

## Crash Cushion

**MASH TL1 COMPLIANT**

**NCHRP-350 COMPLIANT**

### EXCEPTIONAL ENERGY-ABSORBING CAPABILITY

**The RAPTOR™ is an energy absorbing device designed to reduce the severity of vehicle impacts with utility poles or trees**

*Its unique technology offers a compact low-cost solution in places where typical crash cushions would not physically fit.*

A utility pole (or a tree) offers no energy absorption during a head on impact; consequently the occupants and vehicle will absorb all the impact energy being released from a vehicle decelerating to a halt in a fraction of a second. The consequences are quite obvious.

Approximately 30% of the run-off-road fatalities involve severe impacts with hard objects such as poles and trees. The cost of removing these hazards can be prohibitive as it may involve re-layout of the road itself; as a consequence these hazards are often left unattended until a serious accident occurs.

**RAPTOR™** offers exceptional vehicle control and energy absorbing capabilities during head on collisions; the impact energy is absorbed by internal plastic cartridges. **RAPTOR™** is also capable of deflecting a vehicle in side-on angled impacts. The **RAPTOR™** system has been tested to both MASH and NCHRP 350 guidelines for a gating, non-re-directive crash cushion and has been judged to have satisfied the required evaluation criteria for Test Level 1 (TL-1).

**2000kg Pick-up truck impacting head-on with a pole using the RAPTOR™ at 50kph**



### Features & Benefits

- Highly reduces the severity of vehicle impacts against poles and trees
- Meets both MASH TL1 and NCHRP-350 TL1 test criteria
- Usable in places typically impossible to protect
- Compact size and easy installation (under 30 minutes)
- Two sizes available to fit multiple width hazards
- Zero maintenance, UV Stabilised, expected lifespan 25 years
- Smooth surfaces and geometry, suitable for vulnerable road users
- After a collision occurs, the non-impacted side can still be re-used
- No foundations are required
- Fully recyclable very low cost protection

## Crash Cushion

**MASH TL1 COMPLIANT**

**NCHRP-350 COMPLIANT**

The **RAPTOR™** is a safety device purposely aimed to reduce the impact severity of errant vehicles with a utility pole or tree. It has been designed, tested and accepted to NCHRP 350 and MASH TL1 criteria.

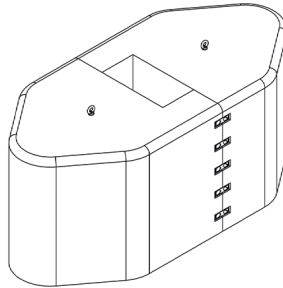
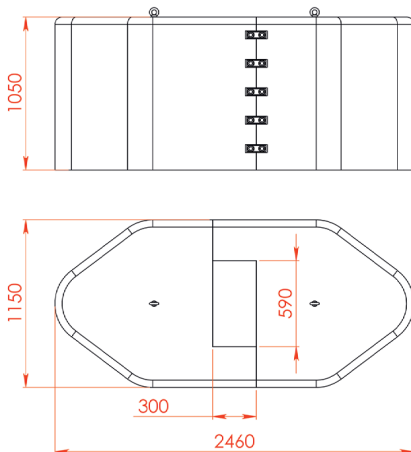
Its exceptional vehicular control and energy absorbing capabilities during end-on impacts makes the **RAPTOR™** an ideal solution for utility pole or tree protection.

Due to its simplistic design, installation and repairs can be done under 30 minutes, promptly re-establishing the safety on our roads.

*Contact Ingal Civil today for more information on this and other road safety products.*

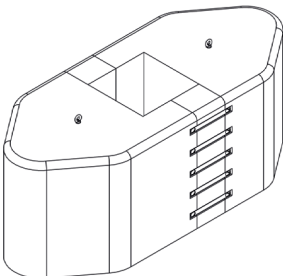
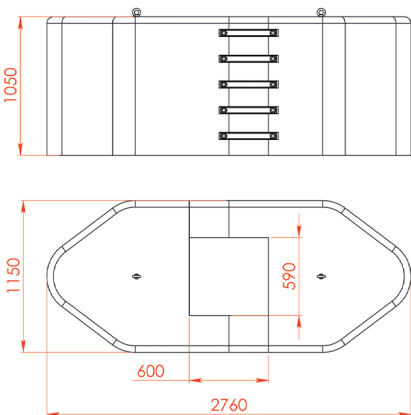


### RAPTOR™ 300



Overall Length	2460mm
Height	1050mm
Width	1150mm
Void Size	300mm x 590mm
Shells & Cartridges	Stabilised PE (UV8)
Connector & Fixings	Galvanised Steel
Weight (per shell)	110kg

### RAPTOR™ 600



Overall Length	2760mm
Height	1050mm
Width	1150mm
Void Size	600mm x 590mm
Shells & Cartridges	Stabilised PE (UV8)
Connector & Fixings	Galvanised Steel
Weight (per shell)	110kg
Weight (per packer)	12kg