

Infrastructure projects designed to reclaim 'people spaces'

Substantial changes to New Zealand's approach to urban design have seen companies like Opus International Consultants leading the way towards a place-based approach for important infrastructure projects in this country.

By SHEERIN SAMASUDEEN,
 Opus International Consultants

Opus is a key player in infrastructure provision in New Zealand and overseas and as a signatory to the urban design protocol it has made a commitment to achieve the best outcomes for the community.

Infrastructure projects arguably have the highest impact on our cities, towns and rural areas, and there is an onus on companies such as Opus and their project partners to adopt a more rigorous approach to planning and implementing them.

Historically, "transportation projects often begin with automobile-oriented problems – increasing daily traffic or a deteriorating level

of service (LOS). The performance of the right of way for cyclists, pedestrians and transit vehicles often is not measured. Roadway classification is similarly oriented towards auto mobility. This leads to other design requirements that stress access management, wider lane widths, increased turning radii and minimum interference with traffic movements. This, in turn, often leads to urban roadways dividing neighbourhoods, destroying local businesses in established communities and creating sterile, inhospitable streetscapes in developing suburbs" – J Laplante & B McCann, ITE Journal, May 2008.

Urban design for infrastructure seeks context-sensitive solutions (CSS) and explores ways to make urban thoroughfares more pedestrian and cycle-friendly and respectful of surrounding communities while not unduly compromising motor vehicle travel. CSS is a project-oriented, location-specific process – to align spatial planning and infrastructure planning – to ensure road projects fit into its context, resulting in a positive outcome to the communities which use them.

This involves an integrated approach to address the larger urban issues that often enhance the economic aspect of a project:

- ▶ to balance the needs of all users;
- ▶ dialogue amongst stakeholders at the early stages to identify all opportunities; and
- ▶ collaboration and integration of people drawn from many disciplines.

Current practice in planning and infrastructure is discrete and multi-level, resulting in compromised solutions. To seek an all-embracing approach for every project is a challenge and requires new tools and skills.

A place-based approach is quite successfully used in many North American, European and Australian cities to create more sustainable urban communities. Nation-wide awareness and the desire to adopt a place-based regulatory system provides tremendous opportunities to integrate spatial and infrastructure planning.

Link Lane – NZ's first purpose-built shared space

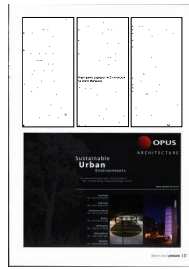
An demonstration of that belief was Auckland City Council's Sandringham Road Link Lane project, and the decision to draw on the skills of artist Billy Apple.

The Link Lane's proximity to Eden Park, a venue for next year's Rugby World Cup was another important factor.

The artist set the concept and the engineering followed. The result is the integration of planning, engineering and artistry, to establish New Zealand's first shared space, an urban street with focus on pedestrians. With the construction beginning, it is drawing plenty of opinions.

Haywards Interchange (SH2 / SH58) – Multi-modal connection through collaboration

With the proposed Haywards interchange located in Hutt Valley – the prime aim of Opus' client the NZ Transport Agency (NZTA) is to provide "value through collaboration". While driver safety was clearly the major issue with the interchange, the project called for innovation in ways that could add value to the basic interchange. Opus' design team worked closely with the urban design manager of Hutt City Council, and through that process engaged local artist and sculptor Guy Ngan



to refine the strategic approach to the visual design.

Opus' approach was two-fold:

- people and partnerships: Involving and engaging the right people and skills at the right time resulted in great ideas and the ability for people to be involved up front to make the difference when needed.
- creating change: Changing the mindset of those previously involved in the project was critical and important – taking them on a journey with the team and sharing information to achieve agreement

These aspects allowed Opus to understand history, gaps and opportunities, push the boundaries and innovate. Transport planners and engineers drew expertise from pool of professionals including architects, urban designers, landscape designers and environmentalists to reconnect the surrounding communities as well as to improve environmental outcomes.

As a result, the final design provides an efficient movement solution, and will have significant urban and environmental amenity benefits to neighbouring residents of Manor Park and the McDougall Grove/Annabell Grove area. In particular it will achieve:

- an interchange structure that is

responsive to and integrated into the local environmental context, character and identity

- convenient, safe and attractive facilities for motorists, cyclists, pedestrians, and users of public transport
- clustering facilities for all modes for convenient and direct linkages between transport modes and increased convenience and safety
- maximising ecological and biodiversity opportunities such as re-vegetation, establishment of wetland/stormwater treatment areas, green link/eco corridors, and use of flora that provide habitat and food for fauna.

Place-based approach to Christchurch Southern Motorway

In the case of the Christchurch Southern Motorway, NZTA joined with the Christchurch City Council in a partnership to progress this project that is now being implemented via a design and construct contract. Opus provided the all-embracing consulting services for the project's specimen design including a landscape and urban design concept design for the corridor.

The concept design called for the motorway corridor to reflect the form of a braided river, flowing across the landscape almost like the Waimakariri River once did.

Inspiration was drawn from river patterns leaving a watermark on the landscape through

- networks – road, cycle and walkways
- landform – swales and earthworks
- built form – shadow patterns and light, integrated art elements
- materials and texture – concrete abutments, guard rails, surfaces
- plant palette – soil and moisture related gradients.

The design goal was to enable a coherent outcome to be developed; concentrating on the natural characteristics of the surrounding landscape, and the experience the users would have when travelling along the new Southern Motorway:

- to complement the existing landscape character
- to enhance local biodiversity
- to maintain and improve connectivity
- to provide continuity of landscape along the Southern Motorway.

While the effective benefits of these projects are yet to be achieved, they highlight the way forward and a shift in infrastructure design and implementation, from one of roading to integrated thinking about the city's movement patterns and transport systems, and most particularly about improving the quality of our urban and rural environments. **U**

