

RP3033

WGV living lab: Community participation in mainstreaming low carbon housing precincts.

Research Question

How can community participation, in the early planning and subsequent activation, of an infill residential precinct, impact on precinct-level innovation for sustainability?

Research Background

Case study: WGV (infill residential precinct)
 Suburb: White Gum Valley
 LGA: City of Fremantle, W.A.
 Developer: LandCorp (WA govt. agency)



Figure 1: Artist's impression of WGV, surrounded by low density housing (Image courtesy LandCorp)

Innovation for sustainability @ WGV:

- One Planet Living (OPL) – Australia's first master planned One Planet Community.
- Co-operative social housing – affordable housing + artists' studio for SHAC (Sustainable Housing for Artists and Creatives).
- Gen Y demonstration house – a design competition for sustainable, flexible, affordable housing for Gen Y home buyers.
- Sustainability design guidelines (for single lot buyers) – passive solar design, 1.5kW PV, dual plumbing, sense of place in design
- Sustainability package for buyers – PV upgrade to 3.5kW, 3000L plumbed rainwater tank and mature deciduous tree.
- Revitalisation of old drainage sump into community bore – nature play public space and alternative water source.
- Renewable energy – PVs on all dwellings

- Water wise exemplar project – non potable water alternatives: a community bore and rainwater tanks.
- Apartments + maisonettes – housing diversity, increased density, and design tenders with sustainability criteria.
- Baugruppen demonstration project – individuals as co-operative developers.
- Research connections – CRC living lab; ARENA governance research for shared PV and battery storage on strata buildings.

Methodology

Research will be carried out in two stages:
Stage 1 – historical analysis of the planning process (Figure 2).

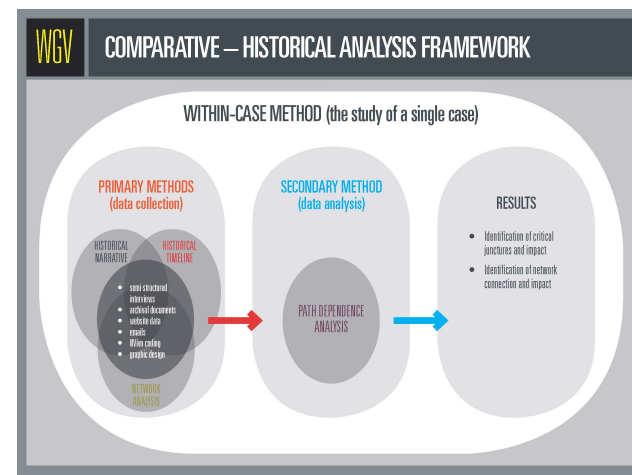


Figure 2: Research Stage 1 – methodology for historical analysis of WGV planning process.

Stage 2 – examine whether WGV residents live, or can be encouraged to live, sustainably.

Results – Stage 1

The planning process is being analysed to understand how institutional change occurred in the planning process. Specific attention is being focussed on networks between actors and critical junctures where decisions were made that impacted on the future path of the WGV development (Figure 3).

The actor network includes people, organisations, policy, and nature. This approach moves away from human primacy toward a symmetry between human and non-human elements (refce).

Against the network analysis and the historical timeline of events, a path dependence analysis is carried out to identify *critical junctures* in time where the business as usual path has diverged onto a new path – the path of innovation for sustainability (Figure 3).

Critical junctures are currently being assessed and are likely to include:

- A change in the business case development process, by the developer, toward 'visioning' for sustainable development.
- Resistance to change when the developer retraces away from its earlier sustainable development visioning. Reinforcing the lock-in to the business as usual path, ie. profitable lot yield and convenience.
- The developer acceding to a request from local community for further consultation on the development design/planning.
- The developer facilitating a partnership for the SHAC affordable housing project for artists.
- The developer's adoption of a holistic sustainability framework to guide the development.
- The developer connecting with researchers plus research organisations.

The analysis is showing that institutional change and innovation cannot be attributed to isolated elements, it

requires knowledge and influence from diverse actors, together with a change-ready contextual environment.

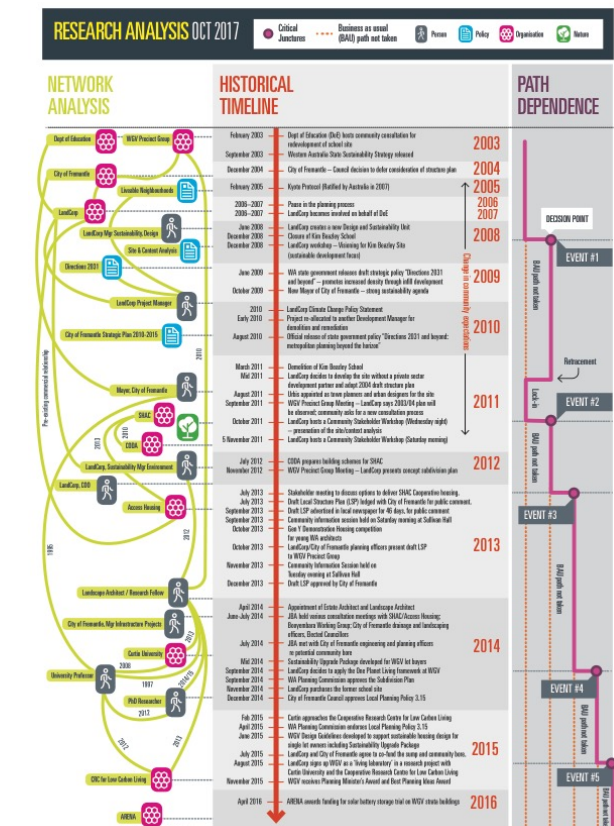


Figure 3: Analysis of the WGV planning process.

Further information

WGV - Innovation through demonstration: <http://tinyurl.com/j4pjhkj>

CRCLCL research project details: <http://tinyurl.com/zjkwu22>

Project partners



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