

Victorian Eco Innovation Lab

Localised Solutions

*Cogeneration within a
central services hub*

30th November 2009

What is a CSH?

Central Services Hub (CSH)

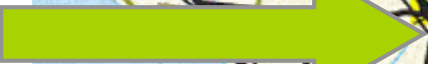
- Centralises CHP or Tri-Gen technology within a precinct
- Captures efficiencies and reduces waste
- Integrates water and waste options to further enhance efficiency and sustainability impacts



Dandenong and Officer



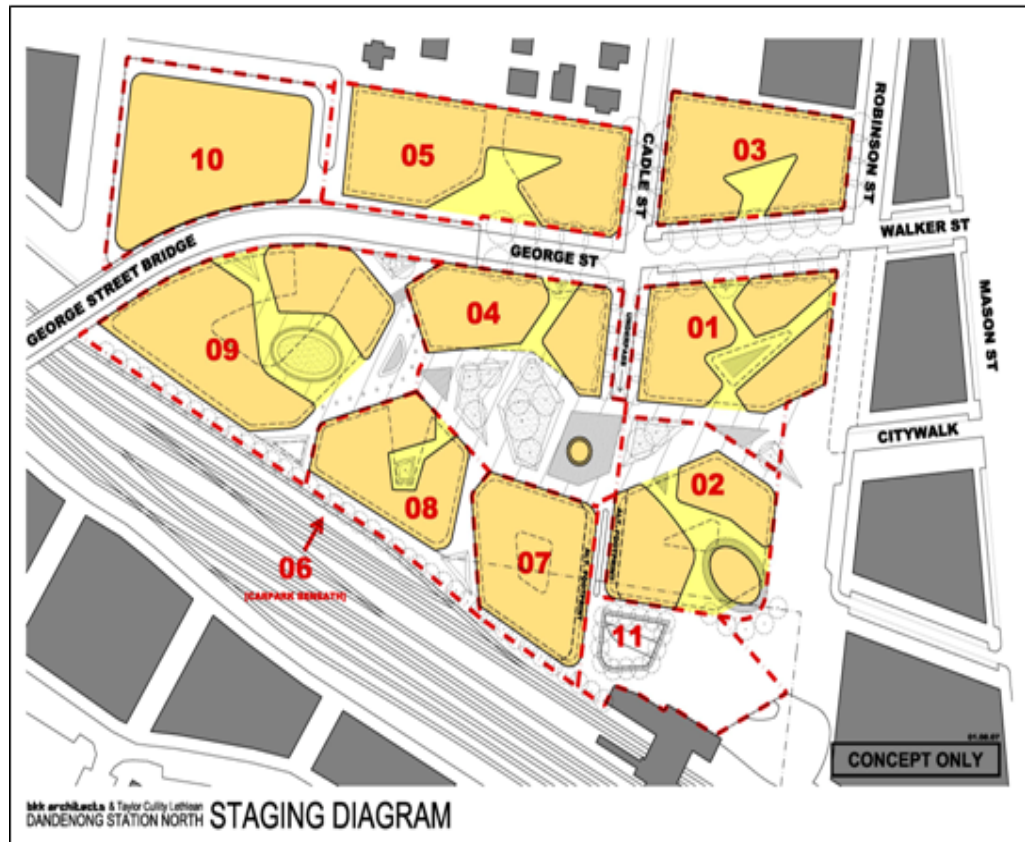
Dandenong
Station
North
Precinct



Officer



Dandenong – current circumstances

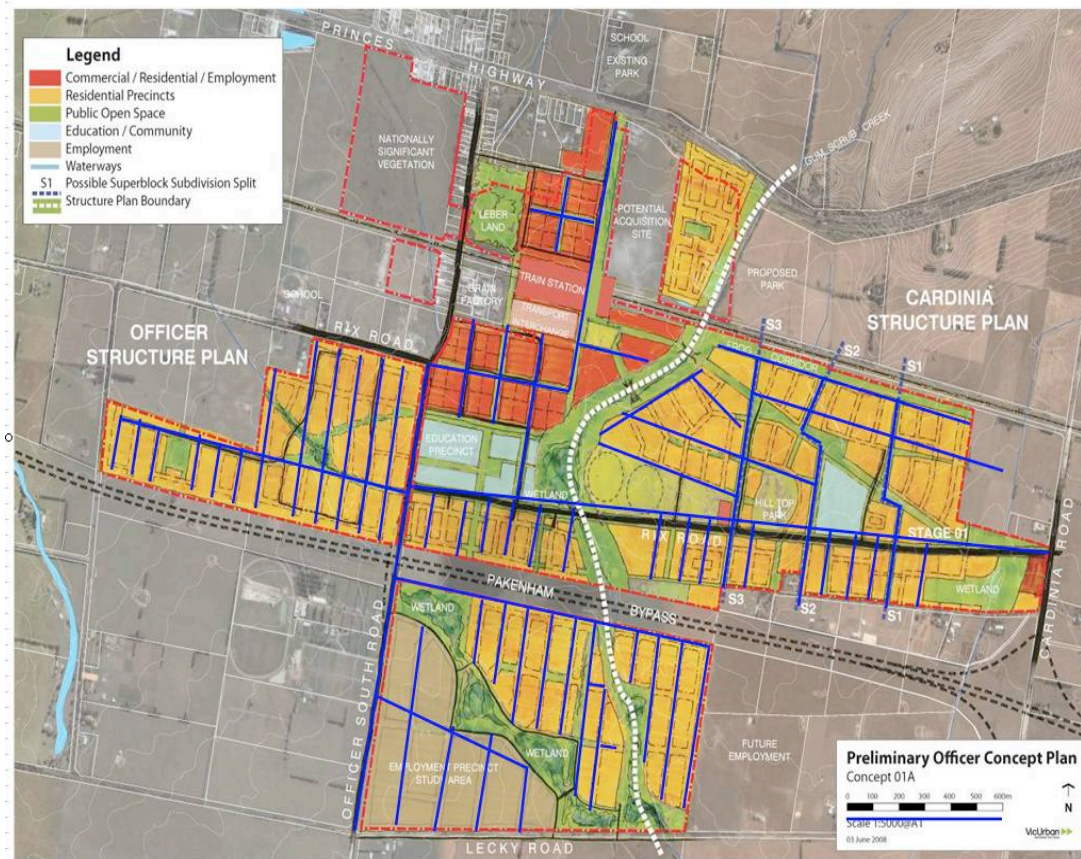


- Station North Precinct
- Established urban area
- 20 plots
- Mixed use, medium rise profile
- Required road reconstruction
- One CSH for the precinct
 - Electricity
 - Heating and cooling
 - Waste water treatment
- Staged development

Dandenong – Study results

- Carbon savings - 30-40%
- Potable water reduced - 36%
- Positive NPV
- Commercially reasonable payback period
- Potentially a BOOT contract funded by a CSH owner/operator

Officer – current circumstances



- Urban fringe / farmland site
- Commuter town – road and rail
- Single commercial precinct & surrounding residential areas
- Primary CSH and four satellite CSHs
- Staged development
 - Electricity
 - Heating & cooling
 - Waste water treatment
 - Waste treatment (anaerobic digester)

Officer – Study results

- Carbon reduction - >40%
- Water treatment plant capacity of 1.5ML pd
- Waste treatment – eventual anaerobic digester production of 69,000 MWH/yr
- Positive NPV
- Commercially reasonable payback period