

## HV2 SAFETY BARRIER

### REVISION REGISTER

Revision	Description	Date
1	Issued for use.	30/03/2020
1 A	Terminals and manual updated.	21/10/2022

The HV2 Safety Barrier is a freestanding longitudinal temporary barrier that consists of 5.8m long interlocking steel units containing concrete ballast. An approved terminal must be connected to the HV2 Safety Barrier.

Depending on the approved terminal used the HV2 Safety Barrier can be used in worksites with design speeds up to 100 km/h.

### Images / Drawings.



Figure 1: Photograph of HV2 Safety Barrier units

## HV2 SAFETY BARRIER

**WORKZONE**

**TRAFFIC**

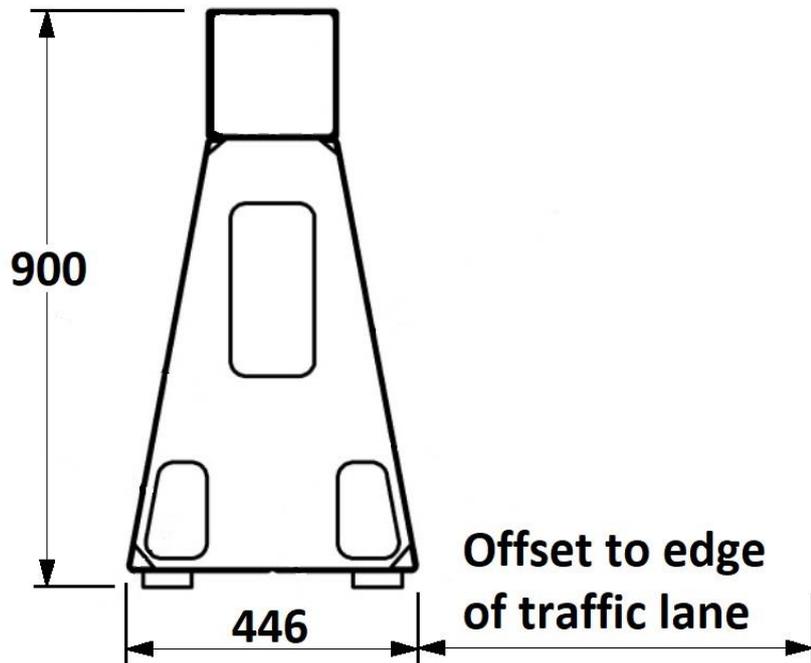


Figure 2: Cross section of HV2 Safety Barrier

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**Test Level:** Approved to MASH TL 3 and MASH TL 4.

Test Level	Test Description	Deflection	Working Width (measured at base of units)
MASH – TL 3	2270 kg vehicle at 100 km/h 25° impact angle	1.47 m	1.84 m
MASH – TL 4	10000 kg vehicle at 90 km/h 15° impact angle	2.37 m	3.74 m

**Configuration:**

Units must be interconnected and requires a sufficient length to resist impact.

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### Design:

- Design to be in accordance with the HV2 Barrier Product Manual (Australian Version 1.6, May 2021).
- It is recommended that the barrier should be offset from the edge of traffic lane by:
  - traffic speed 40 km/h or less – 0.2m;
  - traffic speed 41 to 60 km/h – 0.3m;
  - traffic speed 61 to 80 km/h – 0.5m;
  - traffic speed greater than 80 km/h – 1.0m
- Barrier length must be sufficient to adequately protect the hazard.

### Minimum Length:

Lengths as crash tested (excluding terminals):

MASH TL 3 – minimum length = 98.6m

MASH TL 4 – minimum length = 278m

### Terminals permitted:

Quadguard M10 CZ Crash Cushion	<ul style="list-style-type: none"><li>• The Quadguard M10 CZ Crash Cushion is accepted to a design speed of 100 km/h.</li><li>• Crash cushion must be connected to an HV2 Transition Section, which is chemically anchored with 460mm long M20 threaded rod to the pavement.</li><li>• Pavement may consist of:<ul style="list-style-type: none"><li>(i) 150mm concrete,</li><li>(ii) 76mm asphalt over 76mm concrete,</li><li>(iii) 150mm asphalt over 150mm subbase, or</li><li>(iv) 200mm asphalt</li></ul></li><li>• May only be installed where reverse impacts are highly improbable and a risk assessment has been completed and steps undertaken to mitigate any risks identified.</li></ul>
SLED End Terminal	<ul style="list-style-type: none"><li>• The SLED End Terminal is accepted to a design speed of 80 km/h or less (i.e. a posted speed of 70 km/h or less)</li><li>• Terminal must be connected with a SLED Transition.</li></ul>

### Point of Redirection:

The points of redirection shall be:

- When a Quadguard M10 CZ Crash Cushion is connected, the point of redirection for MASH TL3 conditions shall be the nose of the crash cushion.

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- When a SLED End Terminal is connected, the point of redirection for MASH TL3 conditions shall be 22.5m from the end of the HV2 Safety Barrier (for both the leading and trailing ends).
- The point of redirection for MASH TL4 conditions shall be 138m from the end of the HV2 Safety Barrier (for both the leading and trailing ends).

### Limitations:

- Not to be used on longitudinal slopes or crossfalls greater than 5%.
- Cannot be used on radii smaller than 80 m.
- Cannot be placed adjacent to kerbs or other objects, which may prevent lateral displacement.

### Installation and Maintenance Requirements:

In accordance with the HV2 Barrier Product Manual (Australian Version 1.6, May 2021).

### Parts to be Replaced after Impact:

Units may need to be repaired after impact or replaced depending on the extent of damage.

### Parts Typically Re-Useable after Impact:

Undamaged units.

### References:

Item	Description
1	Barrier system information can be found on Main Roads file 18/8438.

Relevant FHWA Approval Letters to MASH TL 3 and MASH TL 4:

[https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/reduce\\_crash\\_severity/barriers/pdf/b306.pdf](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/barriers/pdf/b306.pdf)

[https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/reduce\\_crash\\_severity/barriers/pdf/b308.pdf](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/barriers/pdf/b308.pdf)

Code	Description
B306 & B308	MASH Test Level 3 and MASH Test Level 4