TRIEF BARRIER AND KERB

Precast concrete kerbing system
**Introduction**

Trief Barrier and Kerb is used primarily in the minimisation of accidents caused by vehicles leaving their carriageway and damaging adjacent property or colliding with pedestrians. When used as a median barrier Trief prevents cars from changing into the lane of oncoming traffic thus minimising the number of accidents involving head-on collisions.

**Construction**

Trief barrier and Kerb is constructed from Portland cement, selected high density aggregates and manufactured sand resulting in a precast concrete product with high durability and integrity. Minimum strength is 32mpa @ 28 days.

**Specifications**

**Size**

Trief Barrier and Kerb can be supplied in two sizes.

- 415mm high × 760mm wide
- 480mm high × 950mm wide

**Jointing**

Trief Barrier and Kerbs incorporate a jointing system similar, in principle, to that of the Tric Bloc Road Barrier. This jointing system effectively links all barriers to provide continuous secure barrier or kerb.

**Radius**

Trief Barrier and Kerb is manufactured from tapered units. The two tapers used are 16mm and 23mm. The minimum radii are:

- 30 metres with 16mm taper
- 20 metres with 23mm taper

**Pricing**

Pricing is dependant on delivery location. Please contact us for further pricing information.
Effectiveness
Tests carried out by TRRL at Crowthorne, England show that the performance of the kerb is a function of the approach velocity perpendicular to the barrier. For satisfactory performance, they found this velocity to be a maximum 4.8km/h in dry conditions and stated that the kerb can be climbed at any approach angle if the velocity perpendicular to the kerb exceeded that value. Based on this, a critical approach curve was drawn from a test run, using a vehicle approaching the kerb at 19km/h and at an angle of 15°. From this curve it was seen that up to 5° incidence and realistic vehicle speeds of 48km/h to 64km/h successful redirection of the offending vehicle will occur.

However, this theory did not apply in all cases, particularly when tests were carried out in wet condition, or when evasive action was taken. It was found in wet conditions the critical climbing speed of the vehicle striking the kerb at an angle of incidence of 15° was 32.8km/h. This is apparently higher than the predicted vehicle speed of 19km/h at the same angle of incidence and has been put down to the fact that the frictional resistance to climbing is minimised when both kerb and tyres are wet. If this is so, it may be advantageous to explore methods of reducing the climbing forces under dry conditions.

These tests show that the effectiveness of the Precast Concrete Solutions Trief Kerb can only be relied upon at angles of approach up to 5° and at realistic vehicle speeds of approximately 64km/h. A possible explanation of the success of Trief Kerb at angles of approach of up to 5° is the fact that at small angles of incidence the bulge of the side-wall of the tyre is trapped in the concave recess of the kerb and that the tread pattern does not come into contact with the rubbing edge. The frictional resistance that occurs at greater angles of incidence is less, until the wheel has been forced parallel to the kerb. The tread pattern is also progressively brought into play with increasing angles of incidence, increasing the tendency for the offending vehicle to climb the kerb.
End Unit
Retaining Barrier

NOTES:

- 760 mm Taper on end
- 804 mm Centre Line
- 760 mm Centre Line
- 820 mm Centre Line
- 1200 mm Centre Line
- Numbers indicate original units. Main units as units from top to bottom
- Symmetrical S' shape on top view
- Construct connection arrangements similar to other units

REFERENCES:
- 170 mm Taper on end

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