Integrated Research Project 3 – Guiding Integrated Urban and Water Planning

Overview

Urban planning in Australia’s major cities has struggled to accommodate population growth in a way that promotes liveability, resilience, sustainability and productivity. The business as usual approach—increasing urban sprawl and densification—places pressure on existing infrastructure and the environment, and commonly leads to fewer green open spaces, more traffic congestion and higher house prices.

To achieve water sensitive outcomes, we need a planning approach that recognises the interlinkages between water, urban form and other urban systems (e.g. parks, transport, and energy).

Developing this integrated planning approach is the key focus of Integrated Research Project 3 (IRP3). Taking an action research approach, IRP3 will examine how different types of urban development can be deliberately guided, at a range of planning scales, to achieve water sensitive outcomes.

The CRC for Water Sensitive Cities (CRCWSC) will work with its industry partners and stakeholders in different case study contexts across Australia to develop and apply a new ‘Integrated Urban and Water Planning Framework’.

A framework for integrated urban and water planning processes

The conceptual basis of this project can be described through five distinct planning phases. Each phase (represented below) will be trialled in real world case studies to support water sensitive urban growth and renewal. The phases are represented sequentially, but the planning process may not be strictly linear. Phases will overlap and often be highly iterative.

Each phase will recognise different levels of practice, ranging from traditional to more aspirational practices. The more ambitious the aspiration for water sensitivity in urban development, the greater the need for each phase to deal with increased integration (across actors, sectors and disciplines), complexity, formality, scale of activities and resources required.

I. Establish a collaborative planning forum to purposefully integrate urban and water planning processes (ranging from informal to formal structures).

II. Explore diverse development scenarios that explicitly recognise water sensitivity in the physical form and layout of urban development.

III. Explore diverse servicing options for water sensitive services (water supply, sewerage, drainage, urban greening, thermal comfort, community connection etc.) at key urban planning decision points.

IV. Evaluate and prepare business cases for preferred servicing approaches that include a comprehensive analysis of monetary and non-monetary costs and benefits.

V. Implement preferred servicing approaches through an appropriate suite of mechanisms (including planning policy, regulation, incentives, guidance and governance).

Delivery of water sensitive urban growth and renewal
Case studies

Three case studies are planned for the project, which will be selected in collaboration with industry and government stakeholders. The case studies are critical to the project, providing the main dataset to test and validate the framework (i.e. methodology, processes and strategies), and investigate the framework’s applicability in different contexts.

What this project will deliver

The key deliverables for this project will include:

• A guidance manual that supports urban development in different contexts to achieve water sensitive outcomes. The manual will be built around the conceptual framework for integrated urban and water planning. It will include collaborative processes and methods to support application of the conceptual framework, as well as strategic guidance on the governance arrangements and planning mechanisms required to implement water sensitive approaches.

• Research case studies documenting the application of the conceptual framework in different contexts, including specific planning recommendations.

• A user-friendly, web-based package of tools based on the final integrated urban and water planning framework and supporting guidance.

Benefits to stakeholders

Urban water management and planning stakeholders who participate in the project or use project outputs will benefit from the project outcomes, which are expected to include:

• A deeper knowledge and understanding of how to bring different stakeholders (e.g. government, service providers, community etc.) together in collaborative governance arrangements at a range of scales, to influence urban planning processes and improve water sensitive outcomes.

• Improved capacity of professional stakeholders through access to strategies and tools that facilitate and strengthen integration between urban and water planning processes.

• A range of implementation options (e.g. policies, planning guidelines, regulatory frameworks and planning practices) that support water sensitive urban growth in Australia.

For further information, visit https://watersensitivecities.org.au/content/project-irp3/

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