

Title	Rules on the Management and use of Contingency in Estates and IT Projects
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Lead contact	Assistant Director of Finance (Finance Corporate Services)
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Rules on the Management and Use of Contingency in Estates and IT Projects

1. **Introduction** - The following are a set of rules on the management and use of contingency in Estates and IT projects under the authority of the Capital Projects Executive Board.

2. **Project contingency** – There are two categories of project contingency both of which are used for each defined project; “Project Board Contingency” and “Project Manager Contingency”.

2.1 Project Board contingency (PBC) - Is owned and controlled by the Project Board which is led by the project Board Chair who is accountable for its use to the Vice Chancellor and the University’s Council. The Project Board Chair may exceptionally delegate on a case by case basis the authority to access contingency to a senior officer of the University.

Project Board contingency can be defined and owned either for each individual project OR for a series of projects (see para 3 “programme contingency”).

2.2 Project Manager Contingency (PMC) - Is owned and Controlled by the Director of Estates, in the case of Estates projects or the Director of ITS in the case of IT projects, who is accountable for its use to the Project Board and may implement arrangements and delegations for its use and management.

Project manager contingency is always defined for each individual project and is never managed in aggregate.

2.3 The first priority of the owner of a contingency whether it be the Project Board or the Director of Estates/ITS is to complete the project without using the contingency, returning it in tact to the University unspent. Where this cannot be achieved contingency must be used for the purposes set out in para 4 below.

3. **Programme Contingency** - It may be appropriate in some circumstances for a project Board to hold a “programme contingency” rather than a “project contingency”.

3.1 A programme contingency is an amount of contingency held by a Project Board with responsibility for a series or “programme” of related projects funded from a common source. In these circumstances the Project Board will have flexibility to use contingency to cover adverse variances as they arise in the individual projects making up the programme.

3.2 Programme and Project contingency are mutually exclusive, therefore a project Board will only ever hold a Programme contingency OR a Project Contingency, never both and never neither.

3.3 It is for the Project Board to propose the use of programme or project contingency appropriately in a business case when it makes a case for funding to the University’s Council, or other person acting under delegation of authority from Council.

4. **Purposes of contingency** – Contingency is a budgetary amount created to cover the assessed risk of unforeseen cost escalation resulting from price inflation, delay and the margin of error in estimating techniques used to calculate input costs required to deliver work.
- 4.1 Contingency can be used to deal with an omission from scope where it prevents delivery of the project but it should not be used to add new scope.
- 4.2 The Project Board is responsible for delivering the project to scope. Scope is defined in the business case before the Project budget is approved by Council or under delegation from Council.
- 4.3 Contingency is approved as part of the budget approval for a project or programme of projects, following presentation of a business case to the University’s Council or other person acting under delegation from Council.
- 4.4 Contingency is not optimism bias, which is defined in para 8 below.
5. **Risk assessment and contingency value** – Contingency is expressed as a percentage value of the contracted sum, in the case of a building project, or as a percentage of the total costs before contingency, in other projects. Table a sets out a risk based approach to establishing the value of contingency for each project or programme. Appendix 1 sets out a risk evaluation template for both contingency and optimism bias (optimism bias para 8).

Table a

Project risk rating	Project Board contingency value	Project Manager contingency value	Risk score
Very Low	5%	5%	0-22
Low	10%	5%	23-44
Medium	10-15%	7%	45-77
High	15-20%	10%	78-110

- 5.1 A standard Project Board Contingency sum of 10% and Project Manager Contingency of 5% of either the contract sum, for a building project, or the total cost before contingency, for other projects, is appropriate for low risk projects. The hallmarks of a low risk project include:
- 5.1.1 Scope is effectively researched complete and documented.
 - 5.1.2 Deliverables are clearly defined and understood.
 - 5.1.3 Requirement and design solution are complete
 - 5.1.4 Requirement and design solution is uncomplicated.
 - 5.1.5 There is a clear delivery plan
 - 5.1.6 There is a high proportion of fixed priced work.
 - 5.1.7 Accurate estimates, quotes and fixed prices have been received for the work.
 - 5.1.8 Risk of delivery of services is effectively transferred under contract to the suppliers.
 - 5.1.9 There is certainty in supply chain and raw materials.
 - 5.1.10 There is minimal exposure to known unknowns such as the presence of asbestos.
 - 5.1.11 Enough people with the right skills have been secured to deliver the project.
- 5.2 The amount of contingency approved for inclusion in a project may vary if the assessment of risk is greater because there is a high level of uncertainty associated with one or more of the

above hallmarks or any other relevant matter. Table a sets out the range of contingency amounts that can be applied when risk is higher or lower than a standard low risk project.

- 5.3 The amount of contingency included in a project should reflect a risk assessment conducted at the point the budget is approved.
- 5.4 If an assessment of the level of risk in a project leads to the conclusion that more than 20% Project Board contingency combined with 10% Project Manager Contingency is necessary then more work should be undertaken to reduce the risk in the project and establish greater cost certainty before approval of the project budget is requested. This may be achieved by the approval of a small budget to fund performance of the necessary work.
- 5.5 The business case for each project approval request should identified the contingency amounts required and should include a risk assessment and risk score based on the hallmarks set out in para 5.1 above. It should objectively explain the need for contingency required in excess of a standard low risk project. Appendix I contains a template matrix for assessing and scoring risk.

6. Managing Project Board contingency

- 6.1 Project contingency – The Project Board contingency for an individual project will be retained by the Project Board and released only to that specific project on request from the Director of Estates/IT. The project sponsor will then be accountable to the Project Board for the use and management of the released contingency in the project for the authorised purpose and may put in place arrangements and delegations to that end.
- 6.2 Programme contingency – The Project Board contingency for a programme will be retained by the project Board and released to any of the projects making up the programme on request from the Director of Estates/IT.
- 6.3 Any unused project contingency or programme contingency will be returned to the University for re-allocation to other purposes.
- 6.4 Underspends in projects that are part of a programme will be added to the programme contingency.
- 6.5 The Chief Financial Officer or the Assistant Director of Finance (Finance Corporate Services) will advise the Project Board on the use and management of contingency.

7. Managing Project Manager contingency

- 7.1 The Director of Estates/IT will retain the Project Manager contingency for each project and will be accountable for its use to the Project Board.
- 7.2 The Director of Estates may put in place delegations and arrangements for its use and to ensure effective control and efficiency in instructing work.
- 7.3 Unused Project Manager contingency and savings on projects will be returned to the Project Board.

8. **Optimism Bias** – Is a value added to the estimate of project cost in recognition of the likelihood that costs have been underestimated. It is a tool which should be used to establish the potential full cost of a project for planning purposes. Its use is appropriate in the early stages of evaluating project cost to mitigate the risk of under providing financially. It also supports decision making processes which may be staged, authorising work and expenditure to develop a project and improve cost certainty while simultaneously recognising the potential overall cost and affordability of the project which are central to feasibility.
- 8.1 Optimism bias is intended for use prior to the approval of a project budget. Its use reflects significant uncertainty in cost estimates which should reduce as a project nears the point of being approved and full project budget authorised.
- 8.2 The Project Board Chair is responsible for ensuring that adequate optimism bias is included in project cost estimates and for establishing points at which it will be re-evaluated and for assessing whether the project is progressing towards cost certainty. In the case of an Estates project the points of assessment may coincide with the stages of design. The Director of Estates/ITS will advise Project Board Chairs on the appropriate amount and function of optimism bias.
- 8.3 Optimism Bias is removed and replaced by a contingency amount at the point the project is approved and the full project budget authorised.
- 8.4 An assessment of risk should be undertaken to determine the appropriate value of optimism bias at a given point in the project. Assessment should include consideration of the hallmarks set out in para 5.1 above and the template at appendix I should be used. This should be undertaken at key stages in the development of the project and as stated in para 8.2 in the case of a building project it is likely to be the design stages. The optimism bias is expected to decrease as the stages complete reflecting increasing cost certainty. The value of optimism bias should be in a range up to 100% calculated as a proportion of the total project cost net of optimism bias. Appendix I contains a risk evaluation template for both optimism bias and contingency.

Contingency and Optimism Bias Risk Evaluation

Risk evaluation criteria	Project Contingency Score	Optimism Bias
	0-10	0-20
1 Is scope effectively researched complete and documented? - Scope is approved and informed by defined and documented objectives, wide consultation with stakeholders and assessment of risk and impact. (very Low 0-2) - Scope is approved and informed by defined and documented objectives, there has been some consultation and an assessment of risk and impact. (Low 3-4) - Scope is not approved but is informed by defined and documented objectives, there has been limited consultation and some assessment of risk and impact (Medium 5-7) - Scope is not approved, the objectives are unclear and there has been no consultation or assessment of risk and impact (High 8-10)		
2 Are all the deliverables clearly identified and fully understood? - Deliverables are defined, approved and tested against approved project requirements (very Low 0-2) - Draft deliverables have been identified from approved project requirements (Low 3-4) - Draft deliverables are dependent on draft project requirements (Medium 5-7) - Deliverables and requirements have not been drafted (High 8-10)		
3 Are the requirements and design solution complete ? - Final requirements and design are approved by the Project Board (Very Low 0-2) - Requirments are approved by the Board but design solution is not complete (Low 3-4) - Requirements are being consulted upon prior to amendment and Board approval (Medium 5-7) - Requirements have not been developed (High 8-10)		
4 Are the requirments and design solution complex? - The requirements and design solution have (very low 0-2) complexity. - The requirements and design solution have (low 3-4) complexity. - The requirements and design solution have (Medium 5-7) complexity. - The requirements and design solution have (High 8-10) complexity. In evaluating complexity of a building project you should have regard to its purpose (specialised or technical use), specification of M&E, building management and control, new build or conversion/refurb, displacement of people and services, topography, design statement, programming, dependency on infrastructure development etc. In evaluating complexity of an IT project you should have regard to the level of integration of systems and data, configurability, in the cloud, dependency on physical infrastructure upgrade, compatability, displacement of people and services, multi user logistics, training and UAT etc. This is not a difinitive nor exhasutive list of criteria.		
5 Is there a clear delivery plan? - The plan has been developed, risk evaluated and is approved by the project Board (Very Low 0-2) - A plan is developed and in risk evaluation prior to approval (Low 3-4) - A plan is developed but has not been risk evaluated (medium 5-7) - There is no plan or it is still work in progress (High 8-10)		
6 Is there a high proportion of fixed price work in the project? - 80% and more of project work will be fixed price. (Very Low 0-2) - 60 -79% of project work will be fixed price (Low 3-4) - 30 -59% of project work will be fixed price (Medium 5-7) - 0-29% of project work will be fixed price (High 8-10)		

notes

- The range of scores for (very Low 0-2), (Low 3-4), (Medium 5-7) and (High 8-10) should be doubled for optimism Bias eg. Very Low will equal 1-4.
- Para 8.2 of the rules state that Assessment of optimism bias should be conducted at agreed stages during the development of the project and that in the case of a buidling project the stages will usually be the stages of design.

Appendix I

Risk evaluation criteria	Project Contingency Score	Optimism Bias
	0-10	0-20
7 Have accurate estimates and quotes been received for project work? - Accurate independent estimates and quotes have been received for >80% of costs (Very Low 0-2) - Accurate independent estimates and quotes have been received for 60-79% of costs (Low 3-4) - Accurate independent estimates and quotes have been received for 30-59% of costs (Medium 5-7) - Accurate independent estimates and quotes have been received for 0-29% of costs (High 8-10)		
8 Are risks effectively transferred under contract to suppliers of services? - The risk for non delivery of 80%, by value, of services to the project is transferred suppliers. (Very Low 0-2) - The risk for non delivery of 50-79% , by value, of services to the project is transferred suppliers (Low 3-4) - The risk for non delivery of 21-49% , by value, of services to the project is transferred suppliers (Medium 5-7) - The risk for non delivery of 0-29% , by value, of services to the project is transferred suppliers (High 8-10)		
9 Is there certainty in supply chain and raw materials? - Supply chain and lead times are secured by tender (Very Low 0-2) - Supply chain and lead times identified and subjected to market testing (Low 3-4) - Supply chain identified but no Market testing, lead times unconfirmed (Medium 5-7) - Supply chain and lead times unknown (High 8-10)		
10 How much exposure is there to known unknown's such as the presence of asbestos? - There is Less than 20% exposure to known unknowns such as asbestos (Very Low 0-2) - There is 21-49% exposure to known unknowns such as asbestos (Low 3-4) - There is 50-79% exposure to known unknowns auch as asbestos (Medium 5-7) - There is 80-100% exposure to known unknowns such as asbestos (High 8-10) In assessing exposure to asbestos for example you should consider how widespread the exposure is. eg. In the refurbishment of a building you should have regard to the likelihood that asbestos is present throughout the whole area taking into consideration asbestos surveys undertaken and the completeness or otherwise of the asbestos register. If for example all but 10% of the area has been fully surveyed recently and the register is up to date then there is less than 20% exposure to the unkown.		
11 Are enough people with the right skills secured to deliver the project? - The skills and numbers of people required are known and appointed (Very Low 0-2) - The skills and number of people are known and there is time to appoint (Low 3-4) - Staff with required skills may not be appointed in the time and budget available (Medium 5-7) - There is a skills shortage and appointment of appropriately skilled staff in time and within budget is unlikely (High 8-9)		
total		

Risk rating	Contingency total Score	Project Board Contingency	Project Manager Contingency	Optimism Bias total score	Optimism Bias
Very Low	0-22	5%	5%	0-44	0-20%
Low	23-44	10%	5%	45-88	21-50%
Medium	45-77	1-15%	7%	89-144	51-80%
High	78-110	15-20%	10%	145-220	81-100%