



Case study 15

Fishermans Bend

Integrated planning for the community

South East Water

This case study showcases

how collaboration and integrated planning deliver better value for communities

how government can facilitate collaboration and integrated planning

Problem

Fishermans Bend is a brownfield development and one of the largest inner city developments in the Southern Hemisphere at 455 hectares. By 2050, Fishermans Bend will be home to approximately 80,000 people and support 60,000 workers. There is a strong imperative by state, government and other organisations to make this a first class, sustainable and liveable development. Water is pivotal to the design. Only by adopting an integrated water management approach can we reduce the reliance of this rapidly growing region on already stressed water and waste water systems.

However, there are numerous challenges to face, including limitations to sewer capacity, regular flooding, drainage issues and unstable/contaminated soils. As a former industrial area, there is limited existing public green open space or recreational areas, an issue further exacerbated in a high-density urban environment where there will be few private green spaces. This means not only a high cost to retrofit but also a number of technical challenges.

Solution

The numerous challenges faced in Fishermans Bend has been viewed as an ideal opportunity to shape a water sensitive precinct, a vision which has been progressively embedded into Victorian Government policies over a number of years. To achieve this goal, a structured approach was taken:

Engage early in the planning process embed WSUD into precinct plans, etc.

Develop strong stakeholder partnerships A stakeholder working group, including South East Water, Melbourne Water, the EPA, relevant State government departments and local councils was formed. They committed to working collaboratively, openly sharing information and ensuring clear allocation of responsibility and risk.

Understand the context understand how water cycle needs in a local context and custom solutions around this.

Holistic thinking what are the liveability, recreational, amenity and social outcomes that could be achieved and ensuring these are accounted for in options analysis.

To combat key issues of the development and create a sustainable masterplan an integrated water cycle approach was required. A number of potential solutions were put forward, with the preferred option on a whole of community needs basis being:

Stormwater storage to reduce flooding frequency

Rainwater capture and smart tanks for non-potable uses – irrigation, toilets, laundry.

Centralised sewer mining – local treatment plant and third pipe for non-potable use (to supplement reuse of rainwater which would not adequately supply the precinct)

Latest technologies for digital metering, pressure sewer systems and intelligent networks which overcome some of the development challenges.

Waste to energy is being explored utilising the solid portion of the mined sewage combined with municipal organic waste through anaerobic digestion to generate gas for electricity generation and centralised heating or cooling.

The preferred option will reduce the water footprint of Fishermans Bend by 45%. The option has the potential to initiate a paradigm change in the way water services are delivered to the heart of Melbourne.

Business case

The cost of the preferred option is higher than business as usual for the water utility and as such, collaborative financing options such as developer contributions or federal and/or state funding are being explored.

The Fishermans Bend Authority has been set up to further develop the South East Water business case based on the additional value the servicing strategy will provide for the community and to support Melbourne as the world's most liveable city.

Key drivers

More broadly, a key driver for undertaking a 'water sensitive' approach has been incrementally growing interest in integrated water management by State Government over the last 20 years. This has largely been driven by the longstanding challenge in Melbourne to

reduce nutrient discharge into Port Phillip Bay in addition to the supply challenges faced during the Millennium drought. This is also supported by the vision of state government, council, authorities and developers for sustainable and resilient communities.

Government & utility drive to try new things and set an example.

Strong relationship between South East Water and key stakeholders and the Metropolitan Planning Authority in particular, which has built capacity and expertise over a number of years across various projects, thereby preparing them for this larger challenge.

Availability of new technology which has made certain solutions feasible.

Benefit/outcome

Water footprint reduced by 45%

Creation of a green, cool landscape (including urban forests, open spaces, street trees, green walls) which combats heat stress and is sustained through a drought proof supply.

Reduced urban flooding

Climate resilience

Amenity and social benefits.