

# EnviroDevelopment

Sunshine Coast Business Council

Think Tank Session 2

4 May 2015



# What is EnviroDevelopment?



- ❖ A sustainability rating tool
  - Certification requirements
  - Breadth of coverage of project types
  - Breadth of coverage of project phases
  - Holistic: Energy, Water, Ecosystems, Materials, Waste, Community
  - Standards have, and will be, progressively raised
  - Facilitate uptake of research, knowledge and tools
  - Be flexible enough to encourage innovation
- ❖ Freely available – used as reference guide

# What is EnviroDevelopment?



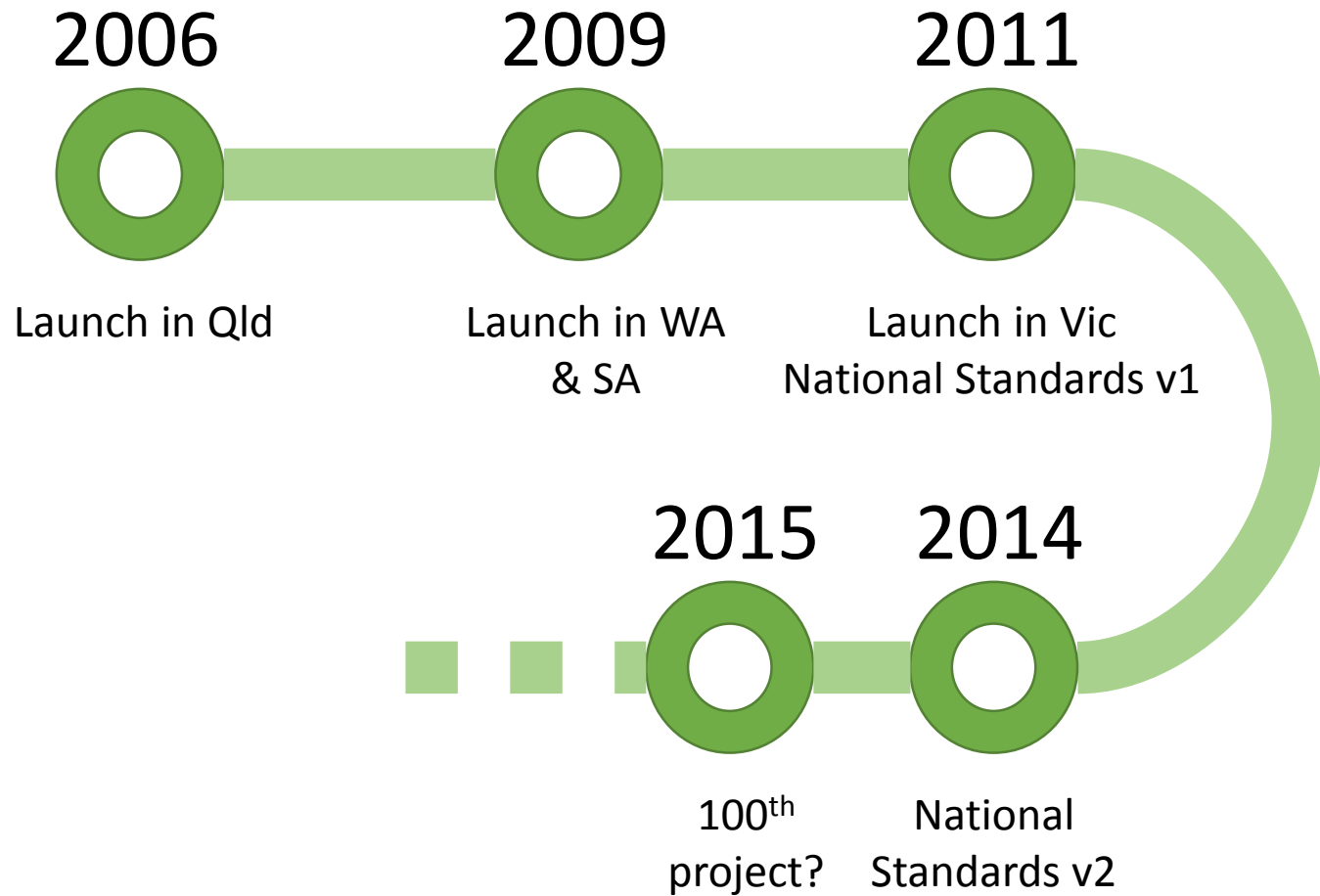
- ❖ A marketing and communications tool
  - Independent certification of sustainability credentials
  - Must maintain integrity and withstand scrutiny
  - Clear communication, easily recognisable
  - Aim to certify in time to be useful for developer (e.g. around DA and BA stages & before marketing to public)



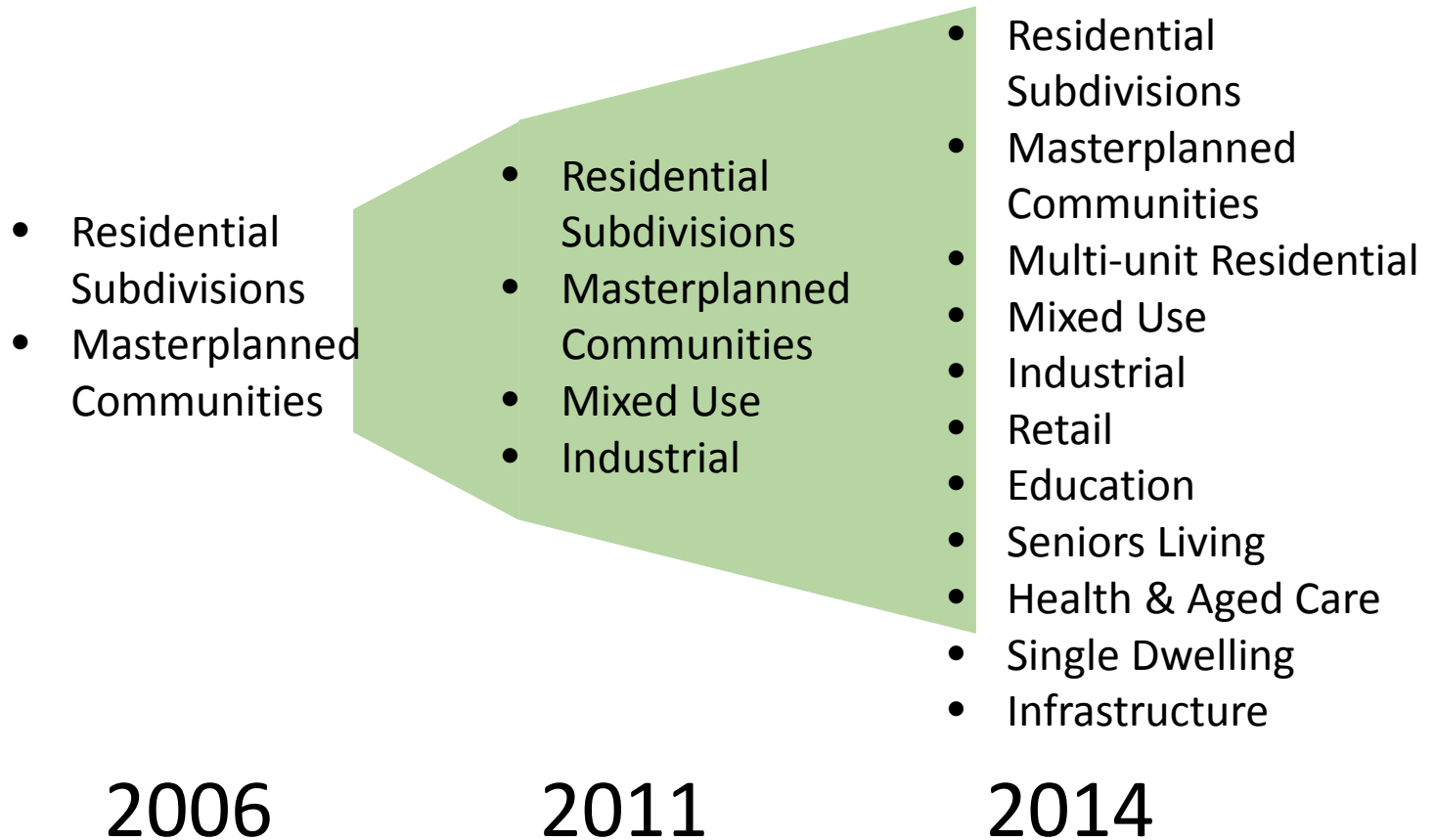
# EnviroDevelopment Fundamentals

- ❖ Educate and inform developers, community members, local authorities
- ❖ Reduce the delays to development approvals for sustainable development
- ❖ Reward developers
- ❖ Overcome problem of “greenwash” → integrity and clarity in marketing
- ❖ Hasten implementation of sustainable development
- ❖ Industry leadership

# History & milestones



# Technical Standards Evolution





Residential



Multi-unit Residential



# Infrastructure



# Industrial





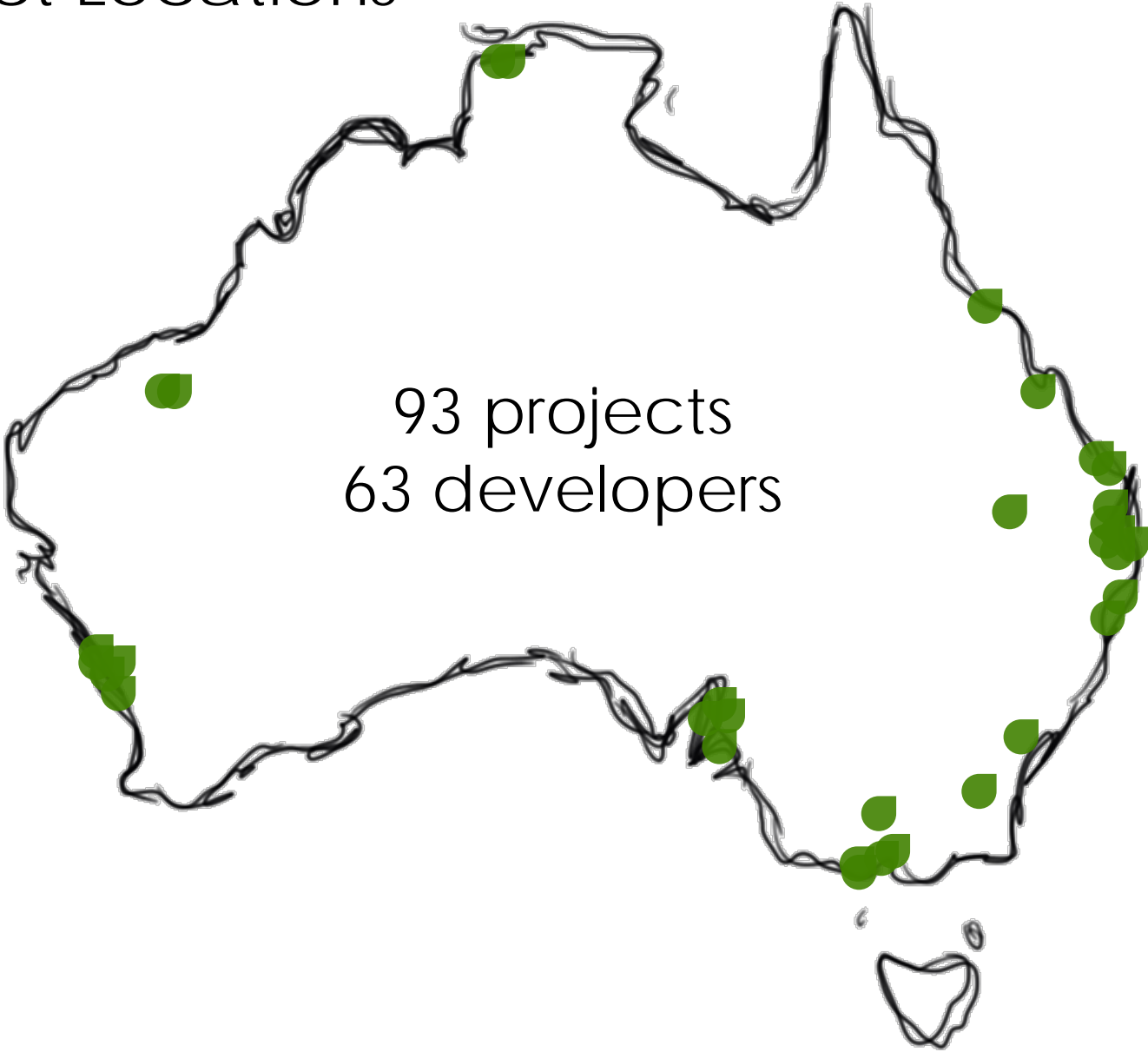
University of the Sunshine Coast

Education

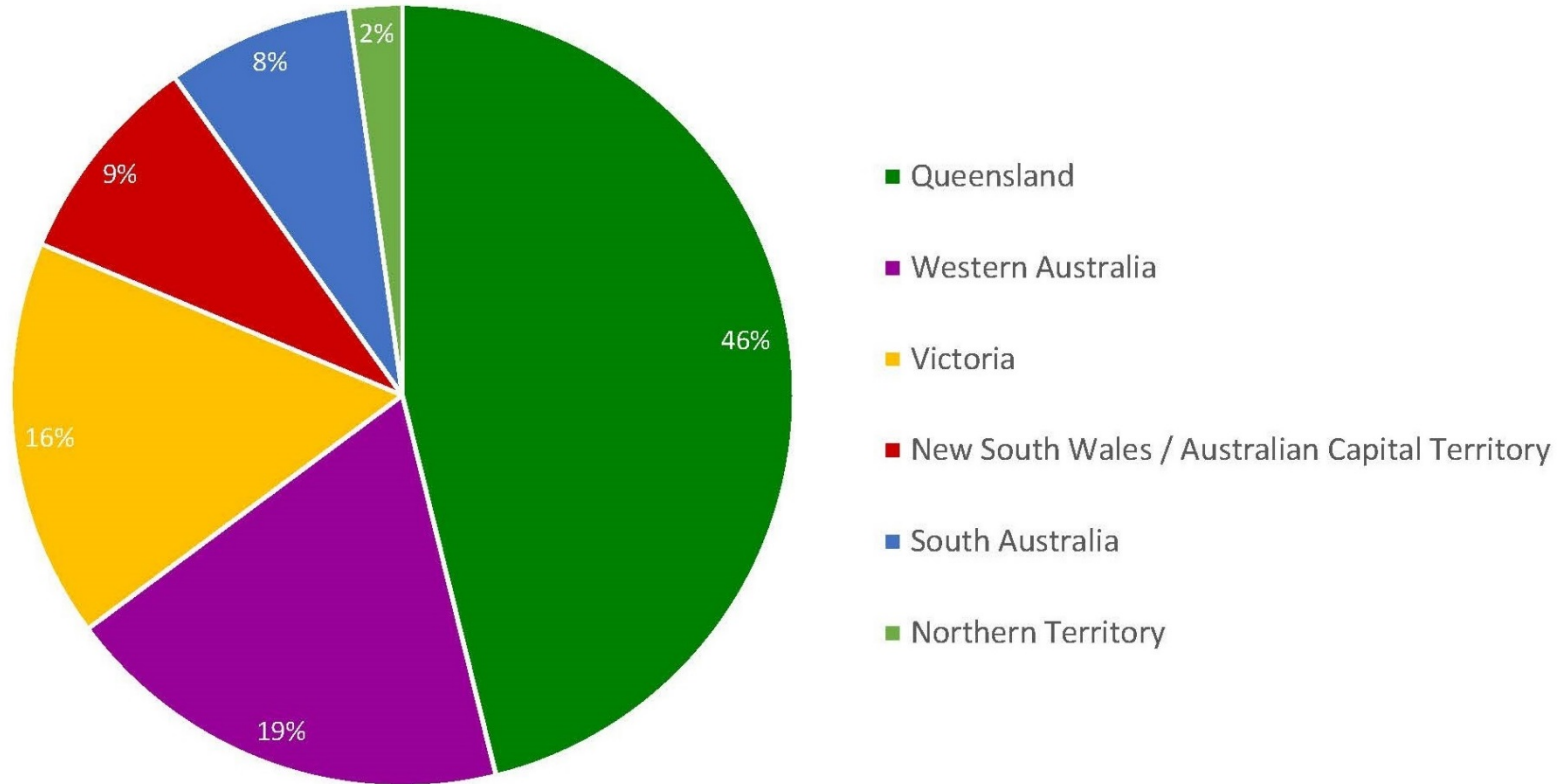
# Mixed Use Precincts



# Project Locations



# Certifications by State





ECOSYSTEMS



COMMUNITY



WASTE



WATER

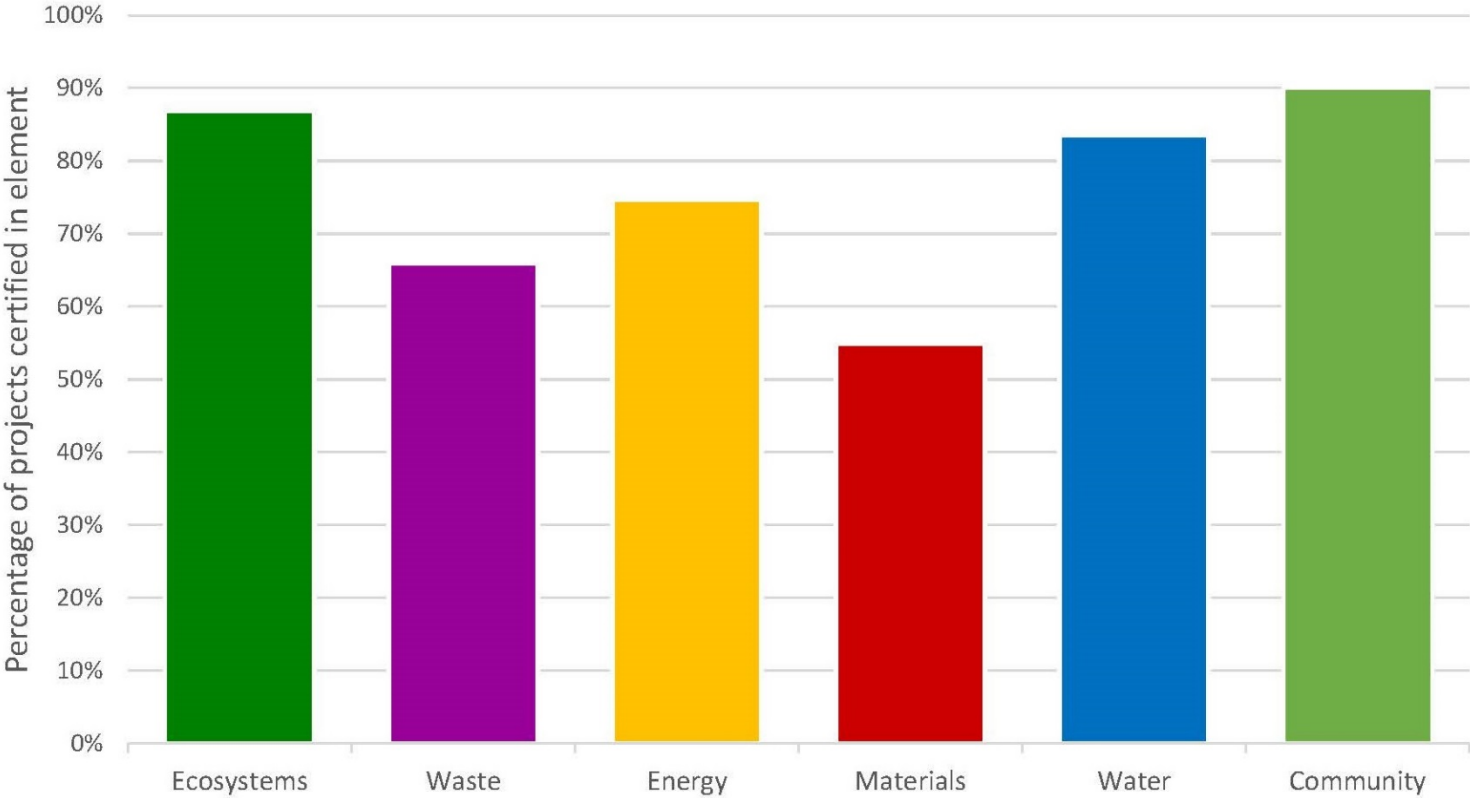


ENERGY



MATERIALS

# Elements Certified





A vertical light green bar on the left side of the slide contains several green hexagons of varying sizes and opacities. One large hexagon is at the top, and a cluster of three overlapping hexagons is at the bottom.

# Ecosystems

- ❖ Aquatic ecosystems
  - Stormwater management
  - Protecting waterways
- ❖ Soil Health
  - Reuse topsoil
- ❖ Earthworks
  - Minimise land disturbance
  - Erosion and sediment control
- ❖ Urban Ecology
  - Vegetation protection and enhancement
  - Fauna movement provisions
  - Enhancing biodiversity

# Avon Ridge, Brigadoon (WA)

## Peet



- ❖ Avon Ridge protected and enhanced the development site's natural ecosystems through:
  - Revegetating degraded areas of the development site with approximately 214,000 native seedlings of local provenance
  - Revegetating up to 100ha of parks and recreational reserves with native seedlings of local provenance
  - Protecting important ecological corridors
  - Retaining a small wetland areas within a 10ha public open space area
  - Mandating maximum lawn/turf areas of 75sqm per lot
  - Using fauna friendly fencing and construction management practices
  - Designing the street layout based on existing cleared areas



# Waste

- ❖ Identify local recyclers, secondary product manufacturers and material streams available to the site
- ❖ Minimise waste & recycle
  - Pre-Construction, Civil Works & Construction Phase
  - Post-Construction (Occupancy) Phase

# Spirit on The Avenue, Darwin (NT)

## Osborne Family Holdings



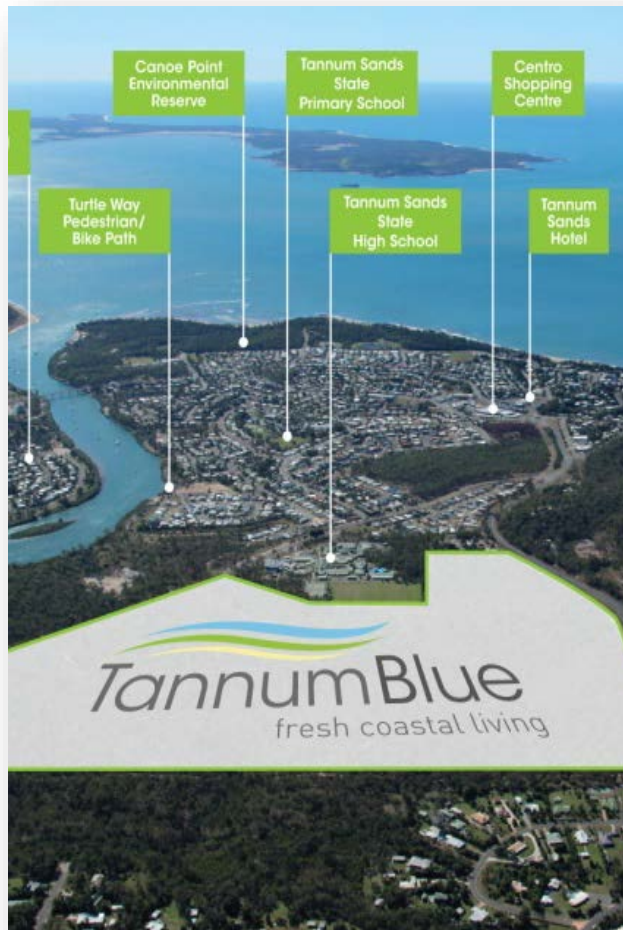
- ❖ Existing structure onsite deconstructed and reconstructed elsewhere
- ❖ Extensive site remediation
- ❖ Triple colour coded bins (paper, recyclables, general)
- ❖ Wet waste container and collection point – feeds to a dedicated worm farm – used on gardens in development
- ❖ Shredders supplied on site for green waste
- ❖ On site composting apparatus



# Energy

- ❖ Climate Responsive Design
- ❖ Peak Load
- ❖ Reduction in Greenhouse Gas Production
- ❖ Community Facilities
- ❖ Submetering
- ❖ Daylighting / Lighting Efficiency
- ❖ HVAC
- ❖ Carpark ventilation systems
- ❖ Lift Systems

# Tannum Blue, Tannum Sands (Qld) Economic Development Queensland



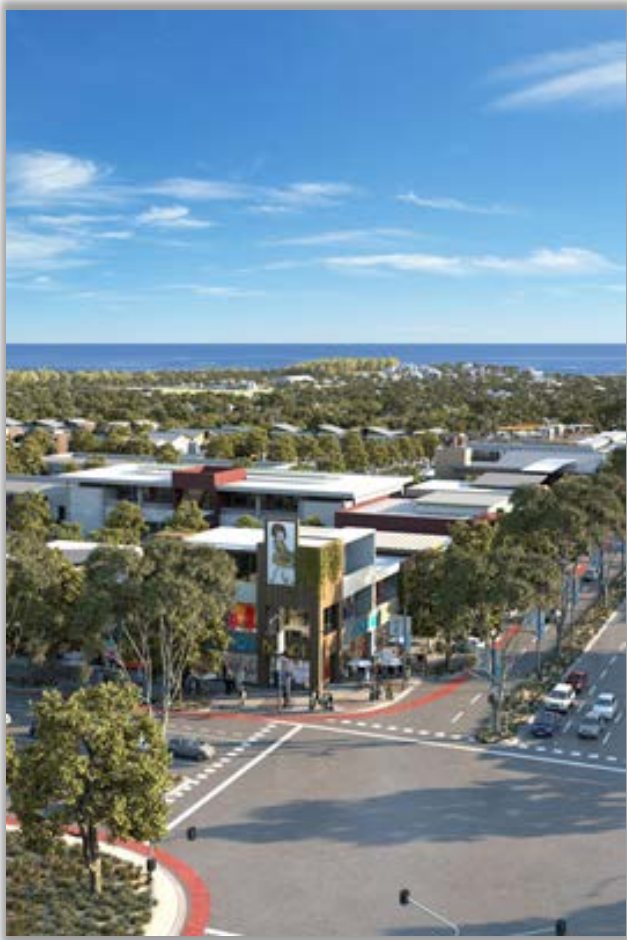
- ❖ EDQ has developed in depth design guidelines to ensure all dwellings result in minimal energy usage. These guidelines include:
  - Homes are to be carefully designed to ensure optimal cross ventilation.
  - All lots must include one shade tree and 3-5 smaller trees, depending on size of the lot frontage, reducing the heat island effect.
  - Roof spaces to be cooled through light coloured roofing and venting.
  - Alternate forms of power generation will be used on site, such as photovoltaic panels.
  - In order to respond to climatic requirements and provide diversity within the built form, all dwellings must include two of the following; verandahs, roof overhangs, window hoods/screens or awnings/shade structures.

# Materials

- ❖ Environmentally Responsible Materials. E.g.:
  - Forestry Stewardship Sourced timber
  - Recycled content concrete, steel, plasterboard
  - PVC from ISO14001 supplier
- ❖ Emissions (low VOC)
  - Adhesives
  - Paints
  - Sealants
  - Composite timber

# Alkimos Beach, Alkimos (WA)

## LandCorp and Lend Lease



- ❖ LandCorp and Lend Lease has put measures in place to ensure that the materials used in the development are environmentally friendly. Measures include:
  - Use of materials with recycled content for civil works (mainly cement replacement concrete)
  - Recycled content for landscaping and community facilities
  - Surf Life Saving Club clubhouse will be used as a flagship building for 'green' materials
  - Eco-Materials List – a locally-based preferred material list for more cost effective, time effective or accessible materials than regular alternatives for civil and built form





# Water

- ❖ Reduction in Potable Water Demand
- ❖ Irrigation requirements
- ❖ Community Facilities (e.g. swimming pools)
- ❖ Submetering

# Fitzgibbon Chase, Brisbane (Qld)

## Economic Development Queensland



- ❖ EDQ has put in place water management and design initiatives to significantly reduce potable water demand. These include:
- ❖ 40% reduction in water use
- ❖ PotaRoo system:
  - Harvest roofwater from approximately 11 ha of roof catchment
  - Collected in a number of communal tanks, pumped to a central storage and WTP
- ❖ FiSH system:
  - Divert urban stormwater runoff from the channel running through the site, filter and disinfect the water prior to distribution via a 3rd pipe dual reticulation system.



# Community

- ❖ Community Consultation, Planning & Development
- ❖ Community Engagement, Governance & Activation
- ❖ Transport
- ❖ Public Realm
- ❖ Community Prosperity
- ❖ Food Sensitive Design
- ❖ Connected Communities
- ❖ Safe and Accessible Living
- ❖ Healthy, Active Communities

# North Shore, Townsville (Qld)

## Stockland



- ❖ In addition to providing community infrastructure and programs, Stockland implemented measures to enhance the community at North Shore by:
  - Establishing a partnership with Ergon Energy to develop "The Handbook" – a guide to sustainability that educates buyers and users on how best to live in their homes.
  - Local aboriginal artists were engaged to provide artwork for the development, particularly the features throughout the "green spine".
  - The Town square holds a fortnightly Farmers market.
  - Target of creating sufficient jobs that 30% of residents could live and work in North Shore. 8,678 full time jobs expected to be generated over the 20 year construction phase.



# Drivers for certification

- ❖ Third party verification
- ❖ Industry leadership / Reputation / Profile
- ❖ Marketing / Advertising
- ❖ Corporate sustainability reporting
- ❖ Point of difference / competition
- ❖ Sustainability performance
- ❖ Consumer demand



# EnviroDevelopment Repeat Clients

- ❖ Economic Development Queensland / LandCorp (WA)
- ❖ Defence Housing Australia
- ❖ Brisbane Housing Company
- ❖ Wesley Mission Brisbane
- ❖ Halcyon
- ❖ Mirvac
- ❖ PointCorp



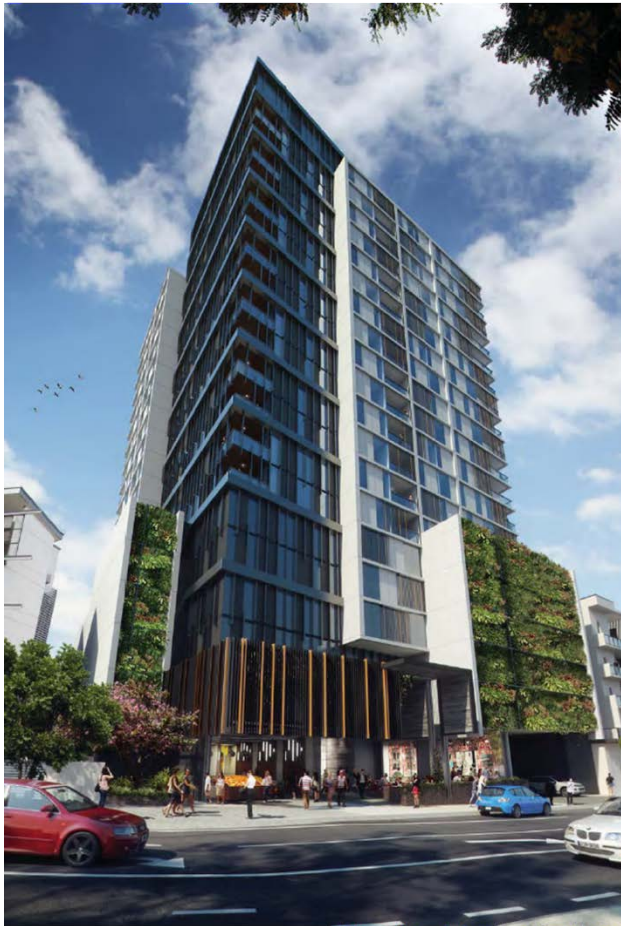
# Case Study: Botanica





# Botanica Residences, South Brisbane

## ARIA Group



- ❖ Location: 2-4 Edmondstone Street, South Brisbane
- ❖ 180 units
- ❖ 18 levels
- ❖ One bedroom: 55m<sup>2</sup>  
Two bedroom: 78m<sup>2</sup>





- ❖ Rooftop garden
- ❖ Four storey greenwall – Queensland’s largest
- ❖ Improvement of streetscape outside the development boundary



- ❖ Detailed construction management plan including extensive waste minimisation and recycling targets
- ❖ Separate recycling facilities for residents at each level



- ❖ Network Green initiative - advanced smart metering system
- ❖ 6 star energy rating for each apartment
- ❖ 30kW solar PV
- ❖ Gas cooktops, gas hot water
- ❖ Energy and Water efficient appliances



- ❖ Use of concrete with a recycle content
- ❖ Use of plantation timber
- ❖ Low VOC paints and sealants/adhesives



- ❖ Water efficient tapware
- ❖ Rainwater tanks to feed landscaping and green wall irrigation



- ❖ Bicycle storage
- ❖ Access to public transport and local facilities
- ❖ Community marketplace
- ❖ Active ground plane to encourage street level activation and interaction
- ❖ End user education manual

