

COMMERCIAL IN CONFIDENCE

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Row Ref	RID	Date Raised	Workstream	WBS	Risk Category	Zone	Impacted Phase	Risk Bearer	Risk Status		Risk Title	Cause	Impact	Established Controls	Controls Effectiveness	Prob	Cost Conseq.	Time conseq.	Reputation	Risk Score	Risk Rating	Prob	Best Case	Most Likely	Worst Case	Static	Future Treatment Strategy		
6	RSK-006	17/02/2025	Design & Construction	0B: Planning and Approvals	02: Scope & Standards	CVL	Pre Implementation	Waka Kotahi	Live - Treat		CVL - Managing flood resilience expectations from public	Hutt Valley is exposed to flood events, and there's a perception the project needs to address flooding events. Flood resilience expectations of Public are greater than proposed (currently not a project objective).	Delays and additional consultation to confirm flood resilience is not a project objective and obtain technical departures. For risk pricing, assume for design / consultation / modelling work to address concerns - \$0.1 to \$5m.	Manage expectations of stakeholders by producing PSOPS document that stands alone for CVL. Manage and define client expectations on resilience deliverables.		2 : Unlikely 5% - 30%	1 : <\$5m		3: Short term media coverage (days). Minister questions or 3rd party investigations.	11	Med Threat	10%	S7(2)(b)(ii)						
7	RSK-007	17/02/2025	Design & Construction	0B: Bridges	07: Insitu Conditions	CVL	Implementation	Waka Kotahi	Live - Treat		CVL - Hutt River Bridge piling interference with Waiwhetu aquifer - methodology change	The Hutt River bridge is located above the Hutt aquifer which has artesian (positive / negative) pressure. Piling for the Hutt River bridge will enter the aquiclude. Geotechnical investigations identify alternative methodology is required. Current method is single oversized casing with bentonite slurry.	1. BC - Assume base approach feasible, but takes longer than expected- \$13m worth of piles, Assume 50% time related, and other specialist plant required = \$5m risk. 2. ML - Alternative method required - e.g. double casing & grout plug - \$15m. 3. WC - Triple casing approach - \$25m Design rework and additional costs.	Use latest agreed method with GWRC for piling over Te Awa Kairangi as cost basis. Early communication with GWRC to develop design. - DBC and beyond		3 : Possible 30% -55%	3 : \$10m to \$25m	3: 3mth to 6mth	15	Med Threat	30%	Further investigation and design in pre-imp phase/							
13	RSK-013	10/03/2025	Governance	0B: Planning and Approvals	04: Planning & Approvals	CVL	Pre Implementation	Waka Kotahi	Live - Treat		CVL - Unclear future Land Use hampers decision-making	There is no clear future land use plan that is supported by robust engagement and analytics. E.g. Seaview and Petone areas, Hutt Valley. This is detrimental in selecting the preferred option.	1. Impacts traffic modelling assumptions (see RSK-010) 2. Impacts communities, businesses and stakeholders (see RSK-012) 3. Impacts recommended scheme - benefits not realised post opening For pricing, assume for design / consultation / modelling work to address concerns - \$0.1 to \$1m.	Robust assumptions and sensitivity/scenario testing, supported by peer review.		2 : Unlikely 5% - 30%	1 : <\$5m	4: 6mth to 12mth	3: Short term media coverage (days). Minister questions or 3rd party investigations.	13	Med Threat	10%						Ongoing liaison with HCC regarding any changes in land use policy.	
18	RSK-018	10/03/2025	Transport Planning	00: Global	05: Design Development	CVL	Pre Implementation	Waka Kotahi	Live - Treat		CVL - Local roads - scale of local network improvements to either mitigate effects or gain support of key stakeholders	Further traffic modelling refinement in next phase results in certain local roads requiring additional intersection or corridor upgrades to cope with new corridor: 1. Various intersection/slip lane upgrades 2. Worst case - Cuba St / Wakefield elevated grade signalised intersection (possible), OR, Wakefield / Hutt Rd Grade separation (unlikely)	1. Best case - minor addition to existing allowance in base. 2. Additional upgrades to local road and intersection capacities - \$12m 3. Worst case - significant intersection and approach upgrades \$40m note Cuba & Dowse intersection improvements are separate risks (RSK- 140 & 141).	1. Good confidence with base model settings. 2. Robust assumptions around growth areas based on available information - which is limited. 3. Sensitivity analysis and peer reviews 4. Allowance for network improvements - but this could increase to add lanes to key intersections, or additional width for PT / WC		3 : Possible 30% -55%	3 : \$10m to \$25m		15	Med Threat	30%	Engagement with HCC. Further investigation, traffic modelling and design in pre-imp phase.							
62	RSK-063	28/04/2025	Design & Construction	0B: Bridges	07: Insitu Conditions	CVL	Implementation	Waka Kotahi	Live - Treat		CVL - Worse than expected ground conditions for CVL river bridge/abutments	1. Deeper liquefiable layers uncovered from further ground investigation - more deep ground improvements required in Petone Marine beds (>10m), including alternative methodology required (ie. vs square precast concrete piles up to 6m). Steel piles currently allowed for abutment loads vs bank seat. 2. Soft layers with settlement risk due to MSE embankment - beyond GI areas or deeper.	1. Most costly methodology, lattice grid deep soil mixing, stone columns and increase in quantity, etc - eo for lattice grid. \$15m for 5-7m ML, and \$30m WC - 15m deep. 2. Additional shallow or deeper ground improvements to reduce settlement risk and avoid property impacts - ML - 50% for more precast - BC	1. Further targeted geotechnical investigations 2. use of Riverlink piling methodology as basis for CVL bridge.		3 : Possible 30% -55%	3 : \$10m to \$25m		15	Med Threat	30%	Further investigation and design in Pre-imp phase.							
65	RSK-066	28/04/2025	RMA and Consenting	01: Environmental Compliance	04: Planning & Approvals	CVL	Implementation	Waka Kotahi	Live - Treat		CVL - Consenting and planning - more environmental compliance / offset	Proposed bridge crossing across Hutt River - might require additional off-set / mitigation measures due to effects on environment (ecology, amenity, SW management, etc)	Additional environmental compliance / offsetting cost. Plug \$1m, \$5m, \$15m			3 : Possible 30% -55%	3 : \$10m to \$25m		15	Med Threat	50%								
66	RSK-067	28/04/2025	Design & Construction	05: Pavement and Surfacing	05: Design Development	CVL	Implementation	Waka Kotahi	Rejected		CVL - Increase of road connectivities - duplicate with RSK-048	More road interconnectivity required that expected as an outcome from traffic modelling or stakeholder requirements. E.g. new local connections, accessways, driveway upgrades, turning heads, etc.	E.g. new local connections, accessways, driveway upgrades, turning heads, etc. Plug \$1m, \$2m, \$10m			3 : Possible 30% -55%	2 : \$5m to \$10m		10	Med Threat									
67	RSK-068	28/04/2025	Design & Construction	0B: Bridges	08: Construction and interfaces	CVL	Implementation	Waka Kotahi	Live - Treat		CVL - Hutt River Bridge - increase in temporary works for constructability	1. Increase of temporary works due to design (simply vs continuous spans) and launching approach for superstructure. 2. Larger footprint required for temporary works, including protection from <1:20 ARI flooding. 3. Temporary causeway staging require deeper piles 4. Constraints around construction with stopbanks, i.e. maintaining integrity. 5. Additional properties to facilitate MSE wall construction, and maintain access along White Lines Way.	Increase costs for temporary works - working platforms, protection bunds, access roads, larger laydown areas. Base has \$7m - Plug assume \$2m, \$5m, \$10m Property: ML - \$2m (2 properties), and Worst case \$4m (4 properties)	Constructability dynamic review completed and comment provided to help inform constructability requirements.		3 : Possible 30% -55%	2 : \$5m to \$10m		10	Med Threat	50%	Further investigation and design in pre-imp phase/							
69	RSK-070	28/04/2025	Design & Construction	0B: Bridges	02: Scope & Standards	CVL	Implementation	Waka Kotahi	Live - Treat		CVL - Raise in bridge soffit and embankment length for flooding	GWRC guidelines require bridge soffit to raise 1m above embankments - thus increasing abutment height: a. Approach increases 20m length both sides b. 30m width impact on properties	Increased embankment size and increased ground improvement requirements - Assume plug \$1.0m WC - additional 5 properties for increased area of approach ramps, at \$1m each.			3 : Possible 30% -55%	3 : \$10m to \$25m		15	Med Threat	40%	Further investigation and design in pre-imp phase							
71	RSK-072	28/04/2025	Design & Construction	09: Utility Services	07: Insitu Conditions	CVL	Implementation	Waka Kotahi	Live - Treat	CVL - Increase utility scope (clashes, poor condition, betterment)	1. Poor condition watermain or wastewater mains along Wakefield. 2. Scope of gas, power, comms not understood. e.g. Utilities impacted by bridge approach embankments and intersection upgrades (undergrounding of overheads). 3. Additional scope from relocations (up sizing) 4. Hutt Crossing - NUO might interest	This is covered in IU allowance \$4.0m in base for utilities - assume 100% likely, 200% WC.	Further investigations at pre-implementation stages, and engagement with NUOs. Any betterment would be NUO cost.		4 : Likely 55% - 85%	2 : \$5m to \$10m		12	Med Threat	75%	Further investigation and design in pre-imp phase/								
109	RSK-111	2/05/2025	Comms & Stakeholder Engagement	0B: Planning and Approvals	04: Planning & Approvals	CVL	Pre Implementation	Waka Kotahi	Live - Treat	CVL - Delays and misalignment associated with separate CVL consultation process	If CVL is to be delivered by HCC, a separate consultation process would potentially take longer and have mixed messages with the wider P2G+CVL scheme.	Delay in completing consenting process for CVL and potential mixed messages			3 : Possible 30% -55%		3: 3mth to 6mth		15	Med Threat				Run a joint P2G and HCC consultation approach					

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111	RSK-113	5/05/2025	Design & Construction	06: Bridges	02: Scope & Standards	CVL	Implementation	Waka Kotahi	Live - Treat	S7(2)(b)(i)		CVL - Increased seismic resilience requirements for CVL river bridge	PSOPs assumes seismic design criteria will be a departure from latest NZGS seismic code. Expectations fo NZTA SME or stakeholders may increase to provide greater levels of resilience	More ground improvement in approaches and abutments for GI. Assume deep GI requirement worst case - \$10m at each abutment. ML - one abutment.	Seismic departure for investment case presented to CEAG.		2 : Unlikely 5% - 30%	3 : \$10m to \$25m			11	Med Threat	S7(2)(b)(i)					Further investigation and design in pre-imp phase/					
112	RSK-114	5/05/2025	Commercial	00: Global	06: Procurement and Resourcing	CVL	Implementation	Waka Kotahi	Live - Treat			CVL - Market competitiveness	Riverlink project has been awarded April 2025, and this will place a strain on the region to be able to resource and deliver CVL.	Additional premium to delivery project, but could decrease prior to implementation. Assume -2%, 2% and 5% on \$181m		3 : Possible 30% -55%	2 : \$5m to \$10m			10	Med Threat	Procurement strategy to be further developed with approval of investment case.											
113	RSK-115	5/05/2025	Design & Construction	00: Global	06: Estimation & Commercial	CVL	Implementation	Waka Kotahi	Live - Treat			CVL - Delayed project start - further cost escalation	Delayed delivery of CVL portion due to sequencing, funding, consenting, eto- further cost escalation exposure.	Increased cost from delayed start TBC pending SRA - might not be captured here.		3 : Possible 30% -55%	3 : \$10m to \$25m			15	Med Threat	TBC - Review delivery sequence and SRA to be completed											
120	RSK-122	6/05/2025	Design & Construction	0B: Planning and Approvals	02: Scope & Standards	CVL	Implementation	Waka Kotahi	Live - Treat			CVL - Having to enhance flood resilience after assessment and HCC engagement	Flood resilience is required after further assessments, stakeholder engagements, and if a flood event occurs, resulting in political pressure. This is currently not a project objective.	Additional flood mitigation is provided by minor formation raising and additional stormwater pump capacity. E.g. Raising of Wakefield and White Lines 300mm, additional property purchase, additional pump stations. Exposure could be \$20m, \$70m, \$100m No risk pricing for capital works - allow for further engagement fees.		2 : Unlikely 5% - 30%	4 : \$25m to \$100m	3: 3mth to 6mth		13	Med Threat	Manage expectations of stakeholders by producing PSOPS document that stands alone for CVL.											
121	RSK-123	6/05/2025	Transport Planning	00: Global	10: Completion & Handover	CVL	Post Implementation	Waka Kotahi	Live - Treat			CVL - Post opening usage does not reflect expected traffic modelling	Post opening usage of CVL does not meet expected usage as per traffic modelling. For tolling or PPP schemes - this potentially has repercussions on revenue.	OIA, parliamentary enquiries and loss of reputation. No risk pricing.		3 : Possible 30% -55%			2: Local media coverage (1-5 days). OIA. Negative Minister feedback	10	Med Threat												
138	RSK-140	17/05/2025	Design & Construction	13: Extraordinary Construction Costs	02: Scope & Standards	CVL	Pre Implementation	Waka Kotahi	Live - Treat			CVL - Cuba overbridge and intersection with Wakefield	Wakefield is grade seperated at Cuba Street with an old concrete bridge with height limits and reduced shoulder clearances. Cause is that the sieismic, safety risk or connectivity provided by this configuration is not considered acceptable.	intersection improvemnts to north to improve connectivity, potential seismic strengthening or full bridge replacement. No Risk Pricing as this would be scope addition	1. was considered in options considerations and was ruled out.		2 : Unlikely 5% - 30%	3 : \$10m to \$25m		3: Short term media coverage (days). Minister questions or 3rd party investigations.	11	Med Threat											