# Guide to Capital Building Projects

September 2021

UNIVERSITY OF
OXFORD

| Date | Version | Author | Notes |
|---|---|---|---|
| September 2009 | 1.0 | Dr David Walker | |
| August 2012 | 2.0 | Dr David Walker | |
| August 2019 | 0.1 | Linda Ranford | **Draft** issued for consultation: incorporation of the *Project Sponsor Group Handbook*; guidance on new SRO role and introduction of SCSG |
| September 2019 | 3.0 | Linda Ranford | Updates following consultation: new paragraph on 'benefits'; revised OUFAL guidance; new paragraph on Research Services; annexes replaced with document references. **Endorsed by BESC 17 October 2019** |
| November 2019 | 3.1 | Linda Ranford | **Endorsed by PRAC/SCSG 12 November 2019** with minor updates: including the explicit exclusion of Joint Venture projects. |
| October 2020 | 4.0 | Linda Ranford | **Endorsed by BESC Programme Board 23 October 2020** Revisions include: Adoption of RIBA 2020 Plan of Work; change from 'client' representative to 'user' representative; reorder of some sections to improve the flow of the document; incorporation of latest contingency guidance. Minor amendments made following suggestions by the Chair of the Programme Board, plus Dr Richard Jones, Ian Patten, Elizabeth Botwright and Sarah Gardner |
| September 2021 | 4.1 | Linda Ranford | **Endorsed by BESC Programme Board September 2021** Additions include: the importance of PEAs; the advantages and disadvantages of novation; the eight principles for success; the role of the Strategic Change Manager; heritage assets (contribution from Head of Conservation and Buildings, Emilia McDonald); wellbeing aspects in design (contribution from the Assessor, Dr Bettina Lange) |

# Contents

# Introduction

# 1. Introduction

This Guide supersedes all previous versions and incorporates the *Project Sponsor Group Handbook[1].* The Guide expands on the **BESC** *Estates Standing Orders[2]* which define the management requirements of capital projects.

The purpose of the Guide is to provide a reference and guidance document for all University staff and **project teams** involved in the delivery of a capital building project. A capital project in this context is defined as a building or built asset with a value over £100k. This includes newly constructed buildings, extensions and refurbishments to existing buildings. Words or phrases that have hyperlinks or are referenced in the Glossary are in **green text**. **Note**: this document does not include guidance for Joint Venture projects delivered via Oxford University Property Development (OUPD).

## What is a successful project?

**Is it delivering a project on time or within budget? Or is it more than that? Is the final result an appropriate, effective and fully functional solution?**

A successful project is one that meets the **brief**, is delivered on time, within the approved budget and constructed to the specified quality. It delivers the **outcomes and benefits** described in the business case.
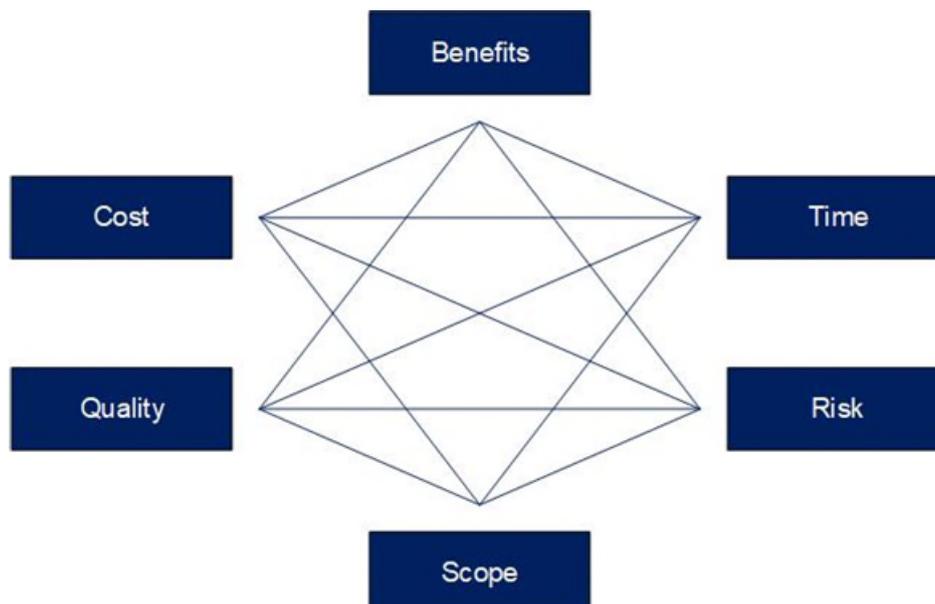


**Benefits** are positive and measurable impacts of change; they are the reason for undertaking a project and should be linked to University strategy and key priorities. They give everyone involved a clear understanding of the purpose of the project as an investment, and ensure the desired outcomes are delivered.

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[1] The *Handbook* was produced following a Buildings and Estates Subcommittee (BESC) working group report which reviewed the role and functioning of project sponsor groups (now Project Boards). BESC(10)155 and BESC(10)175

[2] Estates Standing Orders for Functional Buildings and Sites

There can be varying degrees of success and it is always the aspiration to expect every project to be delivered perfectly constructed and fitted out, on time and within budget, without causing frustration and nuisance to neighbours. However, it is not uncommon for one or more of these aspirations to be only partially met.

The most successful projects manage conflicting demands through clarity of need, advance planning, appropriate communication, engagement with a **user representative** and support from a Programme Management Office. The user representative must have the commitment and authority to arbitrate differing expectations, and the ability to encourage compromise when that is the key to problem resolution.

**An engaged and empowered user representative is key to the success of a project.**

**Follow the eight principles for project success[3]**

> **Principle 1:** Focus on outcomes
>
> **Principle 2:** Plan realistically
>
> **Principle 3:** Prioritise people and behaviour
>
> **Principle 4:** Tell it like it is
>
> **Principle 5:** Control scope
>
> **Principle 6:** Manage complexity and risk
>
> **Principle 7:** Be an intelligent client
>
> **Principle 8:** Learn from experience

Following these eight principles will significantly increase the likelihood of project success. **Annex E** provides more detail; it identifies some of the consequences of not giving sufficient consideration to the principles and sets out how the principles have been incorporated into the University's processes.

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[3] Infrastructure and Projects Authority publication (July 2020)

## 2. Overview of a Typical Project

If every project has one thing in common, it is the journey from start to finish through established industry standard development stages. Estates Services has adopted the **Royal Institute of British Architects** (RIBA) Plan of Work 2020 as the structure by which to manage capital projects:

| | STAGE | OBJECTIVES |
|---|---|---|
| **0** | Strategic Definition | Identification of the strategic brief and preparation of the business case; options appraisal based on the statement of need |
| **1** | Preparation and Briefing | Feasibility study – develop initial project brief and project objectives including project outcomes, quality, sustainability aspirations, project budget, and identify project parameters and/or constraints |
| **2** | Concept Design | Appointed design team develops scheme for endorsement by stakeholders and approval of Project Board;  end of Stage 2 design freeze; scope and costs are actively managed |
| **3** | Spatial Coordination (Developed Design) | |
| **4** | Technical Design | Finalise the Employer's Requirements<br><br>Tender for and appoint principal contractor |
| **5** | Manufacturing and Construction | Appointed contractor builds the facility |
| **6** | Handover | Completed facility is handed over to the University and the Department takes occupation |
| **7** | Use | Seasonal commissioning undertaken and rectification of any defects |

In addition, any University project also has to align or comply with:

- Financial framework – compliance with the University Financial Regulations
- University governance – the correct approvals at the correct time, and evidence of such
- Design team and contractor appointments – in accordance with University Estates and Purchasing Regulations
- Statutory obligations – such as planning permission, building regulations, listed building consent etc. – coordinated and managed by Estates Services
- Any legal restrictions on the use or development of the building – such as tenants or covenants

…and will undergo:

- Independent Gateway reviews
- **Gateway** Sign Off – points in the project requiring committee authorisation to proceed
- **Stage reviews** – on completion of each RIBA design stage
- Workshops (risk/sustainability/design/pre-construction/**soft landing**/**PQRP**) – round table discussions with all stakeholders at various points during the design and delivery programme

Whilst these are brief definitions/explanations of key aspects of a project's 'life', more detail can be found in subsequent sections or the Glossary at the end of this guide.

## 3. Project Initiation and what this means in practice

### Initiation

**What this means**

When a department identifies a 'need' – where the solution might involve refurbished space, additional facilities, more space, relocation, an extension or a new building – the first step is to liaise with your Division and complete a Statement of Need. The Division considers this alongside other divisional priorities. Initial advice from Estates Services can be obtained from the **Programme Manager** associated with your Division, or by contacting the Estates Services **Capital Projects Administrator** – click here to send an email: Capital Projects Administrator.

**What input is required?**

You will need to provide sufficient information to allow Estates Services to assess your project at a fairly high level. We will need to consider, in very broad terms, aspirations for the outcome, **programme** considerations, likely funding sources and any known constraints that might affect the project. We will also need information from you regarding any non-departmental or external occupants of the building to be developed.

If the Division endorses the Statement of Need they will liaise with you and Estates Services to produce a Strategic Outline Business Case (SOBC). This considers the strategic, economic, financial, management and commercial cases for undertaking the project. The nominated Senior Responsible Owner (SRO) submits the SOBC to **CSG** or **SCSG** for consideration. (See section 11 for details on the role of the SRO and other Project Board members.)

**What happens next?**

If the SOBC is endorsed by the relevant committee the project will be will be formally approved and allocated on the Minor Capital Plan or Strategic Capital Plan (depending on value), funding will be released to progress the project further via an Options Appraisal and an SRO will be formally appointed.**[4]**

### Options Appraisal

**What this means**

This is an initial investigation, sometimes funded by the department, into the potential options for the project. A design consultant will be appointed by Estates Services to look at project **risks** and opportunities, programme constraints, possible design options and other design team requirements. The Programme Manager will determine potential fees for developing a full **Feasibility Study**.

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[4] The project may also be considered by SCSG at this stage for development and funding via the University's joint venture with Legal & General Group plc.  Please contact the Director of Asset & Space Management or the Head of Capital Projects at an early stage if you would like to discuss this potential funding and delivery route for the project.

**What input is required?**

You will need to define the potential requirements for space and whether you will be vacating areas as part of the project, the nature of the project and what it might entail (refurbishment, extension, new build, relocation or a mix), any specialist input under consideration such as cleanroom requirements or specific equipment, your aspirations with regard to funding and overall timescale and any anticipated constraints.

**What happens next?**

The outcome of the options appraisal can be used to update the Business Case which is submitted to the relevant capital steering group seeking endorsement for project funding from the University Capital Fund, either for a detailed Feasibility Study, or in the case of MCP projects, for full project funding if the review of the risk assessment submitted to the committee at Gateway 0 gives sufficient comfort that all options have been considered and the anticipated outcome is fairly clear.

## Securing project funding

All projects requiring financial support from the Capital Fund must go through a series of **gateways** and approvals before funding is granted. In all cases, this journey starts with a Business Case. The Division or Department, with assistance from their Programme Manager, will complete the Business Case:

> *The purpose of the Strategic Case is to demonstrate that the proposed development and the activity it will support furthers the University's charitable objects/business needs and academic vision and (where relevant) aligns with the strategies and plans of international/national/regional/and local stakeholders who are important to the University. This requires a clear and evidence based case for what is to be achieved with the development and the benefits that will result.*

The Division will be required to review and endorse the Business Case, and prepare a paper for submission to the relevant capital steering group (CSG or Strategic CSG) seeking funding for the project. The request is then forwarded to the relevant committee for approval.

Each year the four academic divisions, Department for Continuing Education (OUDCE), UAS and GLAM are asked to identify potential needs for minor capital investment. The outputs are collated and form the main inputs to a gathered field exercise, with the aim of developing a rolling three-year Minor Capital Plan within the funding envelope that is approved annually by Council.  In order to balance the tension between the high demand for minor capital and the funding envelope, a set of criteria underpinned by a scoring mechanism is used to help inform the prioritisation and sequencing of project. Further information is available in the *Capital Planning and Governance Process Note* https://governance.web.ox.ac.uk/capital-planning

For projects with an estimated value below £15m CSG will review the request and *recommend* to the Planning Resources Allocation Committee (**PRAC**) that the proposal is included in the Minor Capital Plan and, subject to approval of a business case, will receive funding support. For projects with an estimated value above £15m SCSG will review the request and *recommend* to the Finance Committee

for onward approval by Council. Strategic Capital projects also need to have targets for funding from external sources as part of the business case.

Approval at this initial stage means that the project passes through Gateway 0 and is included in either the Minor Capital Plan or the Strategic Capital Plan. This allows the Business Case to be developed further and progress to the next approval gateway.

Once the funding envelope is approved the project can proceed, subject to the relevant gateways, through the remaining RIBA Workstages (1-7) including governance processes, developing the design and detail, obtaining tenders, construction, handover and occupation.

## What do we have at completion of each subsequent RIBA work stage?

- **A Stage Report reflecting the brief.** This is the current position of the design solution as developed in consultation and collaboration with all stakeholders, and reflecting the refined needs of the users.
- **A Cost Report reflecting an overall estimate of project costs.** The cost report will get progressively more detailed and accurate as the design develops.
- **Compliance with University policies or guidance.** The design team will be required to confirm that the design complies with University standards or issue a **Schedule of Derogation**.
- **A Risk Log.** A schedule of all conceivable risks, refined and updated as the design progresses. The Risk Log is used as a tool to capture and monitor something adversely affecting the project and jeopardising a fully successful outcome. See **Guidance document G3.0** Capital Projects Risk Strategy for further details.
- **Updated Business Case.** Fundamental assumptions made early on should be revisited and reviewed as the design develops. By reviewing benefits at the end of each stage or gateway you can ensure that benefit realisation is still on track and you will be in a position to identify any new benefits that may have emerged or that had previously been overlooked.
- **Unresolved matters for review.** These would be matters that cannot be resolved within the particular stage, but that should be addressed as part of the following work stage. A formal record is required in order to capture and address the output of each stage review.

## What we ask for during the next work stage

- **Developed design in response to user and stakeholder feedback.** The plans and specifications to be updated to reflect feedback.
- **Resolution of outstanding matters.** Matters carried over from the preceding stage are addressed and resolved if possible.
- **Updated Cost Plan.** Greater cost certainty through a detailed cost plan that reflects the developing design.
- **Updated Business Case.** Has anything changed? Has the anticipated use remained the same? There are design and operational matters that may affect the initial assumptions underlying the approved Business Case. The Business Case is reviewed and if necessary revised and re-approved if there are substantial changes to the base parameters.
- **Removal or mitigation of risk.** All risks must be positively addressed and action taken to mitigate, reduce or remove each risk.

Eventually a completed, approved design is arrived at and used as the basis for a contractor to undertake the project, and deliver the anticipated outcome.

## The Gateway Process for Strategic Projects

The process consists of a series of three mandatory project gateways, plus an additional optional gateway should a project be deemed by SCSG to be high risk, highly complex, or where extensive funding (>£2million) would be committed to complete the concept design. SCSG acts as gate keeper, determining if the project can proceed, or if additional work is required to satisfy the University's requirements that the project business case is sufficiently robust to justify further funding commitments.

SCSG seeks confirmation that the following factors have been addressed:

Programme – is the project capable of being delivered successfully to the timescales proposed, in accordance with recognised best practice?

Cost – demonstration that the preferred option will result in a fundable and affordable project, including operational and whole life cost and ongoing impact on departmental budgets

Scope – the project will deliver benefits in line with the University's strategic objectives.

The gateway process for strategic capital projects includes the requirement for Senior Responsible Owners (SROs) to instruct independent reviews ahead of gateways 1, 2 and 3. The remit of the Review Panel is to provide the SRO and University (via SCSG) with:

• Assurance that the project is aligned with the strategic intent of the University and/or previous project approvals
• An assessment of the deliverability of the project and potential for success
• Assurance that appropriate governance and procedures are being adhered to
• Assurance that relevant stakeholders have been identified, consulted and needs addressed
• Recommendations for improvement to increase likelihood of success
• A record of successes to be celebrated

Projects on the **minor capital plan** follow a similar process but with fewer gateways and independent officer reviews. A risk assessment at Gateway 0 will be used to determine the number of Gateways an MCP project will be required to complete.

Further detail on the inputs, outputs and purpose of each gateway, including information on independent reviews, can be found in **Guidance document G4.0** *Independent Gateway Review Process*.

# 4. The Phases of a Project

A project can be viewed as having eight phases corresponding to one or more Work Stages in the RIBA[5] Plan of Work 2020.

- (0) Strategic definition **(initiation/options)**
- (1) Preparation & Briefing **(feasibility)**
- (2) Concept Design
- (3) Spatial Coordination (Developed Design)
- (4) Technical Design
- (5) Manufacturing and Construction
- (6) Handover
- (7) Use

## Strategic definition (Stage 0)

**Purpose**

To explore how the need identified by a department might be satisfied, to express requirements and constraints in an outline business case that can serve as the basis for further work, and to secure approval and funding to carry out a feasibility study.

The Programme Manager may instruct a Project Manager to conduct a preliminary options investigation at this stage in order to inform the business case and explore the viability of the project before committing further resources and funding for a feasibility study.

**Tasks**

With the project having passed Gateway 0 and thus being included on the Strategic Capital Plan/Minor Capital Plan, the initial project objectives, identified in the strategic outline business case, are further developed and aligned with departmental/divisional strategic objectives.

An options appraisal is undertaken to explore the ways in which the project objectives can be satisfied. The department should identify possible sources of funding for the next stage (feasibility study) and make a preliminary estimate of the order of cost for the project as a whole.

**Deliverables**

The options appraisal is completed and feeds in to the documentation submitted for Gateway review.

An outline business case is formulated, building upon the existing strategic outline business case. The outline business case explains how the project will contribute to achieving departmental, divisional, and University strategic goals. It describes how the project relates to the University's estate strategy, what the capital cost of the project is expected to be and how it is proposed that it will be funded. It should also provide a full explanation of any revenue costs. In the case of a new building, the proposal contains an estimate of the additional maintenance costs that will arise from the project, based on an approximate area rate for a similar existing University building.

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[5] See Royal Institute of British Architects webpage RIBA Plan of Work

**The Purpose of a business case** is to develop and present a project **brief**, to establish governance, to identify funding for the project or determine a funding strategy, and to obtain approval for further work to be done. The Senior Responsible Owner (SRO) works with the project/programme manager when submitting to committee a *verified[6]* Project Expenditure Approval (PEA) form to support each Business Case thus ensuring alignment between the costs identified and the funding being requested – this gives reassurance to both the SRO and the approving committee that the funding request is comprehensive and is supported by a cost breakdown.

The business case template follows the HM Treasury Five Case Model with each element being finalised following completion of activities that inform subsequent actions.

- **Strategic case** gives outline information about the project, its impacts, constraints and risks

- **Options appraisal** is used to describe how the preferred option was reached

- **Financial case** outlines the sources of funding and whole life costing

- **Commercial case** outlines the procurement strategy

- **Management case** includes the governance structure, **change management**, benefits realisation and risk management

**Approvals**
1. The business case must be endorsed by the SRO
2. The **PEA** must align with the funding request
3. The **PVR** must be issued by the VAT Team and, if relevant, by **OUFAL**
4. PRAC or Council must approve the outline business case in accordance with the Gateway process

The PEA document is an important part of the project audit trail. It contains a cost breakdown which informs the budget requirement for each funding request and it contains a level of detail, including VAT, necessary for the project budget to be set up in the Oracle Financials system once committee approval has been confirmed. This then enables orders to be raised and invoices to be paid within contracted dates. See **Guidance document G15.0** PEA Process for further details.

## Preparation & Briefing (Stage 1)

**Purpose**
To investigate via a feasibility study how the need set out in the outline business case might be satisfied, to identify one or more feasible options, and to estimate the costs of implementing those options.

**Tasks**
The Programme Manager arranges for the feasibility team (project manager, architect, cost consultant, and so on) to be appointed. The appointments are generally for the feasibility study only,

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[6] The PEA is verified by members of the Capital Projects team and the Capital Finance team to ensure there is sufficient/clear/correct detail to enable the budget to be set up in Oracle

however it is recommended that fee quotes are also requested for further work in anticipation of the possibility that a subsequent main project proposal might be approved.

The Project Manager informs all relevant stakeholders within the University that the feasibility study is being undertaken and collates their comments.

The project team carries out the study in consultation with the Department (and others as appropriate) and prepares the feasibility report. The report sets out development options which may include sketch preliminary designs and outlines initial cost estimates.

**Deliverables and approvals**
The feasibility report must be approved by the Project Board and Estates Services.

Once completed, and if not already approved to proceed with the scheme, the outline business case is updated, endorsed and submitted to SCSG/CSG for Council/PRAC approval in accordance with the established governance for Capital Funded projects and the Gateway process.

## Concept Design (Stage 2)

**Purpose**
To prepare and obtain approval of a report containing an outline design and a preliminary cost plan.

**Tasks**
The Programme Manager arranges for the design team to be appointed. The team may be carried over from the feasibility study, or there may be a fresh tender process.

Starting with the feasibility report, the architect considers aesthetic aspects of the design and draws up a space plan for the building, taking account of the department's wishes, site issues, statutory requirements, and Local Plan considerations.

The team prepares the full outline design, including proposals for structural systems and building-services systems and outline specifications, taking into account the **design philosophies** of Estates Services and the Safety Office. In this and subsequent phases, the design team carries out the required work relating to sustainability and energy conservation. The team prepares the draft Stage 2[7] Report.

With the advice of the team, the Project Board begins to consider what the most appropriate contractor procurement method might be.

> It should be noted here that a significant step towards determining the procurement route is decided when the consultant team are appointed. The services and form of appointment which apply to the consultant team will differ depending on the intended procurement route. These can be changed later, but are difficult to do so. For example, if the consultants are all appointed on forms of appointment which allow for novation, anything other than a design and build contract would require reappointment due to the changed scope of services, thus adding cost to the project.

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[7] RIBA Plan of Work, Stage 2

**Deliverables and approvals**

The project must undergo a **Stage Review**, facilitated by Estates Services. The Stage 2 Report, and cost plan, is then completed taking into account feedback from stakeholders and must be approved by the Project Board and Estates Services. Building on the outline business case, the full business case is produced, endorsed and submitted to SCSG/CSG for Council/PRAC approval in accordance with the established governance for Capital Funded projects and the Gateway process.

## Spatial Coordination (Developed Design) (Stage 3)

**Purpose**

To prepare and obtain approval of a report containing a scheme design that finalises the project requirements and a precise cost plan. To prepare applications for planning permission and listed building consent if required.

**Tasks**

The design team develops the outline design into a scheme design, which is a statement of the University's requirements, including those relating to functional layouts, structural systems, and building-services systems. The team also refines the outline specifications and the cost estimates.

The team, under the coordination of the architect, prepares a planning submission (if required) and provides information to the Estates Services Town Planning Manager who interacts with the local planning authority.

The team prepares the draft Stage 3 report. Under the **Two-Stage Design and Build** option, the main contractor is normally selected at some point during Stage 3 (or 4) following a tendering exercise (see the Procurement section below for further detail). The contractor and the design team develop an understanding of the likely programme and construction costs.

**Deliverables and approvals**

The project must undergo a Stage Review, facilitated by Estates Services. The Stage 3 Report is then completed taking into account feedback from stakeholders and must be approved by the Project Board and Estates Services. Planning and listed building consent applications, if required, are submitted in accordance with the procedures outlined in the **Planning Procedure note[8]**. Points to note with regard to planning are:

- Consider the appointment of a planning consultant
- The Communications Strategy will identify stakeholders and include any requirement for a consultation process
- The Local Planning Authority should be consulted when a feasibility study is undertaken for a building which may require planning permission or listed building consent
- Approval to submit a planning application is given by BESC
- If an Environmental Impact Assessment is required it can add several months to the project programme
- The Project Manager maintains a tracker of all planning conditions and their discharge

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[8] Follow this link - Strategies and Policies - to the relevant Estates Services webpage

## Technical Design and Contractor Appointment (Stage 4)

**Purpose**

To prepare the University's requirements, to agree the contract price, and to enter into a contract for the works.

**Tasks**

The design team in collaboration with the appointed contractor develops the scheme to a detail design and working drawings package that form the University's requirements. These, along with an agreed cost, form the **Contractors Proposals.**

The Project Board reviews the contractor's proposals against the approved project cost plan. If the Project Board determines that the contractor's proposal is acceptable, the second-stage contract is entered into. On larger projects it can take several months for the finer details of the contract to be reviewed, negotiated and agreed.

Depending on the circumstances, the University's design team may be **novated** to the contractor to carry out any remaining design development. See section 13 below for information on novation.

**Deliverables and approvals**

At this stage, the design and cost should be fixed, validated by the appointed Cost Consultant and agreed with the main contractor, as these form the basis of a Contract between the University (or OUFAL) and the Developer/contractor for the scheme.

The University's requirements are deemed to have been met unless the contractor provides a **Schedule of Derogation**, explaining where, how and why the design proposals do not meet the required standards or compliance with University policies.

The Project Manager will ensure that any derogations are approved by the Project Board and the relevant Estates Services stakeholder(s).

Building on the full business case, the final business case is produced, endorsed and submitted to BESC for PRAC approval in accordance with the established governance for Capital Funded projects and the Gateway process.

## Manufacturing and Construction (Stage 5)

**Purpose**

To execute the construction contract to **Practical Completion**.

**Tasks**

The Project Board determines the process by which any question of possible variation to the construction contract is to be considered. The site is handed over and the contractor carries out the work. The Project Manager monitors the work, reporting regularly to the Project Board. The Project Board monitors progress and expenditure.

The design consultants carry out regular inspections of the works, draw up a **snagging** list, and if appropriate report to the PM that a Certificate of Practical Completion can be issued. The PM ensures

that all pre-handover inspections are undertaken and that all requirements related to practical completion are met.

The building manager, and other operational stakeholders (such as the University Direct Labour Organisation), receives training on the building's systems.

**Deliverables and approvals**
The Safety Office must approve the provision and function of life safety systems prior to occupation.

The Contract Administrator issues a Certificate of Practical Completion.

## Practical Completion (PC)

PC marks a point in time at which the Contractor has sufficiently completed his contractual obligations, and can hand over the building to the client (University).

At PC:
- Minor outstanding works may exist but should not affect the use of the building and must not have Health and Safety implications
- The Contract Administrator issues a certificate of practical completion
- A snagging list will be compiled for the contractor to address within a reasonable period of time
- The Client (University) takes possession and becomes responsible for insurance, security and maintenance
- A proportion of the **retention** monies are released
- the contractor is no longer liable for liquidated damages due in the event of a breach of contract which amounts to a delay in reaching practical completion[9]
- The Defects Liability period begins
- **Any subsequent work or fittings become liable for the full rate of VAT (20%)**

## Hand over (Stage 6)

**Purpose**
To bring the building into operation, to remedy any **defects** in the construction, and to conduct an initial review of the project.

**Tasks**
When a Certificate of Practical Completion is issued, the building is handed over to the University and the University assumes responsibility for insurance (if it has not already done so). The building is brought into service and the department occupies it. The *Soft Landing Strategy*[10] (**Guidance document G6.0**) contains a detailed handover checklist as part of a Handover Certificate which should be signed by the key members of the project team to confirm that the building is ready to handover to the occupying Department(s).

On practical completion the **defects-liability period** (DLP) begins. This is usually a period of 12 months during which the contractor remedies snags identified at PC, or any defects arising during the period.

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[9] See **Guidance Document G12.0** Liquidated and Ascertained Damages Management Strategy

[10] See Building Services Research & Information Association (BSRIA) webpage on Soft Landings

Defects are those that are not apparent at PC but develop subsequently; the contractor is liable for remedying them within a reasonable period of time.

The Project Board and the wider project team contribute to a post-project evaluation during the defects-liability period.

At the end of the DLP the contractor issues a Certificate of Making Good, the PM then ensures that the final project accounts are agreed and that final payment is made to the contractor. The PM initiates the **project closedown** procedure once all financial activity has ceased.

The Finance Division ensures that all committed funding is received, that the project's finances are reconciled and any unspent funds are transferred to the appropriate University accounts, and that the project is closed down on Oracle Financials.

Estates Services adds planned maintenance data to **Planon**. The PM ensures that the electronic project record and audit trail is completed and passes all project documents to the Estates Services' archive.

**Deliverables and approvals**
The Project Board must confirm acceptance of the project's overall projected final accounts.

## Before you move in

Before any new space (whether refurbished or newly built) can be occupied, certain checks need to be undertaken and various systems certified as safe to use,  e.g. certification for electrical systems, pressure vessels, fire alarm systems and zone plans.

As advised in the *Soft Landing Strategy* (**Guidance document G6.0**) it is good practice, and one promoted by BESC, to have a planned period between Practical Completion and Handover – the latter being when the department starts using the new facility. Ideally on larger projects this would be one month.

This allows for both Estates Services and the department to fully familiarise themselves with the new building, undertake live testing, complete directly-contracted works that sit outside the main contract, install equipment and to conclude any service agreements with third parties.

## Statutory checks

Any new building must comply with Building Regulations and this will be certified as such by the Approved Inspector. For some specialist facilities other statutory licencing is required – for example Home Office licencing for certain biological research operations or Environment Agency trade effluent consent.

The Approved Inspector or the University Safety Office will advise on any specific licencing required.

## Direct contracts for fit out

Often the department will place direct orders for certain items such as IT equipment, audio-visual systems, catering equipment or contract directly with companies for relocation services.

All direct contracts must be procured through the project, be actively managed, and fit into the overall project programme. The Project Manager can assist the department with this task.

### Furniture

Unless specifically included in the building contract, supplies of new loose furniture (desks/chairs/cabinets etc.) will need to arrive between PC and occupation. In the case of residential accommodation, bedroom and study furniture will be required.

The timely arrival of furniture, especially for residential accommodation, is critical to the successful operation of a completed facility. The Project Manager will coordinate the procurement and delivery of furniture if funded by the Capital Project.

### Equipment

The main contractor does not always provide a full 'fit out service' and some equipment requires either the PM or the department to have placed orders (in good time) for new equipment such as telephones, computers and monitors, white goods (fridges/dishwashers/washing machines etc.) and other specialist equipment used for research or teaching.

It is imperative that the department puts in place call-out and maintenance contracts for new equipment – especially if these provide business critical supplies (air compressors, vacuum pumps laboratory water etc.).

### Facilities Management

Estates Services Strategic Facilities Management can provide contracted services for many aspects of the day to day operation of the building on completion of the project. Consultation with Facilities Management at the very beginning of a new project provides an opportunity to enable efficient services to be delivered: catering, cleaning, general building maintenance, IT solutions for Facilities Management, lecture and event management, purchasing and finance, security, waste management and workplace compliance. The *Soft Landing Strategy* (**Guidance document G6.0**) contains a comprehensive FM responsibilities matrix which can also be used as a services checklist.

### Orientation signage

Whilst the 'spaces' created in any refurbishment or new building will be formally assigned unique University space numbers, departments often adopt local room names that suit their own operations, and as such room names/numbers/identification signage. This is fitted out during the post PC period, before the users occupy the new facility. Again the Project Manager can assist the department with this task.

## Use (Stage 7)

When departments move into new space, it is good practice to establish clear points of contact so that any emerging defects are dealt with promptly and effectively by the right party, and users can seek answers to any concerns they might have.

The main contractor is responsible for building defects during the 12 months following Practical Completion. This is known as the Defects Liability Period. However, the contractor is not responsible for direct contracts, support services or 'user errors or omissions'. Neither is the contractor responsible for maintenance unless specifically written into their contract.

**Seasonal commissioning** may be undertaken at this point. This involves re-commissioning heating systems in winter and mechanical cooling systems in summer. But it may also be applied to other systems, such as motorised windows and active solar-shading devices - any building system affected by seasonal changes.

## Points of contact

It is important that users do **not** approach or contact the main contractor directly to deal with problems. The department must establish an agreed 'escalation procedure' that clearly separates issues into those that can and should be addressed by the main contractor, and those that are the responsibility of either the department, or other University support services.

The first point of contact should be the user representative or their nominee (often the departmental Building Manager). This person, with a clear understanding of the entire project, will be able to separate 'construction issues' for the Project Manager to follow up with the contractor, from 'direct contract issues' and 'maintenance issues' for which the department are responsible.

Other support service issues should be referred to the FM Helpdesk: facilities@admin.ox.ac.uk.

## Principal responsibilities

- **Contractor** (during Defects Liability Period)
  - Construction defects
  - Any missing Operation & Maintenance information
  - Any missing 'spares' (e.g. air handing unit filters)

- **Department**
  - Direct contracts – furniture, equipment, signage, decanting or relocation
  - Maintenance contracts
  - Fire Extinguishers and fire safety systems including Fire Plan
  - Communication with staff and users for access, orientation and general questions

- **Estates Services**
  - Facilities support (if contracted to do so)
  - Continuous commissioning which involves the building and its systems being continuously monitored, where available via the building management system (BMS). Systems can be re-commissioned or adjusted if performance isn't meeting requirements.
  - Repairs & Maintenance (of plant and system under their control)

# University Governance

## 5.  Context

The purpose of this chapter is to provide a convenient summary of the context and the framework within which University capital building projects are executed. The process starts with perception of a need and ends with the review of a completed project.

The University's programme of capital building projects is substantial. At 31 July 2020, the gross internal area of the University's non-residential **functional estate** was approximately 643,857 square metres. In August 2021 there were 100 active projects with a total value of £1.26bn.

It is worth noting here that all building works are subject to external statutory and regulatory control including the Oxford Local Plan 2036 which sets out the framework for the City Council's land-use policies. The University and the Colleges have contributed greatly to the city's architectural richness and the University seeks to achieve the highest standards in conservation and development of its estate.

# 6. University governance structure

## Strategies and Capital Masterplan

Departments and divisions periodically refine their academic and service strategies, and those strategies inform development of the University's estate. The University's Strategic Plan for 2018-23 specifies a commitment for the development of the estate:

"*To ensure that our estate provides an environment which promotes world-class research and education whilst minimising our environmental impact, conserving our historic built environment and improving our space utilisation*"; this includes delivery of a capital investment programme of at least £500m by 2023, and in partnership with the private sector, to have started the construction of accommodation for 1000 graduate students and at least 1,000 new subsidised homes for University and college staff by 2023.

The demand within the University for capital building projects generally exceeds the resources that are available, in particular land and funding. A process of coordination and prioritisation is therefore needed to determine which projects can be brought to fruition.

The University's Strategic and Minor Capital Masterplans list the capital building projects that Council has decided should be developed and, if resources are available, carried to completion.

Capital building projects generally fall into one of three categories:

**Intermediate** – having a total out-turn cost between £100k and £5m (considered as part of the minor plan)

**Minor** - £5m to £15m

**Strategic** – above £15m

Projects below £100k are generally not capitalised and are classed as 'small works'. In general the majority of building and refurbishment costs can be capitalised if in total the costs exceed £100k, the main exceptions are asbestos related costs, decanting, and general decorating and repairs and maintenance. Capitalised assets are those that are depreciated (the cost expense is spread over time in the University Financial Statements).

## Funding

Funding for a capital building project normally comes from one or more of the following sources:

- University Capital funds
- UK Research and Innovation (formerly HEFCE)
- other grant-making bodies
- benefactors
- Legal & General Group plc via the University's joint venture, utilising a lease and leaseback (long term borrowing) model

In the case of a refurbishment project, there is sometimes a contribution from funding allocated to Estates Services for repairs and maintenance.

## Consideration of Proposals

The precise means by which a feasibility proposal or a project proposal is considered depends on the scale of what is proposed and how it is envisaged that it will be funded. (See section 3 above.)

The University units most involved in the process are Estates Services, the Finance Division, and the Planning and Council Secretariat (PACS). https://governance.admin.ox.ac.uk/planning#/

An approval to conduct a feasibility study will specify the permitted expenditure and the sources of funding. Thereafter, and using the outcome of a Feasibility Study, further approval is sought to take the project through design stages and construction to completion. The *Capital Planning and Governance Process Note* (issued by PACS) details the process of capital planning and prioritisation https://governance.web.ox.ac.uk/capital-planning

## 7. Financial Regulations

The primary purpose of the University's **Financial Regulations** is to ensure the proper use of University financial resources in a manner that meets the University's requirements for accountability, internal control and management of financial risk, and satisfies any legal or financial obligation laid down by HM Revenue and Customs, UK Research and Innovation, or any other government agency.

The University's Financial Regulations state that all building projects must be appraised, implemented, and monitored in accordance with the University's Financial Management of Building Projects process.

The SRO has overall accountability for the success of a project however the Project Manager has responsibility for ensuring that expenditure on a University capital project is effectively managed within approved budgets and funding.

The key financial controls that must be complied with are:

• All capital projects must be reviewed and authorised in line with financial processes; the project funding must be established and agreed; and approval for the project to go ahead given by the appropriate authorities in accordance with Financial Regulations

• Project expenditure follows the University regulations and processes for purchasing and expenses incurred, and is continually monitored against budget and funding

Financial Regulations state that the Director of Estates has authority to enter into contracts for the design, demolition, construction, alteration, repair, and maintenance of buildings and for the sale, purchase, leasing, licensing and charging of real property.

However there are financial thresholds that require certain approvals and these are shown below. The value noted is the gross project cost including and fees, **contingency** and VAT liability.

**Project Approval Thresholds**

| STRATEGIC | All projects (whether requiring University Capital Funding or not) |
|---|---|
| **Projects over £15m** | SCSG recommends to Finance Committee Finance Committee recommends to Council Council approves |
| **Projects under £15m within the remit of SCSG** | SCSG recommends to Finance Committee Finance Committee recommends to Council Council approves |
| **Under £5m on developing proposals for projects within the remit of SCSG** | SCSG approves |

| MINOR | Requiring University Capital Funding | Not Requiring University Capital Funding |
|---|---|---|
| **£5m-£15m** | CSG recommends to PRAC PRAC recommends to Council Council approves | CSG recommends to PRAC PRAC recommends to Council Council Approves |
| **£1m-£5m** | CSG recommends to PRAC PRAC approves and reports to Council | CSG Recommends to PRAC PRAC approves and reports to Council |
| **£300k-£1m** | CSG recommends to PRAC PRAC Approves | Sponsoring **Division** may approve[11] |
| **Below £300k** | CSG recommends to PRAC PRAC Approves | Sponsoring **Department** may approve[12] |

## VAT

The University is sometimes entitled to claim certain VAT reliefs on capital building projects. Most of the time the University has to pay VAT on capital building projects but sometimes it can recover part (and very occasionally all) of this VAT from HM Revenue & Customs (HMRC). **Typically the University is able to recover only 12% of the VAT incurred on mixed use projects, in which case the VAT burden is 17.6% of the net cost.** Whether VAT is payable to suppliers and, if so, whether any of that VAT can be recovered from HMRC, can have a considerable impact on the project's budget. Therefore, it is vital

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[11] Delegated Authority given to Divisional Boards and Heads of Department is subject to the overall budgetary limits approved by PRAC (Financial Regulation 1.4.1)

[12] Delegated Authority given to Divisional Boards and Heads of Department is subject to the overall budgetary limits approved by PRAC (Financial Regulation 1.4.1)

to get advice from the University's Tax Team in order to ensure that any appropriate VAT reliefs are used correctly and, if VAT is payable, that it is costed into the project at an early stage.

The Tax Team require detailed information about what the project entails and how the finished building or refurbishment etc. will be used by the department(s) occupying it because **the extent to which VAT is recoverable will depend on the use of the building**. The Project VAT Review form (PVR) has been designed to capture as much of this information as possible. The Project Manager should complete a PVR in conjunction with appropriate departmental user contacts, including as much information requested as possible and send it to the Tax Team.

The PVR should be completed and sent to the Tax Team as early as possible to help budgeting for VAT as necessary. The Tax Team will make any further enquiries necessary (which may include contacting the departments involved, asking to review plans, and possibly meeting to discuss complex projects) and then complete the advice section of the PVR.

**OUFAL managed projects**

The University can zero-rate the construction costs of new buildings which are to be used **95% or more for grant-funded non-commercial research**. This is based on the intention to use these areas for a "relevant charitable purpose" (RCP). It is also possible to zero-rate defined areas in a new building, providing the activities carried out there represent over 95% non-commercial research. Areas that *would not* qualify for zero-rating include:

- Teaching labs and tutorial rooms used by undergrads and academics
- Canteens/cafés, whether staff or student

Within the fit-out costs, it should be possible to zero-rate building materials which are "incorporated into" those parts of the building to be used for non-commercial research (e.g. laboratories or write-up areas). However, this *would not* extend to furniture, carpets or most electrical/gas appliances (sometimes referred to as white goods). Certain laboratory and other equipment to be used for medical research/training may also qualify for zero-rating.

If zero-rating is obtained for a defined area/building, it should also be possible to zero-rate a proportion of the external and enabling works for the whole site.

If a proportion of the construction costs can be zero-rated, it is also possible to zero-rate a similar proportion of the professional fees (architects, surveyors) by entering into a design and build contract with the main contractor. The University regularly uses its subsidiary **Oxford University Fixed Assets Ltd (OUFAL)** for this purpose as a legitimate way to minimise VAT liability. Normally only the construction services and related building materials qualify for zero-rating - the supply of architectural, surveying, consultancy and supervisory services is standard-rated. However if these "professional services" are procured via a design and build contract which covers both the design **and** construction elements of the project then HMRC accept that the whole supply can be eligible for the zero rate. The University is able to enter into design-and-build contracts with OUFAL and thereby save VAT on professional fees to the same degree as on contractor's fees.

Where a project is to be managed via OUFAL then the contract, requisition and invoice process is managed within a separate accounting system. **Annex B** contains further detail.

**Change of use -** If RCP zero-rating is obtained on the construction of a new building, the VAT rules require us to track the use of these buildings for the first **ten years.** Where the use of the building (or the defined part) changes the original zero-rated percentage used for non-commercial research, some of the original VAT saving must be repaid to HMRC. The amount repayable depends on how long the building has been open and the extent of the fall in the zero-rating percentage.

## Contingency

Contingency is a provision in the project budget to cover uncertainties, risks or other unforeseeable occurrences. When preparing an initial project cost plan there is inevitably a degree of uncertainty to the actual out turn cost of a project, this can be a result of: it not being possible to define the cost of some elements at the earliest project stages; design changes including correction of errors or omissions and/or; the materialization of known and unknown risks.  Because such uncertainties remain a risk to the project Estates Services ensures that all projects carry a financial contingency sufficient to mitigate such risks. However, contingency is not meant to replace the development of accurate estimates, nor to cover significant changes in project scope.

Note: this section provides guidance for financial contingency however a programme contingency is also recommended, particularly where time is a key project driver, and should be considered as an important element of the *Soft Landing Strategy* (**Guidance document G6.0**).

> A level of contingency appropriate to the form of contract and level of remaining **risk** must be included in the project budget. As much as 20% contingency is recommended during the feasibility stage whilst risks are relatively unknown; a project will ordinarily commence RIBA Stage 2 with a contingency sum of 10% which allows for an amount of design development, and a contingency sum of 5% of the construction cost should be available once the construction contract is awarded, assuming a design and build procurement route. The Project Board must retain control of the contingency and must not delegate that control to the design team.[13]

The approved[14] contingency strategy is as follows:

(i)     that contingency levels should be set on a  project-by-project basis, at each stage recognizing the Project Board's responsibility to ensure that an appropriate level of contingency is included within the cost plan;

(ii)    that ordinarily, authority for expenditure of contingency **at the point of entering into contract** on capital projects in excess of £5m in value is allocated such that 25% is delegated to the SRO, a % sum equivalent to the costed or expected value of the risk log, but in any case no more than 50%, is held by the Buildings and Estates Sub-committee and the remaining % sum is allocated to the Planning and Resources Allocation Committee;

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[13] Section 4.4.8 of the *Standing Orders*

[14] PRAC May 2020

(iii) that ordinarily, authority for expenditure of contingency at the point of entering into contract on capital projects up to £5m in value is allocated such that 50% is delegated to the SRO and 50% is held by the Buildings and Estates Sub-committee;

(iv) that different types of contingency expenditure on strategic capital projects is drawn down from the different sources of contingency funding held by the SRO and Committees dependent on the nature of the expenditure. That is that: design development, errors and omissions be drawn against the SRO's allocation; materialization of known valued risks be drawn against the Sub-committee' allocation and; that materialization of unforeseeable and unquantifiable risks, unknowns, be drawn against the Planning and Resources Allocation Committee's allocation where held;

(v) that it may be possible to vie sums between contingency allocations with the agreement of the authority responsible for the fund being debited;

(vi) that the draw against Committee controlled funds would be subject to a *de minimus* of £10k, £50k in the aggregate and;

(vii) that authority to draw down expenditure against Committee held funds will be obtained by Chair's action from the Chair of the Buildings and Estates Sub-committee[15] in the case of Sub-committee held funds, and the Chairs of the Planning and Resources Allocation Committee[1] and the Sub-committee[1] in the case of Planning and Resources Allocation Committee held funds, such approval to be obtained by the SRO by e-mail or written correspondence and not be unreasonably withheld.

**Additionally the project or programme cost consultant shall track expenditure and maintain a report detailing draw down of contingency against each of the contingency sums.**

Authorities are summarised in the table below.

| Project/Programme | Allocation of contingency | Type of contingency expenditure |
|---|---|---|
| Projects in excess of £5m | 25% to Senior Responsible Owner | Design changes, errors and omissions |
| | % sum equivalent to the costed or expected value of the risk log to Buildings and Estates Sub-committee, but in any case no more than 50% of the total contingency sum | Materialization of known risks |
| | Remaining % sum to the Planning and Resources Allocation Committee | Materialization of unknown risks |
| Projects £100k - £5m | 50% to Senior Responsible Owner | Design changes, errors and omissions |
| | 50% to Buildings and Estates Sub-committee | Materialization of known and /or unknown risks |

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[15] Or a nominated delegate in the case of annual leave or other absence

## Risk

**Risk is an uncertain event that should it occur will have an effect on the project.**
The Project Manager is responsible for preparing and maintaining a Risk Log (or Register) and all of the risks are rated based on perceived probability and impact. Risk areas to consider include planning, funding, construction complications. For each risk the Project Board should consider mitigation measures or a contingency plan. **All significant risks are reported to the Programme Board and escalated to BESC as deemed appropriate.** See **Guidance document G3.0** Capital Projects Risk Strategy for further details.

## Project Underspends

In order to incentivise Divisions to reduce project costs PRAC[16] has approved the adoption of a revised Finance Division policy on the treatment of underspends on capital projects where central funding is allocated:

- Following agreement of the final account, where the cost of a project is less than budgeted[17], both the Divisions and the central University should benefit, pro rata to their respective contributions
- In order to reduce the administrative burden, this only applies to projects with a construction budget in excess of £1m and where the refund to the division would be in excess of £10k
- Any savings arising from reductions in VAT are governed by a separate process overseen by SCSG, with the default position that the savings will benefit the central University
- Other than where explicitly required by the donor, any underspend against the budget will not result in funds being returned to an external funder
- The agreement of the final account is the deadline for internal cost charging, e.g. departmental recharges from associated costs; this applies to *all* projects regardless of value

**Insurance**
The Project Board must ensure that any building-related design meets the University's insurance requirements in relation to property protection measures, e.g. appropriate flood protection methods, fire suppression systems and security protection. The project manager must ensure that the Insurance Office is consulted early in the feasibility and design stages of any building project, including refurbishments and changes of use. Once designs have been approved, no change that might affect insurance or otherwise depart from the Insurance Office's design preferences shall be made without further agreement with the Insurance Office.

The removal of agreed property protection measures through value engineering should only be carried out in exceptional circumstances and as a result of a detailed assessment and measurement of the risks in relation to the lifespan of the property, in conjunction with the Insurance Office and relevant stakeholders. Such measures not only protect the property, and adjacent buildings, but provide protection for the people within the premises as well as providing protection for the equipment, contents, research data and teaching material.

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[16] PRAC(19)20C

[17] The budget at the point of final release of funds (final gateway)

**It should be noted that projects with a construction cost over £30m are not covered under the University's existing blanket policy and will require a separate policy and premium (c.£1,400 per £1m of construction cost).**

## Allocation of Sites and Buildings

In estimating the time required to meet a need, for instance to create accommodation for a new initiative or to refurbish facilities for a research group, it is necessary to bear in mind the timetables of the University's planning and approval processes, the possible need to acquire land or buildings, the requirement to obtain all necessary consents (for instance planning), and the time needed to arrange and execute design and construction works. Further, a project sometimes involves a series of departmental relocations, each of which may be constrained by decant sequencing or other factors.

## 8. Procurement

Procurement of suitable consultants and contractors is crucial to the success of a project. The **Estates Standing Orders for Functional Buildings and Sites**[18] specify requirements and authorities relating to tendering and award of contracts, in line with the Financial Regulations.

**Consultant procurement**

Selection of an architect is occasionally based on the outcome of a design competition and fee proposals, but more commonly on a competitively tendered fee proposal. The ability to lead the design team, to work collaboratively, to provide high-quality input, and to understand the University's (sometimes complex) objectives is often at least as important as the initial design proposals. The remaining design disciplines can be sourced either from a University framework where appropriate or via a competitive tender exercise. In order to determine which consultants are invited to tender the following factors are taken into consideration:

- expertise required and experience of different types of project
- current and past performance including recent KPI results
- availability of resources

When selected, consultants are formally appointed using the University's standard letters of appointment. These documents in particular ensure that the University and the consultants are covered by the consultant's insurance arrangements.

**Construction procurement**

There are several different ways in which construction can be procured. It is necessary to consider the most appropriate method for a particular project from an early stage in the process because some methods require early involvement of construction professionals. Estates Services and the project team evaluate the options for the project and make a recommendation to the Project Board and the Director of Estates. The different methods allocate risk and responsibility in different ways.

**Construction procurement options**

There are six main procurement options:

1. Traditional Lump Sum
2. **Design and Build**
3. Design and Build (**Two Stage**)
4. Management Contracting (normally not used by University)
5. Construction Management (normally not used by University)

Important factors when weighing the options are matters relating to the programme, the complexity of the building design, the complexity of the construction, the need to ensure effective transfer of risk, and the need to retain sufficient flexibility to be able to respond to changes in requirements.

Detailed review of procurement options is often structured by the following considerations:

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[18] Follow this link: Standing Orders to view the webpage (Single Sign On required)

**(1)** The procurement option and the packaging of the various elements of the development should provide a good degree of cost certainty before there is any contractual commitment.

**(2)** Certainty of the programme is normally important and the procurement option may need to allow for a phased handover.

**(3)** It is usually necessary to be able to respond to changes in users' needs as design develops.

**(4)** A high-quality outcome is normally required, so the option must allow the University to influence and control the appearance and the quality of the building.

**(5)** Risks specific to the construction process should be transferred to the contractor and should be clearly identified to avoid unnecessary cost premiums.

**(6)** The option should achieve value for money but also, as noted above, cost certainty.

**(7)** Many University projects are complex and benefit from an option that allows early involvement of specialist contractors or suppliers.

## Traditional Lump Sum

The main contractor is appointed following a competitive tendering process based on measured bills of quantities using fully developed and coordinated specifications and drawings provided by the design team.

The main benefits of the Traditional Lump Sum option are ability to control costs and influence design. All of the tenders are based on the same detailed design information, the bills of quantities provide detailed pricing information and hence aid cost control, the University has total control over the design and the quality of work through the project team, and there is no early commitment to a single contractor.

## Design and Build

Competitive tenders are obtained on the basis of a detailed statement of the University's requirements. The form of those requirements can vary from a simple performance specification and sketch scheme drawings to full working drawings. The contractor may be required to employ the University's professional team, excluding the Quantity Surveyor and the Project Manager, for the construction phase. The tenders are fixed lump sums and the price changes only if the University's requirements change.

The Design and Build option offers cost and performance certainty provided the University's requirements do not change. The most significant drawback is that any user-generated changes are potentially very expensive.

## Design and Build (Two Stage)

The contractor is selected through a first-stage tender process, normally at RIBA Stage 2, to secure construction expertise during the work on the concept design. The tender criteria are **preliminaries** plus overhead and profit, relevant experience, and the quality of the team offered for the project. The scheme design is then tendered to the subcontract market on an open-book basis, with the second-stage (and final) contract figure based on the first-stage tender and the subcontract tenders. It also includes a risk premium for any outstanding design-development work.

The additional benefits of the Two-Stage Design and Build option are the early assessment of 'buildability' and early planning expertise, assistance in managing information relating to timing and quality of design, and potential to sub-let subcontracts early if the programme requires it. The

disadvantage of Two-Stage is that the contractor is unlikely to be changed at this point and could increase cost subsequent to a low preliminaries bid.

**The University's preferred procurement option is Design and Build.**

There are substantial advantages in transferring design and construction risk to the contractor at the right moment. The timing depends on the complexity of the project and the degree of control that is required.

For more complex new-build projects where design certainty is required and the University's requirement may change as the design develops, Two-Stage Design and Build offers risk transfer after full emergence of a design that has benefitted from integration of construction expertise.

However, for smaller projects where the design can be completed at a relatively early stage, there is often commercial benefit in adopting the single-stage Traditional Lump Sum option and accepting the design-development risk. This option is particularly appropriate for refurbishment projects and works to listed buildings where a contractor's premium for taking design-development risk (deriving from uncertainty) may be substantial.

Both Management Contracting and Construction Management leave the bulk of the risk, and the bulk of any saving, with the **client** and are rarely employed by the University.

**Liquidated and Ascertained Damages (LADs)** are pre-determined sums, agreed at the time that a contract is entered into, and which are payable to the client in the event that the contract is breached in a defined way, primarily for contractor delay. In construction contracts, liquidated damages usually relate to the contractor failing to achieve practical completion by the completion date set out in the contract. Calculated as a daily or weekly rate the sum payable is determined by considering the *actual loss* the client is likely to incur if the contractor fails to meet the completion date. Costs may include: rent on temporary accommodation, removal costs, storage costs, loss of income, finance costs, fees and/or additional running costs. The sum is generally a fixed daily or weekly rate although more complex calculations are possible where the works are phased or sectional completion is agreed

All projects and programmes should determine a level of Liquidated and Ascertained Damages payable upon breach of contract in order to minimise loss to the University in the event of contractor delay. The Liquidated and Ascertained Damages strategy helps to transfer or share risk University by enabling the recovery of losses incurred in the event the contract is breached, but should be considered as only one part of a risk management strategy.

**Guidance document G12.0** *Liquidated and Ascertained Damages Management Strategy* contains further detail.

**Section 5.4 of the *Standing Orders* lists the instructions that apply to the placing of all orders, contracts or commissions. Procurement and tendering advice for all projects should be sought from the Capital Projects Purchasing Team: purchasing@admin.ox.ac.uk.**

**Office furniture** above £25,000 should be procured through a formal tender process.[19]

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[19] BESC(17)24

## 9. Committees and Governance

**Council**

Council is the University's principal executive and policy-making body. It is responsible for advancing the University's objectives, the University's administration and managing the University's finances and property. Council ensures that all risk associated with the governance of the institution is recognised, assessed, and managed. https://governance.admin.ox.ac.uk/committees

**Strategic Capital Steering Group (SCSG)[20]**

SCSG is a working group of the Finance Committee responsible for developing a long-term strategic capital investment plan for submission to the Finance Committee. It submits recommendations for expenditure on strategic investments in the University's physical estate and liaises with PRAC to ensure that such proposals are compatible with the rolling (minor) capital programme. It ensures in particular that business cases use appropriate financial assumptions and space standards, have the approval of the relevant bodies, and are consistent both with the capital priorities of the Division in question and with the University's priorities and plans. SCSG oversees the strategic project gateway process and obtains approval from the Finance Committee and Council for project expenditure at gateways 1 and 2.

SCSG also makes recommendations to the Finance Committee with regard to proposed functional estate projects that should be submitted to Oxford University Property Development (OUPD) for consideration, and the development of proposals for the functional estate put forward by OUPD.

**Finance Committee**

The committee is responsible for the overall capital expenditure budget for approval by Council consisting of:

- an allocation for the strategic capital investment plan and
- an allocation for the annual rolling (minor) capital programme

**Planning & Resource Allocation Committee (PRAC)**

Among the responsibilities of PRAC[21] are to prepare and update annually the University's five-year plan, informed by the plans of the Divisions and the services, to advise Council on the use of capital funds, and to consider advice from BESC on allocation of land and property in the functional estate.

**Capital Steering Group (CSG)**

CSG reviews feasibility proposals and proposals for projects on the minor capital plan on behalf of PRAC. It ensures that business cases use appropriate financial assumptions and space standards, have the approval of the relevant bodies, and are consistent both with the capital priorities of the division in question and with the Minor Capital Plan.

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[20] Council Regulations 15, Part 12

[21] Council Regulations 15, Part 5

**<u>Buildings and Estates Sub-Committee (BESC)</u>**[22]

BESC is responsible to PRAC for management and maintenance of the functional estate. In particular, the Sub-committee:

- advises PRAC on the allocation of land and property in the functional estate
- oversees the repairs and maintenance programmes undertaken by the Estates Services
- makes recommendations to PRAC concerning the strategic development of the functional estate, taking into account institutional plans and environmental, planning, and heritage issues
- oversees the delivery of all capital projects within the functional estate

The **functional estate** is defined as all University-owned, leased, or 'embedded' land and property occupied by University bodies. It is distinct from the commercial estate which is governed by the Property Management Sub-committee (PMSC).

**BESC Programme Board**

The **Programme Board** is a sub-set of BESC that responsible for:
- considering and monitoring project **issues**, decisions, risks, finances, programme and requests for change (alerting the Sub-committee where projects are deemed to be proceeding outside of agreed tolerances)
- consolidating data and screening information for consideration by the Sub-committee, taking a "reporting by exception" approach with issues being escalated to the Sub-committee when tolerances, authority or limits have been exceeded, and alerting the Sub-committee where risks are not being sufficiently mitigated
- providing a single forum in which project interdependencies can be considered concomitantly
- monitoring a forecast of the outturn cost for each project

The Programme Board thus reduces the workload for the Sub-committee, allowing the Sub-committee to concentrate on the most important issues while still discharging its responsibility. Twice a term the Programme Board meets, reviews project highlight reports and submits an exception report to BESC. The membership includes the Chair of BESC and the Director of Estates, with the Programme Managers in attendance.

**Project Board**

Every capital project, regardless of value, has a Project Board responsible for managing the project on behalf of the University. This includes responsibility for financial control of the project within the approved budget and for ensuring that the outcome satisfies the needs of those who will occupy and maintain the premises. The Senior Responsible Owner, accountable for delivering the project in line with the approved business case, is always a member of the Project Board. The *Standing Orders* outline the responsibilities of Project Boards.

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[22] Council Regulations 15, Part 10

**University committees (in relation to Capital Project delivery) are structured as follows:**
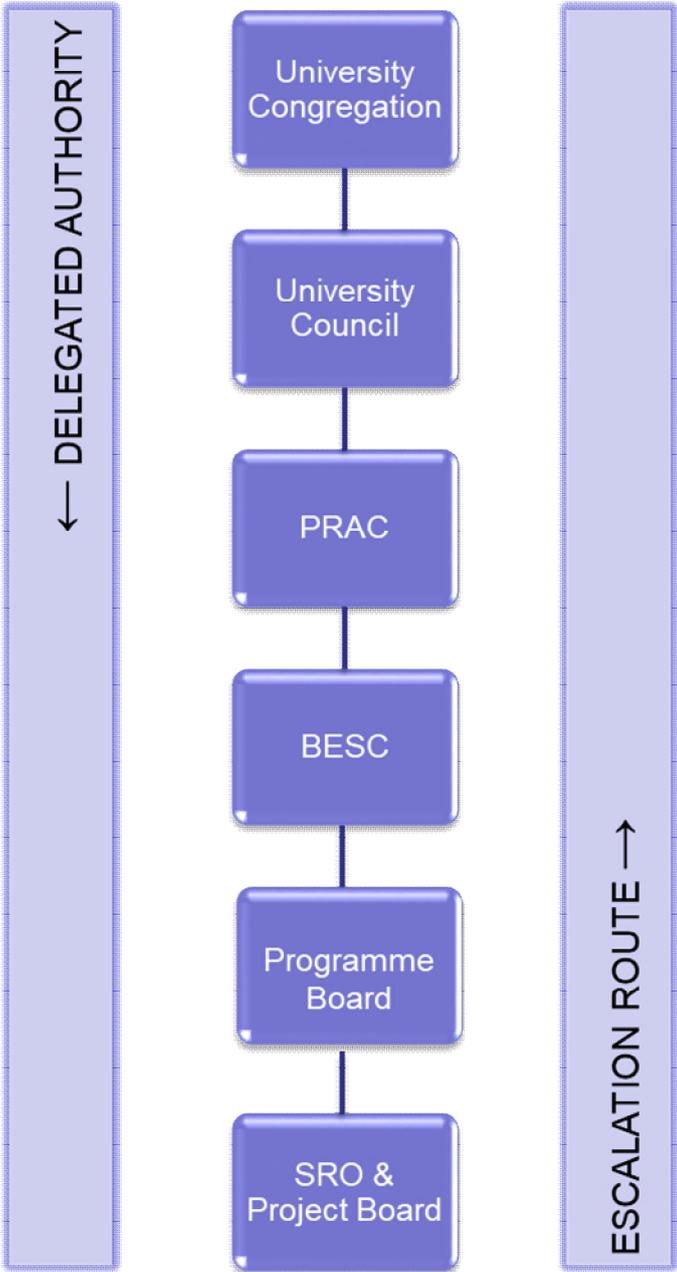


University committees, and the Director of Estates, have various approval responsibilities delegated from Council. The length of time taken to obtain such approvals should be factored into the project programme, e.g. BESC only meets three times each term.

**NOTE**: for the purposes of simplification this diagram does not show the governance of the Gateway process: all business cases are submitted in the first instance to CSG or SCSG before being considered by PRAC or Finance Committee respectively. This happens concurrently with the delegated authority approvals shown in the table below. Section 7 above outlines the financial project approval thresholds for the submission of business cases.

**BESC Approvals Summary**

| | Head of Capital Projects | Director of Capital Projects | Director of Estates | BESC | Council / Congregation |
|---|---|---|---|---|---|
| **Project Board membership/changes** | | | Intermediate projects only | ✓ | |
| **Appointment of architect** | | | Estimated fee up to £1m | Estimated fee over £1m | |
| **Procurement terms** | | | ✓ | | |
| **Tender list** | ✓ | | | | |
| **Approval of the lowest tender** | | | ✓ | | |
| **Approval of other than the lowest tender** | | | Up to £1m | Over £1m | |
| **Tender Exemption (Single Tender Action)** | | Up to £25k | £25k to £100k | £100,000 and over | |
| **Approval of submission of Planning Application or Listed Building Consent** | | | | ✓ | |
| **Space allocation** | | | up to 300m$^2$ | 301 to 600m$^2$ | 600m$^2$ and over |
| **Building name change** | | | | | General Purposes Committee decides |
| **Release of contingency for *all* materialised risks** | | | | Intermediate projects only | |
| **Release of contingency for materialised 'known' risks[23]** | | | | Projects over £5m | |

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[23] The contingency authority for materialisation of 'unknown' risks for projects over £5m is PRAC

## DONOR FUNDED PROJECTS

In November 2010 Council[24] approved the creation of a Design Review Forum (DRF) for projects where there is a substantial donation from a single benefactor, and where the benefactor wishes to take a role in the development of the project.  The DRF would have a significant role in establishing design aspirations, assisting in the selection of design teams and architects, and reviewing the design as it develops throughout the project. In all instances the DRF would be responsible for making recommendations to the Project Board. It is anticipated that the DRF would meet regularly with the design teams, cost and planning consultants etc., and act as advisors to the Project Board on design matters. **Neither donors nor their representatives should be appointed as members of a Project Board.**

The table *Committee structure for donor-funded capital projects* (**Annex A**) illustrates this.

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[24] PRAC(10)158aR

# Roles and Responsibilities

**All capital building projects within the functional estate are procured and managed by Estates Services.[25]**

A project normally stems from identification of a need by a department. This prompts a discussion between the department and the division about the relationship between the need and departmental and divisional priorities and circumstances, with a discussion between the department and Estates Services about how the need might be met.

> **The remit of the Capital Projects team is to deliver the capital projects strategy for the University, having responsibility for over £120m of capital expenditure each year. The team provides an 'intelligent client' function with extensive construction industry technical knowledge and governance experience; we adopt best practice and champion continuous improvement.** We are the professional team that facilitates interactions between technical designers and end users throughout the project lifecycle: from the initial identification of need and strategic guidance through to design input, contract negotiation, project completion and post-handover care. It is not unusual for larger projects to have a lifecycle of between five and ten years.

Capital building projects vary widely in scale, complexity, procurement method, and cost. This diversity is reflected in the different structures and processes employed to bring individual projects to fruition. This section does not attempt to capture all of the associated variety but rather to convey the structure of a project team in general terms.

## 10. Programme Management Office

The Capital Projects team operates as a Programme Management Office (PMO). The benefits of having an internal PMO are:

- It provides an 'intelligent client' or **client representative** function
- It supports the University's decision-making process through improved transparency and visibility
- It provides the ability to manage project interdependencies, providing an overview of risks and issues
- It provides standards and processes to ensure consistency of delivery (via the Centre of Excellence)
- It supports independent oversight, scrutiny and challenge, thereby improving organisation accountability
- It provides appropriate escalation reporting
- It provides a single point of contact for Divisions and stakeholders
- It provides performance managemenent of consultants

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[25] Section 4.1.1 of the *Standing Orders*
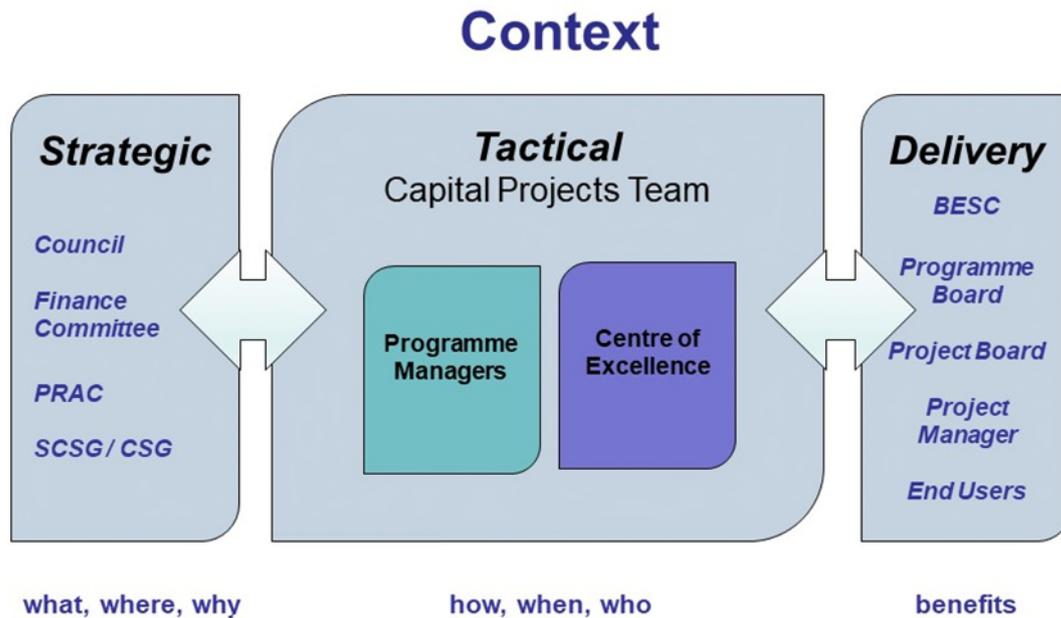
## Centre of Excellence

The Centre of Excellence is a team within the PMO that supports the delivery of capital projects in the following ways:

- Standards – it develops, implements and maintains processes and procedures and establishes best practice
- Training – it provides training, advice and guidance to project managers, Project Board members and stakeholders
- Assurance – it monitors quality, compliance and consistency by undertaking regular project checks

The PMO and Centre of Excellence are committed to continuous improvement which includes proactively reproducing successful processes and identifying process weaknesses and taking appropriate corrective actions. Lessons learned are recorded and passed on to new projects via the Project Quality Review Process (PQRP).

## Capital Projects Team

```
Director of Capital Projects

Head of Capital Projects

EA to Director and Head

Deputy Head of Capital Projects
& Programme Manager
(SS & Hum)

Programme Manager          Programme Manager
(MSD)                      (MPLS & GLAM)

External Consultant Project Managers
and Project Support Officers

Capital Projects
Administrator

Project Assurance          Programme Support
Officer                    Officer

Team Administrator         Programme Support
                           Officer
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### Project Managers

Estates Services has Framework Agreements[26] with several project management organisations who, if appointed, report to the relevant Programme Manager or Head of Capital Projects. The project manager (PM) is formally appointed by the Director of Estates. The formal responsibilities of the PM are set out in detail a *Schedule of Services* which forms part of the contractual appointment documentation. The PM can be appointed as early as the feasibility stage and assists the Project Board in delivering the project.

In conjunction with the Head of Capital Projects and Programme Manager, the PM is responsible for selecting and procuring other design and consultancy services required for the project. The PM works closely with the departmental representative to establish the project brief and translate it into a preliminary specification that is refined as the project progresses. The PM devises the programme for the project's various stages so that University and statutory approvals are achieved and construction work can proceed.

The PM ensures that stage sign-offs and final project reviews are conducted and that lessons learned from the project are recorded.

The PM delivers the project on behalf of the Project Board working to an extensive schedule of services which include:

- Coordinating the services provided by the consultant project team and contractor
- Monitoring progress and construction programme; managing cost and risks; reconciling cashflow on a monthly basis (both with and without contingency forecast)
- Overseeing the commissioning, snagging and acceptance of the building

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[26] Retendered Summer/Michaelmas 2021

- Following University policies and procedures, e.g. philosophy documents; financial regulations, by working closely with the Programme Manager and Centre of Excellence
- Participating in performance management surveys and workshops
- Following industry standard delivery models, i.e. PRINCE2 and RIBA
- Using the Concerto system to provide a project audit trail and assurance by using checklists, recording key data and documents, and producing highlight reports

## 11. Project Board

A Project Board[27] ordinarily comprising representatives of the Department, the Division (see SRO below), and Estates Services is **formally appointed by BESC**; the Board is responsible for managing a project on behalf of the University. This includes responsibility for financial control of the project within the approved budget and for ensuring that the outcome satisfies the needs of those who will occupy and maintain the facility. This aligns with the PRINCE2[28] model and is intended to represent all project stakeholders.
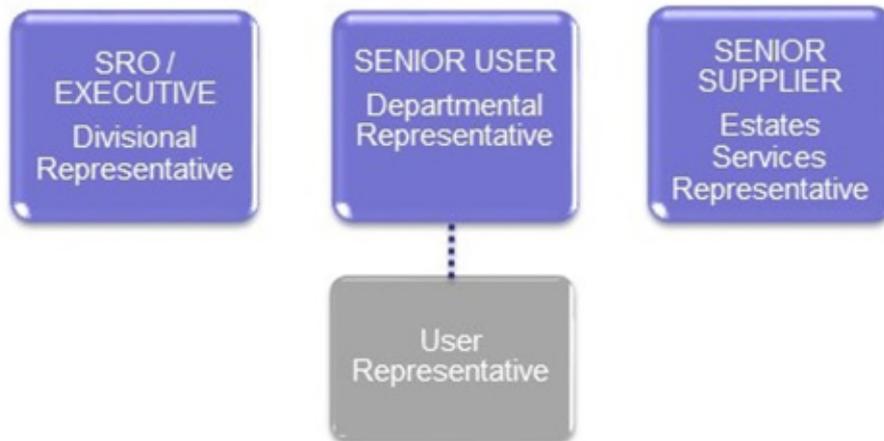


The Project Board oversees the work of the project manager who is appointed by Estates Services to manage the design consultants engaged to undertake the project.

Note: for 'intermediate' projects (those with a value below £5m), BESC has delegated to the Director of Estates the discretion to approve the membership of a Project Board. The project will still follow the usual University and Estates regulations and established project procedures.

The nomination of Departmental/Divisional members should have regard to the following:

- the nature of the project and therefore the experience required
- the time commitment involved
- the possible need to release the person concerned from other duties
- the requirement for the representative to be able to achieve consensus within the department or division and speak on behalf of the department or division in matters relating to the project
- the ability to make decisions on behalf of the department and users.

Project Board reponsibilities can be grouped under two main headings:

**Governance**

- Consider and approve variations in design (within scope)
- Authorise any commitment against contingency funds (SRO)

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[27] Section 4.1.3 of the *Standing Orders*

[28] Projects in Controlled Environments (Office of Government Commerce)

- Take decisions regarding key design elements such as fire suppression (sprinkler) systems, subject to approval
- Approve design stages including the **Employer's Requirements** and Contractor's Proposals
- Provide *neutral challenge* to the project delivery team

**Neutral challenge means…**

**There are no 'silly' questions – no need to feel embarassed asking an obvious question**

**There is an awareness of change and its impact on the project including future lifecycle costs**

**Monitoring project team performance, e.g. 360° KPIs**

**Overseeing Delivery**

The Project Manager delivers the project on behalf of the Project Board as described in the previous section.

**Programmes of Work**

A typical project team structure is shown above, however a complex project or programme may have multiple workstreams in order to implement a strategic change and one of these workstreams will deliver the capital building element. The SRO in this instance chairs the Project Board, and if required, appoints a Strategic Change Manager (SCM) to oversee the other workstreams on their behalf, e.g. development of academic programmes, fundraising campaign, benefits realisation and development of the operational requirements.

In the event that two (or more) linked projects are being delivered simultaneously an SRO will be appointed for each project, and a *Programme SRO* will be appointed to oversee the entire delivery of both projects; a Programme Board might also be appointed by SCSG.
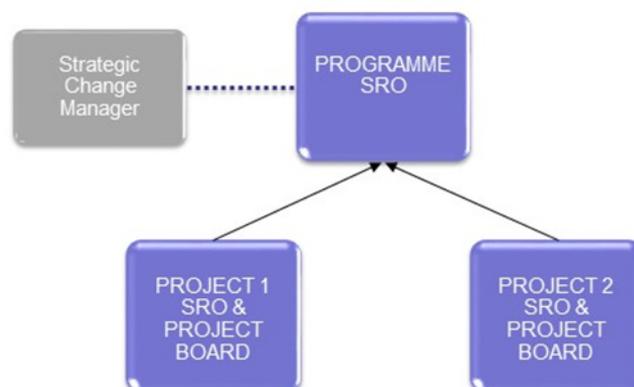
**The Role of the Strategic Change Manager**

On larger projects where there are several workstreams it is recommended that the SRO appoints a Strategic Change Manager (SCM), typically coming from a senior administrative role within the organisation area into which the project outcomes and benefits are being delivered. The SCM will directly support the SRO on a day-to-day basis actively liaising with the team leaders for all of the project workstreams. It is advisable for SCMs to be in attendance at Project Board meetings and to attend the SRO training.

## Senior Responsible Owner (SRO)

The Project Board may be formally appointed by BESC as late as RIBA Stage 2, i.e. once the project has approval to proceed to the design stage, however the SRO will usually be identified and appointed much earlier in the project, usually at Gateway 0, as he or she will be the person submitting the business case to committee for approval.

At Gateway 0 for £5m-£15m projects[29], a request to appoint an SRO should be included for recommendation by CSG to PRAC for approval. At Gateway 0 for Strategic Capital projects, a request to appoint an SRO should be included for recommendation by SCSG to Finance Committee for approval by Council. Following approval, an SRO appointment letter will be issued detailing the responsibilities of the SRO.

The SRO provides active and visible leadership of the project on behalf of the University, and is accountable to Council. He or she is responsible for driving the project's ongoing delivery on time, within budget and in line with the approved business case, and seeks advice from other Project Board members and the project team. **The SRO will ordinarily be the Chair of the Project Board** but has the option to delegate this function to one of the other Project Board members. See **Guidance document G2.0** for more detail on *The Role of the SRO* including an example of an SRO appointment letter.

> **The Project Board Chair will…**
>
> - **By default be the SRO but could be another Board member**
> - **Ensure minutes are a fair and accurate record**
> - **Ensure the reports presented are formally approved**
> - **Ensure decisions and actions are clearly recorded**
> - **Invite and approve additional attendees at meetings (i.e. anyone who is not an appointed Board member)**

## Departmental Representative

The Departmental Representative is responsible for ensuring that the project meets the needs of those who will occupy and manage the building in question by taking an active role in developing and

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[29] For Intermediate (£100k-£5m) projects, the SRO role defaults to the Divisional Planning Leads, as approved annually by BESC.

refining the brief, working closely with the end users, Project Manager and lead designer as the detailed design develops and articulating the requirements to the design team. These responsibilities include:

- Being the primary point of contact between the end users and the design team, with the support of a User Representative where appropriate
- Ensuring that user requirements and designs (including layouts, **room data sheets** etc.) are formally signed off at appropriate points in the design process; and that users understand what this sign-off means in terms of the types of change that can or can't be made at later stages
- Ensuring the project outcome will meet the needs of end users (see *User Representative* below)
- Actively developing the brief in close liaison with end users, Project Manager and design team
- Advising the SRO

## User Representative

(Only a formal Project Board member when this role is being undertaken by the Departmental Representative, otherwise 'in attendance'.)

The department on whose behalf a project is being undertaken nominates a user representative who serves as the primary point of contact between the department and the design team. **For smaller projects, the user representative role is normally undertaken by the departmental member of the Project Board.** In the case of a larger project, it is common for the user representative to report to the Project Board and for the departmental member of the Project Board to be the Head of the Department. The user representative is crucial to the success of a project and it is imperative that the person identified is allowed the time, resource and authority to carry out the role effectively.

Having a user representative to speak on behalf of users and to feed information back to them is crucial to the success of a project and helps avoid situations where end users' expectations are not met, or the specified need has not been fully delivered.

When choosing its user representative, the department must properly consider the nature of the project and hence the experience required, the time commitment involved, the possible need to release the person concerned from other duties, and the requirement for the representative to be able to achieve consensus within the department and speak authoritively on behalf of the department in matters relating to the project. The User Representative would typically be the building manager or someone else empowered to represent the Department at design team meetings and user fora.

**What is expected of the User Representative?**

- **Time commitment** – time to give the project the input it needs to be successful. This can sometimes be significant and require backfilling for normal duties (the cost of which can be built into the project budget)
- **Influence** – decision making or responsibility for facilitating, coordinating and collating end user requirements

- **Flexibility** – if initial expectations cannot be met, the user representative will contribute to finding appropriate and acceptable solutions
- **Continuous input -** throughout the life of the project, updating users, refining the brief, reviewing the Business Case
- **Acceptance –** of the finished and delivered project on behalf of the users

The Project Board will expect the user representative to attend meetings when requested, and to ensure that the Departmental Representative on the Project Board is fully informed on matters throughout the development of the project. The user representative may be asked to speak on matters of detail in connection with any decisions the Project Board may be required to take.

Design decisions such as floor finishes, paint colours, furniture choices, equipment selections and other interior decoration finishes as well as room layouts whether library, office, common areas, lecture or seminar rooms or a laboratory will require end user input – the user representative is responsible for facilitating, collating and conveying this input to the design team.

There are some design elements that will not require end user input because solutions will have to comply with statutory obligations (Building Regulations, Fire Codes etc.) and design choices remain the responsibility of the appointed design team, such as the engineering solutions (mechanical, electrical and structural), fire design, health & safety design.

Other design choices (for example sprinkler protection, air conditioning) are influenced by established and agreed University policies. Deviation from these can only be sanctioned by the Project Board having due regard for the implications.

## Estates Services Representative

The Estates Representative is almost always a Programme Manager from the Capital Projects team and is responsible for:
- Ensuring the Project Manager fulfils his/her responsibilities to the Project Board by monitoring performance and referring any issues to the Head of Capital Projects
- Ensuring correct application of University and Estates Services procedures including the use of generic documentation
- Ensuring that the Project Board carefully reviews the information presented by the Project Manager
- Monitoring the project programme to ensure this remains on target
- Ensuring all project risks are recorded, reviewed and escalated appropriately
- Advising on the level of Liquidated and Ascertained Damages in the main contract
- Being the point of contact for the Programme Board and BESC
- Advising the SRO
- Facilitating the independent reviews ahead of each Gateway
- Performance management of the external consultants and contributing to the 360° KPIs
- Ensuring that internal stakeholders have been consulted as early as possible and that they have agreed the relevant design elements
- Maximising the environmental performance of the building by monitoring the implementation of the relevant *Standing Orders* (4.6) on environmental sustainability

- Overseeing the commissioning and acceptance of the building and handover to its occupants and ensuring that the soft landing procedure is followed
- Ensuring every project applies the Project Quality Review Process as directed by the Head of Capital Projects
- Ensuring every project completes the Key Performance Indicator and Benchmark processes as directed by the Head of Capital Projects

## 12. Project Board Meetings

A meeting should take place each calendar month unless the Project Board agrees to do otherwise. **As a minimum, meetings should be scheduled to cover the following critical project events:**

- Agree project brief
- Agree feasibility scope
- Agree architect selection
- Feasibility Study sign-off
- Agree procurement terms and funding for main project
- RIBA Design Stage sign-offs
- Agree contractor and consultant tender lists
- Accept building at handover
- Approve final account
- Review KPIs (quarterly)
- Review benchmarks (each RIBA stage)

In all cases a meeting timetable shall be agreed and recorded at the outset. The Project Manager is responsible for organising all Project Board meetings. **In the event of not being able to attend a scheduled meeting a Project Board member shall nominate a proxy who has delegated powers of representation and the authority to make decisions at the meeting.** Where this is not possible, the Chair will determine whether or not the meeting should be rescheduled.

The Project Board shall include **in attendance**:

- the designated Project Manager (mandatory)
- a Project Support Officer appointed by the Project Manager to take meeting minutes
- any additional individuals required (for the entire meeting or part), e.g. consultants, the User Representative or other departmental representatives, at the discretion of the group; **formally agreed and invited by the Project Board Chair**

The generic agenda includes the following:
- Matters arising and approval of minutes from previous meeting
- Project Manager's highlight report
- User matters
- Benchmarking
- KPIs
- Risks and issues
- Funding
- Any other business

The generic format of the Project Manager's report contains the following:

- Progress update
- Programme activities and milestones
- Key risks and issues
- Changes and variations
- Decisions and approvals required

REPORT APPENDICES

A.   Minutes of previous meeting
B.   Programme
C.   Planning Conditions Tracker
D.   Risk Log
E.   PM's cost report summary
F.   Cost consultant report (including operational and lifecycle costing at each RIBA stage or significant design change)
G.   Decision Log
H.   Change Control Log
I.   Benchmarking
J.   KPIs (quarterly)

The report must be issued in its entirety ahead of the meeting.  Any subsequent information that becomes available should be forwarded to the Chair (by default the SRO) who will decide whether it should be tabled at the meeting. Only new or updated information should be presented in order to avoid duplication and repetition.

**Project Managers will brief the Chair prior to any meeting, highlighting any critical decisions to be made by the Project Board.**

Project Managers will issue reports and associated papers a minimum of *four* working days before a meeting, and will issue minutes to the Chair for approval no more than *five* working days after each meeting. Minutes must be approved by the Chair prior to circulation to the Project Board members. All reports, papers and minutes will be issued electronically unless the SRO agrees otherwise.

# 13. Consultants and Contractors

## Consultants

A wide range of professional services is needed to deliver a capital building project and the University has Framework Agreements for provision of certain services, established through formal tender exercises. They are general appointment contracts that allow services to be procured from certain consultants for specific projects. Such agreements allow the University to reduce costs, develop productive long-term relationships with consultants informed by mutual understanding, and establish consistent performance. The University is generally risk averse therefore appointing consultants ensures that the right levels of professional expertise and insurance cover is appropriate for each project. Also, it would be very difficult for the University to appoint employees with such diverse skills and carry the resulting fixed overheads, particularly where workloads are unpredictable.

**Principal Designer - a key appointment**

Under the **CDM Regulations**[30], the client (University) is required to appoint a **Principal Designer** who must plan, manage and monitor the pre-construction phase and coordinate matters relating to health and safety during the pre-construction phase to ensure that, so far as is reasonably practicable, the project is carried out without risks to health or safety.

The appointment must be made as soon as practicable and it is commonly the architect, who has control over the pre-construction design phase.

**Design consultants**

The primary design consultant is the **Architect**[31], who leads the design team through the project's various stages. Principal responsibilities of the Architect are the aesthetic appearance of the building, obtaining statutory approvals, and designing an efficient and effective space layout that meets the functional brief.

Most projects also require a **Civil/Structural Engineer** and a **Services Engineer**. Their role is to develop, with the Architect, optimal engineering designs that respond to the functional brief and evolving scheme design. From early in the project, both engineering disciplines develop a range of possible designs that are then reviewed by the design team with due regard to cost and programme implications.

The Civil/Structural Engineer advises on the structural form of the building, materials, underground drainage, and compliance with construction standards. The Services Engineer designs the mechanical and electrical services, which can include heating and cooling systems, water supplies, electrical supply, lighting and power, fire protection, and above-ground drainage.

Some projects also require more specialist expertise, such as Passivhaus Designers, Fire Consultants, Acoustic Consultants, Cladding Consultants, and Highways Engineers. Specialist surveys may also be required, e.g. site survey, ecological survey.

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[30] Construction (Design and Management) Regulations 2015

[31] Appointed by the Director of Estates or BESC (Standing Orders 4.4.5)

The consultants are also required to assist the contractor in the provision of accurate as-built record drawings and associated operational and maintenance information on completion of the project.

### Cost Consultants / Quantity Surveyors

The Quantity Surveyor (QS) is an independent cost advisor to the client for the project. The QS is appointed at the feasibility stage to give order-of-cost budgets for the proposed development and works with the design team to prepare more accurate cost estimates for the construction as the design becomes more detailed.

The QS is active in tendering for the construction work, in particular coordinating the tender information and analysing the returns from a financial perspective.

During the construction phase, the QS is responsible for valuing the work as it proceeds (usually on a monthly basis) so as to verify the amount payable to the contractor and negotiates with the contractor over the cost of any variations, recommending the final-account figure on completion.

Throughout the project, the QS provides cost information to assist the client's decision-making, particularly when there are alternative courses of action or changes are proposed.

### Planning consultants

Most construction projects undertaken by the University require formal planning approval, and projects involving heritage parts of the estate also require listed building consent. In straightforward cases, the Architect will assist the Estates Services Town Planning Manager in discussions with the **local planning authority** and the subsequent submissions. In more complex or sensitive cases, a Planning Consultant may be engaged to advise the project team.

All planning related appointments (planning, highways and **EIA**[32] consultants) are made by the Director of Asset & Space Management.

### Approved inspectors

To ensure compliance with **Building Regulations**, either the members of the design team submit their designs and calculations to the local authority for approval or the University appoints an Approved Inspector. The Inspector has a legal obligation to ensure compliance with the Regulations. The University Fire Officer must be involved in meetings with the Fire Authority arranged by the Approved Inspector or the design team.

### Contract Administrator

The contract administrator is the individual responsible for administering the construction contract and usually acts as the University's agent. This role must be undertaken by either the QS, the **Employer's Agent** or a consultant PM.

The role usually includes: administering **change control** procedures; issuing instructions such as variations; coordinating and instructing site inspectors; issuing contractual certificates, including the Certificate of Practical Completion and the Final Certificate.

**Note**: Changes often have cost and time implications, particularly after entering into contract.

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[32] Environmental Impact Assessment

Any changes made after the date of the contract will be treated as variations to the contract.

Each variation means that the Contractor could receive an extension of time for completion of the works and a payment for the additional costs associated with the variation, including his overhead and profit.

In situations where there are a number of changes, these can have a significant impact on the date of **practical completion** and the final account for the project.
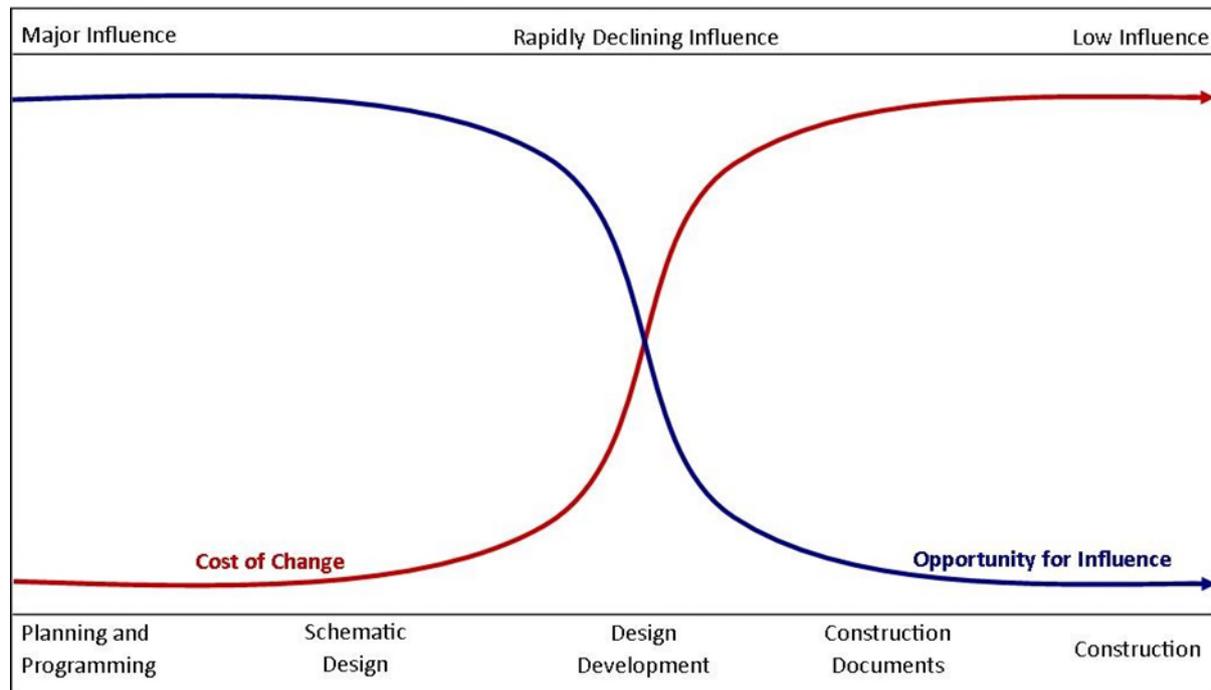


**Novation**

Novation is a term used in contract law describing the act of transferring the rights and responsibilities of one party to a new party. In construction contracts this is usually where a design consultant is appointed by the University and the appointment is transferred over to the contractor. The contractor will take on the University's responsibility to pay the consultant, and the consultant will continue to carry out the design, but now reporting directly to the contractor.

A novation is valid only with the consent of all parties to the original agreement, and where the original contract obligations are retained. Novation is common on design and build projects where the design team are appointed by a client to carry out initial studies or prepare a concept or detailed design, but then when a contractor is appointed to carry out or complete the design and construct the works, the design team (or part of it) is novated to work for them. Novation can be used for all design services including mechanical and electrical consultants and structural consultants.

Note: The project manager, cost consultant and contract administrator are never novated as this would result in a conflict of interest that would be disadvantageous to the University.

| Advantages | Disadvantages |
|---|---|
| Allows the contractor to take on full responsibility for the whole design throughout the project safe in the knowledge that it can claim against the design consultant if anything goes wrong. | The process of novation in itself does not make a contractor responsible for any design carried out for the client prior to novating their contract. To achieve this the building contract needs to specifically state that the contractor has examined the design and adopted it. |
| The client only needs to claim against the contractor for any problems with the design or workmanship of the building. | The contractor could seek to avoid liability for build issues by blaming the non-novated design team for preparing the Employer's Requirements. |
| Maintains continuity of design (pre- and post-novation) whilst leaving sole responsibility for designing and building the project with the contractor. | The process of novation can leave designers feeling they have mixed loyalties and there can be difficulty determining where liability lies for design work carried out before novation.

Once the consultant is novated, they no longer owe any monitoring or oversight etc. to the client. This either needs to be secured through drafting in the novation agreement or by a separate appointment. |
| Working with the client at an early stage, the design team can gain a strong understanding of the requirements. If the design team is not novated, this learning is potentially lost, and parts of the process will need to be replicated with the contractor's design team. On a complex or highly technical project this can be detrimental to the final design and can add cost. | The contractor and design team must work together closely on any design and build project, but this is particularly important when novation has taken place. Novation is often criticised for putting additional strain on the relationship between these parties. Without a good relationship there is greater chance the project will be negatively influenced and critical issues such as time and cost will suffer. |
| In a novated Design and Build contract, design issues should theoretically occur less frequently as the designer and contractor have worked closely to jointly develop and agree the final design and to ensure buildability and quality. The contractor is better equipped to manage and control the risk to quality through the influence of design decisions at each stage (post-novation). | Disagreements between the designer and the contractor can arise through a difference of opinion over the Employer's Requirements, and the way in which design changes and variations should be managed. Often the contractor and design team have different priorities. The designer is concerned with the aesthetics of the design and the opinion of the client, whereas the contractor is concerned with buildability or cost and programme targets. For the relationship to work successfully, the teams must work in an integrated and collaborative manner. If this relationship breaks down, there could be serious consequences for the overall project. |

## Contractors

**Main contractors**

Construction on capital building projects is done through a Main Contractor. As explained in this guide, under some contractor-procurement options, the main contractor also provides early construction advice during the design phase.

The formal contract between the University and the main contractor consists of a University standard contract based on the JCT[33] suite of contracts with amendments drafted by the University's construction lawyers. Under the contract, the main contractor is responsible for completing the building works to the agreed design and specification within a fixed period known as the contract programme. When the site is handed to the main contractor, their organisation assumes responsibility for security and safety on the site and insurance of the building as it is being built.

The University ordinarily uses three kinds of standard form JCT contract:

- Design and build - the contractor is responsible for all the design and building work for a particular project. This contract can be used for any value of works but is likely to be inappropriate for a straightforward or low value project

- Intermediate - suitable for works of medium complexity and value – recommended for contracts with a value of £250k to £1m but may be suitable for values below or exceeding this, depending on the nature of the works; an intermediate contract has two options – with or without contractor design

- Minor works - appropriate for low value and low complexity works

**Health, Safety & Site Review Forum**

Estates Services has instigated a Joint Working Group to which each construction main contractor working for the University is required to send a representative. Contractors are asked to present for discussion, openly and honestly, any site issues or incidents which have occurred over the previous month. Each contractor presents the issue or incident, lessons learnt, and actions taken in order that other contractors, or the University, can implement procedures or systems as appropriate. The purpose of this is sharing of information and continuous improvement.

Each meeting has a subject topic for discussion on which contractors are invited to share information and best practice. The meeting encourages the consideration of "health" issues in recognition of the industry's great advances with regards to safety and a need to also address health issues such as mental health.

Contractors are also invited to contribute towards the preparation of University policies such as dust control, public engagement and noise pollution. Estates Services uses the meeting as an opportunity to publicise, and introduce, Estates Services initiatives such as Soft Landings.

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[33] Joint Contracts Tribunal

# 14. Internal Stakeholders

The project manager is in continued consultation with **all stakeholders** relevant to the project **from RIBA Stage 1 onwards**. These include, but are not limited to, the following individuals and teams within the University:

- Area Safety Officer
- User Representative
- Crime Prevention Design Advisor
- Department Facilities Manager
- Disability Advisory Service
- Equality & Diversity Unit
- Estates Services Asset & Space Management Team
- Estates Services Building Services Team
- Estates Services Conservation and Buildings Team
- Estates Services Compliance Team
- Estates Services Environmental Sustainability Team
- Estates Services Facilities Management Team
- Insurance Manager, Oxford Mutual Limited (Insurance Office)
- IT Services
- Legal Services
- Safety Office
- Security Services
- Tax Team

Early stakeholder consultation allows the design team to take account of any risk mitigation measures that need to be implemented and for the Project Board to be fully aware of the wider costs of omitting them. **Guidance document G18.0** *Stakeholders* contains further information in addition to that given below.

### Estates Services

Estates Services is responsible for managing University capital buildings projects and ensuring that they are brought to fruition. Estates Services interacts with Departments and Divisions to understand their needs and aspirations, advises on how they might be met, manages the planning process, participates in the groups that manage projects, appoints and oversees the work of project managers, design consultants, and building contractors, and ensures that statutory and regulatory requirements are met. Estates Services is also responsible for managing the use of space and for repairs and maintenance, and throughout a capital building project attention is given to how a new or refurbished building will be used, serviced, and maintained. Estates Services maintains comprehensive records on all University buildings on its estate-management system **Planon**.

### Planning and Council Secretariat (PACS)

PACS is responsible for coordinating the University's strategic planning activity, including that relating to capital building projects.

### Divisional Boards

Among the duties of the Divisional Boards are the development of strategic plans covering academic, financial, and physical-resource issues that affect their constituent units.

## Development Office

The Development Office supports activities intended to assist in raising funds for capital building projects.

**Research Services**

Research Services supports capital projects by working with researchers, divisions, departments, collaborators and funders; providing advice and information on funding opportunities, supporting major bids, reviewing and authorising applications, accepting new awards and sponsor liaison.

**Legal Services**

Legal Services supplies legal advice in relation to capital building projects, including in respect of major benefactions, site acquisition and other property law issues such as tenancies and rights over land, planning, insurance, tax, and construction and equipment procurement. The section instructs specialist law firms where the necessary resources are not available in-house**.**

**IT Services**

ITS advises on development of the University's primary computing infrastructure including the network backbone and its external connections. The Telecommunications Team advises on telecommunications cabling standards. It is important to **identify early** and coordinate all areas of expertise that will be required.[34]

**Finance Division**

The Finance Division is involved in financial planning for the programme of capital building projects and financial administration of projects including accounting, making payments, and claiming funds. Within the Finance Division there are specialist roles:

- the **Purchasing Team** works with Estates Services to ensure that the University achieves value for money in purchase of goods and services
- the **Tax Team** advises on VAT and other taxation aspects of capital buildings projects
- and the **Insurance Team** arranges insurance protection for University properties

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[34] See IT matrix in *Soft Landing Strategy* (**Guidance document G6.0**)

**Safety Office**

The Health and Safety at Work etc Act 1974 (Sec. 2(3)) requires employers to draw up and bring to the notice of their employees a statement of safety policy. The University's Policy states the health and safety objectives of the University and describes the managerial structure by which they may be implemented.  It consists of three parts:

- University of Oxford statement of health and safety policy
- Departmental statements of Safety Organisation
- The University's detailed safety arrangements on specific issues. These are known as Policy Statements and are issued by the Health and Safety Management Committee on behalf of Council

The Safety Office supports the University's research and teaching activities by providing competent advice and assurance of legal compliance. Its main functions are:

- providing advice to all University departments, institutions, staff, and students on all aspects of health and safety, including fire and radiation protection
- providing a wide range of safety training courses
- carrying out safety audits
- investigating serious accidents and incidents
- liaising with enforcing agencies (e.g. Health & Safety Executive, Environment Agency, Fire Service)
- advising Estates Services and its consultants on the health and safety aspects of designs for new buildings/building refurbishments
- providing a hazardous waste disposal service
- managing programmes of health and safety improvements, e.g. fire precautions, containment facilities in laboratories handling dangerous pathogens
- managing a mini-minor works budget that can contribute funding towards safety improvements in departments
- managing the University's fire alarm contract
- drafting safety policies that ensure the University complies with relevant legislation
- servicing the University's safety committees (the Consultative Committee for Health and Safety and the Health and Safety Management Sub-committee) which consider and approve draft safety policies on behalf of Council

## 15. External Stakeholders and Regulatory Organisations

The term 'stakeholder' refers to anyone that has an interest in a project and can influence its success including groups and organisations external to the University. For example, all building works are subject to statutory and regulatory requirements. These cover planning permissions, changes to listed buildings and health and safety compliance.

### The Oxford Local Plan

The Local Plan sets out the policies and proposals for future development and land use in Oxford.  The objective of the Plan is to promote measures to improve the local environment and to meet the needs of local communities. The Plan is implemented by Oxford City Council acting as Local Planning Authority in determining planning applications. The **Cherwell Local Plan** sets out similar policies for the district that includes Begbroke Science Park.

### Town Planning

Any proposed new building or change to the external appearance or use of an existing building normally requires planning consent from the local planning authority, which in most cases is Oxford City Council. Any application for planning consent relating to a capital building project must be approved by BESC and submitted by Estates Services.

Estates Services has robust planning procedures in place for all major developments, including public consultation procedures, under the direct responsibility of the Director of Asset & Space Management. These can be found under 'Planning Procedures' on the Estates Services 'Strategies & Policies' webpage.

The University regularly liaises with Oxford City Council Planning Department by way of monthly meetings attended by the University's Town Planning Manager and Head of Conservation and Buildings.

### Neighbours and Community Groups

Stakeholders can  provide  useful feedback (and  an  indication  of  the  likely  response  to  a subsequent planning application), however, as they may not be experienced in building projects, and their  actions  may  be  beyond  the  control  of  the University,  their  involvement  requires careful organisation, and a clearly understood mandate. Key relevant groups are requested and contacted by the local authority as seen relevant for input during the planning determination period. Meetings can be arranged individually to discuss any concerns and during the design development. Further information can be found under 'Planning Procedures' on the Estates Services 'Strategies & Policies' webpage.

The Party Wall Act seeks to protect the interests of adjoining owners from any potentially adverse effects that construction works might have by imposing a requirement that all adjoining owners be given   prior notice of   them.   Wider neighbours may   also   be   affected   by construction works and consideration should   be   given   to   how   to   reduce   the   impact   of works,   by sensible working hours,  quiet  and  low vibration construction techniques, dust dampening,  wheel cleaning and so on.

## Heritage Assets

The University estate includes a large number and variety of heritage assets. Some are formally Designated (Listed Buildings, Conservation Areas, Historic Parks and Gardens, Scheduled Ancient Monuments) and others are not formally Designated but still of historic interest (Undesignated Heritage Assets).

Listed Buildings are buildings which are recognised for their special architectural and historic interest, through inclusion on the National Heritage List for England (NHLE) by the Secretary of State for Digital, Culture, Media and Sport (DCMS). Listed Buildings are protected under the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990. Each listed building is classified as Grade I (exceptional interest), Grade II* (particularly important and more than special interest), or Grade II (special interest). Listed building Consent is a type of planning control, required for any works which are deemed by the Local Planning Authority to have the potential to affect the special interest of the building.  In practice this will include all works of demolition, alteration, or extension of a listed building, and some types or repair. Undertaking work to a listed building without the necessary consents from the local planning authority or the Secretary of State is a criminal offence, and risks both large fines and potential jail terms if formal enforcement action is taken.

Conservation Areas are areas of special architectural or interest. They are designated by the Local Planning Authority, and the majority of the centre of Oxford City is included within a designated Conservation Area. Conservation Areas benefit from some additional protections over and above those provided by general planning legislation and the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990 apply to these assets. Certain works, such as lopping and topping of trees, are specifically excluded from General Permitted Development rights within Conservation Areas, and the effect of a development proposal on the overall character and appearance of a Conservation Area is a material planning consideration in the decision making process (with great weight being placed on preservation).

Historic Parks and Gardens and Scheduled Ancient Monuments are protected through the provisions of the Historic Buildings and Ancient Monuments Act 1953 and the Ancient Monuments and Archaeological Areas Act 1979  respectively. The impact of development proposals within or adjacent to these areas is also a material planning consideration in the planning process. There are also specific protections in place for known archaeological deposits which are not Scheduled, and for areas which are deemed to be of likely archaeological interest/potential even if they are not yet known to contain specific archaeological deposits. Local Authorities maintain a comprehensive Historic Environment Record, which contains details of known and potential areas of archaeological interest, and there is a requirement in policy that all applicants consult this "HER" prior to the submission of any application which will affect such remains.

All of the above, in addition to the provisions of the primary legislation mentioned, are included within the definition of a Designated Heritage Asset within NPPF. In order to meet the requirements of the NPPF in relation to these assets it is necessary for any application relating to these assets to be accompanied by two documents. The first is a comprehensive statement of significance, which must describe the special interest, significance and heritage values both of the asset as a whole, and in detail those elements of the asset which are proposed to be altered. The second is a Heritage Impact Assessment, which must describe the proposed alterations in detail, and assess the impact that the

alterations will have upon the identified significance, any mitigations which have been put in place to limit harm caused, and define any deliverable public benefits which will (in heritage terms) help to make a compelling case in favour of the proposal. Further details of these requirements can also be found in the accompanying NPPG documentation issued by Historic England on behalf of central government.

As well as provisions for Designated Heritage Assets, the NPPF also makes provision for assets which are not designated but which are considered to be of historic or architectural interest nonetheless. These Undesignated Heritage Assets may be identified at any point in the planning process, although every effort is taken to note their existence as early as possible and effective pre-application consultation can help to identify their presence in advance of formal planning submission. Undesignated Heritage Assets, whilst not granted any statutory protection in legislation, are still a key material consideration in planning terms, and any application affecting an Undesignated Heritage Asset should be accompanied by the same documentation as for a Designated Heritage Asset.

It is important to note that, in addition to the physical fabric of all of the above assets, their setting (and in the case of listed buildings also their curtilage) is also protected by the legislative and policy provisions noted above. It is therefore important, when proposing development within the vicinity of any asset, that a full visual impact assessment which considers the proposed development, the way in which it might alter views to, from and of an asset, the way in which the current site makes a contribution to the understanding of the asset, or the way in which the proposed development might offer opportunities to better reveal the significance of the asset, should be undertaken.

It is strongly recommended that any project team undertaking works directly affecting any heritage asset or its setting makes provision for suitably qualified heritage consultant support to be embedded within the project team. For Listed Buildings and Conservation Areas ideally this should be an individual with a formal qualification in Historic Conservation, or Full Membership of the Institute of Historic Buildings Conservation. For Archaeological Areas and Scheduled Ancient Monuments this should be an individual with a formal qualification in Archaeology and ideally Full Membership of the Chartered Institute for Archaeologists. Where a proposal's impact upon heritage assets is limited to its visual impact, there may be other specialist consultants who can prepare such an assessment (for example Landscape Architects or Planning Consultants), but it is important that any individual undertaking such an assessment is fully conversant with the policies and legislation which relates to heritage assets and the requirements of the NPPF in relation to Statements of Significance and Heritage Impact Assessments.

The following sources of information may be of use to project teams in the early stages of design. Historic England regularly update their advice in relation to Assessing Significance Assessing Significance | Historic England and have made available guidance on the production of Statements of Significance Statements of Heritage Significance: Analysing Significance in Heritage Assets | Historic England. There is also advice on the Setting of Heritage Assets The Setting of Heritage Assets (historicengland.org.uk) and Listed Building Consent | Historic England describes the process of listed building consent and gives details on the requirements of applicants in relation to listed buildings. Their website also has a great deal of general advice on all types of heritage asset and the provisions of the legislation and policy detailed above Heritage Consents | Historic England

The University's Town Planning Manager advises whether listed building consent is required and if it is arranges for it to be obtained. Help and advice may also be sought from the Head of Conservation and Buildings.

Early engagement with Statutory Consultees on heritage matters may help to speed up the progression of planning and listed building consent applications.

For Heritage related matters the following are the key Statutory Consultees:

- The Gardens Trust (for Historic Parks and Gardens)

- Historic England

- Society for the Protection of Ancient Buildings

- Victorian Society

- Georgian Group

- Twentieth Century Society

There are also a number of local consultees who are treated as statutory by Oxford City Council:

- Oxford Architectural and Historical Society

- Oxford Preservation Trust

- Local Residents Associations

- Oxfordshire Gardens Trust

- Oxford Archaeological Society

## Building Control

The Building Regulations are made under powers provided in the Building Act 1984. Among other things, the Regulations specify the notification procedures that must be followed when building works are undertaken and requirements for aspects of building design in consideration of health and safety, energy conservation, and access to and use of buildings. The Project Manager ascertains whether building control approval is required, and if it is arranges for it to be obtained by appointing an Approved Inspector.

## Health and Safety

The Health and Safety at Work etc. Act 1974 (also referred to as HASAWA) is the primary piece of legislation covering occupational health and safety in Great Britain. The Health and Safety Executive (HSE), with local authorities (and other enforcing authorities) is responsible for enforcing the Act and a number of other Acts and Statutory Instruments relevant to the working environment.

### CDM Regulations

University Policy Statement S3/15 relates to the Construction (Design and Management) Regulations 2015 (CDM) and forms part of the University's Safety Policy. The CDM Regulations focus attention on

the planning and management of construction projects and are intended to reduce risks to those who build, use, and maintain buildings.

The Regulations specify duties of clients, designers, contractors, and workers. They apply to:

a.  new building constructions
b.  new services installations
c.  alterations, maintenance, and renovations of buildings and services
d.  site clearance
e.  demolition

The Regulations cover planning, design, management, and execution of activities associated with these types of work.

The University cannot delegate its client responsibilities to a third party, i.e. the University must make suitable arrangements for managing the project so that health, safety and welfare is secured.

**Fire Safety**

In addition to consideration of fire safety as part of building control, the University Fire Officer must approve any proposal for a new building, an extension, or an alteration to a floor layout before any work commences. The Safety Office must approve any proposed building work in a laboratory or an animal facility before it commences.[35]

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[35] Standing Orders 4.2.3

# Best Practice

**Enhanced project delivery**

The work of the Capital Projects team goes beyond what might be termed as *standard* project delivery. Standard delivery adheres to University procedures and processes, and follows industry practice such as PRINCE2 and the RIBA plan of work. Our *enhanced* delivery builds on this and includes initiatives that have been developed in-house to embrace gold standard practices in order to provide a comprehensive and consistent service. These initiatives include:

- Benchmarking
- $360^o$ project team KPIs and monitoring of performance
- Project Quality Review Process (PQRP) – collating and learning lessons
- Gateway Process, including independent reviews
- Training for SROs, Project Boards, stakeholders and consultants, including the production of guidance documentation
- Concerto portfolio management system
- Soft Landing strategy
- Risk Management strategy including maximisation of opportunities
- Stakeholder stage reviews
- Regular project compliance checks
- Options appraisals
- Regular reporting on projects, using standard formats
- Project Manager and Cost Consultant workshops
- Site Safety meetings
- Tracking building defects and their resolution
- Managing the consultant and contractor appointment and contract processes, including tendering, negotiation and ensuring value for money; protecting the best interests of the University

## 16. Environmental Sustainability

Oxford University's Environmental Sustainability Strategy was approved by Council on 15 March 2021. The strategy sets two ambitious targets: to achieve net zero carbon and to achieve biodiversity net gain, both by 2035. The strategy focuses on ten priority areas, including carbon emissions from University buildings, biodiversity, sustainable resource use and investments. The strategy can be found on the University website. The University retains the existing target of reducing peak carbon emissions incurred during 2010 by 50% by 2030.

Capital projects support these objectives, and the attainment of the University's carbon emission reductions target, ensuring that appropriate mitigation of any likely environmental-sustainability impacts is undertaken. Each project represents a significant environmental and cost legacy for the University and an inimitable opportunity to ensure that this is positive.

It is imperative that sustainability measures should be considered in detail from the inception of any capital project to ensure that the greatest benefit can be captured and in the most cost effective manner. A roadmap to achieve this is provided by the Sustainability Design Guide. This document provides targets and guidance for designers and those engaged in project governance to ensure that sustainable development issues are considered appropriately and are outcome focused. It is recognised by Oxford City Council as delivering equivalent sustainability compliance where the achievement of BREEAM[36] Excellent would normally be a planning requirement.

The guide considers holistic sustainability issues, comfort and quality of internal environment and is drawn from a combination of industry best practice and lessons from previous University capital projects. It is imperative that University capital projects result in the delivery of low carbon buildings in-use and the lowest possible operational energy cost for the occupying department. This important focus on operational energy consumption and carbon emissions represents a shift in focus from compliance (i.e. Part L Building Regulations), which might not necessarily deliver the optimum building for the University, to outcomes (i.e. actual in-use efficiency) which should result in better performing buildings in terms of cost and CO2 emissions.

**The University's policy[37] is that all new build and refurbishment projects with a value greater than £1 million should be Passivhaus certified.** The Passivhaus methodology has the greatest evidence base for delivering buildings that operate in line with their design and certification ensures that design performance is matched in operation. The Passivhaus methodology, outlined in the Sustainability Design Guide has also been successfully used to demonstrate the delivery of energy saving targets.

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[36] Building Research Establishment Environmental Assessment Method

[37] In 2017 PRAC approved the application of Passvhaus methodology for all projects over £1m

# 17. Soft Landing Strategy

Estates Services has developed a *Soft Landing Strategy*[38] (see **Guidance document G6.0**) which provides a unified vehicle for design teams and contractors to engage with outcomes throughout the process of briefing, design and delivery in order to improve the operational performance of a building and fully prepare the building in readiness for occupation. Commencing early in the project, if not before, the strategy seeks to: improve project delivery; improve client experience; manage expectations; ensure stakeholder involvement and engagement during design and post-handover; prepare the end user for the occupancy, use and management of their new facility; ensure an efficient handover; minimise impact on day to day operations, both during the project and after handover and; improve building performance. **Soft Landing** involves:

- Achieving greater clarity at the inception and briefing stages about users' needs and required outcomes
- Placing greater emphasis on building readiness, by the users, design team and constructor having greater involvement during the pre-handover and commissioning stages
- A resident Soft Landing team located on site during the users' initial settling-in period
- Remaining involved after occupation, during and beyond the **defects liability period** to resolve outstanding issues

The *Soft Landing Strategy* (G6.0) provides the project team with a comprehensive suite of documents including an overarching matrix of actions and responsibilities by RIBA stage, a handover checklist, facilities management responsibility matrix, FF&E schedule and an IT network matrix. All of these are scalable and can be applied to all capital projects.

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[38] See Building Services Research & Information Association (BSRIA) webpage on Soft Landings

## 18. Philosophy Documents

The Philosophy Documents are a suite of documents that cover a range of topics, where there are specific maintenance and design requirements. Each document has been developed by the team responsible for running and maintaining that service. The contents reflect the requirements of the University and experience of the buildings in use across the estate. In some cases the document will outline a mandatory requirement; in other cases, the documents will offer guidance. The Design Teams and Contractors are required to provide detailed information on their design approach, in response to the requirements of the Philosophy Documents. The Design Team and Contractor should note that the Philosophy Documents form part of their Contract Documents. It is a contractual requirement that the principles of the Philosophy Documents are followed and evidence provided to demonstrate compliance.

### Secured By Design

The University's Security Services team have specially trained staff known as Crime Prevention Design Advisors (CPDA) who will advise, support and guide project teams on the design and layout and minimum physical security measures for new and existing developments to reduce the risk of crime. CPDA guidance is informed by Secured by Design (SBD), which is an Official Police Security Initiative.

## 19. Project Quality Review Process (PQRP)

**Aims**

- Continuous improvement
- Learning for the next project
- Timely identification of issues and resolution during the project process
- Affirmation of initial aspirations, continual review and redirection
- Improved communication
- Project ownership
- Project team building

**Introduction**

The University and particularly Estates Services is encouraging continuous learning from capital projects whereby issues identified during the project process are addressed in a timely manner before project completion, and the benefits of lessons learned are passed on to other projects. The aim is to foster a culture of continued review and problem resolution, and constructive feedback within the project teams and amongst the user representatives, consultants and contractors, with the intention of improving the efficiency and effectiveness of the delivery process.

The PQRP is a whole life project process of evaluating the design and construction of new buildings, and the refurbishment of existing buildings whilst actively involving a wide group of people who have responsibility for delivering the project, who will occupy the resulting construction, or have some form of responsibility for the building.

The process involves six key stages:

- **Pre-Project Initiation** (PPI)
- **Pre-Construction Review** (PCR)
- **Mid-Construction Review** (MCR) where construction programmes exceed 12 months
- **Post Project Evaluation** (PPE)
- **Post Occupancy Evaluation** (POE)
- 5 Year Post Occupancy Evaluation (POE5)

Each stage is equally valuable and to be afforded equal focus and effort.

The Project Quality Review Process is primarily concerned with reviewing and improving delivery by undertaking continual:

- Process Evaluations
- Operational and Functional Reviews
- Technical and Performance Reviews

The emphasis at each stage evolves throughout the project. At the start of a project the PQRP is primarily concerned with reviewing and, if applicable, adopting lessons learnt from previous projects

including both problems encountered (and their mitigation) and project successes.  Additionally, at the start of a project, the focus is one of developing and agreeing the brief and aspirations and conveying this to the team.  As the project evolves the emphasis evolves to one of recording lessons learnt for the benefit of others and to one of checking the brief and aspirations are being met, to finally verifying the functional and technical performance against the original brief.  The start of the project sees the building of a team and adoption of best practice from lessons learnt with regards to process, this then evolves through stage review of team performance to a final review of team performance and onward communication of any lessons learnt.

Consistent throughout the process is a continual review and improvement cycle, whereby the project is continually reviewed against original aspirations and the team reviewed for performance in order that any unjustifiable deviations or problems may be addressed in a timely manner ensuring quality is maintained or improved.

**Annex C contains further detail.**

# 20. Performance Measurement

Estates Services is committed to developing a performance management culture to drive continuous improvement throughout the estate. In the delivery of projects, this is through two key areas – Performance Benchmarking and Key Performance Indicators (KPIs).

**Annex D contains further detail on performance benchmarking and KPIs.**

## Performance Benchmarking (Project Metrics)

There is a formal benchmarking process which facilitates the review and setting of performance targets at project initiation and the monitoring of project delivery throughout the duration of a project. The process applies to the design and construction of new buildings or facilities as well as the refurbishment of existing buildings and facilities.  There is a wide selection of benchmarks with the potential for measurement, however, any benchmark used routinely within the Estates Services capital project process needs to be consistent, unequivocal, realistically measureable, auditable, and of value.

Estates Services has established a set of benchmarks in conjunction with other leading university establishments. It is intended that the **Project Board** monitors performance against a pre-established baseline and a project target figure. At the end of each project these benchmark indicators will be incorporated into the performance matrix for the whole of Estates Services. They should be considered more as project metrics used for the monitoring of project performance.

The Project Board may decide to define, measure, and monitor additional, project-specific benchmarks which can be added to the register although it is not envisaged that this will be appropriate for all projects. The benefit of this is to provide a structured approach across the whole estate and to allow specific areas to be monitored, for example, on unusual or complex projects.

## Key Performance Indicator Evaluation Process (KPIs)

**Aims**

- Continuous improvement
- Quantitative and qualitative consultant, contractor and supply chain evaluation
- Identification and commendation of exceptional performance
- Timely identification of issues and resolution during the project process
- Measurement of project success

**Introduction**

The University and particularly Estates Services is committed to continuous improvement across its capital projects, project teams and supply chains.

The KPI process is a whole life project process of evaluating project and team key performance indicators throughout, and following, the design and construction of new buildings or facilities, as well as the refurbishment of existing buildings and facilities.

The objective of the KPI evaluation process is to inform Project Boards and Estates Services of project delivery team performance against agreed KPIs.  On the basis of the indicators reported, the Project Board or Estates Services may then take action to correct failings in the project delivery or note exceptional performance.  The KPI process also assists the University in the process of contractor or consultant selection and general supply chain management.

**Methodology**

The KPI evaluation process has two key elements:

- Recording of project KPIs against Project Board set targets (measured at the end of the project)
- Quarterly KPI 360° evaluation of project team members throughout project

## 21.Wellbeing Aspects of Capital Projects Design

Designing or Refurbishing Capital Projects provides an opportunity to consider the impacts of the project on the wellbeing and mental health of the building users.

The following issues may thus be considered:

- Access to daylight and views - Section 2.9 of the Sustainability Design Guide from Oxford University's Estates Services provides specific guidance on this (for student/staff accommodation this can also include ability to ensure darkness for sleep) – for electric lighting warm/SAD lighting may be considered.

- Thermal comfort and ventilation/cooling – Sections 2.6 and 2.7 of the Sustainability Design Guide from Oxford University's Estates Services provides specific guidance on this.

- Limiting noise from external and internal sources (e.g. PC fans etc.) in accordance with or exceeding current Building Regulations.

- Access to healthy food/drink options:
  o designing in cafeteria/canteen space, with adequate space for fresh and/or hot food to be prepared on the premises (rather than frozen pre-packaged food being brought in and microwaved).
  o free water cooler drinking water
  o tea/coffee making kitchenettes

- Access to social space for tea/coffee breaks and meeting colleagues/students informally etc., e.g. 'sofa space'.

- For student accommodation shared kitchens as spaces of social interaction - compared to bedsit designs with integrated individual kitchens - can have positive impacts on well-being.[39]

- the pros and cons of open office space. Some research has found open office space to be demotivating.[40]

- Colour schemes for internal decoration and natural material flooring that promote wellbeing.

- Security in building access and for storing valuables inside (e.g. options for locking laptops, good external access lighting) to promote feelings of safety for building users.

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[39] Gareth Hughes and Leigh Spanner (2019) The University Mental Health Charter, Leeds: Student Minds, at: https://www.studentminds.org.uk/charter.html, p. 54

[40] Gareth Hughes and Leigh Spanner (2019) The University Mental Health Charter, Leeds: Student Minds, at: https://www.studentminds.org.uk/charter.html, p. 59

- Good, clear signage to buildings and their various internal spaces – including for disabled users – has positive impacts on wellbeing, as well as reducing access to high places.[41]

- Access to some green space externally or internally (biophilic design), e.g. with benches near the building for the option of outdoor breaks, and internally through 'green wall planting' or 'green roof terraces' (see also Section 2.18 'Biodiversity and Landscaping of the Sustainability Design Guide). This could include consideration of green outside meeting and learning spaces.[42]

- Green transport options for accessing the building, e.g. covered and/or lockable bicycle racks (e.g. for more expensive e-bikes), and charging points for electric cars.

- Consultation with building users at an early stage when the design brief for the Capital Project is developed: staff, teachers, researchers and student users (e.g. through focus groups/SU sabbatical officers, e-surveys) about the wellbeing aspects of the building, which provides the opportunity to discuss further specific wellbeing aspects.

*Further Info:*

UK-Green Building Council Report 'Health and Wellbeing in Homes'

The commercial office sector has its own international bespoke health and wellbeing standard - the WELL Building Standard.

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[41] Gareth Hughes and Leigh Spanner (2019) The University Mental Health Charter, Leeds: Student Minds, at: https://www.studentminds.org.uk/charter.html, p. 60

[42] Gareth Hughes and Leigh Spanner (2019) The University Mental Health Charter, Leeds: Student Minds, at: https://www.studentminds.org.uk/charter.html, p. 59

# References and Glossary

# 22. References

**Please follow the links below to the relevant websites**

## University

**Guidance documents** referred to in the body of this document can be found **here**

University Strategic Plan

Financial Regulations

University Policy Statement S3/15 (CDM Regulations)

Sustainable Buildings

Standing Orders for University Functional Buildings and Sites
Note: Single Sign On required

Capital Planning

## Wider Context

Oxford Local Plan 2036

List of Buildings of Special Architectural of Historic Interest

Building Regulations

Construction (Design and Management) Regulations

Control of Asbestos Regulations

Royal Institute of British Architects Plan of Work

## 23. Glossary

Descriptions and explanations for words and phrases used in the Guide appear here, sub-divided into four groups:

      a.  **General Terms**
      b.  **University Specific Terms**
      c.  **Roles**
      d.  **Processes**

In addition, words or phrases commonly used on construction projects are also included. The list is not exhaustive, but comprehensive enough to be informative.

## a. General terms

| | |
|---|---|
| **Benefits** | Benefits are positive and measurable impacts of change; they are the reason for undertaking a project and should be linked to University strategy and key priorities. They give everyone involved a clear understanding of the purpose of the project as an investment, and ensure the desired outcomes are delivered. Benefits are best titled with a change term: *increased, lower, cheaper*, and should have a measurement: £, %. Avoid generic terms without giving more detail: *better, improved,* as they are not specific enough for analysis. |
| **Brief** | The brief is the first stage in the process of defining the users' requirements for the project. The purpose is to provide a full and firm foundation for the initiation of the project. The contents are extended and refined into the business case but the brief remains a key document in its own right. The brief can evolve as options are explored. |
| **Contingency** | Contingency is a provision in the project budget to cover uncertainties, risks or other unforeseeable occurrences. When preparing an initial project cost plan there is inevitably a degree of uncertainty to the actual out turn cost of a project, this can be a result of: it not being possible to define the cost of some elements at the earliest project stages; design changes including correction of errors or omissions and/or; the materialization of known and unknown risks.  However, contingency is not meant to replace the development of accurate estimates, nor to cover significant changes in project scope. |
| **Contractors Proposals (D&B contracts)** | Documentation prepared by tenderers in response to employer's requirements which provide a description of the client's (University's) requirements. The contractor's proposals set out their suggestions for designing and constructing the project, along with their price. |
| **Contract Sum** | The total monetary amount to be paid to the contractor for services performed under the contract for construction. |

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| **CDM Regulations** | The Construction (Design & Management) Regulations 2015 cover the management of health, safety and welfare when carrying out construction projects. |
| **Defect** | A deficiency in the design or construction of a building which is not in accordance with the building contract. |
| **Defects Liability Period (DLP)** | A fixed period of time after practical completion of a construction project during which a contractor has the obligation and right to return to the site to remedy defects. A typical defects liability period lasts for 12 months. The client will remain responsible for regular building maintenance during this period. |
| **Design & Build (D&B)** | A procurement route in which the main contractor is appointed to design and construct the works. This is an alternative to a traditional contract, where the client appoints consultants to design the development and then a contractor is appointed to only construct the works. |
| **Design Freeze** | Generally, the later in the development of the project that changes occur, the greater the impacts on time, cost and quality. At certain stages in the design process therefore, packages of information are provided for approval, and once this approval has been given, a change control procedure is introduced to ensure that the approved information is not changed without the express permission of the Project Board. This is referred to as a 'design freeze' and usually occurs at the end of a RIBA design stage (2, 3 and 4). |
| **Environmental Impact Assessment (EIA)** | The aim of an Environmental Impact Assessment is to protect the environment by ensuring that a local planning authority, when deciding whether to grant planning permission for a project which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision making process.. It can add several months to the programme. |

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| **Employer's Requirements (ERs)** <br> **(D&B contracts)** | Employer's requirements provide a description of the client's requirements, including the specification for the building, the scope of services required from the contractor and an allocation of risk for unknown items. Employer's requirements can range from a very simple specification to a fully developed performance specification and concept design. <br><br> If the employer's requirements are not properly developed, the client can incur significant additional costs, as any requirements which are not properly specified, or are changed, will require the issue of instructions for which the client will be charged by the contractor. |
| **Issue** | The occurrence of an event that has an adverse impact on a project such the materialization of a known or unknown risk. |
| **Latent Defect** | A defect in material or workmanship of an item which may cause failure or malfunction, but is not discoverable through general inspection and manifests itself at a later date. <br><br> **Patent defects** are those which can be discovered by reasonable inspection. |
| **Lifecycle (or whole-life) costing** | All costs associated with the life of a building, from inception to design, construction, occupation and operation and disposal. |
| **Liquidated and Ascertained Damages (LADs)** | Pre-determined sums, agreed at the time that a contract is entered into, and which are payable to the client in the event of the contract being breached in a defined way. |
| **Novation/Novated** <br> **(D&B contracts)** | A term used in contract law describing the act of replacing a party to an agreement with a new party. A novation is valid only with the consent of all parties to the original agreement. An example would be when an architectural team developing the outline design is 'passed' (or novated) from the client's to the contractor's responsibility. |

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| **Practical Completion (PC)** | Practical Completion is the point at which a building project is complete, except for minor defects that can be put right without undue interference or disturbance to an occupier, or is the point when the building project is capable of beneficial occupation and use. This phrase refers to the point at which an architect or a contract administrator confirms that the building contractor has achieved *practical completion* under the building contract.<br><br>Work undertaken after PC is chargeable at the standard rate of VAT. |
| **Programme** | In its widest sense, the term 'programme' refers to a series of interrelated projects, however in the construction industry the term is also used to refer to the overall project timescale, showing the periods required for certain activities and the critical path connecting activities that affect the start, construction, practical completion and end date of the project. |
| **Retention** | Retention is a percentage (often 5%) of the contract sum that is deducted from the amount due and retained by the client until the contractor properly completes the activities required of them under the contract. |
| **Risk** | Risk is an uncertain event that should it occur will have an effect on the project. Risks can be both positive (opportunity) and negative (threat). If a risk materialises it becomes an 'issue'. |
| **Royal Institute of British Architects (RIBA)** | The Royal Institute of British Architects is a professional body for architects. It has produced a plan of work which divides projects into 8 key work stages. |
| **Room Data Sheets** | A system for defining the requirements, finishes and fittings of each and every room and space within a building. They provide comprehensive information in a format that is both user-friendly and technically clear. |
| **Schedule of Derogation** | A document outlining the non-application of a rule or reduction in its stringency. In this case a schedule of derogation is used to ensure compliance with, or highlight deviation from, the Estates Services design philosophy documents. |

| Seasonal Commissioning | As its title implies, seasonal commissioning involves re-commissioning heating systems in winter and mechanical cooling systems in summer. But it may also be applied to other systems, such as motorised windows and active solar-shading devices - any building system affected by seasonal changes. Ideally, the original project team (or independent commissioning engineer, if appointed) should remain engaged to perform the seasonal commissioning.<br><br>Where possible **continual commissioning** is preferred. It involves the building and its systems being continuously monitored, either via the building management system (BMS) or through the use of dedicated logging devices. Systems can be re-commissioned or adjusted if performance isn't meeting requirements. |
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| **Snagging** | The process of checking a new building for minor faults that need to be rectified before Practical Completion. |
| **Two Stage Tender** | A procurement procedure typically used to achieve an early appointment of a contractor to a lump-sum contract. For the first stage, the objective is to competitively appoint, on the basis of limited information, a preferred contractor for further negotiation. The second stage, which is typically managed as a negotiation between the employer and the preferred contractor relies upon competition between second tier contractors for work packages. |
| **Whole life costing** | A method for assessing the total cost of ownership over the life of an asset, for example, 50 years. Costs considered include planning, design, construction and acquisition, operations, maintenance, renewal and rehabilitation, depreciation and cost of finance and replacement or disposal.<br><br>Whole-life cost analysis can be used for option evaluation. |

## b.  University specific terms

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| **Buildings and Estates Sub-Committee  (BESC)** | The Buildings and Estates Sub-committee is responsible to PRAC for management and maintenance of the functional estate, except for matters that are the responsibility of Divisions, SCSG, or other bodies. |
| **Capital Steering Group (CSG)** | The Capital Steering Group reviews feasibility proposals and proposals for minor capital projects on behalf of PRAC. It ensures that plans use appropriate financial assumptions and space standards, have the approval of the relevant bodies, and are consistent both with the capital priorities of the division in question and with the Minor Capital Plan. |
| **Conservation Management Plan** | Estates Services produces Conservation Management Plans for all University listed buildings. As part of our commitment to undertake conservation to the highest standards, these documents are designed to foster understanding of why our historic buildings are significant assets to be appreciated and to inform their conservation into the future. They are of use to anyone working on our historic buildings. |
| **Functional Estate** | All University-owned, leased, or 'embedded' land and property occupied by University bodies. It is distinct from the commercial estate which is governed by the Property Management Sub-committee (PMSC). |
| **Intermediate project** | Any capital project with a value between £100k and £5m. |
| **Oxford University Fixed Assets Ltd (OUFAL)** | OUFAL is a wholly owned subsidiary company of the University. The University is able to enter into a single design-and-build contract with OUFAL and thereby recover an amount of VAT on consultants' fees to the same degree as on contractor's fees. |
| **Planning and Resource Allocation Committee (PRAC)** | Among the responsibilities of the Planning and Resource Allocation Committee are the preparation and annual update of the Minor Capital Plan informed by the plans of Divisions and the services, to advise Council on the use of capital funds, and to consider advice from BESC on allocation of land and property in the functional estate. |

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| **Planon** | Planon is an integrated FM System used by Estates Services to manage buildings within the functional estate and graduate accommodation. It is the authoritative source for information on University buildings and spaces. Staff from University departments can log on to the Planon web sites, either FM Online or FacilityNet, to report maintenance faults and view building and space information. |
| **Project Expenditure Approval (PEA)** | The PEA document is an important part of the project audit trail. It contains a cost breakdown which informs the budget requirement for each funding request and it contains a level of detail, including VAT, necessary for the project budget to be set up in the Oracle Financials system once committee approval has been confirmed. This then enables orders to be raised and invoices to be paid within contracted dates. |
| **Project VAT Review (PVR)** | Advice received from the Finance Division Tax Team as to the level of recoverable VAT that can be applied to the project. An authorised PVR must be received before the PEA can be verified. |
| **Strategic Capital Steering Group (SCSG)** | The Strategic Capital Steering Group reviews feasibility proposals and proposals for strategic capital projects on behalf of Council. It ensures that plans use appropriate financial assumptions and space standards, have the approval of the relevant bodies, and are consistent both with the capital priorities of the division in question and with the Strategic Capital Plan. |

## c. Roles 89

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| **Architect** | The profession of designing buildings, open areas, and environments, usually with some regard to aesthetic effect. The role often includes design or selection of furnishings and decoration, supervision of construction work, and the examination, restoration, or remodelling of existing buildings. |
| **Capital Projects Administrator** | Primarily responsible for ensuring that due process is followed with regard to audit trails, project governance and ensuring that appropriate training is delivered to Project Boards and Project Managers. Manages the PMO Centre of Excellence team. |
| **Civil Engineer** | Civil engineers design, build, supervise, operate, and maintain construction projects and systems including systems for water supply and sewage treatment (drainage). |
| **Client**<br>(also known as the Contracting Party) | The organisation or individual that is procuring the building development. The client is also sometimes referred to as the 'employer' as they are the body which employs consultants, contractors and suppliers – the 'contracting party'.<br><br>At Oxford, this is either 'The Chancellor, Masters & Scholars of the University of Oxford' or 'OUFAL'.<br><br>Neither Divisions, Departments nor Estates Services are authorised to enter into contracts for construction works.<br><br>NB You may hear the Capital Projects team refer to Departments as clients, this is because we are providing a service to them as our customers. |

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| **Client Representative / Intelligent Client** | **The Capital Projects team provides an 'intelligent client' function for the University with extensive construction industry technical knowledge and governance experience.** It is the professional team that facilitates interactions between technical designers and end users throughout the project lifecycle: from the initial identification of need and strategic guidance through to design input, contract negotiation, project completion and post-handover care.<br><br>NB The client representative is distinct from the employer's agent, which is a contractual role equivalent to the contract administrator on certain forms of contract (such as design and build contracts). |
| **Cost Consultant / Quantity Surveyor** | Provides expert advice on construction costs to ensure that proposed projects are affordable and offer good value for money. The role also helps the client and the design team assess and compare different options, and then track variations, ensuring that costs remain under control as the project progresses. |
| **Employer's Agent (D&B contracts)** | The employer's agent is any agent acting on behalf of the client as the contract administrator for design and build contracts. In addition to their role as contract administrator the employer's agent may also undertake other tasks on behalf of the University such as coordinating the tender process and agreeing the final account. |
| **Local Planning Authority (LPA)** | The local planning authority is usually the planning department of the district or borough council. This will be Oxford City Council for most University planning applications, but could also be one of the local District Councils. |
| **Project Board** | A Project Board is responsible for managing a project on behalf of the University. This includes responsibility for financial control of the project within the approved budget and for ensuring that the outcome satisfies the needs of those who will occupy and maintain the premises. The Project Board should be appointed no later than RIBA Stage 2. By default the SRO is the Chair. |

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| **Principal Designer** | Appointed by the client to take control of the pre-construction phase of any project involving more than one contractor. Principal Designers have an important role in influencing how risks to health and safety are managed throughout a project. CDM 2015 regulations extended the role of the CDM Co-ordinator into design phases as design decisions made during the pre-construction phase have a significant influence in ensuring the project is delivered in a way that secures the health and safety of everyone affected by the work. |
| **Programme Board** | The Programme Board is a sub-set of BESC that considers project issues, decisions, risks, finances, programmes and changes, reviewing projects and taking a *reporting by exception* approach with issues being escalated to the Sub-committee when tolerances, authority or limits have been exceeded, or are about to be exceeded, or when risks should be considered further. The Programme Board thus reduces the workload for the Sub-committee, allowing the Sub-committee to concentrate on the most important issues while still discharging its responsibility. |
| **Programme Manager** | The principal responsibility of a Programme Manager is to manage, lead, monitor and coordinate the capital project programme for a Division including all related projects and work streams. The Programme Manager will also lead and coordinate project and design teams in order to ensure the efficient, timely and correct delivery of projects. |
| **Programme Support Officer** | A role in the Capital Projects Centre of Excellence providing administrative support to Programme Managers and providing the administrative link between Project Managers and the University's financial systems. |
| **Project Assurance Officer** | A role in the Capital Projects Centre of Excellence with responsibility for maintaining project audit trails, consistency of guidance and templates, and continuous improvement of processes and procedures. |
| **Project Manager** | The individual responsible for delivering the project on behalf of the client. The individual leads and manages the project team, with authority and responsibility from the Project Board, to run the project on a day-to-day basis. |

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| **Project Team** | An organised group of people who are involved in performing shared and individual tasks of a project for the purpose of accomplishing the shared project objectives. |
| **Senior Responsible Owner** | The individual accountable for ensuring that a programme or project meets its objectives and delivers the projected benefits. The SRO should be the owner of the overall business change that is being supported by the project and should ensure that the change maintains its strategic focus, has clear governance and that it is actively managed. |
| **Services Engineer** | Building Services Engineers design the services that are needed to allow the building to do what it's designed to. These services include:<br>• acoustics<br>• heating<br>• lifts and escalators<br>• lighting<br>• power and supply<br>• security systems<br><br>There is a growing emphasis on sustainability and building services engineers are at the cutting-edge of designing, developing and managing new technologies that help to reduce the carbon emissions of a building. |
| **Stakeholders** | Stakeholders are individuals, groups or organisations that can influence or are affected by an activity.<br><br>In the case of University projects, stakeholders also include Estates Services (Repairs & Maintenance, Facilities Management, Environmental Sustainability, Conservation, Security and Parks), the Safety Office and the Disability Advisory Group. Sometimes external bodies, donors or Funder Representatives are considered stakeholders. |
| **Statutory Consultees** | Local planning authorities are required to undertake statutory consultations on proposed development as set out in Article 10 of the Town and Country Planning (General Development Procedure) Order 1995. |

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| **Strategic Change Manager** | On larger projects or programmes of work where there are several workstreams it is recommended that the SRO appoints a Strategic Change Manager (SCM), typically coming from a senior administrative role within the organisation area into which the project outcomes and benefits are being delivered. The SCM will directly support the SRO on a day-to-day basis actively liaising with the team leaders for all of the project workstreams. |
| **Structural Engineer** | Structural engineers design structures to withstand stresses and pressures imposed through environmental conditions and human use. Structural design is the methodical investigation of the stability, strength and rigidity of structures. |
| **User** | The departmental end user or occupier of the new facility – academic, research, administrative staff & students. |
| **User Representative** | The person nominated by the department to represent the end users of a capital project whether new building, extension or refurbishment.<br><br>The User Representative is most effective when empowered with the authority to make decisions with regard to the brief, the functionality and the target outcomes of a project. |

## d. Processes

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| **Change Management / Control** | The process through which all requests to change the baseline scope of a project are captured, evaluated and then approved, rejected or deferred. Changes often have cost and time implications. |
| **Feasibility Study** | The project manager carries out the feasibility study in consultation with the SRO and others as appropriate and prepares the feasibility report. The report sets out options and may sketch preliminary designs and initial cost estimates. |
| **Gateways** | A stage-gate process is a project management technique in which a project is divided into stages separated by gateways. A decision to proceed to the next stage is based on the information available at the time, including the business case, risk analysis and availability of necessary resources. |
| **Mid-construction review (MCR)** | A review and application of lessons learned, review of process and delivery to date and identification of current project issues to be resolved. Used on projects where the construction programme is longer than 12 months. |
| **Options Appraisal** | The Options Appraisal process enables Estates Services to consider all the current and future space needs identified by Divisions, so that there can be a review of potential scenarios to fulfil the University's requirements. The process also takes into account other projects on the critical path of the University's Capital Plans, in terms of phasing and the dependencies between them. |
| **Post Occupancy Evaluation (POE)** | Review of functional performance (against aspirations and objectives) - undertaken at least 12 months after Practical Completion. |
| **Post Project Evaluation (PPE)** | Review and application of lessons learned, review of process and delivery (against aspirations and objectives) – undertaken just after Practical Completion. |
| **Pre-project Initiation (PPI)** | A review of lessons learnt on previous projects, setting of objectives and aspirations for the current project and ensuring understanding of the Client's requirements. |

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| **Pre-construction Review (PCR)** | A review and application of lessons learned on previous projects. Adoption of common objectives and aspirations informing the Contractor's understanding of the Client's business. |
| **Project closedown** | The process which prevents any further expenditure on a project and is undertaken once all final payments have been made to suppliers, contractors and consultants. |
| **Project Quality Review Process (PQRP)** | The Project Quality Review Process is an Estates Services Capital Projects initiative involving four or six project reviews at key stages of a project. It is a 'whole life' project process of evaluating the design and construction of new buildings, the refurbishment of existing buildings and feeds back lessons learned from each project. |
| **Risk Management** | A strategy which describes how risks will be owned, evaluated, managed, reviewed and reported. |
| **Soft Landing** | A strategy adopted to ensure a smooth transition from construction to occupation and that ensures operational performance is optimised. |
| **Stage Reviews** | Assessments conducted during the design phase to ensure that projects, as they move through their life cycles, are fully compliant with baselines or require corrective action plans or rebasing as appropriate to the situation. Stage reviews evaluate whether a project is ready to advance to the next phase. |

# Annexes

# ANNEX A - Committee structure for donor-funded[43] capital projects

| | DESIGN REVIEW FORUM[44] | Project Board | BESC / Director of Estates | CSG / SCSG | PRAC / Finance Committee |
|---|---|---|---|---|---|
| Develop a client brief with the users | Consider design aspirations with end-users and the Project Board | Agree and Recommend | | Agree and Recommend | Approve |
| Cost Plan for the project including fees, VAT, contingency, fixtures and fittings, IT, equipment, relocation costs etc. | | Approve | | | |
| Department prepare a Project Business Case including confirmation of sources of funding, projected income and expenditure streams. Obtain permission to proceed (PEA) | | Agree and Recommend | | Agree and Recommend | Approve or forward to Council for approval |
| Select a design team and consultants | Consider proposals and competition entries together with the Project Board | Oversee process and recommend to Director of Estates | Director of Estates approves all tender lists | | |
| Appoint design team and consultants using standard University contracts (Estates) | | Recommend to Director of Estates | Director of Estates approves architect appointment (or BESC if fee over £1m) | | |

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[43] The Design Review Forum should be formed only where there has been a "substantial" donation from a single benefactor and is subject to consideration by PRAC or the Finance Committee in consultation with the Development Committee (ref. PRAC(10)158aR)

[44] It is important that the Design Review Forum includes representation from Estates Services, the relevant Head of Department and potentially other end user representatives

| | DESIGN REVIEW FORUM[44] | Project Board | BESC / Director of Estates | CSG / SCSG | PRAC / Finance Committee |
|---|---|---|---|---|---|
| Review design and estimated cost at each key design stage. Revise the brief if necessary to keep within the project budget[45] | Consider and agree | Examine and approve | | | |
| Major variations to design and or budget | Consider and agree | Recommend | | Agree and Recommend | Approve |
| Prepare and submit application for planning approval. Estates to submit | | Recommend to Director of Asset and Space Management | BESC approves | | |
| Prepare a procurement strategy and a list of suitable main contractors in accordance with the University's financial regulations | | Recommend to Director of Estates | Director of Estates approves | | |
| Review main contract tenders and select the most appropriate tender. Prepare a tender report with recommendations | | Recommend to Director of Estates | BESC or Director of Estates approves appointment as per Standing Orders | | |
| Major variations to design, cost and time post-contract | Consider and agree major variation to design | Report | Receive reports | Agree and Recommend | Approve |
| Monitor construction | | Report | Receive reports | | |
| Oversee commissioning and Practical Completion (PC) | | Accept PC | Receive reports | | |
| Hold a post-project evaluation (PPE) facilitated by Estates | Participate | Participate | Receive report | | |

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[45] Any increased expenditure must follow the usual committee approvals

# ANNEX B – OUFAL and VAT

**Aim:**     To explain the role of OUFAL in reducing the VAT cost of new University buildings.

**Background**

Certain types of new University buildings qualify for zero-rating relief when intended to be used solely (i.e. over 95%) for a 'relevant residential purpose' (RRP) or 'relevant charitable purpose' (RCP).

In general RRP buildings are student accommodation and RCP buildings are for non-commercial research.  Student accommodation can also qualify for zero-rating when studio/cluster flats are constructed which fulfil the VAT definition of "dwellings".

Normally only the construction services and related building materials qualify for zero-rating - the supply of architectural, surveying, consultancy and supervisory services is standard-rated.

However if these "professional services" are procured via a design and build contract which covers both the design **and** construction elements of the project then HMRC accept that the whole supply can be eligible for the zero rate.

The University is able to enter into design-and-build contracts with OUFAL and thereby save VAT on professional fees to the same degree as on contractor's fees.

**OUFAL and design & build projects**

OUFAL is a wholly owned subsidiary company of the University whose principal activity is the construction of new zero-rated buildings.

Where a project is to be managed via OUFAL, the contract, requisition and invoice process is managed through the OUFAL accounting system.

A single design and build contract for each OUFAL-managed project is drawn up between the University and OUFAL.

A VAT certificate is then issued from the University to OUFAL stating the value of the services that qualify for zero-rating.  A certificate is required for RRP and RCP buildings but not for dwellings.

OUFAL uses the same process as the University to appoint individual suppliers.  Supplier contracts are drawn up by the project manager between OUFAL and the suppliers.

**Purchase orders**

Purchase Orders have to be raised in two stages for OUFAL-managed projects:

(a) A Purchase Order from the University to OUFAL should be raised on Oracle Financials for each supplier.

(b) Purchase Orders from OUFAL to individual suppliers should also be raised on the OUFAL Sage Accounting System for the full value of the contracts, or other agreement, with each supplier.

**Invoices**

Contractor invoices to OUFAL are signed by the relevant Project Manager to accept that the work is complete and the invoice amount is correct, and are authorised before being entered onto the OUFAL Sage Accounting System for payment using the approved OUFAL process.

Invoices raised by OUFAL to the University are approved and paid by the Estates Office as per the approved process.

An OUFAL management fee is charged to the University (equivalent to 1% of the original invoice value). However, this fee is borne centrally by the University rather than being allocated to the specific project.

If contractor invoices have been issued to the University rather than OUFAL (for example in the early stages of a project) the suppliers should be requested to issue credit notes and re-invoice OUFAL instead.

*Bernie Hurst*
*University VAT Manager*
*October 2018*

# ANNEX C – Project Quality Review Process (PQRP)

**Aims**

- Continuous improvement
- Learning for the next project
- Timely identification of issues and resolution during the project process
- Affirmation of initial aspirations, continual review and redirection
- Improved communication
- Project ownership
- Project team building

**Introduction**

The University and particularly Estates Services is encouraging continuous learning from capital projects whereby issues identified during the project process are addressed in a timely manner before project completion, and the benefits of lessons learned are passed on to other projects. The aim is to foster a culture of continued review and problem resolution, and constructive feedback within the project teams and amongst the user representatives, consultants and contractors, with the intention of improving the efficiency and effectiveness of the delivery process.

The PQRP is a whole life project process of evaluating the design and construction of new buildings, and the refurbishment of existing buildings whilst actively involving a wide group of people who have responsibility for delivering the project, who will occupy the resulting construction, or have some form of responsibility for the building.

The process involves six key stages:

- Pre-Project Initiation (PPI)
- Pre-Construction Review (PCR)
- Mid-Construction Review (MCR) where construction programmes exceed 12 months
- Post Project Evaluation (PPE)
- Post Occupancy Evaluation (POE)
- 5 Year Post Occupancy Evaluation (POE5)

Each stage is equally valuable and to be afforded equal focus and effort.

The Project Quality Review Process is primarily concerned with reviewing and improving delivery by undertaking continual:

- Process Evaluations
- Operational and Functional Reviews
- Technical and Performance Reviews

The emphasis at each stage evolves throughout the project. At the start of a project the PQRP is primarily concerned with reviewing and, if applicable, adopting lessons learnt from previous projects including both problems encountered (and their mitigation) and project successes. Additionally, at the start of a project, the focus is one of developing and agreeing the brief and aspirations and conveying this to the team. As the project evolves the emphasis evolves to one of recording lessons learnt for the benefit of others and to one of checking the brief and aspirations are being met, to finally verifying the functional and technical performance against the original brief. The start of the project sees the building of a team and adoption of best practice from lessons learnt with regards to process, this then evolves through stage review of team performance to a final review of team performance and onward communication of any lessons learnt.

Consistent throughout the process is a continual review and improvement cycle, whereby the project is continually reviewed against original aspirations and the team reviewed for performance in order that any unjustifiable deviations or problems may be addressed in a timely manner ensuring quality is maintained or improved.

**Methodology**

Each stage consists of a questionnaire to gather data and a workshop where issues are discussed and actions agreed. A formal report results from the workshop detailing the findings of the review and the agreed action plan to ensure problems are addressed or project successes implemented.

The output of the final stage will formally record achievements against the original brief and lessons learnt on the project, both good and bad, for subsequent projects. On larger projects the final output takes the form of a case study detailing the project, benchmarking and lessons learnt.

The information gathered will be distributed as widely as possible in order to engender learning.

**The Teams**

The PQRP requires a team who will see the project and process through from the initial stages to post occupation. A PQRP team takes ownership of the project and consists of professional members as well as those with key roles such as the end user representatives who have a key role in communicating aspects of the project through to their departments, and encouraging participation in the Post Occupancy Evaluation. The following teams have been designated for PQRP purposes:

- The Client Team represents those that are responsible for determining requirements and aspirations of those that will use the building, be affected by it, or will have responsibilities for the building function, operation, maintenance or safety. This will also involve Stakeholders who have an active interest in the project as a result of their requirements to discharge their own responsibilities.

- The Project Team represents those who are responsible for the design, construction and delivery of the building.

**Ownership and Facilitation**

Each stage is owned by the Project Manager or the Head of Capital Projects. The workshop is facilitated by the Project Manager for the first three stages (PPI, PCR and MCR), as these are primarily learning stages. The Director of Capital Projects or the Head of Capital Projects will facilitate for the final three stages (PPE, POE and POE5) as these are primarily review stages and must remain objective and independent, although an external facilitator may be appropriate in some cases.

The teams have the following members:

| Client Team Membership | Project Team Membership |
|---|---|
| Programme Manager | Programme Manager |
| Project Manager | Project Manager |
| Academic | Acoustic Consultant |
| Area Safety Officer | Architect |
| User Representative | BREEAM Advisor |
| Department Facilities Manager | Principal Designer |
| Disability Advisory Service | Cost Consultant/Quantity Surveyor |
| Equality & Diversity Unit | Ecologist |
| Estates Services Asset & Space Management Team | Electrical Engineer |
| Estates Services Building Services Team | Employers Agent/Contract Administrator |
| Estates Services Capital Projects Team | Fire Engineer |
| Estates Services Conservation and Buildings Team | Landscape Architect |
| Estates Services Direct Labour Organisation | Main Contractor (at PCR, MCR, PPE & POE stages) |
| Estates Services Environmental Sustainability Team | Mechanical Engineer |
| Estates Services Facilities Management Team | Planning Consultant |
| Insurance Office | Principal Subcontractor |
| IT Services | Security Advisor |
| Legal Services | Structural/Civil Engineer |
| Project Board  Member | Sustainability Engineer |
| Safety Office | |
| Security Services (and Secure by Design Team) | Client Team Members as appropriate |
| Senior Responsible Owner | |
| VAT Office | **Further Participants and Contributors** |
| | |
| **Further Participants and Contributors** | Principal Subcontractors (at PCR, MCR, PPE & POE stages) |
| **Centre of Excellence Team** | |
| End Users and Occupants (at POE stage) | |

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# ANNEX D – Performance Measurement

Estates Services is committed to developing a performance management culture to drive continuous improvement throughout the estate. In the delivery of projects, this is through two key areas – Performance Benchmarking and Key Performance Indicators (KPIs).

## Performance Benchmarking (Project Metrics)

There is a formal benchmarking process which facilitates the review and setting of performance targets at project initiation and the monitoring of project delivery throughout the duration of a project. The process applies to the design and construction of new buildings or facilities as well as the refurbishment of existing buildings and facilities.  There is a wide selection of benchmarks with the potential for measurement, however, any benchmark used routinely within the Estates Services capital project process needs to be consistent, unequivocal, realistically measureable, auditable, and of value.

Estates Services has established a set of benchmarks in conjunction with other leading university establishments. It is intended that the Project Board monitors performance against a pre-established baseline and a project target figure. At the end of each project these benchmark indicators will be incorporated into the performance matrix for the whole of Estates Services. They should be considered more as project metrics used for the monitoring of project performance.

The Project Board may decide to define, measure, and monitor additional, project-specific benchmarks which can be added to the register although it is not envisaged that this will be appropriate for all projects. The benefit of this is to provide a structured approach across the whole estate and to allow specific areas to be monitored, for example, on unusual or complex projects.

The benchmarks against which targets will be set at project initiation are:

| Benchmark | Description | Source of Data |
| --- | --- | --- |
| Gross Internal Area (GIA) (m$^2$) | | |
| Occupancy (FTE) | | |
| Capital cost per m$^2$ (£) | Cost of construction, including net building costs, main contractor costs, contractor overheads and profit and inflation divided by the gross internal area in m$^2$ [note 1.] | Cost consultant |
| Net project cost per m$^2$ (£) | Cost of construction, includes net building costs, main contractor costs, overhead and profit, fees, other project costs and inflation but excludes contingency and VAT, divided by the gross internal area in m$^2$ | Cost consultant |
| % Total consultant fee spend | Expressed as a percentage of construction costs [note 2.] | Cost consultant |
| % Architect fee spend | Expressed as a percentage of construction costs | Cost consultant |
| Space efficiency | Net to gross, this being the net usable area divided by the gross internal area in m$^2$ and expressed as a % | Architect |
| Space usage Teaching sub-category | Expressed as % | Architect |
| Space usage Research sub-category | Expressed as % | Architect |
| Space usage Support sub-category | Expressed as % | Architect |

| | | |
|---|---|---|
| Design occupancy | Net usable area in $m^2$ per staff and student FTE | Architect |
| Water consumption ($m^3$) per student and staff FTE | Total $m^3$ of water used annually per student and staff FTE | Mechanical & Electrical design consultant |
| Total water consumption ($m^3$) per year | Total $m^3$ of water used annually | Mechanical & Electrical design consultant |

| Benchmark | Description | Source of Data |
|---|---|---|
| Building $CO_2$ output | kg $CO_2$ produced per $m^2$ of gross internal area per year, $CO_2$ output calculated from electricity, heat and gas consumption only (As calculated to determine Building Regulations Part L compliance) | Mechanical & Electrical design consultant |
| Total $CO_2$ output | kg $CO_2$ produced per $m^2$ of gross internal area per year | Mechanical & Electrical design consultant |
| Energy consumption | kWh of energy consumption per $m^2$ of gross internal area per year, energy consumption calculated from electricity, heat and gas consumption only (regulated load - as calculated to determine Building Regulations Part L compliance) | Mechanical & Electrical design consultant |
| Total energy consumption | kWh of energy consumption per $m^2$ of gross internal area per year (includes regulated *and* unregulated) | Mechanical & Electrical design consultant |

Note 1.  Contingency % allowance may reduce with successive stages

Note 2.  Includes cost of surveys and architect fee spend

At the end of the project feasibility stage the Project Board will set the core benchmark targets from the list above along with any additional specific improvement metrics if necessary. These will be communicated to the design team upon appointment. The Project Board will own the development of the benchmarks, using data provided by Estates Services and will be responsible for assessment during the gateway stages.  Quantitative data will be provided by the Project Manager during the gateway stages.

## Key Performance Indicator Evaluation Process (KPIs)

**Aims**

- Continuous improvement
- Quantitative and qualitative consultant, contractor and supply chain evaluation
- Identification and commendation of exceptional performance
- Timely identification of issues and resolution during the project process
- Measurement of project success

**Introduction**

The University and particularly Estates Services is committed to continuous improvement across its capital projects, project teams and supply chains.

The KPI process is a whole life project process of evaluating project and team key performance indicators throughout, and following, the design and construction of new buildings or facilities, as well as the refurbishment of existing buildings and facilities.

The objective of the KPI evaluation process is to inform Project Boards and Estates Services of project delivery team performance against agreed KPIs. On the basis of the indicators reported, the Project Board or Estates Services may then take action to correct failings in the project delivery or note exceptional performance. The KPI process also assists the University in the process of contractor or consultant selection and general supply chain management.

**Methodology**

The KPI evaluation process has two key elements:

- Recording of project KPIs against Project Board set targets (measured at the end of the project)
- Quarterly KPI 360° evaluation of project team members throughout project

**Post Project KPI Evaluation**

Estates Services has selected a concise set of KPIs, referencing previous stakeholder consultation and project management best practice to measure the success of a project. A balanced scorecard approach has been developed with the following categories: Finance, Environmental, Personnel, Programme and User Satisfaction. The KPIs are as follows:

| Category | Key Performance Indicator |
|---|---|
| User Satisfaction | ✓ Total number of snags at PC (per £1m net construction cost) <br> ✓ Total number of snags at 3 months (per £1m net construction cost) <br> ✓ Total number of snags at 12 months (per £1m net construction cost) <br> ✓ Average Post Project Evaluation score <br> ✓ Average Post Occupancy Evaluation score <br> ✓ Average KPI Score above team <br> ✓ Number of days after PC that final O&M Documents are received |
| Environmental | ✓ Energy consumption (MWh/m2/year) (gas, electricity and heat) after 12 months of operation <br> ✓ %, by weight, of construction waste sent for recycling |
| Finance | ✓ % variation between approved budget (at point of entering in to contract) and actual final outturn cost |
| Personnel | ✓ Reportable accident/incident rate per number of man hours worked <br> ✓ Considerate Constructor score |
| Programme | ✓ Progress against programme defined in building contract (days behind or ahead of schedule expressed as a %) |

The KPI process commences at the completion of RIBA stage 1 with the review of the best practice guidance and, if required, the setting of more specific targets by the Project Board. It is the Estates Services Project Board representative who retains responsibility for ensuring that this action is undertaken.

Following the completion of the project the score for each measure is input by the Project Manager as data becomes available. It will not be possible to record some of the scores until 12 months after

PC, but these should be added when available. The final scores can be compared with the best practice and target figures to judge the success of the project. Any improvement areas or processes to repeat on future projects can be captured via the Project Quality Review Process.

**In-Project 360° Feedback Model**

The second element of the KPI evaluation process is the performance evaluation of the project team. The process described above is heavily weighted towards indicators of team performance, while audit requirements have significant interest in the evaluation of the performance of the Estates Services supply chain in the form of individual contractors and consultants.  This will enable individual performance appraisal, timely resolution of problems, provide further opportunities for improvement and identify exceptional performance.

This element is a qualitative analysis of team performance via analysis of peer group project team opinions and experiences, utilizing a 360° feedback model.  The 360° evaluation is a common tool for evaluating performance, based on feedback from other team members. Estates Services will routinely evaluate the performance of the following team members against the KPIs: Architect, Building Services (M&E) Engineer, User Representative, Contractor, Planning Consultant, Project Manager, Quantity Surveyor/Cost Consultant, Structural/Civil Engineer, Sustainability Engineer, Senior Responsible Owner and Programme Manager.

The process involves each team member being required to rate the performance of the other team members via an online survey tool on a quarterly basis, beginning at the start of RIBA stage 2, using the following criteria:

1. Overall service provided to date
2. Overall effectiveness of communication
3. Meeting of milestones
4. Commitment to team working
5. Understanding of the project requirements
6. Compliance with University procedures
7. Compliance with health and safety legislation

Data collected is summarised in a composite report which generates an automatic traffic light colour coding which quickly identifies a team member's performance ranging from red, indicating very poor, to blue, indicating excellent.  The data is reviewed by the Project Manager prior to submission to the Project Board in order that details of mitigating circumstances or other comment or explanation may be added.  The data will be reviewed by the Project Board who may take action or request the Project Manager take action as necessary.  The Estates Services representative on the Project Board will be responsible for conveying concerns and/or commendations to the Director of Capital Projects or the Head of Capital Projects to enable exceptional performance to be noted, or team performance issues addressed in a timely manner.

**Output**

Each evaluation will produce a data set, either in the form of the balanced score card or the 360° composite report, and will be entered on a database held within Estates Services.  In addition, the results are deconstructed and the data entered into a supply chain database in order that contractors and consultants may be evaluated for performance across all projects in which they have participated. The database is interrogated to determine trends.

Consistent throughout the process is a continual review and improvement cycle, whereby the supply chain is continually reviewed against original aspirations and the team reviewed for performance in order that any unjustifiable deviations or problems may be addressed in a timely manner, ensuring quality is maintained and improved.

**Anonymity**

It is intended that the 360° feedback composite report will be anonymous although the University will recognise any legal requests for release of data. Information will be stored securely and held in accordance with the University's Data Protection Policy.

**Ownership**

The Project Manager has responsibility for ensuring that data is gathered and the balanced score cards are completed on schedule and presented to the Project Board.  The Estates Services representative on the Project Board has responsibility for ensuring that the results of the evaluations are reviewed by the Project Board and graded where required.  In addition, the Estates Services representative has responsibility for conveying both performance concerns and commendations to the Director of Capital Projects or the Head of Capital Projects as appropriate.

**Stages in summary**

- End of RIBA stage 1 – setting of KPI targets by Project Board
- Quarterly from the start of RIBA stage 2 – 360° feedback evaluation of project team
- End of RIBA stage 6 – Post project KPI evaluation

# ANNEX E – Eight Principles for Project Success[46]

Following these eight principles will significantly increase the likelihood of project success. The right-hand column identifies some of the consequences of not giving sufficient consideration to the principles (in red) and sets out how the principles have been incorporated into the University's processes (in green).

| 1. Focus on outcomes | |
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| ✓ Be clear about the **outcomes** to be achieved before starting the project, and who commissioned them<br>✓ Translate outcomes into tangible **deliverables** and realistic measurable **benefits** and use these to steer decisions on project scope, time, cost, risk and design priorities<br>✓ Set out a clear project **business case** for investment of funding and other resources, needed to deliver these benefits and outcomes in the most efficient and effective way<br>✓ Be clear how **success** will be measured, and focus on delivery of **benefits and outcomes** throughout the project. If these no longer appear deliverable or affordable, the project should be stopped | If the project benefits don't align with organisational strategic priorities there will be resistance or a lack of buy-in from key stakeholders<br><br>Failure to sufficiently define the brief can lead to costly redesign later on<br><br>The comprehensive Business Case template is based on the Treasury five case model and requires SROs to set out their strategic case, options appraisal, financial case, commercial case and management case<br><br>The Gateway process ensures that business cases are reviewed at key points in the project to verify continued project viability |
| 2. Plan realistically | |
| ✓ Invest time in **thorough up-front planning** to ensure the project is deliverable and affordable before commitments are given<br>✓ Use expert, **evidence-based cost estimation**, using benchmarking and reference class forecasting to identify the range of possible scenarios, and increasing accuracy between each stage gate<br>✓ Use **ranges** for costs, benefits and delivery dates, adjusted as certainty increases through the life of the project. Plan for contingencies and be aware of optimism bias<br>✓ **Maintain the plan** throughout the project and **track progress** against it, taking decisive action quickly if things go off track | Insufficient planning and unrealistic timescales are two of the most common causes of project failure and can quickly lead to issues which threaten the ability of the project to progress to conclusion; going off track costs time and money<br><br>Take time to set the project up properly right at the start or you won't be in a position to consider all opportunities and efficiencies<br><br>Early engagement with Estates Services will ensure project incubation covers all key options<br><br>Benchmarking matrix tracks progress against project aspirations |

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[46] Based on the Infrastructure and Projects Authority publication (July 2020)

## 3. Prioritise people and behaviour

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| ✓ Plan ahead for the **diversity of people, skills and experience** needed to deliver the project and build a **strong, properly resourced and competent team,** evolving as necessary through the project lifecycle<br><br>✓ Agree the **delivery structures**, internal and external, needed to deliver the project, and how these will be established, managed and governed as the project evolves<br><br>✓ Be clear on individual **accountabilities** and **responsibilities** across project delivery structures, and check that they are working as expected. Consider **organisational capabilities** and take action where improvements are needed<br><br>✓ Agree clear expectations on **behaviours** and make the project a great place to work, where **everyone in the team can thrive, grow and feel valued** for their part in the project | Lack of senior management ownership and leadership will lead to disengagement within the project team and the users; Project Board members must be prepared to give sufficient time to their project<br><br>Lack of effective project team integration between users and suppliers (design team) means that opportunities will be missed and may lead to late changes<br><br>The *Guide to Capital Building Projects* contains role definitions and responsibilities<br><br>The use of external consultants on University projects ensures a wide breadth of industry knowledge and experience<br><br>360° KPI surveys monitor team performance and identify problems so they can be addressed |

## 4. Tell it like it is

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| ✓ Foster **an open project culture**, where people feel safe to challenge and raise risks and issues, and where assurance is valued as a key element of successful delivery<br><br>✓ Agree standards for **realistic performance reporting** and challenge optimistic assumptions and inaccurate data<br><br>✓ Encourage **honest conversations** within the project team, with sponsors, stakeholders and suppliers, and as a fundamental principle for assurance<br><br>✓ If something isn't right, isn't ready or isn't working, **say so, and take action accordingly** | Unwillingness to listen to the ideas and concerns of users and stakeholders can lead to railroading and disengagement<br><br>The Capital Projects team promotes honesty and transparency within all project teams and uses 360° KPI surveys<br><br>Benchmarking matrix tracks progress against project aspirations<br><br>Project Boards receive regular reports to enable them to effectively monitor their project and challenge the project team when required<br><br>There is a clear escalation route for raising concerns |

## 5. Control scope

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| ✔ Agree project scope from the start and stick to it at each stage. For evolving agile and transformation projects, agree clear scope for each stage, within an overall envelope<br>✔ Exercise strict change control, and test unavoidable changes in scope or design for impact against the plan, business case, benefits and outcomes before decisions are taken<br>✔ Work in manageable project stages, with **gated decision points**, pausing to assess delivery and ensure continuing viability at each stage of the project<br>✔ **Track progress to plan**, in terms of cost, schedule, deliverables, risks and opportunities, always assessing impact on benefits and outcomes | Change in scope will inevitably have an impact on budget and/or programme, and could jeopardise delivery of the benefits<br><br>The Gateway process ensures that business cases are reviewed at key points in the project to verify continued project viability<br><br>Project Boards receive regular reports to enable them to effectively monitor their project<br><br>Cost consultants maintain a change log for all projects<br><br>Guidance on the use of contingency minimises scope creep |

## 6. Manage complexity

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| ✔ **Reduce complexity and risk** where possible; where not, plan for them and manage them<br>✔ **Take a system-wide view** of what it will take to deliver the project, including operating context, boundaries with partners and operational change, and plan for it, with a detailed project execution plan in place before moving to delivery<br>✔ **Minimise internal and external dependencies** where possible at the design and planning phase: manage those remaining actively through the life of the project<br>✔ **Pay attention to integration:** ensure a single point of accountability. Plan how to bring elements together, testing that they work together at each stage and that the outcome works for users | Lack of risk management will result in project overrun both in time and cost as unforeseen risks materialise into issues<br><br>All University capital projects have a detailed programme and risk log managed by the project manager and are regularly reviewed by the Project Board<br><br>Programme Managers have an overview of all projects and manage inter-dependencies<br><br>Stakeholder management plans ensure consultation and communication occurs at the right time |

## 7. Be an intelligent client

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| ✓ Build a clear understanding of **user needs** and design the project accordingly<br>✓ Consider the **whole supply chain** in terms of market appetite, capacity and capability, and whether it can deliver what is needed, as part of planning. Involve the supply chain early and have firm bids for scope before full business case<br>✓ Establish **channels for dialogue** with users and stakeholders to ensure their voice is heard throughout the project<br>✓ Build **trust-based relationships** with the supply chain and partner organisations: contract collaboratively to ensure a viable contract and incentivise successful delivery where everyone benefits | Lack of effective user and stakeholder engagement can result in a poor brief and late changes which lead to cost and programme overrun<br><br>The Capital Projects Programme Management Office within Estates Services undertakes the University's intelligent client function and Programme Managers have extensive industry experience and knowledge |

## 8. Learn from experience

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| ✓ Seek out relevant **experience from other projects** and use it in planning and delivering the project<br>✓ Value **experience and learning in the project team** and build a culture of continuing professional development<br>✓ Maintain an '**outside view**' of the project: bring in independent perspectives and integrated assurance, and learn from them<br>✓ **Capture lessons** throughout the life of the project, and share them as feedback, stories and case studies to improve project delivery for wider public benefit | Failure to record and heed lessons learned results in costly mistakes that are easy to avoid<br><br>The Project Quality Review Process provides a structure for capturing and recording lessons (good and bad) which are then communicated to project teams embarking on new projects<br><br>The use of external consultants on University projects ensures a wide breadth of industry expertise<br><br>Programme Managers have extensive industry experience and knowledge |