Constructing a WaterUps® timber wicking bed

Ironwood® Sienna treated pine sleepers make a great raised bed for your WaterUps® wicking system. They are extremely sturdy, long lasting and are specified as safe for use in sensitive areas such as vegetable gardens. You can also build a bed to almost any dimension. They are, however, very heavy and for this reason are best built on site.

Draw up a plan

Measure the space where you intend to construct your timber bed and consider the following points when drawing up your plan:

1. Your bed will need to be constructed on a completely level base – determine this with a spirit level.
2. For your bed design, the internal dimensions should ideally be in multiples of 400mm (the width of 1 WaterUps® cell). This avoids the need to cut the cells. If you do, however, want a dimension that is a multiple of 200mm, then this will work as you can cut a cell in in half with a saw.
3. After working out the length and width, add an extra 10mm to each to allow for the pond liner. For example, if you had decided on a bed 2.4m x 1.2m then your internal dimensions would be 2410mm x 1210mm.
4. After you have decided on the optimal internal dimensions for your bed, remember that you need to make allowance for the thickness of the sleepers (50mm) and the supports (50mm). This will impact the external dimensions that you will need.
5. For the supports/caps you need to decide whether these are best located on the long or the short side of the bed.
6. Determine the amount of timber that you need – refer section below on cutting the sleepers.
7. Next, you will need to decide where to locate the overflow pipe – either on the long side or the short side.

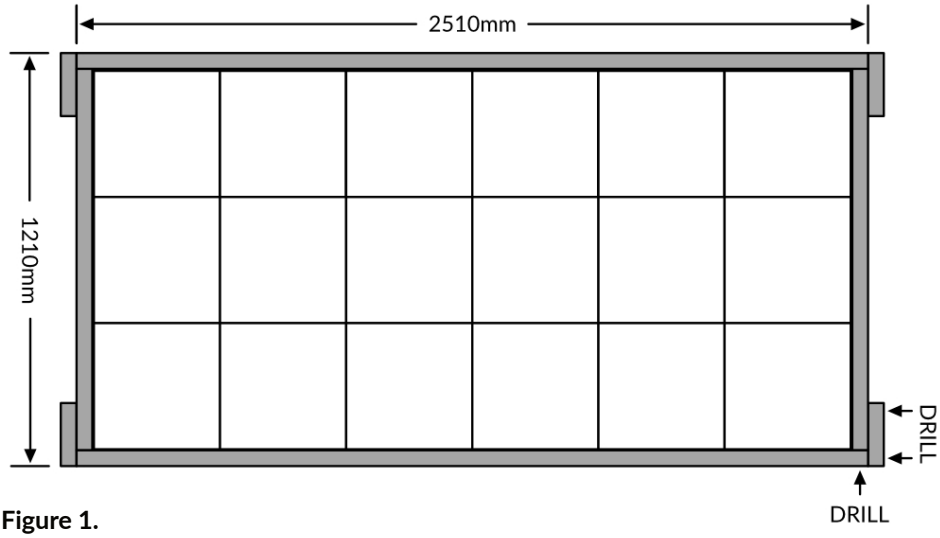

Figure 1.

Cutting the sleepers

The most important thing to consider before cutting your sleepers is the dimensions of your bed and on which sides you have decided to locate the supports. This will determine the lengths that you you will need to cut the long and short sides.

Figure 1 shows the location of the supports/caps on the (long) sides of our 2400mm x 1200mm (internal dimensions) bed.

With the supports/caps on the long side this means that you will need to cut the sleepers into the following lengths:

1. 4 x 2510mm (long sides). **Note:** this is 100mm longer than the internal dimensions (plus 10mm allowance for the pond liner).
2. 4 x 1210mm (short sides).
3. 4 x 400mm (supports/caps).

Drilling holes for the screws and the overflow pipe

1. On the 200mm side of each of the 4 x 2510mm sleepers, drill 2 x holes centred (ie. 25mm in from the top and the bottom) and 50mm in from the end. Drill these all the way through. Refer to **Figure 1** and the photo above.

2. On the 4 supports/caps, drill 4 holes (all the way through). The holes should be located 100mm in from the ends and 25mm in from the sides. Refer photo below.

3. If you have decided to locate the overflow pipe on the 1200mm (short) side, then the location of your overflow pipe should be 420mm in from the end of one of your 1210mm lengths and 120mm up from the bottom. Drill as follows:
   - Use the 5.5mm drill bit to drill a small hole; and
   - Then use the 20mm speed bore or hole saw to drill the hole for the overflow pipe.

QUICK TIP

Mark the bottom so that you will know which way the sleeper should sit when you go to install it.

Preparing the base for the bed

1. Ensure that the base of the bed is level.
2. It is often beneficial to lay down some Corflute sheet to provide a perfectly even base. This will also protect the underside of the timber sleepers and the pond liner.

Assembling the bed

It is now time to start putting your raised timber bed together.

1. Lay the 2 x 2510mm (long) lengths in position. Then, take 2 x 1210mm end pieces and place them in position. Use your spirit level to double check that the bed is located on a level surface. Insert the Bugel head screws into the pre-drilled holes on the long sections and screw the base together.
2. This is probably a good time to check the position of the overflow pipe.
3. Do the same with the other 2510mm and 1210mm sleepers and then place on top.
4. Take the 4 x support/cap pieces and screw where you have pre-drilled.

You have now completed the timber frame and your bed should look similar to the photo at the photo at the top of the next column.

Adding the Pond Liner

1. Before adding the pond liner, lay it out flat and cut to make sure that your liner measures as follows:
   - Long side: 3200mm
   - Short side: 2000mm
2. Next measure and mark where to cut out the circle for the over flow pipe. This should be on the short side as follows:
   - 820mm in from the side and up 520mm from the bottom;
   - trace the outline of the overflow pipe around the marked position;
   - Before cutting the hole place the pond liner into the bed to ensure that you have marked the position of the hole correctly;
   - Cut out the circle.
3. Add the pond liner so that it covers the entire base and and all internal walls. You should have sufficient liner to reach the top of the bed.
4. On the corners take care to fold the pond liner diagonally to ensure that it sits neatly to the edge of the base and up the wall. You can tack or staple the folded edges in place to make it easier to position the rest of the liner and the cells.

Adding the WaterUps® cells

Next add the WaterUps® cell with the overflow pipe and place it in position.

Then add the rest of the cells including the one for the inlet pipe. On that cell cut out the circle for the inlet pipe and insert it by aligning the 3 lugs at the base of the pipe with the holes in the cell.

Final steps

Now fill the 4 wicks of each cell with perlite and then add your potting mix, compost and plants.

Further Information

Click here to view & download the *WaterUps® Installation Guide*

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