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BARRY - USER MANUAL

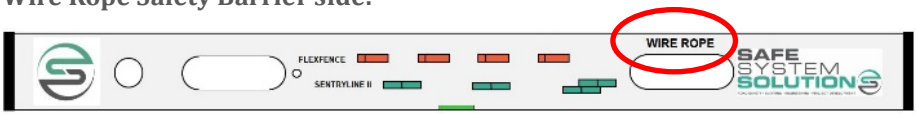
INTRODUCTION

Barry is a measuring tool designed to assist practitioners to:

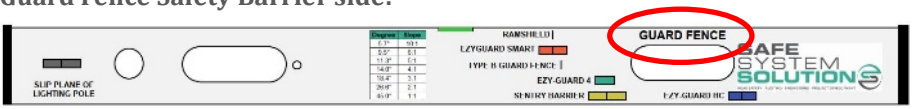
- validate the height of safety barriers based on VicRoads Road Design Note (RDN) 06-04 – Accepted Safety Barrier Products and product supplier's requirements; and
- assist in measuring the slope of roadside batters.

Barry has two sides, one for measuring Wire Rope Safety Barriers and one for W-Beam (Guard Fence) type barriers. There is also a ruler located on the edge to help with taking and recording site measurements.

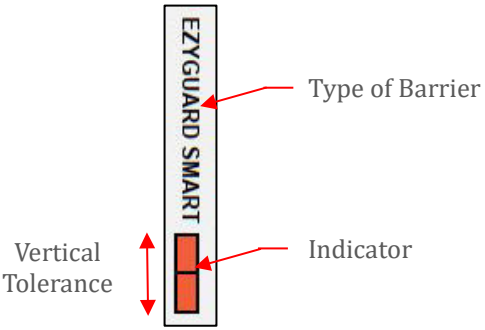
Wire Rope Safety Barrier side:



Guard Fence Safety Barrier side:



When installing a safety barrier it is important that the system is installed at the correct height to ensure it performs as intended when struck by an errant vehicle. Each barrier type has a specific installation height and acceptable vertical tolerance range this is shown on the Barry black indicator (line) and coloured area.



CHECKING - WIRE ROPE SAFETY BARRIERS

Wire Rope Safety Barriers (including Flexfence and Sentryline II) are measured by placing the Barry on the ground adjacent to the safety barrier as shown below:

Flexfence (Red Indicators)

Sentryline II (Green Indicators)

Note: Ensure you have the Barry orientated the right way up! The '0' ruler measurement should be closest to the ground.

Wire Rope Safety Barriers have a vertical tolerance which each of the wire ropes are required to be within. The vertical tolerance areas are shown in either green or red depending on the system type.

When checking a Wire Rope Safety Barrier:

- If each barrier rope matches the indicated markers and fits into coloured areas, the barrier has been installed in accordance with VicRoads requirements and the product supplier's manual.
- If each barrier rope fit into coloured areas either side of the indicated marker, is has been installed in accordance within the vertical tolerance requirements as per VicRoads guidelines and the product supplier's manual.
- If each barrier rope does not fit in either coloured areas, the barrier is either too low or too high and not in accordance with VicRoads guidelines and the product supplier's manual.

CHECKING – W-BEAM SAFETY BARRIERS

W-Beam Safety Barriers (including Ezy Guard Smart, Ramshield, Type B Guard Fence, Sentry Barrier and Ezy Guard High Containment (HC)) are measured by placing the Barry on the ground adjacent to the safety barrier as shown below:

Ezy Guard 4 (Green Indicator)

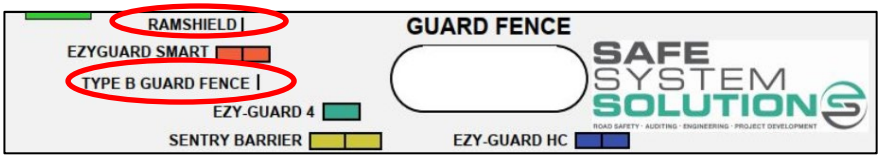
Note: Ensure you have the Barry orientated the right way up! The '0' ruler measurement should be closest to the ground.

W-Beam Safety Barriers have a vertical tolerance which the top of the W-Beam railing is required to be within. The vertical tolerance areas are shown in either red, green, yellow and blue depending on the type of barrier product used.

Checking W-Beam safety barriers:

- If the top of the W-Beam railing matches the indicated marker and is within the coloured area, the barrier has been installed in accordance with VicRoads requirements and the product supplier's manual.
- If the top of the W-Beam railing fits into the coloured areas above or below the indicated marker, the barrier has been installed in accordance within the vertical tolerance requirements as per VicRoads guidelines and the product supplier's manual.
- If the top of the W-Beam railing does not fit in either coloured areas, the barrier is either too low or too high and not in accordance with VicRoads guidelines and the product supplier's manual.

- For Ramshield and Type B guard fence barrier products there is no tolerance for its installation hence no coloured area has been provided. If an installation does not match the indicated marker the barrier has been installed incorrectly.



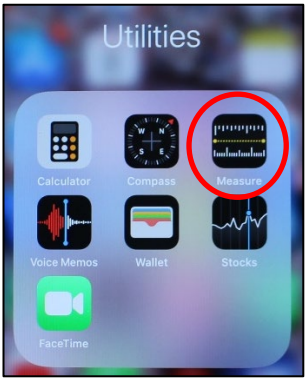
Note: When checking W-Beam safety barriers behind kerb and channel it is important to measure the height of the barrier from the correct point (refer VicRoads RDN 06-08), this being the lip of kerb or ground surface behind kerb depending on the barrier offset measured from back of kerb.

CHECKING THE SLOPE OF A BATTER

When checking barrier installations, it is important to know the slope of a batter in front and behind a barrier as it can have an effect on barrier performance. The maximum slopes in front of and behind barriers are set out in VicRoads RDN 06-02, 06-08 and 06-15 Austroads Guide to Road Design Part 6. Measurements taken on site should be checked against these standards to determine if there are any potential safety issues.

Barry can be used to accurately determine the slope of a batter in front of or behind barrier by following the steps set out below:

① Launch 'Measure' app (IOS) or 'Ruler' app (Android) in smartphone.



② Insert smartphone into the black phone holder on side labelled 'Guard Fence'.

③ Place Barry on its edge with Barry being as flush with the natural surface as possible.

④ Read the measurement 'degrees' shown as shown on smartphone screen.

⑤ Use table located on Barry to convert the degree θ measurement into slope measurement.

Degree	Slope
5.7	10:1
9.5	6:1
11.3	5:1
14.0	4:1
18.4	3:1
26.6	2:1
45.0	1:1