

Don't fence me in By Haidi Bernhardt¹

Wild and free, the West of this ditty had no need for boundaries or borders. How things have changed! Fences have become our main method for defining what is ours – be it picket, paling, COLORBOND®, brick or mesh.

As a result, we tend to view our suburbs as individual pockets of land, neglecting to see the big picture. In reality our towns and suburbs are a series of inclines, valleys and gullies. A fact that we probably don't realise until perhaps, it starts to rain.

There's nothing like a gushing torrent to show us the lie of the land. So, any fencing project needs to consider the delicate balance of the environment if it is to be successful in avoiding flood danger.

In fact, fences are one of the most significant factors in alleviating (or exacerbating) stormwater run-off. It doesn't take a degree in fluid dynamics to work out why either, especially with the recent ascendancy of the solid COLORBOND® fence.

Solid fencing can retain water flows, building up to a swell that will gush towards the lowest point and either run into someone else's property or perhaps even flatten the fence. Even the traditional paling fence is poor at letting water through.

As it is an offence to direct stormwater onto a neighbour's land resulting in damage, to keep you out of court – and harms way – there are a few issues to consider when fencing your property.

Your property

To begin with you should establish if your property lies within a known flood prone area. Your local council can advise you in this regard.

Even if you reside at the top of the hill, you can still be subject to flooding and should become aware of overland flows on your property and employ flood minimisation strategies.

¹ In mid-2000, Haidi Bernhardt was engaged as a journalist under the Natural Disaster Mitigation Program to prepare a series of news articles. The aim of the news articles is to provide some awareness and education about flooding issues.

Overland flow

This is probably one of the most influential criteria to consider before erecting a fence. Overland flow refers to the inundation that flows along suburban streets, car parks, or across other types of property, to drainage depressions.

Overland flow paths can follow the natural lie of the land or be artificially created by buildings, pavements and earthworks. Either way, the most important thing to remember is not to block them.

If an overland flow path is blocked or significantly altered, it can result in a number of damaging outcomes. Possibly the worst is where the fence lies across the flow, building up a substantial enough body of water to result in the fence being levelled, sending a mini tsunami into the next property.

Fences can also divert the overland flow and in doing so bring you into conflict with your neighbours who could take you to court.

The obvious remedy then, is not to erect a fence that impacts on overland flow. If this is not an option there are a number of design techniques that can help.

Alignment

Fences that run parallel to the overland flow (or closely to it) are less likely to create a water build up or divert substantial amounts of water to the detriment of others. There is also more chance of a parallel fence staying upright should the full force of a flood eventuate.

Height

Fence height is a critical factor in determining stability during a flood. The taller the fence, the less steadfast it will be during flood flows. A fence reduced in height to between 1200mm and 1350mm will still form an adequate barrier whilst allowing neighbourly communication.

Flow-through

As most property fences generally have three sides, this means at least one side will not be adequately aligned with the overland flow resulting in the potential for water build up or unwanted diversion.

The best way to combat this scenario is by constructing a fence that allows the water to continue on its way.

One of the most successful, and simple, design options for those who prefer a solid barrier is to leave a significant gap at the bottom of the fence, say between 100mm to 200mm.

An alternative is an open face design that incorporates infill panels of lattice, battens or wrought iron filigree to break up the fence wall.

If a solid form is essential, then think outside the box when it comes to flow-through strategies. Caloundra in Queensland is no stranger to the effects of flooding and when it came to designing a fence for a residential subdivision, landscape architect Chris Fenaughty created a hinge system much like a large cat-flap to allow high stormwater flows to pass.

If all else fails, to prevent large-scale damage, a section of fence perpendicular to the flow could be hinged so that it can be sacrificed to save the rest of the structure in a flood situation.

With so much to consider, you may start to think it easier to recreate the Wild West and forget the fence. In reality however, all it takes is a call to the Council, a little bit of common sense and a dose of civic duty to stake your own land claim without watching it wash into next-door's ranch.