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Technical Direction – TD 00051:2024

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Title: Update to allow for the use of flangeway gap fillers at railway level crossings – Amendment to ESC 520 (TS 02392) *Level Crossings*, version 2.3

This technical direction is issued by the Asset Management Branch (AMB) as an update to ESC 520 (TS 02392) *Level Crossings*, version 2.3.

This technical direction includes an amendment to Section 5.4 to permit the use of flangeway gap fillers with approved product at level crossings, and related update to the approved products list in Appendix 2. It also includes an additional update to Appendix 2 to add other level crossing product that was approved in the past.

1 Background

ESC 520 (TS 02392) specifies the requirements for the depth and width of flangeway gaps to allow train wheel flanges to traverse through the level crossing surface.

These requirements do not allow any provision for the use of flangeway gap filler to mitigate any entrapment hazard.

2 Amendment to ESC 520 (TS 02392)

The following sections in ESC 520 (TS 02392) are amended as follows:

Section 5.4 Flangeways

Delete the contents of Section 5.4 in their entirety and replace with the following:

Level crossings shall be designed to provide a clearance to the running rail for train wheel flanges. The following flangeway gap requirements apply to all railway level crossings unless an approved level crossing product with flangeway gap filler is used:

- Level crossings shall have a minimum flangeway clearance of 60 mm.
- Pedestrian level crossings shall have a maximum flangeway clearance of 65 mm as new, maintained to 75 mm. The maximum depth of the flangeway clearance shall be 50 mm.

Refer to Appendix 2 for details of approved level crossing products.

Appendix 2 Approved Level Crossing Surface Products

Delete the contents of Appendix 2 in their entirety and replace with the following:

Manufacturer	Supplier	Surface type	Application			
			Road	Pedestrian	Track vehicle access	Service
Bodan:	KH1 Pty Ltd	Frameless Polymer Concrete Panel*	√ ^{1,2}	√	√	√
Holdfast:	Baron Rubber Pty Ltd	Rubber Panel	√ ^{1,2}	√	√	√
STRAIL:	Phoenix AG (Australia) Pty Ltd	Rubber Panel	√ ²	√	√	√
pedeSTRAIL:	Phoenix AG (Australia) Pty Ltd	Rubber Panel	-	√	-	-
veloSTRAIL ⁵ :	Phoenix AG (Australia) Pty Ltd	Rubber Panel	√ ^{2,3}	√ ³	-	√ ³
Thermit:	Thermit Australia Pty Ltd	Concrete Panel	-	√	√	√
Trelleborg:	Trelleborg Engineered Systems Australia Pty Ltd	Rubber Panel	√ ^{1,2}	√	√	√
Other:	-	Asphaltic Concrete	√	√	√	√
	-	Concrete	√	√	√	√
	-	FRP Grating	-	-	-	√ ⁴

* Steel framed panels not allowed

Notes:

1. Not where road speed exceeds 80 km/h
2. Not where angle of road crossing the track is more acute than 30 degrees
3. Not be installed within 1000 m downstream from an active track lubrication point
4. Pedestrian crossings in yards and sidings only
5. Level crossing product with flangeway gap filler

Authorisation:

Approved by	Director Corridor Infrastructure and Engineering Asset Management Safety, Environment and Regulation
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