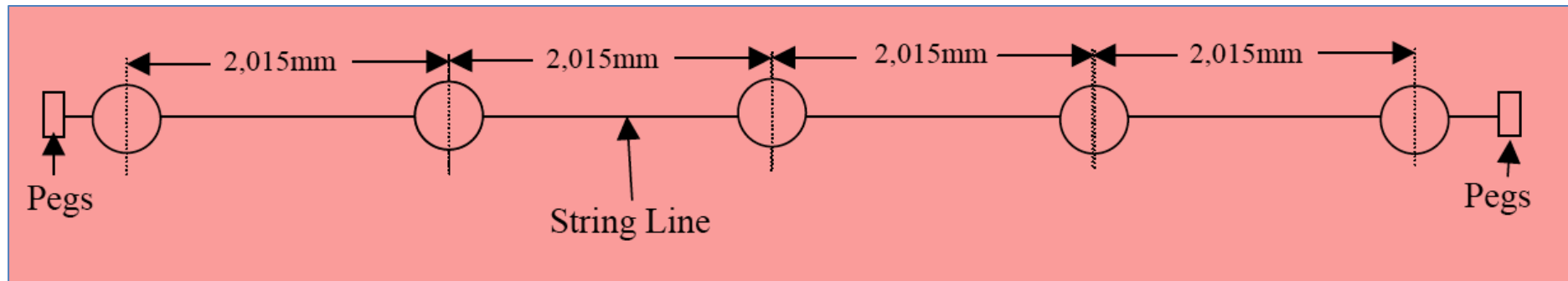
This guide is a basic outline of how to install a concrete retaining wall. For simplicity it is based on installing a 1 metre high retaining wall with 2 metre sleepers. For different wall heights please adjust the figures accordingly.

## **STEP 1: Setting up**

When setting up your retaining wall you need to establish the correct alignment, particularly if the retaining wall is located on a boundary. In most cases, the person who alters the natural ground level is responsible for the retaining wall, however you should check with your local council as each region may have different laws.

## **STEP 2: Laying out**

You will need to set a string line along the line of the proposed retaining wall. Set your pegs 500mm past each of the retaining wall so that the end holes do not disturb your string line. Mark out where each hole will need to be dug (hole centres should be 2015mm apart for 2m sleepers).



### **STEP 3: Steel lengths**

As a rough guide, the steel should be cut to double the height of the wall, so a 1m wall will require 2m steel lengths. This may vary depending on your type of soil.

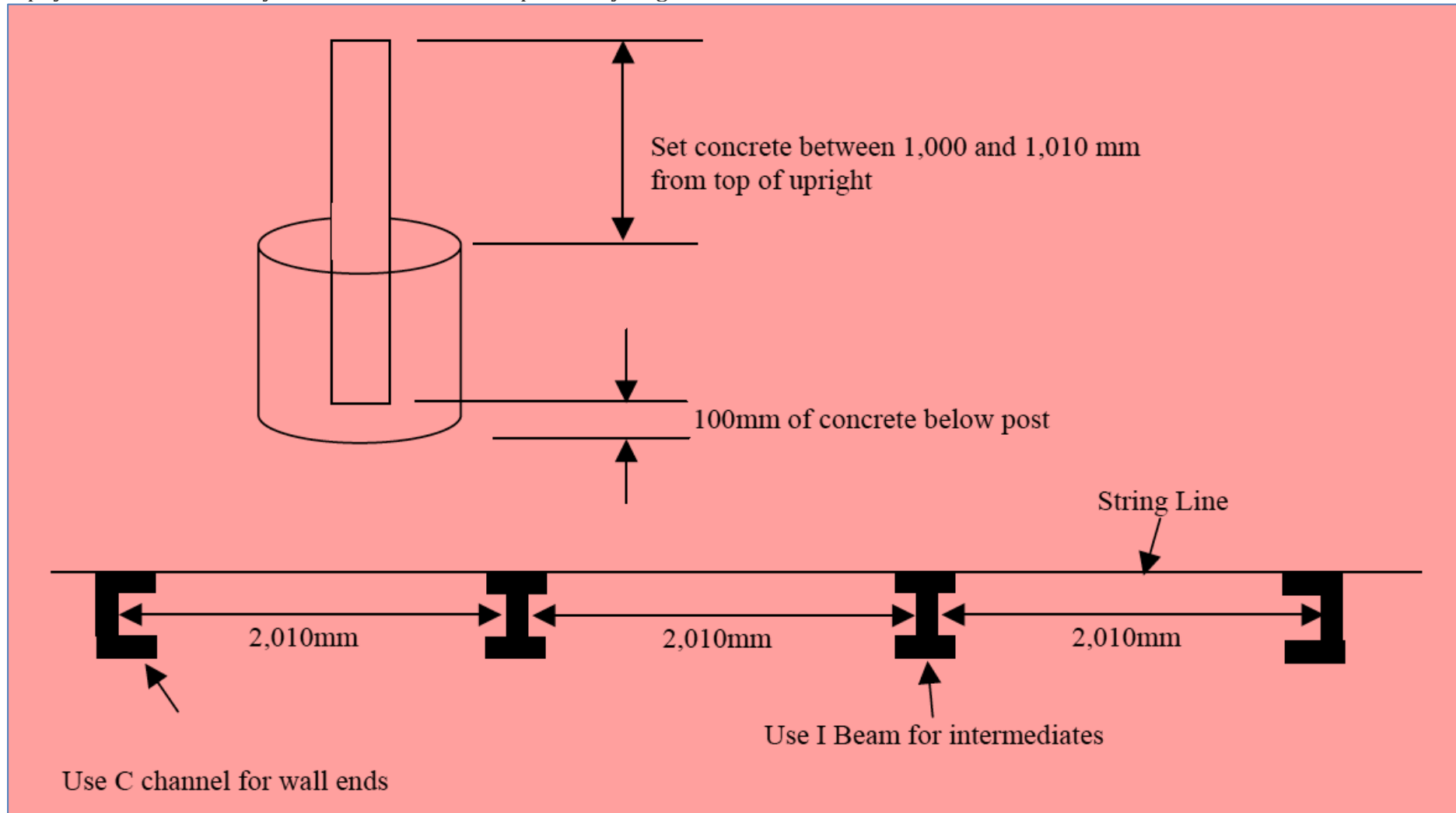
### **STEP 4: Digging the holes**

Holes should be dug to the same height as the wall, plus 100mm. For example, a 1 metre high wall should be dug to  $1,000 + 100\text{mm} = 1,100\text{mm}$ . Hole diameters should be approx. 450mm.

### **STEP 5: Concreting**

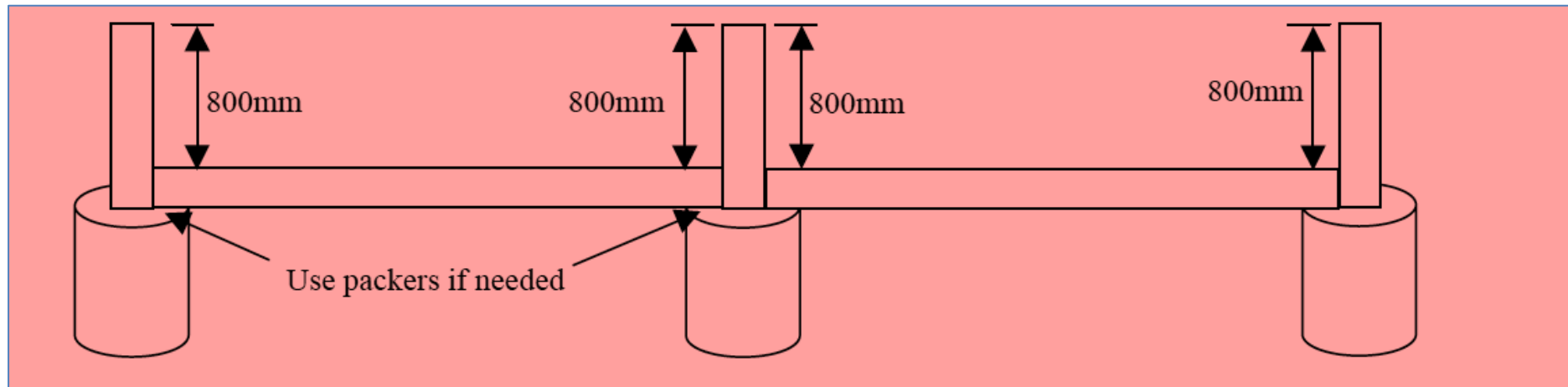
Once your holes are dug, concrete your steel uprights in place leaving a gap of 2,010mm between them. The easiest way to do this is to cut a piece of wood to the right length. Check each upright with a spirit level as you go. Do not overfill the holes with concrete – the distance from the top of the upright to the top of the concrete should be 1,000 to 1,010mm.

It pays to double -check your distances between posts as you go.



## STEP 6: Slotting your wall

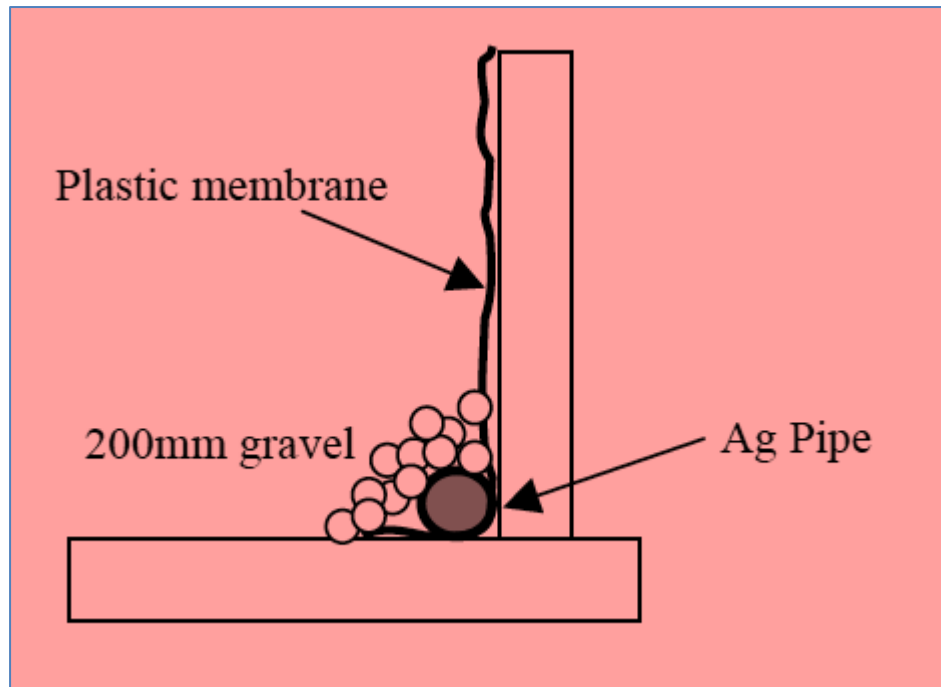
Once the posts have set for at least 24 hours you can start slotting your sleepers. In most cases it is best to set your bottom sleeper first, and then check the measurement from the top of the sleeper to the top of the upright. For a 1m wall you should end up with 800mm. If the measurement is more, place packers under the ends of the sleeper until it is correct. Packers should be made of material that will not disintegrate.



Although you can slot your sleepers one day after the uprights were installed, it is not advisable to back-fill your wall for a few days as the concrete will not be fully cured.

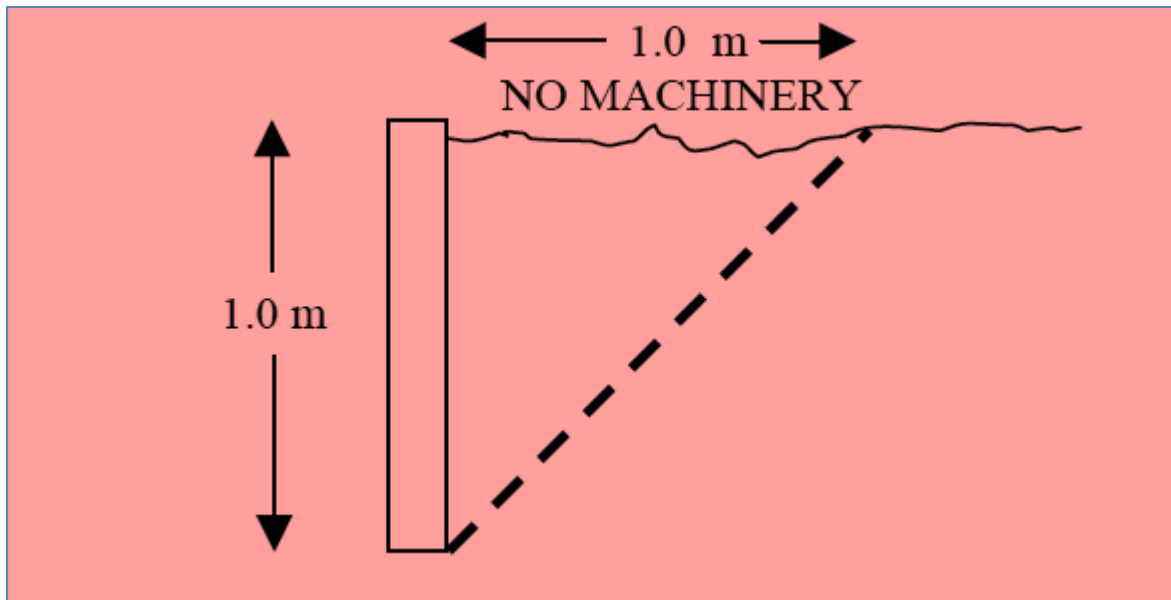
## STEP 7: Preparing for backfilling

Once your sleepers are slotted you will need to place a plastic membrane behind the wall, and place a ag pipe along the bottom. Cover the ag pipe with 200mm of gravel to allow for sufficient draining.



### **STEP 8: Back-filling**

Concrete sleepers are designed to take the pressure of soil behind them, however it is not recommended to compact directly behind the wall. As a general rule you should never compact any closer to the wall than it's height, so for a 1m wall, heavy machinery should be kept at least 1m away from it.



**Note:** These instructions are supplied as a basic guide only. We accept no responsibility in regards to the installation of a wall, or for any issues that occur as a result of incorrect installation. For large walls, structural engineers should be employed to ensure structural integrity. Any queries please contact your local council.

80mm thick
80mm thick
80mm thick
80mm thick
80mm thick

Up to 1 metre high

80mm thick
80mm thick
80mm thick
80mm thick
80mm thick
100mm thick (Heavy Duty)
100mm thick (Heavy Duty)
100mm thick (Heavy Duty)
100mm thick (Heavy Duty)
100mm thick (Heavy Duty)

Up to 2 metres high