

# BACKYARD BLITZ

## Garden Sanctuary

The Blitz team decided to create a garden sanctuary for Hassia Lichtman. Hassia is pregnant with her second child and things are not going well. A rare medical condition means she has to spend a lot of time either in hospital or resting. While the Blitz team set to work, husband Mitch and three year old son Ben took Hassia for a brief holiday. When she came home she discovered a wonderful surprise - a new backyard with space to rest and recuperate.



Landscape designer John Happ's plan called for a raised garden bed around three sides of the garden, a thatched pavilion in the centre and a pond with wall fountain. Blue glazed tiles were used to make wall features and the fountain splashback. Matching blue glazed pots contained feature plantings of agave. The garden was planted with two species of strelitzia and some fragrant gardenias.

## What we did

The existing grassed backyard had high brick walls on three sides. Sections of the turf were removed and raised garden beds, the pond and thatched pavilion were constructed. A fountain splashback for the pond and decorative wall plaques were made from glazed tiles and attached to the walls. Decomposed granite paving was laid inside the pavilion and at the back of the house. The pond and a fountain were installed and the garden beds planted.

## Materials

**Pavilion:** posts (125x125mm), beams (200x75mm), hip rafters (140x45mm), Rapid Set concrete (40kg bags), decomposed granite (Deco Gold), off white cement, treated pine lawn edging (100x25mm), treated pine pegs (300mm), brush wood roofing, bolts and nuts (150mm) and nails all galvanised. *Tools:* circular saw, nail gun, post hole shovel, length of clear hose, plate compactor,

rake, drill.

**Pond and fountain:** fibreglass pond insert (1400x700x500mm), low voltage fountain pump (300 litres per hour), transformer, low voltage cable, conduit, elbows, glue, gel cap connectors, Sikaflex 11FC, plastic hose, spout, plastic mesh box, river sand, blue metal. *Tools:* screwdrivers, caulking gun, electrical pliers, saw.

**Tiled wall features and fountain splashback:** compressed fibre cement board (10mm) eg James Hardie Villaboard, blue glazed tiles (100x100mm), blue glazed border tiles (75x200mm), flexible tile adhesive, plastic tile spacers (2mm), quick grab construction adhesive, rawl plugs (green) and screws (8 gauge), blue coloured tile grout. *Tools:* hammer drill with chasing bit, tile spreader, caulking gun, screwdriver, angle grinder with tile cutting blade, rubber squeegee, sponge.

**Raised garden bed and pond wall:** concrete blocks (200x200x400mm), wall capping for concrete blocks, reinforcing mesh, reinforcing mesh 'chairs' (50mm), ready-mix concrete, brickie's sand, cement. *Tools:* brickie's trowel, concrete float, angle grinder with concrete cutting blade, wheelbarrow, string line, shovel, paint (exterior low sheen acrylic), protective gloves, boots and clothes for when handling concrete.

**Garden beds:** plants (see list below), planter box mix, horticultural pine bark as a mulch.

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## Adapting this plan to your garden

Make a detailed scale drawing of your backyard (eg 1:100) showing the location of the house and major features then incorporate the desired elements from our makeover. As your garden will be a different size you will need to estimate the amounts of materials you will require.

**Note:** On your plan show the locations of any services (water pipes, sewerage, power, phone, etc) so you can avoid damaging them during the makeover. Dial the 'Dial before you Dig' line on 1100 for information.

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## Step-by-step

**Getting started:** any rubbish, old structures, paving, weeds, etc should be removed and the site levelled. When levelling ensure adequate slope away from the house to prevent flooding in heavy rain. If your soil is of poor quality it can be mixed 50:50 with a good organic garden mix. If it is high in clay dig in gypsum or organic clay breaker.

## Pavilion

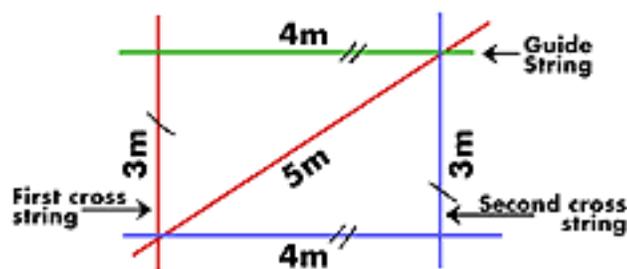
The centrepiece of the new garden is a thatched roof pavilion with a decomposed granite floor. We built the pavilion and a thatching contractor installed the roof. The cost of thatching is about \$50 per square metre which includes the cost of installation.

**Note:** the roof construction requires some carpentry experience. The entire job is also made easier if you have one or two helpers.

Before beginning work, check with your local council as it is a structure it may require council permission.

**Step 1** Clear and level the area for the pavilion and mark out the position of the corner posts using string lines and spray marker paint. It is essential to get the posts in the right position so great care needs to be taken in positioning the string lines.

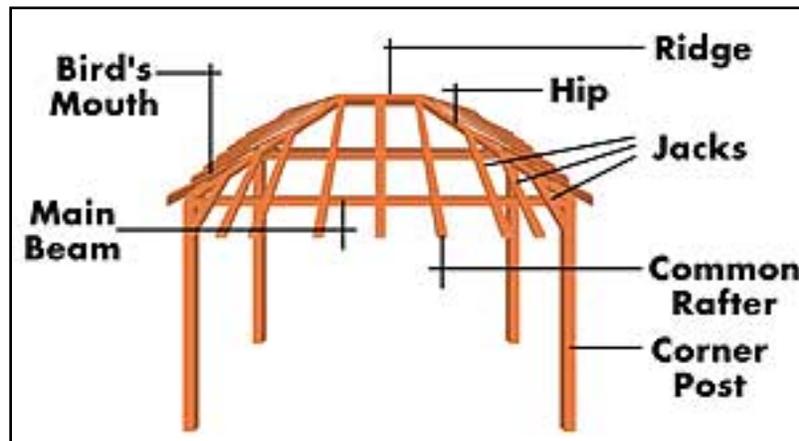
**Blitz Tipz:** The longer the string lines used the easier it will be to get them square. The first string will become the guide string from which the position of the other three can be determined. Once you have a guide string in position it is a simple matter of positioning the second string parallel to it. Measure the same distance from the ends of the guide string to the ends of the second string. To find the position of the cross strings use the '3,4,5 rule'. Temporarily position the first cross string by eye then from its crossing point on the guide string make a mark 3m along the cross string and 4m along the guide string. The distance between the two marks has to be exactly 5m for them to be square to each other. Adjust the cross string as necessary (see diagram). The second cross string is parallel to the first.



**Step 7** Cut the main beams to the correct length and bolt into position with two bolts at each end. As two main beams will be bolted to each post the bolt holes will need to be offset.



**Step 8** Cut a length of timber for the ridge and angle cut (bevel) the ends of six common rafters. You also need to cut a groove in the common rafters (called a bird's mouth) at the point where they touch a main beam (see photo above).



**Blitz Tipz:** If you do not have a helper you can temporarily hold beams in position by rigging support structures. Extreme care needs to be taken to avoid injury when working alone. Ensure temporary support structures are robust enough for the job in hand.



**Step 11** Excavate the floor area of the pavilion to a depth of 100mm. Edge the area in treated pine garden edging, nailing it to treated pine pegs driven at 1 metre spacings around the outside edge.

**Step 12** Fill the area with 100mm of decomposed granite, liberally sprinkle with off-white cement and rake in. Sprinkle lightly with water and compact with a vibrating plate. Add more decomposed granite (with a sprinkle of cement, water and compact) until a final depth of 100mm is achieved.

## Raised garden beds (and pond wall)

We built a raised garden bed around three sides of the garden using a concrete block retaining wall 400mm (2 blocks) high. The pond wall was built exactly the same way but was 600mm (3 blocks) high. Both walls were bagged and painted.

**Note:** Read 'Pond and fountain' construction details (below) before starting to build the pond walls.

**Step 1** Clear the area for the wall, garden and pond removing any vegetation or old structures. Mark out the position of the wall using string lines and spray marker paint. Excavate a 200mm deep and 300mm wide trench for the wall footing.

**Step 2** Position reinforcing mesh on 50mm chairs along the bottom of the footing ensuring the mesh is no closer than 50mm to the sides at any point (see photo). **Blitz Tipz:** If the reinforcing mesh is too close to the edge of the concrete it can become exposed to the elements and start to rust thereby decaying the concrete - a condition commonly called 'concrete cancer'.



**Step 3** Pour concrete into the trench filling it completely. Prod the concrete with a shovel to remove air pockets and ensure it encases the mesh and the chairs. Float the concrete (smooth and level it with a concrete float) to give a flat base for the retaining wall. Allow to set overnight before continuing work in the area.

**Blitz Tipz:** If using ready-mix concrete be well prepared when the concrete truck arrives - you may get charged overtime if you take too long to move the load.

**Blitz Tipz:** In colder weather concrete takes longer to set, check for hardness before continuing work.

**Step 4** Mix a wheelbarrow load of mortar (4:1 ratio of brickie's sand and cement) to a firm consistency. Lay a 10mm bed of cement along the footing and position the first course of concrete blocks using the string line and spirit level. The string line should be positioned along the top front edge of the blocks so both the height and position of the block can be determined. Adjoining blocks should have 10mm of mortar between them.

**Blitz Tipz:** A stiff mortar mix works best with concrete blocks as they are large and heavy.

**Step 5** The second course of the wall is laid on the first after moving the string line up. The second course should be off-set half a block width to the first. (For the pond a third course is required and is also offset half a block to the one below.)

**Blitz Tipz:** Use an angle grinder with concrete cutting blade to cut a concrete block in half.



**Step 6** To complete the wall the capping can be mortared into position. It should overhang evenly on each side.

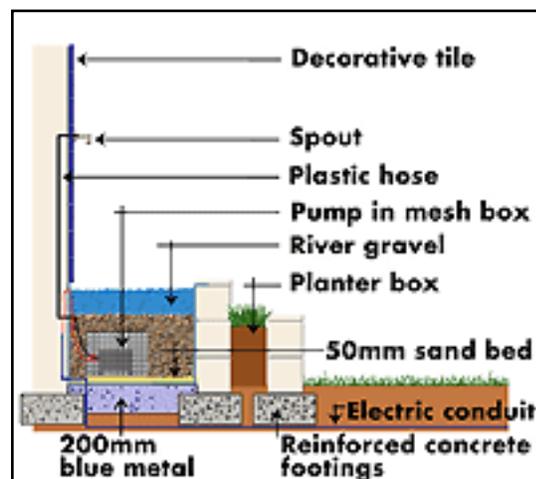
**Step 7** To bag the wall prepare a mortar mix (4:1 sand and cement) with a wet consistency and apply it to the front of the wall with a piece of sack or sponge. Allow to dry and paint.



## Pond and fountain

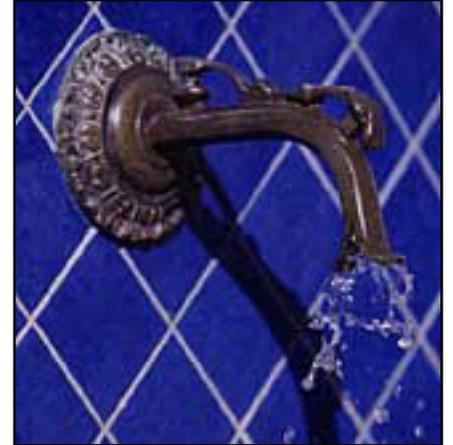
We built a concrete block wall fitted it with a fibreglass pond liner and installed a submersible fountain pump. To make it child safe we filled the pond with river gravel to a level 50mm below the water level. The fountain pump was housed inside a plastic mesh box to protect it from the gravel and to allow easy access for cleaning the filter.

**Step 1** Drill a 25mm diameter hole in the centre of the rear wall of the pond liner as an overflow hole and to allow passage of the low voltage electric cable. The hole should be 50mm below the top of the liner and will set the maximum water level. Drill a second hole 60mm below the overflow hole the same diameter as the fountain supply hose you are using. Run the fountain supply hose through the lower hole allowing an excess of around 400mm. To seal the hole liberally apply Sikaflex 11FC and allow to cure for 12 hours.



**Step 8** Carefully move the splashback (see instructions below for how to make the tiled splashback) into position taking care not to allow the splashback to bend while moving it as this could cause tiles to pop off. Drill a hole through the backboard into the concrete wall (in the tile space left in the top row). Carefully lean the splashback forward (best done with the assistance of two helpers) and drill the hole in the back wall to a sufficient diameter for the rawl plug - locate the plug.

**Step 9** Place an elbow bend through the fountain spout hole and cut the fountain supply hose to the correct length - connect to the elbow. Attach the fountain spout to the other side. Liberally apply construction adhesive to the back of the splashback and move it back into position pressing evenly and firmly into the wall to ensure good adhesion. Screw the backboard into the rawl plug. Use tile adhesive to secure the final tile and grout following **step 5** 'Tiled Wall Features and Fountain Splashback' below.



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## Tiled wall plaques and fountain splashback

We used glazed blue tiles to make six tiled plaques for the garden wall and a fountain splashback. We grouted them with a matching blue grout. The colour of the tiles matched the glazed pots used for feature plantings.

### 1. Tiled wall plaques:

**Step 1** Cut the compressed fibre cement backboard to the required size. Our tile plaques were a 16 tile square. To calculate the backboard dimensions measure your tiles and add 2mm for grouting between each tile.

**Step 2** Cover the backboard with flexible tile adhesive and spread with a tile spreader to get an even coating (see manufacturer's recommendations).

**Step 3** Start in one corner carefully positioning the first tile, press down firmly. Place a plastic tile spacer into position and locate the next tile. Continue placing the tiles and spacers. Leave one corner tile off to allow for the attaching screw. Allow to set (see manufacturer's recommendations).

**Step 4** To mount the feature, carefully move it to its final location with the empty tile space at the top. Care must be taken to avoid flexing the backboard as tiles may pop off. Drill a hole through the

backboard into the wall. Remove the feature and drill the hole in the wall to a sufficient diameter for the rawl plug - locate the plug. Liberally apply construction adhesive to the back of the feature and move it back into position pressing evenly and firmly onto the wall to ensure good adhesion. Screw the backboard into the rawl plug. Use tile adhesive to secure the final tile, allow to set. Repeat for other plaques.

**Step 5** Grout each by spreading tile grout over the tiles and into the gaps with a rubber squeegee or sponge. Allow the grout to set and wipe off the excess with a sponge.

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## 2. Fountain splashback

We tiled the splashback with a diagonal pattern and used hand-painted feature tiles around the border. When planning a diagonal pattern it is advantageous to keep the number of tile cuts required to a minimum. This can be achieved if you are not strictly limited in the final dimensions of the splashback. We had the flexibility of 50mm either way as the splashback was not constrained by other structures around it.

**Blitz Tipz:** If you don't want to go to the trouble of cutting tiles, lay the tiles square.



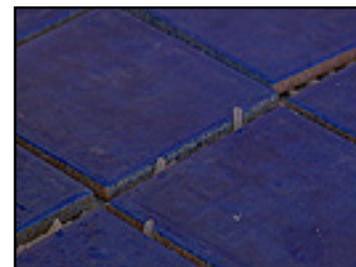
**Step 1** Lay an uncut sheet of compressed fibre cement board on a flat surface and draw a straight line from left to right 200mm up from the bottom. Place a border tile against the left hand edge on top of the line. Place a row of centre tiles along the line corner to corner with a 2mm space between each. Continue the row until you reach the approximate width of your splash back. Place the border tile in position last and make a mark along its outside edge. This will be the final width of the splashback and will ensure the minimum number of tile cuts. Mark also the centre point and the inside edge of the border tiles.

**Step 2** Repeat the above procedure to find the height of the splashback, the centre point and the inside of the border. As you will be laying the diagonal tiles first define their boundary by drawing a box around the diagonal tile area inside the border leaving only the width of the border tiles and a 2mm grout margin outside it.

**Blitz Tipz:** Try to make the splashback dimensions an even number of tile widths to make the cutting of the tiles around the spout hole easier.

**Step 3** Use the centre marks to find the exact centre point of the splashback and drill a hole at this point to accommodate the spout and hose.

**Step 4** Draw a diagonal line from one corner to the opposite and spread a layer of flexible tile adhesive along an area to one side of the line using a tile spreader (check manufacturer's recommendations for adhesive thickness). Begin laying tiles along the line, pressing them down firmly and placing a tile spacer between each. Work in sections out from the line.



Use the angle grinder to cut the corners off the tiles which surround the spout hole and to cut the tiles in half where required around the edges.

**Step 5** Lay all but one of the border tiles (leaving the top centre to allow for an attaching screw) using the above procedure. Allow to set.

**Step 6** Position the splashback following **steps 8 and 9** 'Pond and Fountain' (above). Grout following **step 5** 'Tiled Wall Features' (above).



## Garden beds

Our raised garden beds were filled with planter box mix. Plant the garden keeping plants at the same depth as they were in their containers. Water thoroughly. Spread a 50mm layer of mulch (we used horticultural pine bark) over the entire garden.

**Our plants:** giant strelitzia (*Strelitzia nicotia*), bird of paradise (*Strelitzia reginae*), gardenia (*Gardenia* 'Ocean Pearl'), agave (*Agave attenuata*), liriopie (also called turf lily or giant mondo, *Liriope muscari*).



Giant strelitzia



Bird of paradise



Gardenia



**Agave**



**Liriope**

## Cost and availability

We used mature plants in our makeover to create an instant effect for television. Our total cost of plants and materials was \$9948. Considerable savings are possible using smaller plants (\$6506).

- Plants are readily available at nurseries or ask your nursery to order plants for you.
- Most other materials are available from large hardware stores, building suppliers, or landscape suppliers. We ordered ready-mix concrete from a concrete supplier. Check your Yellow Pages under 'Concrete - Ready-mixed'.
- For tiles check your Yellow Pages under 'Tiles - Floor and Wall'. We used tiles from The Art of Tiles, Newtown. Phone: (02) 9565 1066.
- Brushwood thatching and construction may not be available in all areas. Check your Yellow Pages under 'Fencing Materials'.
- The vibrating plate compactor, post hole shovel and most of the other tools required are available for hire.
- Fountain spout from Circa Studios phone (02) 9310 2666 or check your Yellow Pages under 'Fountains'.

## Acknowledgements

Design by John Happ, 3rd Dimension Designs, phone (02) 9744 2658. Construction by the Blitz team.