

# Constructing a wetland at 76 Crooke Street, East Bairnsdale



East Gippsland Shire Council is constructing a wetland at 76 Crooke Street East Bairnsdale. This land, which Council owns, has been functioning as a stormwater drain for the East Bairnsdale community. Water moving through this stormwater drain is not treated.

Stormwater is collected from Crooke Street and surrounding streets including Hoddinott, Humphrey and Lucknow streets. It is then diverted by kerb and channel to be discharged into Jones Bay via the vacant block at 76 Crooke Street.



*View of 76 Crooke Street looking south towards Jones Bay.*

## What is a constructed wetland

Constructed wetlands are designed to use natural processes including vegetation and soils to improve water quality. Water moves through the wetland and is filtered and cleaned as it moves through a series of retention ponds.

Constructed wetlands are commonly used to regulate and improve the quality of stormwater. Benefits include reduced water pollution and habitat provision for plants and animals.

Using natural processes to improve urban water runoff is known collectively as Water Sensitive Urban Design (WSUD). Each wetland is unique; they are specifically designed to meet the conditions of each location.

The wetland located at the corner of Phillips Lane and north of the Princes Highway is a local example of a constructed wetland. It is open to the public. It was built in 2016 with the support of the state and federal governments. It has improved water flow through East Bairnsdale and reduced flooding impacts on the Princes Highway.

## What are the benefits of this wetland?

The Crooke Street wetland has been designed to achieve multiple environmental outcomes including:

- 100% removal of gross pollutants, including litter
- 100% of suspended solids
- 81% of current phosphorous
- 33% of current nitrogen

These pollutants are currently entering the Gippsland Lakes directly via Jones Bay. Water leaving the completed wetland will now be cleaner.

The Jones Bay Wildlife Reserve is an important part of the Gippsland Lakes Ramsar Site. Ramsar sites are internationally significant habitat for migratory bird species. More than 20 species of migratory birds including snipe, sandpipers and terns visit the Gippsland Lakes as part of their annual breeding and resting cycle. Most travel from northeast Asia and Alaska, a roundtrip of approximately 20,000 km.

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We also know that nutrients like phosphorous and nitrogen build up in the Gippsland Lakes. This directly contributes to the prevalence of Blue Green Algal outbreaks, limiting recreational use of the Lakes and impacting the Lakes biodiversity.

Improving water quality that is going into the Gippsland Lakes will contribute to improving the overall quality of this important environment.

The current site is an open stormwater drain. By developing this wetland, we will better regulate water flow during large rainfall events. A constructed wetland will also improve the outlook for residents.

## When will the wetlands be constructed?

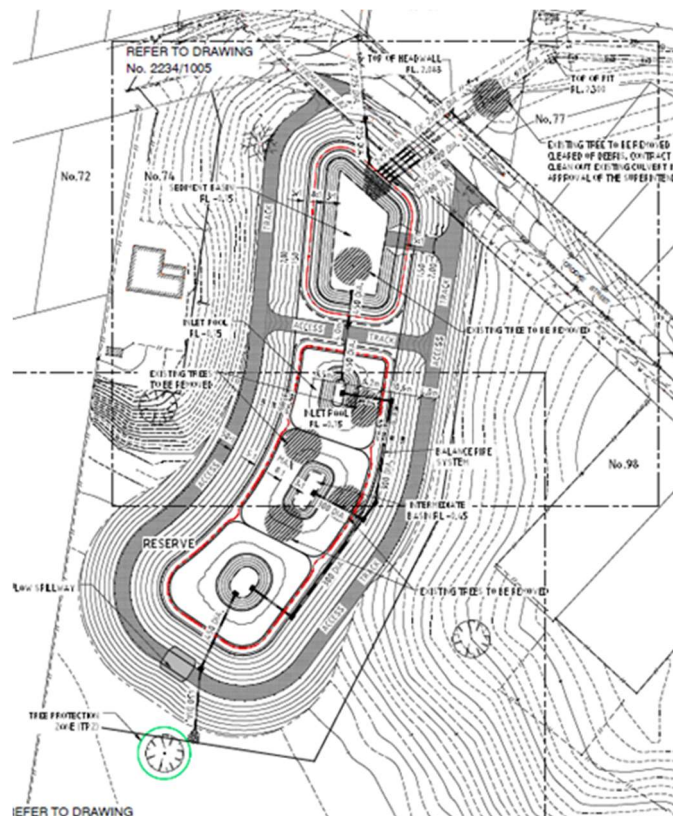
The wetlands are currently planned to begin construction over the summer of 2022-23 with a planned completion date of April / May 2023. These dates are to be confirmed.

## Will the construction disturb residents?

It is likely that residents will be disturbed during the construction period. There will be heavy machinery and earthmoving operating within the area required for the wetland. Residents might be disturbed by noise or Crooke Street may need to be blocked for short periods of time so work can proceed.

Work will be limited to daylight hours Monday to Friday. Only in cases where a stage of work must be completed will work be permitted out of non-standard business hours, for example over weekends.

Being an active drain, the movement of water through the site must be managed during these works. Rain at different times in the construction period may necessitate weekend or after hours work to ensure that the drain continues to function.



The schematic for the scope of works relating to the constructed wetland at 76 Crooke Street.

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## Who is involved in the construction of the wetlands?

The East Gippsland Integrated Water Managers Forum have identified the Crooke Street wetlands as being a priority project. It is included in the East Gippsland Integrated Water Management Forum Strategic Directions Statement (see link below) and is referenced for implementation as part of the of the Bairnsdale integrated Water Management Plan. Partner agencies involved in this project include:

- East Gippsland Water (EGW)
- East Gippsland Catchment Management Authority (EGCMA)
- Gippsland Lakes Coordination Committee (GLCC)
- Federation University
- Gunaikurnai Land and Waters Corporation (GLaWAC)
- Department of Energy, Environment and Climate Action (DEECA) (formerly the Department of Environment, Land Water and Planning (DELWP)).

You can read the Gippsland Integrated Water Management Forum Strategic Directions Statement here: <https://bit.ly/3IJbO6G>

## Will the wetlands need ongoing maintenance?

Yes. At different times the wetlands will need to be excavated to clear sediments that might build up. If sediments are allowed to build up in the retention ponds of the wetland, then the wetland will not function as designed.

## Are pest plants and animals a risk?

It is possible that exotic pest plants and animals may inhabit the wetland at different times. Where pests occupy the wetlands, they will need to be removed. This might include mosquitos in cases where water flow through the wetland has reduced and water is stagnant.

Monitoring the wetlands for pest plants and animals will be part of the maintenance requirements for the site.

## Will snake numbers increase for residents near the wetlands?

Snakes are already in the local area in large numbers, this includes in and around the existing drain at 76 Crooke Street. The fringing wetlands of Jones Bay provide ideal habitat for snakes. The addition of these wetlands is not considered likely to significantly increase the risk of residents encountering snakes. The wetlands will be open to the public; they will be fenced and limited access will be permitted.

It is possible that snakes may be disturbed during construction. Residents should increase their monitoring of snakes during the construction period. If a snake is spotted, a trained snake catcher should be contacted to relocate the animal.

## Can the public access the wetlands?

Yes. The public can access this site. The wetlands will have limited public access with a walking track and some seating planned. No carparking will be constructed but local residents will be able to use this space.

## Will the wetland increase the risk of localised flooding?

No. The wetland has been designed to better regulate water movement through the Crooke Street drain. In fact, there is more risk now for localised flooding than there will be when the wetland is completed. The wetland has been designed specifically for that site and considers peak flow conditions through that part of the catchment.

## For further information please contact East Gippsland Shire Council

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