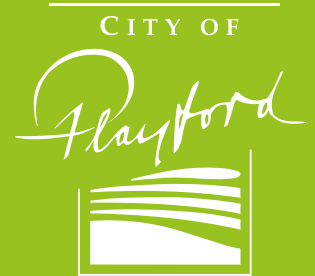


MUNNO PARA WETLAND



Munno Para Wetland is located near the corner of Curtis Road and Coventry Road, Munno Para.

Designed to intercept stormwater drainage from Smith Creek and the Craigmores Road drain.

In addition to stormwater harvesting, this site has been designed as a focal point for open space, recreational and environmental activities close to the Playford Alive development.

The wetland system removes pollutants from the stormwater via a complex range of physical, chemical and biological processes. These processes include filtering via aquatic plants as well as settling out of particles by slowing the flow of water.

It has a wetland area of 5ha and a total annual harvest of 660 ML



The Munno Para Wetlands provide the following benefits;

- Capture & cleanse stormwater runoff.
- Enable injection of stormwater into underlying aquifer for later re-use.
- Reduce pollutants entering Gulf of St Vincent.
- Establishment of ecosystems, plants and animals.
- Improved appearance & recreational amenity of public open space.

The Munno Para Wetlands will enable stormwater to be collected, cleansed and injected into an underlying aquifer via a process known as Aquifer Storage & Recovery (ASR)

The Munno Para Wetlands are a joint initiative between City of Playford, Land Management Corporation and Commonwealth Government.

The main processes include:

Sedimentation: The natural process in which heavy particles, such as mud, are carried to the bottom of a body of water and forms a solid layer. This process is supported by the use of gross pollutant traps that collect litter and debris

Dilution: Some pollutants are only dangerous if they are in a concentrated form. Large detention ponds allow pollutants to be diluted into the larger water body.

Sorption (partitioning): A physical and chemical process by which nutrients, metals and other pollutants becomes attached to soil particles in the shallows along the shoreline of the wetland.

Bioaccumulation: Bioaccumulation - The accumulation of substances, such as pesticides, or other organic chemicals into the biological elements of the wetland. Reed beds filter the slow moving water as well as capture nutrients allowing microscopic film to develop on their stems trapping a range of pollutants.

Photodegradation (photolysis): UV rays and light can break down bacteria that pollute the water. Open water areas of the wetlands allow the sunlight to penetrate the water column.

Hydrolysis: Water can also break down pollutants and occurs when parts of a water molecule bond with a pollutant.

Oxidation: Occurs in oxygen-rich waters and can break down pollutants.

With so many processes occurring at once, wetlands are forever changing.

Not only do they reflect the changes that occur as the water passes through the processes, they also reflect the smaller changes in the day.

This ranges from temperature and light, to the larger changes in the environment, such as summer and winter. For example, despite being called a 'wet' land, a healthy wetland system may have long dry periods.



Council regularly monitors the water coming into and leaving the wetlands for sediments, salinity, a range of pollutants and nutrients to ensure the wetlands are working in the manner they are designed.

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**WATERPROOFING
PLAYFORD**