

Sustainability Victoria Sustainable Precinct Program

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Melbourne Forum 29 September 2010



sustainability.vic.gov.au 

What do we want our neighbourhoods to be like?


- > Attractive
- > To facilitate healthy living
- > To use minimal (and renewable) resources
- > To be safe
- > To have a community
- > To be economically sustainable
- > To be in harmony with surrounding community and nature



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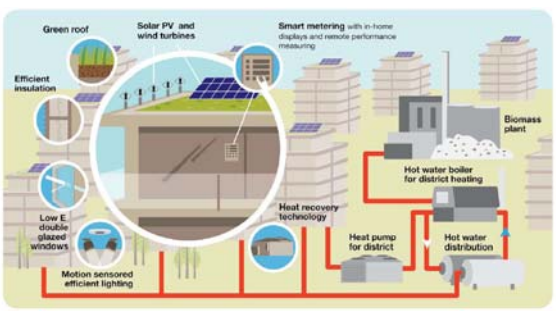
Case study: BedZed

- > 81% Energy reduction (heating)
- > 45% reductions electricity
- > 64% reduction in car miles
- > 58% reduction water use (72 l/pp/day)
- > 60% waste recycled
- > Residents know 20 neighbours by name



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Case Study: Dockside Green - Canada



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Management and service models: Borough of Woking

- Thamesway Energy Services Company
- Distributed energy on a local grid
 - Energy efficiency
 - Water, waste transport
 - Affordability

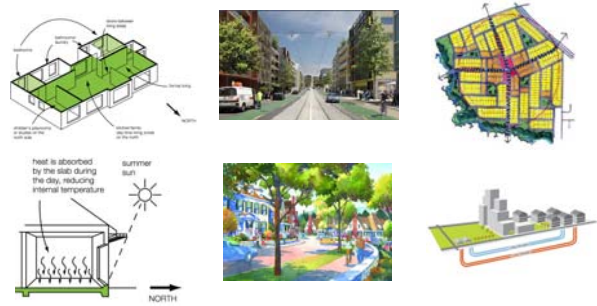


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Design Solutions

Building level ↔ Street level ↔ Neighbourhood level



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Technology Solutions

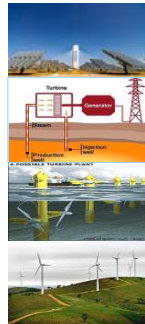
Building Level



Precinct level



Site related



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Melbourne Context: Managing Growth and Development in a Sustainable Manner

Melbourne@5million: The need to respond to Melbourne's population growth

New development in growth areas

Redevelopment in existing areas

The challenge for sustainable development and a move to a more sustainable city

Need combination of planning, behaviour change, technology and infrastructure



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SV's Sustainable Precincts Program

- > To demonstrate sustainable precincts
- > To explore and promote the business case for sustainable precincts
- > To explain how it is done



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Precinct Programs/Projects

- > Smart Energy Zones
- > Zero Emission Neighbourhoods
- > Armstrong Creek
- > Research into Building the Business Case for Sustainable Precincts
- > Sustainable Urban Infill Business Case







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Armstrong Ck Business Case - the results

A sustainable approach will:

- > Generate additional \$ benefits over 15 years  \$466m
- > Over 80% of these benefits likely to flow to the residents of Armstrong Creek  
- > Including a capital investment cost saving  \$48m

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Armstrong Creek - Key Lessons

- > A partnership approach is critical, involving all the key players, from vision formation onwards
- > Context is everything
 - Each precinct is unique
 - Environmental and financial cost/benefits of solutions dependant on location to existing trunk infrastructure
 - Regional contexts and solutions have to be considered



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Smart Energy Zones

- > Seven partnerships looking at energy supply/demand issues
- > Some interesting projects:
 - VicUrban CHP/trigeneration plant in Central Dandenong
 - Solar cooking, food waste anaerobic digester for cogeneration, energy efficient buildings
 - DHS wind turbines, energy efficiency and cogen
 - Moreland CHP plant and Energy Services Co

Smart Energy Zones

www.resourcesmart.vic.gov.au



CERES



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Smart Energy Zones - Key Lessons

- > Electricity grid connection issues need to be addressed early, and throughout
- > District tri-gen systems are not the panacea
- > There are plenty of opportunities for precinct solutions

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Zero Emission Neighbourhood Program

- > \$5 million for infrastructure support
- > 4-6 projects best-practice residential developments
- > Operational zero net operational greenhouse gas emissions associated with water, waste, energy and transport
- > \$500,000 for assistance to develop and scope the business case
- > Allocated funding process: proposals being received until mid 2011
- > Collaboration process to develop partnerships

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ZEN Application Process



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ZEN- Progress to date

- > 15 proposals
- > 11 opportunity assessment workshops
- > 4 through to feasibility, research and business case phases
 - Market assessment and viability study (what will sell, and what can the supply chain deliver?)
 - District heating and cooling feasibility study for activity centre
 - Carbon abatement scenarios for urban infill site: business as usual, versus best practice, versus leading edge
 - Retrofit feasibility study
- > ZEN precinct carbon modelling tool completed- now in useability testing and trialing with ZEN participants

Building the business case for sustainable precincts

- > A research report undertaken for SV by MEFL, Net Balance and Bright Spark
- > We know the technical solutions...
- > But how to implement???
 - Funding models
 - Governance structures
 - Community involvement
 - Operational models
- > How advanced are precinct solutions in Australia and around the world?

>Christie Walk
>Hepburn Wind
>Vauban

>Currumbin Ecovillage
>One Brighton
>Portland Streetcar

Thankyou

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www.resourcesmart.vic.gov.au/for_businesses/sustainable_precincts.html

Eco-acupuncture – sites of intervention 2010

Victorian Eco-Innovation Laboratory (VEIL)
Exhibition in the lobby of 50 Lonsdale St, 26 Sept - 8 October



To develop **low-carbon resilient communities** from within the existing fabric of (sub)urban life it is important to have two things: **visions** of desirable future living scenarios - and visible **interventions**, today, that can re-orient the path of **future development**.