

# PRECAST PUMP-WELLS FOR THE WESTCONNEX

MAJOR PRECAST CONCRETE MANUFACTURER HUMES HAS BEEN ENGAGED ON THE WESTCONNEX MOTORWAY IN SYDNEY TO PROVIDE PRECAST PUMP-WELL UNITS AS A DRAINAGE SOLUTION.

**C**urrently under-construction the Westconnex motorway is paving a 33 kilometre stretch of traffic-light free road network across the Sydney metropolitan area.

At the project's Southern edge - in the suburb of Kingsgrove - the initial design included an insitu surface drainage solution, which was later rejected due to a concerning tolerance between the insitu pits and the precast pipe infrastructure.

As the primary supplier of pipes for the project, National Precast's Master Precaster, Humes supplied a modified variant of their tightly specified precast Dn3600 pump-well as an alternative.

By engaging Humes to supply this precast solution, the civil contractor CPB were able to ensure a successful outcome in line with the project's deadlines and forecasted budget.

The set of five modified Dn3600 pump-well units, supplied by Humes, include custom-cast blockouts and a design that made for efficient transport and installation. Due to the size of each precast element, Humes negotiated an after-hours escort and installation of the pump-well units.

Precast concrete allowed for a reduced congestion of trades on site as the parts could be delivered after hours and an efficient installation that took less than one hour from unloading the delivery trucks.

Like many civil applications of precast concrete, Humes supplied the elements in an affordable, uniform and cost-effective off-form finish. Off-form precast elements provide benefits such as tolerance control,



Hume's large precast pits for pump-wells on the Westconnex project.

finish consistency and structural reliability.

Humes' ability to supply an innovative yet cost effective solution for the Kingsgrove Westconnex project will service the new road network for many generations to come.

The durability of precast concrete is an additional reason why it is commonly used in watertight civil projects such as the Westconnex motorway. The pump-well unit supplied was rated with a minimum 100-year design lifespan.

A precast concrete solution also solved challenges presented such as onsite waste, delays due to weather, worker safety

and issues with design tolerances.

Engaging one of National Precast's 'Master Precasters' has ensured that the drainage works at Kingsgrove Westconnex were a quick and successful installation. ■

**Project:** Westconnex Project

**Location:** Kingsgrove, NSW

**Master Precaster:** Humes

**Client:** NSW & Australian Governments

**Builder:** CPB Contractors