

# **Culverts benefit community and wetlands**

Located just under an hour's drive south-west of Melbourne between Werribee and Wyndham Vale, Harpley is a Lend Lease Communities development that is set to become an exciting destination for both its residents and the wider community.

Bordered by 60 ha of dedicated waterways and wetlands, the new Harpley Estate is part of a \$250 million major upgrade to the area which will see Werribee as the 'Capital of Melbourne's New West'.

Designed to accommodate 4,000 homes and around 12,000 residents, the Harpley master plan stretches over 435ha and will comprise multiple facilities to suit. A retail neighbourhood shopping centre, schools, multiple waterfront cafes and restaurants, a community centre and flexible commercial sites will transform the area into a vibrant escape from the city, offering easy and direct access via the Princes Freeway.

#### Precast best access solution

Precast box culverts and link slabs play a major role in the series of roads that run over the waterways and wetlands connecting the Harpley community with the surrounding areas.

National Precast member Reinforced Concrete Pipes Australia (RCPA) were brought in as a part of the team in June 2019 during the early stages of the development plan.

## Precast manufacturer

Reinforced Concrete Pipes Australia

#### Location

Harpley Estate, Werribee VIC

### Client

Lend Lease

## **Engineer** SMEC

## **Civil Contractor** Excell Gray Bruni

www.nationalprecast.com.au

According to Marita Mullarvey, RCPA's Account

Manager, precast concrete was chosen for the project for its safety and ease of construction, as well as its cost efficiency. The client was confident that the factory-controlled manufacturing environment would ensure a high quality product that would deliver outstanding durability and offer fast site installation.

"We supplied 95 reinforced box culverts and 57 reinforced link slabs for the Ison Road causeway that passes over wetlands, connecting commuters from Bulban Road on the southern edge of the development to the estate," Ms Mullarvey comments.







Measuring an enormous  $1.8 \times 1.8 \times 2.4 \text{m}$ , the box culverts were installed on top of the link slabs to form a milti-cell culvert crossing. The link slabs measured  $1.8 \times 1.8 \times$ 

The project will be constructed in multiple stages, with the completion of the overall development to be in 2023/2024.

## Minimising environmental harm

Reinforced concrete box culverts allow water to pass under a road or other structure and are recognised to cause minimal environmental harm to natural wetlands and their habitats. With their size and location designed to withstand high flows, they generally preserve the form of the stream bed and the channel width. They offer impressive durability and concrete mix designs can be tailored to suit harsh environments. They will not emit chemicals into their surrounding environment – critical when preserving vegetation and wildlife.





