

# LIVING SPACES MAKES SMILING FACES GOOD DESIGN CREATES HOUSING FOR EVERYONE

AUCKLAND  
DESIGN MANUAL

TE PŪKA WHAKATAIRANGA | A TAMAKI MĀKAURAU

BUILDINGS + SITES // HOUSING CASE STUDY

**Living Spaces**  
Danedong, Australia

# OVERVIEW

*The Living Places Suburban Revival showcases a range of housing that meets the need of a today's changing demographics. It also demonstrates that with good design, high density can have a minimal impact on a traditional suburban neighbourhood.*

## PROJECT SUMMARY

The Living Places is the result of a design competition run as a joint initiative between the Office of Housing in the Department of Human Services, Victoria, and the Office of the Victorian Government Architect. The brief behind the competition was to create a design that explored increased density in a traditional suburban setting, and was repeatable across a variety of sites.

The project is social housing which is owned by the Department of Human Services, and their brief was to create a range of housing types to accommodate a wide range of demographics including single storey fully accessible accommodation, and 4 bedroom housing with downstairs accessible bedrooms and bathrooms. It also had to demonstrate best practice architecture and sustainability.

The winning design by Bent Architecture focuses on maximising the use of the communal outdoor space. These areas are a shared space that blends car manoeuvring and accommodation, pedestrian paths and communal outdoor spaces and seating areas. The success depends on careful consideration of detail, as well as a community of residents that are happy to share spaces and co-operate with each other.

The single storey houses are designed in three distinct, staggered forms each with a roof at a different pitch. The ceiling follows the roof profile to give a generous amount of internal space, and the external pitches break up the overall form of the building and provide a response to the suburban setting.

The buildings are designed to follow best practice energy efficient design principles. The walls have increased thermal mass to heat and cool the buildings, there are rain tanks under the slabs, and solar hot water and energy generating photo-voltaic cells on the roof.

The project is a place to live for a wide range of people who would otherwise have had no other choice in this neighbourhood. It shows that a relatively dense development can fit into an existing suburban area, respond sensitively to the surrounding stand along houses yet be a distinctly modern housing form.



Information for this case study was largely sourced from 'Model Housing' written by Jennifer Clazini in July/August 2012 issue of Architecture Australia Vol 101No 4.

Information for Getting it Right: The Building was sourced from 'Living by Design' written by Kate Robertson in the Domain, April 26-27, 2013

Other information was taken directly from the website of Bent Architecture.

# KEY PROJECT INFORMATION

HOUSING TYPE  
**DETACHED/ATTACHED**

DENSITY  
**48 DW/HA (Gross)**

ARCHITECT & DESIGN TEAM  
**BENT ARCHITECTURE**

YEAR COMPLETED  
**2012**

**93 Beds/HA**

Structural Engineer: Clive Steele Partners

Services Engineer: SPA Consulting Engineers

Landscape Architect: Site Office

ESD: Third Skin and Greensphere Consulting

Building Contractor: Pirovich Industries

SITE AREA  
**3129 M<sup>2</sup>**

PROJECT TYPE  
**ACCESSIBLE SOCIAL HOUSING**

CLIENT/DEVELOPER  
**DEPARTMENT OF HUMAN SERVICES, VICTORIA**

PRICE BAND  
**MID-RANGE**

9 x 1 bedroom dwelling, fully accessible 64m<sup>2</sup>

4 x 3 bed (two storey) 123m<sup>2</sup>

2 x 4 bed (two storey) accessible downstairs bedroom and bathroom 140m<sup>2</sup>

PARKING  
**AT GRADE**

1 space per dwelling, no visitor parking

A mid-range project would typically have a current build cost of \$2000 - \$3000 per m<sup>2</sup>, exclusive of land costs, professional services and regulatory fees

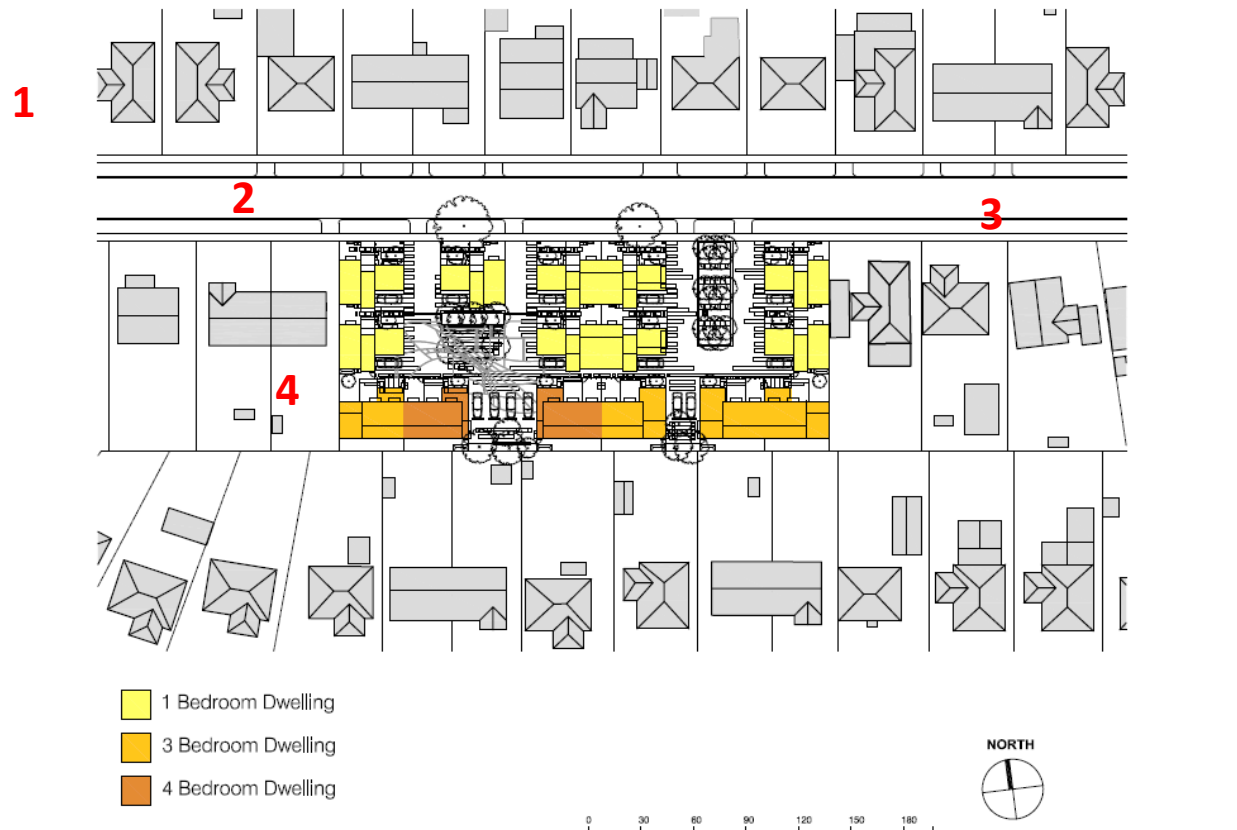
\$4m (Australian) total development cost.

Units have not been sold/ available for sale on the open market.



# UNDERSTANDING THE NEIGHBOURHOOD

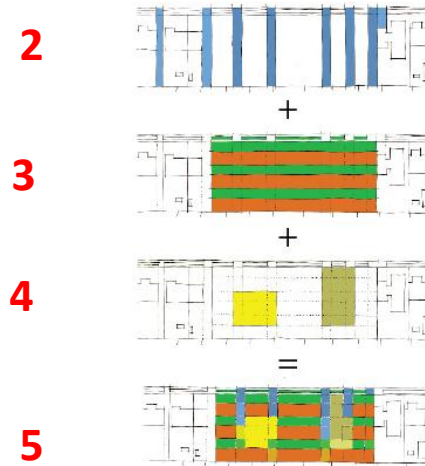
1. Dandenong is a suburb 30km southwest of Melbourne CBD in Victoria, Australia. It experienced high amounts of growth in the mid-nineteenth century and now has approximately 29,000 residents. It has a diverse population in terms of ethnicity and high rates of immigration compared to other parts of Melbourne. (Source: Wikipedia)
2. Jesson Crescent is located in the middle of a traditional post war suburb. Most of the surrounding housing is standalone, and there is limited redevelopment. The neighbourhood is 1.8km away from the local centre.
3. The area is not where increased density would normally be considered, due to its distance from the town centre and associated services. A key part of the brief was to provide for an unmet demand for differing types of accommodation within this neighbourhood.
4. The project has considered the impact on the wider neighbourhood when designing and siting the houses. The buildings are a contemporary interpretation of traditional materials and forms, and the single storey, mainly detached, housing at the front of the site creates a sense of openness to the street.



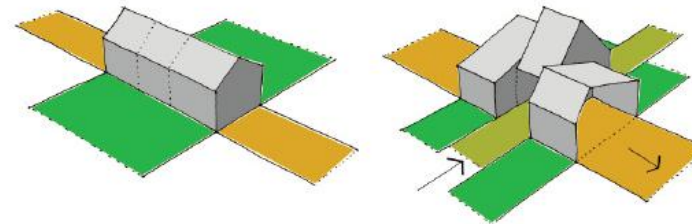
Site plan and surrounding houses.

# GETTING IT RIGHT PLACING THE BUILDINGS ON THE SITE

1. The approach to the site design was to define the different functions within the site as a series of 'bands', overlay them on top of each other and use that as the ordering device to locate the buildings, outdoor spaces, and circulation.
2. Vehicular and pedestrian paths: Existing crossovers kept to maintain the street edge and circulation rhythms.
3. East-West banding: Alternating landscape and housing bands maximise northern edges, create north facing open space and site permeability.
4. Community spaces defined: Two communal spaces, one for passive recreation and one for active play increase physical and visual permeability and allow neighbourhood surveillance.
5. Urban framework: Housing Bands, landscape zones, pathways and communal open spaces are overlaid – defining a solar-responsive and socially engaging urban framework.
6. Housing units respond to site banding to define private open spaces and connections to the urban network



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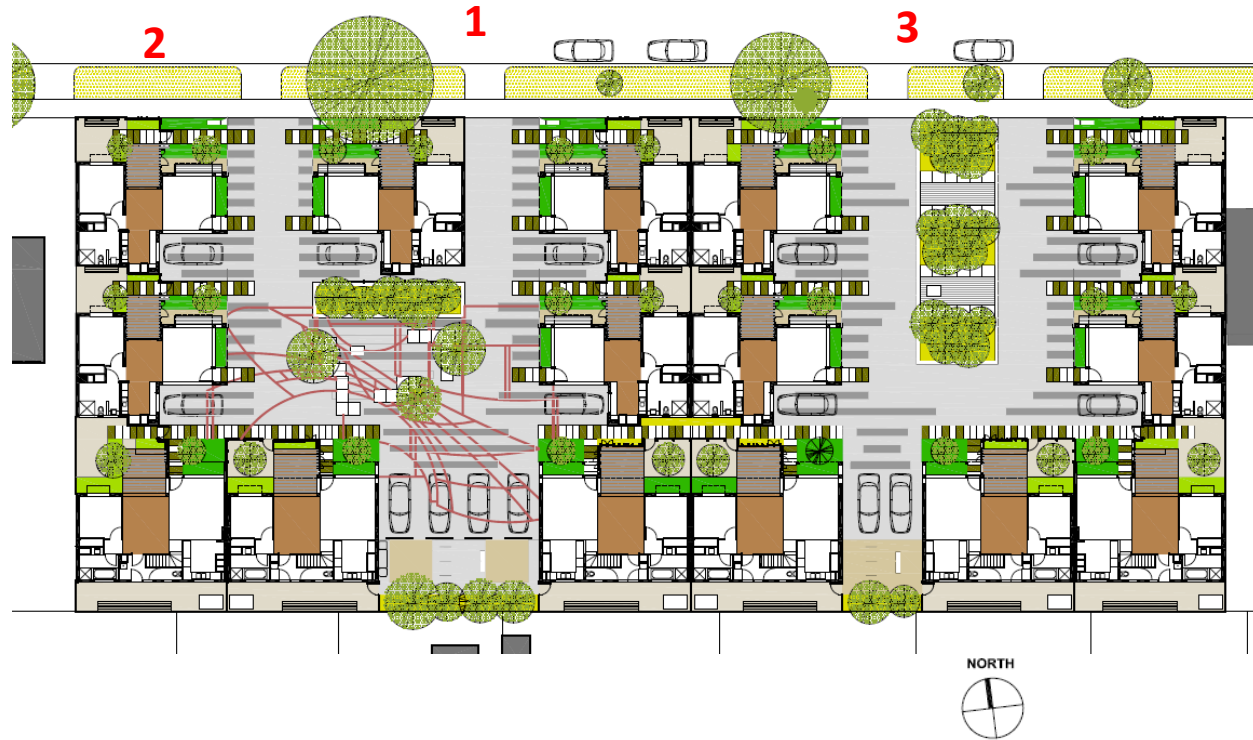


Source: Bent Architecture Website

<http://www.bentarchitecture.com.au/projects/residential/living-spaces-suburban-revival.html>

## GETTING IT RIGHT PLACING THE BUILDINGS ON THE SITE

1. The development is grouped around two communal spaces which are designed to accommodate a range of functions. They provide pedestrian circulation, car parking and maneuvering, and each courtyard has communal open space. The courtyards are very open, with each space blending into each other and loosely defined by the use of different materials
2. All units have private courtyards located on the north side of the house. Where this is located against the street, any fencing includes movable panels to provide a flexible balance between privacy and security for the residents, with oversight of the street.
3. Placing single storey, mainly stand alone, units along the street front minimises the impact of increased density on the suburban street.



Site plan showing how the units are arranged around two communal areas.

# GETTING IT RIGHT STREET TO FRONT DOOR

1. The street frontage alternates very public areas which accommodate car and pedestrian entry into the rest of the site, semi-public areas which are the yards for the front units and fenced private front yards.
2. The front fences have hinged panels which allow the resident to decide how much engagement they have with the street. This one way of balancing providing privacy for the occupants with oversight of the street. Residents also noted it allowed the breeze through the outdoor areas on hot days.
3. Oversight of the street is provided from large living room windows. The sill is extended to form a bench, providing a place for the residents to sit and chat to passersby.
4. Single storey units are placed along the street front which reduces the appearance of density on the wider street. Each unit has a three forms, each with a different roof pitch and each staggered in plan relative to each other. This breaks down the individual unit into three, distinct elements. This is a good response to this particular location and street.
5. The common circulation area is a shared space that accommodates cars and people. Pedestrian paths and access to the individual units is provided by different paint treatments.
6. A wire trellis planted with vines gives some screening and privacy to the front window of the house, and provides additional landscaping.



Buildings facing onto Jesson Crescent.



# GETTING IT RIGHT OUTDOOR SPACES

1. The outdoor space accommodates pedestrians, car parking and maneuvering and communal outdoor facilities. The success of the space depends on the careful attention to detail in the design, and the willingness of the residents to both share and become custodians of the spaces around the building.
2. The communal area is overlooked and addressed by all the units. This gives the space a sense of ownership, provides passive surveillance from the houses and ensures the space is monitored and looked after.
3. This courtyard contains a range of seating and a BBQ that can be used by the all the residents. The other courtyard has planting and a seating area.
4. The individual units each have a fenced, private outdoor garden on the north side of their houses. There are movable panels in the upper half of the fences which allow the residents to choose how much privacy or interaction they have with their neighbours.
5. There is limited separation between the buildings and the communal areas – some privacy is provided by and climbing vines in front of the front windows.



Communal space inside the development – showing seating and BBQ area.



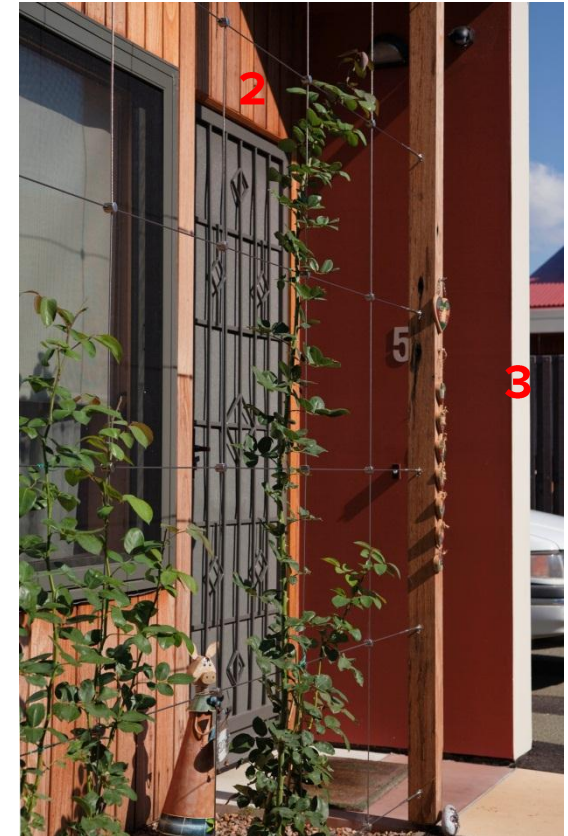
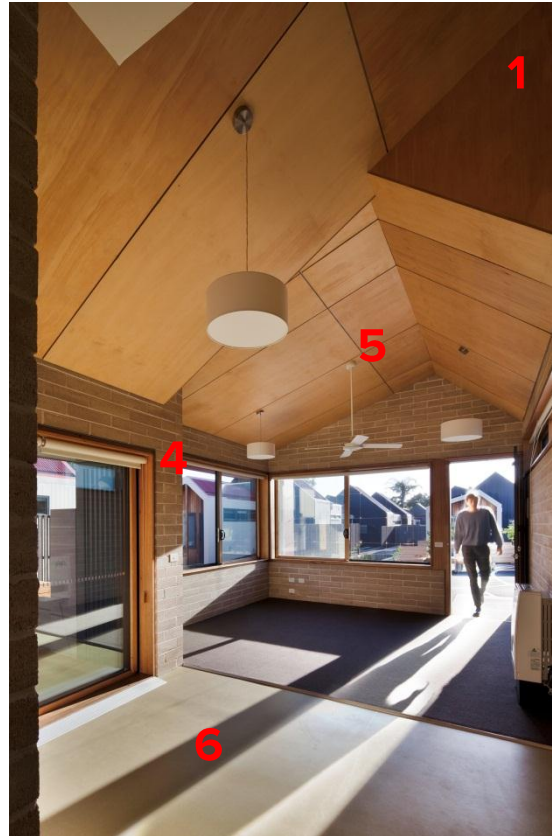
## GETTING IT RIGHT ACCOMODATING THE CAR

1. Each unit has one open park located next to the house, with direct oversight from inside the unit. No visitor parks are provided on site – which lowers the cost to the developer and occupants.
2. The car manouvering areas are designed as a shared space which forms part of the communal open space of the development. A range of surface treatments give some definition to pedestrian circulation and car parking spaces. The emphasis is on creating a space that looks like a communal open space, puts the priority on pedestrians and allows car access as a secondary priority.
3. Movable screens provide some privacy for the residents.



## GETTING IT RIGHT THE BUILDING

1. The design aims for maximum energy efficiency – this one bedroom unit includes a 3000 litre water tank, solar hot water and a 1 kilowatt photo voltaic panel to generate electricity.
2. While accommodating a variety of ethnicities and cultures, a unifying feature is the light and airy interiors “Our primary response to that challenge was to create homes that were light filled because, in addition to the benefits of having every room north facing, I think that’s one of the fundamentals that transcends culture” Paul Porazoski – Bent Architecture
3. The wall construction is an outer layer of Colourbond over brick veneer giving extra thermal mass which helps to regulate temperature.
4. The houses are organised into three boxes which are staggered to provide space for an outside courtyard. Each box has a different roof pitch – the raked ceilings follow the roof pitch to give soaring internal volumes and an increased feeling of space.
5. The development has been awarded a 8 star rating when assessed against natHERS. The minimum rating is 6 stars, which is still well above the minimum standards in the New Zealand Building Code. Ceiling fans are a cost effective and energy efficient way to cool and heat a building.
6. The whole building is an accessible, barrier free environment that complies with Housing NSW Universal Design Guidelines. Not only is level access provided throughout, all units are designed to be used by people with limited mobility, and some are specifically designed for people in wheelchairs.



Left: Inside the 1 bedroom units showing the high ceilings. Right: Vines providing privacy to the front.



## GETTING IT RIGHT THE BUILDING

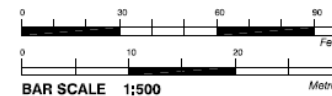




# GETTING IT RIGHT SITE PLAN

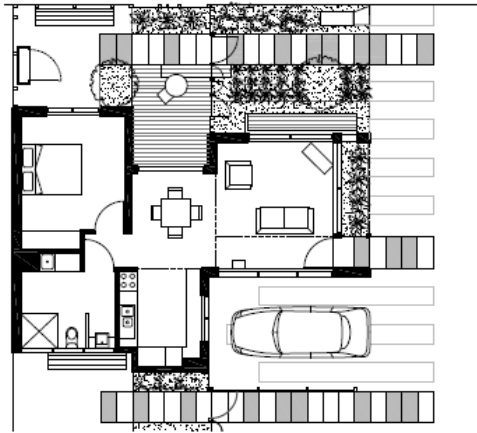


SITE PLAN, SCALE 1:500 @ A4  
**LIVING PLACES SUBURBAN REVIVAL**

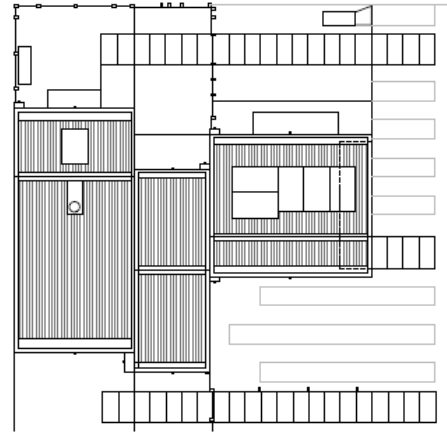


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# GETTING IT RIGHT 1 BED

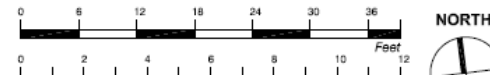


Ground Floor Plan  
Home for Singles/Couples - 1 Bedroom Unit



Roof Plan  
Home for Singles/Couples - 1 Bedroom Unit

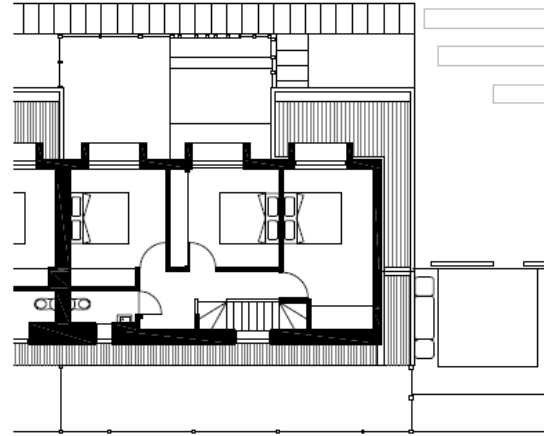
FLOOR PLANS, SCALE 1:200 @ A4  
**LIVING PLACES SUBURBAN REVIVAL**



# GETTING IT RIGHT 4 BED



Ground Floor Plan  
Family Home - 4 Bedroom Unit



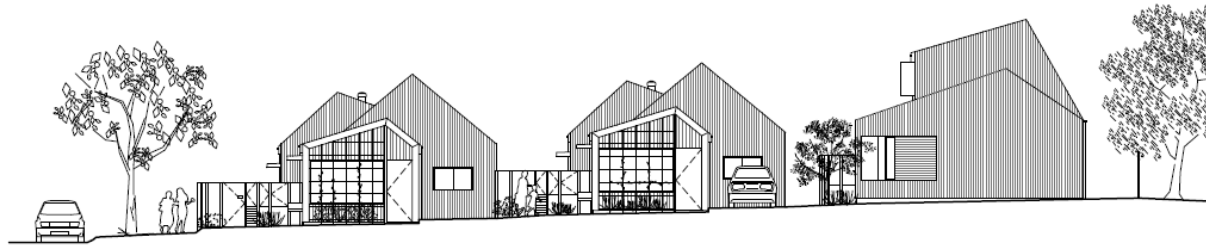
First Floor Plan  
Family Home - 4 Bedroom Unit

FLOOR PLANS, SCALE 1:200 @ A4





# GETTING IT RIGHT ELEVATIONS AND SECTIONS



SITE SECTION AND ELEVATION, SCALE 1:200 @ A4  
LIVING PLACES SUBURBAN REVIVAL



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# AUCKLAND DESIGN MANUAL

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The Auckland Design Manual provides practical advice, best practice processes and detailed design guidance to enable us to design and build the world's most liveable city. The manual will enable us all to make informed choices, to build houses and develop our streets and neighbourhoods to not only look good but to ensure they are built to last, sustainable and give the best return on investment.

[www.aucklanddesignmanual.co.nz](http://www.aucklanddesignmanual.co.nz)