

CASE STUDY THE ORCHARD RESIDENTIAL DEVELOPMENT



MAGNUMSTONE™



CONTRACTOR	Townsville Earthmoving
CLIENT	Elements North Queensland
LOCATION	Townsville, QLD
PRODUCTS USED	MagnumStone

**ADVANCED
GEOSYNTHETIC
SOLUTIONS**

PROJECT INFORMATION

The Orchards is a large block residential development located in Jensen, just north of Townsville. Constructed on sloping terrain, and surrounded by natural bushland, The Orchards will cover 113 hectares once complete, providing a sense of space with parks and walking tracks.

Developed by Elements North Queensland, the goal was to provide large, flat blocks, making it easy and cost effective for buyers to build their homes. This resulted in large requirements for retaining walls across the project.

DESIGN

The original project plans showed traditional post and panel walls, however this retaining wall system proved slow and expensive to construct due to the weathered rock soil condition on the site. The MagnumStone system was considered as an option, and as it provided a high class finished look, was cost effective and fast to construct, the designs were changed to a MagnumStone Gravity wall system for the project.

Throughout the tendering process, Cirtex provided elevations that showcased the volume of blocks and materials required to construct the walls, as well as advice on construction methodology. Cirtex also worked closely with the contractor and client to ensure that the walls were correctly tied into the existing batters to minimise erosion during the intense rains experienced in this area through the wet season.

Due to the site's gentle slope, many of the walls were designed to be tiered walls of only two or three blocks high, with each layer of MagnumStone resting on top of each other. Extenders were used on the larger walls, rising to a maximum retained height of around three metres.

INSTALLATION

During construction, Cirtex worked closely with the contractor to ensure production matched their program. This allowed relevant components for each wall to be delivered to the exact wall location around the site, allowing the walls to be quickly and efficiently constructed by Townsville Earthmoving and removed the need to shift product around the site.

The result was great looking retaining walls that created over 30 flat house pads, enhancing the value of the development and exceeding the client's expectations.

The MagnumStone system provided the following benefits to the project:

- Ease of transition when changing design methodology
- Fast to construct with readily available machinery
- Does not require deep boring or extensive excavation

