Taupo is no longer solely the domain of holiday baches and trout fishing. A sprawling urban population of 22,000 and the State Highway 1 bypass (Eastern Taupo Arterial) has provided a catalyst for Taupo District Council’s vision of more cohesive urban growth.

In 1996, the council acquired a large tract of countryside on the eastern side of the town as part of the land purchase for the East Taupo Arterial route. Labelled the East Urban Land development (EUL), the 200 ha block is expected to accommodate around half of the town’s predicted growth by 2026.

The Victoria Street subdivision developed by the council is seen as one of the gateways into this area. It comprises conventional 600–800 m$^2$ allotments, with the exception of ‘Victoria Lot 60’, a 1.9 ha parcel set aside for medium-density housing.

Design competition for a sustainable neighbourhood

As a way of challenging the low-density urban form, the council launched an open urban design competition for Victoria Lot 60 in 2007. The two-stage competition fielded entries from around New Zealand as well as overseas.

Whilst looking for something imaginative, viable and with a suggested density of 20 dwellings per gross hectare (more compact than conventional development), designs had to fit into the existing suburban surrounds for purchasers and neighbours alike.

The Victoria Lot 60 brief called for a sustainable, environmentally low-impact development that modelled best practice urban design. It needed to incorporate green building and environmentally sustainable design principles such as energy efficiency, sustainable materials, waste management and water treatment and conservation. Located on a proposed collector road and major vehicle, pedestrian, cycling and public transport route, the site was well positioned for the creation of a sustainable community.

Design all about connections

Taken in the broadest sense, a sustainable community is a place where people want to live and work, now and into the future. Meaningful connections are vital to support social cohesion and facilitate contact among people, for both commerce and recreation.

But you can put all this together and still not reproduce a sustainable neighbourhood; you need places for people to naturally bump into each other and say hello.

The winning entry

At Antanas Procuta Architects, we didn’t see the architecture of the houses as separate from the public realm. Instead, we imagined the future Victoria Lot 60 connected in a comprehensive greenway network linking the significant scenic, social, economic, recreational, historical and cultural values of the Taupo area. Preserving and accommodating views to the lake and the mountains – Tauhara in particular – were fundamental to connecting with the local history and geology.

A hierarchy of connections was developed, beginning with the home and spilling into small housing cluster neighbourhoods with shared green spaces. This grew into a public park threading through the lot – a green spine (see Figures 1 and 2).

Our approach was driven by a desire to respond to the natural attributes of the site and how the occupants of these houses would live. We wanted to build to the sun’s trajectory and consider how the outdoor living spaces would integrate with the communal spine that traversed the site.
Local stone, pumice-grey plaster, timber window and door joinery, timber cladding and the dark cladding of the heat storage system reinforces connections with the local landscape and the lakeside creosote bach heritage.

Warmth and privacy
Buildings are oriented with living areas facing the sun and turned away from the prevailing winds and cold southerly face. Creating sunny private outdoor living zones allows occupants to enjoy privacy when desired, while hedges and gabion walls create a soft threshold between shared community green spaces and private lots (see Figure 3).

Passive solar design incorporating high levels of insulation, thermal mass heat storage and stack ventilation contribute to a comfortable internal environment in the warm summers and cold winters. High-efficiency wood-burning fireboxes supplement the passive heating and contribute social warmth.

Adaptable house design and safe walking environment
Another component of the house design is adaptability. People can ‘make the place their own’ by expanding or contracting the architecture as necessary to create sleeping and working spaces. A house could be adapted by infilling the indoor court or upper gallery or adjusting the living area.

A safe walking environment was prioritised. Narrowed thoroughfares, transitions between green space and roads, textured roading materials and verges signal shared traffic use. Pedestrians experience the small neighbourhood retail piazza, the communal green space at the heart of the site and eventually the future public reserve beyond.

Food gardens and composting
Productive fruit trees along the internal streets and public spaces contribute to a sense of community ownership and local food production.
Within the yard of each dwelling, there is space for a food garden, composting of household organic waste and the potential to attach a greenhouse to extend the growing season. A rainwater tank to service toilet, laundry and garden demand is also proposed.

Economic downturn delays project
Antanas Procuta Architects were engaged by Taupo District Council to progress the design to resource (planning) consent stage. In doing so, the council demonstrated a significant commitment to advancing sustainable communities as part of the New Zealand urban form. Unfortunately, the project was put on hold in late 2009 in response to tough economic conditions.

For more information, go to www.sb10presentations.co.nz/ and look under Thursday, Stream 2c, 11.45–12.15.