

# Risk Register - Ladies Mile Housing Infrastructure Fund - v1.5

STAGE 1 - RISK IDENTIFICATION					STAGE 2 - ANALYSIS OF UNCONTROLLED RISK							STAGE 3 - RISK CONTROLS AND ANALYSIS OF CONTROLLED RISK							STAGE 4 - RISK CLASS									
RISK DETAILS					Consequence Score							Risk Controls							Controlled Risk									
Risk ID	Date	Risk Title <i>There is a chance that...</i>	Risk Causes <i>Because...</i>	Risk Owner	Consequences <i>Resulting in...</i>	Political	Economic	Social	Technical	Legal	Environmental	Consequence Score (1 - 5)	Likelihood (1 - 5)	Level of risk 1 (very low) to 25 (very high)	Risk Class (Very Low to Very High)	Risk Control Options	Selected Control <i>one of the options identified</i>	From	Political	Economic	Social	Technical	Legal	Environmental	Consequence Score (1 - 5)	Likelihood (1 - 5)	Level of risk 1 (very low) to 25 (very high)	Risk Class (Very Low to Very High)
R1	28-Nov-17	We cannot deliver the project infrastructure.	There are not enough internal or external resources to undertake design and construction of infrastructure (for ALL upcoming work in the District within Council and private sector).	MBIE	Failure to deliver sections and houses on schedule.	4	5	2	4	2	2	5	3	15	Very High	Treat	Undertake early contractor engagement and develop Contracting Plan to enable broad supply base.		4	5	2	4	2	2	5	2	10	High
R2	28-Nov-17	There may be dispute about responsibility to produce houses.	MBIE's expectation for house production may differ from the developer's business model to deliver sections.	MBIE	MBIE or Developer may withdraw, or project experiences significant delay while dispute is resolved.	4	5	3	1	4	1	5	3	15	Very High	Treat	Arrange Developer Agreement		4	5	3	1	4	1	5	2	10	High
R3	28-Nov-17	We cannot deliver house construction.	There are not enough internal or external resources to build houses (for ALL upcoming work in the District)	QLDC	Failure to deliver houses on schedule.	3	5	3	4	2	2	5	4	20	Very High	Treat	Undertake early contractor engagement and develop Contracting Plan to enable broad supply base.		3	5	3	4	2	2	5	2	10	High
R8	28-Nov-17	Funding is not secured.	Central government (MBIE) and QLDC do not reach funding agreement.	MBIE	Developer may withdraw.	4	5					5	4	20	Very High	Treat	Arrange MBIE/QLDC Agreement.		4	5					5	2	10	High
R10	28-Nov-17	Developer withdraws.	Council and Developer cannot agree terms.	QLDC	Development does not proceed.	4	5					5	4	20	Very High	Treat	Arrange Developer Agreement.		4	5					5	2	10	High
R38	28-Nov-17	We cannot obtain NZTA designations in time.	The procedure for design, assessment and approval may take too long.	Developer/QLDC	Additional time and cost.				5			5	3	15	Very High	Treat	Commence detailed design and engagement with NZTA as priority.					5			5	2	10	High
R40	26-Feb-18	Detailed Business Case may not be submitted on time	Required inputs may be delayed, including: - Engineer not yet engaged for 3 waters - NZTA approval of yield not yet confirmed - NZTA approval of roundabout location not yet confirmed - Developer's agreement with neighbour for land purchase not yet confirmed - Development Agreement between QLDC/KVL not confirmed	QLDC	Additional time and cost.		4					4	5	20	Very High	Treat	Include assumptions in draft Business Case, and update when final data is received.					4			4	3	12	High
R50	11-Jul-18	Patronage of public transport does not achieve the required level	Adequate systems and facilities are not operational at the required time to meet the needs of development: - 20% by first development - 25% by 450 houses - 27% by 750 houses - 29% by 1,100 houses	QLDC	Unacceptable traffic delays on SH6	5	5	5				5	4	20	Very High	Treat	Develop MOU between ORC, QLDC, NZTA to develop, implement, monitor and control trigger points for public transport interventions		5	5	5				4	3	12	High
R41	5-Jun-18	Integrated transport outcomes could dictate unforeseen physical constraints to any proposed infrastructure.	There has been no integrated land transport planning	QLDC	Additional time and cost, or reduction in benefit.	4	5		4			5	4	20	Very High	Treat	Undertake integrated transport planning and incorporate into concept design.		4	5		4			5	2	10	High
R43	5-Jun-18	Utility services (e.g. power, telecom, gas) cannot serve the new development	Capacity or reach is insufficient.	QLDC	Additional time and cost to expand utility capacity of reach.		5		4			5	3	15	Very High	Treat	Involve utility providers in preliminary design discussions.			5		4			5	2	10	High
R31	28-Nov-17	Road access to the subdivision cannot be agreed in time.	Some landowners (particularly at west end, and pet lodge) not yet agreed location and size of access with NZTA and QLDC.	QLDC	Delay to commencement / additional cost	4	4					5	4	20	Very High	Treat	Progress Developers Agreements and evaluate road/intersection locations.		4	4					4	2	8	Moderate
R39	28-Nov-17	The SH6 roundabout cannot be located at Howards Drive intersection.	The owner of the Pet Lodge will not sell their land.	Developer/QLDC	The roundabout being relocated to the west, and Howards Drive realigned to suit.				5			5	3	15	Very High	Treat	Commence negotiation with the owner of the Pet Lodge as priority. Shift roundabout to the west into land currently owned by QCC.					5			5	1	5	Moderate
R5	28-Nov-17	Community support may change.	Costs may increase (either overall, or the community's portion).	QLDC	Delays to schedule caused by holdups.			4				4	4	16	High	Treat	Treat community facilities separate from the HIF funding.				3				3	3	9	Moderate
R6	28-Nov-17	The funding may no longer be available.	Government has recently changed.	MBIE	A change in policy.	4	5					5	2	10	High	Tolerate	Have MBIE lobby for continuation of policy.		4	5					5	1	5	Moderate
R7	28-Nov-17	Development may not provide affordable housing.	MBIE's focus is on producing houses quickly, whereas Developer/Council may have different design expectations.	MBIE	May not be able to reach Developer Agreement.	3	4	4		3		4	3	12	High	Treat	Arrange Developer Agreement.		3	4	4		3		4	2	8	Moderate
R11	28-Nov-17	Wastewater reticulation costs may change due to increase pipe size, length or pumping requirement, etc.	Design is not mature (e.g. gravity vs. pressure).	QLDC	Additional time and cost.		4					4	3	12	High	Treat	Commence detailed design as priority.			4					4	2	8	Moderate
R12	28-Nov-17	Water pressure is too low.	Design is not mature.	QLDC	May require pressure boosting or other land for facilities.				4			4	3	12	High	Treat	Commence detailed design as priority.					4			4	2	8	Moderate
R13	28-Nov-17	NZTA may dictate work on highway infrastructure that is not currently planned. (e.g. Shotover bridge)	Current design may underestimate future NZTA level of service expectation.	QLDC	Additional time and cost.		4		4			4	3	12	High	Treat	Early engagement with NZTA.			4		4			4	2	8	Moderate
R19	28-Nov-17	Easements and corridors for stormwater may not be obtained.	Stormwater system needs to pass through other property, including possibly NZTA, to get to discharge location.	QLDC	Additional cost and time.				4			4	3	12	High	Treat	Confirm alignment and engage with landowners.					4			4	2	8	Moderate

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R25	28-Nov-17	Total number of houses is less than expected.	Density calculations may have been optimistic, not taking sufficient account of loss by roads, reserves or setbacks.	QLDC	Increased cost per unit (less houses / more relative cost)	4	4					4	3	12	High	Treat	Early engagement with Landowners.		4	4					4	2	8	Moderate
R27	28-Nov-17	Pedestrian underpass design, location and cost estimates may be underestimated.	Design is immature	QLDC	Additional cost.	4			4			4	3	12	High	Treat	Engage with QLDC, NZTA and ORC to finalise basis of design for underpass, and finalise detailing.		4			4			4	2	8	Moderate
R28	28-Nov-17	Bus stop location may lack integration.	Design is immature	QLDC	Additional cost.	4			4			4	3	12	High	Treat	Engage with QLDC, NZTA and ORC to finalise basis of design of bus stop (and PT in general), and finalise detailing.		4			4			4	2	8	Moderate
R29	28-Nov-17	Pumping may be required for wastewater reticulation, which has not been accounted for (due to topography)	Design is immature	QLDC	Lack of benefit.	4			4			4	3	12	High	Treat	Progress Detailed Design and develop integration strategy.		4			4			4	2	8	Moderate
R30	28-Nov-17	Surface flooding/ponding may be greater than expected.	Design is immature	QLDC	Additional cost to mitigate.	4			4			4	3	12	High	Treat	Progress design.		4			4			4	2	8	Moderate
R33	28-Nov-17	There may be dispute about the number of houses to be provided.	The reason and mechanism of the hold point between 1100 and 2200 houses (and the impact on the bridge) is unclear.	QLDC	Lack of benefit.	4	4					4	3	12	High	Treat	Assume HIF funding is for 1100, but full build development plan is 2200.		4	4					4	2	8	Moderate
R34	28-Nov-17	Number of constructed lots may change.	Final development layout may differ from the preliminary plan.	QLDC	Increased cost per unit (less houses / more relative cost)	4	4					4	3	12	High	Treat	Progress Developers Agreements.		4	4					4	2	8	Moderate
R35	28-Nov-17	SHA Policy may change	Recent change in government	QLDC	Withdrawal of SHA opportunity, and no other immediate mechanism for subdivision (which would narrow the drawdown window because of additional application time, e.g. Private Plan Change)	5						5	2	10	High	Treat	Have MBIE lobby for continuation of policy.		5						5	1	5	Moderate
R37	28-Nov-17	Shotover bridge capacity is reached earlier than expected.	Traffic volumes on the bridge increase faster than expected.	QLDC	Limits (or holds) placed on development.	4	4		4			4	3	12	High	Treat	Encourage development of public transport and active transport.		4	4		4			4	2	8	Moderate
R42	5-Jun-18	Ground conditions could be unsuitable for road construction, or may be contaminated.	There has been no integrated geotechnical investigation, aside from Glenpanel's own studies.	QLDC	Additional time and cost, or reduction in benefit.	4			3			4	3	12	High	Treat	Undertake integrated geotechnical investigation.		4			3			4	2	8	Moderate
R44	5-Jun-18	Additional earthworks could be required.	Preliminary engineering is based on 2-dimensional plans only.	QLDC	Additional time and cost for embankments, cut/fill, etc.	4			4			4	4	16	High	Treat	Undertake topographic survey and 3-D earthworks design.		4			2			4	2	8	Moderate
R45	5-Jun-18	The proposed reservoir location is not suitable.	The proposed site may not offer suitable foundation or elevation.	QLDC	Additional time and cost to secure and/or prepare suitable land.	4			4			4	4	16	High	Treat	Undertake geotechnical investigation and enter land access agreement.		4			2			4	2	8	Moderate
R46	5-Jun-18	Stormwater cannot be discharged to the State Highway.	NZTA chooses to disallow stormwater discharge to the State Highway as per Government Roadway Powers Act	QLDC	Additional time and cost to install alternative stormwater transfer and disposal infrastructure.	4			4			4	4	16	High	Treat	Engage with NZTA and agree solution.		4			2			4	2	8	Moderate
R47	5-Jun-18	Stormwater from uphill catchments is not captured by existing cut-off drains.	Extent or performance of existing cut-off drains is inadequate.	QLDC	Additional time and cost to control stormwater.	4			4			4	4	16	High	Treat	Undertake topographic survey and engineering design.		4			2			4	2	8	Moderate
R48	5-Jun-18	Currently, if the capacity of the existing wastewater pipeline across the Shotover Bridge is insufficient for the new development, the risk mitigation proposal is to provide a second crossing by sleeving inside an abandoned pipe. There is a risk that this mitigation option cannot be implemented.	The existing abandoned wastewater pipe across the Shotover Bridge proves unsuitable for sleeving.	QLDC	Acceptance of high-risk because no back-up bridge crossing alternative, or additional time and cost to construct additional pipe crossing.	4			4			4	4	16	High	Treat	Undertake engineering evaluation of abandoned pipe to determine suitability for sleeving.		4			2			4	2	8	Moderate

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R36	28-Nov-17	Reservoir location cannot be confirmed.	Suitable land cannot be secured.	QLDC	Additional cost/delay	4		4			4	3	12	High	Treat	Primary landowner also owns hillslope property, reach agreement for location.		4		4				4	1	4	Low	
R32	28-Nov-17	Some landowners may not be willing to sell to enable development.	They are asking an unacceptably high price.	QLDC	Delay to commencement / additional cost	4					4	4	16	High	Treat	Utilise the Public Works Act.		4						4	1	4	Low	
R4	28-Nov-17	The proposed developer(s) does not continue with the project.	Market conditions and the commercial strategy of the Developer may change.	MBIE	Failure to deliver houses on schedule; sunk costs may not provide beneficial return.	3	5	4				5	1	5	Moderate	Treat	Arrange Developer Agreement.		3	5	4				5	1	5	Moderate
R9	28-Nov-17	The community causes disruption during construction.	Excess noise, traffic, dust, runoff, etc.	QLDC	Delays to completion.			4			4	2	8	Moderate	Treat	Engage with community, increase awareness and development equitable outcome.				4					4	2	8	Moderate
R26	28-Nov-17	Space may be limited in State Highway corridor for piped services.	Too many existing services.	QLDC	More expensive solution required.	4		4			4	2	8	Moderate	Treat	Progress Detailed Design and develop accurate cost estimate.		4		4					4	2	8	Moderate
R49	5-Jun-18	A portion of the new water supply rising main may be installed in a location that does not suit the future upgrade of the Borefield and Treatment Plant.	The Borefield and Treatment Plant upgrade is not yet designed.	QLDC	A portion of the new rising main may need to be realigned in future once upgrades are made to the Shotover Borefield and Treatment Plant	2		2			2	3	6	Moderate	Tolerate	Undertake prudent pipeline design to allow easy modification of pipeline if required.		2		2				2	3	6	Moderate	
R15	28-Nov-17	Council's expectation for a community of mixed section sizes may not be achieved.	Developer may prefer a standard section size for simplicity.	Developer	Additional cost for developer.	3		4			4	2	8	Moderate	Treat	Arrange Developer agreement.		3		4					4	1	4	Low
R18	28-Nov-17	Consent may be required for stormwater discharge to Lake Hayes end.	Regional Council may introduce new consent policy.	QLDC	Additional cost and time.	4		4			4	2	8	Moderate	Treat	Early engagement with ORC.		4		4					4	1	4	Low
R21	28-Nov-17	Stormwater design requirements may change and take up development land.	Design is not finalised.	QLDC	Reduction in lot yield for developer, and/or additional cost.	4		4			4	2	8	Moderate	Treat	Finalise design of detention/infiltration basins within 70m setbacks.		4		4					4	1	4	Low
R22	28-Nov-17	We may not achieve 1100 lots in the expected time.	Some landowners may not have the necessary resources or motivation to proceed at the same time.	QLDC	Delays to completion or lack of benefit from partial completion; subsequent political pressure.	3	3				3	3	9	Moderate	Treat	Negotiation with Landowners (including neighbourings to the east who now want to sell, so new owners may wish to become involved.)		4	4						4	1	4	Low
R23	28-Nov-17	Some landowners may choose not to proceed.	The proposal does not deliver their expected return.	QLDC	Delays to completion or lack of benefit from partial completion.	3	3				3	3	9	Moderate	Treat	Negotiation with Landowners after determining what can be offered.		4	4						4	1	4	Low
R24	28-Nov-17	The development does not achieve the number of houses intended.	Landowners may prefer non-residential land use or different density.	QLDC	Lack of benefit.	3	3				3	3	9	Moderate	Treat	Negotiation with Landowners after determining what can be offered.		4	4						4	1	4	Low
R14	28-Nov-17	Installed infrastructure capacity may be insufficient.	Other developers may decide to enter the game and subdivide additional land.	QLDC	Have to re-start the design and delay the entire HIF. (If changes happens after the HIF funding window, then little consequence for this project)			4			4	1	4	Low	Tolerate	Confirm and freeze Basis of Design as priority.					4				4	1	4	Low