

PROJECT NO:	WNBINP
PROJECT MANAGER:	GRAHAM BOAKES
PROJECT NAME:	BIN BROOK
BRIEF PROJECT DESCRIPTION:	RESERVOIR 100YRS

Ref	Risk Identification		Risk Prioritisation (Before Mitigation)						Mitigation					Residual Prioritisation (After Mitigation)						Data for Quantitative Analysis					Assumptions (for cost basis)	
	Risk Description (Hazard and Consequence)	Risk Owner (Client, Contractor, Consultant, Others)	Probability (%)	Probability Scale (L,M,H,VH)	Cost Impact (L,M,H,VH)	Time Impact (L,M,H,VH)	Cost+Time Impact (L,M,H,VH)	Risk Priority	Mitigation Description	Action	Cost of Mitigation (£)	Action Owner	Completion Date	Residual Probability (%)	Probability Scale (L,M,H,VH)	Cost Impact (L,M,H,VH)	Time Impact (L,M,H,VH)	Cost+Time Impact (L,M,H,VH)	Priority	Least Cost (£)	Most Likely Cost (£)	Max Cost (£)	binomial	@Risk Pert Distribution		risk value
1	Compensation cost higher than expected due to change in policy by Cambridge Preservation Society	Client	1%	L	vh	I	VH	H	Impossible to mitigate, re-evaluate economics if it occurs. Legal agreements to be in place. Working in partnership				1%	L	I	I	L	L	0	0	0	0	0	0		
2	Cambridge Preservation Society Country Park proposals abandoned. Land sold to private owner	Client	1%	L	vh	I	VH	H	Impossible to mitigate, re-evaluate economics if it occurs. Legal agreements to be in place. Working in partnership				1%	L	vh	I	VH	H	0	0	0	0	0	0		
3	Objections from tenants including Wheatcases Cottages, Springfield, Brookfield and Wayside	Client	50%	H	I	I	L	L	Maintain consultation process. Targeted consultation.				30%	M	I	I	L	L	1,000	5,000	10,000	0	5167	0		
4	Clay quality poorer than expected	Client	50%	L	m	I	M	M	Carry out detailed investigation at design stage.				5%	I	I	I	L	L	70,000	175,000	245,000	0	169167	0	Based on 7000m3 for core of dam at £10, £25 & £35/m3	
5	Clay not consistently available in borrow area causing need to expand borrow area into southern field	Client	70	H	m	m	M	H	Carry out detailed investigation at design stage, move material around to maintain southern field				15%	M	I	m	M	M	5,000	13,000	26,000	0	13833	0	£2,600 per day for plant to excavate and fill for 2 days, 1 week & 2 weeks additional time	
6	Prolonged wet weather during construction	Client	40%	M	m	m	M	M	Construct works in the summer				20%	m	m	m	M	M	14,500	21,000	42,000	0	23417	0	Site costs £8k per week, standing time £1,300 per day for 1 week, 2 weeks & 5 weeks delay	
7	Out of bank flooding from Bin Brook during construction	Client	2%	L	I	I	L	L	Construct works in the summer				2%	L	I	I	L	L	0	0	0	0	0	0		
8	Additional works required for landscape or environmental mitigation	Client	30%	M	m	m	M	M	Confirm CPS will undertake main landscaping work. Include allowance in main budget.				5%	L	I	I	L	L	0	0	0	0	0	0	0	Costs assume CPS will carry out all landscaping apart from grass seeding. Could get into difficulties with Planning if this is not done promptly
9	Contaminated ground	Client	30%	M	m	m	M	M	Trial pits at detailed design stage should remove most of uncertainty				5%	L	m	m	M	M	2,000	4,000	6,000	0	4000	0	Disposal to waste tip, £2k per load	
10	Unexploded ordnance	Client	2%	L	h	m	H	M	Carry out UXB survey.				2%	L	m	m	M	M	2,500	15,000	30,000	0	15417	0	Allow for 1 day, 1 week, 2 weeks delay, £15k per week	
11	Archaeological find during construction	Client	20%	M	h	h	H	H	Preliminary investigation at design stage				20%	M	m	m	M	M	15,000	30,000	60,000	0	32500	0	Allow for watching brief in costs allow for 1 week, 2 weeks, 1 month delay in risk budget. £15k per week	
12	Need to investigate archaeology more than allowed for in base estimate	Client	30%	M	h	I	H	H	Preliminary investigation at design stage				20%	M	h	I	H	H	50,000	100,000	150,000	0	100000	0	Based on cost for excavation by County Archaeology on other sites (Steve Peck)	
13	Vandalism & theft	Contractor	20%	M	m	I	M	M	Risk carried by contractor with main budget				10%	L	m	I	M	M	0	0	0	0	0	0	0	Cost of security is allowed in costs
14	Civil cost underestimated due to design additions/changes	Client	30%	M	m	I	M	M	Opt review designs, PAH design as complete as possible, prepare comprehensive cost estimate. Carry out				30%	m	m	I	M	M	75,000	150,000	300,000	0	162500	0	Allow 5% minimum cost, 10% likely cost, 20% maximum cost of capital cost	
15	Automation cost underestimated including power supply	Client	30%	M	I	I	L	L					30%	M	I	I	L	L	5,000	25,000	50,000	0	25833	0	10, 50 100% of £ estimated cost for power and BT connection	
16	Delay in obtaining power supply or BT connection	Client	50%	M	I	m	M	M	Order in advance. Arrange wayleaves.				1%	L	I	I	L	L	0	0	0	0	0	0	0	
18	Consultants design and supervision cost underestimated	Consultant	30%	M	m	I	M	M	Prepare comprehensive estimate. Allow risk budget				10%	L	I	I	L	L	10,000	20,000	30,000	0	20000	0	Allow 5% increase, 10% increase, 15% increase on £200k estimate	
19	Unexpected buried service	Client	10%	L	m	m	M	M	Search already carried out, unexpected services unlikely in rural area				5%	L	m	I	M	M	4,000	6,000	14,000	0	7000	0	Delay at £2600/day plus cost of diverting, 1 day, 2 days, 1 week, £1k	
20	Water main diversion costs greater than estimated	Client	30%	M	m	I	M	M	Review cost estimate from Cambridge Water. Divert in advance. Advance planning				20%	M	m	I	M	M	20,000	40,000	60,000	0	40000	0	5, 10, 15% of £400,000 estimate	
21	Unexpected ecological constraint	Client	30%	M	m	I	M	M	Environmental survey has not identified this as high risk area. Relevant surveys				20%	m	m	I	M	M	3,000	15,000	30,000	0	15500	0	Site costs £8k per week, standing time £1,300 per day for 1 day, 1 week & 2 weeks delay	
22	Environmental incident stops work eg nesting birds	Client	30%	M	m	I	M	M	Carry out bushing before start of work should be possible to work around nesting birds but delay still a possibility. Advance				5%	L	m	I	M	M	14,500	21,000	42,000	0	23417	0	Site costs £8k per week, standing time £1,300 per day for 1 week, 2 weeks & 5 weeks delay	
25	Mismatch with owner expectations	Client	10%	L	I	I	L	L	Continued consultation				5%	L	I	I	L	L	0	0	0	0	0	0	0	
26	No approval from NT who have interest in land	Client	10%	L	I	I	L	L	Early consultation				5%	L	L	L	L	L	0	0	0	0	0	0	0	
27	Increase in steel price	Cont	35%	M	M	L	M	M	Risk allowance				35%	M	M	L	M	M	1,000	2,000	3,000	0	2000	0	3%, 6%, 9% of £30k	
28	Increase in fuel price	Cont	35%	M	M	L	M	M	Risk allowance				35%	M	M	L	M	M	5,000	10,000	15,000	0	10000	0	10%, 20%, 30% of £50k	
29	Bird flu, F&M etc	Client	2%	L	M	H	H	M	Risk allowance				2%	L	M	H	H	M	15,000	45,000	60,000	0	42500	0	Remobilise	
30	Need for additional downstream channel improvements	Client	20%	M	m	I	M	M	Early inspection				5%	M	m	I	M	M	20,000	30,000	40,000	0	30000	0	To be confirmed after investigation	
31	Unforeseen ground conditions	Client	20%	M	m	m	M	M	Site investigation.				20%	L	m	m	M	M	3,000	6,000	15,000	0	7000	0	1.2.5 days additional work	
32	Delayed start	Client	30%	M	m	m	M	M	Construction now planned to start 2008, provided risks 2 to 4 do not occur this should be achievable				30%	M	m	m	M	M	30,000	60,000	90,000	0	60000	0	Allow for 1 years inflation in construction costs for min, likely and max - 3%, 6%, 9%	
33	Failure to secure funding	Client	80%	H	h	h	H	H					80%	H	h	h	H	H	0	0	0	1	0	0	0	No need to allow for this. Effect will be to stop project
34	Failure to obtain planning permission	Client	10%	M	m	m	M	M	Early consultation with planning authority				5%	L	I	I	L	L	0	0	0	0	0	0	0	Unlikely to delay project for a year
35	Other approvals not received English Nature etc	Client	10%	M	m	m	M	M	Early consultation				5%	L	I	I	L	L	0	0	0	0	0	0	0	Unlikely to delay project for a year
36	Non or delayed acceptance of asset by Operations requiring additional works	Client	30%	M	m	I	M	M	Ongoing consultation with ops delivery				30%	L	m	I	M	M	1,000	2,000	5,000	0	2333	0	Allow £1000, £2000, £5000 additional work in risk	