



CRC for  
Water Sensitive Cities

# Subiaco Strategic Resource Precinct

Workshop context, May 2017



Australian Government  
Department of Industry,  
Innovation and Science

**Business**  
Cooperative Research  
Centres Programme

# Subiaco Strategic Resource Precinct

## The purpose of this document

This document provides some context for the workshop to be held on 24 and 25 May 2017.

It provides an overview of Water Corp’s Subiaco wastewater treatment plant and the buffer zone surrounding the plant.

It also explains the opportunity to scope the future of the plant and surrounding land use to help make Perth more liveable, sustainable and resilient to a changing climate.

## The Subiaco Wastewater Treatment Plant

The Subiaco wastewater treatment plant is one of more than 100 managed by Water Corp. These plants treat and safely dispose of the sewage generated by cities and towns across WA.

The Subiaco plant is one of three that treat around 85 percent of the total sewage produced in the Perth-Peel region:

Sewerage volume treated at Subiaco.	Population serviced now	Population serviced in 2030
23 billion litres/yr	240,000	290,000

There is a quiet revolution underway for wastewater treatment plants. While most wastewater is treated and disposed via ocean outfall there is increasing demand to reframe sewage as a resource. Now, these treatment plants produce recycled water as well as a number of other by-products including renewable energy, soil compost and fertiliser as well as nutrients for surrounding land use. As a result, discharges to the environment decrease.

## Buffer zones

All waste water plants have an odour buffer zone (Fig 1). As the name suggests, this area aims to separate sensitive land uses such as residential housing, from the wastewater plant for a variety of amenity and public health reasons.

Land in the buffer zone can still be actively used, although there are restrictions on the odour sensitive land uses that are permitted. Uses may include public open space, nature conservation areas, agriculture, industry and others.

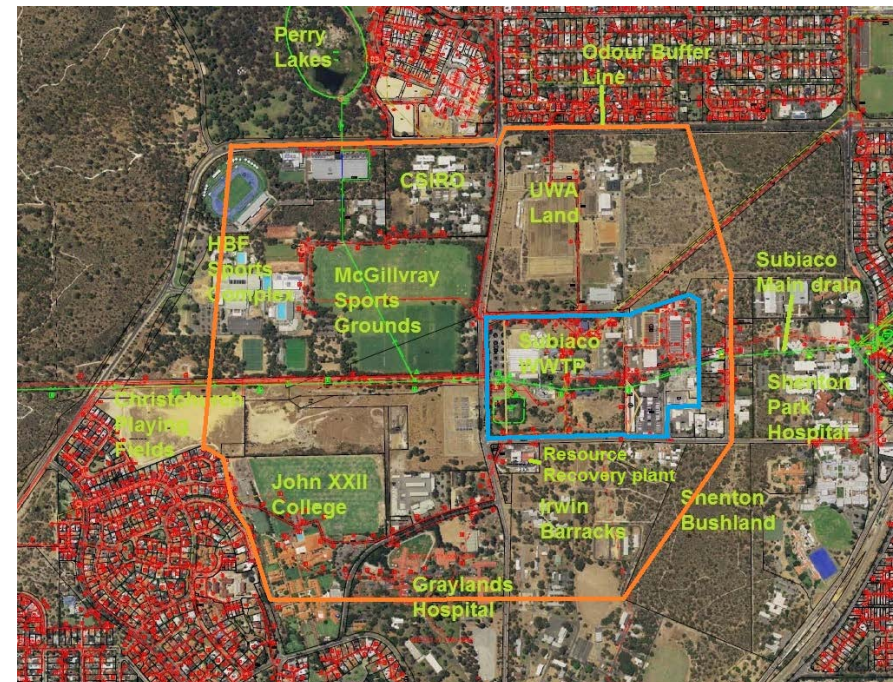


Figure 1 - the Subiaco plant and its buffer zone

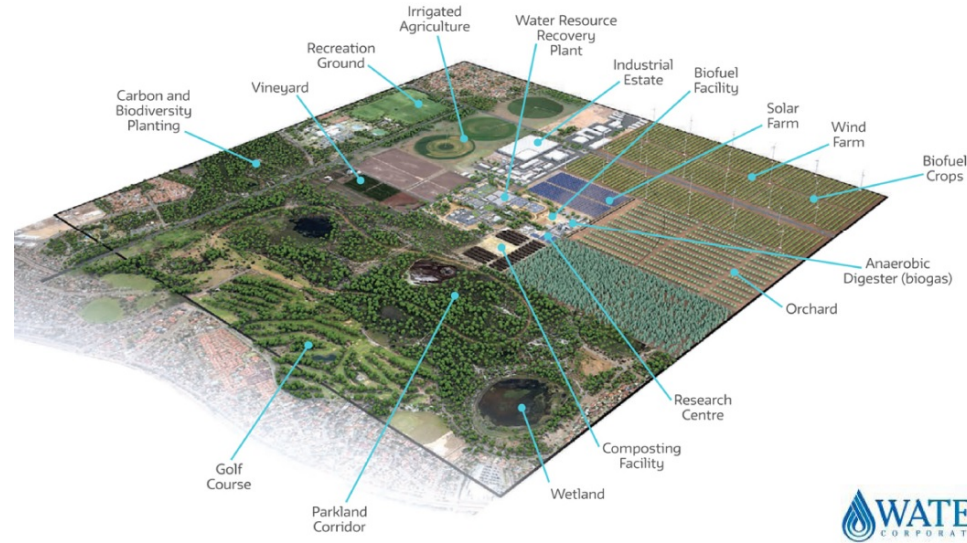


Figure 2 Subiaco WWTP and odour buffer

## The opportunity

### 1. Increasing the community value of the buffer zone land

Buffer zones are essential to the design of wastewater treatment plants and exist to ensure the wellbeing of local communities. But as cities grow, the development of infrastructure and evolution of land uses provide opportunities to use these areas in new and exciting ways – without compromising on the primary purpose of providing a buffer.

Qu. : Are there opportunities for the buffer area surrounding the Subiaco plant? What combination of uses will maximise community wellbeing and value?

### 2. Strategic resource precincts

The concept of Strategic Resource Precincts (Fig 2) has been developed to reframe wastewater treatment plants from ‘waste’ to ‘resource’ assets:

*“Wastewater treatment plants are increasingly becoming recognised as secure sources of alternative water. Facilitating beneficial and synergistic land use in and around the buffers of treatment plants will improve the efficient use of (this) land.”*

WA Planning Commission

Qu.: What resources can, and should, the Subiaco plant produce? How can businesses and communities surrounding the plant utilise these resources?

## Lines of enquiry

- **Can we create composted mulch and fertiliser?** The plant may be able to compost biosolids together with food and green waste to produce composted fertiliser and composted mulch for use in public open space across the region which could reduce water demand.
- **Can we produce renewable energy from the wastewater treatment process?** Co-digestion of sludge and putrescible waste generates renewable energy and heat at two other plants in WA.
- **Environmental and carbon offsets:** Can we provide environmental and carbon offsets, possibly associated with the regional ecological corridor and other corridors which traverse the buffer?
- **Potential land redevelopment:** Is there a way to redevelop Water Corporation owned land and adjacent land in a way which compliments the business?
- **Stormwater harvesting, treatment and storage:** Can we harvest stormwater from the Subiaco main drain that traverse the site?
- **Green infrastructure:** Can we increase the tree canopy cover and irrigated areas to mitigate the urban heat island effect while providing other benefits?
- **Densification of surrounding area:** Can the plant provide recycled wastewater and stormwater and energy services to the surrounding area?
- **Water security:** Can a reliable supply of high quality recycled water leverage new land use outcomes?
- **Heritage values:** Can we enhance the existing Nyoongar heritage walk and other Nyoongar and natural heritage values associated with the area?

## Get involved.

On 24 and 25 May the CRC for Water Sensitive Cities, together with Water Corp, is hosting a workshop to design a vision and scope ideas for a Strategic Resource Precinct for the Subiaco Wastewater Treatment Plant.

This workshop provides an opportunity to understand the different opportunities for the buffer zone and the strategic future of the plant itself to support economic growth and build a water sensitive city.

## Further information

Watch a video about Strategic Resource Precincts [here](#).



## Cooperative Research Centre for Water Sensitive Cities

 Level 1, 8 Scenic Boulevard  
Monash University  
Clayton VIC 3800

 [info@crcwsc.org.au](mailto:info@crcwsc.org.au)

 [www.watersensitivecities.org.au](http://www.watersensitivecities.org.au)