

# HIGHLAND RESERVE, UPPER COOMERA

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*Highland Reserve is an 1100 dwelling master planned community located on Reserve Road at Upper Coomera and is due for construction commencement in 2005. External Services are a major constraint of this development; these include a water reservoir and 3 kilometre regional trunk sewerage main.*

## **CLIENT:**

Stockland Development Pty Ltd

## **SERVICES:**

Complete civil engineering, as principal consultant, services from preliminary feasibility to land product.

## **PLANNING ISSUES**

The whole estate was lodged as one Reconfiguration of a Lot approval and as such the supporting documentation required that all roadworks and preliminary earthworks for the site be modelled.

The use of the latest 3D modelling software on this project gave council officers and the design team a clear image of the allotment layout over the existing terrain.

## **DESIGN & CONTRACT ADMINISTRATION**

The documentation for this development includes;

- Design and Documentation of Earthworks, Roadworks, Stormwater, Sewerage, Water and Sediment and Erosion Control
- A 3 Hectare Lake and two "Bebo" arch culvert structures.
- Preliminary Design of the Water Reservoir site.
- Design of a 3 kilometre 300mm diameter sewerage rising main and associated works.
- Design and Documentation of an Interim Sewerage System.
- Water Sensitive Urban Design
- Contract Documentation



The sewerage rising main design involved the recalculation of the Upper Coomera Sewerage and Water Catchments to ensure that enough capacity was available in the region for future developments under the current town plan. This involved liaison and negotiation with Gold Coast Water that results in a system that services two Stockland Developments' within the catchment.

The location and Preliminary design of the reservoir site involved an Internal Water Network Analysis for the estate with regional links. The final height of the reservoir has been chosen using these models.

