

College Road Roundabout Risk Register

College Road Roundabout - Client Risks

Risk Id	Description	Cause	Consequence	Owner	Shadow Owner	Risk Category	Owned by (Organisation)	AFTER MITIGATION						Mitigation Strategy	P50 Cost (£)	P50 Delay	
								Likelihood (%)	Minimum (£)	Most Likely (£)	Maximum (£)	Minimum (Days)	Most Likely (Days)				Maximum (Days)
1	Setting out and computer models don't fit with on site layout	Issues around scaling, OS backgrounds, restricted access etc cause problems at job start	Additional survey work, costs and time to respond and to modify as needed.	DM		Design	RMBC	10	5000	25000	100000	0	5	20	Extensive pre works surveys and modelling checks.	2500	0.5
2	Soft spots or poor ground above CE threshold especially linked to former housing around the existing roundabout	Additional excavation and need to import material for fill and capping	Increased costs and possible delay	DM		Physical	RMBC	50	10000	150000	300000	2	10	20	Ground investigation in advance of construction	75000	5
3	Utility diversions - final invoices outturn at a higher cost than estimated at time of NPIF bid (C2 stage).	All works are charged at cost, and final invoices are often higher than estimated	Increased outturn costs	DM	DP	Utilities	RMBC	50	10000	100000	200000	0	0	0	Undertake regular refresh of utility estimates.	50000	0
4	Utility diversion - unforeseen services requiring diversion.	New or uncharted services	Increase in diversion costs.	DM	DP	Utilities	RMBC	30	10000	100000	300000	0	5	30	Continuous review of utility locations supplemented with trial pits at critical locations and ground penetrating radar surveys during works lead in.	30000	1.5
5	Utility diversions - during construction stage, including additional accomodation works.	During construction stage construction programmes of the diversion contractors does not meet that anticipated at tender stage / programme 1 approval causing delay.	Increase in construction costs and some delay in diverting stats and main contractor progress.	DM	DP	Utilities	RMBC	50	20000	200000	500000	5	20	50	Compile contact list of statutory undertakers to help ensure quicker response in case issues arise during construction. Regular diversion works meetings prior to and during construction.	100000	10
6	Preparation costs - design and site investigation - exceed budget allowance.	Design becomes protracted due to changes or complexity. Site investigation yields the need for further tests or excavations.	Increase in preparation costs.	DP	DM	Design	RMBC	50	10000	20000	50000	0	5	20	Clarity of brief ensured. Regular design meetings to be minuted with nomination of lead designer.	10000	2.5
7	Rock or other hard material above CE threshold	Sandstone is present on site with rock head level typically 2m below existing ground level	Additional cost of excavation and disposal and possible delay	DP	DM	Physical	RMBC	5	10000	50000	100000	1	5	10	Ground investigation in advance of construction	2500	0.25
8	Historic sites or other heritage or archeology issues	Sites exist in the works area requiring special investigation and restricting access at the start of the job. Special finds or interest or uncharted sites may cause delay and incur additional survey costs.	Increased outturn costs, delayed approvals and consents to start works	DP	DM	Design	RMBC	1	5000	100000	200000	1	10	20	Early commissioning of dig and similar research.	1000	0.1
9	Groundwater problems	Wet ground causing construction problems	Delay and additional cost. Special construction methods	DP	DM	Physical	RMBC	10	10000	30000	100000	1	10	25	No mitigation possible.	3000	1
10	Design amendments.	Miscellaneous amendments during construction	Additional costs and delays	DM	DP	Design	RMBC	90	-5000	100000	300000	1	25	60	Design as compete as possible before issue.	90000	22
11	Bond	No bond included in initial contract documents. Subsequent introduction would lead to additional cost	Additional costs	DP	NF	Commercial	RMBC	5	8000	10000	20000	0	0	0	No mitigation possible.	500	0
12	Noise becomes intolerable for residents	Close proximity of construction works to some residential houses	Residents are relocated during certain phases of construction	DP	DM	Commercial	RMBC	5	1000	10000	20000	0	0	0	No mitigation possible.	500	0
13	Allowance for shared risks below	See below	Shared pain/gain	DP	DM	Various	RMBC	90	-200000	-40000	300000	0	0	0	No mitigation possible.	-36000	0

14	Protected species / wildlife.	Discovery of protected species within the site.	Delay in implementation or programme reappraisal due to consents or approvals required and need for additional surveys.	DP	DM	Design	RMBC	1	5000	75000	250000	0	10	50	Site survey being continuously updated. Trees felled before nesting bird season	750	0.1
15	New or Amendments to environmental or health and safety legislation.	New or amended legislation (e.g. landfill taxes, health and protection requirements).	Change in methodology, increased costs for associated works	DP	DM	Contractual	RMBC	10	10000	25000	50000	0	5	10	No mitigation possible.	2500	
16	Diversion routes require additional signage or other enabling works	Traffic unable to follow routes, or routes changed due to unforeseen events or complications	Additional costs. Possible delays if details not confirmed in time and implemented	DM	DP	Design	RMBC	10	10000	20000	100000	0	0	10	Early liaison with HNMG and HE	2000	0
17	Local / public opposition or protest. Appeals to Members or CE.	Proposed scheme generates significant amounts of local opposition and / or protest.	Delay to access to areas affected..	DP	DM	Commercial	RMBC	1	5000	20000	120000	0	5	20	Early consultation	200	0
18	Main contractor goes into liquidation after being awarded contract.	Main contractor goes into liquidation.	Delay whilst appointing alternative contractor. May be significant costs incurred in preparing for replacement contractor to begin works.	DP	DM	Commercial	RMBC	1	250000	1000000	2000000	30	90	180	MHA membership should allow rapid agreement with second contractor	10000	0.9
19	Inclement weather conditions during construction above CE thresholds.	Unexpectedly inclement weather eg exceptional cold occurs during construction period.	Delays to construction phase and potential for additional costs to be incurred.	DM	DP	Physical	RMBC	25	20000	40000	150000	5	10	40	No mitigation possible.	10000	2.5
20	Changes in design standards / legislation.	New legislation and/or standards come into effect or existing legislation / standards are modified (e.g. design standards for safety fencing).	Need to revise designs in order to comply with new (or modified) design standards. Delay and cost implications.	DM	DP	Design	RMBC	10	5000	20000	100000	0	5	20	MHA forum membership may give early warning of standards change or similar	2000	0.5
21	Contaminated land, soft ground or similar.	Discovery of contaminated land within (or in proximity) of site, or material for disposal classed as hazardous. Soft ground requiring extra dig.	Need to decontaminate land. Delay and cost implications, Waste needs to go to hazardous waste tip for disposal.	DM		Physical	RMBC	10	25000	75000	200000	2	5	20	Further ground investigation and testing for tar deposits	7500	0.5
22	Updates and ambiguities in contract documents issued following agreement of target cost.	Need for early agreement of target cost for submission of final approval means that contract documentation may need to be reissued prior to start on site.	Potential for additional scheme costs to be incurred if details are revised. Especially appendices 1/13, 1/16, 1/17.	DP	DM	Design	RMBC	50	5000	25000	100000	2	5	20	Ensure that contract documents are as complete as possible before agreement of target price. Utilise ECI with contractor to flag up uncertainties. Utilise as far as possible standard MHA documentation.	12500	2.5
23	Stage 3 Safety Audit.	Stage 3 Safety Audit identifies unforeseen issues that require additional tasks over and above those originally allowed for.	Additional costs and some potential delays involved in resolving issues.	DP	DM	Design	RMBC	50	5000	20000	50000	1	5	10	Ensure findings and recommendations from Safety Audit Stages 1 and 2 are noted and acted upon. Early commission of Stage 3 audit before contractor left site.	10000	2.5
24	Additional tarmac layers at tie-ins or within scheme where lower layers to be retained	Deterioration of existing carriageway	Additional works	DM	DP	Physical	RMBC	40	5000	30000	60000	0	5	10	No mitigation possible	12000	2
25	Staff changes RMBC.	Changes in staffing of project delivery	Delay in delivery (and associated costs) due to need for new staff to get up to speed with project.	DP	DM	Resources	RMBC	5	10000	20000	50000	2	4	10	No mitigation possible.	1000	0.2
26	Changes in sustainability taxes		Additional costs	DP	DM	Contractual	RMBC	2	10000	50000	100000	0	0	0	No mitigation possible.	1000	0
27	Extended supervision due to contract overrun	Staff retained on site, costs not wholly covered by LD's	increased costs	DP	DM	Resources	RMBC	25	2000	10000	20000	0	0	0	Robust LD's	2500	0
28	Estimates based on Sketch Design only	Estimates may be exceeded at the time of target cost setting due to more information contained in the preliminary and detailed design including scope creep	increased costs	DP		Design	RMBC	50	-100000	250000	400000	0	10	20	Ensure scope creep is minimised as far as is reasonably practical.	125000	5
29	Night-time and weekend working. (Amendments to 1/17 and 1/13 resulting in additional night and weekend working)	TM still to be agreed	Additional costs	DM	DP	Design	RMBC	50%	5000	25000	75000	0	2	5	TM to be further developed asap	12500	1
30	Site vehicle specification greater than that included for			DM	DP	Design	RMBC	50%	0	5000	10000	0	0	0	Confirm specification	2500	0
31	Survey equipment specification greater than that included for.			DM	DP	Design	RMBC	50%	0	2000	5000	0	0	0	Confirm specification	1000	0

