

Risk ID	Risk Title	Risk Details				Pre-Treatment Risk Level				Treatment & Residual Risk					
		Area	Design Work Package	State	Section 9(2)	Existing Controls (Project)	Risk Rating	Current Risk Rating	Risk Treatment Actions (Proposed mitigation)	Severity	Probability	Residual Risk Rating	Residual Risk	Residual Risk Owner	
1	There is a threat of temporary stability issues related to existing revetment (related to temporary support)	Project Wide - 000	DWP-RV-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Extreme	Unlikely	HIGH	To be developed further. Potential treatments could include: - PAA investigations of existing rock revetment stability during design with current information and develop mitigation solutions and methodologies to be used during construction.	Extreme	Rare	HIGH	To be developed	Construction (Craig Services)
2	There is a threat of working in confined spaces for manhole inspections (operation) and installation (construction)	Project Wide - 000	DWP-DR-02	Live - Treat	Section 9(2)	Rungs in manhole to enable access	Extreme	Rare	HIGH	To be developed further. Potential treatments could include: - Safe working method to be developed to govern work in confined spaces	TBC	TBC	#N/A	To be developed	Construction (Jessica Phoenix)
3	There is a threat of unavailability of Rail Protection Officers	Project Wide - 000	N/A	Live - Treat	Section 9(2)	Agreement with KiwiRail on Digital shield to reduce the number of RPO required	Moderate	Unlikely	MEDIUM	To be developed. Potential treatments could include: - Train and develop project RPOs	TBC	TBC	#N/A	To be developed	Construction (Jessica Phoenix)
4	There is a threat that the lack of sufficient availability of Electrical Safety Officer Officers causes delays to work fronts not being able to operate	Project Wide - 000	N/A	Live - Treat	Section 9(2)	KiwiRail have committed to us 3 ESO's this will provide 1 ESO per work crew. (If 1 ESO not available for any reason one work crew may need to stand down until an ESO is available.)	Extreme	Unlikely	CRITICAL	To be developed	TBC	TBC	#N/A	To be developed	Construction (Jessica Phoenix)
5	There is a threat that because of frustration with the design of the shared path (width design speed) and maybe how busy it is cyclists choose to stay on State Highway over using the path. Risk of cyclist fatality on this road. (Project fails to achieve objective)	Project Wide - 000	DWPTS-01 DWPTS-02 DWPTS-01	Live - Treat	Section 9(2)	Current design seek provide a facility which is attractive to cyclist including but not limited to: - 3.0m design speed - 5m total width - tactile delineation to encourage separation of different transport modes	Extreme	Unlikely	CRITICAL	To be Developed. Potential treatments could include: - Closing of the State Highway to cyclists widening of the path separated cyclist and pedestrian cyclists. - Provision of an alternative cycle route for road cyclist groups on weekends/busy times	Extreme	Possible	CRITICAL	To be developed	Waka Kotahi (operation)
6	There is a threat that the number of people using the completed path are lower than the numbers forecast.	Project Wide - 000	N/A	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Severe	Possible	HIGH	The intention is to ensure the design implementation and ongoing maintenance create an environment that attracts people to use the shared path including people already cycling on SH2. This will be supported by communications and behaviour change initiatives to raise awareness and support people to use Te Ara Tupua. To be Developed. Potential treatments could include: 1. Work with the Te Ara Tupua Alliance to ensure the design of the path will meet the needs of people walking, cycling and using micro-mobility devices including people already cycling on SH2. 2. Identify critical gaps in connectivity and work with Council partners to resolve prior to opening. 3. Identify and agree baselines and how uptake and mode shift will be measured. 4. Produce an Update Strategy incorporating an Action Plan that sets out the communications marketing and behaviour change initiatives that will be delivered	Severe	Unlikely	MEDIUM	To be developed	Waka Kotahi (operation)
7	There is a threat of workers falling from bridge during construction (In NZ there have been 40 Fatalities 2011-2021 from falling from height)	Ngā Ūranga - 001	DWP-BR-01	Live - Treat	Section 9(2)	Downer Critical Risk controls for working at height	Extreme	Rare	HIGH	To be Developed. Potential treatments could include: - Seek to reduce the time and complexity of work to be undertaken at height including: - Simplify site joints - bolted/girder splices versus welded box girders - Provide suitable barriers on bridge - Look to modularise as much as possible to minimise on-site activities	TBC	TBC	#N/A	To be developed	Construction (Jessica Phoenix)
8	There is a threat of a derailed train impacting the bridge pier during an event which cause track displacement/derailment e.g. large earthquake event	Ngā Ūranga - 001	DWP-BR-01	Live - Treat	Section 9(2)	Robust kerbs between tracks and bridge piers KiwiRail train operation policy is response to extreme earthquake events	Extreme	Rare	HIGH	To be developed. Potential treatments could include: - Consideration of seismic effects on adjacent structures and how the land will look around the bridge in an IL2 and IL3 sized event - A robust kerb meeting the requirements of the KiwiRail Design Brief W203 will be provided between the rail corridor and pier/bridge supports. The robust kerb and maximization of distance between rail and bridge supports will reduce the risk of collision with bridge piers. In addition in accordance with the Bridge Manual the piers are designed for pier redundancy or impact loads.	TBC	TBC	#N/A	To be developed. Potential residual risk consideration include: - The chance of a train approaching the bridge just as a very large earthquake hits would be a rare (very low probability event) but if it did occur it could be serious. - However consequences on passengers on a train anywhere along this stretch in a very large earthquake event could be similar.	Waka Kotahi (operation) & KiwiRail
9	There is a threat that a user could be harmed due to the ecological barrier provided along the seawalls not being adequate at deflecting overtopping splash from the design storm event	Project Wide - 000	DWP-RV-01 DWP-TS-02	Live - Treat	Section 9(2)	Wave modelling and analysis to understand the LoS and design to achieve an agreed threshold.	Minor	Unlikely	MEDIUM	To be developed. Potential treatments could include: - ITS warning signs and apps to improve user awareness	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)
10	Threat of existing utilities strike and relocation of services	Project Wide - 000	DWP-JUN-01	Live - Treat	Section 9(2)	- Desktop study (before you dig) identification of services in the corridor - Consultation with utility and service owner to improve understanding network and accuracy of data	Extreme	Possible	CRITICAL	To be developed. Potential treatments could include: - Service location works within the construction corridor (including hydrovac and GPR investigations) - Design of service diversion/relocation works - Hazard controls on-site	TBC	TBC	#N/A	To be developed	Construction (Jessica Phoenix)
11	Threat that cyclist speeds on bridge ramps are excessive	Ngā Ūranga - 001	DWPTS-01 DWP-BR-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Severe	Possible	HIGH	To be developed. Potential treatments could include: - Reduced kerbs. Pavement markings to encourage slower speeds - Straight alignment and long sight distances - Extend the rub rail bar at the bottom of the bridge (at both ends) to consider a high speed zone and potential for user impact	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)
12	Threat that SH2 cycle lane closure endangers cyclist travel southbound on SH2	Ngā Ūranga - 001	DWP-TS-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Extreme	Unlikely	HIGH	To be developed. Potential treatments could include: - Discourage cyclist access to SH2. - Widened the shoulder on SH2. - Path access still available at the Ngā Ūranga intersection	TBC	TBC	#N/A	To be developed. Potential residual risk consideration include: - Cyclist choosing to use SH2 will not be prohibited	Waka Kotahi (operation)
13	Threat of vehicle using the path for Maintenance Bay Access	Project Wide - 000	DWP-TS-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Severe	Unlikely	MEDIUM	To be developed. Potential treatments could include: - Controlled access. SOP for all KiwiRail vehicles. - Spotter required if reversing onto the shared path is required. - Operation restrictions for example operation outside of peak path periods. - Signage and paint marking at maintenance bays. - Warning on VMS boards	TBC	TBC	#N/A	To be developed. Potential residual risk consideration include: - The residual risk after treatment is impeded - Turning of vehicles larger than uses requires reversing which enhances user vehicle crash - Risk of damage to specified pavement of maintenance bays	Waka Kotahi (operation) & KiwiRail
14	User Conflict at between users on main path and other users entering/exiting Ūranga	Project Wide - 000	DWP-TS-01 DWP-TS-01 DWP-TS-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Severe	Possible	HIGH	To be developed. Potential treatments could include: - pavement and cultural markings to highlight increased risk. - Strategic positioning of bike parts - Tactile delineation of Ūranga transitions points	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)
15	Tsunami	Project Wide - 000	N/A	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Extreme	Rare	HIGH	To be developed. Potential treatments could include: - Closure of path. Signage to direct pedestrians to nearest evacuation points. - Track crossing evacuation route via the track railing on mobile phone notification - Standard signage approach - Potential escape to the bridge as a high point	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)
16	Debris on path	Project Wide - 000	DWP-TS-01 DWP-DR-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Moderate	Unlikely	HIGH	To be developed. Potential treatments could include: - Maintenance of path to be agreed. Closure of path in significant weather events. - Nil kerb or similar reduced level of gravel finish areas to contain loose finish materials - Concrete finishes between path and Ūranga with ripping to capture finer materials	TBC	TBC	#N/A	To be developed.	Waka Kotahi (operation)
17	ITS cabinets	Project Wide - 000	DWP-TS-02	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Moderate	Unlikely	MEDIUM	To be developed. Potential treatments could include: - ITS cabinets to be located away from shared path with consideration for how they will be accessed and opened.	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)
18	Boat ramp at Honiana Te Puni Reserve	Honiana Te Puni Reserve	DWP-TS-01	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Severe	Unlikely	MEDIUM	To be developed. Potential treatments could include: - Restricted vehicle access to Honiana Te Puni Reserve west Resign boat ramp to be away from the main desire line for cyclists.	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)
19	Dog exercise areas	Honiana Te Puni Reserve	N/A	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Moderate	Unlikely	MEDIUM	To be developed. No dogs allowed on the main shared path. Lower cyclist speeds through path marking and signage	TBC	TBC	#N/A	To be developed: responsibility for dog control sits with dog owner.	Waka Kotahi (operation)
20	Low vision and blind users	Project Wide - 000	DWP-TS-01 DWP-TS-02	Live - Treat	Section 9(2)	No controls exist prior to implementing treatment of this risk item	Moderate	Unlikely	MEDIUM	To be developed: Tactile delineation between the pedestrian and cyclist paths along the entire length of the project.	TBC	TBC	#N/A	To be developed	Waka Kotahi (operation)





