

Safety In Design Meeting Minutes - NZTA Petone to Melling Cycleway Project
NZTA Chews Lane Offices - 11th July 2017 2.00pm

DRAFT

Reference	Issue
1	Petone Underpass
2	Normandale Underpass
3a	Petone Station Car Park
3b	Rail Corridor Cycleway
3c	Hutt River Trail Link

Safety in design objective of focus	
A	Constructability
B	Operation by end user (public)
C	Maintenance and Operation
D	Demolition

Attendees	Organisation	Role/Responsibility
Chris Nally (CN)	NZTA	Project Manager P2M Cycleway
Ross Balfour (RB)	NZTA	Maintenance & Operations
Karen Chapman (KC)	KiwiRail	Project Co-ordinator - Wellington Metro Upgrade Project
Duane Greyling (DGr)	KiwiRail	Protection Planner - Wellington Metro
Simon Cager (SC)	HCC	Senior Project Manager
Section 9(2)(a)	AECOM	P2M Design Manager
	AECOM	Facilitator
	AECOM	Principal Civil Engineer
	AECOM	Lead Geometrics Designer
	AECOM	Graduate Engineer

Ref	Issue	Location	Raised By	Safety in design objective of focus				Mitigation/Action	Current Owner	Contact person	Closed out Date
				A	B	C	D				
1	Petone Underpass										
1.1	Overhead lines cannot be disassembled or pulled to one side during construction due to age and condition of fasteners	Petone and Normandale underpass	DGr	✓				Outline construction methodology updated to suit. Contractor methodology must work around this requirement	Section 9(2)(a)		
1.2	Contractor staff could "burn out" after several days of shift work during 24 hour construction	Petone underpass	Section 9(2)(a)	✓				Contractors must prove how they will safely resource job	CN		
1.3	Not all contractor staff may be fit for work on New Years Day.	Petone underpass	KC	✓				Contractors to have resource contingency for NYD	CN		
1.4	Specs and operation/monitoring of CCTV (all of P2M cycleway)	Throughout	RB		✓	✓		Speak to GWRC re specifications and willingness to monitor Cycleway CCTV	Section 9(2)(a) Richard Noakes (GWRC), Section 9(2)(a)		
1.5	Options for sump depths on underpass- accessibility for maintenance	Petone and Normandale underpass	Section 9(2)(a)			✓		Decide on shallow wet well in underpass or deep wet well in rail corridor- consultation with Wellington Water required (subject to confirmation of asset ownership on completion)	TBC Wellington Water		
1.6	Fence height options on sides of ramps (1.5 m or 1.8m). Fences within 4 m drop zone of highest traction overhead wire will needed to be electrically bonded as per KiwiRail specification E1356	Petone and Normandale underpass	Section 9(2)(a)		✓			Check fence position and height relative to nearest OHLE wire drop zone			
1.7	Security concerns at Weltec- may need higher fencing on subway wall nearest Weltec	Petone underpass	CN		✓			Confirm position with WelTec. Consult urban designers on secure and aesthetic fence design			
1.8	Weather during Xmas Block of Line may cause incomplete construction of underpass	Petone underpass	CN	✓				Design in hold points so construction will not begin if weather bomb coming. Mitigation strategy to reinstate if construction is partially complete	CN		
1.9	Ballast could fall into ramps over time as track retamped / reballasted.	Petone and Normandale underpass	DGr		✓	✓		Increase free board height of ramp walls nearest rail lines (match height on end subway units)	Section 9(2)(a)		
1.10	Buried Services	Petone underpass	Section 9(2)(a)	✓				Trial excavation to locate services prior to Xmas BOL			
1.11	Contaminated soil disposal over Christmas	Petone underpass	Section 9(2)(a)	✓				Ensure landfill will be able to take waste over holiday period	CN		
1.12	Adjacent KiwiRail work site during Xmas BOL - 206 signal Banner Indicator installation	Petone underpass	DGr	✓				Communicate access requirements to avoid conflict during BOL	DGr	Duane Greyling will be in overall charge of Block of line worksite protection and isolation arrangements	
1.13	Reduction in footpath width on Hutt Road beside subway ramp	Petone underpass	SC		✓	✓		Determine extent of width reduction and advise SC	Section 9(2)(a)		
1.14	Maintenance of underpass - will a sweeper vehicle fit vertically?	Petone and Normandale underpass	Section 9(2)(a)			✓		Determine height of typical small sweeper vehicle and confirm			
1.15	Graffiti protection/ removal in underpasses	Petone and Normandale underpass	CN		✓	✓		Find out what Graffiti Guard or similar product works best on exposed concrete- check what GWRC use for rail stations		Richard Noakes (GWRC)	
1.16	Maintenance and location of lighting units	Throughout	Section 9(2)(a)	✓		✓		Lighting units and mounting columns on subway walls and throughout P2M cycleway should if possible be located outside of 4 m drop zone of highest traction overhead wire on nearest rail track. If this is not possible the lighting columns steel work needs to be earthed and the lighting supply to each pole fed through an isolating transformer as per KiwiRail specification E1356. This also applies to any SH 2 street lights that need to be relocated for cycleway.			
1.17	Design of lighting units- acceptability to KiwiRail from avoiding excessive glare to train drivers	Throughout	Section 9(2)(a)			✓		Proposed lighting design has columns on the rail side of the cycleway, i.e. light directed away from the rail track. Moving the columns to the SH2 side to address 1.16 above will cast light towards the rail corridor. Confirm effects and agree with KiwiRail		Leah Murphy (KiwiRail)	

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1.18	Access to rail corridor at Petone for KiwiRail Maintenance Vehicles	Petone Underpass	Section 9(2)(a)	✓	✓	Double gate to be provided from WelTec land across cycleway (at approx. chainage 300) for trucks to access corridor. Localised increase in cycleway pavement thickness at crossing point.	
1.19	Emergency service access to cycleway	Throughout		✓	✓	Determine how emergency services will access cycleway but prevent unauthorised vehicle access. Possible removal bollards at each end of Petone station carpark onto cycleway	Section 9(2)(a) Police/ Ambulance/ Fire service?
1.20	Heavy rain may flood underpass	Petone and Normandale underpass		✓		Determine how people will be warned. Possible Manual barriers at each end of underpasses to prevent access? Needs to be agreed with Hutt City Council	Simon Cager (HCC)
1.21	Handling of rails for box culvert installation	Petone and Normandale underpass		✓		Consider how long lengths of rail will be safely handled and installed to provide level surface for box culvert installation	
1.22	Continuity of reinforcing mesh for site concrete	Petone and Normandale underpass		✓		Reinforcing mesh will be laid under the rails supporting the box culverts	
1.23	Foundations of 4 redundant traction overhead structures	Petone		✓		KC to arrange for redundant bases to be removed as part of traction pole removal at Labour Weekend BOL. However Cycleway contractor should have contingency for extra fill if bases are not able to be removed before Xmas BOL. Consider how they will be safely removed and handled. Concern over stropping etc.	KC
1.24	Vertical and lateral clearances for possible KiwiRail ballast cleaner operation	Petone and Normandale underpass		✓	✓	Must determine min ballast depth to hard structure plus clearance to subway side walls	Section 9(2)(a) Karen to provide details

2 Normandale Underpass							
2.1	Ability to de-energise lines separately (Melling and Hutt Valley lines). Effect on Subway ramp secant piling pre-works	Normandale underpass	DGr	✓	✓	KC has a current project to modify OLE sectioning to allow all of Melling Line to be isolated while Hutt Line remains live- KC to advise expected timeframes	KC
2.2	Large vehicle manoeuvring around bend on Parliament Street is further constrained by reduction in carriageway width.	Normandale underpass	Section 9(2)(a)	✓	✓	Underpass has moved closer to rail lines in agreement with KiwiRail (3.0m clearance zone reduced to 2.5m). Minimise kerb realignment on rail side of Parliament Street and realign markings to extend carriageway width	Section 9(2)(a)
2.3	Brake shoe falling off train flies into ramp and injures someone	Normandale underpass	DGr	✓		Lift capping beam higher. Note no freight trains on Melling line so risk of brake shoes falling off train is reduced as Matangi electric trains are partially disc braked	

3a Petone Station Car Park							
3a.1	Conflicts between cyclists and pedestrian movements through car park (people going between cars and station)	Petone Station car park	Section 9(2)(a)	✓		Safety audit has been undertaken including the route through and changes to the existing car park. The recommendations have been adopted. Allowance to be made for post opening monitoring, temporary signage etc.	Section 9(2)(a)
3a.2	Pedestrian access to station from new overflow carpark on south side of McKenzie Ave overbridge will be via short section of shared path beside railway. Risk that cyclist speed up after exiting main car park and collide with pedestrians walking to station.	Petone Station car park		✓		Safety Audit has proposed use of visual and physical alerts (signage, path texture, colour) to highlight shared path. The recommendations will be adopted.	
3a.3	Revised carpark layout and lanes not suitable for campervans	Petone Station car park	RB	✓		Signage to be provided to ban campervans from parking in Station carpark. Alternatively, overflow car park could be used?	

3b Rail Corridor Cycleway between Petone Station car park and Normandale underpass							
3b.1	SH2 Direction signage in way of cycleway - may need relocation	Cycleway	SC	✓	✓	Signs do need to be moved or modified. Confirm appropriate action with each.	Section 9(2)(a)
3b.2	Cycleway Fences within 4 m drop zone of highest traction overhead wire will need to be electrically bonded as per KiwiRail specification E1356 to minimise touch potential issues if OLE wires fall and come into contact with fence	Cycleway	Section 9(2)(a)	✓		Identify where this is unavoidable and incorporate KiwiRail requirements on these sections	
3b.3	Pinch point between state highway and Melling line junction safety turnout.	Cycleway	SW	✓	✓	Current KiwiRail Maintenance track does not extend past safety turnout and sanddrag, but cycleway design assumes that both existing kink in SH2 "W" crash barrier is removed and that the safety turnout can be moved closer to the main lines to create space for cycleway and maintenance track. Several options have been presented to NZTA and KiwiRail for consideration. Confirmation of preferred option is yet to occur	Leah Murphy (KiwiRail)
3b.4	Dowse Interchange bypass for "fast and furious" cyclists remaining on SH2- means of separating from parallel cycleway	Cycleway	Section 9(2)(a)	✓		Flexible orange poles proposed between Dowse bypass and cycleway. Possible different coloured surface and signage also needed	

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3c	Hutt River Trail Link								
3c.1	KiwiRail s ill need to be able to access Melling line along Parliament Street for dropping off maintenance material	Hutt River Trail connection	DGr		✓			Cycleway should not restrict this. Access to properties also needs to be maintained. Confirm final layout with KiwiRail	Section 9(2)(a)
3c.2	Location of fire station	Hutt River Trail connection	KC	✓	✓	✓		Consult on the impacts of the traffic calming measures proposed along Bridge Street, Pharazyn Street and Marsden Street. (AECOM and HCC)	
3c.3	Proposed Stop bank reconstruction will realign Marsden Rd	Hutt River Trail connection	CN?		✓	✓		Cycleway design based on current alignment as assumed that it will be constructed before stop bank project starts	CN
3c.4	Conflict of cyclists and car access to businesses on Bridge St	Hutt River Trail connection	SC		✓			WCC trialling warning markings for similar situations along Hutt Rd	Section 9(2)(a) Paul Barker - WCC

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