

Aerotropolis Integrated Stormwater Schemes

Wianamatta Badgerys, Cosgroves and Dunans Mulgoa

Sydney
WATER



Wetlands and stormwater basins

Stormwater harvesting infrastructure, including wetlands and stormwater basins, naturally filter and store stormwater that is collected from developed areas.

Sydney Water will use a combination of wetlands and stormwater basins to collect and treat the stormwater from within the Aerotropolis for reuse.

Our approach

We're taking a holistic approach to how we manage water in the Aerotropolis, by using Integrated Water Cycle Management (IWCM).

IWCM coordinates and considers all elements of water management and urban planning across the scheme areas, recognising and celebrating cultural heritage, protecting waterway health, prioritising sustainable water supplies and helping to cool and green Western Sydney.

Taking this regional approach allows infrastructure to be placed efficiently in the scheme areas. It will minimise the amount of stormwater infrastructure required on development sites, maximising developable land.

The schemes have been designed in line with the Stormwater Principles, which were developed in consultation with government, industry and community.

Waterway health targets

To support liveable cities and healthy, resilient communities as Western Sydney grows, the NSW Government introduced new waterway health targets for the Wianamatta–South Creek catchment.

To achieve these environmental, social and economic objectives, we must take a new approach to servicing growth. As development happens and there are more hard surfaces like roads and roofs that collect water, but can't soak it up, there's more stormwater to manage.

We need to hold water in the landscape to prevent degradation, erosion and pollution of sensitive waterways as development occurs. By directing, capturing, treating and reusing stormwater, we can do this efficiently while creating a cooler, greener Western Sydney.

Sydney Water's responsibilities

As the Regional Stormwater Authority for the Aerotropolis, Sydney Water is responsible for delivering, managing, and maintaining the regional stormwater network on behalf of the NSW Government.

Since 2022, we have been working with landowners, government and the development industry to shape the frameworks that guide how we will manage stormwater across the Aerotropolis and Mamre Road areas.

This includes developing the Stormwater Scheme Principles that outline how we will design the infrastructure needed for the regional stormwater system.

The NSW Government has allocated land for stormwater infrastructure, including wetlands and stormwater basins, in the **Western Sydney Aerotropolis Precinct Plan (2024)**.

Connecting with Country

At the heart of the Aerotropolis is Wianamatta, Western Sydney's longest freshwater stream, located in Dharug Country. In the Dharug language, Wianamatta (or South Creek) means 'Mother Place,' reflecting its cultural and environmental significance.

This waterway is central to the area's identity and heritage, and its preservation plays a crucial role in maintaining the natural environment and the cultural practices of the Dharug Community.

Wianamatta's ecosystems are fragile and unique, home to a range of unique species that rely on healthy waterways including populations of platypus and native fish. To protect them, we have followed the Dharug People's approach of Letting Country be Country, shaping the layout and structure of the of the schemes around existing waterways.

Where stormwater infrastructure is required, we've prioritised natural systems, like the wetlands and creeks that have always been a part of this place, over concrete pipes and channels.

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Artist's impression of a wetland - creating a cooler, greener Western Sydney.

What is a wetland?

As well as being designed to treat stormwater, wetlands provide habitat for a wide range of animals and plants. They are also culturally significant for Aboriginal people and provide a strong connection to Country.

Wetlands will be strategically placed to handle local stormwater while avoiding high-value existing bushland and minimising potential impacts on future development.

What is a stormwater basin?

A stormwater basin is a constructed pond, sometimes called a retention basin, designed to collect and store stormwater runoff. Stormwater runs off roads, rooftops and other hard surfaces and flows through drainage infrastructure in the street.

To protect the sensitive creeks, it is then directed into strategically located stormwater basins where it is filtered, and stored for reuse in irrigation, industrial processes, and other non-drinking water applications.

Design principles

All of the proposed regional stormwater infrastructure has been developed in alignment with the Stormwater Scheme Principles.

Our focus is on developing infrastructure that achieve the Government's waterway health targets in the most efficient way possible while still creating a cool, green liveable city. Doing this reduces the amount of land needed for stormwater basins and wetlands.

In designing the stormwater schemes, we have:

- kept basins and wetlands contained to the areas reserved for stormwater infrastructure in the Precinct Plan (2024) wherever possible
- sized basins to treat only the stormwater required within the catchment areas they are designed to service
- reduced the size of the basins in order to keep the scheme costs and developer charges down
- reduced the amount of developable land allocated for stormwater basins
- avoided environmental and other existing constraints
- aligned the stormwater basins to reduce the impact on existing lots, where possible.

To know more

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Naturalised stormwater treatment is part of the scheme, managing stormwater and providing habitat and community amenity.

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