Step by Step Construction

These construction tips are a guideline only and will vary according to your site.

- Above ground swimming pool and fence
- Bagging
- Brick edging
- Decomposed granite
- Decorative screens
- Fences - picket
- Garden Beds
- Garden lighting
- Garden shed
- Paving
- Pergola
- Planter boxes
- Retaining wall
- Sandpit
- Shade sail
- Stepping stones
- Timber paving
- Treated pine garden bed
- Turf

Above ground swimming pool and pool fence

Materials: pool, road base, paving sand, approved pool fence and gate.Tools: post hole shovel, string line, tape measure, spirit level, vibrating plate compactor, topsoil leveller, larry hoe or shovel, rake, screed, wheelbarrow and spanners or drivers to suit your pool fence.

Step 1 Level area where pool is to be located. Diameter of area will depend on the pool you buy.
Step 2 Cover area with 75mm of road base and compact using a vibrating plate compactor.
Step 3 Place about 20mm of sand over the compacted road base and screed level.
Step 4 Assemble pool according to manufacturer's instructions. Install in place and fill with water.
Step 5 Install your pool fence and gate. Pool fences are sold as panels, posts and gates. Strict safety regulations govern pool fences, so check with your supplier and install in strict accordance with instructions provided and your local council's requirements.

Bagging

Bagging is a type of render that can be applied over brickwork to give an interesting texture or finish. It can be painted or coloured.

Materials: sand:cement, sponge, hessian sack, paint.

Step 1 Create a mortar mix the consistency of thick cream (6:1 brickies sand:cement).
Step 2 Wet the entire surface of the brickwork to be bagged (reduces cracking).
Step 3 Use a large sponge to apply the mix to the brickwork. Blitz Tipz: Bagging can be done with a piece of hessian sack to give a rough effect, a sponge for a medium effect or a soft cloth for a smoother effect.
Step 4 Allow the bagging to dry, then paint.

Brick edging

A simple brick edging can be used to add a decorative feature and define the edge of a lawn, garden bed or paving.

Materials: Bricks, readymix sand/cement. An insert of decomposed granite can be used between the brick strips.
Tools: wheelbarrow, string line, spirit-level, brickies trowel, shovel, trenching shovel, bucket and sponge.

Step 1 Mark out the shape required on the ground and dig a shallow trench about 100mm.
Step 2 Lay bricks on a bed of mortar with 10mm joints between each brick. Tap each brick into place and check the level. To achieve a curve, expand one side of the mortar joint and turn the brick accordingly.
Step 3 Allow the mortar to firm and clean all excess mortar off the tops of bricks with a sponge and water.
Step 4 Decomposed granite can be used as a decorative infill.

Decomposed granite

Decomposed granite can be used on your garden as a mulch or as a paving surface.

Materials: decomposed granite, quartz sand, cement, rake, topsoil leveller.

Step 1 Mark out the area and spread a 75mm layer of decomposed granite.
Step 2 Spread a 25mm layer of quartz sand over the decomposed granite, rake it in thoroughly and level with a rake. Blitz Tipz: a topsoil leveller is a hand tool which makes quick work of levelling loose material like topsoil, decomposed granite, or sand and is available from hardware stores for about $70.
Step 3 Compact the granite with a vibrating plate to a finished depth of 75mm. Blitz Tipz: if you prefer the granite paving to be solid lightly sprinkle with off-white cement, rake it in and sprinkle with water before you compact it.

Decorative screens

Materials: 2400x1200x12mm sheets compressed fibre cement, 100x100mm treated pine posts, rapid set concrete, coach screws and coloured exterior acrylic paints to suit.
Tools: string line, tape measure, spirit level, post hole shovel (or Kanga with auger attachment), spade, angle grinder, safety goggles, dust mask or respirator, drill, spanner and saw.

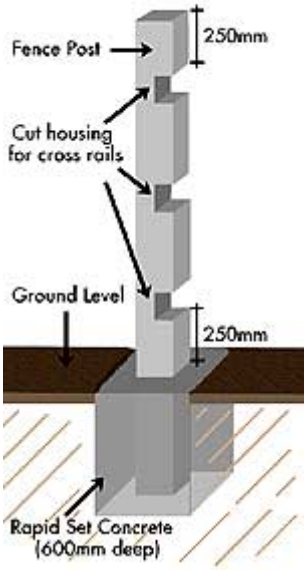
Step 1 Plan where your screens will be and mark out post locations. Dig post holes to 600mm using shovel or auger.
Step 2 Set posts in vertically one at a time using rapid set concrete. Half fill hole with water then pour in concrete, watering as you go and tread into place. Use a spirit level and string line to ensure each post is vertical in both directions. Support post until concrete starts to firm (about 4 mins). Sets in about 15 minutes.
Step 3 Cut compressed fibre cement to desired shape using an angle grinder with a masonry blade. Blitz Tipz: Compressed fibre cement is made from cellulose (from wood chip) sand and cement. It produces a very fine dust when cut that is potentially hazardous if inhaled. Therefore we recommend using a cartridge respirator when cutting this product.
Step 4 Hold screens up against posts, mark and then pre-drill holes for coach screws. Get help as these sheets are quite heavy.
Step 5 Screw screens into place.
Step 6 Have fun painting your screens with colourful exterior acrylic paints. Choose your colours with regard to the existing colours in your yard and on surrounding structures.
Blitz tipz: You could also use shadecloth as the insert (we used 1800mm wide, black, 50% shade cloth), securing with gang nails. Fold cut ends over double prior to fastening. Have a helper hold the shadecloth taut as you nail until it is firmly fixed.

Fences - picket

Materials: posts (90x90mm), rails (70x45mm), pickets (42x19mm), paint, rapid set cement (40kg bags). 2 hinges, latch, bolts & nuts (150mm) and picket nails all galvanised.
Tools: auger or shovel, circular saw, spirit level, nail gun, electric screwdriver.

Step 1 Paint the posts, cross rails and pickets.
Step 2 Mark out the position of the fence posts and use an auger or shovel to dig post holes 600mm deep. To make a solid pad to sit the posts on pour some rapid set concrete into the holes, watering and mixing into a slurry as you go. Allow to set for at least 15 minutes. (Note: use only the equivalent of about 4 cups of concrete per hole.)
Step 3 Place one of the end posts in the hole and measure up 250mm from ground level, 250mm down from the top and the point half way in between. Remove the post and using a chisel and saw cut out three notches at the points marked to house the cross rails, called a half house out (see diagram below).
Step 4 Place the post back in the hole. Use a spirit level to ensure the post is exactly vertical. Half fill the hole with water then tip in a bag of rapid set concrete, watering as you go. The concrete should be filled to the top of the hole. Hold the post in position while the concrete starts to set (about 4 minutes). This post will become the guide post.

Step 5 Place all of the other posts in their holes and use a water level to find the points at the same height on each post and level with the house outs on the guide post. To do this take a length of clear hose filled with water and, with the assistance of a helper, hold one end of the hose against the guide post and the other against the next post. Water naturally finds its own level so the level of the water in the hose is the same at both ends. Adjust the hose on the guide post so the water level lines up with one of the house outs and mark the same point on the other post. Mark each house out point on each of the posts. Remove the posts and house them out. Blitz Tipz: Any clear flexible hose can be used to find the levels.
Step 6 Return each post to its original hole and concrete them into position using a string line just above ground level to keep them in line and a spirit level to ensure they are vertical. Allow the concrete to set before continuing. If using a nail gun, allow concrete to set for at least three hours. If using a normal hammer, wait at least three days. Blitz Tipz: A nail gun can be hired for around $100 per day and makes quick work of building picket fences.
Step 7 Bolt the cross rails to the posts (use an angle grinder to cut the bolt off flush with the nut) and nail the pickets to the cross rails. Use a spirit level to ensure the first one is vertical then use a picket on its edge for even spacing between each one (ie 19mm). Every five pickets use the spirit level again to check that the pickets are vertical. Blitz Tipz: Use galvanised nails for a long-lasting job and to prevent rust staining.
Step 8 Putty the nail holes in the fence pickets and touch up the paint work. Note: Depending on your design you may need to double house out the posts at right angle corners.



Garden beds

For a deeper bed use edging to raise the level of the bed, this can be done in brick (see Brick edging), timber or with other purpose designed materials (see also Planter boxes below). Note, any wall above a metre needs to be approved by an engineer. Raised brick garden bed

Materials: bricks (Austral dry pressed commons), brickies sand and cement, masonry sealant, plants, organic soil mix, mulch.
Tools: Brickie's trowel, spirit level, string lines, plastering hand tool.

Step 1 Check existing walls and floor are level. If the surroundings are not level you will have to adjust your new work accordingly. Use a string line to mark out the position of the garden bed walls.
Step 2 Form a footing for the bricks with a layer of mortar (4:1 ratio of sand to cement) approximately 75mm deep. Start at one end, working out from the existing wall first.

Step 3 Using a brickies trowel, place mortar on each side of a brick then lay it in position. Continue laying the bricks side by side, tapping them into position with the handle of the trowel. Leave the mortar off one side of every third brick to create a drainage hole. Complete the side you're working on. Place a spirit level on top of the bricks to ensure they are level, gently tap them down if needed.
Step 4 Complete the front row next, ensuring it is level and flush with the side you laid first, then finally complete the remaining side.
Step 5 Tidy up the mortar footing by removing any excess with the trowel so it is flush with the front of the bricks.
Step 6 Continue laying each layer on the previous with the joins offset from the layer below.
Step 7 The top layer is laid on its edge to finish the top surface. Allow the mortar to set - preferably overnight, however with care you can start working around it within a couple of hours.
Step 8 Paint the inside of the planters with a masonry sealant. Allow to dry.
Step 9 Fill with potting mix or incorporate a layer of around 200mm of organic soil mix into the site soil. This is to improve the existing soil structure and add nutrients. For a vegie garden or annual bed, dig in extra manure and compost. Blitz Tipz: It takes 62 x 30 litre bags, or 1.5 tonnes of potting mix to fill 1 cubic metre.
Step 10 Position your plants prior to planting. When you are happy with the layout, plant one at a time, ensuring that plants are placed at the same depth in the soil as they were in their containers.
Step 11 Water plants well (before applying mulch).
Step 12 Mulch by spreading a 50mm layer of organic mulch over the garden beds.

Garden lighting

Materials: low voltage garden light with transformer and cable, gel cap connectors, conduit and elbows (20mm), conduit adhesive.
Tools: electrical screwdriver and pliers, shovel and spirit level, bucket or hose.

Step 1 Mount the transformer for the low voltage garden lights near an existing electrical outlet. Excavate a trench for the conduit from the transformer location to the light location and lay the conduit, cutting to length, inserting elbows where necessary and threading the cable through as you go. Fill in the trench and replace any turf or earth disturbed in the process.
Blitz Tipz: Wiggling the conduit as you push the cable through makes the job much easier.
Step 2 Position the light (the one we used was fitted with a peg that pushed into the ground) and connect it to the low voltage cable using gel cap connectors. Connect the low voltage cable to the transformer and test. Adjust the direction of the light beam for maximum effect.
Blitz Tipz: If possible plan your garden so the lamps are hidden by plants or landscape features.

Garden shed

You can purchase your shed in panel form. This means the shed is preassembled into panels which are already framed. This saves a lot of time and difficulty in assembly of the shed.

Materials: 2000x2400mm Colorbond shed ordered in panel form (comes complete with rivets).
Tools: drill and rivet gun.

Step 1 Assemble the panels together using the rivets provided. If you don't have a rivet gun and don't want to hire one, the supplier can supply you with self-tapping screws instead.
Step 2 Position door resting on two 20 cent coins as shown by Scott on the show. This ensures adequate clearance so that the door will swing freely on its hinges. Rivet or screw hinges into place.

Paving

Materials: pavers (we recommend 40mm thick for general use), road base, paving sand, grouting sand, rapid set concrete.
Tools: string line, rubber mallet, spirit level, vibrating plate compactor, brick saw or angle grinder, topsoil leveller, larry hoe or shovel, rake, brickie's trowel, screed, screed rails and wheelbarrow.

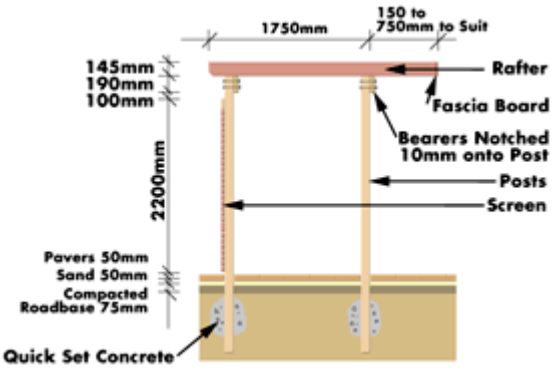
Step 1 Clear the area to be paved and excavate if required. The excavation depth is calculated as the thickness of the paver (in this case 40mm) plus around 30mm for paving sand, plus 75mm for road base for pedestrian areas. [Note: Use 100mm road base over clays.] If the area is wet use 150mm of road base stabilised with cement to ensure the paving is stable. If you are in doubt about how much road base to use, seek advice from your local landscape professionals.
Step 2 Mark out area to be paved. Lay road base to about 100mm deep. Compact to approximately 75mm with a vibrating plate compactor.
Step 3 Bring in paving sand and tread into place about 30mm deep. Set up screed rails to 40mm below finished paving level. Screed off paving sand to even surface.
Step 4 Start laying the pavers along the longest straight edge of the area to be paved using a string line to keep them in position. If any of the pavers need to be cut, use a brick saw or angle grinder.Blitz Tipz: A brick saw can be hired for about $130 a day.
Step 5 Excavate a 100mm trench around the outside edge of the paved area (unless up against a solid structure) and fill with concrete (follow instructions on bag). Use a brickie's trowel to compact concrete against the side of the pavers taking care not to mound it too high and spoil the look of the paving. Allow to set. This retains the paving sand in place.
Step 6 Sprinkle grouting sand (fine sand) over the paving and sweep to fill the gaps. This sand stabilises the paving by wedging pavers in place.Blitz Tipz: Grouting sand flows best when completely dry so sprinkle a layer over the paving and allow to dry before sweeping in.

Pergola

Materials: rougher header treated pine (RHTP) posts (90x90x3000mm), RHTP bearers (190x45x3600mm), RHTP rafters (140x45x3000mm), Laserlite polycarbonate (clear, 'Roma' profile, 1800x820mm), primed battens (140x19x3600mm) (45x19x3600mm) and (50x25x6000mm), primed fascia (140x19mm), cup head bolts (120x10mm) nuts and washers, galvanised timber screws (12x50mm), cup washer roofing screws (12x50mm).

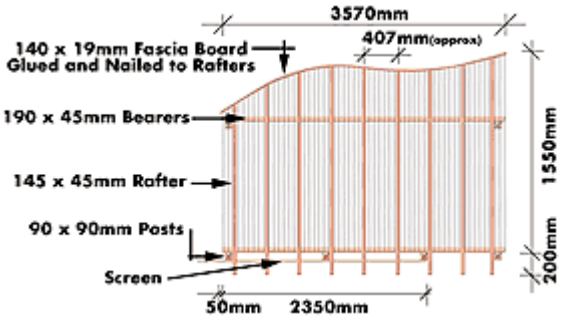
Tools: circular saw, electric plane, chisel, hammer, nail punch, ruler, spirit level, tape measure, adjustable square, string line, bevel, electric drill and auger bit (12mm), adjustable spanner, pencil, nail gun (or pre-drill nail holes), flexible conduit.

Step 1 We marked the position of the pergola and dug holes for the posts about 800mm deep. We ensured the holes were dug in the correct position by using string lines and a tape measure and by applying the 3,4,5 rule.
Blitz Tipz: The 3,4,5 rule enables you to create a right angle triangle and ensure your structures are properly aligned. From one corner of your proposed structure, measure 3m along one side and mark on the ground. In a direction perpendicular to this along the other side of the structure measure 4m along and mark. You now have 2 sides of a triangle which are probably close to a right angle. To check this measure between the 2 points and if this distance is 5m you have a right angled triangle.



Step 2 The posts were placed into the holes. Each hole was 1/3 filled with water and then filled with rapid set concrete to about 100mm below the top of the hole. More water was added to ensure the concrete would set. The concrete was

allowed to set before proceeding further.
Step 3 A water level was used to mark the same level at the top of each post approximately 2400mm above the ground. Each post was then cut off at this level. The bearers were temporarily attached to the posts using G-clamps and the position marked. One bearer was attached to the 4 rear posts and the other bearer was attached to the 2 front posts. Each bearer was attached at the same height and level. Holes were drilled using an auger and the bearers were attached using galvanised cup head bolts, nuts and washers.



Step 4 Rafters were fixed at 400mm centres on top of and perpendicular to the bearers. A decorative end to each rafter was created by removing one small corner of the rafter. Rafters were skew nailed to bearers ensuring the ends are in line. Battens were nailed to the top edge of and perpendicular to the rafters to accommodate the roof.
Step 5 A curved front fascia was created by cutting the ends of the rafters at different lengths. A piece of flexible conduit was bent along the top of the rafters as a template for marking. Cut rafters along these lines, then glue and screw the fascia into place after cutting shallow grooves in the rear of the fascia to aid bending.
Step 6 The Laserlite roofing was cut to shape and connected to the battens using roofing screws with washers. Each sheet of roofing overlapped the next by about 150mm. Finally, battens were attached perpendicular and horizontal to 3 of the rear posts to provide some screening, similar to the garden screen.
Blitz Tipz: Prepaint all timbers prior to construction to reduce final painting time later.

Planter Boxes

Materials: treated pine sleepers, fast setting concrete, galvanised gang nail plates and galvanised nails.
Tools: spray marker paint, circular saw, hammer or nail gun, and shovel.

If you need to build your planter box next to a retaining wall, we recommend you build a 'dead man' see photo, tying the adjacent wall and planter boxes together, in effect making them one structure. If you are not building your planter box on top of a retaining wall you will not have to use a dead man.)

Step 1 Clear and level the area for the planter boxes. Mark out the planter box position with spray marker paint and excavate a footing 300mm wide and 100mm deep.
Step 2 Fill the footing with road base, level and compact. Position a string line along the footing to guide the placement of the sleepers.
Step 3 Lay the bottom course of sleepers using the string line as a guide. Along the back wall (on top of your adjacent wall or fence) run a dead man at 1m intervals at right angles to the sleepers. The dead man is nailed to the retaining wall at the back and to the sleepers at the front where it butts in. You will need to cut the sleepers in the back row to fit between the dead men. Nail them where they butt in. Nail all of the sleepers together where they touch and use galvanised gang nail plates on the inside joints.
Step 4 Lay the top course of sleepers ensuring the joints are offset from the course below. No dead men are needed in this course. Use galvanised gang nail plates and nails to nail them to each other and the course below.
Step 5 Excavate post holes to 400mm at 1m intervals along the front of the wall using a post hole shovel. Cut sleepers to 800mm lengths, place them in the holes and, using a spirit level to ensure they are vertical, nail them to the sleeper wall flush with the top. Half fill the hole with water and tip in fast setting concrete. Completely fill the hole, watering and stirring as you go. Allow to set for 3 hours before resuming work in the area.
Note: If you are not building your planter box on a retaining wall locate posts at 1m intervals on all sides.

Retaining Wall

Materials: 100x100mm treated pine posts, 150x75x2400mm treated pine sleepers, 200x10mm galvanised cup head bolts, quick set concrete.
Tools: tape measure, string line, post hole shovel (or Kanga with auger attachment), spade, carpenter's square, saw, spirit level, drill and spanner.

You can build your retaining wall with 150x75mm treated pine sleepers on edge bolted to 100x100mm treated pine posts.

Step 1 Excavate along the line of your retaining wall, cutting the soil back to around 300mm from finished wall face.
Step 2 Dig holes for each of your posts to 600mm deep. Space posts so that each sleeper attaches to two posts.
Step 3 Set posts in vertically one at a time using rapid set concrete. Half fill hole with water then pour in concrete, watering as you go and tread into place. Use the string line and spirit level to ensure each post is vertical. Support post until concrete starts to firm (about 4 mins). Sets in about 15 minutes.
Step 4 Cut off posts just below finished wall height.
Step 5 Position sleepers and bolt onto posts using galvanised cuphead bolts tightened at the back. This ensures there are no rough edges on the face of the wall.
Step 6 Paint wall if desired.

Sandpit

Materials: treated pine sleepers, agricultural drain, sand, spirit level, galvanised nails or spikes.
Tools: shovel, spade, wheelbarrow, hammer and lump hammer.

Step 1 Excavate area to about 200mm below finished sand level. You could install an agricultural drain to remove soil water from the sand pit.)
Step 2 Where sleeper edges are required for the sand pit: lay sleepers on edge, check they are level and fasten together using galvanised nails or spikes. If they are raised well above ground level, use 50x50mm pegs to help secure them.
Step 3 Fill pit with sand.

Shade Sail

Materials: 4.23 triangle landscape sail with adjustable sail webbing belt tensioners, 100x100mm galvanised steel posts and rapid set concrete.
Tools: Tape measure, spirit level, post hole shovel (or Kanga with auger attachment), spade, angle grinder, safety goggles and drill.

Step 1 Locate posts and dig holes to around 1 metre deep using shovel or auger. We used 100x100mm galvanised, square-section, steel posts which we set out in a triangle. Your shade sail supplier will be able to advise you on spacing and fastening.
Step 2 Set posts in vertically one at a time using rapid set concrete. Half fill hole with water then pour in concrete, watering as you go and tread into place. Use a spirit level to ensure each post is vertical in both directions. Support post until concrete starts to firm (about 4 mins). Sets in about 15 minutes.
Step 3 Leave posts overnight then attach and tension your shade sail according to manufacturer's instructions.

Stepping Stones

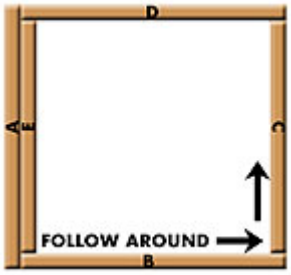
Materials: 400x400x60mm concrete pavers, sand/cement or mortar mix, or brickies sand and cement.
Tools: spade, wheelbarrow, larry hoe, spirit level and trowel.

Step 1 Lay out the pavers along the ground surface to determine their positioning. Space pavers evenly and walk along them to ensure that they provide comfortable steps. When you are satisfied with their position, spade cut around each paver to mark its location and place paver to the side.
Step 2 Excavate under paver to allow room for paver and mortar. Place pavers on a bed of about 50mm of 4:1 mortar (four parts brickies sand to one part cement). Use a rubber mallet to gently tap pavers level and into line.
Step 3 Repeat Step 2 for all of the pavers. Take care not to disturb pavers until mortar has set.

Timber Paving

Treated pine paving for an outdoor area will last for ages. An easy design can be created in a square pattern made to any size.

Materials: treated pine sleepers (2400x150x75mm), pegs (600mm) paving sand, grouting sand and galvanised nails (150mm) and galvanised gang nail plates.
Tools: saw, tape measure, pencil, adjustable square, ear muffs, goggles, screed rails, screed, level, string line, hammer or nail gun and nail punch.



Step 1 Measure the area to be paved and excavate the ground to allow for construction of a firm base that the sleepers will be laid on. To work out your excavation depth calculate the depth of the sleepers (in our case it was 75mm) and add 30mm for paving sand and 150mm for road base. Fill the excavated area with road base then compact it to 150mm with a vibrating plate. Place a 30mm layer of sand over the road base and screed to level.

Step 2 Form a frame by laying out sleepers for the four sides (A, B, C, D in the diagram above). All corners should be at right angles (90°). Drive treated pine pegs at 500mm intervals along the outside edge of the framing sleepers and nail these pegs to the sleepers.
Step 3 Nail the framing sleepers to each other using 150mm galvanised nails and galvanised gang nail plates.
Step 4 Begin the internal construction. To create the spiral effect, lay the first sleeper along the left side (point E on the diagram) and work in an anti-clockwise direction. Each piece is the width of a sleeper shorter than the one before it. Measure and cut one piece of sleeper at a time. If the last space is too narrow for a full sleeper, cut it to fit. Each sleeper must fit tightly, so gently tap the sides of each sleeper with a lump hammer to ensure it is hard up against the one outside it.
Step 5 Sprinkle fine grouting sand over the paving and sweep to fill the gaps. Compact the finished paving with a vibrating plate, taking care to ensure an even and perfectly level finish. Blitz tipz: Grouting sand flows best when completely dry, so lightly sprinkle a layer over the paving and allow it to bake in the sun for a couple of hours before sweeping it in.

Treated pine garden bed

Materials: treated pine sleepers, river sand, steel pegs, galvanised nails and gang nail plates, string, soil

Step 1 Mark out the corners of the beds and run string lines between them. Use the string line as a guide to place the sleepers.
Step 2 To form a footing for the sleepers, dig a shallow (100mm) trench under the string line and compact it. Place a 25mm layer of river sand in the base of the trench.
Step 3 Place a row of sleepers in the trench. To make sure each one is flush with the next tap it with a lump

hammer. This method can also be followed as a garden edging.
Step 4 Secure the sleepers with steel pegs. To make the pegs cut a Y12 steel rod into 1m lengths. Drill holes through each sleeper at 600mm intervals and drive each peg through a hole and into the ground until it's flush with the top of the sleeper.
Step 5 Nail each sleeper to the next using 150mm galvanised nails. Nail a galvanised gang nail plate on the inner edge of the join.
Step 6 For the raised garden bed (three sleepers high) first lay the bottom sleepers in the manner described above. When laying the next two rows make sure the joints are staggered. Use 150mm nails and gang nail plates to secure each sleeper to the adjacent sleeper and the one below. Fill the bed with a good quality organic garden mix (or better still, excavate soil from somewhere else in your yard) ready for planting.

See also Garden beds.

Turf

Materials: turf, turf underlay.
Tools: wheelbarrow, spade, rake, topsoil leveller, hedge shears.

Blitz Tipz: In some areas subsurface drainage may be required prior to turfing. If in doubt, check with your local landscape professionals.
Step 1 Prepare the area for turf by removing all debris and levelling. If your soil is poor, spread a layer of a good quality turf underlay soil mix and level with a topsoil leveller.
Blitz Tipz: Turf underlay soil is spread about 100mm (4") thick and costs around $34 a cubic metre.
Step 2 Roll out the turf starting along the longest straight edge, have your runs lay across a slope to avoid erosion, and stagger your joints. Cut to shape with hedge shears or spade where required.Blitz tipz: prior to laying keep turf moist and in the shade.
Step 3 Roll with a lawn roller and then water well.
