

## WCTIS PHASE 1 SCHEME RISK REGISTER

New Ref	Date Added	Risk Description	IR Likelihood	IR Impact	IR Risk Score	Current controls in place	RR Likelihood	RR Impact	RR Risk Score	Direction of Travel	Risk Owner	Date Reviewed	Timescale	Latest Period Comments	Consequences	Minimum Event	Expected Event	Maximum Event	Risk Status	Further Actions Required	FA Due	Progress of FA	FA & Risk Status Comments	FA Owner
<b>1. Strategic / Political / Policy</b>																								
A1.1	05/07/2019	Scheme clashes with HE projects in the area leading to delays due to network occupancy or a delay to start of scheme.	3	4	12	Ongoing liaison between GCC / Atkins and HE. Road space booked. GCC to issue press release to advertise the scheme during design phase. Joint comms strategy document to be developed between all parties.	2	4	8	Remains the same	Consultant Project Manager	05/07/2019	Long	Press release and share events completed. Atkins to review HE construction programme and diversion routes for bridge works.	Excessive congestion, reputational damage. Delays to scheme	No change, conflicts resolved	Minor amendments to scheme programme	Significant delays to scheme / other scheme	Open	Review HE programmes to minimise conflict. Continue to liaise with and provide updates to other schemes	Ongoing	On Target		Consultant Project Manager
A1.2	05/07/2019	Local GCC Member(s), councillors or public oppose scheme, or alter scheme design / dilute benefits	3	4	12	GCC and PM have been consulting with members to review preliminary plans. Share events and WCHAR consultation held. Comments to be considered and implemented where possible.	2	4	8	Decreased	GCC Project Manager	05/07/2019	Short	GCC PM to maintain regular contact. Local political support expressed for the scheme. Cabinet approval planned for Oct 19. Ongoing correspondence	Reputational damage, delays and costs due to scheme changes or scheme cancelled	No changes required to scheme	Minor changes to scheme design	Delays, more significant changes to design or scheme no longer supported by GCC.	Open	Frequent briefing of local members and reactive response. Set up member steering group.	Ongoing	On Target		GCC Project Manager
A1.3	05/07/2019	Local stakeholders (environmental groups, residents, businesses, cycle groups) do not support the scheme and additional consultation and input required.	4	3	12	Engagement with stakeholders at share events. Further consultation with non-motorised users via WCHAR consultation. Feedback to be reviewed during detailed design.	3	3	9	Remains the same	GCC Project Manager	05/07/2019	Short	Stakeholder feedback reviewed and included in FBC. Design amended or comments considered during detailed design.	Delays and additional costs. Reputational damage	No changes required to scheme	Minor changes included within scheme	Delay and redesign in order to gain support	Open	Ongoing meetings and updates during detailed design.	Ongoing	On Target		GCC Project Manager
<b>2. Economic / financial / management</b>																								
A2.1	05/07/2019	The capital costs of the scheme increase as a result of factors uncovered at detailed design stages. Eg. Additional structural work to subway / retaining wall, additional utility diversions	4	4	16	The current scheme estimates assume worst case where possible. Scheme costs to be reviewed again at completion of detailed design. Risk contingency within budget.	4	3	12	Remains the same	Consultant Project Manager	05/07/2019	Medium	Scheme cost estimate updated for final FBC submission based on preliminary design drawings. Estimates to be reviewed during detailed design.	Reduction in funding for future phases. GCC has to find additional funding to cover cost overruns.	Very minor changes required to scheme	Some design changes lead to higher costs	Unassessed risks realised	Open	Continue to review risk register to manage residual risks	Ongoing	On Target		Consultant Project Manager
A2.2	05/07/2019	The tender prices received from the contractors exceed the available budget to construct the scheme.	3	4	12	The scheme cost estimate will be at the end of detailed design. Ensure adequate allowances for contingencies and risk. Procurement strategy has been developed and agreed to achieve best value.	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Medium	Design ongoing, cost estimate updated prior to final FBC submission and will be reviewed after completion of detailed design (post FBC approval).	Reduction in funding for future phases. GCC would have to find additional funding to cover cost overruns.	Tender price within budget/risk allowance	Contractor's price is negotiated to acceptable level	Major design changes lead to significant increase in cost	Open	Regular review of project scope. Review prices to account for increased construction industry inflation as a result of currency fluctuations. Monitor and review during detailed design.	Ongoing	On Target		Consultant Project Manager
A2.3	20/01/2017	LEP failure to reimburse scheme development costs (i.e. if scheme does not achieve approval of Full Business Case the costs incurred prior to this would be GCC's liability).	3	5	15	Develop robust Full Business Case to secure funds. Business case reviewed in draft form prior to final submission.	2	5	10	Remains the same	GCC Project Manager	26/07/2017	Medium	LEP money will not be issued to GCC until the FBC is approved. Political support for scheme given likely future development in area.	Scheme cancellation or GCC have to find additional funding	FBC approved in programme	FBC approved in programme	FBC not approved and LEP do not reimburse costs	Open	None	Ongoing	On Target		GCC Project Manager
<b>3. Statutory Process / Legal / Land acquisition</b>																								
A3.1	05/07/2019	Judicial review of processes evoked. Eg. Questions over AQMA, planning / consenting strategy	3	4	12	Robust design and consenting strategy ongoing. Ensure correct procedures being followed in liaison with local authorities.	3	4	12	Remains the same	GCC Project Manager	05/07/2019	Medium	Consenting strategy technical note produced.	Delay to scheme, reputational damage	No JR	No JD	6 months delay & legal costs	Open	Confirm planning and environmental screening requirements.	Ongoing	On Target		GCC Project Manager
A3.2	05/07/2019	Requirement for additional 3rd party land purchase identified as a result of change of design at detailed design stages (post FBC approval)	2	5	10	Review of scheme design against highway boundary plans. Identify worst case scenario when design optioneering. Any design changes to be accommodated within highway boundary if at all possible.	2	5	10	Decreased	Consultant Project Manager	05/07/2019	Medium	Review of scheme design against highway boundary plans.	Delay to scheme, additional costs	No additional land required	Any changes within highway boundary / GCC land	Additional 3rd party lane required. 12 months delay & legal costs	Open	Confirm any highway boundary changes required. Review of detailed design against land plans.	Ongoing	On Target		Consultant Project Manager
A3.3	05/07/2019	3rd party property purchases by GCC on Hatherley Lane fall through and require additional amounts.	2	4	8	GCC progressing 2 x property purchases. Offers currently accepted on both properties.	2	4	8	Decreased	GCC Project Manager	05/07/2019	Medium		Change of design and reduced scheme benefits.	Properties acquired	Properties acquired with some additional cost / delay	Properties not acquired.	Open	GCC to confirm property ownership. Progress agreed planning / consenting for demolition and highway widening.	Ongoing	On Target		GCC Project Manager
<b>4. Design / technical / preparatory works</b>																								
A4.1	05/07/2019	Exact details and cost of required utility diversions are currently not finalised. Cost of diversions could be higher than expected and higher than allowance in budget.	4	4	16	Trial pits completed to identify exact utility locations. C4 cost estimates received from utility companies. Further discussion and review taken place with utility companies. Design to be amended to reduce diversions where possible. Risk allocation included within scheme budget.	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Medium	Risk of design changes creating the need to revised utility diversion cost estimates	Delay to scheme, additional costs.	Utility diversions within budget or less	Minor additional diversions.	Major additional diversions.	Open	Progress C4 enquiries and trial holes following FBC approval during detailed design.	Ongoing	On Target		Consultant Project Manager
A4.2	05/07/2019	Design changes required during detailed design result in additional works required. (Eg. Scope of work on Hatherley Lane, P&R, bus layby, cycle crossings)	3	4	12	Preliminary design reviewed by Atkins. Feedback from share events to be considered. Early liaison with GCC regarding departures from standard	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Medium		Late changes to design. Delays to design completion. Increase in works estimate /	Very minor changes	Minor amendments	Significant re-design	Open	Finalise preliminary design. Ongoing liaison. Meetings with GCC Strategic Planning team.	Ongoing	On Target		GCC Project Manager / Amey Project Manager
A4.3	05/07/2019	Unfavourable Road Safety Audit response causes design changes	3	3	9	RSA Stage 1 completed based on preliminary design drawings and designers response drafted. Further safety audit at detailed design stage.	3	3	9	Remains the same	Consultant Project Manager	05/07/2019	Medium	RSA 1 complete on Preliminary design	Amendments required to design. Delays / additional costs	No changes	Minor amendments	Major design changes necessary / 3 month delay	Open	Further RSA during detailed design	Ongoing	On Target		Consultant Project Manager

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A4.4	05/07/2019	Delays incurred during detailed design.	3	4	12	Early review of handover preliminary design. Robust programme developed. Resourced programme developed.	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Medium		Delays to start of construction and additional design costs	No Delay	2 month delay	6 month delay	Open	Ongoing monitoring of detailed design programme	Ongoing	On Target		Consultant Project Manager
A4.5	05/07/2019	Need for additional surveys identified during detailed design	3	3	9	Survey works completed during preliminary design phase. Review of design and surveys taken place.	3	3	9	Remains the same	Consultant Project Manager	05/07/2019	Short	Survey required for properties on Hatherley Lane	Delays to completion of design. Additional cost	No Delay	1 month delay	3 month delay	Open	Confirm if final design layout requires additional survey information	Ongoing	On Target		Consultant Project Manager
A4.6	05/07/2019	Design departures required not acceptable to GCC	2	4	8	Produced non conformance report to highlight departures. Early liaison with GCC.	2	4	8	Remains the same	Consultant Project Manager	05/07/2019	Short		Delays to completion of design. Design changes. Additional cost	DFT authorised	Some minor design changes / further work	Major redesign	Open	Departure review meeting to be arranged with GCC.	Ongoing	On Target		Consultant Project Manager
A4.7	05/07/2019	Scheme clashes with other projects on the road network (Highways England / GCC schemes)	3	4	12	Ongoing meetings and liaison with Highways England	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Short		Delays to scheme. Excessive delays on road network.	No clashes	Some clashes with diversion routes	Major traffic management clashes	Open	Ongoing liaison with Highways England	Ongoing	On Target		GCC Project Manager / Amey Project Manager
A4.8	05/07/2019	Delays submitting Full Business Case (FBC) leads to late approval of FBC by LEP board	3	4	12	Ongoing liaison with FBC review Consultancy. Stagger submissions of ph 1-4	3	4	12	Increased	Consultant Project Manager	05/07/2019	Medium			Submitted on programme	Delayed submission but approved at LEP board	Delayed to next LEP board meeting	Open	Ongoing liaison with Aecom and LEP	Ongoing	Behind Target		Consultant Project Manager
<b>5. Environmental</b>																								
A5.1	05/07/2019	Further environmental investigations reveal the presence of protected and / or invasive species on the site since the initial survey, leading to changes in design and additional mitigation.	3	3	9	Environmental desk top assessment and site survey completed. The current cost estimate makes an allowance for risks to cover the potential for additional environmental mitigation measures - covering drainage, ecology, archaeology, air quality, noise, landscape etc.	3	3	9	Remains the same	Consultant Environmental Lead	05/07/2019	Medium	Environmental requirements assessed as part of FBC submission.	Additional scheme costs	Further surveys to properties	1 month delay	2 month delay	Open	Further environmental surveys and design work ongoing during preparation of the FBC.	Ongoing	On Target		Consultant Environmental Lead
A5.2	05/07/2019	Vegetation clearance works required after the beginning of bird nesting season.	3	3	9	Conduct all site clearance works prior to the nesting season. Or ensure an Ecologist inspects all trees and hedgerows prior to removal	2	3	6	Remains the same	Consultant Environmental Lead	05/07/2019	Medium	Review programme and manage tree/hedgerow removal based on that programme	Trees need to be removed during nesting season need to be inspected by ecologist prior to removal thereby incurring additional cost and possible delay	Does not occur	Does not occur	Trees not removed prior to nesting season need inspecting	Open	Review construction programme during detailed design to identify any potential issues.	Ongoing	On Target		Consultant Project Manager
A5.3	05/07/2019	Requirement for noise protection / additional planting measures identified.	3	3	9	Noise and planting assessment completed for FBC. Ongoing environmental input to design	2	3	6	Remains the same	Consultant Environmental Lead	05/07/2019	Medium	Noise and planting assessment within FBC.	Design changes, additional cost and delays to scheme.	Not required	Some minor work required	Major works necessary	Open	Further environmental surveys and design work during detailed design post FBC approval.	Ongoing	On Target		Consultant Environmental Lead
A5.4	05/07/2019	Part One Claims - claims arising from noise, pollution 12 months after the scheme opening.	2	3	6	Noise assessment completed for FBC. Review requirement for further noise and AQ assessments undertaken post scheme opening (1 year).	2	3	6	Remains the same	Consultant Environmental Lead	05/07/2019	TB		Some possible claims	No claims	Some minor claims	Some minor claims	Open		Ongoing	On Target		Consultant Environmental Lead
A5.5	05/07/2019	Increase to impervious surface area requires more extensive drainage design / construction and consenting than originally anticipated	3	3	9	Drainage surveys, assessments of drainage design and consenting strategy complete.	2	3	6	Remains the same	Consultant Drainage Lead	05/07/2019	Medium		Programme delay and additional costs	No delay	1 month delay	2 month delay	Open		Ongoing	On Target		Consultant Drainage Lead
A5.6	05/07/2019	Scheme requires EIA planning application / record of determination/ EIA screening report	3	5	15	Consenting strategy technical note produced and shared with GCC. Further confirmation to be agreed with planning authority	3	5	15	Increased	Consultant Environmental Lead / Project Manager	05/07/2019	Medium	GCC sort advice of GCC legal team	Significant delays to scheme. Additional cost of fees to complete assessments	No delay	1 month delay	6 month delay	Open		Ongoing	Behind Target		Consultant Environmental Lead
A5.7	05/07/2019	Further air quality works required by Local Planning Authority due to works within Air Quality Management Areas	3	4	12	Consenting strategy technical note produced and shared with GCC. Further confirmation to be agreed with planning authority	3	4	12	Remains the same	Consultant Environmental Lead / Project Manager	05/07/2019	Medium		Programme delay and additional costs	No delay	No delay	3 month delay	Open		Ongoing	On Target		Consultant Environmental Lead
A5.8	23/09/2019	Evaluation of specific tree - adjacent to Harthurstfield Park bungalows; possible mitigation required	4	2	8	Talk to Tree Officer and develop appropriate working methodology for inclusion in contract	4	1	4	Remains the same	Consultant Environmental Lead / Project Manager	23/09/2019	Medium		Written permission may be required from the local authority to carry out any works to tree. Contractor must comply with working methods which may impact on programme	No delay	No delay	2 weeks delay	Open		Ongoing	On Target		Consultant Environmental Lead
<b>6. Stakeholder Management / Consultation</b>																								
A6.1	05/07/2019	Ineffective share event and/or comms strategy.	3	3	9	Ensure early consultation with stakeholders. Public share events held in June 19. Developed a communication plan to engage with the public and key stakeholders.	3	3	9	Remains the same	GCC Project Manager	05/07/2019	Medium	Comms team involvement at early stage. Detailed comms plan developed and utilised. Share events held 18/06/19 and 20/06/19	Increased resource to deal with public, delays, objections, scheme design changes	Does not occur	Existing resource adequate	Delays, objections, design changes, support for scheme questioned	Open		Ongoing	On Target		GCC Project Manager
<b>7. Procurement</b>																								
A7.1	05/07/2019	Receipt of lower cost alternative tenders which extends into 3rd party land or requires planning application.	2	3	6	Contract specification to highlight constraints.	1	3	3	Decreased	Consultant Project Manager	05/07/2019	Medium		Delay, reputational damage if better alternatives are proposed.	No alternatives need to be considered	No alternatives need to be considered	Delay whilst alternatives considered	Open		Ongoing	On Target		Consultant Project Manager
A7.2	05/07/2019	Lower number of contractors price the scheme leading to reduced competition	3	3	9	Early planned notification of tender opportunity. Adequate time to be provided to price and mobilise scheme.	2	3	6	Remains the same	Consultant Project Manager	05/07/2019	Medium		Less competition. Higher tender price	High number of tenderers	Moderate number of tenderers	Low number of tenderers	Open		Ongoing	On Target		Consultant Project Manager

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<b>8. Construction</b>																								
A8.1	05/07/2019	Scheme is not delivered in the timescales expected by LEP.	3	4	12	Robust programme developed for design and delivery. Scheme split into phases to allow staggered construction. Ongoing agreement of timescales with LEP and GCC	3	4	12	Remains the same	GCC Project Manager	05/07/2019	Medium	Detailed design and construction programme developed.	Delay of LEP spend. Possible loss of LEP funding. Delay of construction of other phases of projects, reputational damage.	Delivered in line with current timescale	3 month delay	6 month delay	Open		Ongoing	On Target		GCC Project Manager
A8.2	05/07/2019	Excessive construction noise leading complaints.	3	3	9	Determine works to be carried out at night. Look at alternative proposals and do work during daytime. Liaison with residents and businesses	3	3	9	Remains the same	Consultant Project Manager	05/07/2019	Medium	No progress yet due to timeline of project.	Change in construction methodology. Complaints and negative publicity.	Not Significant	Not significant	Road Closure	Open		Ongoing	On Target		Consultant Project Manager
A8.3	05/07/2019	Excessive traffic delays on A40. AM queuing back of traffic to M5 J11 / M5 motorway and PM towards Cheltenham.	4	4	16	Traffic management proposal to be developed. Current assumptions that any lane closures will be off peak. HE aware of plans and ongoing meetings taking place.	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Medium		Significant traffic delays, negative publicity	Traffic delays acceptable	Minor expected delays at peak times	Significant delays leads to change of traffic management	Open		Ongoing	On Target		Consultant Project Manager
A8.4	05/07/2019	Unexpected difficulties during construction (Eg. ground conditions, design changes, unknown utilities)	4	4	16	Extensive site surveys complete. Robust detailed design to be developed. Risk allowance to be included within budget estimates.	3	4	12	Remains the same	Consultant Project Manager	05/07/2019	Medium		Delays and additional costs.	No significant changes	Some changes but managed within programme	Significant difficulties resulting in delays and costs	Open		Ongoing	On Target		Consultant Project Manager
A8.5	05/07/2019	Unknown / unchartered services	2	5	10	GPR and trial hole surveys complete in areas of widening. Liaison with utility companies. Detailed design to be developed including necessary utility diversions	2	5	10	Remains the same	Consultant Project Manager	05/07/2019	Medium		Delays and additional costs.	Some changes to known diversions	Some changes but managed within programme	Significant additional diversions	Open		Ongoing	On Target		Consultant Project Manager
<b>9. Operations &amp; Maintenance</b>																								
A9.1	05/07/2019	Scheme does not deliver agreed benefits.	2	5	12	Robust FBC produced.	2	5	9	Decreased	GCC Project Manager	05/07/2019	Long	Modelling shows improvement to journey times and positive BCR.	Reputational damage. Further measures to improve traffic delays	No significant issues	No significant issues	Reputational damage	Open	Post completion surveys required to assess scheme impact.	Ongoing	On Target		GCC Project Manager