TRIEF® – THE ORIGINAL CONTAINMENT KERB SYSTEM

Since 1962, the Brett Trief containment kerb system has been delivering high levels of vehicle and pedestrian protection and is widely recognised as having made a substantial contribution to British road safety.

Today, the Trief Kerb system continues to set the benchmark for containment kerbs with a versatile range of easy-to-install, passive road safety components.

What is Trief?

Trief is a safety kerbing system which is designed to contain and re-direct vehicles safely back onto those carriageways where, if they were to stray unchecked, they may cause injury to pedestrians, damage to local structures or damage to the vehicles and drivers themselves.

In these instances, Trief kerb will provide better containment of vehicles than standard kerb units.



How does Trief work?

The Brett Trief Kerb has been designed and proven to work in three ways to prevent vehicles leaving the carriageway:

1. The Trief Kerb is designed to present a clear visual signal to road users that it will prevent vehicles trying to leave the carriageway. Its height also discourages pedestrians from crossing the highway. The result is that the separate streams of road users are effectively segregated - a key contributor to enhanced road safety.

2. The Trief Kerb has a 25mm upstand from the highway surface leading onto an inclined shoulder. This is essential to give road users an initial physical warning that their vehicle is leaving the carriageway and that they need to take action to bring their vehicle back onto the carriageway. The inclined shoulder will help the driver bring the vehicle back on to the carriageway.

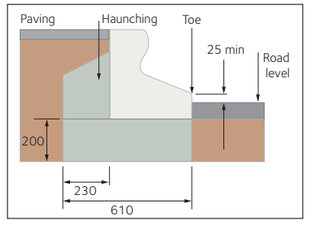
3. The Trief Kerb is designed to capture the sidewall bulge of a vehicle tyre within its concave section, thereby helping to contain the vehicle within the carriageway boundary. Once contained, the result is that the tyre is turned parallel to the kerb thereby minimising the upward traction available to the tyre and its ability mount the kerb.

Taken together, these three steps have been proven to contribute to British road safety for almost 50 years by providing a reliable, passive safety feature for use on our highways.

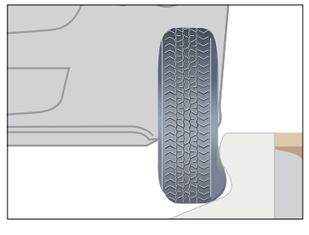
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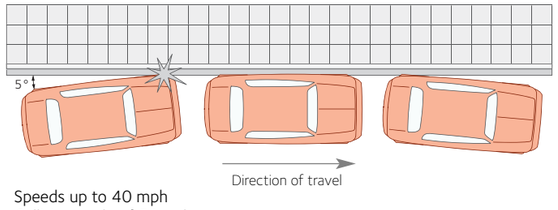
3.





Trief - independently tested

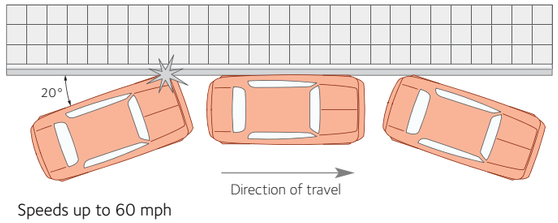
Tests on the effectiveness of the Trief kerb have been carried out by the TRL (Transport Research Laboratory) using a remote controlled vehicle. The test results clearly showed that the parameters within which Trief was found to perform effectively was when re-directing vehicles travelling at speeds of between 30 and 40 mph and hitting the kerb at angles of 5° or less - even without evasive driver action, as shown below.



Speeds up to 40 mph
Collision angle of 5° or less

The testing also confirmed that vehicles travelling at higher speeds and at greater angles may also be effectively redirected, especially where evasive action is taken by the driver.

These tests were later repeated at the Fort Dunlop test track where a section of Trief kerb was specially constructed. These further independent tests proved that the Trief kerb was successful in re-directing a vehicle at speeds approaching 60mph (96Km/h) with angles of incidence up to 20° as shown below.



Speeds up to 60 mph
Collision angle of 20°or less

Although the testing confirmed that vehicles travelling at higher speeds and at greater angles may also be effectively redirected by the Trief kerb, (especially where evasive action is taken by the driver) these are not scenarios that we would recommend Trief installations to be used for.

Similarly, it should be recognised that the conventional test regime for safety barriers - and containment kerbs – requires a vehicle hitting the kerb at an angle of 90° angle. Trief is expressly not intended for use in such applications as its height would not contain a vehicle and the unique profile would not be able to engage with the vehicles tyre sidewall.

Trief is not a high kerb as defined by the Department of Transport and as such is not intended for use on high speed roads.

The typical uses for Trief would be:

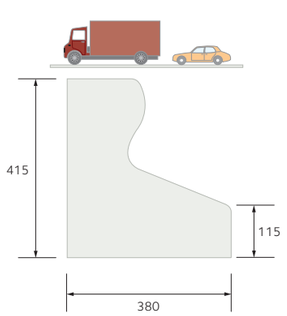
- Development of traffic management and calming systems
- Effective segregation of traffic in mixed use areas
- Creation of pedestrian refuges and crossing islands
- Trief Chevron for directional and containment systems
- Prevention of vehicle over-run in parking areas
- Protection of roadside infrastructure and verge zones
- Increased protection for toll booths

Trief design service: call 0845 60 80 579

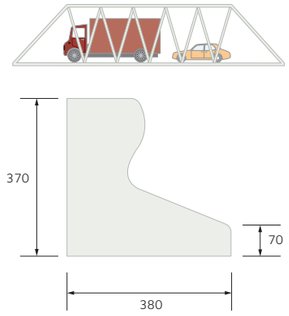
Brett offer a full Trief design service to assist in maximising safety, practical layout and aesthetic issues. We are able to offer design advice or full installation design, calculate quantities and provide detailed installation diagrams. We also design and produce bespoke units for specific projects.

Effective design also enables the minimisation of on-site cutting, which improves site safety as well as reducing construction waste.

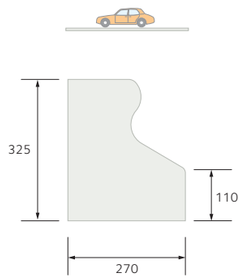
The Trief kerb system



Trief GST2A
For use on carriageways where 85 percentile speeds are below 40 mph



Trief GST2
For use on minimal excavation projects, especially bridges



Trief Cadet
For use on roads up to 30 mph i.e urban or residential areas, or smaller traffic calming schemes

Trief Chevron
Directional indicator kerbing system



Front elevation with clockwise directional indication



Front elevation with anti-clockwise directional indication

PRODUCT RANGE

The Trief and Trief Cadet Kerb system is comprised of a range of components, including quadrants, short lengths, as well as radius and transition kerbs. This allows for a wide range of design possibilities that can address specific site constraints and safety considerations.

The use of transition kerbs allows Trief to be seamlessly integrated into existing kerb systems. Trief transition kerb units are available with transitions to British Standard HB2 or splay kerbs.

COMPOSITION, MANUFACTURE AND FINISHES

Trief Kerb units are wet cast from high strength concrete, manufactured with premium quality granite aggregates.

Trief Kerb concrete units are available in three finishes:

- Standard Finish for a smooth, matt surface
- Exposed Aggregate Finish with a subtle, slightly aged finish for conservation and heritage installations
- Granite units for use in aesthetically sensitive locations, but with the same design properties as the concrete units.

FEATURES AND BENEFITS

- Design prevents vehicles from deliberately or accidentally leaving the carriageway
- Protects people, infrastructure and landscaping by containing vehicles within the carriageway
- Deters drivers from mounting the kerb by creating a visual warning
- Controls traffic flows when used as part of traffic management or calming measures
- Provides effective protection for pedestrians in mixed use areas such as motorway services and pedestrian islands
- Available with dowel holes for sites with limited haunching options - particularly bridges - or where extra protection is required
- Most shapes or sizes of roundabout or curve can be made
- Compatible with Brett's tactile, flag and concrete block paving ranges

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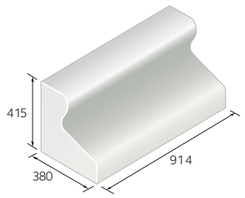
TRIEF CONTAINMENT KERB SYSTEMS

Providing vehicle and pedestrian safety

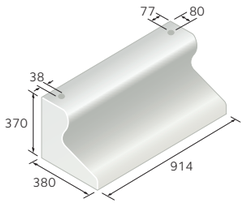


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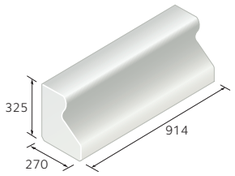
STANDARD TRIEF KERBS



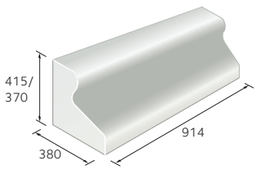
Trief GST2A for carriageways and roads
The standard Trief Kerb unit provide a strong visual deterrent due to their size and unique shape. This encourages reduced speed levels and increases hazard awareness.



Trief GST2 for bridges
The shallower Trief GST2 profile has been designed to have a slimmer toe section. This serves to minimise excavation requirements and allow installation within limited depth applications, for example, around the vulnerable structural parapets and edge beams of bridges.



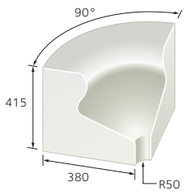
Trief Cadet units for urban areas
The smaller Trief Cadet has been designed for use within lower speed urban areas where the size of the larger Trief units may not suit the surrounding urban environment and pedestrian movement.



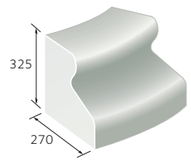
TRIEF TAPERS

Trief to road side tapers
A range or tapered Trief Kerb profiles are available to match both British Standard HB2 and splay roadside kerbs.

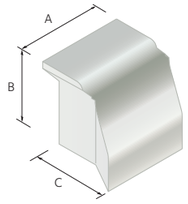
Tapers from Trief to Trief Cadet are also available.



TRIEF QUADRANTS
External and internal quadrants are available in 30°, 45° and 90° variations. A 60° external quadrant is also available.



TRIEF RADII
The range of Trief and Trief Cadet radiused units offer still more design flexibility by allowing an almost infinite degree of configuration and curvature permutation.



TRIEF CHEVRON
Brett Trief Chevron and Trief Cadet Chevron Kerbs are interlocking kerb units that are highly visible from a distance or in low light conditions.
The unique chevron design is extremely effective for directional indication at traffic islands and roundabouts.

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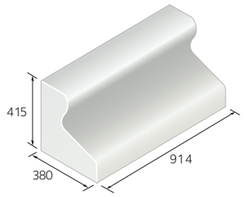
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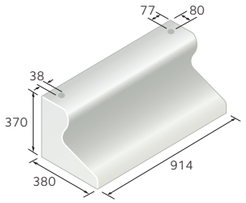


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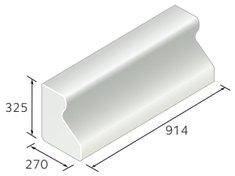
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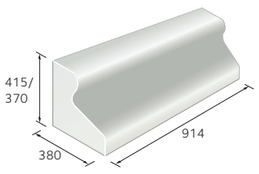
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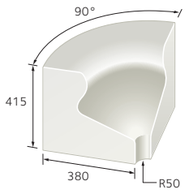
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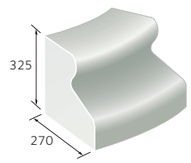
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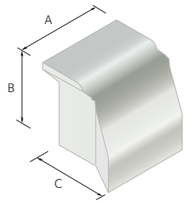
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