



LOCATION

IDYLLIC RURAL SITE WITH RIVER FRONTAGE

The **Chimneys Sustainable Village** site is located 30 km south from Port Macquarie on the New South Wales mid-north coast, and on the banks of the beautiful Camden Haven River, in an area reputed to enjoy the best year-round climate in Australia. It is 10 minutes' drive from several pristine surfing beaches, lakes, National Parks and State Forests. The Kew Country Club is almost adjacent to the north. The undulating site enjoys views, which can never be interrupted, over the river and farmland to forests and mountains, to the east, south and west. The Camden Haven region has a focus for fine food and produce and for major cultural events including literature and music. Nearby are wineries and vineyards, with local shops, theatre, schools, university, sporting and medical facilities all handy. The site is adjacent to local bus services, and 3 km from CountryLink rail services. The major regional centre of Port Macquarie which is 20 minutes away provides all necessary services and amenities including, The Glasshouse cultural centre housing the Regional Gallery and world class performance spaces, as well as the recently upgraded airport. Sydney is 3.5 hours by road, most of it dual highway and freeway, Brisbane is 7 hours and Tamworth 4 hours.

PROJECT

DA APPROVED AS A SPECIAL PROJECT

The **Village** is designed to lead by example to sustainable residential development in Australia. It consists of 66 dwellings, 6 of which are zoned commercial, allowing people to work from home, 8 are townhouses, and the remainder individual dwellings on lots arranged in clusters of between 6 and 8. Each cluster has its own small community central space, and those clusters in turn are loosely arranged around a large central common open space with amenities and facilities such as a community centre, lap pool and tennis court, all adjacent to a small lake. The **Village** is self reliant for potable water supply, self reliant on sewerage treatment and re-use, harvests and re-uses stormwater, and has community productive gardens and orchards. Each dwelling will generate some green energy, fed back to the grid. Extensive walking and bicycle paths meander through the **Village**, and connect to the Camden Haven River with a small boat ramp and boat store, and a footbridge to a park separated by a creek. Extensive areas of native bushland have been set aside in two Environment Protection Zones, and the old heritage-listed Struggletown Chimneys are to be stabilized and preserved in a Heritage Protection Zone. The **Village** will trial a car share, using a hybrid or low energy vehicle. An Educational Charitable Trust will allow students to visit and learn from the sustainable systems incorporated in the **Village**, and data will be collected and published annually. The patron for the Trust is leading social researcher Hugh Mackay.

An independent assessment by Engineers Patterson Britton has concluded that "The Chimneys Sustainable Village" will cut greenhouse gas emissions by a minimum 48%, when compared with a conventional development of the same size.

AIMS AND OBJECTIVES

- 1. A SUSTAINABLE SUBDIVISION**
To show by example that a sustainable residential subdivision can be practical, profitable, financially viable, and reduce living costs when compared with a conventional unsustainable subdivision.
- 2. DEMONSTRATION PROJECT**
To demonstrate with Australian best Practice and employment of leading experts with use of the latest technology that a sustainable subdivision can meet all the requirements of residents, be independent of Council's water and sewerage and road systems, recycle all water for re-use within the development, generate energy to feed into the grid and /or be stand alone , and also contribute to some of its own food needs.

3. REGIONAL BENEFITS

To positively answer concerns about unsustainable coastal developments and their ever-increasing drain on resources, services and amenities.

4. SOCIAL SUSTAINABILITY

To create a design which creates jobs, and infrastructure for more on-site employment and businesses; provides places for children to play, safe from cars without close supervision; and replaces the social isolation of unsustainable subdivisions, with places of conversation, engagement and interaction, sense of community and education.

5. SUSTAINABLE ARCHITECTURE

To create buildings and spaces which are user-friendly, are compatible with each other and with the location, establishing a 'sense of place', and cause least damage to the environment.

Buildings will be designed for year round comfort without the need for air conditioning by virtue of appropriate design, orientation and materials.

6. MAINSTREAMING SUSTAINABLE DESIGN

To demonstrate that sustainable houses and subdivisions can meet mainstream requirements, in being cost effective and comfortable and become more desirable than conventional unsustainable houses in conventional unsustainable subdivisions.

7. COUNCIL, AGENCY and DEVELOPER PARTNERSHIP

The project has support from Port Macquarie-Hastings Council in pursuit of these objectives, which will generate publicity for a timely and successful example of responsible development; to generate data on sales, building and living costs which can inform the development market of the benefits of sustainable subdivisions.

BUILDING PHILOSOPHY

Homes in the **Chimneys Sustainable Village** will follow current best practice for sustainable building; will be functional in their design and appropriate to their semi-rural setting; construction details will be well resolved; and will follow the principles set out in the Design Guidelines. The character being sought for the **Village** is best described as "contemporary rural", and dwellings must be constructed from materials which are listed in the Building Materials and Colour Palette. Dwelling designs which mimic historic styles will not be allowed, nor will dwellings proposed to be constructed from materials or colours not conforming to those in the Guidelines. Dwellings must meet the minimum performance standards specified.

The materials prescribed are selected for their qualities and colours so as to achieve maximum durability and performance; to achieve easy and fast construction; to avoid incorporating materials which have very high embodied energy; to avoid materials which have embodied toxic elements; to avoid materials which require high maintenance; and to achieve a cohesive development. Applied external finishes to large wall areas are to be avoided; materials should be left and expressed with their natural colours and textures.

Similar considerations apply to design elements throughout the **Village**, including community seating, letter boxes, lighting, signs and graphics and community facilities.

The scale, form, colour and texture of the buildings which make up the **Village** will establish its identity, its character, its "sense of place", and its attractiveness as a place to live and, in some cases, work. It is essential that these physical characteristics are also appropriate to the locality and responsive to the climate. That is why the Design Guidelines, and the Building Materials and Colour Palette, have been formulated, and their implementation will help ensure that the outcomes achieve the objectives as well as protect the living environment and the long-term investment of residents.

Each lot in the **Village** has been planned with a Building Zone which establishes the area within which the building footprint should be located, an Amenity Zone which suggests the area of the lot which can be allocated for outdoor living and recreation, and a Productive Zone which can be developed for vegetable and herb garden and fruit trees. Building is not allowed in Amenity Zones or Productive Zones. These plans are incorporated in the Development Control Plan, and are to be used as a guide to lot planning and dwelling location and layout. They have been developed to avoid things such as overshadowing from neighbouring dwellings, to make it easier to plan for good passive solar design as well as visual and acoustic privacy, to facilitate access, and to design homes to maximise views and the features of each lot.

LANDSCAPE PRINCIPLES

The **Chimneys Sustainable Village** site is blessed with stands of mature native shade trees and large structure trees, around and within which the housing clusters and infrastructure have been planned. In addition, there are extensive areas of undisturbed bushland on the extremities of the site, which are home to a multitude of native birds and animals, and which are to be retained as Environment Protection Zones. These areas act as “buffer zones”, insulating the housing clusters and **Village** centre from adjacent development to the north, whilst the river banks on the west are shaded and stabilised by the trees there.

The Architect and Landscape Architect for the **Village** have worked in close collaboration to ensure that landscape works form a fundamental integral part of the development, with the following key principles:

- Narrow, light coloured roadways, draining to swales rather than kerbs and gutters, are to be lined with small-medium endemic evergreen tree planting, shading the roadways and reducing reflected ground temperatures.
- Swale planting will incorporate two wetland species *Carex appressa* and *Juncus usitatus*, which will take up water from road areas. They will form a pleasant, low maintenance road boundary.
- The walking and bicycle trails are to be lined with fruit and nut trees, irrigated by recycled water from the community waste water treatment plant. These trees will provide some of the food for residents, as well as providing a pleasant and shaded path for walking, jogging and cycling.
- Smaller spaces within communal courtyard areas will be vegetated using endemic ground-plane grasses, selected for high drought tolerance and low ongoing maintenance.
- Planting along boundaries will include grape and passion fruit vines and lilly pilly hedges. These plants are hardy and recycled water will provide for their low to moderate watering requirements. They will provide a food source, and form an impressive green edge to roads and privacy for dwellings.
- The **Village** will have a limited number of large structure trees, mainly along the southern boundary. These trees will be of significant mature size and are appropriate to the large scale of the spaces in which they are placed.
- The **Village** will also have a large area of commercial gardens and orchards, designed to provide at least 25% of the food needs of residents, managed by the community neighbourhood association, and designed with specialist perma-culture advice.
- With the exception of food production plants, all species are of endemic origin and will grow on this site with very limited ongoing maintenance requirements, after the initial establishment period.