

Retrofitting the Suburbs. Opportunities for Environmental Improvement.

Abstract

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The genesis of most of our urban environmental problems and many of our urban ecological problems can be traced back to what we now recognise as inappropriate urban design, landscape design and horticultural trends.

These problems include extinctions and constrictions of species, populations and gene pools of plants and animals, degraded terrestrial and aquatic ecosystems, weed infestation and bad air quality.

As managers of urban areas, we have no excuse to continue degrading our natural environment. The information, expertise and policy exists to ensure that all urban and landscape design should be at worst benign and at best effecting a positive change to our urban environment.

Unfortunately, while there is a broad recognition that our past activities resulted in degradation of our natural resource base, there remains a reluctance to admit that current trends in design are still impacting negatively on the environment. Some of the unsustainable elements include:

- sources and sustainability of materials (bushrock, sands, river pebbles, some clays)
- selection of landscape species (environmental, genetic, fauna and health weeds continue to be used, as well as plants that have no ecological value)
- design (stormwater issues, destruction of corridors, fragmentation, bushfire issues, light pollution)
- human interaction (access to waterways and other natural areas, noise, light, litter)

There have been a number of initiatives over the last few years which embed elements of environmental improvement into urban and landscape design. The best example of this has been Water Sensitive Urban Design (WSUD). Though still art as much as science in some respects, WSUD is effecting a positive change not only to the environment but also to the way we think about water in our urban design.

While a good start, we need to go beyond WSUD and begin to think about other ways that design interacts with the natural world, such as Biodiversity Sensitive Urban Design, Riverine Sensitive Urban Design, Soil Sensitive Urban Design and Nutrient Sensitive Urban Design.

Opportunities exist to retrofit our urban areas and to reinforce a range of natural values. In some cases this is a straight reversing of the damage that was done originally (restoration), but often the outcome results in a new environmental dynamic. Any attempts at reinstating or “creating” natural values must be done through comprehensive and multi-disciplinary planning and management. There is too much risk of single discipline action resulting in further degradation to the natural environment. In NSW, the whole of government Catchment Blueprint process aims to bring together all relevant disciplines to address specific environmental issues, including those relating to urban areas.

The rehabilitation of natural values in the more natural areas is a rigorous and evolving science. Bush Regeneration, stream rehabilitation and ecological fire management are all carried out to great positive effect. Collectively, our current greatest challenges lie in the urban/natural interface and in the predominantly human environments.