



Case study 19

A move to buffertopia Strategic resource precincts

Water Corporation

This case study showcases

How collaboration and integrated planning deliver better value for communities

How Government can facilitate collaboration and integrated planning

Problem

As cities and towns grow there is often pressure to locate residential areas close to wastewater treatment plants (WWTPs). This can expose residents to nuisance causing odour, leading to complaints and pressure for the utility to either upgrade infrastructure or relocate the treatment plant at significant cost. Water Corporation operates over 100 treatment plants across Western Australia. Odour buffers have been identified for most of these, however, many are not secured and are at constant risk of urban encroachment. On average only 20 percent of land in the identified odour buffers is owned by the Water Corporation and so there is a heavy reliance on seeking to influence State and local government land use planning to prevent the intrusion of incompatible land uses into the defined buffer. While the Water Corporation has had some success in achieving this, around 25 percent of all WWTPs and 40 percent of large WWTPs are considered to be at risk of urban encroachment.

Solution

'Buffertopia' – the Strategic Resource Precincts² concept was conceived and developed in consultation with internal and external stakeholders, including planning authorities.

The concept recognises that WWTPs are increasingly being seen as secure sources of recycled water and other resources essential for helping to ensure the liveability, climate resilience and sustainability of cities and towns. At the same time it proactively communicates opportunities for synergistic and beneficial land uses in the buffer that either use outputs from the plant (e.g. recycled water, nutrients, sludge, biogas) or provide inputs (e.g. energy, knowledge) which benefit the WWTP and urban communities. For example parklands or intensive horticulture could be high users of WWTP outputs such as recycled water, nutrients or biosolids, or there may be benefit in co-locating other green waste facilities or research facilities for sharing of knowledge or technology. At a time of increasing water stress and urban heating, there is a growing community demand for green infrastructure such as playing fields, artificial wetlands and urban forests, which are supported by a secure water supply.

The establishment of Strategic Resource Precincts around WWTPs has been recognised in the Western Australian Planning Commission's State Planning Strategy 2050 and Water Corporation is now progressively working together with local governments and other key stakeholders to ensure it is included in a range of other strategic and statutory plans and policies. Going forward, Water Corporation has an important facilitation role to play as they have the expertise to communicate and advise on the most appropriate beneficial land uses.

Business case

A lack of appropriate buffers or land use planning is estimated to have cost the Water Corporation around \$800 million in upgrades or relocations in the period 1997 to 2012. While each site will need to go through its own business case and may involve financial contributions from Water Corporation or other stakeholders, the main driver is avoided cost in addition to added community benefit.

Key drivers

Having secure odour buffers resulting in less complaints, avoided infrastructure upgrade or relocation costs as well as reputational benefits has largely driven this initiative. The concept of Strategic Resource Precincts has been used in Western Australia for other industries such as agriculture and basic raw materials and minerals which effectively set a precedent for Water Corporation to pursue this initiative.

Benefit/outcome

Long term asset protection

Efficient use of land, water and other resources

Communities which are more liveable, climate resilient and sustainable through provision of water secure land uses – e.g. parks, gardens, conservation reserves, horticulture etc.

² <http://www.watercorporation.com.au/home/builders-and-developers/land-planning/strategic-resource-precincts>