

Moddex Bikesafe Bikeway Barriers BPIR Declaration

Version: v1

Designated building product: Class 2

Declaration:

Moddex has provided this declaration to satisfy the provisions of Schedule 1(d) of the Building (Building Product Information Requirements) Regulations 2022.

Product/system

Name: Moddex Bikesafe Bikeway Barriers

Identifier:

- BS10 - A partial barrier with smooth deflection rail for Austroads and NZTA compliance.
- BS20 - A standard partial barrier with smooth deflection rail for Austroads and NZTA compliance.
- BS25 - Bikeway barrier with offset top rail and handrail for level and rake applications.
- BS30 - A partial barrier with smooth deflection rail for Austroads and NZTA compliance and bottom rail for added protection.
- BS35 - Bikeway barrier with offset top rail, handrail and bottom rail for level and rake applications.
- BS40 - A standard full barrier with smooth deflection rail for Austroads and NZTA compliance.
- BS45 - A full barrier with smooth deflection rail, incorporating a handrail for additional assistance.



Description

Moddex Bikesafe barriers ensure you protect cyclists, especially those travelling at speed, and eliminate or mitigate injury from falls. Bikesafe systems are quick and easy to install, with curved sections to flow with cycle ways.

The smooth continuous top rails help prevent or mitigate injury for both pedestrians and cyclists.

With six configurations available in the Bikesafe family, Moddex bikeway barriers offer:

- Continuous full or partial offset barriers for protection across culverts, bridges, headwalls and hazards
- Smooth and continuous top rails for injury prevention
- Curves to flow with bike paths or cycle ways

Scope of use

Moddex Bikesafe Bikeway Barriers are suited to applications such as:

- Cycle Paths and Bikeways
- Shared Pedestrian Paths
- Protection over culverts
- Footbridges

Conditions of use

The Moddex Bikesafe Barrier System must be installed to a substrate (as designed by others) that is able to resist the applied loads.

Bikeway Barrier systems must be installed by an accredited Moddex Installer as per the Moddex Bikesafe Ps1 and the Moddex Installation Guide.



Not suitable for use on roads or public transport areas where the barrier is required to meet car loading requirements. Bikeway barriers should not be used for the restraint of vehicles and should only be used in the following locations:

- On a structure provided for the sole use of pedestrians, i.e. not motorised traffic
- On the outside of a footpath on a structure that is separated from the motorised traffic by a semi-rigid barrier or a rigid barrier.

Relevant building code clauses

- B1 Structure
- B2 Durability
- Other: NZTA Bridge Manual B6.4, B2.4 and B2.5

Contributions to compliance

B1 Structure: Moddex Bikesafe Systems have been designed and tested in accordance with loadings AS/NZS 1170.1:2002 table 3.3 and AS 1657:2013 CL6.1. Bikesafe Configurations BS40 and BS45 are designed for loading 0.35 kN/m line load or 0.6 kN concentrated load on the top rail, as per AS/NZS 1657.

B2 Durability: Moddex Bikesafe Systems are galvanized to AS 4792 and AS/NZS 4680:2006 and can provide a durability of at least 5 years in all Exposure Zones. Durability is dependent on the Bikesafe Balustrade being installed and maintained in accordance with Moddex specifications and recommendations. Refer to Moddex Care and Maintenance Manual

NZTA: Moddex Bikesafe Bikeway barriers are designed and manufactured in accordance with the NZTA Bridge Manual B6.4 and also incorporate the relevant requirements for pedestrians and cyclists under B2.4 and B2.5 to provide the ultimate protection for cyclists travelling at speed.



The NZTA Bridge Manual states that the installation of a barrier at the side of a path used by cyclists or pedestrians is desirable where:

- There is a steep batter or large vertical drop located in close proximity to the path.
- The path is adjacent to an arterial road and it is necessary to restrict cyclist access to the road.
- A bridge or culvert exists on a path.
- A hazard exists adjacent to a particular bicycle facility.
- Cyclists are likely to be 'blazing a separate trail' at an intersection between paths or around a path terminal.

B2.5 Cyclist Barriers:

The minimum height to the top edge of the top rail for a cyclist barrier shall be:

- 1200mm where the risk of angled collision resulting in a cyclist vaulting over the barrier is considered low
- 1400mm where the risk of angled collision or launch is high.

This would typically be at tight bends or junctions (radius less than 25m) or where cyclists travel at high velocities (greater than 40km/h).

B6.4 Pedestrian & cyclist barriers Bridge barriers shall be designed for the most extreme of the following loads:

- Horizontal and vertical service loads of 1.75kN/m applied to the top rail
- A horizontal service load of 1.5kN/m² applied to the gross area of the barrier
- A point load of 0.5kN in any direction at any point.

Horizontal and vertical loads need not act concurrently.

In addition to the provisions above, where the road controlling authority requires the barrier to restrain crowds or people under panic conditions, the barrier shall be designed for the most extreme of the following loads:

- A horizontal service load of 3.0kN/m acting away from the path simultaneously with a vertical service load of 0.75kN/m acting on the top rail
 - A horizontal service load of 1.5kN/m simultaneously with a vertical service load of 0.75kN/m acting on any one longitudinal member
 - A horizontal service load of 1.5kN/m² applied to the gross area of the barrier
 - A horizontal point load of 1.0kN acting away from the path at any point.
- The load factor for the ultimate limit state shall be 1.8 for design of the barrier, fixings and supporting structure



Supporting documentation

The following additional documentation supports the above statements:

Moddex Installation Guide (Installation) May 2021

https://3284798.fs1.hubspotusercontent-na1.net/hubfs/3284798/NZ_Moddex_InstallGuide_Update_May2021_90254_M2.pdf

Moddex Care and Maintenance Manual (Maintenance) September 2023

https://3284798.fs1.hubspotusercontent-na1.net/hubfs/3284798/Moddex_Care%20&%20Maintenance%20Manual.pdf

Moddex Bikesafe PS1 (Design) March 2021

<https://3284798.fs1.hubspotusercontent-na1.net/hubfs/3284798/033-005-PS1-01.%20BS40%20Bikesafe.pdf>

For further information supporting Moddex Bikeway Barriers claims refer to our website - www.moddex.com

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