

Manawatu Cycle Bridge Risk Register

Project/Contract:	PNCC Pedestrian Cycle Bridge
Project/Contract ID:	He Ara Kotahi
Client:	PNCC
PNCC Lead:	Rob Green

Document Date:	Version 4 - date 15/07/2016	
Supplier Lead 1:	A Harris	Opus
Supplier Lead 2:	P Kortegast	Opus
RM Specialist:	W Stewart	Opus

Risk Target Threshold:	13
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RID	Risk Title	Description Cause/ Consequence	Risk Owner	Risk Owning Org	Date Raised	Risk Status	Phase	Established Controls	Current Exposure			Residual (Target) Exposure			Commentary & Closure Statement			
									Semi-Quantitative			Treatment Strategy				Semi-Quantitative		
									Conseq	Prob	Risk Score	(refer to Actions Register for detail)				Conseq	Prob	Risk Score
100	PSG Representation	Description: There is a threat that PSG representation is challenged Cause: The cause of the threat is a iwi group not feeling represented. Consequence: The consequence is delay in decision making and lack of support by Elected Members.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) PSG established.	High	Very Low	8		High	Very Low	8			
101	PSG Representation	Description: There is a threat of PSG membership changes Cause: The cause of the threat is new members not supporting project. Consequence: The consequence is delay in decision making and elected members withdrawing their support.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) PSG terms of reference.	High	Very Low	8		High	Very Low	8			
102	Project Governance	Description: There is a threat that project governance will cause delays. Cause: The cause of the threat is introduction of a new decision-making structure, new organisations, new personnel (elected members), or changing policy which delays decision making. Consequence: The consequence of the threat is project delays		PNCC	18/01/2016	Live - Treat	Detailed Business Case	The establishment of the Project Steering Group and terms of reference	High	Very Low	8		High	Very Low	8			
103	Decision making delays	Description: Delays in PNCC decision making processes Cause: The cause of the threat is due to i) uncertainty in information provided to elected members to make a decision or ii) different political views that can not be resolved Consequence: The consequence of the threat is delay in construction		PNCC	18/01/2016		Detailed Business Case	Understand and programme decisions around PNCC meeting schedule. Minutes of PSG to PNCC elected members. Representation of PNCC at governance level on PSG. Delegate authority to PNCC programme Manager	Medium	Medium	15	Continue to hold workshops with elected members and provide regular updates	Low	Low	6			
104	No funding	Description: Withdrawal of funding Cause: The cause of the threat is due change in government policy for funding UCP projects Consequence: The consequence of the threat is delay or cancelled project		PNCC	18/01/2016		Detailed Business Case	Maintain agreed programme and avoid slippage. ii) PNCC provide regular reporting.	Very High	Low	20		Very High	Low	20			
105	No funding	Description: Withdrawal of funding Cause: The cause of the threat is due Government funding being conditional to meeting implied design standards. Consequence: The consequence of the threat is delay or cancelled project		PNCC	18/01/2016		Detailed Business Case	Maintain relationships with Project Funder	Very High	Medium	23	Seek early confirmation of any any conditions of funding in terms of standards to be adopted	Very High	Low	20			
200	Scope and Project Objectives Poorly Defined	Description: There is a threat that the project objectives and scope change during project. Cause: The cause of the threat is poor scoping and setting project objectives. Consequence: The consequence of the threat is that the project programme is delayed or stalled resulting in increased project costs.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	Existing Scope of work within Professional Services contract and Project Steering Group Terms of Reference. Project sponsors agreement.	High	Low	16	Avoid scope creep.	High	Very Low	8			
201	Scope Change	Description: There is a threat that scope will increase. Cause: The cause of the threat is a poorly defined scope and/or changes to the scope are uncontrolled. Lack of proper identification of what is required to meet the project objectives. Consequence: The consequence of the threat is delayed programme and increased project costs.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	Existing Scope of work within Professional Services contract and Project Steering Group Terms of Reference	High	Low	16	Avoid scope creep.	High	Very Low	8			
202	Benefits	Description: There is a threat that the number of pedestrians and cyclists using the bridge are estimated to be lower than initially predicted. Cause: The cause of the threat is uncertainty at being able to predict number of users, including commuter and recreational cyclists Consequence: The consequence of the threat is the selection of incorrect preferred option or lack of funding support due to poor		PNCC	18/01/2016	Closed	Detailed Business Case	i) Peer review, estimate range and level of uncertainty. ii) Opus Research Behaviour Survey.	High	Very Low	8		High	Very Low	8			
203	Connections	Description: There is a threat of poor connections to adjacent cycle network reducing number of users and benefits of the project. Cause: The cause of the threat is poor understanding of the adjacent cycle network or changes to that design. Consequence: The consequence of the threat is that the project benefits are eroded.		PNCC	18/01/2016	Closed	Detailed Business Case	PNCC are advanced with their cycleway network that is not reliant on other stakeholders, factors or decisions.	Medium	Very Low	4	Maintain Liaison with PNCC team	Medium	Very Low	4			
204	Benefits and costs	Description: There is a threat that Bridge location makes Powerco contribution uneconomic. Power cable may be uneconomic even if bridge is in suitable location Cause: The cause of the threat is due to preferred bridge location Consequence: The consequence of the threat is that the project may require additional funds		Opus	18/01/2016	Closed	Detailed Business Case	Established controls: Keep Powerco informed throughout IBC/DBC, Structural re-design for reduced loads due to no cable on bridge	Very Low	Very Low	1		Very Low	Very Low	1			
205	Project costs	Description: There is a threat that preferred construction tender results in total cost that is above budget. Cause: The cause of the threat is due to poor estimating Consequence: The consequence of the threat is that the project is no longer viable due to lack of available funds		PNCC	18/01/2016	Live - Treat	Pre Implementation	Established controls: Value engineering.	Medium	Medium	15	Undertake market analysis before tendering. Advise the market that the project is scheduled. Early contractor involvement.	Medium	Low	11			
206	Cost exceeding previous estimate	Description: There is a threat that incorrect cost rates were used for the estimate, in addition to omissions and cost uncertainty. Cause: The cause of the threat is due to poor estimating practice. Consequence: The consequence of the threat is that the total cost of the project could exceed committed funds		Opus	18/01/2016	Live - Treat	Detailed Business Case	Follow good Cost estimation practice and allow for uncertainty. Communicate uncertainty to client and stakeholders.	Medium	Medium	15	Undertake market analysis before tendering. Advise the market that the project is scheduled. Early contractor involvement.	Medium	Low	11			

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									Current Exposure				Semi-Quantitative			
									Conseq	Prob	Risk Score		Conseq	Prob	Risk Score	
207	Connections	Description: There is a threat that PNCC is unable to provide cycleway connections to bridge Cause: The cause of the threat is failure to obtain Consents or Land agreements Consequence: The consequence is project unable to be completed or used.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) Ensure all permissions and funding for connections obtained before consent application and construction	Very High	Low	20	Continue liaison with PNCC team	Very High	Very Low	13	
208	Equine use	Description: There is a threat that community groups will demand bridge can be used by horses. Cause: The cause of the threat is failure to agree on types of users in project objectives and design philosophy Consequence: The consequence is redesign of bridge causing delay and increased cost.		Opus	18/01/2016	Closed	Detailed Business Case	i) Engagement with community groups. ii) Agree on Design Philosophy early	Very Low	Very Low	1		Very Low	Very Low	1	
209	Value for Money	Description: There is a threat that the option that provides best value for money is not identified. Cause: The cause of the threat is failure to identify all feasible options Consequence: The consequence is withdrawing of funding support.		Opus	18/01/2016	Closed	Detailed Business Case	i) Identify Option early and be willing to consider additional options as project progresses	High	Very Low	8		High	Very Low	8	
300	Land/Property Owners	Description: There is a threat that affected landowners and stakeholders do not support project, particular Massey University/NZ Defence Force . Cause: The cause of the threat is that stakeholders feel they have not been not engaged in project or have concerns about the outcomes or adverse effects of the project. Consequence: The consequence of the threat is damage to PNCC 's reputation and challenge ability to obtain RMA consents and designations. Stakeholders withdraw their support.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) Develop robust engagement strategy . ii) Engagement with Massey at high level through PSG involvement	High	Low	16	Include CRI in engagement plan	High	Very Low	8	
301	Ground Water	Description: There is a threat of ground water table adversely affecting construction of foundations Cause: The cause of the threat is being unaware of this during design and at time of tender. Consequence: The consequence of delay in bridge construction and increased costs.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Assume standard construction methods like those used at Fitzherbert Bridge will be suitable.	Medium	Low	11	Allow in cost estimate	Medium	Very Low	4	
302	Soft Ground Conditions	Description: There is a threat that we find soft soils during construction Cause: The cause of the threat is unforeseen ground conditions. Consequence: The consequence is delay in bridge construction and increased costs due to the need to consolidate soft soils using preloading.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Review existing geotechnical investigation results	Medium	Medium	15	Undertake further geotechnical investigations. Allow in cost estimate	Medium	Low	11	
303	Unforeseen Ground Conditions	Description: There is a threat of unforeseen ground conditions within river bed delaying construction. Cause: The cause of the threat is the contractor finding logs in the river. Consequence: The consequence is delay in bridge construction and increased costs.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Review existing geotechnical investigation results	High	Low	16	Undertake further geotechnical investigations. Allow in cost estimate	High	Low	16	
304	Land Entry Problems for Investigations	Description: There is a threat of difficulty to obtain land entry agreements for investigation works. Cause: The cause of the threat is unhappy landowners Consequence: The consequence of the threat is delays to programme.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) PNCC property officers proactive in negotiating property access agreements	Low	Very Low	2		Low	Very Low	2	
305	Land/Property Owners - Lack of Information	Description: There is a threat that the community and land owners want more information than what is currently available. Cause: The cause of the threat is perception that more information is available. Consequence: The consequence of the threat is damage to the project team's and PNCC's reputation.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) PNCC develop strategy for making latest information on project available ii) PSG will provide information	Low	Low	6		Low	Low	6	
306	Design Standards	Description: There is a threat that agreement cannot be reached on width of the cycleway/pedestrian path, particularly in relation to safety and amenity. Cause: The cause of the threat is range of standards, public expectations and differing views from safety specialists. Consequence: The consequence of the threat is a potential redesign, resulting in delays and increased project costs.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Austroads Guides.	Medium	Medium	15	Undertake a Safety Audits at IBC	Medium	Low	11	
307	Design Standards	Description: There is a threat that agreement cannot be reached on whether cyclists need to be physically separated from pedestrians. Cause: The cause of the threat is changing public expectations about safety and amenity. Consequence: The consequence of the threat is redesign, resulting in delays and increased project costs.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Consider in options	Medium	Low	11	Adopting 5m wide bridge option provides opportunity to separate in future years if required. Adopt wider bridge for cost estimate.	Medium	Very Low	4	
308	Changes in design standards	Description: There is a threat of changes to design standards during the project, particularly the width of combined cycleway/pedestrian way. Cause: The cause of the threat is changes to the design standards that have not been planned or predicted. Consequence: The consequence of the threat is that the project programme is delayed and increased project costs.		Opus	18/01/2016	Live - Parked	Detailed Business Case	Design Guidelines are not mandatory. Currently being reviewed, expected published June 2016.	High	High	21	Review latest changes to Design Standards as at July 2016.	High	Low	16	
309	Uncertainty of ground conditions	Description: There is a threat of uncertainty of ground conditions or liquefaction impacting bridge foundation design. Cause: The cause of the threat is a lack of detailed geotechnical information. Consequence: The consequence of the threat is design and cost uncertainty leading to costs exceeding budgets.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Preliminary Geotechnical Assessment and geotechnical investigations.	Medium	Medium	15	Include cost of adding stone columns at bridge abutements. Allow in cost estimate	Medium	Low	11	

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									Semi-Quantitative			Semi-Quantitative			
									Conseq	Prob	Risk Score	Conseq	Prob	Risk Score	
310	Contaminated land is difficult to avoid	Description: There is a threat that there ground contamination is found at the site. Cause: The cause of the threat is a lack of detailed information. Consequence: The consequence of the threat is increased project costs due to the need to undertake remediation or avoidance.		Opus	18/01/2016	Closed	Detailed Business Case	PMCC HAIL maps	High	Very Low	8	High	Very Low	8	
311	Services on Bridge	Description: There is a threat that service authorities would like to install services on bridge Cause: The cause of the threat is services being added late in the design phase or construction phase. Consequence: The consequence of the threat is redesign to accommodate services increasing cost and delays.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Water and Power allowed for. Service Providers has been consulted	Low	Very Low	2	Low	Very Low	2	
312	Location of Services	Description: There is a threat from design clashes with services, particularly those underground. Cause: The cause of the threat is from inadequate knowledge of services (existence, location, condition, extent and accuracy). Consequence: The consequence of the threat is cost and design uncertainty.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Service provider 'Dial before you Dig' GIS plans	Low	Very Low	2	Low	Very Low	2	
313	Flood Effects on environment	Description: There is a threat of increased flood effects upstream of bridge Cause: The cause of the threat is the design of the approaches within the flood plan. Consequence: The consequence is increased cost in raising stop banks.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) Modelling of potential flood effects of bridge and approaches ii) consider alternatives.	High	Medium	19	High	Low	16	Modelling effects and amend design (including increasing upstream stop banks) of Horizons find the effects are unacceptable (more than minor).
314	Accessibility	Description: There is a threat bridge does not provide universal access. Redesign and increased costs. Cause: The cause of the threat is not designing bridge approaches and bridge for full accessibility. Consequence: The consequence is loss of reputation for PNCC.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Consider gradient of ramps during design phase to ensure universal access.	High	Low	16	High	Very Low	8	Consider cost of providing universal access on all routes
315	Flood effects on bridge	Description: There is a threat of flood events will damage bridge Cause: The cause of the threat is providing inadequate protection at abutments and piers. Consequence: The consequence is damage to the bridge and possible collapse.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) Consider impacts in design	Very High	Very Low	13	Very High	Very Low	13	
316	Flood effects on services near the bridge	Description: There is a threat of flood events will damage services Cause: The cause of the threat is providing inadequate protection at abutments and bridge approaches within flood plan. Consequence: The consequence is damage to services.		Service Owner	18/01/2016	Closed	Detailed Business Case	i) A matter for service authorities to consider.	High	Low	16	High	Low	16	
317	Flood effects from Piers in River	Description: There is a threat that the presence of piers will impact flood events Cause: The cause of the threat is reduced cross section and increased friction. Consequence: The consequence is need to increase upstream stop banks.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	i) Consider impacts in design ii) consider alternatives	Very High	Very Low	13	Very High	Very Low	13	Modelling effects and amend design (including increasing upstream stop banks) of Horizons find the effects are unacceptable (more than minor).
318	Change in Design	Description: There is a threat that stakeholders will request a change in design philosophy Cause: The cause of the threat is poor scope definition or poor buy-in of project objectives Consequence: The consequence delays in due to rework.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	PSG has buy-in of project objectives and agreement of design philosophy.	High	Very Low	8	High	Very Low	8	
319	Urban Design	Description: There is a threat that stakeholder will withdraw support or consents declined Cause: The cause of the threat significant departure from River Framework and Urban Design Framework Consequence: The consequence delays in due to rework.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Frameworks Reviewed	Very High	Very Low	13	Very High	Very Low	13	
320	Foundation Construction	Description: There is a threat that the cost to construct foundations exceed budget Cause: The cause of the threat inadequate allowance for temporary works for foundations Consequence: The consequence tender price exceeding budget/		Opus	18/01/2016	Live - Treat	Detailed Business Case		High	Medium	19	High	Very Low	8	Provide Adequate allowance for foundations
321	Location of Services on Bridge	Description: There is a threat that locating the services within box will require a deeper section to enable access for maintenance Cause: The cause of the threat need to locate services within the box rather than outside the box Consequence: The consequence is higher cost for bridge construction.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Clarify need for services to be within Box or need to maintenance and inspection.	High	Low	16	High	Very Low	8	Allow for deeper box depth in cost estimate.
400	Designation & Consents not Granted	Description: There is a threat that land designation and consents are not granted. Cause: The cause of the threat potential adverse impacts, opposition and appeals. Consequence: The consequence of the threat is that it results in a non-consentable project.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Develop robust consenting strategy, ii) an effective communication strategy to mobilise city wide support for programme. iii). Ensure HRC/PNCC planners are well informed about the project. iv). Engage with directly affected parties as soon as the preferred bridge site is known. v) proactive identification of potential adverse impacts.	Very High	Medium	23	Very High	Medium	23	

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									Conseq	Prob	Risk Score		Semi-Quantitative			
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401	Significant Areas of High Ecological Value	Description: There is a threat that areas of significant ecological values are found. Cause: The cause of the threat is uncovering unknown impacts late in the project development. Consequence: The consequence of the threat is programme delays and increased costs.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Early identification of effects.	High	Very Low	8		High	Very Low	8	
403	Option Assessment Process	Description: There is a threat that the option evaluation process to reach a preferred option is not considered robust at a resource consent hearing, particularly if there is opposition to the site of the bridge. Cause: The cause of the threat is a flawed option evaluation process which did not rigorously consider alternative options. Consequence: The consequence of the threat is a resource consent application being rejected.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Undertaken Robust option evaluation	Very High	Very Low	13		Very High	Very Low	13	
404	Unidentified Iwi & Heritage Values during design	Description: There is a threat of unidentified impacts on Maori land and other areas of heritage value. Cause: The cause of the threat is lack of appropriate investigations. Consequence: The consequence of the threat is delays to programme and damage to PNCC's reputation.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Early engagement with iwi, undertake cultural and archaeological assessment early. i) Iwi represented on project Steering Group.	Medium	Medium	15	Continue engagement with iwi	Medium	Medium	15	
405	Social Impact Assessment	Description: There is a threat that there is a lack of thorough social assessment. Cause: The cause of the threat is a high awareness of social impact by the communities Consequence: The consequence of the threat is it could negatively impact on the consenting process.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Determine possible social and community impacts of the bridge and associated network early	Very High	Very Low	13		Very High	Very Low	13	
406	Parking Effects	Description: There is a threat that submitters will identify the risk of a large number of bridge users parking their car on local streets near the bridge Cause: The cause of the threat is failure to identify number of park-and-walk users and to assess effects in consent application Consequence: The consequence failure to obtain consents and designations.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Consider park-and-walk effects when preparing consent application	Medium	Very Low	4		Medium	Very Low	4	
407	Public Opposition	Description: There is a threat of lack of political support. Cause: The cause of the threat is growing public opposition Consequence: The consequence is withdrawing of funding support.		Opus	18/01/2016	Live - Treat	Detailed Business Case	i) Bridge identified in LTP process	Very High	Medium	23	Ongoing engagement	Very High	Low	20	
408	Visual Impacts	Description: There is a threat that project is delayed due to adverse Visual impacts Cause: The cause of the threat is perceived adverse visual impacts Consequence: The consequence is failure to obtain consents or withdrawal of political support.		Opus	18/01/2016	Live - Treat	Detailed Business Case		Very High	Low	20	Undertake Visual Assessment	Very High	Very Low	13	
408	Noise/Vibration Impacts	Description: There is a threat that project is delayed due to adverse Noise impacts Cause: The cause of the threat is perceived adverse noise impacts Consequence: The consequence is failure to obtain consents or withdrawal of political support.		Opus	18/01/2016	Live - Treat	Detailed Business Case		Very High	Very Low	13	Undertake Noise Assessment	Very High	Very Low	13	
500	Delays during Construction	Description: Weather/Construction difficulties cause delays Cause: The cause of the threat is due to unforeseen ground conditions, weather or flood events. Consequence: The consequence of the threat is delay in opening		PNCC	18/01/2016	Live - Treat	Detailed Business Case	Allow generous construction time float for uncertainty. Allow for pre-loading in construction programme	High	Medium	19	Ensure programme allows for critical works during summer. Determine most likely flood season from HRC and programme around those periods if possible.	High	Low	16	
501	Unidentified Iwi & Heritage Values during construction	Description: There is a threat that Iwi archaeological finds are encountered during pathway/bridge construction. Cause: The cause of the threat is due to uncertainty, despite earlier investigations Consequence: The consequence of the threat is delay in construction		PNCC	18/01/2016	Live - Treat	Detailed Business Case	Include Accidental discovery protocol within tender documents	High	High	21		High	High	21	
502	Flooding	Description: There is a threat that Flood events will close cycleway on LHS. Cause: The cause of the threat is due to cycleway being below stop bank Consequence: The consequence of the threat is temporary closure.		PNCC	18/01/2016	Closed	Implementation	Acceptable Risk	Very Low	Very High	9		Very Low	Very High	9	
503	Suicide	Description: There is a threat that bridge could be used and develop a reputation for those wanting to take their own life. Cause: The cause of the threat is poor passive surveillance and copy cat behaviour (following a first event). Consequence: The consequence of the threat is negative reputation for PNCC and the bridge itself.		PNCC	18/01/2016	Closed	Detailed Business Case	Established controls: Include barrier design that minimises ability to climb onto barrier.	Medium	Very Low	4	No evidence of this being an issue with existing bridge	Medium	Very Low	4	
504	CPTED	Description: There is a threat that bridge could become unsafe for users. Cause: The cause of the threat is poor passive surveillance due to its location. Consequence: The consequence of the threat is negative reputation for PNCC and the bridge itself.		PNCC	18/01/2016	Live - Treat	Detailed Business Case	Established controls: Include CPTED in site location evaluation.	Medium	Low	11	Include Lighting, Passive surveillance	Medium	Very Low	4	

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505	Crowding	Description: There is a threat that bridge become unstable in certain load events. Cause: The cause of the threat when the bridge is used as viewing platform during a river event. Consequence: The consequence of the threat is death, injury or damage to bridge.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Adopted Bridge Design Manual crowd loading of 5kPa	Very High	Very Low	13		Very High	Very Low	13	
506	Cyclist Safety	Description: There is a threat that cyclists fall off bridge Cause: The cause of the threat is adequate barrier height for pedestrians to allow for viewing river, but insufficient barrier height for average centre of gravity for cyclists. Consequence: The consequence of the threat is death or injury.		Opus	18/01/2016	Live - Treat	Detailed Business Case	Established barrier design height and style to Austroads Design Guidelines	Very High	Very Low	13		Very High	Very Low	13	
507	Working in River	Description: There is a threat that construction is delayed Cause: The cause of the threat is Horizons restrictions to protect fish during spawning season. Consequence: The consequence of delay in bridge construction and increased costs.		PNCC	18/01/2016	Live - Treat	Implementation	Consent Conditions.	High	High	21	Allow in proposed Construction Programme and include in Tender Documents and cost estimate.	High	Very Low	8	
508	Flooding During Construction	Description: There is a threat that flood events will impact on construction Cause: The cause of the threat is Flood Events. Consequence: The consequence of delay in bridge construction and increased costs.		Opus	18/01/2016	Live - Treat	Implementation	Allowance for flood events in contract documents and Construction Programme.	High	High	21	Allow in proposed Construction Programme and include in Tender Documents and cost estimate.	High	Low	16	
509	Sabotage	Description: There is a threat of groups that are opposed to project protesting Cause: The cause of the threat is lack of support for project from some community groups. Consequence: The consequence is delay in bridge construction and increased costs.		PNCC	18/01/2016	Live - Treat	Implementation	Public Engagement Strategy	High	Very Low	8		High	Very Low	8	
510	Delays to materials	Description: There is a threat construction of the bridge is delayed Cause: Lack of steel in the country Consequence: The consequence is delay is with withdrawal of funding, political embarrassment or cost escalation		PNCC	18/01/2016	Live - Treat	Implementation		High	Medium	19	Allow adequate time in construction programme	High	Very Low	8	
															0	
															0	

Emerging	0
Live - Treat	45
Live - Parked	1
Impacted	0
Closed	9
Rejected	0
Total	55

FALSE

Total Risks (Current)	
Extreme Threat	4
High Threat	28
Moderate Threat	14
Low Threat	8

Total Opportunities (Current)	
Extreme Opportunity	3
High Opportunity	1
Moderate	
Low Opportunity	
Closed	9
Total	67

Total Risks (Target)	
Extreme Threat	2
High Threat	20
Moderate Threat	25
Low Threat	11

Total Opportunities (Target)	
Extreme Opportunity	
High Opportunity	
Moderate	
Low Opportunity	
Closed	9
Total	67