



Risk and Opportunities Management

We undertake projects to achieve beneficial change. To establish whether the project will be of benefit the starting point should always be a business case or investment appraisal.

Producing a business case requires one to make certain assumptions about future performance, such as how much will the project cost, when will the facility be completed and when will the expected benefits start to be realized. Making such assumptions obviously introduces an element of uncertainty.

There is a risk that the project will not turn out as expected and that the perceived benefits for which the project was conceived will not be materialised.

Because of the uncertainty and risk within projects we at TCA believe in managing the project through the management of risks and opportunities. Having established the business benefit of commissioning the project we focus on the risks of achieving the desired results and what opportunities can be harnessed as a result of undertaking the project. This way we are able to focus the project team towards devising appropriate strategies towards eliminating or minimising the risks and maximising the opportunities so that the desired outcomes are achieved.

Successful completion requires these risks and opportunities to be managed. At TCA we believe that effective project management aims to reduce the risks by focusing on thorough design and planning and implementing a project strategy which makes the team better able to respond to deviations as they occur.

Having established the factors by which the project will be judged a success we then identify the risks involved in achieving the success criteria.

Risk can be defined as:

- hazard
- chance of bad consequence or loss
- exposure to mischance

Impact of risk can be measured as the likelihood of an event occurring and the consequence if it does occur.

i.e. impact of risk = (likelihood of occurrence) x (consequence of risk)

At The Clarkson Alliance we adopt a systematic approach to the management of risk by:

- identify, assess and rank risks making your risks explicit
- focus on the major risks from your project
- make informed decisions on your provision for adversity, e.g. mitigation measures
- minimise potential damage should the worst happen
- control the uncertain aspects of construction projects
- clarify and formalise your role and the roles of others in the risk management process

and perhaps most importantly

- identify your opportunities to enhance project performance.

Please see below a copy of our sample Risk register which we compile and use to manage each of our projects.

Risk Register



Client: Oxford City Council					Project: Proposed Capital Improvement to Ferry Sports Centre								
Item	Nature of Risk	Assessment			Degree of Risk	Consequence		Strategy to elimination/Control of Risk	Owner	Estimate of Implications			
		LO x	CR	=HRN		Cost Time Fitness for purpose	C T FP			Min £	Most Likely £	Max £	Time (Weeks)
1.	Poor ground conditions	2	3	6	High	May need to have piled foundations	C, T	Undertake early soils investigation with either trial pits or boreholes	OCC	£10k	£20k	£100k	4
2.	Contaminated Ground	1	3	3	Significant	Need to remove contaminated soil, backfill with stable material & then pile	C, T	Undertake early soils investigation with either trial pits or boreholes	OCC	£50k	£75K	£100k	5
3.	The presence of Underground services	2	2	4	Significant	Potential diversion of services	C, T	Need to carry out search with Utility companies / Obtain as-built drawings.	OCC	£100k	£150K	£250k	12
4.	OCC do not agree to a re-arrangement of car parking and a possible loss of parking spaces immediately in front of Leisure Centre	2	2	4	Significant	Would need to consider extending over the top of the existing Gym	C, T & FP	Consultation with Planners	OCC	£100k	£150K	£250k	8
5.	If we are forced to extend Gym by introducing a mezzanine floor existing ground floor structure may not be suitable to build over	3	2	6	High	May have to support proposed first floor on an independent structure	C, T	Obtain as-built drawings and structural engineers calculations for existing structure	OCC	£200k	£250k	£300k	6
6.	Existing foundations may require underpinning	3	2	6	High	Underpin existing foundations		Obtain as-built drawings and structural engineers calculations for existing structure	OCC	£100k	£150k	£200k	4
7.	Condition of existing building which we propose to extend.	1	2	2	Low	The existing building fabric may not be sound where we propose to build above the existing ground floor.	C, T	Need to undertake intrusive survey in location of proposed connection	OCC	£10k	£50K	£100k	3
8.	Existing underground drainage is in poor condition / blocked / damaged	2	1	2	Low	May need to break out existing concrete floor slabs and re-lay new underground drainage	C, T	Carry out CCTV survey of underground drainage at Scheme design stage	OCC	£10k	£50K	£80k	3
9.	Inflation above present forecasts	2	1	2	Low	Increase costs due to wage increases in Construction industry due to Olympics in 2012	C	Make a higher inflationary allowance than BCIS forecast	OCC	£10k	£30K	£80k	0

Item	Nature of Risk	Assessment			Degree of Risk	Consequence		Strategy to elimination/Control of Risk	Owner	Estimate of Implications			
		LO x	CR	=HRN		Cost Time Fitness for purpose	C T FP			Min £	Most Likely £	Max £	Time (Weeks)
10.	Changes in the law	1	2	2	Low	Duration of works to be carried out within first 2 years of contract	C, T	Research potential statute which could come into effect during timescales of Capex works	OCC				
11.	Building Controls interpretation and application of Part L	3	3	9	Extreme	When extending volume of building some Building Control Officers have insisted that the thermal resistivity of existing building is increased to comply with Part L as well as new structure	C, T	Establish whether existing building was designed and constructed under the new Part L of the Building Regulations	OCC	£100k	£500K	£600k	12
12.	Design being fit for purpose	1	4	4	Significant	Facilities will not deliver forecast incomes projected by Fusion	FP	Establish latent demand and Undertake business case / Investment appraisal prior to commissioning design & works	Fusion				
13.	Building Contractor going into receivership / bankrupt / liquidation	2	1	2	Low	Completion of works are delayed and cost to complete is more than that tendered by appointed Contractor	C, T	Undertake thorough credit and liquidity checks on Contractors being considered for tender	OCC	£50k	£75k	£100k	4
14.	Obtaining Planning Approval	2	3	6	High	We may not be able to create a Leisure facility which delivers the business plan	FP	Consultation needs to be had with Planning Officer at an early stage	OCC				
15.	Business disruption as a result of carrying out Capital works	3	2	6	High	We do not achieve predicted revenues	C, T	Detailed consideration needs to be given to timing, phasing and sequencing of works to minimize disruption to the operation of the facility throughout programme of works	Fusion	£50k	£150K	£200k	8
16.	Business disruption as a result of Capital works taking longer than planned	3	2	6	High	Delay in opening extended facility, causing a delay to predicted revenue streams	C, T	Developing clear and complete works information for Contractor. Avoid introduction of Changes once on site. Ensure LAD's are included for in Building Contract	Fusion	£50k	£150K	£200k	8

Item	Nature of Risk	Assessment			Degree of Risk	Consequence Cost Time Fitness for purpose	C T FP	Strategy to elimination/Control of Risk	Owner	Estimate of Implications			
		LO x	CR	=HRN						Min £	Most Likely £	Max £	Time (Weeks)
17.	Obtaining Building Regulations consent	0	3	0	Negligible	Would not be able to operate facilities	FP	Ensure Design is developed in accordance with Building Regulations	Fusion				
18.	Receiving tenders within the project cost plan allowances	2	2	4	Significant	This could effect the scope of work that can be delivered within the budget	FP	Thorough Cost Planning, obtaining quotations from Contractors during design development stage	Fusion	£150k	£250K	£300k	0
19.	Consultants working within their fixed fee agreements	2	1	2	Low	Increase in overall project costs	C	Employ Consultants on Fixed Price Lump sum fee agreements	Fusion	£50k	£75K	£100k	0
20.	Inappropriate Specification for the works	1	2	2	Low	Facility does not perform to the requirements of Fusions Zone Data Sheets	FP	Application of Fusion Design Manual as brief to design team	Fusion				
21.	Latent defects within existing buildings	2	2	4	Significant				OCC				
22.	Weather disruption to Capital Works	2	1	2	Low	Delay to completion of the Capital Improvement Works	T	Place risk with Building Contractor	Fusion	£10k	£25k	£50k	4
23.	Incoming service capacity is insufficient	2	3	6	High	Increase in Cost – particularly to M & E	T C	Investigation with service providers as to current supply					

Original Assessment carried out by: Signature:	Signature:
Position	Position:

Key: Likelihood of occurrence (LO)

Consequence of Risk (CR)

Hazard Rating Number (HRN)

Key

Likelihood of occurrence			Consequence of Risk		
4	Frequent	Likely to occur frequently, many times during the period of concern (e.g. project duration, life of building)	4	Catastrophic	Major failure in meeting prime project objectives
3	Probable	Several times in the period of concern	3	Critical	Significant failure in meeting prime project objectives
2	Possible	Some time in the period of concern	2	Serious	Failure to meet major project objectives
1	Remote	Unlikely but possible in the period of concern	1	Marginal	Failure to meet lesser project objectives
0	Improbable	So unlikely that it can be assumed that it will not occur or it cannot occur	0	Negligible	Minor effect on meeting project objectives

RISK	Negligible	Very low	Low	Significant	High	Very High	Extreme	Prohibitive
HRN	0	1	2	3-4	6	8	9	12+

COMMENTS:

REVIEW DATES:

Although you can never remove all uncertainties, systematic risk management improves the chances of your project being completed on time, within budget and to your required quality, with proper provision for safety and environmental issues.

The ultimate purpose of the Risk Register is to communicate the analysis to all parties involved with the project.

Having identified and assessed the risk, one is then in a position to consider ways in reducing the effect of it.

There are 3 basic approaches

1. *Avoidance* – having identified the risk one can plan to eliminate the risk.
2. *Deflection* – one can try to pass the risk on to someone else through contract, insurance or bonding, by which security is held against the risk.
3. *Contingency* – one can take no action in advance of the risk occurring other than to draw up contingency plans should they occur

When ever a decision is made to pass a risk on to a third party through contract it is prudent to assign the risk to the party best able and motivated to control the risk. There is very little point in passing the risk onto a

contractor or sub-contractor if neither has the power or the motivation to control it.

Having produced the risk register we then use this to derive an appropriate contingency in terms of a time and cost allowance for each risk so that there is provision should the risk manifest itself.