



Heads-up for construction

Concrete with exposed aggregate finish for driveways and paths

The DRC has noticed that many lot owners at Mullum Creek have proposed substantial areas of concrete with exposed aggregate finish for driveways and other paving. Concrete substantially increases the overall embodied energy or carbon footprint in a home's construction. This environmental impact can be halved without extra difficulty or cost by substituting Portland cement with supplementary cementitious materials (SCM) such as fly ash and slag.

When the Mullum Creek Design Guidelines were originally formulated in 2013, the requirement that a minimum 30% SCM replace Portland cement in wet mix concrete, was quite ambitious. In the intervening years however, we have found that the clear majority of concrete suppliers are extremely willing to routinely batch concrete where 45 -60% of the binders are SCM. And this has proven suitable for a broad range of applications where concrete is used.

Eighteen months ago, some retailers of proprietary mixes, batched for an exposed aggregate finish, were still unwilling to embrace the use of SCM. But even that has changed. It is now more broadly and better understood how the addition of fly ash and/or slag affects the workability, curing rates, hardness and colour of concrete.*

We have recently made enquiries with Hanson Concrete who supplied the exposed aggregate that has been used for footpaths in Stage 1 of the Mullum Creek estate. It is a product from the *Imagecrete* range and is branded as '*Ovens Murray*'. They have confirmed that SCM can, without any adverse effects, replace from 30 to 40% of Portland cement in exposed aggregate mixes batched at their Lysterfield plant. The slightly lighter colour of the slag-bound concrete can be countered by adding a touch of black ink to the mix and this branded product '*One Mile Creek*' comes at no extra cost.

Please feel free to contact Heidi Vernon (Architectural Account Manager at Hanson Imagecrete) to discuss (ph: 0418 360 936, email: heidi.vernon@hanson.com.au).

* This has been confirmed by numerous materials engineers including our concrete guru Joe Pietrosanto from Vic Mix Pty Ltd. <http://mullumcreek.com.au/app/uploads/JPVicMix-essay.pdf>