



**WATERWAY
HEALTH**

**FACT
SHEET**

Riparian condition in Ipswich waterways



The corridor of trees and plants along streams, creeks and rivers are vital for the health of both land and water ecosystems. The degradation of these corridors is a major threat to the health of Ipswich waterways.

The land along the edges of waterways is known as the 'riparian' corridor. It's different from the surrounding land because the soil and vegetation is shaped by the presence of water.

Since European settlement, a large amount of riparian vegetation in Ipswich has been cleared for agricultural or industrial activities, as well as residential and urban development. Remaining riparian corridors are often constrained or can become infested with invasive weeds.

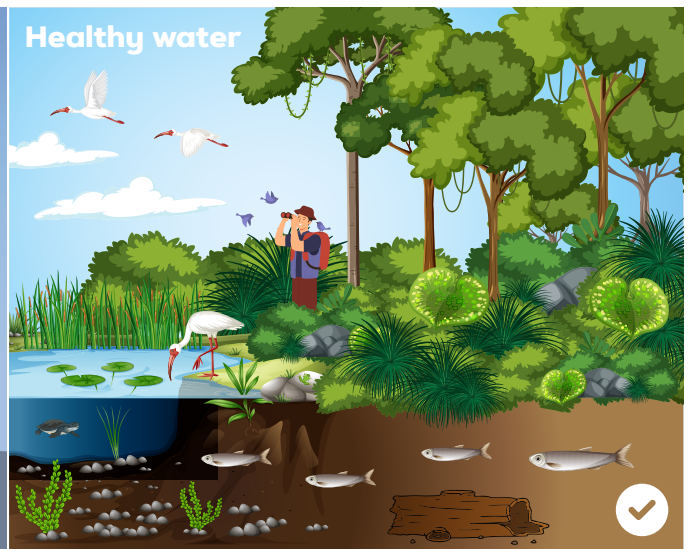
The work to restore our riparian corridors is a collective effort between government, community and landholders. Removing weeds and planting native species, as well as maintaining the appropriate width of riparian corridors, will increase both waterway health and our quality of life.



RIPARIAN CONDITION IN ACTION



UNHEALTHY: Native vegetation has been cleared or smothered by weeds, including vines capable of bringing down canopy trees. Buildings and structures have been built close to the waterway. Banks are exposed and prone to erosion, with sediment filling the stream. In-stream habitat is lost and water temperatures fluctuate, affecting aquatic life. Stormwater runoff carries pollutants from land-based activities straight into the waterway.



HEALTHY: Wide corridors of native vegetation line the waterway. Root systems bind the soil and reduce erosion while trunks and branches roughen the channel and slow rising water. Dense vegetation provides habitat both on land and in-stream, stabilising water temperature and filtering rainwater runoff. The waterway corridor has good biodiversity and is an enjoyable place for activities such as canoeing and fishing.

THE NEED FOR CONNECTED CORRIDORS WITH PLENTY OF ROOM

Riparian corridors are the interface between land and water. They provide habitat for both land and water-based species and reduce the impact of land activities on aquatic habitats.

It is important that these green corridors are connected along the length of a waterway, from the small headwaters and urban drainage channels to the larger downstream rivers.

If vegetation is disconnected or of poor quality, the waterway can be more prone to erosion, pollution and invasive weeds. It affects biodiversity and movement corridors for both water and land-based species.

Waterways need riparian corridors with enough width to provide functions such as filtering stormwater runoff, stabilising banks and providing habitat and shade.

LOWER ORDER STREAMS

Minimum riparian width:
10 metres each side

More than 90 per cent of Ipswich's waterways are lower order streams. They are often overlooked as they are small and may only flow in heavy rain events or during wet season. Many of our concrete drains were once low or middle order streams that provided important habitat. They play a critical role in protecting and maintaining the health of higher order streams and rivers.



MIDDLE ORDER STREAMS

Minimum riparian width:
25 metres each side

Middle order streams are about 4 per cent of Ipswich's waterways. These are often small but permanent creeks formed by the joining of multiple lower order streams. They run through rural and urban areas, and vegetation is often cleared for land uses such as livestock grazing or expanding urban development. These riparian corridors can provide additional benefits such as urban cooling.



HIGH ORDER STREAMS

Minimum riparian width:
50 metres each side

Only 3 per cent of Ipswich's waterways are high order streams, which includes major creeks and the Brisbane and Bremer rivers. These are waterways that handle greater volumes of water during heavy rainfall and flood events so require greater riparian buffers. Additional benefits include habitat for land and water-based species, and nature-based recreation.



IMPACT ON SPECIES

A healthy aquatic habitat needs in-stream features to provide a wide range of species with shelter, shade, foraging and spawning sites. This includes fallen trees and branches (snags).

Riparian vegetation plays a number of important roles in biodiversity of water environments. These include:

- shading, lowering water temperatures and reducing light penetration
- leaves and branches providing a source of organic carbon and nutrients
- stabilising channel banks for burrowing species such as platypus
- logs and tree roots providing an important habitat for aquatic fauna
- providing a habitat for terrestrial fauna including insects that are a food source for fish
- trapping pollutants in overland flow
- weed control as native vegetation can inhibit the growth of noxious weeds.

The continual loss and degradation of native plants in riparian areas reduces habitat, significantly impacts on water quality and increases the vulnerability of river ecosystems to collapse.



CASE STUDY POLLARD PARK

Pollard Park in Camira contains a lower order stream that flows into the ecologically significant Sandy Creek. Like many small lower order streams, this one had been repurposed into a stormwater drain with no riparian vegetation. This was causing water quality and erosion issues. The waterway was improved through the construction of grade control structures, rock pools, and significant revegetation. Healthy native vegetation quickly established, improving water quality, waterway stability and wildlife habitat.



CASE STUDY WOOGAROO CREEK

Woogaroo Creek is an important middle order stream in Goodna. Loss of native vegetation and development encroaching on the riparian corridor contributed to issues such as severe bank erosion. Improvement works along several sections of Woogaroo Creek have sought to stabilise the bank and revegetate the riparian corridor. This has included 'pile fields' of upright logs installed in the bank. These protect young trees from peak flows, and will naturally rot away as the trees grow.



WHAT YOU DO MATTERS!

The majority of Ipswich's riparian corridors are on private land. Here are some things you can do if your property is next to a stream, creek or waterway:

- Make sure the waterway has at least the minimum width of vegetation. This may require stock fencing, or minimising buildings and infrastructure within the riparian corridor
- Consider joining a free council program such as Habitat Gardens or a Landholder Conservation Partnerships Program for help with improving your riparian corridor, including free plants
- Make sure you dispose of garden waste properly, such as your household green waste bin. Dumped garden waste is a major source of weeds in riparian corridors.

"Plant a better future for our waterways today."



Even if you live elsewhere you can contribute to improving the health of our waterways.

- Volunteer with community efforts to restore riparian corridors such as Bushcare, or Habitat Connections planting days
- Report illegal dumping to council.

RIPARIAN SPECIES

These native plants are specialised for providing benefits to waterway corridors. They are commonly used in restoration projects.



Lomandra's matted roots bind the soil which makes the bank resilient. It can survive periods underwater.



Weeping bottlebrush branches overhanging water stabilises the temperature and provides leaf litter.



Casuarina or Sheoak acts as a windbreak and can prevent erosion. Needle-like leaves create mulch.



Blue Gum's deep roots hold together banks. The trees form hollows over 100+ years for wildlife.

INVASIVE WEEDS

These exotic plants are known for infesting waterway corridors and harming the environment. It is important they are controlled.



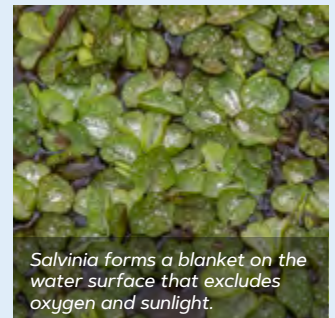
Cats claw creeper smothers landscapes and can bring down canopy trees.



Leucaena forms dense thickets that exclude all other plants.



Celtis is a dense shade tree and absorbs an enormous amount of water.



Salvinia forms a blanket on the water surface that excludes oxygen and sunlight.