

Dr David Ford says concrete ponds are prone to leakages, especially after winter frosts

PHOTOGRAPHS BY THE AUTHOR

The Slow Leaking Pond

A step by step guide to easily solve the problem

Concrete is certainly the best medium for the complex designed pond, especially where linked by waterfalls and capped by decorative walls. However, it is the most susceptible material for springing leaks. The concrete shell can settle, crack under the strain of ice pressure or just 'move' as the

garden changes shape over the years.

Under the waterproofing layer of polypaint sealer the subsequent cracks in the rendering will open and close with daily temperature changes ... only microscopic mounts but enough to stretch the sealer until it fails. The nearest pinhole, let alone a tear, will allow water to ingress and from then on it's downhill all the way to a leaking pond.

Detective work

If, like my set-up, you have a multi-pond system, the only noticeable effect is a lowering of the

water table in all ponds. So, switch off the pumps long enough (may take a few days) to check which pond is the leaker. Any fish therein can be moved to a non-leaking pond.

The problem pond is left until the water level no longer falls (assuming no heavy downpours of rain). This means the leak will be at that water level. Drain and inspect. Probing the meniscus ring around the pond with a chisel will soon show where the leak has occurred, because the concrete will be soft and crumbly through water damage. Any tears or holes larger than pin-pricks will be seen too, since the area will tend to turn white from water damage.

If the walls are heavily coated

RIGHT
Close-up of the area showing a crack in the polypaint seal being chopped open.

FAR RIGHT
The rapid setting cement is liberally applied to the dug out section, then smoothed off and left to set and dry.



with algae paint with a 50/50 mix of warm tapwater and domestic bleach using a sweeping brush with plastic bristles. Allow to soak a few hours and then wash down.

Take all the usual precautions — warm bleach is corrosive and must not splash onto clothes or skin, nor the wash-down water escape into any other pond.

Using a hammer and chisel chop into the damaged area and dig out all the soft concrete, cutting back into a good, solid concrete.

Chop away any polypaint beyond this area too and then scrub well with a wire brush.

Use a rapid setting cement from DIY stores — they all sell ready mixed polythene bags of this cement (about 2.5 kilograms for £2). Remember that this material really is rapid setting. You only have 10 minutes to work the wetted mix and it is solid within the hour. Mix small



amounts at a time, pressing it into the cut-out area and smoothing it off with a wet trowel.

Waterproofing

After 24 hours the first of two, preferably three, coats of waterproofing paint (such as

Aquaseal 40 or Sealer G4) can be spread over the area. I have used water-based polypaints in the past with some problems of subsequent peeling where the new paint layer meets the old. This did not cause new leaks, but the paint flakes can break loose and get into the pond with the fish — being prize Koi you don't want them inspecting such detritus!

Hence, this time I used a solvent-based paint. The choice was the black bitumen paint used for water cisterns such as Aquaseal Protective Black Bitumen Paint (litre tins available at any DIY store).

It is essential that solvent paint is used on a dry surface, which is difficult in the saturated air within a drained pond. Hence the area to be painted is pre-heated with a domestic hair dryer.

Obviously using a hairdryer outdoors (let alone standing in a damp pond) is dangerous. So do use an extension lead fitted with an RCD cutout and be very careful not to drop the dryer; do disconnect it from the mains if laid to one side.

Subsequent layers, each a day later, do not need the preheating. After the paint has set rubbery but solid fill the pond with spray-washing down of the painted area and drain again to remove any residual solvent.

All this may seem a lot of trouble for a tiny leak but it really is a case of a stitch in time saves nine!

The repaired pond is restored to its former glory, home to prize Koi!

