International Rock Gardener

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---International Rock Gardener---

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For July; a little trip to the Netherlands as we learn from two Dutch growers about their approach to garden design and some clever planting solutions.
They show how it is possible to accommodate rock garden and alpine plants in novel ways in a garden that can still be family friendly. Gert, from Dronten in Flevoland has moved upwards in his pursuit of more space for his propagation projects and plants in pots while Jan, from Roosendaal in North Brabant uses some bright ideas for reusing odd items in various home-made solutions to benefit his garden with intriguing planters.

Cover picture: *Pinguicula grandiflora* in the garden of Gert Hoek.

My Garden: Text and photos by Gert Hoek

When I showed some pictures of my garden on social media I got a lot of reactions. We don't have that much space here; our whole plot is about 350 square metres, so we don't have the space to make a rock garden with big beds and lawns. I have created a rock garden with a modern design and modern materials and most of all sufficient room for lots of different plants. This design, or part of it, is suitable for the smaller gardens which are more and more common these days.
Before I describe my garden I would like to tell you my history before building this garden.
I attended a Horticultural School where I followed education as a Garden Designer and Nurseryman. At that time I lived with my parents: they have a large garden were I could experiment with plants and ponds. At that time terrestrial orchids were introduced in the garden, mostly available as swamp plants near ponds. I was working at an aquatic plant-nursery so I could get a good amount of species, mostly *Dactylorhiza, Orchis* and *Epipactis*. When I accepted another job, I came in contact with another man who also grew terrestrial orchids. When I visited him he had no swamp/pond to grow these orchids, but he had a rock garden and a little greenhouse.
At that time I decided that I would build a rock garden. In 1992 we bought a house in the middle of the Netherlands, in Dronten in the Flevopolder, about 3 metres below sea level. The soil is heavy clay/loam, sometimes blue in colour. When I drew the first design of our garden, I had to take into account the fact that we had children. So I created little pieces of rock garden and peatbeds around a big lawn with a swing. I added tons of broken bricks and sand to mix with the heavy soil.
In 2013, the kids had grown up: we decided to create a new garden with modern design and modern materials. Building a new rock garden makes it possible for you to learn from your past and build new pieces with new and more knowledge.

Left: *Androsace bryomorpha*

Far left*: Androsace muscoidea longiscapa* forma alba.

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My aim of designing any (rock) garden is that it looks good, but most of all that it contains a lot of space to grow a lot of alpines in different habitats. Of course the other family members had their impact on the design; enough space to enjoy the sun and to invite people to chill in the garden was required: **so two big terraces were created**, one for a dinner table with six chairs and one for a lounge set.

In late summer 2013 I start breaking down the old garden, removing hedges, old pavement, fences, the old greenhouse and a piece of the lawn. I also removed plants from the rock garden; most of them were potted and kept aside in boxes. Most of the stone walls and peat block walls were demolished. After taking 9 trailers to the dump, I could start building again. I had to dig through the blue clay, to put in **15 metres of rainwater drain** (below left).

Then I added 12 trailers full of sand for the new pavement since the clay in the polder sinks a bit every year. Then I started, with help, to lay the paved area. We chose for the paving an anthracite coloured concrete stone with the look of natural stone and a colour that will not fade. We also chose a mix of different sizes of paving stones: 30x30, 30x60, 60x60 and 60x90cm to get a more natural look. It was heavy work because the biggest stones were more than 70 kilo in weight.
When the pavement was ready I could start rebuilding the garden. The choice was made to build only raised beds. These are very accessible and in the walls there is more space for different plants.

For the raised beds I used:

* tufa blocks: 15x15x35 cm, they are made of pressed tufa, easy to drill holes for plants, when the blocks get older they look more natural.
* broken pavement: concrete pavement 30x30x4 cm, broken in the middle with the broken side placed to the fore in use.

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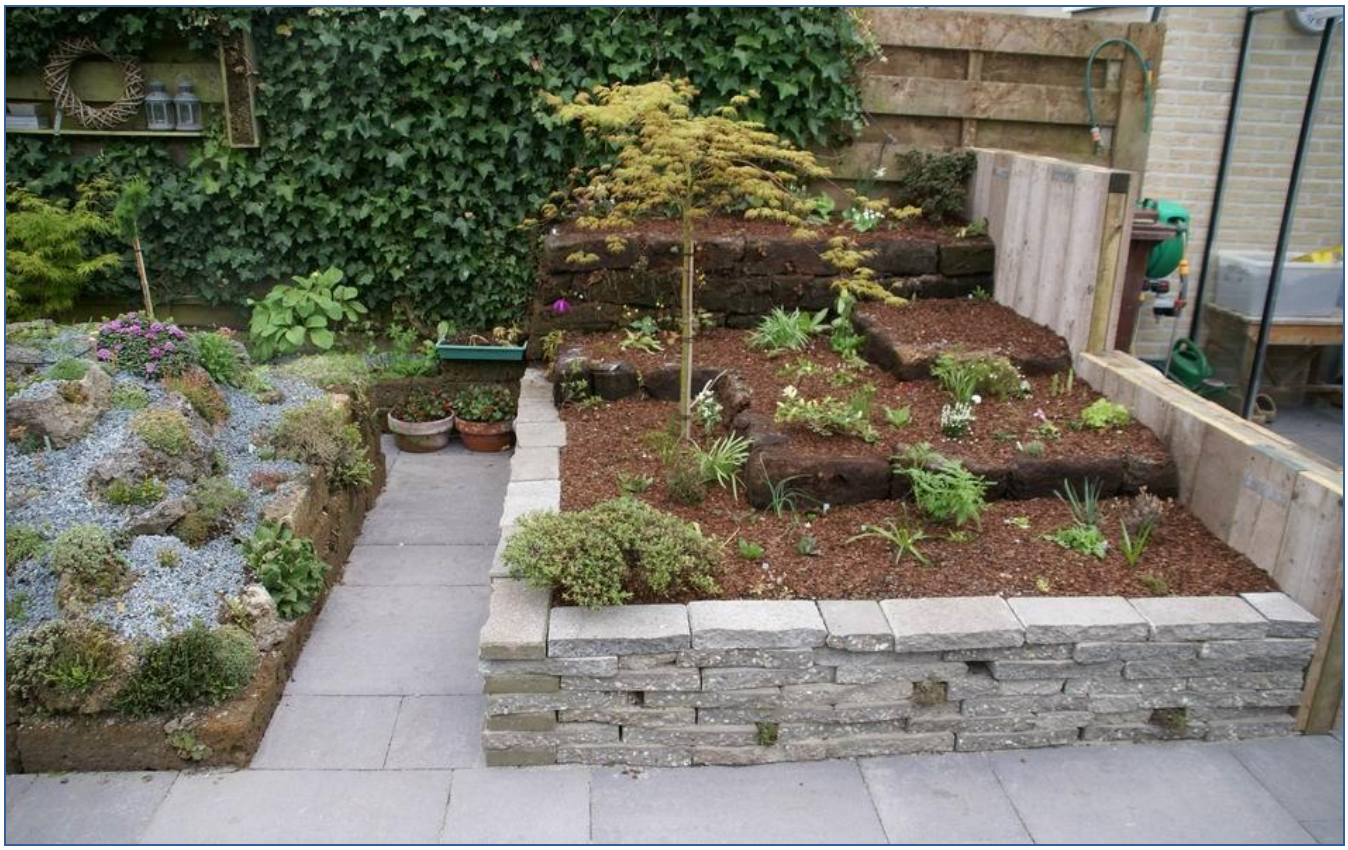
* peat blocks: 15x15x35 cm, from soft peat, used for making potting soil, these are sourced from the Baltic States, fixed with metal pins, ideal to grow plants.
* scaffold planks: used by building companies to build scaffold, beautiful grey colour by the concrete, I used pond liner on inside to prevent rotting.

For the rockgarden I used the following materials:
* tufa rocks: used in rockgarden and troughs, ideal for a lot of alpines
* lava stones: the porous ones, light on weight, those are easy to drill holes in and suitable for a whole range of alpines, for example Saxifrages.
* slate: different kind of slates, used in troughs.
* granite stones: 5-15 mm, between the tufa rocks
* lava stones: 5-15 mm, between the lava rocks
* lava sand: between the lava stones
* bark: from Mediterranean pines, a little bit brown red, used on peat beds

Garden: In the garden I repeated the use of the different materials. The fences in my garden are also made from those scaffold planks.
The peat blocks are used in the different peat beds that I have created. In those beds there is not only peat, but also composted pine needles, composted beech leaves and bark. So I get different types of soil. For a peat bed in the sun I have used a pond liner to prevent the soil from drying out. It is on the bottom with about 30-40 cm. soil mix above. From the peat blocks I build wet and dry walls, behind the wet walls is also pond liner filled up with suitable compost. Peat blocks are also used in troughs together with slate, to create a spot for choice alpines.



Newly made raised bed with peat block area to rear and broken slab edging to front and sides.

So in the backyard I built all kinds of raised beds, with spacious paths between them. I make use of every square inch in the garden and created a lot of different spots to grow plants. Rock garden and walls, peat beds and peat walls – can all be in full sun or shade. I have built in a watering system which is on a small computer on the hose: this allows the garden to be watered automatically.

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Same bed from the side as the plants begin to settle…..

…and from more recently, showing the good rate of growth from *Cypripedium* and *Acer.*

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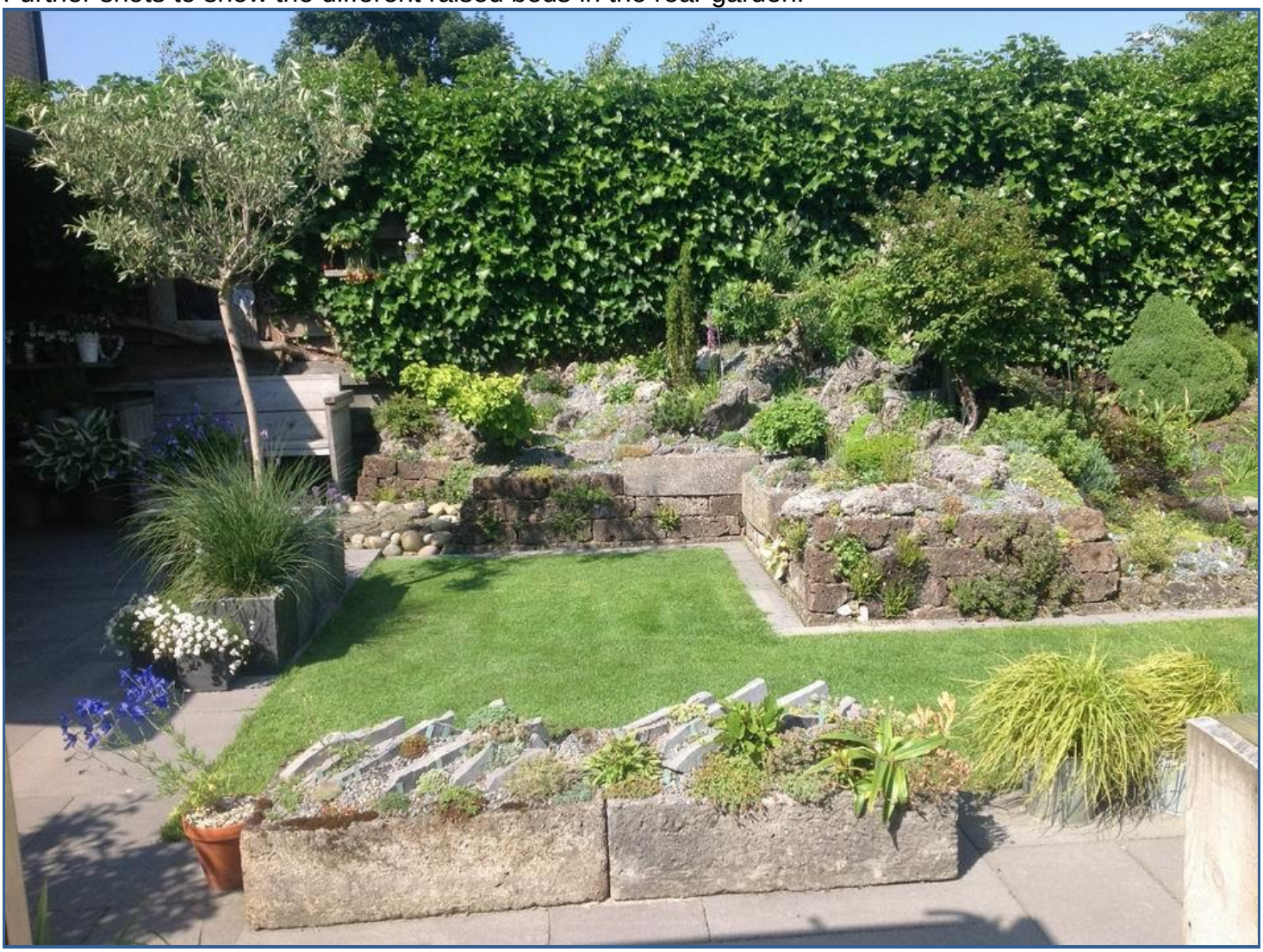
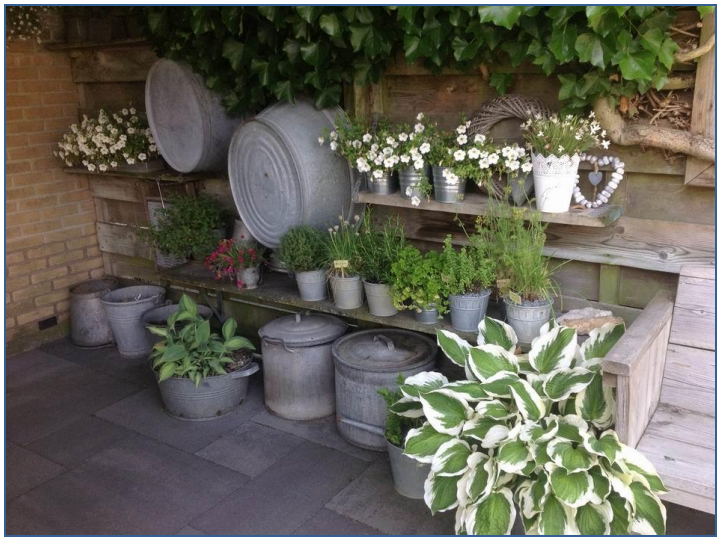
Further shots to show the different raised beds in the rear garden:



Troughs have been built into the walls of some beds which also provide planting spaces. Near the dining area is a restful area, themed in green and white. Each trough has its own style.



The photo below shows a diagonal view from the dining area. Walls made from the scaffold planks help to add privacy and to separate different growing climates to suit different plants.

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Another view – note the slate trough in the left foreground.

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Stages in dressing and planting the slated trough.

Above right: A crevice trough with broken concrete, planted with *Androsace*.
Below: Raised bed with tufa block sides.

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Gesneriads such as ***Haberlea*** and ***Ramonda*** grow with ***Saxifragas*** in the tufa blocks.
Some of the plants growing in the peat bed areas: this is ***Epigaea repens***

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***Cassiope* 'Beatrice Lilley'**

***Primula petiolaris* Sherriff's form**

Above: ***Shortia galicifolia***, below left: ***Primula aureata***

Iris acutiloba in a sunny bed and a metal stand for plant in pots.

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Front garden: This is the first garden I built: I needed a kind of barrier between the footpath and my garden. Then I thought about the pictures I had seen of granite kerbstones with tufa in between. Those granite kerbstones are so expensive and rare that I chose to use the modern form: Concrete ones sized 100x20x4 cm, partially dug into the soil, fastened with cement and with lava stones between them. In the rest of the front garden I only used lava stones and there are some troughs. In this garden I grow the easier plants and bulbs, so when a ball from children playing nearby rolls in, there is no great loss.

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Greenhouse: I have built a new “lean-to” greenhouse with aluminium frame and glass, about 4 by 2 metres, against our garage and along the boundary from the neighbours. I use the greenhouse as a working shed, propagation place and for a small collection of choice alpines. They grow in pots in two gutters, one along the wall (no sun after 12 noon) and another along the aluminium frame (whole day in sun). The garages are kept frost-free so the two walls are “warm” during winter. In winter half of my greenhouse is kept frost-free by using temporary bubble-wrap walls and a small electric heater. In winter I keep the frost tender plants and all kind of young plants like *Cyclamen, Shortia*, and South-American plants etc. in this part of the greenhouse.

Above: ***Cyclamen*** seedlings in glasshouse

Cold frame: My greatest joy is to propagate plants, but you need space to do that, so at the back of my garden behind a fence, there is a cold frame. It is a wooden construction with a base of polycarbonate, which slopes to the back to ensure that any surplus water flows off. There are polycarbonate sheets on top which are covered with shading cloth in summer. It is built so that there is space beneath for soil mixes, plant boxes, pots etc. It can hold about 900 pots of 7x7 cm.

Right: covered frame area with storage beneath.

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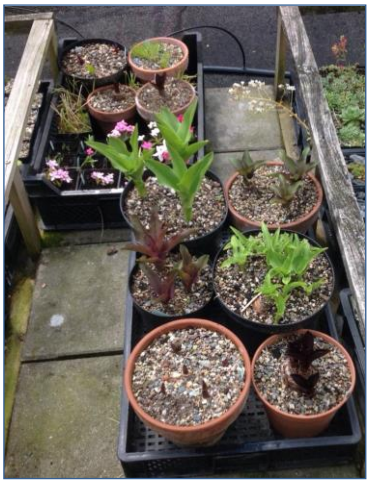
Saxifrages in the cold frame – both in and out of flower.

Roof: It turned out that I needed more space than the greenhouse and the cold frame, so my expansion has been onto the roof of my garage and the carport. This is about 10 x 3 metres and I made 4 open frames and two boxes, between these is a path made from special paving suitable for use on a roof. The plants on the roof are also automatically watered. I have grown plants on the roof for almost 20 years now!

Layout of frames on the roof, with covers on for winter. The two white boxes are filled with sand and have a permanent polycarbonate cover.



Plants on the roof, mid-June 2016.

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One is a bulb frame and in the other are alpines: the pots are plunged in the sand. In these boxes there is a pipe in the sand almost to the bottom of the box: the water goes in this pipe and the sand gets wet.

The frames are made from wood and they have a construction such that in autumn polycarbonate plates can be placed to protect plants against winter-wet. There is some space between the boxes and the roofing material, to ensure that drainage is optimal. One frame is for the mother plants, some in clay pots and others in plastic pots.
Through the years I have found out that some plants grow better in plastic pots, those pots don't dry out that much as clay pots. Almost all *Ranunculus* and *Callianthemum* are in plastic pots.

Ranunculus parnassifolius and ***Pyrethrum leontopodium*** in clay pots.

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In the other two frames and boxes are mainly plants I propagated to exchange or sell. In the growing season I climb the ladder almost every day to check the plants. When plants are in flower I take them into my greenhouse or on the plant cabinet on the terrace, having our own plant show. So we don't need to climb the ladder to see them flower.

I have to mention the rest of the family too; they did the furnishing of the garden. They chose the colours of the furniture, cushions, pots etc. G.H.

Sempervivum arachnoideum 'Silberring' growing in lava stone.

Saxifraga oppositifolia and ***Shortia*** with seedpod – under net to keep the blackbirds out.

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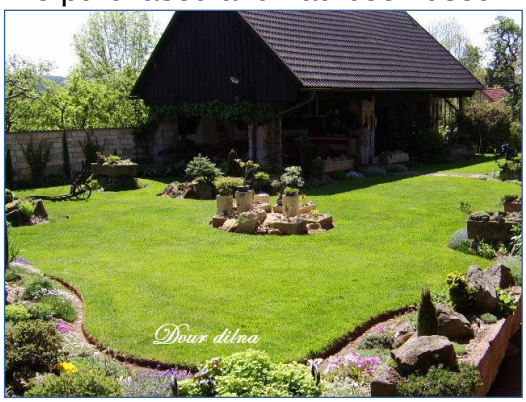
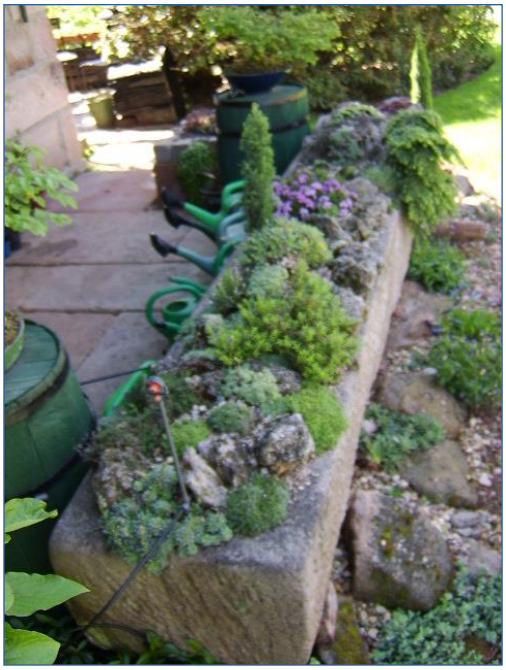
How to create a 3 metre trough: Text and photos by Jan Tholhuijsen

We have all seen wonderful 2-300 year old troughs, entirely chiselled by hand. In Western Europe they are priceless, especially the larger 2 to 3 metre troughs.
In my previous life in the Czech Republic, we had 12 of the sizes of 1.50 to 3 metres. These were present on the farm that we purchased and had been used in the stables as feeding troughs for livestock. They were just there, but I did have a destination for them!



Now that we have been back again in the Netherlands for three years, with 400 square metres of land, I wanted to create a little garden, with rock plants. So far, so good, tuff, lava, sandstone and making troughs, everything is been addressed, but a 3 metre trough was still a wish. Not to buy an old one, but rather to create one.
You must do this on the spot, because you will not lift it. But how do you do it as cheaply as possible? Make an expensive formwork you only use once? No, that's not for me. Here I would like to explain how I did this.



Let's start:

Materials

- ✓ 14 Small kerbstones for paving 100-15-5cm, I bought them second hand.
- ✓ 6 gravel tiles of 50-50cm.
- ✓ Tile adhesive for exterior ('glue')
- ✓ Reinforcement bar approximately 3 metres, in diameter 8mm.
- ✓ 1 stainless steel threaded stud of a metre and stainless steel nuts
- ✓ 120mm screws and dowels (10)
- ✓ Small packet of peat

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- ✓ 25kg bag of Portland cement
- ✓ chicken wire
- ✓ Plastic to protect the ground
- ✓ Old tea towels or cotton / linen pieces
- ✓ A good hammer drill with long masonry drill and grinding machine with diamond wheel.

Determine the right place for your trough to be situated. Lay plastic on the ground to keep your workplace clean. When the trough is done you can cut the excess away.
Lay the tiles with the top down, side by side on the plastic, so that a base of 50-900cm is formed. The tiles lie about 3-5mm apart, so you have five drains in all along the base.

On both long sides put three kerbstones. Then grind/cut two kerbs in half, from top to base. Begin the second (top) row with a half kerb and then two full and a half again so that an offset connection is created. Now grind four pieces of 40 cm for the ends.
Drill now above the upper band halfway down the lower band, with an 8 mm masonry bit. Do this for all sections. Drill carefully; the kerbstones can break easily when drilling (I broke two). Remove the kerbstones in order to start greasing the narrow bottom edges with glue. Put them on the gravel tiles and press them down well, then move on to the top row.
Grind the iron rebars into pieces 20cm long and place these gently into the holes drilled down through the kerbstones, tapping them in so that they are connected to the lower kerbstones.

On the corners, I also drilled holes (carefully) through the band to the short side of 40 cm. This is plugged and then connected with a screw of 120 mm.

Two pieces of threaded stainless steel are placed evenly to tie the sides together each third of the kerbstones by piercing the sides and securing tightly with nuts put on tightly. If you drill from the inside out, a deeper hole will be pierced on the outside so you can disguise the nuts there. After that rub the gaps between the curbs for paving with glue so they sit well together.

The next day, mix up mortar and place half plain tiles or pieces of kerb obliquely upwards, cementing them in against the lower walls. Place chicken wire on the upper layer ready for some more cement work for the next day. Place a large piece of plastic next to the trough, so you do not mess up the ground.

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Mix the mortar so that it is soft enough to "slam" into the top of the trough through the chicken wire.

Smear mortar on to a finger's depth on top of the rim, so that the edge is between 8 and 10cm wide. This does not have to be exact, it is better that it varies – to give the look of a natural handmade trough. Smear mortar down to make a smooth transition to the lower slope.

We will now give the exterior an old handmade appearance

- ✓ Necessities for a first mix. (You need 3 mixes)
- ✓ Mix In the wheelbarrow- I use an old measuring cup of half a litre.
- ✓ 9 x portland cement
- ✓ 2 x peat
- ✓ 2 x cement / sand
- ✓ 1 x glue.

Mix well and then add water to create a thin 'gruel' (right).
You will need strong gloves to protect your hands. The tea towels or other items must be at least 60 cm in length.
Dip the first towel in gruel, get it well wetted so that the entire fabric is soaked. You can see that the gruel is too thick if you see dry round pieces of mixture on the cloth – in that case then a little more water needs to be added.
When the cloth is well soaked, grasp the corners and lower to the ground on the outside and then bring in over the top edge.

Right: showing the drape with a plain piece of cloth to demonstrate the method.

Then press down well. Make the outside of the trough a little wet for better adhesion. Continue all around the edges.
Do not dry in full sun, provide some shade. After a few hours you can still update the outer side where needed with a brush and bowl of water.

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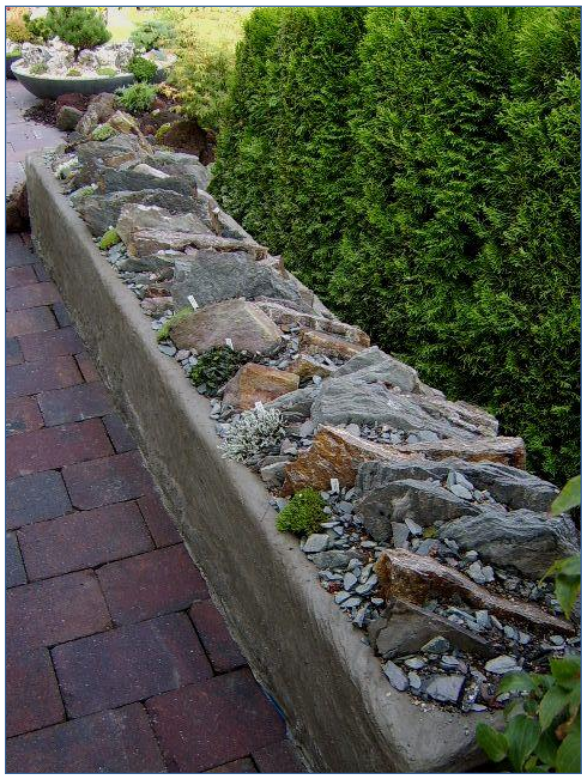
The inside of the trough showing a tie-bar with the overhanging cloth. You will see nothing of this when the trough is filled.

The next day at the bottom of the base of the trough, you can take away the plastic and cut away excess cement

The next stage is to begin filling the trough when the cement (mortar) has dried well- again the tie-bars are visible.

The filling I use is: first pot shards, anti-root fabric. The basis: 25% sand from the garden, 25% 'Japanese split' (gravel) 2-6mm, 25% coarse river sand / crusher sand, 25% improved garden soil and clay.

The desired finished effect was of a crevice planting and this required quite a lot of rock.



Two aspects of the planted trough.

A short video overview of the trough can be seen HERE.

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Left: The trough with a temporary cover against excess winter rain.

The plants used are:
Ajuga pyramidalis 'Metallica Crispa'; *Armeria juniperifolia* 'Brookside'; *Asyneuma pulvinatum*; *Azorella filamentosa; Benthamiella patagonica; Burkhartia lanigera* (syn. *Perezia lanigera*); *Calceolaria fothergillii; Campanula asperuloides* (syn.*C. trachelium*); *Celmisia argentea; Clematis marmoraria; Crassula exilis* subsp. *sedifolia; Crassula setulosa* var. *curta; Dianthus microlepis* 'Rivendell'; *Dianthus haematocalyx* subsp. *ventricosus; Dianthus haematocalyx* subsp. *pindicola; Dianthus haematocalyx* subsp. *alpinus; Dianthus repens; Dionysia aretioides* 'Bevere'; *Erysimum caricum*; *Ewartia planchonii; Globularia bellidifolia; Helichrysum* 'County Park Silver'; *Juniperus communis* 'Compressa'; *Lysimachia japonica*; *Minuartia uniflora; x Ramberlea* 'Inchgarth'; *Raoulia australis; Santolina chamaecyparissus* 'Small-Ness'; *Saxifraga x zimmetri; Saxifraga longifolia* hybrids; *Schivereckia doerfleri* (syn. *S. bornmuelleri*); *Scleranthus uniflorus* 'Olive.' J.T.

Above: Jan's garden in early July 2016 – he will share several more of his "home-made" projects in future issues of IRG, such as his cascading gutter garden which houses many saxifrages, a neat crevice bed, planters made from clay pipes, a satellite dish, old chimneys and much more!

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