

RISSB Product Proposal (and Prioritisation)

Primary information			
Type of product being suggested:	<i>Guideline</i>		
Title of product being suggested:	<i>Guideline for the suitable treatment of flange gaps at level crossings</i>		
Date of suggestion:	<i>08/02/2018</i>		
Reason for suggestion:	<i>observed deficiency/opportunity in the industry</i>		
Railway discipline area:	<i>Safety or track</i>		
Scope:			
<p><i>Currently the Disability Standards for Accessible Public Transport 2002 (Transport Standards) stipulate that the maximum traversable gap for unassisted access is 12mm vertical and 40mm horizontal.</i></p> <p><i>The current level crossing standards (AS1742.7) advises that flange gaps can be designed to a maintainable maximum gap of up to 75mm. The Australian Standards for level crossings makes specific mention that a flange gaps has been noted as an entrapment hazard for pedestrians.</i></p> <p><i>In many low patronage locations, level crossings form part of the access path to the station. In order to make these stations accessible a solution needs to be developed to address the flange gap for the road/rail interface as they exceed the requirements under the Transport Standards.</i></p> <p><i>Initial research undertaken by the Australasian Centre for Rail Innovation (ACRI) into flange gap fillers concluded that significant entrapment and trip risks exist with the flange gaps at level crossings, particularly for those using wheelchairs, wheeled walkers, walking canes and prams. There are various flange gap fillers available however, these have not been properly evaluated and tested for their effective ability to reduce risks without creating additional hazards. We are not aware of further research to be conducted in this area at this time.</i></p> <p><i>This Guideline will build upon the initial research piece undertaken by ACRI to develop viable (if any) solutions for rail operators to bridge flange gaps to make crossings safer for pedestrians without causing adverse impacts to rollingstock movements.</i></p> <p><i>This should also include research on safe dimensions for people to traverse across but also for rollingstock movements.</i></p>			
Objective:			
<p><i>The objective of this Guideline is to assist operators in identifying suitable solutions for implementation to bridge flange gaps in level crossings in pedestrian environments in order to find cost effective and safe solutions.</i></p>			
Hazard identification:			
1	Entrapment	6	
2	Slips, trips and falls	7	
3		8	

RISSB Product Proposal (and Prioritisation)

4		9	
5		10	
Benefits:			
<p><u>Safety</u></p> <ul style="list-style-type: none"> • <i>Reduces the likelihood of entrapment of pedestrians in flange gaps</i> • <i>Reduces the likelihood of slips, trips and falls of pedestrians</i> <p><u>Interoperabilityⁱ / harmonisationⁱⁱ</u></p> <ul style="list-style-type: none"> • <i>All railway operators have difficulties in finding solutions to bridge flange gaps. Through extensive product testing or development of a bespoke design solution this guideline would assist in developing a harmonised solution across all jurisdictions.</i> • <i>This work may assist or form part of future revisions of the Transport Standards.</i> <p><u>Financial</u></p> <ul style="list-style-type: none"> • <i>A suitable solution means that locations with lower patronage may find a cost-effective solutions in making them accessible without the need for large infrastructure insertions (eg lifts)</i> • <i>Lower ongoing operational costs.</i> • <i>This is also particularly important in rural and regional areas for economic development where the costs in prescriptive solutions such as lifts may cause perverse outcomes with operators no longer servicing these areas due to ongoing capital and operating costs in making locations accessible in accordance to the Transport Standards.</i> <p><u>Environmental</u></p> <ul style="list-style-type: none"> • <i>More sustainable solution than lifts and other infrastructure.</i> 			
Impacts:			
<ul style="list-style-type: none"> • <i>Safety risk of implementing a solution in a “live” environment</i> • <i>Differing rollingstock types and speeds make finding a solution that meets all requirements difficult</i> 			

i **Interoperability** is the ability of a process, system or a product to work with other process, systems or products (aka compatible systems through managed interfaces).

ii **Harmonisation** - the act of bringing into agreement so as to work effectively together (aka uniformity of systems).

RISSB Product Proposal (and Prioritisation)

Other items to aid RISSB project planning

Structure:		
Reference / source materials:		
#	Reference / source material	Available from
1	ACRI research into flange gap fillers – LC15 (attached)	ACRI
2	Australian Standards – AS1742.7, AS1428.1, AS1428.2	Standards Australia
3	Disability Standards for Accessible Public Transport 2002	Legislation.gov.au
4		
5		
6		
7		
8		
9		
10		
Assumptions:		
Constraints:		
Australian Standards considerations: (only applies if proposed product is to be a Standard)		
Does proposed Standard duplicate an existing Australian Standard <i>(Where such duplication occurs, justification or explanation shall be included in the standard)</i>		
(if yes – please list)		
Will proposed Standard be developed for conformance assessment purposes? <i>(relates only to inspection and testing activities subject external certification)</i>		
(if yes – please detail expected certification activities)		
Are there are any International Standards on the same subject		
(if yes – could Int.std.be adopted or used as a basis for this development)		
(if no – please provide reasons)		
Expected effort required at key stages:		
Activity	# Days	
The Author's research into the reference / source materials.	2	
The Author's further (if required) development of draft headings for the document (including any work that may be required on the scope, purpose and hazard references).	5	
The Author's production of the draft content building on the above.	10	
The Author's production of a further draft based on Development Group comments on the above.	10	
The Author's development of the 'post public consultation' draft based on the guidance of the Development Group in addressing public comments.	10	
Independent validation ⁱⁱⁱ (applies only to standards).		
The Author's finalisation of the product incorporating Development Group's validation comments.	2	

RISSB Product Proposal (and Prioritisation)

iii Independent validation is to:

1. Check that clauses relate to the identified hazards
2. Check that the standard is of comparable quality to other similar domestic / international standards
3. Check that the standard is fit for the Australian railway (and is therefore nationally applicable)
4. Provide a recommendation for any deficiencies from the above