

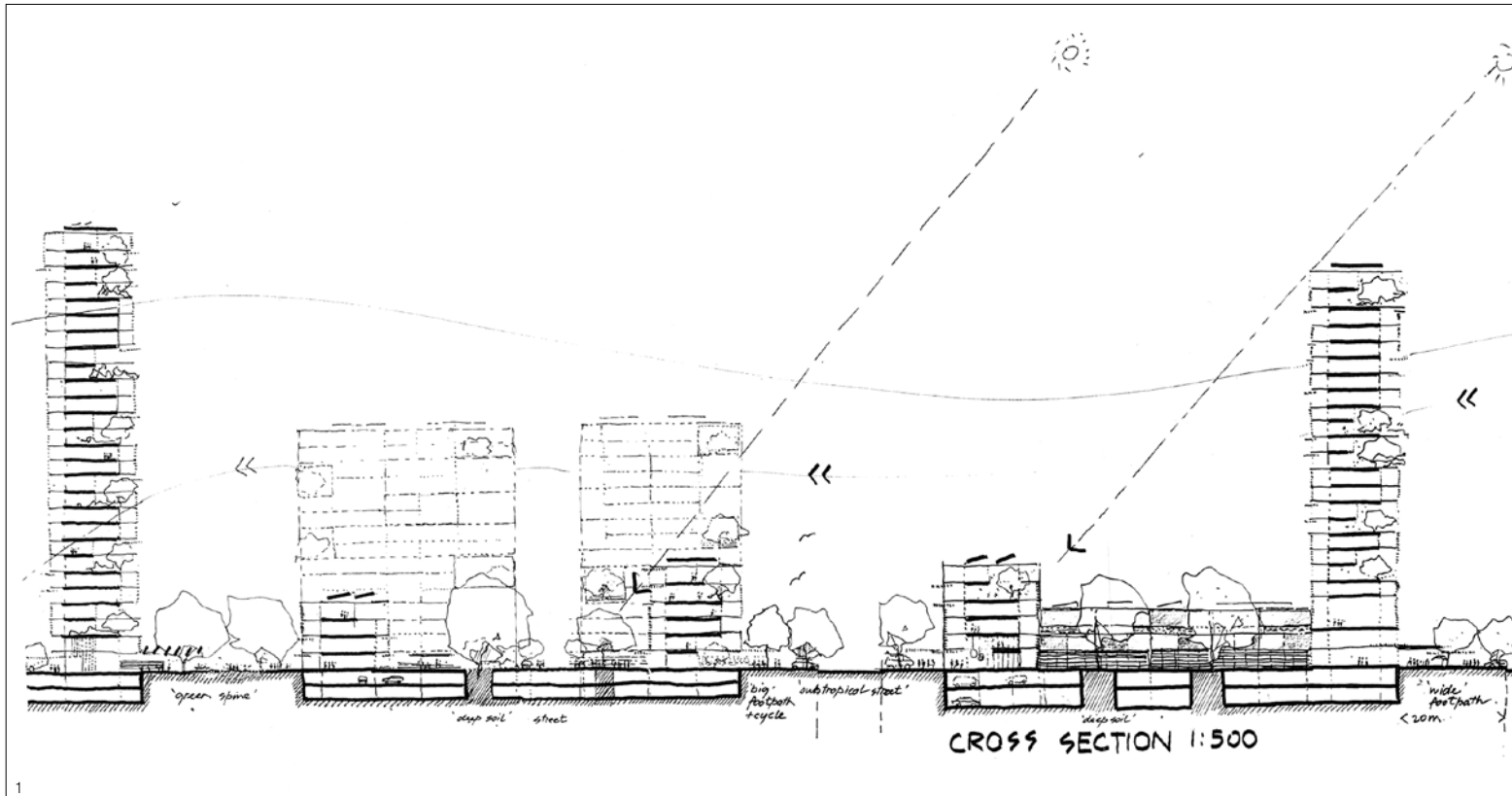
Design in the Age of Climate Change

A group of people are gathered around a table, focused on a large architectural drawing. They are using various colored markers and pens to draw and color the plan. The drawing shows a complex layout with buildings, roads, and green spaces. The scene is brightly lit, and the overall atmosphere is one of collaborative design.

architectus™

www.architectus.com.au
www.architectus.co.nz

The Sub-Tropical City



Planning for South-East Queensland in the Age of Climate Change

The past 12 months marks an environmental turning point. Scientific research and community awareness has moved inexorably towards a similar understanding of the world's delicate climatic balance.

The tide of public and political opinion has turned to the point where how Australia responds to the challenge of climate change is now a federal election issue. How South-East Queensland responds as a region has fascinating implications. Queensland's outstanding economic performance is underpinned in large measure by its coal industry and population growth. What it decides to do about coal may, in the long term, be directly affected by Federal Government policy. What it decides to do in South-East Queensland about population growth, carbon emissions and water management, is more immediate. These are directly connected to Australians' home and lifestyle choices, neighborhood developments along with local and State Government policy.

The design of our cities directly affects our environment in almost invisible, but most profound ways. This has become increasingly apparent with the alarm bells sounding evidence of climate change. Our cities, it appears, are becoming increasingly costly. Carbon emissions from motor vehicle use and

domestic/commercial energy consumption are major factors. Through its South-East Queensland Regional Plan and Infrastructure Plan, the Queensland Government is seeking to reduce reliance on private motor vehicles to help lower carbon emissions. The Building Code of Australia also makes provision for new housing to meet higher energy efficient standards. These are important, but there remain areas of difficulty.

A key lever for the delivery of a less car dependent community in the Regional Plan is what is known as 'Transit-Oriented Development' (TOD). This essentially means locating more people within easy walking distance of public transport to reduce reliance on the private motor vehicle. It also involves increasing the efficiency, standards and appeal of public transport. TOD can take a variety of forms. It may involve 4 to 6 storey housing, shops and offices near a light-rail station. A mixture of duplexes, small lot housings and 2 storey apartments around a local bus route, or 10-15 storey buildings around a railway station.

Brisbane already has its versions of TODs. Fortitude Valley is a form of TOD split by a major through road. Coorparoo is also another TOD, but the station is relatively removed from retail use. A regional example

of a TOD in the making is Nambour, while Southport CBD could become one, once the proposed rapid transit system is completed.

There is a level of real political complexity in creating new TOD. The whole team of developers, planners, land-owners and infrastructure providers must work together to achieve sustainable outcomes, requiring outstanding leadership, commitment and determination. One of the biggest challenges in creating TOD is negative community attitudes towards medium density housing and public transport - both major features of TOD.

TOD is about planning and designing smarter, more efficient and more interesting neighbourhoods and workplaces rather than uneconomic, unsustainable expansion.

Does TOD conflict with the great Australian dream of the private backyard? Is TOD simply an invention of inner city planners and urban designers anxious to impose left-'ish' social planning dogma on Australians and ask them to give up their birthright of a childhood with the Hills Hoist and space for formation of our national character? Not necessarily! Research undertaken by the Centre for Subtropical Design at QUT tells us that the two key community environmental values about living in South-East Queensland are openness and a relationship to green spaces and the beach.

This means that in such a region, the love of the indoor/outdoor lifestyle, is highly sought after and prized. The community expects easy access to green spaces and beach. There is a preference for living spaces to be permeable, not dark, inward looking places with little relationship to outside green space. Sounds



2

like something that could only be achieved in a conventional suburb? Not so. These qualities or values, can be designed into a whole range of living and higher density environments. Thoughtful, better, design that involves TOD can range from the neighborhood of detached houses, duplexes and 2 storey apartment buildings with the local bus, to multi-story CBD buildings - and everything in between.

To reduce carbon emissions and help counteract climate change, it is critical that we demonstrate ways that are less motor car dependent, less energy consuming, but at the same time, protect the qualities that created the initial attraction.

The recent Architectus 'Think Tank' assembled directors from across Australia to contribute ideas to help achieve just that. Design and planning luminaries included Lindsay and Kerry Clare (designers of Queensland's new Gallery of Modern Art), Dr John Hockings (formerly Professor and Head of the School of Design at Queensland University of Technology), as well as representation from Gold Coast City Council, the Office of Urban Management, Tweed Shire Council, and the Director for the Centre for Subtropical Design, Rosemary Kennedy. To provide a focus, Coolangatta, right on the Queensland/New South Wales border was selected for review.

Following a site visit and two days of intensive discussion and workshop, the following recommendations were made:

- The primary focus when master planning new housing and other development, should be to create and link landscape elements such as parks and creek corridors

and to treat streets/boulevards as planted landscape elements. Specific ideas for Coolangatta include new landscape corridors to improve the link of parks and green wedges to the beach.

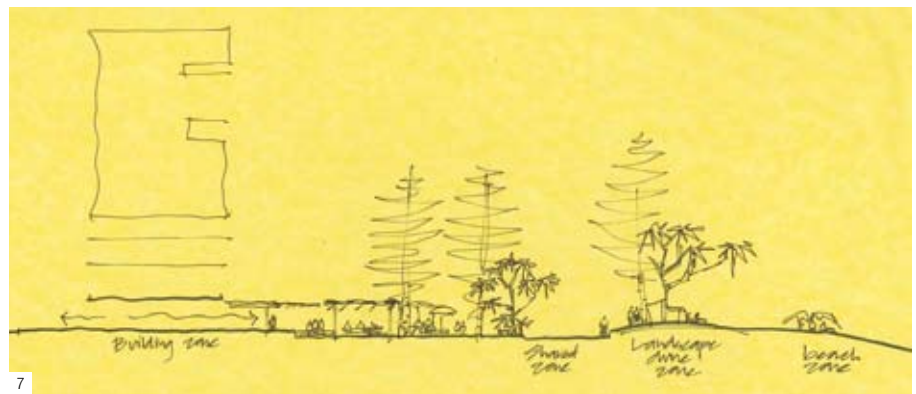
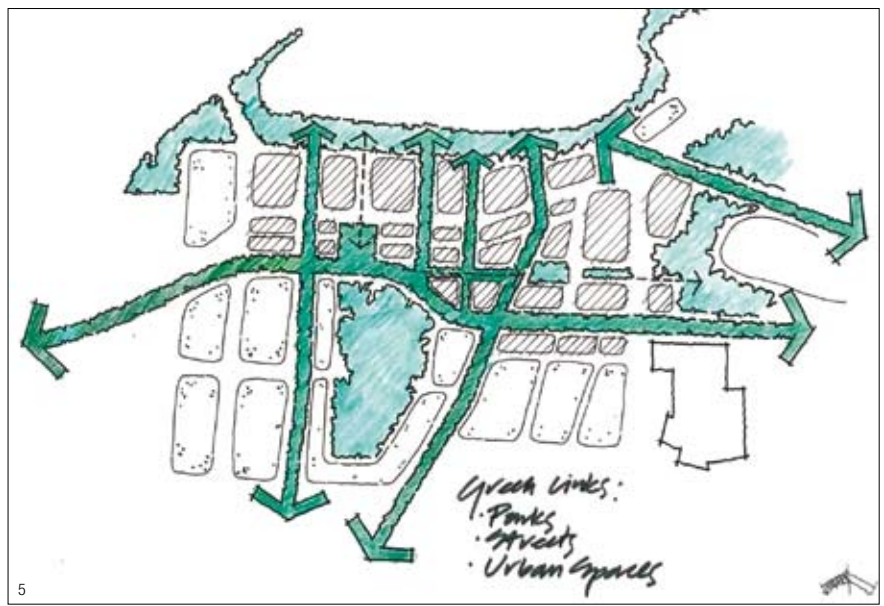
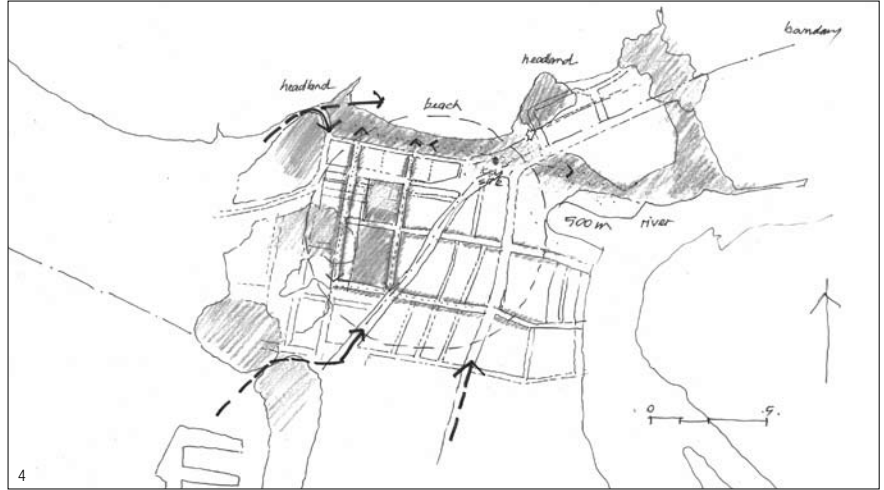
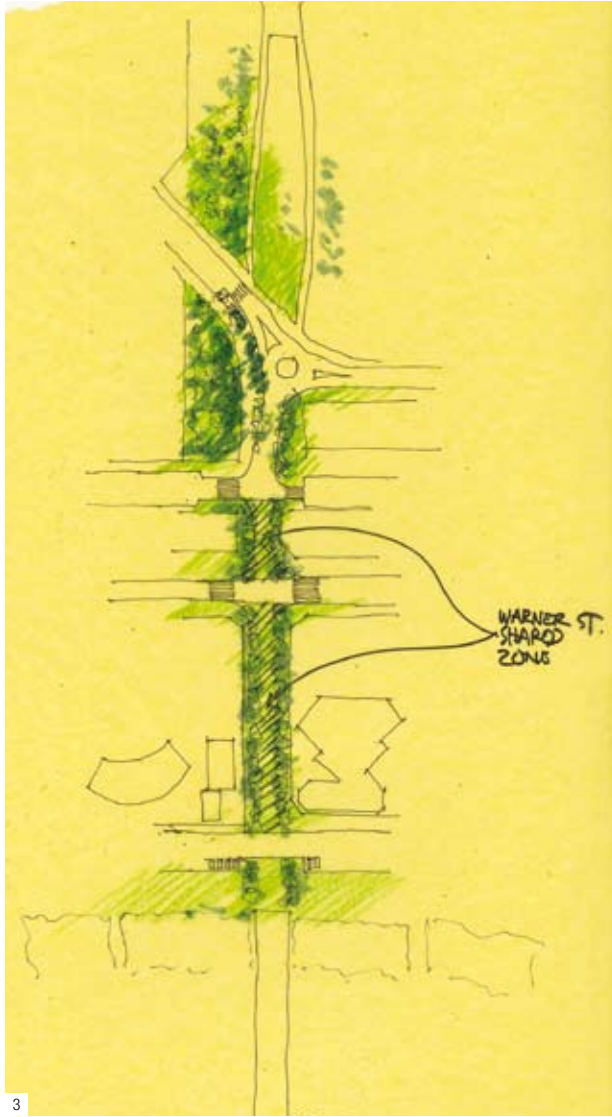
- The design of transport oriented models to reduce reliance on cars. These should also be specific and climate-attuned rather than simply transplanted from Europe or North America. The transport itself could be subtropical in character, involve more passenger stops (less walking in the heat) and respond in character with appropriate technologies and design elements such as large shaded roofs and incorporate solar power.
- When looking to create TOD do so in a way that responds to the subtropical climate. Apartment buildings, for instance, should be located adjacent to parks and creek corridors where a green, open outlook and cross ventilation can be achieved, rather than sited along main roads. Ensure there are deep soil areas within residential street frontages, along northern edges of lots and within courtyards of buildings so that sizable subtropical trees can be established on site.
- At the city-wide level, rather than areas of extreme difference of high and low density, create local neighborhoods where detached houses sit next to duplexes and low scale apartment buildings and allow residents to share an outlook of green backyards and shaded streets.
- Create more subtropical streets and public spaces that are shaded and simply oriented to funnel breezes. Primary streets should

be broad subtropical boulevards with multiple rows of trees.

- Apartment buildings need thin plans to encourage cross ventilation and an abundance of natural daylight. The workshop also proposed much wider use of the 'verandah apartment' to re-create some of the qualities of the traditional Queenslander, yet designed for even better cross ventilation and light. This indoor/outdoor quality is seen as vital to the full experience of 'subtropicality'.
- Taller buildings should have smaller/thinner floor plates to allow for cross ventilation, daylight and views and should be co-located with major landscape outlooks/resources. It should also be noted that smaller floorplates don't block breezes and don't cause large shadows and create more space between so that they don't block view lines. In taller buildings, major landscape and shade can be brought into the building via courtyards, podium and also within the building itself and in courtyards between floors. These gardens should be incorporated to create a more functional, articulated façade.

The sketches that accompany these recommendations illustrate something of what is possible for a subtropical city to raise standards of relevance and livability while being socially responsible towards resources. A focus on design as a key strategic tool for the delivery of lower carbon emissions in this region is a critical step in guiding development towards building a truly sustainable community, city, region and nation.

Imagined Places

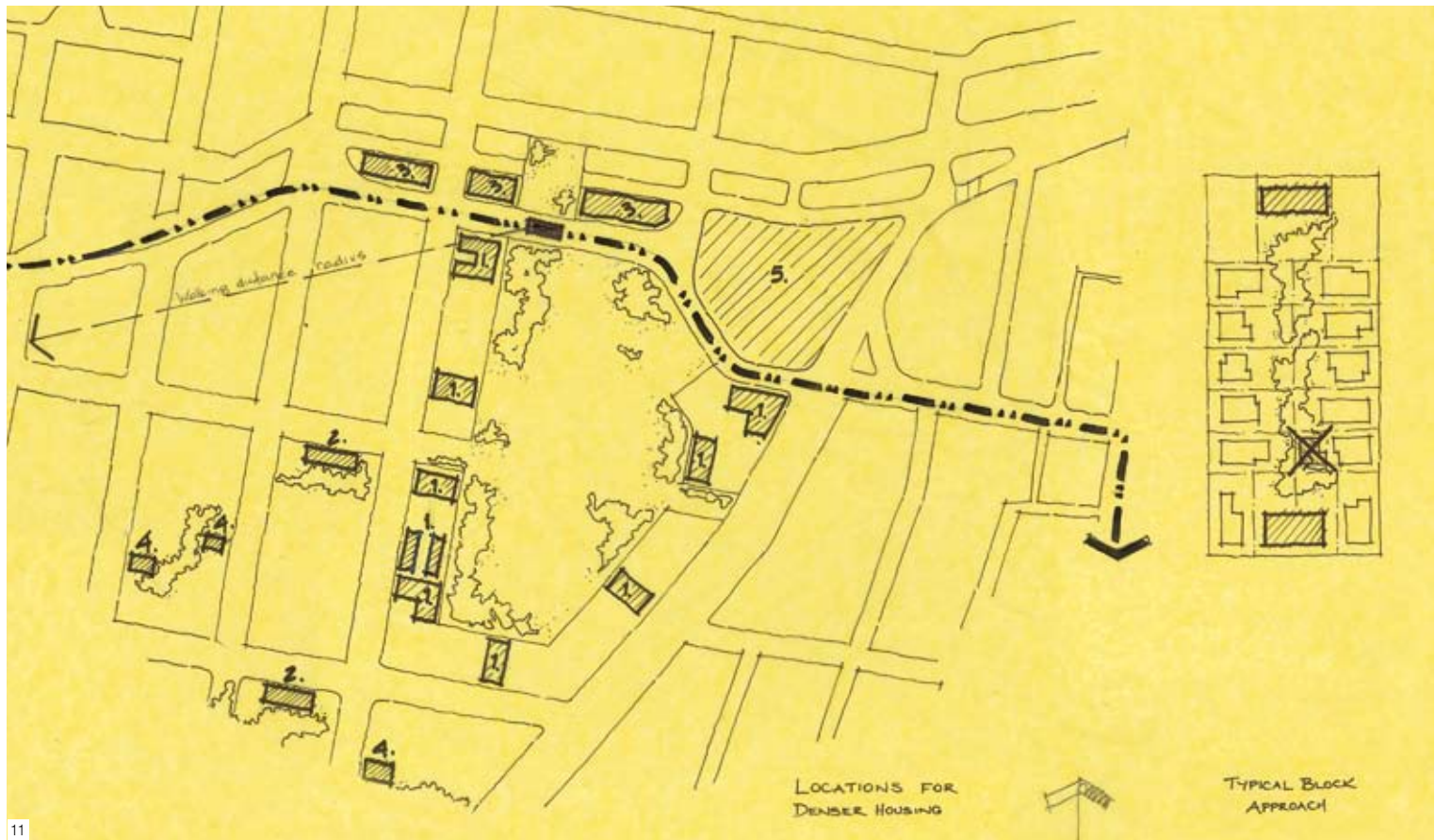
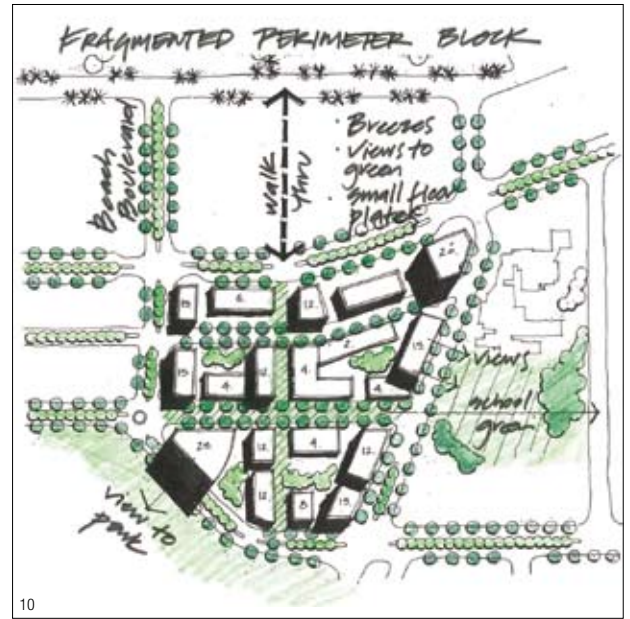
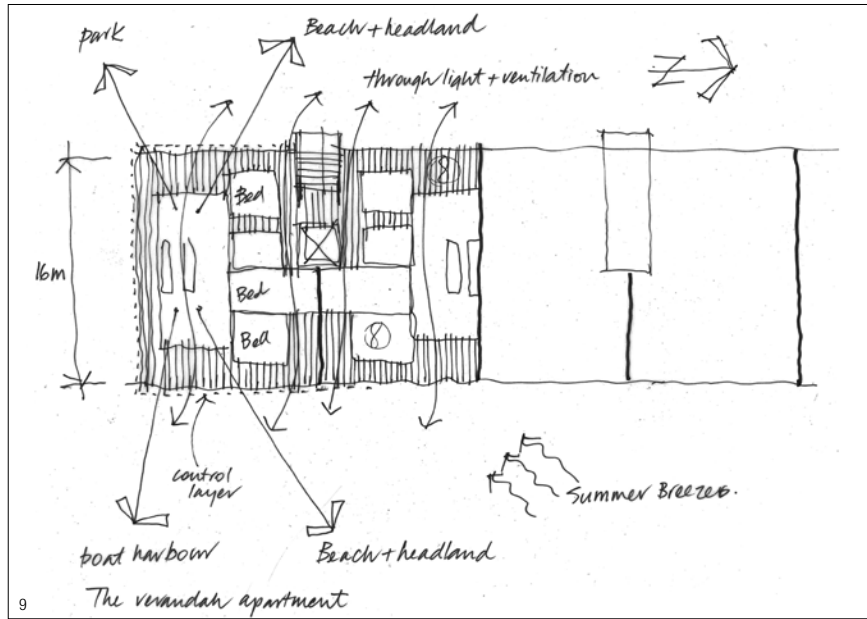


1. Apartment buildings with thin plans, courtyards with deep planting zones, and landscape integrated throughout the upper levels of taller buildings.
2. Aerial view of the hypothetical project area.
3. Streets are important green resources and outdoor rooms in the subtropical city.
4. The urban structure can drive the creation of linked landscape spaces.
5. Creating green streets linked to landscaped open space is an important key principle in designing subtropical TOD.
6. Key strategies for consolidating uses around transport corridors and linking these to green spaces.

7. A deep public terrace with shady places to sit outdoors can be created at the ocean front, with strong links into the centre of blocks.
8. Mapping key green spaces in the study area.
9. The verandah apartment plan shows how cross ventilation, natural light and indoor/outdoor spaces can be achieved at higher densities.
10. The fragmented perimeter block addresses street frontages while facilitating breezes and views.
11. Ideas for retrofitting density to create TOD - the neighbourhood and the block.



Cool Housing



Retro-fitting housing density to create TOD

Locate denser housing forms where there is the possibility to create openness and a relationship to landscape, keeping in mind the scale and height of adjacent existing development. In particular, create denser housing forms:

1. Overlooking green spaces within easy walking distance of public transport.
2. At the ends of existing rectilinear blocks, but not in the middle, where there is the potential to create a relationship with 'borrowed' landscape established in other people's backyards rather than in the back of blocks. Backyard landscape is a crucial natural resource.
3. On a major transport route only if the potential exists to create a strong relationship to landscape.
4. The creation of small units of increased density within the same scale as existing residences – i.e. 2 storeyed duplexes, which allow deep planting on the block.
5. Big sites where the potential exists to create openness and relationship to landscape.

Creative Contributors



Perspective

Phillip Follent – Chief Architect, Gold Coast City Council

“The workshop was really insightful. I was so impressed that I have decided that whatever planning our Council undertakes in the future, we must follow such a process. The result was not necessarily about ‘wowing’ people with slick, coloured drawings, but rather very thoughtful, sometimes modest, ideas. But these were ideas with great longevity and the basis upon which you build great cities.

This project produced some very refreshing insights. Part of the reason is that you have a group of people not so familiar with a locality that they only see it in the same old way and that may miss the potential for an area’s cultural and physical attributes.

I have absolutely no doubt that this process is vital to realising the best possible planning.

This better understanding of place should be the starting point of any council planning. High quality consultants such as planners,

architects and landscape architects will bring invaluable experience and an independent eye to reveal opportunities not always evident to those more familiar with an area.

Architectus’ process of a thorough site inspection to fully familiarise itself followed by hitting the project hard for two or three days is probably the best springboard for any form of serious local area plan that can be undertaken. It informs that local area plan with issues that need to be brought to the top of the pile.”



(c) Contributor (a) Advisor

John Byrne Urban Design Consultant, on behalf of Office of Urban Management (pic 3) (a)

Kim Campbell Gold Coast City Council (a)

Deb Chow Gold Coast City Council (a)

Kerry Clare Architectus Sydney (pic 5) (c)

Lindsay Clare Architectus Sydney (pic 5) (c)

David Corkill Gold Coast City Council (a)

Kym Cox Architectus Brisbane (c)

Christopher Davis Tweed Shire Council (c)

Margaret Dengate (c)

Phillip Follent Gold Coast City Council (pic 6) (a)

John Grealy Architectus Brisbane (pic 1) (c)

Ella Gunn Architectus Brisbane (c)

Michael Harrison Architectus Sydney (pic 2) (c)

John Hockings Architectus Brisbane (c)

Rosemary Kennedy Centre for Subtropical Design (a)

Richard Mullane Architectus Sydney (c)

Katie Rankine QUT final year student (c)

Timothy Rodgers Architectus Brisbane (c)

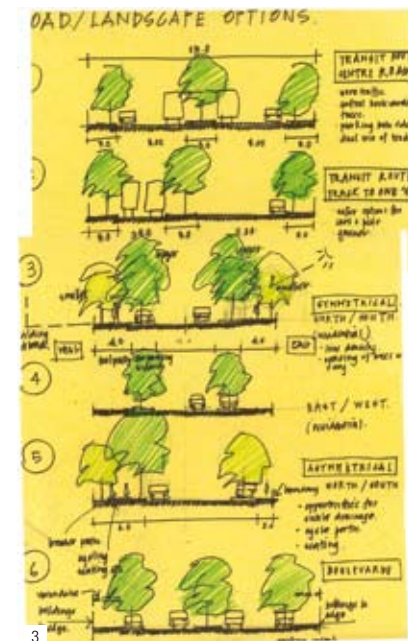
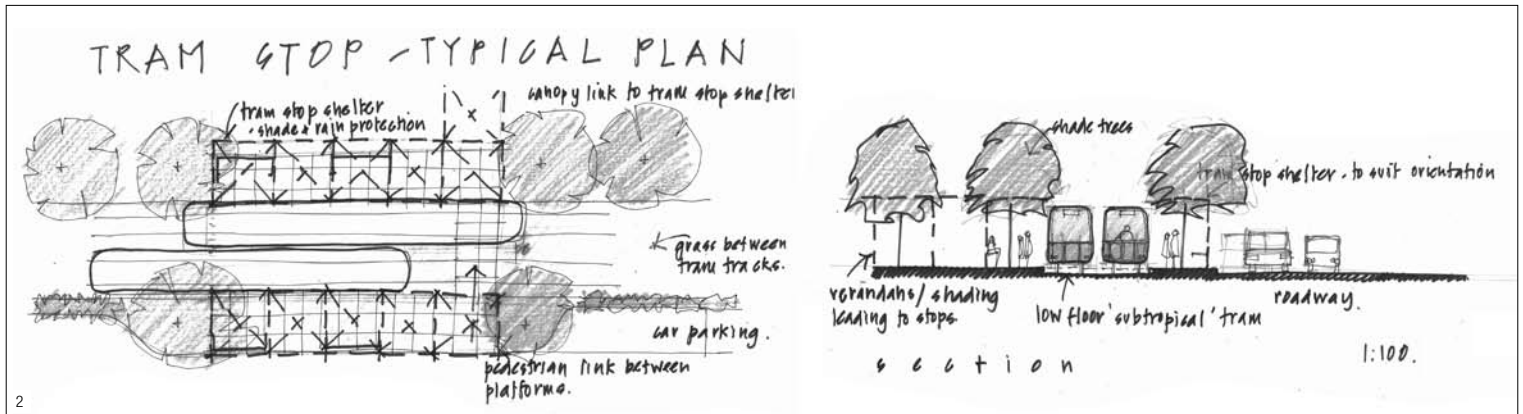
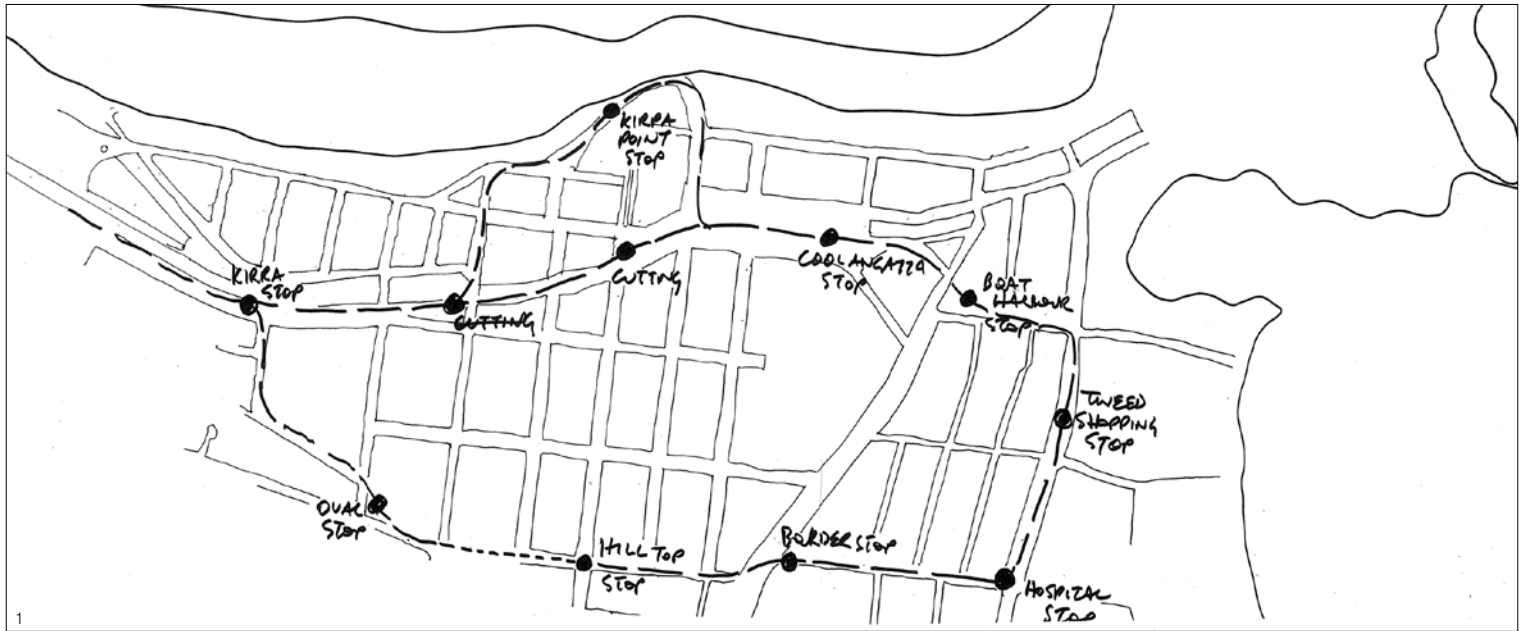
David Sainsbery Architectus Sydney (c)

Caroline Stalker Architectus Brisbane (pic 4) (c)

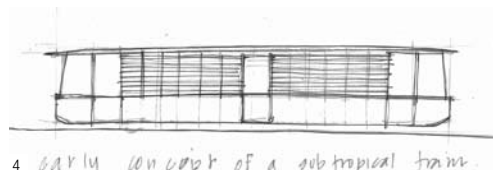
Stewart Verity Architectus Sydney (c)

Harvey Walsh Gold Coast City Council (a)

Timely Transport



"The recent Architectus 'Think Tank' assembled directors from across Australia to contribute ideas to help achieve just that. Design and planning luminaries included Lindsay and Kerry Clare (designers of Queensland's new Gallery of Modern Art), Dr John Hockings (formerly Professor and Head of the School of Design at Queensland University of Technology), as well as representation from Gold Coast City Council, the Office of Urban Management, Tweed Shire Council, and the Director for the Centre for Subtropical Design, Rosemary Kennedy. To provide a focus, Coolangatta, right on the Queensland/New South Wales border was selected for review."



1. Ideas of a public transport loop to create a network of neighbourhoods.
2. Ideas for trams/light rail in a green corridor setting.
3. Studies of subtropical street sections.
4. A contemporary subtropical tram with a shady roof and screens responding to weather conditions.

Architectus supports sustainable initiatives. This newsletter has been printed on sustainably produced paper using vegetable based ink.

architectus™

Auckland
Phone +64 9 307 5970
Fax +64 9 307 5972
auckland@architectus.co.nz

Brisbane
Phone +61 7 3221 6077
Fax +61 7 3221 1645
brisbane@architectus.com.au

Melbourne
Phone +61 3 9429 5733
Fax +61 3 9429 8480
melbourne@architectus.com.au

Sydney
Phone +61 2 9929 0522
Fax +61 2 9959 5765
sydney@architectus.com.au

Shanghai
Phone +86 21 6255 7373
Fax +86 21 6255 7575
shanghai@architectus.com.au