

Integrated Research Project 4 (IRP4)

Achieving water sensitive outcomes for in-fill developments

8th February 2017 Workshop synthesis notes

Key Considerations:

- Technology/design implementation thresholds – scale at which certain technology or design is applicable/suitable to achieve specific outcomes
- Demonstration projects
 - Work closely with developers & authorities to demonstrate WSC outcomes
 - Competitive/market edge as incentive for developers to incorporate innovative WSUD
 - Precinct scale?
 - BAU vs WSUD side by side study
- Political & community support
- Supporting business case for multiple benefits/lifecycle costs
- Impact of in-fill on hydrology, use of public open space, urban heat island effect
- Assessment tool (incorporate into TAPs) for new in-fill developments/approvals including design principles (D5.1) and technologies (Program C)

Key Outputs:

- **Validated performance framework**
 - Scale-independent performance assessment and life-cycle costing tool
 - Demonstration of benefits to different stakeholders
- **Planning/design guidance tool**
 - Selection tool for technology application/suitability
 - Public-private partnership options/solutions
 - Risk assessment & incentives
 - Performance assessment
 - Life cycle costs/benefits
- **Innovative governance** arrangements
- **Community engagement** platform & behaviour change

Approach and expertise

- Project outcomes **aimed at precinct scale** - link with planning and urban design
- **Project structure** focused on **framework/tool development** with testing/demonstration through case-studies (similar to IRP2)
- **Key expertise** areas required:
 - Technology solutions/engineering
 - Urban design & architecture (link/integrate with D5.1)
 - Public-private partnering and governance solutions
 - Community participation and behaviour change (link with IRP1?)
 - Economics (link with IRP2)
 - Water systems, hydrology and urban climate modelling (link with TAPs)

Possible/nominated Case studies

VIC Fishermans Bend

Monash National Employment Cluster: commercial/residential/educational

Aquarevo: SEWater: longitudinal research on water & energy usage impact of novel technology solutions and behaviour change;

Arden Macaulay: regeneration/brownfield/infill development; commercial/light industry/residential use; flood affected (link to IRP2 case study)

SA Renewal SA - Kilburn, Blair Athol: lot, street and precinct scale solutions for 2on1 and 3on1 developments & apartments; significant public housing fraction (Housing SA); commercial interface; approx 50-60ha; has industrial bufferzones and some green spaces;

Greenhill Precinct: Infill; on Transport route; commercial/residential (multiple use) development; adjacent southern parkland; water balance issues; alternate water available (Glenelg-Adelaide pipeline); stormwater harvesting at source, highly impervious sites (90%) (possibly joint with IRP3)

WA Bentley Regeneration (precinct)

RedCliff-Connect

Canning City Centre (mixed use precinct)

City of Belmont

NSW Central Park Sydney:

QLD Norman Creek: Brisbane City Council; opportunity to take it to next stage; overland flows; residential in-fill