

Quantified Risk Assessment - Financial Cost

Rev: 21/06/2017

Scheme: NPIF 18-20 TQEZ East Access

Risk Ref.	Category	Description	Risk Owner	Cost Impact Estimate			Probability	Likelihood	Mean outcome £k	Mitigation Owner	Mitigation Measures
				Min (£k)	Max (£k)	Likely (£k)					
R5		IF there are unforeseen ground conditions THEN design changes may need to be made before construction	TDB	11	33	22	3	25%	6	PM	Undertake sufficient surveys
R6		IF there are restrictions on working method and phasing imposed by Network Management THEN the schemes may take longer to construct	TDB	0	510	170	4	50%	85	PM	Early assessment of plans and engagement with Network Management Coordination through the Transport Delivery Board
R7		IF there are unforeseen defects /circumstances on the Netham Lock bridges THEN additional design work may be required	TDB	6	11	6	2	13%	1	PM	Assessment of Asset Records Learning from previous works
R8		IF there are unforeseen sub-surface pavement conditions THEN significant carriageway re-construction may be required	TDB	11	510	170	3	25%	43	PM	Assessment of Asset Records Learning from previous works
R10		IF emergency utilities works have to be undertaken THEN the construction period and duration may have to be amended	TDB	9	18	9	2	13%	1	PM	Flexible phasing plans
R13		IF there are unforeseen utilities THEN design changes may need to be made before construction	TDB	6	33	11	2	13%	1	PM	GPR surveys
R14		IF cost inflation is higher than anticipated THEN the outturn project cost may increase	TDB	85	340	170	2	13%	21	PM	Conservative cost estimates allow for inflation Competitive tender process to reduce impact of any inflation
R15		IF further survey information shows additional works are required THEN design changes may need to be made before construction	TDB	6	11	6	3	25%	2	PM	Commission all required surveys as soon as possible and integrate information into design process to reduce changes at later stages
R16		IF a contractor causes delay THEN the overall project may be delayed	TDB	17	68	34	4	50%	17	PM	Penalty clauses for late completion
R17		IF interest groups/local media etc oppose a scheme in the project THEN the individual scheme and overall project may be delayed or design changes required	TDB	6	11	6	3	25%	2	PM	Early and ongoing media/stakeholder engagement
R20		IF there are changes to highway design standards THEN the designs may have to be changed	TDB	6	33	6	3	25%	2	PM	Apply "freeze" on standards at start of construction
R21	Political	IF the political endorsement of the schemes changes THEN changes to the schemes may be required	SRO	6	33	6	3	25%	2	Prog. Mgr	Continued close working with members to maintain cross-party political support, clarify scheme impacts and implications of changes. Regular cabinet and local member briefings/updates. Restrict further changes by highlighting critical risk to programme.
R22		IF the tenders received for construction works are higher than anticipated THEN the outturn project cost may increase	TDB	85	340	170	3	25%	43	PM	Use up to date market intelligence in compiling cost estimates throughout the design stages
R26		IF unforeseen noxious weeds are found THEN they may need to be removed or otherwise dealt with	TDB	1	50	1	2	13%	0	PM	Thorough and appropriate surveys during the design phase.
R28		IF damage is caused to the Feeder Canal wall during construction THEN the project will be responsible for making repairs	TDB	1	100	10	3	25%	3	PM	Contractor to develop appropriate mitigation
R29		IF the diversion of known utilities is delayed THEN construction of the schemes may be delayed	TDB	0	380	190	4	50%	95	PM	Early/comprehensive engagement with utilities companies
R34		IF the TM plans cause unacceptable traffic conditions during construction THEN they may have to be revised and require longer construction durations	TDB	0	190	85	4	50%	43	PM	Early assessment of plans and engagement with Network Management Coordination through the Transport Delivery Board
R36		IF there are unexpected site conditions THEN additional design may be required	TDB	6	11	6	3	25%	2	PM	Thorough and appropriate surveys during the design phase.
R37		IF any required TROs and Notices are not completed in a timely manner THEN construction may be delayed	TDB	8	32	16	4	50%	8	PM	Early notice given to Statutory orders team TRO officer to be part of Project Team
R38		IF technical problems with the design come to light during construction THEN changes may be required, causing delay to construction	TDB	0	190	95	3	25%	24	PM	Independent design and cost estimate reviews
R40		IF cost estimates are not sufficiently robust THEN the project outturn cost may exceed the funding available	TDB	0	510	170	4	50%	85	PM	Independent cost estimates and use of up to date market intelligence
R41		IF there are additional works required as part of the schemes THEN the project outturn cost may increase	TDB	0	340	85	3	25%	21	PM	Governance through Transport Delivery Board to ascertain all requirements at early stage
R43		IF there is adverse local reaction to TM implemented during construction THEN changes made be required causing delay to construction	TDB	0	190	95	3	25%	24	PM	Early assessment of plans and engagement with Network Management Coordination through the Transport Delivery Board
R45		IF BCC direct suppliers (e.g. signals, lighting) fail to perform THEN construction may be delayed	TDB	0	206	17	3	25%	4	PM	Coordination through the Transport Delivery Board Early contractor engagement and resource planning
R46		IF there is an increase in utility diversion costs THEN the outturn cost of the schemes may increase	TDB	0	50	10	3	25%	3	PM	Detailed engagement with utilities companies to generate robust estimates at an early stage during design
R48		IF contractors within the BCC Highway Works Framework are not available THEN other contractors may have to be procured or construction delayed	TDB	0	340	85	3	25%	21	PM	Coordination through the Transport Delivery Board Early contractor engagement and resource planning
R49		IF Network Rail asset protection costs are more than expected THEN the project outturn cost may increase	TDB	0	10	2	3	25%	1	PM	APA within the TQEZ FAPA Early engagement

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R50		IF the Stage 3 safety audits find issues THEN further works may be required	TDB	0	85	20	3	25%	5	PM	Design audits and detailed supervision of the works
R51		IF the contractor(s) underestimate time/costs in their tender submissions THEN actual construction costs may exceed budgets	TDB	0	510	170	3	25%	43	PM	Detailed works information in the ITT Thorough review of tender submissions during assessment
TOTAL RISK COST									602		
RISKS IDENTIFIED By CONTRACTOR (refer to separate register)											
TOTAL RISK COST									0		

TOTAL RISK VALUE £k	602
DURATION RISK VALUE £k	0
GRAND TOTAL £k	602