Advanced Procurement
for Universities & Colleges

Guide to Procuring Construction Projects

Contents

1. Introduction

This guide has been developed to assist Scotland's Colleges with the process of procuring Capital Projects of all types and is intended for use by anyone involved in the procurement of a Capital Project.

Construction procurement differs from procuring goods in that there can seldom be a direct acquisition of a building (unless it is a small prefabricated unit, for example a school classroom).

New buildings are seldom standard and the refurbishment of existing buildings non standard. Procuring a new or extending or refurbishing an existing building cannot be directly compared to the procurement of goods which can be requisitioned, and are often 'off the shelf' and where an immediate choice can generally be made in terms of cost and quality. The Client's accommodation or property requirements need to be defined and then various options considered. This document sets out the stages of the construction process and identifies the people and organisations' who will be involved. It provides a useful checklist for the Client in regard to all the main stages in delivering a Capital Project and is applicable equally to major or minor construction projects, new build or refurbishment schemes.

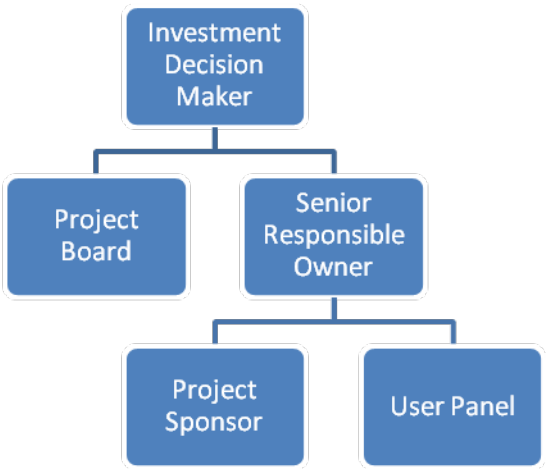
Capital Projects which have a value of £1M or more must be managed in line with the Scottish Funding Council's "Capital Projects Decision Point "Process" and "Payment of Capital Grant Guidance." This guide should be read in conjunction with the advice published by the Scottish Funding Council on its website, which sets out the general recommendations for the management of higher and further education Capital Projects.

2. The Construction Project

Who's who? - The Client's Team

The Client has multiple responsibilities, and it is normal to divide these amongst several individuals so that the appropriate management structure can be implemented and conflicts of interest avoided.

A typical Client-side structure is as follows:



The overarching Client responsibilities and roles are:

Responsibility for making the decision to invest in the Project (**Investment Decision Maker IDM)** Responsibility for the approval of the project and thereafter providing a sustained commitment to the project (may be the Director of Finance, Vice Principal or such).

Ownership of the project at High Level. (**Senior Responsible Owner**) Should be a Senior Manager in the institution that requires the project, typically Head of the Department. He/she will define the scope of the project, and be responsible to the IDM for project delivery. They will ensure that the appropriate in-house structure is in place to inform the project, oversees the Business Case and the project budget, ensure that a brief is developed that clearly reflects the projects objectives, establish a reporting procedure, resolve issues, approve major changes to the project and appoints the Project Sponsor.

Providing the appropriate interface between the Client Team and the Supply Team (**Project Sponsor**) who usually with the assistance of the Project Manager (PM), will act as the day to day representative of the Client. The Project Sponsor (PS) is the Client's representative, who acts as a single focal point for the day to day management of the project. (For small/ medium sized projects, the PS may also act as the Project Manager) The PS does not have to be a construction expert if supported by a PM, who requires construction experience.

The Main roles of the PS are to have a full understanding of the project, and to be able to communicate this to the PM and Design Team. The PS will co-ordinate user input, assist with preparing the project brief, control changes and risk. Manage the project budget and programme, secure professional services as required, determine the procurement route, manage reporting arrangements and provide a focal point for all Client contact with the Supply Team.

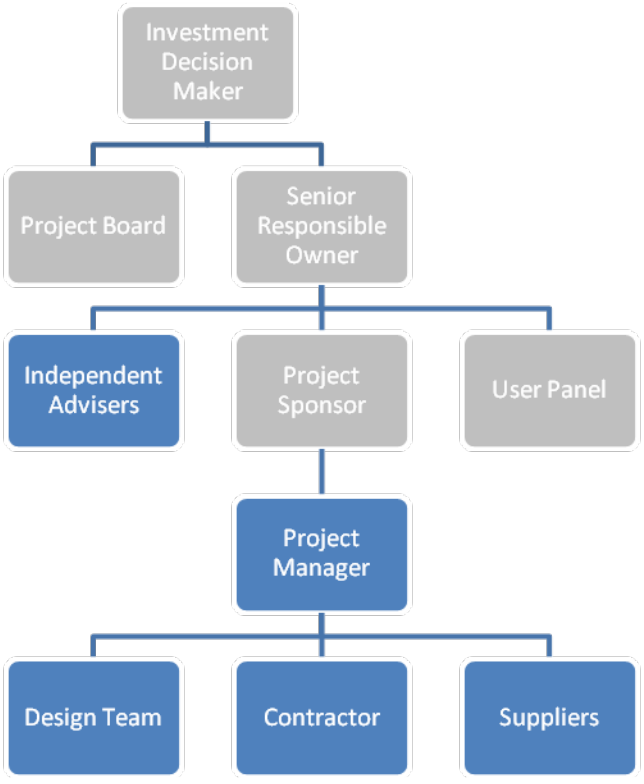
Dependant on the size of the project, some of the above roles can be combined, however, only if the person combining the roles has the necessary experience and authority. It is not advisable for one person to take all three roles.

NOTE: Further information on the roles and responsibilities of the Client Team can be found in the *OGC's* Achieving Excellence in Construction Procurement Guide, Guide 2: Project Organisation, Roles & Responsibilities.

Project Manager role-managing and co-coordinating the Design Team on a day to day basis (only where the institution does not employ a consultant PM). It is noted that the Client body should only take on the duties of the PM, where there is a suitably qualified and experienced resource available in-house.

Project Roles should be allocated in such a way that everyone in the Clients' team is committed to successful delivery of the project. Responsibilities should be given to those individuals who have the appropriate ability, resources and level of responsibility to carry out their roles effectively.

Who's who? - Externals



The Project Manager

Dependant on the size of the project and the availability of appropriate internal resources, the institution may decide to either appoint a PM from its own staff (possibly a member of their Estates Team) or to appoint an external consultant. Depending upon the scope of the project and the institutional resource and where projects are resource intensive it may be appropriate to appoint two PMs, one being an external consultant and the other internal from the institutions estates department. The appointment of the PM is normally made

before any of the Design Team is appointed. The PM will work with the institution to assist with the appointment of the rest of the Team.

The PM acts on behalf of the Client to direct the Design Team and ensure that they have the appropriate information and understanding to effectively execute the project. The PM has an obligation to recognise and respect the professional codes of the other disciplines which make up the Project Team.

The PM's main responsibility is therefore to the Client (institution), acting as the interface between the Design Team and the Client. The PM will also provide assistance in managing all the other key actions required to deliver the project, from advising on forms of contract, procurement options, managing risk, monitoring and reporting on the works as they proceed on site, assisting with procurement and management of fit-out and making arrangements for removals.

The PM can also assist the Client in appointing the rest of the Design Team and guide the Client through the project.

An important part of the role is ensuring that a comprehensive project brief is prepared, which will include firm information regarding costs, specifications and timescale. A well-prepared brief will form the basis of all the subsequent project actions, i.e. Product Information, Tender Action, Construction works etc.

The Scope of Works to be provided by the PM will depend on the size and complexity of the project. The Client's responsibility to the PM is to clearly define the scope of their appointment at the outset. Further information can be found in Appendix A Project Managers Check List.

The Design Team

Architect

The Architects responsibility is to interpret and develop the Clients brief during the various stages of the project. The Architect will define the Client's requirements, identifying constraints, advise in terms of feasibility studies and option appraisals, arrange site investigations, establish the preferred solution, advise on sustainability, manage health and safety issues, develop the design, prepare room data sheets, obtain Client sign off of the design at appropriate stages, advise on materials selection, provide space planning services, advise on furniture/equipment selection, prepare construction drawings and specifications, etc and with due respect to the client's brief , prepare a design which meets all the clients requirements, including budget and timescale. The Architect acts as the leader of the rest of the Design Team and co-ordinates their specialist input with their own. The Architect will prepare and lodge the Planning Application and Building Warrants in co-ordination with the rest of the Team. During the works on site, the Architect will assist the Clerk of Works in monitoring quality on site. At handover the Architect will assist in ensuring that the works are complete and that the clients needs have been met, and will continue their involvement through the Defects Liability period, and the final resolution of defects.

After novation (in the case of a Design & Build Contract), the Architect will work for the contractor and will no longer be in the direct employment or control of the client.

The Quantity Surveyor

The Quantity Surveyors (QS) roles are primarily in connection with providing cost advice to the Client throughout all stages of the project.

During the pre-contract stage, the QS will assist the PM in providing advice on procurement routes for the main contractor, preparing the tender documentation, receiving and analysing tenders and preparing the tender report for the Client and recommendations for approval. The QS will prepare the contract documentation on behalf of the Client. Where the client has a procurement department it is essential the QS liaise with procurement throughout the procurement process.

During the contract period the QS monitors the project spend, providing regular reports to the Client, and will receive monthly valuations from the Main Contractor and will check these, before authorising the Architect to approve payment in the form of an Architect's Certificate. The QS will also assist with negotiations with the Contractor if any variations (changes) occur during the project, which have a financial impact. Following completion of the Construction Works, the QS will liaise with the Contractor in agreeing the Final Account. It is normal for this to take up to 12 months after completion, but this could take longer if the project is complex and there were many variations during the project.

Other responsibilities are:

- Life Cycle cost analysis.
- Preparing the Elemental Cost Plan
- Preparing Bills of Quantities , if required
- Assisting with selection of and interviewing of tendering Contractors
- Dealing with Contractors Queries

Many clients seek not to novate the QS services in the case of a Design and Build Contract. In this case the QS continues' to work directly for the client and there are no issues in regard to conflict of interest when the QS is engaged in agreeing the monthly and final accounts with the Contractor.

Services Engineer (Mechanical and Electrical Services)

Has the responsibility to design and specify all the mechanical and electrical; services for the building in due regard to the clients requirements, be these the desire to achieve a BREEAM "excellent" rating (further information can be found on page 37) or to minimise long term building running costs. The Services Engineer will co-ordinate their works with that of the Architect and the Structural Engineer, and will provide appropriate cost advice to the QS as required to allow cost planning and monitoring. They provide the appropriate advice to the Client in order to allow them to make the best decisions in terms of sustainability, energy use, lifecycle costs and relevant "Green Issues"

After novation (in the case of a Design & Build Contract), the Services Engineer will work for the contractor and will no longer be in the direct employ or control of the Client.

Structural Engineer

The Structural Engineer (SE) has the responsibility to design the structure of the building, including drainage installation. The SE must ensure that their design co-ordinates with that of the Architect and the Services Engineer. The SE will advise the Client on the most appropriate form of structure for the building, and will provide cost advice to the QS in relation to all aspects of the building structure.

After Novation (in the case of a Design & Build Contract), the SE will work for the contractor and will no longer be in the direct employ or control of the Client.

The CDM Coordinator (Health and Safety Adviser)

The CDM Coordinator provides advice to the Client on the Client's duties and the implementation of the CDM regulations for the project. They co-ordinate the Health & Safety aspects of the design work, and co-operate with the other consultants employed on the project. They prepare the Pre- Contract Health and Safety Plan and work with all the other consultants to ensure that Safety is high on the project agenda.

The CDM Coordinator assists in assessing the contractor's Health and Safety documentation and will check his competence at time of tender and will check that the requirements of the CDM regulations are taken on board by the contractor. The CDM Coordinator will notify the Health and Safety Executive of the works by preparing and lodging the F10 form.

At completion, the CDM Coordinator will prepare the Healthy and Safety file and pass this to the client.

Other Consultants

Dependant on the scope and scale of the project, the Client may wish to appoint other consultant such as;

- Interior Designer
- Space Planner
- Legal Advisers
- Ecologist
- BREEAM adviser
- Landscape Designer
- Sustainability Adviser
- Fire Engineer
- Landscape Designer
- Façade Engineer
- Service Providers
- The Main Contractor

The Main Contractor's duties are to deliver the project to the Client's requirements- that is to the brief, budget and to programme.

The Main Contractor will subcontract various parts of the construction works, and will be responsible for their performance, and will co-ordinate the work of all the subcontractors accordingly. They are also responsible for Health and Safety on site and ensuring that all persons on site are aware of their responsibilities.

The Subcontractors

Deliver their selected work packages, in co-ordination with the Main Contractor and other subcontractors particularly in the case of Electrical and Mechanical subcontractors whose work is generally inter-related.

The Suppliers

Responsibility to provide goods and/or services to the Client as per the requirement and to their timescale and budget. This category could include furniture supply, audio visual equipment, IT equipment etc.

The Project Procurement Strategy

In the early stages of the project, the Client should be developing the Procurement Strategy for the project in consultation with the PM and the Design Team. This decision requires to be made in consideration of the objectives of the project, and will vary from project to project.

There are four main types of Procurement Strategy;

1. **Traditional**

The design is completed fully before the tender process commences. It affords the Client a great deal of control over the quality, specification and cost, however the timescale is lengthened to achieve the completion of the design, and the Client maintains the risk in terms of the Consultants Design and any unforeseen items e.g. ground conditions, as well as failing to benefit from the contractors' input on buildability by appointing the Contractor once the design is completed.

As the contractor has no responsibility for the design, the Client is responsible for any mistakes or omissions in the design. Although, some risk is shared with the contractor the majority of risk is taken on by Client and the success of Design Team and the contractor.

Good for: Client maintaining control of quality and specification. Cost certainty at point of accepting the tender. **Bad for:** Client responsibility for risk. Cost control during construction works.

2. **Design and Build**

Transfers risk to the contractor at a much earlier stage in the project. There are various sub-types of Design & Build; however, the basic parameters remain the same, at a certain point in time the contractor becomes responsible for completing the design and construction of the project for a fixed sum. Cost certainty is achieved at an early stage, and therefore offers the client a high level of certainty.

Commonly, the Client's Design Team designs the project to the end of Stage D only. (please refer to page 22 and 23 **RIBA Plan of Work: Key Stages in a Capital Project**) At this point the project is tendered either on a single or two stage process, and risk is transferred to the contractor who becomes responsible for the Design and Construction from this point on. The Design Team is novated to the contractor and is no longer within the control of the Client. Most Clients choose to retain the services of the QS, so that some control can be maintained over costs.

The contractor provides a fixed price based on the Clients Requirements Document, which can range from a simple accommodation schedule (for a basic project) to a fully worked out design. Adequate time must be allowed for the Clients proposals to be prepared, as noted above this should be the end of Stage D, and including completed room data sheets. Once the contract is let, the contractor assumes responsibility for developing the design in accordance with the Client's requirements. If the Client requires any changes during the works, these are controlled by the contractor, however, additional costs are the responsibility of the Client. Therefore, it is recommended that the Client ensures that their requirements adequately describe the extent and scope of the works, and that no changes are made during the construction stage.

There are two variants; single stage, where the Clients requirements are well established and the contractor prices on the basis of all packages of work at once , and stage two , where the contractor is chosen , based on a tender which includes only certain elements , normally; site management costs, and a percentage for profit and overheads. The Client chooses the contract on the basis of this limited information and then works with the selected contractor to prove the work packages on an individual basis. The two stage approach normally allows the contractor to commence sooner on site, but at a risk to the Client as all packages will not be fully priced at that stage. To ensure cost certainty, it is recommended that the Client follows the single stage route.

Good for: transferring risk to the Contractor. **Bad for**: loss of control by the Client in terms of influencing quality and specification

3. Management Contracting

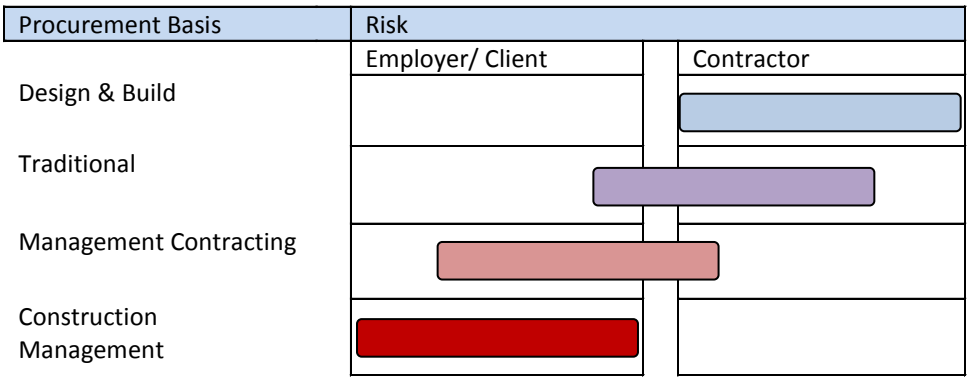
Where speed and control of quality are of paramount importance a management contract may be an acceptable choice. In this method the Design Team has the responsibility for the design of the whole project, and the contractor is responsible for defining the packages of work and then arranging for these to be carried out through separate trades or works contracts. This approach has the advantage of time, as the detailed design can be carried out in parallel with the construction works, therefore, an early start on site can be made. Design changes are possible during the course of the works, however, only where these will not affect the work packages that have already been let. However, if this approach is taken, the Client does not have cost certainty until the final package is let, and therefore this approach is often considered to be risky. The Client retains control and responsibility for the Design, and therefore, the risks if the design is not fully co-ordinated and if the Design Team fails to produce information on time. Virtually all risks remain with the client throughout the entire project and the final cost is not established until close to completion. There is no risk transfer to the contractor. Whilst this option is suited to projects where it is impracticable to complete the design prior to commencing work on site, the high level of risk maintained by the Client makes it an unpopular option for most public sector Clients.

Good for: Client retains full control of the design. Shorter Programme is achievable. **Bad for**: No transfer of risk to the contractor, risks to Client if the design is not fully co-ordinated. No cost certainty until late in the project.

4. Construction Management

The design is carried out by the Design Team and there is generally an overlap between the preparation of the Design and work on site (as noted in Management Contracting above). A fee earning construction manager will define and manage the work packages. All the contracts for the work packages are between the Client and the trade contractors, therefore, the Client has a considerable duty in managing the separate contracts. The final cost of the project is not known till the last work package is let.

Good for: Client retains full control of the design. Shorter programme is achievable. **Bad for**: Client employs the package contractor's directly- the Construction Manager has no contractual role, therefore, the Client carries majority of the risk. No transfer of risk to the contractor, risks to Client if the design is not fully co-ordinated. No cost certainty till late in the project.



Distribution of risk

Note: Whilst investigating the most appropriate Procurement Strategy for the projects the Client must consult with the PM and Design Team. They will have invaluable input and expertise to make in making the final decision.

Other Procurement Methods

Private Finance Initiative (PFI) are mostly for very large public sector projects, however, are very rarely used in the higher and further education sectors.

Further information on Design and Build, PFI and Framework Agreements can be found in OGC's Achieving Excellence in Construction Guide 06: Procurement and Contract Strategies.

Further Information on Traditional, Design & Build and Management Contracts can be found in JCT (Joint Contracts Tribunal) publication: Deciding on the Appropriate JCT Contract Practice Note 2008

Summary of Procurement Strategies

Procurement Route	**Advantages**	**Disadvantages**
Traditional Contract	Control over Design Process and Quality	Design must be fully developed before tender procedure
	Cost Certainty at point of appointing the Contractor	Longer timescale
	Client retains direct contractual relationship with Consultants and Main Contractor	Low risk to Contractors
		Client must have the resources and expertise to administer the contracts of the Design Team and Main Contractor
Design and Build	Transfers risk to Contractor for Construction delivery & design development	Client has reduced control over design quality and cost risks
	Cost Certainty	Changes by Client are unadvisable- heavy cost penalties
	Shorter Programme	Clients Requirements must be fully detailed before signing Contract
	Single Point of responsibility for design & cost risks	
	Early Contractor involvements- assists with buildability	

Management Contracting	Client retains full control of design.	Management Contractor takes control of packages and interaction with subcontractors
	Shorter Programme	No transfer of risk to Contractor
	Buildability input is obtained pre-tender	Client retains risk
	Changes can be accommodated in unlet packages as long as there is no impact on time or costs	Client must have the resources and expertise to deal with the design team and the management contractor
		No cost certainty till final package is let
Construction management	Client retains full control of design.	Construction Manager takes control of packages and interaction with subcontractors, but has no contractual role
	Shorter Programme	Client has to manage the contractual agreements with each subcontractor
	Buildability input pre-tender.	Client retains all risk
	Changes can be accommodated in unlet packages as long as there is no impact on time or costs	No cost certainty till final package is let

Forms of Contract

The third part of the procurement process is to decide the form of contract. Two main standard options that are most commonly used:

- The JCT (Joint Contracts Tribunal) suite of Main Contract documents , including;
    - Traditional Lump Sum Contracts
    - Traditional (with or without Quantities)
    - Intermediate Building Contract (with or without Contractors Design)
    - Minor Works Contract
- Design & Build
- Management Building Contract

Further information on the different forms of contract can be found by consulting JCT Practice Note: Deciding on the appropriate JCT Contract. The JCT form of contract has been the most commonly used and all Project Teams and contractors are familiar with its use and the application of its various forms.

- NEC (New Engineering Contract)Suite of Contracts
- NEC3 Engineering and Construction Contract Option A: Priced contract with activity schedule
- NEC3 Engineering and Construction Contract Option B: Priced contract with bill of quantities
- NEC3 Engineering and Construction Contract Option C: Target contract with activity schedule

- NEC3 Engineering and Construction Contract Option D: Target contract with bill of quantities
- NEC3 Engineering and Construction Contract Option F: Management contract
- NEC3 Engineering and Construction Short Contract (ECSC)
- NEC3 Engineering and Construction Short Subcontract (ECSS) NEC3 Term Service Contract (TSC)
- NEC3 Term Service Short Contract (TSSC)
- NEC3 Supply Contract (SC)
- NEC3 Supply Short Contract (SSC)
- NEC3 Framework Contract (FC)

Similar to the JCT suite of contracts there is an appropriate version for each type of contract. The basic decision that the Client needs to take is to decide on the most suitable form of contract, (with assistance from the PM and the rest of the team) is whether the JCT or NEC3 form of contract should be chosen. Once this decision has been made, the most appropriate sub form of contract can be selected. OGC recommends public sector procurers use the NEC3 contracts. It has stated that NEC3 "now complies fully with the Achieving Excellence in Construction principles, using simple language and modern project management techniques."

JCT Form of Contract	**NEC Form of Contract**
Written in legalistic language	Written in Plain English
Contains 40 principal Conditions	Contains 9 Core Clauses
Originally written for Traditional Contracts (and since expanded to include other Procurement Strategies.)	Options included to accommodate all Procurement Strategies
Design Consultant supervises the Contractors Work., and applies the Contract Conditions independently of the Client and Contractor, so there could be potential conflict of interest.	Project Manager acts as the Client's agent and is not required to at independently, therefore no conflict of interest.
Reactive approach, with consequences and actions being determined in response to events	Proactive approach, designed to minimise problems, including early warning systems
Does not promote co-operative working style	Requiring the parties to act in a spirit of mutual trust and co-operation.
Claims are dealt with retrospectively and may become protracted	Claims are transformed into compensation events and dealt with during the term of the Contract
Substantial volume of case law	Low level of Case law and low incidence of disputes

Choosing from the differing forms of Contract

The JCT provides a plethora of different forms depending on the procurement route - traditional contracting, design and build, management contracting, etc - and the size and complexity of the project. The NEC starts from the reverse position: there is a single common form of main contract and flexibility is obtained by selecting one of the main pricing 'Options' (lump sum, target cost, etc) and then from an extensive range of secondary clauses dealing with matters such as delay damages, sectional completion, limitation of liability and key performance indicators.

Management of the Contract

With the JCT form, management is the responsibility of the leader of the Design Team, which is normally the Architect, whilst in the NEC3 form the management is carried out by the PM, and is more onerous than those required by the JCT form. Therefore, the costs to manage an NEC project will be more than those required for a JCT contract of similar size and complexity. The overriding logic is that by increasing resources during construction, problems and issues can be dealt with as and when they occur at a time when the outcome can still be influenced. This should assist in completing the project on time and within budget and should reduce uncertainty for all parties. Compliance with the contractual procedures should also create an excellent set of records of project activities. Therefore, if claims or disputes are raised later, both parties will have access to these records and enable agreement of any dispute.

Dealing with Claims

The NEC3 Contracts promotes the compilation of a 'risk register' and risk reduction meetings to manage the consequences. There is a strict eight week cut-off period for the contractor to notify that a compensation event has occurred, after which the right to compensation is lost.

Even shorter timescales are fixed for the contractor to submit quotations to deal with the event. A failure by the PM to respond to a notification or quotation within equally short periods will lead to its deemed acceptance, binding the employer and potentially exposing the PM to a claim by the employer. The quid-pro-quo for the NEC 3's pro-active approach is that it requires a heavy resource commitment from all sides to administer the project.

In contrast, the JCT standard forms give the parties greater freedom to put contractual claim issues to one side before completion and focus on delivering the project. The downside of this which the NEC 3 strives to avoid is the greater possibility that claim issues will then fester over time, ultimately to the detriment of the project and the parties' relationships. Before opting for either suite, it is important that adequate resources are available to meet all the relevant contractual obligations.

Design responsibility

The JCT forms provide for partial design by the contractor through the use of a 'design portion supplement' and for full design, via a range of 'design and build' forms. NEC 3 approaches the issue in a rather more flexible way: the amount of any contractor's design is set out as part of the 'works information', a schedule to the contract containing technical information relating to the scope of work. Under the JCT design and build forms, the standard design warranty expressly restricts the level of duty owed by the contractor to one of reasonable skill and care. In contrast, under NEC 3 the parties must expressly agree a secondary option clause (X15) to have this effect. Without such an agreement, a fitness for purpose obligation will normally be implied by law as part of the design and build contractor's responsibilities. It is interesting to note that under this clause, where a defect arises in the works due to the design, the contractor has the burden of proving they used reasonable skill and care.

Insurance arrangements

Whereas the JCT forms require insurance of the works to be maintained until practical completion is certified, under the NEC 3 the contractor's obligation to arrange insurance extends to issue of the defects certificate.

Dispute resolution

JCT and NEC 3 forms provide an automatic right to adjudication as provided for by the Construction Act. Under NEC 3 there is a further opportunity to challenge the decision of an adjudicator by arbitration or through the courts. The dissatisfied party must give notice to the other side within four weeks of that decision. After that, the decision becomes final and binding on the parties. Both forms of contract will provide the client with the protection that they require albeit in different ways. As noted above, all Design Teams and Contractors are familiar with the JCT Contracts and possibly less so with the NEC contracts. However, the pros and cons of each form of contract should be considered in relation to the procurement strategy to make the best decision for the delivery of the Project.

Elements of the construction project

The procurement of a building involves commissioning professional services and creating a specific solution. The process is complex, involving the interaction of the Client, design team, contractors (who provide the construction expertise, labour, materials and plant resources), suppliers and various statutory/public interest bodies. All capital projects, whether they are small, large, refurbishments or new build have the same basic requirements and structure.

Three basic requirements should be established as early as possible and monitored throughout the project. They will also form the basis of the final analysis of the project, when the outcomes are measured against inputs to gauge the success.

It is imperative that there is a clear brief for the project, that this brief has been costed properly and that the programme (timescale) for the works has been correctly identified.

Many projects fail because one or more of these elements has not been properly considered at the outset. Throughout the project, the three basic requirements should be reviewed regularly, and action is taken if any of them change sufficiently to affect any of the others. This will ensue that the project is controlled. Responsibilities for preparation of the three basic requirements are generally as follows:

The typical Structure of a project is as follows be it a small refurbishment, involving decoration and re-furnishing of a few rooms, or the procurement of a new building:

There are several points in the project when procurement of services or works will be required.

Design Team Services will either be procured:

- At Feasibility/ Option Appraisal stage for a medium to large project
- At Outline Brief Stage for a small to medium size project

The procurement method will depend on the extent of the service desired by the Client (and therefore the cost) and whether the financial thresholds for EU Procurement are applicable.

Often for a large project, the Client may wish to procure Design Team services for the Feasibility Stage of the project only, sufficient to provide information for the Business Case and for relevant approvals at this stage. Once the project has been approved to proceed, the Client will then wish to procure the team for the remaining stages of the project, in which case it is likely that scale and cost of the service will mean that the EU thresholds will apply and Design Team Services will require to be tendered following the appropriate rules.

In the case of a small to medium project, the Client may typically appoint a Design Team at the beginning of the project to cover all stages to completion. In which case, a quick calculation is required to ascertain if the total fees are above or below the EU thresholds, and the appropriate method of tendering chosen.

In terms of the appointment of the Main Contractor, this is usually done once the final proposals for the project have been signed off (Stage E). The Client will be required to ascertain whether the EU Procurement Directives apply before the appropriate method of tendering is chosen. (See page 47 procuring The Main Contractor)

The Design Team

Once the Design Team has been appointed, they can proceed to work through the next stages of the briefing process with the Client - that is Stages C, D and E of the RIBA Plan of work (The RIBA plan of work is explored in more detail later in this document)

The main tasks during these stages are to ensure that a comprehensive project brief is produced, which will include firm information regarding costs, specifications and timescale. The quality of this information will reflect on the success of the project. Sufficient time must be committed to completing these stages including the Clients understanding of the requirement to "sign-off" the brief and therefore "freeze "the project parameters. In theory, no changes should be made to the brief once it has been frozen at the end of Stage D, to reduce risk in the further stages of the project.

A well-prepared brief will form the basis of all the subsequent project actions, i.e. Production Information, (leading to Contractor Procurement)

At the end of each of the above stages, the Design Team will produce a co-ordinated report, which will confirm all the relevant project information at each stage. It is important that the Client reviews the reports, consulting with all relevant in-house colleagues and provides feedback to the Design Team, who will update the report accordingly.

The updated report should then be checked and "signed-off "by the appropriate senior officers of the institutions, to confirm their agreement with the contents of the report.

The Design Team will then proceed to the next stage.

Each of the Stage C, D and E reports will therefore become the main guidance documents for the project as it proceeds.

Once the end of Stage E has been reached, sufficient information has been gathered to allow the project to proceed to procurement of the Contractor's services.

Paying the Design Team

Payment of the Design Team is based around the stages of the RIBA Plan of Work. The following table illustrates a standard schedule of payments for a Traditional and a Design & Build contract.

Fee Schedule			
RIBA Stage	Description	Fee	Cumulative fee
A + B	Appraisal + Feasibility	Time Charge	Time Charge
C	Outline Proposals	15%	15%
D	Detail Proposals	15%	30%
E	Final Proposals	20%	50%
F,G + H	Production Information + tender	20%	70%

J	Pre-Contract Planning	2%	72%
K	Construction Works	25%	97%-
L	Completion	3%	100%

Once the Design Team is appointed, the Client should ask the team to prepare a monthly draw down of fees schedule, so that the frequency and amount of payments throughout the project are agreed. This will assist the Client in preparing cash flow documentation and controlling spend throughout the project.

Design Team Contract

It is advisable to formalise the appointment of the Design Team in contractual terms. If the team has been appointed as separate bodies, i.e. Architect, Quantity Surveyor , Engineer etc , then an approach is to use the standard Form of Appointments which are provided by their professional bodies, for instance in the case of the Architect , the RIBA publishes the "Standard Conditions for the Appointment of an Architect".

If the Client is familiar in appointing consultants, they may well have developed their own set of Appointment letters, which have been written by their legal advisers.

If none of the above applies, and if the appointment is for an Integrated Design Team, then the recommended Form of Contract (promoted by OGC and SFC) is the NEC3 Professional Services Contract (PSC). This has a standard set of clauses which the client can adapt (with advice from their legal Adviser) to suit the project.

Alternatively, The Joint Contracts Tribunal (JCT) also publish the **JCT Consultancy Agreement (Public Sector) (CA)** , which is appropriate for use by the Public Sector undertaking construction works and wish to engage a consultant (regardless of discipline).

Both the above forms of contract will afford the Client the protection that they require in appointing a consultant. In most cases the decision comes down to the Form of Contract that the Client is most familiar with. If the Client is not familiar with either, the decision can be made by taking the advice of the PM, or utilising the NEC3 form which as noted previously is promoted by the OGC.

Collateral Warranties

Sometimes included by Clients within the Consultant's and Contractor's contract to provide owners and occupiers of buildings with a contractual remedy in order to pursue claims for certain types of losses. Collateral Warranties (CWs) are most commonly used where the Client is acting as a developer and the building is likely to be sold on, rented, leased or being funded by a third party. The client should seek legal advice to ascertain if warranties are required.

If required, they must be considered at the outset of the project. If the construction contract and consultants' appointments do not include the necessary provisions in their contracts, the developer may be unable to procure warranties when required. This would then have an adverse effect on the marketability and value of the development. The following questions should be considered;

Who requires Collateral Warranties? The usual interested parties (beneficiaries) are tenants, purchasers and companies funding the development. The employer may require warranties from sub-contractors and consultants, particularly those with design responsibility.

What form should the warranties be in*?* Standard forms are published by the British Property Federation (BPF). These are designed to limit the warrantor's obligations. These forms are generally approved by professional bodies and insurers. Alternatively, the client's legal adviser can draft the forms as required.

Note: It is not usual for Universities or Colleges to require Collateral Warranties as in most cases, they construct and fund and occupy the buildings themselves, with no third party involvement.

3. Project management and Governance

The Decision Point Process

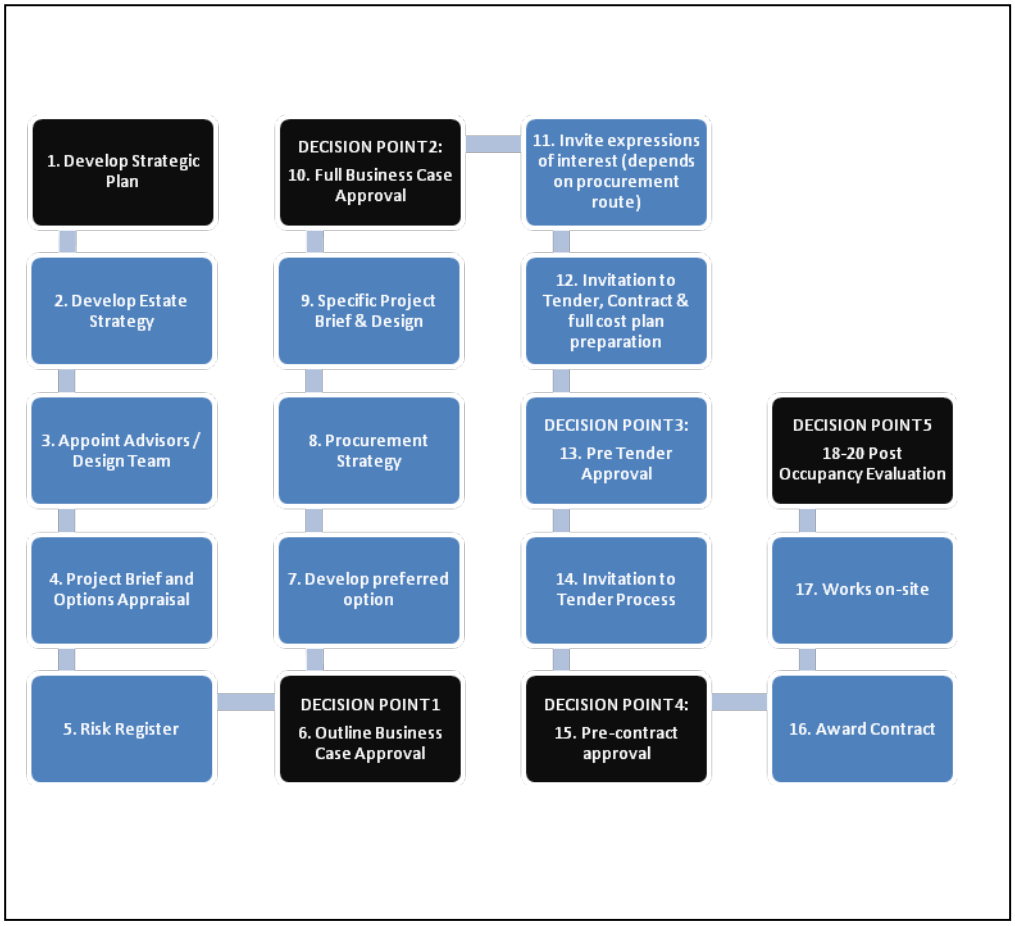
The Scottish Funding Council also promotes and recommends the use of a Decision Point process for all Capital Projects above £5 million. This decision point process has been developed from, but is not the same as OGC Gateway™ Review process. The SFC process has been developed by the Council to fit with its specific statutory requirements.

At each decision point, the Investment Decision Maker or Senior Manager with overall project responsibility should review the project parameters. If the project continues to satisfy its objectives, then approval can be given to proceed to the next stage.

The process provides the governing body of the college or university the security and support to achieve their business aims by ensuring;

- the project is on target to meet the pre-agreed aims and objectives;
- management receive an assurance that the project can successfully progress to the next stage of development or implementation;
- the project remains within the cost, quality and budget parameters set;

Key Stages in The Scottish Funding Council Decision Making Process

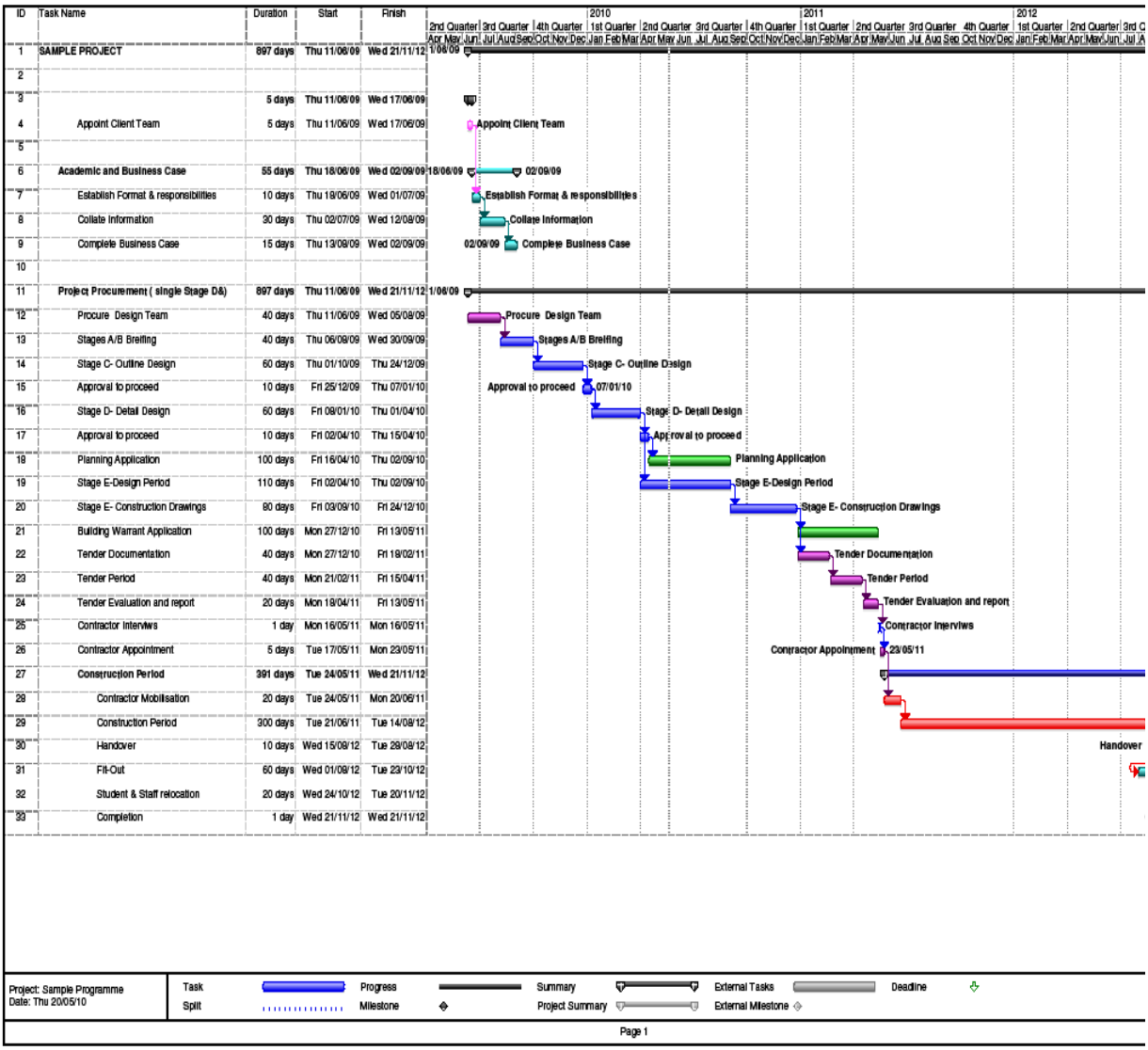


The Programme

One of the Key elements in controlling the progress of the project is the drafting and maintaining of the Project Programme. From the start of the project, this document measures and monitor progress against targets. The programme is normally set up by the Client at the initial stage of the project, and once the PM is appointed it is their responsibility to develop and maintain.

Once the Main Contractor is appointed, they will develop the Main Programme for the Works, which will include subcontracted activities, material deliveries and relevant activities in order to deliver the project to the satisfaction of the client. During the Construction works, the PM will monitor the contractors' progress against the plan and provide regular progress reports to the Client.

The format adopted is normally that of a Gantt chart. Each activity is listed and given a timescale. The activities are related to each other to build up a full profile of the project;

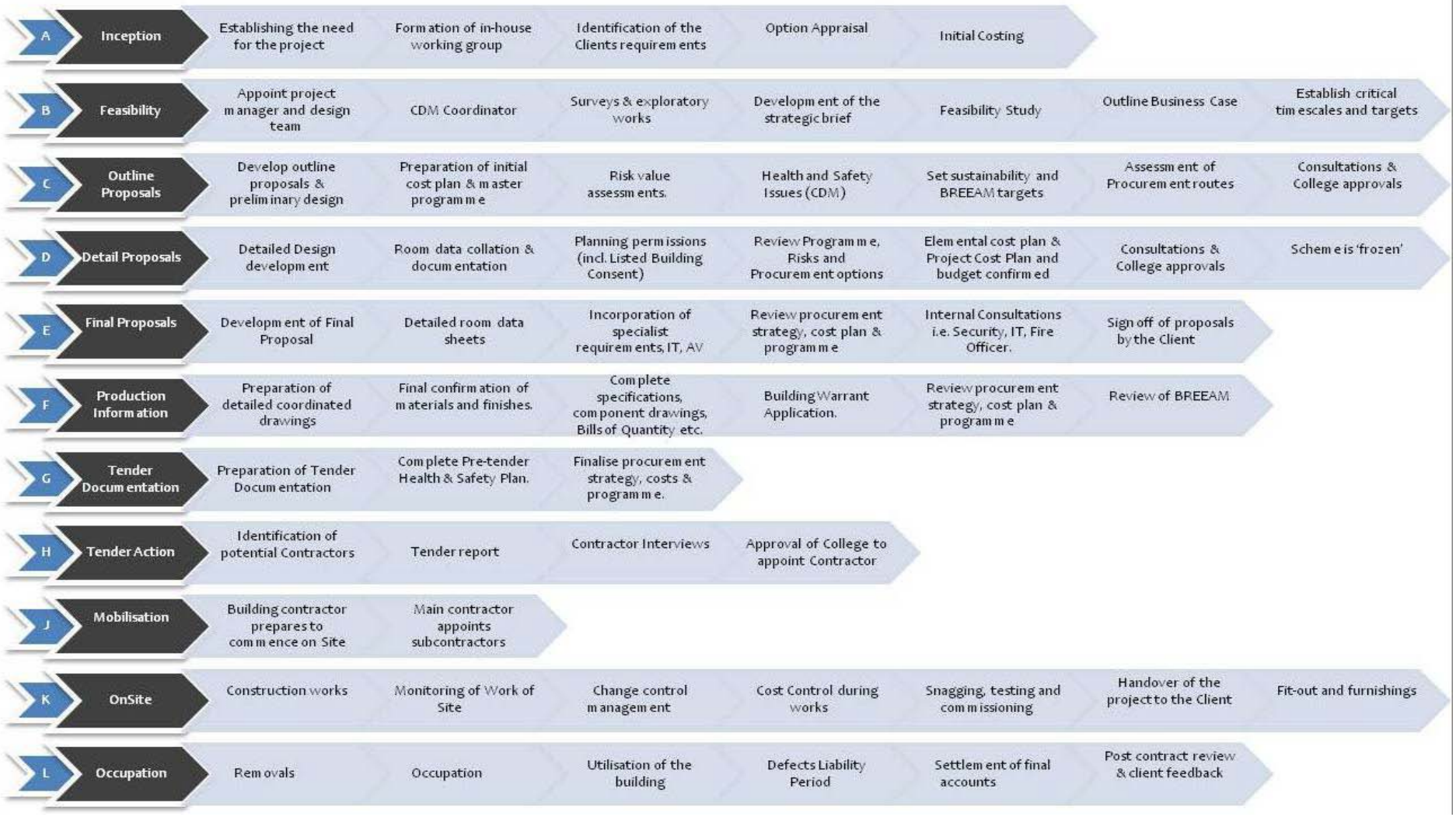

ID
Task Name
Duration
Start
Finish
2nd Quarter 3rd Quarter 4th Quarter 2010 1st Quarter 2nd Quarter 3rd Quarter 4th Quarter 2011 1st Quarter 2nd Quarter 3rd Quarter 4th Quarter 2012 1st Quarter 2nd Quarter
1 SAMPLE PROJECT 897 days Thu 11/06/09 Wed 21/11/12
3 5 days Thu 11/06/09 Wed 17/06/09
4 Appoint Client Team 5 days Thu 11/06/09 Wed 17/06/09
6 Academic and Business Case 55 days Thu 18/06/09 Wed 02/09/09
7 Establish Format & responsibilities 10 days Thu 18/06/09 Wed 01/07/09
8 Collate Information 30 days Thu 02/07/09 Wed 12/08/09
9 Complete Business Case 15 days Thu 13/08/09 Wed 02/09/09
11 Project Procurement (single Stage D&) 897 days Thu 11/06/09 Wed 21/11/12
12 Procure Design Team 40 days Thu 11/06/09 Wed 05/08/09
13 Stages A/B Breifing 40 days Thu 06/08/09 Wed 30/09/09
14 Stage C- Outline Design 60 days Thu 01/10/09 Thu 24/12/09
15 Approval to proceed 10 days Fri 25/12/09 Thu 07/01/10
16 Stage D- Detail Design 60 days Fri 08/01/10 Thu 01/04/10
17 Approval to proceed 10 days Fri 02/04/10 Thu 15/04/10
18 Planning Application 100 days Fri 16/04/10 Thu 02/09/10
19 Stage E-Design Period 110 days Fri 02/04/10 Thu 02/09/10
20 Stage E- Construction Drawings 80 days Fri 03/09/10 Fri 24/12/10
21 Building Warrant Application 100 days Mon 27/12/10 Fri 13/05/11
22 Tender Documentation 40 days Mon 27/12/10 Fri 18/02/11
23 Tender Period 40 days Mon 21/02/11 Fri 15/04/11
24 Tender Evaluation and report 20 days Mon 18/04/11 Fri 13/05/11
25 Contractor Interviws 1 day Mon 16/05/11 Mon 16/05/11
26 Contractor Appointment 5 days Tue 17/05/11 Mon 23/05/11
27 Construction Period 391 days Tue 24/05/11 Wed 21/11/12
28 Contractor Mobilisation 20 days Tue 24/05/11 Mon 20/06/11
29 Construction Period 300 days Tue 21/06/11 Tue 14/08/12
30 Handover 10 days Wed 15/08/12 Tue 28/08/12
31 Fit-Out 60 days Wed 01/08/12 Tue 23/10/12
32 Student & Staff relocation 20 days Wed 24/10/12 Tue 20/11/12
33 Completion 1 day Wed 21/11/12 Wed 21/11/12
11/06/09
02/09/09
07/01/10
23/05/11
Project: Sample Programme
Date: Thu 20/05/10
Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline
Page 1

RIBA Plan of work: Key Stages in a Capital Project

Capital Projects follow the same basic structure and is recognised by all disciplines in the construction industry, which has been formalised by the RIBA's (Royal Incorporation if British Architects) Plan of Work.

Dependant on the size of the individual project, some or all of the following action will apply.

Stage	Tasks to be Done	People Involved
A Inception	Set up client organization for briefing. Procure Design Team (if Required)	Client Team Project Manager & Design Team
B Feasibility Strategic Briefing	Procure Design Team (if not done at Stage A) Carry out studies of user requirements, site conditions, planning, design and cost etc as necessary to reach decisions.	Client Team, Project manager, architects, engineers and QS according to nature of specialist project.
C Outline Proposals	Develop the brief further. Procure additional Consultants if required	Client Team Design Team
D Detail Proposals	Full design of the project by architect, preliminary design by engineers, preparation of cost plan	Client Team Design Team and specialists and all statutory and other approving authorities.
E Final Proposals	Full design of the building by all concerned. Complete cost check.	Design Team and specialists
F Production Information	Preparation of final drawings, schedules and specifications.	Design Team and specialists
G Tender Documents	Preparation of Bills of Quantities and tender documents.	Client Team Design Team and
H Tender Action	Procurement of Contractor	Client Team Design Team and specialists.
J Mobilisation	Construction Works	Contractor, sub-contractors.
K Operations on Site	Procurement of Furniture/ Equipment/ Fittings etc	Client Team Design Team Contractor Subcontractors
L Completion & Occupation		Client Team Design Team Suppliers


A
Inception
Establishing the need for the project
Formation of in-house working group
Identification of the Clients requirements
Option Appraisal
Initial Costing
B
Feasibility
Appoint project manager and design team
CDM Coordinator
Surveys & exploratory works
Development of the strategic brief
Feasibility Study
Outline Business Case
Establish critical timescales and targets
C
Outline Proposals
Develop outline proposals & preliminary design
Preparation of initial cost plan & master programme
Risk value assessments.
Health and Safety Issues (CDM)
Set sustainability and BREEAM targets
Assessment of Procurement routes
Consultations & College approvals
D
Detail Proposals
Detailed Design development
Room data collation & documentation
Planning permissions (incl. Listed Building Consent)
Review Programme, Risks and Procurement options
Elemental cost plan & Project Cost Plan and budget confirmed
Consultations & College approvals
Scheme is 'frozen'
E
Final Proposals
Development of Final Proposal
Detailed room data sheets
Incorporation of specialist requirements, IT, AV
Review procurement strategy, cost plan & programme
Internal Consultations i.e. Security, IT, Fire Officer.
Sign off of proposals by the Client
F
Production Information
Preparation of detailed coordinated drawings
Final confirmation of materials and finishes.
Complete specifications, component drawings, Bills of Quantity etc.
Building Warrant Application.
Review procurement strategy, cost plan & programme
Review of BREEAM
G
Tender Documentation
Preparation of Tender Documentation
Complete Pre-tender Health & Safety Plan.
Finalise procurement strategy, costs & programme.
H
Tender Action
Identification of potential Contractors
Tender report
Contractor Interviews
Approval of College to appoint Contractor
J
Mobilisation
Building contractor prepares to commence on Site
Main contractor appoints subcontractors
K
OnSite
Construction works
Monitoring of Work of Site
Change control management
Cost Control during works
Snagging, testing and commissioning
Handover of the project to the Client
Fit-out and furnishings
L
Occupation
Removals
Occupation
Utilisation of the building
Defects Liability Period
Settlement of final accounts
Post contract review & client feedback

Statutory Consents

Planning Permission

If the project consists of a new build project or a major refurbishment then it is likely that Planning Permission will be required. In the case of a major refurbishment this will only be necessary , if additional parts are being added to the building, the exterior will be changed in a material way, or there is a Change of Use – for instance from Commercial to Educational. All new build projects, no matter how small require Planning Permission, unless the new building is small and temporary.

At the earliest stage possible, the Client should contact their Local Council's Planning Section and arrange a meeting with the local Planning Officer to discuss the proposals and seek advice from the Council. It is normal to apply for planning permission at the end of Stage C , and a fee will be payable.

The statutory period for determining Planning Applications is 12 weeks, however, this will vary dependant on the workload of the Planning Committee and the complexity of the project. It is important that a close relationship with the Planning Department is maintained by the Client and the Architect to ensure a successful outcome.

In the unlikely occurrence that Planning Permission is refused, the Client has the right to appeal, and the Council should be consulted in regard to the appeal procedure.

Once the permission has been obtained it is valid for 5 years, within which period the Client must commence the construction of the building.

Building Warrant

Almost every building project will require a Building Warrant; this is technical assessment of the building design by the Local Councils, Building Control Department to ensure that it complies with all relevant regulations. The Scottish Building Regulations are updated regularly and are in 6 Parts, which are:

- Structure
- Fire
- Environment
- Safety
- Noise
- Energy

In the case of the Planning Application, a fee is payable by the Client to the local Council. The Design Team will advise on the need for a Building Warrant and will prepare the submission on behalf of the Client. All relevant sections have to be complied with and there is no ability to appeal if the design does not comply.

There are two ways of applying for a Warrant;

Single Stage

One application is made for all aspects of the project (suitable for small and medium sized projects). Once the warrant is received, construction may commence. It is unadvisable to commence construction until the relevant parts of the Warrant are in place.

Multiple Stages

Where the Warrant is applied for in stages , for instance structure and under building first , then following on with services and others as necessary. This method is often used for larger projects, where there may not be time in the programme to clear all aspects of the warrant before construction. Therefore; the Warrant is staged to coincide with the stages of construction.

The Design Team will advise the Client on the best approach to be taken dependant on the size and complexity of the project.

During the construction works, the Council's Building Inspector will visit site regularly to check that work is proceeding in line with the Warrant Application.

Once the construction is completed , the Architect will apply for a Certificate of Completion, which will be granted by the Council if they are happy that all works are compliant and in line with the Application. Once the Certificate is received, the Client may occupy the Building.

Health and Safety (CDM)

The CDM Regulations 2007 came in force in 2007, replacing the previous CDM regulations 1994, with revised duties for Clients, designers and contractors. The regulations were put in place to place specific obligations on Clients, designers and contractors to ensure that Health and safety issues are considered throughout the currency of the project.

The CDM regulations are applicable to all non-domestic construction projects irrespective of size or duration. However, a CDM Coordinator only requires to be appointed by the Client if the project is greater than 30 days duration and/or 500 person days.

The key issues are the effective planning and management of risk, ensuring that people and organizations are competent, with a focus on co-operation and co-ordination.

Under the CDM regulations, the Client's duties are;

- Take reasonable steps to ensure the competence of all appointees, and ensure that roles and responsibilities are clear
- Co-ordinate activities that ensures where practicable that the health & safety of persons is affected by the carrying out of the works
- Take reasonable steps ensuring arrangements are in place for managing the project, including construction works being safely carried out, welfare facilities are provided for workers, and that any structure designed as a workplace complied with the workplace Regulations 1992
- Appoints a CDM Coordinator
- Signs the H10 form to confirm that they are aware of their duties (form drafted by CDM Coordinator)
- Ensures that appropriate pre-construction information is provided to all Designer and Contractors
- Ensures that the Designer takes account of Workplace regulations for any workplace

- Appoints a competent Principal Contractor
- Ensures that sufficient time and resources are allocated for all stages of the project
- Ensures that a suitable developed Health & safety plan is in place before commencement of the works (prepared by Principal Contractor)
- After completion, receives the Health & Safety file from the Contractor and keeps it up to date

The CDM Coordinator will assist the Client in taking the steps above and will advise them of their duties, providing advice and assistance at each stage of the project. The CDM Coordinator should be appointed at the same time as the rest of the Design Team. If the client has appointed a PM, they will assist with the appointment of the CDM Coordinator.

F10

The F10 form is a standard document, which the CD Coordinator sends to the HSE to notify the existence of the project. The form is updated once the Principal Contractor is appointed.

The Health and Safety file

The Health & Safety File is a document which is prepared by the CDM coordinator, with assistance from the Design Team, Main Contractor and the Subcontractor. The file contains all relevant information to allow the Client to occupy, utilise, manage and maintain the building safety and effectively. Following receipt of the File, the Clients responsibility is to update the file regularly, for instance if any changes are made to the building, plant or controls are maintained, replaced etc.

If the building is ever disposed of or leased, access to the Health and Safety file requires to be provided to the new owner/ occupier.

For further information see

OGC's Achieving Excellence in Construction Guide 10: Through Health and Safety.

Managing Health and safety in Construction, Published by HSE

CDM 2007 Industry Guidance for Small, One-off and frequent Clients, published by HSE

Risks and Risk Management

The management of risk is essential for any project and has two main actions, firstly to identify risk and secondly to control the risks.

Risk is managed by carrying out the following actions;

Identify risks and assess them in terms of impact and probability (this is normally done by compiling a Risk Register) This activity is best done by the whole team in the form of a workshop , where all the project participants , can work together to identify the risks and assess each one. This allows all the project stakeholders to actively participate in Risk Management. The risks can be recorded in a standard Risk Register matrix. Collation and updating the Risk Register is normally the responsibility of the PM.

Establish procedures for actively managing and monitoring risk throughout the project (this can be done by setting up regular Risk Meetings).

Allocate responsibility for managing risk (this can be recorded on the Risk Register so everyone is aware of their individual responsibilities)

Control risk by planning how risks are to be managed in order for them to be contained within acceptable limits.

Typical Risks:

- Programme Slippage
- Funding
- Accuracy of Cost plan
- Design Changes
- Accuracy of Client Information
- Delay in signing-off Stage C , D or E stages
- Site Conditions
- Changes in Legislation/statutory Requirements
- Delay in obtaining Planning Permission or Building warrant
- Inflation
- Availability of materials

As noted above, the PM has day to day responsibility for Risk Management, and all members of the design Team have responsibilities related to their disciplines. The Clients role in managing risk is as follows:

Investment Decision Maker, should be aware of all risks.

Senior Responsible Owner, should ensure that risks are managed by the appropriate persons.

Project sponsor, liaise closely with the PM on the management, monitoring and reporting of risks.

Risk Management/ Contingency Planning

It is prudent to identify the cost of each of the risks as the project proceeds; this will allow the Client to make sufficient financial allowances to manage the risk and will assist in making sure that contingency allowances are sufficient to cover risk as the project progresses.

The Construction Phase

The Construction Stage does not tend to involve the Client as much on a day to day level, and the majority of actions and responsibilities, lie with other parties, namely, the PM, Design Team, Contractor, subcontractors and Clerk of Works

Once the Contractor has been appointed, they will commence the mobilisation stage, appointing subcontractors for the first stage of the project and commencing site set up. At this stage the PM will arrange the pre-start meeting, and check that the contractors insurances are in place. The CDM coordinator shall ensure that the contractors Health & Safety plan is in place before site works are commenced.

During the Construction phase, the Main Contractor has the major responsibility in planning and execution the works, but alongside this, the following activities will continue: (most of these will be the responsibility of the PM)

- Ensuring Contract documents are prepared, agreed and signed off
- Performance Bonds and/or Collateral Warranties are in place
- Handover of Site to the Contractor
- Advising relevant personnel of the Commencement of Works.
- Reviewing the Contractors construction schedule and method statements.

- Appointing Clerk of Works (as required)
- Regular site meetings will be held to monitor the progress of the works
- Monitoring construction cash flow
- Monitoring the performance of the Contractor.
- Ensuring that Design Information is being provided timeously to the Contractor by the Design Team
- Site Inspections by Clerk of Works and Design Team (if required)
- Procedures for payments are being followed.
- Reporting to Client on Progress
- Change Control procedures being followed
- Statutory approvals are being obtained
- Problems are anticipated and resolved

All actions are in place to ensure that the Contractor is delivering the Works in accordance with the Contract.

Pre-Start Meeting

Before the Contractor starts on Site, the PM will hold a Pre-Start meeting, to which all relevant parties will attend; Client, Design Team, and Contractor etc. The purpose of the meeting is to introduce all parties to each other and review the requirements of the project.

Clerk of Works

Dependant on the size of the project, the Client may wish to employ Clerks of Works who will be the eyes and ears of the Client on Site. Several Clerk of Works may be required to cover the necessary disciplines: Building, mechanical and Electrical. They will also carry out the following duties:

- Issuing of works and roof access permits.
- Reviewing contractor's Method Statements and ensuring they provide a safe method of working including where plant changeovers are required.
- Resolving technical queries and liaising with the Design Team.
- Quality – inspecting the work to ensure the required levels of workmanship are achieved.
- Monitoring the Contractor's progress and level of resources being deployed.

Regular Site Meetings

Regular meetings are the primary method of controlling and reviewing progress and will be chaired by the PM. The main points covered will be as follows;

- Progress Vs programme, procurement, resources
- Information required – this should be linked to and reflect the programme
- Change Control – Technical queries and instructions
- Method statements – in particular for plant changeover or disruptive works which must be planned in advance
- Commercial issues – warranties, claims, valuations and the agreement of variations

User Liaison Meetings

Regular meetings as necessary should be held with the User Group to make sure that they are informed about progress.

The following areas should be addressed during the construction works:-

- Dealing with any changes to the brief
- Agreement of furniture layouts including equipment
- Agreement of reasonable degree of shelving, provision, location of pin boards and notice boards
- Involvement in the selection of finishes, carpets etc
- List of occupants for each room
- Signage requirements

Financial Review

During the Works, the PM will continue to monitor all cost changes and updating budgets accordingly. Not only to the construction but also IT costs, furniture costs, professional fees etc. to ensure that all cost categories remain within budget

Progress Reporting

Regular monthly reports provide visibility on the current project status; progress Vs programme, out-turn cost Vs budget and current scope Vs approved scope and ensures corrective action is identified at an early stage.

The PM prepares a monthly report, considering all aspects of the project and making predictions as accurately as possible regarding the potential impact of any change, with the assistance of the QS. Reporting of costs should include an accurate prediction of out-turn cost and identify whether the remaining contingencies sums will or will not be expended.

The progress report submitted by the PM will include:

- Progress Vs programme and the implications of any delay.
- Early warning of potential problems.
- Review of expenditure, construction, fees, furniture, IT, data etc.
- Identification of major changes to scope and significant issues.
- Updated budget summary sheet which should identify any current degree of financial risk.

Payments

Payments will be managed in accordance to the requirements of the contract. The PM will monitor spend and ensure that payments are made timeously.

Health & Safety

The PM and Clerk of Works should ensure that the works are being executed safely and in line with the Contractor Health & Safety Plan.

Variations

Any changes during the Construction Works should be avoided as these will inevitably lead to delays and the incurrence of costs. The Change Control mechanism (page 34 variations / changes) should be implemented for all requests for change/ variations.

Fitting Out and Furnishing

Whilst the Construction Works are underway, the Client needs to plan the fitting out and furnishing of the new facility/ building with the assistance of the PM and possibly other members of the Client team such as the Catering Manager, IT Officer etc.

The requirement for these items should be identified at the start of the project, and appropriate budgets set aside for each category. Likewise, the PM should work with the Client to agree the programmes for the briefing, procurement and installation. Normally, these items would be installed after the handover of the building to the Client, but before occupation. A mini-programme should be prepared by the PM

The scope of items will depend on the complexity of the project but will generally include:

- Furniture and Equipment
- Fit-out of specialist areas such as catering
- Blinds and Curtains
- IT Infrastructure and telephony
- Audio-Visual equipment
- Specialist equipment
- Library shelving
- Signage
- Cleaning and firefighting equipment

The procedure for managing each of the above is similar:

1. Establish users' requirements
2. Prepare schedules of requirements on a room by room basis if required
3. Liaise with the Clients in-house specialists in confirming requirements
4. Obtain the Users' sign-off to their requirements (in the case of furniture , colours and fabrics require to be agreed)
5. Utilise existing frameworks (consult with APUC) or where requirements are not covered by conduct tenders (be aware of OJEU thresholds)
6. Prepare further competition or tender documentation, and manage the tender process
7. Evaluate tenders with users 'assistance if required
8. Appoint suppliers
9. Programme the installation of the goods/ equipment
10. Monitor the installation works
11. Organise teach-ins and or demonstrations as required (particularly for Audio-Visual equipment)

Generally, it is the responsibility of the PM with assistance from the Client's Purchasing Department to arrange for the procurement of the above. All procurement should be carried out with due regard to the client's procurement policy and rules.

Commissioning and Handover

When the Construction works are nearing their end and Handover of the project to the Client is imminent, the following stages will be progressed.

Testing and Commissioning

The PM will coordinate the interface between the Main Contractor, the Design team and the Client during the testing and commissioning stage. Typically the following items will be actioned;

The contractor will prepare a testing and commissioning method statement and a detailed commissioning programme which will indicate when each test will occur allowing the client to attend.

The Contractor will advise the Client/ Design Team when areas of the building will be available for snagging inspection. (The snagging will be carried out by the clients' Clerk of Works). The Contractor will advise on the proposed date for the final snagging inspection (once the defects lists have been cleared)

The Contractor in liaison with the CDM coordinator will advise on the dates of production and review of the Operation and Maintenance (O&M) manuals and Health & Safety File.

The Contractor and Design Team will liaise in regard to the date of inspection by Building Control and the anticipated issue of the Certificate of Practical Completion.

Generally the Client should not accept the facility unless the above are completed and the relevant documents are available (i.e. electrical test certificates, fire alarm tests etc.). However, the building may be handed over if a minimal list of minor defects is outstanding, but this is at the discretion of the Client. The main parameter is that the building is deemed to be "Practically Complete" and is capable of being occupied and operated as designed.

Completion of Defects

Part of the above process is the logging and completion of defects. Where defects are outstanding at completion the Design Team, including the Clerk of Works, will prepare a snagging list.

It is recommended that defects are prioritised and actioned in accordance with the following categories;

A. immediate within 24 hours
B. urgent within 2 days
C. within one week
D. within one month.

The Design Team will agree a programme of work with the contractor to clear the defect. The list will be checked off regularly by the Clerk of Works.

Consultation with Estates/Facilities/ Maintenance Section

The Client must be in a position to safely and effectively manage the building once it is completed, therefore as part of the handover process and in line with the commissioning programme the PM will ensure that the following are completed and undertaken;

The Estates/ Facilities/ Maintenance sections of the institution are informed that the project is due to complete and of the handover date.

Training is arranged on the operation of mechanical and electrical systems. Training or briefings are arranged for the cleaning sections on any risks they should be aware of or methods of cleaning new materials e.g. floor finishes. (This should also be done for any other departments who will be involved in the care or maintenance of the building).

The O & M manuals and Health & Safety file are made available for review and inspection by the institutions Estates/Facilities/Maintenance section as soon as possible after handover is completed.

Health & Safety File / Operation & Maintenance Manuals

Prior to handover of the project, the Contractor should hand over the O&M manuals to the client. It is useful that this documentation is available at the time of the demonstrations and teach-ins for the building systems

to allow the Estate/ Facilities/ Maintenance team to familiarise themselves with the operational side of the building.

The O&M manuals are not the same as the Health and Safety file. The H&S file is prepared by the CDM coordinator and handed to the client following completion. The file may include the O&M manuals as part of its content.

Final Account and Defects

Once the project has been handed over to the Client the last remaining actions will be clear of any remaining (minor) defects, and the settling of the Final Account.

Defects

The PM and design team will work with the contractor to also ensure that any remaining minor defects are cleared. This should be reviewed on a monthly basis, and formally six months after completion, and at the end of the defects liability period.

Final Account

The QS will work with the Main Contractor to agree the settlement of the Final Account. Generally, this will involve a financial review of all the cost packages of the project. Dependant on the size of the project and the extent of variations to the works, this process can take up to a year. It is to the advantage of the Client to liaise regularly with the QS to monitor the progress of the Final Account.

Insurances

Once the Client has received notice that the building / project is due to be handed over, they should make arrangements for the institution Insurances to be updated accordingly.

Occupation and Use

Allocation of Space

Approximately 6 to 9 months before the project is due to be completed, the Client should finalise the plans for allocation of space. This will allow the planning of furniture and equipment procurement to be finalised and planning for the move to be commenced.

Planning the Move

Dependant on the extent of personnel, furniture and equipment to be moved, the client needs to assess if this can be done in-house or whether the services of a removals company will be needed. If the move is very complex, it is advisable to employ a Move Management consultant to plan and oversee the move. The PM can assist with the procurement and appointment of such a consultant.

Otherwise, the move can either be planned or managed by the PM (if this is part of their remit) or by the Client themselves.

Room by Room schedules should be produced indicating the current and future positions for all items that require to be moved. Where special services are required, or items are bulky or unusual, these should be noted.

The Services of the Removals Company should be tendered in line with the Clients purchasing rules.

Sequence of the Move

The following is a suggested sequence;

1. Installation of Fire Fighting Equipment and any other Health & Safety Items
2. Installation of Signage
3. Installation of purchased equipment and furniture
4. Installation of AV systems
5. Installation of IT Systems and telephony
6. Removals; staff, furniture and equipment.Before staff are relocated, a final check should be made that all necessary systems are in place and working
7. After / during the move, staff training to provide them with information on how the building operates, which facilities and services are within their control and which are managed by the Estates/ Facilities/Maintenance Department

To manage the post-occupancy phase, when often many queries come from the occupants, alongside reports of defects or non-functioning items, it is simplest to nominate one person on the occupier's side, through which all queries should be channelled. Likewise, there should be a single point of contact for any queries on the side of the Client's project team. This could be the Project Sponsor or the PM.

Post-Project Evaluation

Following the completion of the project and occupancy by the users, the project does not end yet. As the building is a public asset , the Scottish Funding Council recommends that the project is evaluated post-construction at three discrete points so that ;

- The performance of the building can be monitored.
- The success of the project is evaluated
- Lessons are learned from the Experience

Post-occupancy evaluation is an essential tool to be able to demonstrate that the project objectives have been achieved and in terms of public accountability to demonstrate what has been achieved with the investment of public funds.

Review One: Operational Review

(3 to 6 Months after handover)

Did we achieve our objectives?

This focuses on ensuring that the project delivers the outputs and value for money identified in the business case, and covers the period of the commissioning, fitting out and occupation of the building.

A post-occupancy evaluation needs to be undertaken and the results compared with the original project objectives. The Client should identify the lessons learned, particularly in regard to the procurement process, so that future projects can be delivered with improved efficiency.

Review Two: Functional performance

(12 to 18 months after handover)

How is the building operating?

The Client should carry out a further review at least twelve months after occupation to assess the suitability of project in satisfying user needs and assess the whole life design. The main focus of this review is on the performance of specific areas and functions and a more in depth view of the technical and functional performance. The performance review will establish where adjustments and corrections were needed to the building and its systems as well as identifying cost in use.

The results of this review will assist is refining good practice and may affect strategic plans for the future.

Review Three: Strategic

(3 to 5 years after handover)

Was the whole project worth it and what have we learnt?

The main focus of this final strategic review is to look at organisational change and the buildings response, asking how the buildings might respond to change in the future, and how the project has responded to medium term needs and changes.

Feedback from this review can be used to influence Strategic decision making on future projects.

Funding, Budget and Controlling Costs

Cost management is the process of planning and controlling all cost-related items on the project from Inception to Completion. From the earliest stage of the project, the works should be costed (see Appendix B: Sample Project Cost Plan) and the costs monitored regularly throughout.

All costs involved in the project should be accounted for, and appropriate budgets set aside for each. Informed choices shall be made by the client during the project in order to control the overall project budget and where required to vary between separate project budgets to ensure that the project remains within budget at all times.

It is recommended that the Client maintains a contingency budget throughout the project. This should be utilised for unforeseen items such as a change in need, specification, legislative requirements, regulations, tax or others. The level of contingency will vary dependant on the complexity of the project, and typically could be between 5 or 15% of the value of the project, dependant on risk.

In order to minimise cost risk, the Client should:

- Ensure objectives are realistic and achievable.
- All elements of the project have been identified and properly costed.
- The project brief is complete and changes minimised.
- All members of the team have full knowledge of the Clients requirements.
- All relevant parties have been consulted; End Users, Maintenance, Safety, Fire, outside bodies.
- The design meets all Statutory and Regulatory requirements.
- The project is effectively managed.
- Decisions taken during the design and construction phases are based on accurate cost estimates of their impact. No decisions should be taken if the cost implications would cause the total budget to be exceeded.
- The Design Team should always be encouraged to work within the agreed cost plan.
- The Cost plan should be regularly updated, incorporating any variations.

- Cashflow should be monitored and adjusted in there are any changes to the scope of the project, budgets or the programme.
- Contingency and risk allowances to be reviewed regularly.
- Ensure the Change Control mechanism is being followed.
- Ensuring that costs are reported and monitored against the original approved budget.

During the Design Stages, the Design Team will carry the majority of the responsibility for managing costs. In order to assist them the Client needs to provide clear instructions and information, and to maintain a good relationship with the QS whose responsibility it is to monitor the cost of the design as it progresses and report regularly to the Client.

The client is responsible for taking appropriate action if costs vary from the cost plan at any time during the design process. This may be in the form of varying between budgets, seeking additional funding or changing the scope of the works accordingly.

Whole Life Costing

During the development of the brief and the design, the Client should make sure that whole-life costing is carried out. The aim is to deliver a sustainable project, with the added advantage of reducing running costs during the life of the project. (See page 37 Life Cycle Costing for more information)

Monitoring Spend/Cash flow

During the construction, the overall responsibility for managing cost control will be that of the PM, working with the client to monitor spend.

At the outset of the project, a cash flow spreadsheet should be prepared, which can be monitored throughout the project to ensure that targets are being met.

Tip: a sure indication that the project may be behind schedule is if the actual spend begins to lag behind the cash flow forecasts.

Regular cost control meetings should be held to monitor the following:

- Commitment
- Spend/payments
- Remaining budgets
- Variations/ changes

The QS will issue regular cost reports; these should be compared against allocated budget. All commitments and expenditure should be recorded against the project budget allowances. Dependant on the scale of the project, this can be done using a simple Excel spreadsheet or a more complex format. Any variations must be addressed as they arise and appropriate action taken. There should be formal procedures for dealing with any variations that occur, such as referring the matter to the Investment Decision Maker or PS. All variations or changes should be recorded.

Variations/ Changes

All variations and changes to the scope of the project require to be recorded after Stage D. At this point the project is normally accepted to be “frozen” and no changes should be made. In order to control any changes, a Change Control sheet should be completed to record the change and its implications.

Only once the full extent of the implications of the change are known i.e. Cost, implications and the change has been approved by the PS can the design Team incorporate the changes in the Project .The project budget/ cost allocations require to be updated to reflect this change. Note: this process is designed to be onerous to discourage any changes to the scope of the Project, unless extremely necessary. Any project which has a large number of variations/ changes is likely to be at risk.

Fair Payment

Fair payment is remuneration for work or services which have been properly carried out in accordance with the contract. Any arrangements for retention should be equally applied across the supply chain. The withholding of payments due to defects or non-delivery has to be fairly assessed, provable, and proportionate in line with the obligations in the contract.

In order to avoid delays in payment, the client and their payees, such as the Design Team, Contractor and suppliers, must agree payment terms and methodology at the outset of their contracts. Payment through BACS is generally preferred.

During capital projects, the majority of payments will be to the Design Team the Main Contractor and Suppliers. The payment terms will vary dependant on the contracts, but generally will be:

Design Team: 28 or 30 Days

Main Contractor: 14 Days

Suppliers: paid at end of service or supply (unless the supply is provided over a number of months, in which case it would be fair to agree monthly terms)

Payments to Design Team members

As noted in section 2, it is advisable to agree a schedule of fees with the Design Team members at commencement of their services, so that each party is clear about their obligations. If there is any change to the scope, value or programme, then the fee schedule should be amended accordingly with agreement of the Design Team.

If the Client feels that there is any need to withhold payment, for instance if the necessary service is not being provided in line with the contract, the client should contact the Design team, prior to making any changes, with a full explanation of why the changes are being made.

It is imperative that the process of instigating any change is open, transparent and fair. Both parties are required to agree to any changes prior to implementation.

Payments to the Main Contractor

The procedure for payments to the Main Contractor is carried out in accordance with the Building Contract.

The general procedure is as follows and occurs on a monthly basis during the course of the contract.

- Subcontractors prepare their applications, based on the work that has been carried out since the last application.
- The Main Contractor collates the applications and adds their own costs and overheads.
- The application is sent to the Client's QS who assess the accuracy. The QS may consult with the rest of the Design Team in doing this, and visit the site to confirm that works have been completed and materials are on site.

- The QS requests the Architect to make up the Certificate of Payment.
- The certificate is sent to the Client.
- The Client pays the certificate within the contractual period (normally 14 days)

Most contracts will include a 2-3% retention, which is deducted from each valuation, and retained by the Client until the Certificate of Practical Completion is issued (when 50% of retention is released to the contractor. Once the Certificate of Making Good Defects is issued, then the final 50% is recessed to the Contractor.

Similar to the contract with the Design Team, the payments to the Main Contractor cannot be unduly reduced or changed by the client without prior notice. The terms of the contract will provide specific information on the instances when payments can be varied and the conditions therein. The QS should be consulted prior to any amendments being made by the Client.

The Client must be able to justify their actions when withholding payment, under the terms of the contract. The general principle is always to administer payments in terms of the contract, and not to vary payments unless there is the necessary justification.

For further information of Fair Payment Practices see **OGC's Achieving Excellence in Construction Guide to best "Fair Payment" Practices.**

Sustainability

Increasingly scarce resources and rising energy costs, places sustainability high on the agenda and cannot be ignored when planning a building project.

Sustainable development is defined as a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations. The cornerstone of sustainable design are providing buildings which are energy efficient, healthy, comfortable to occupy and flexible in use and designed for long life. In designing a sustainable building, the following broad parameters require consideration:

- Reduce energy use to a minimum
- Choose materials wisely
- Consider energy re-generation- photovoltaics/ solar panels, ground source heat pumps.
- Conserve resources- waste water/ grey water recycling.
- Reduce environmental damage.

Sustainability covers how buildings are designed, how they are constructed and how they are used. There is a considerable amount of cross-over between BREEAM and Sustainability when planning a building project. However, the main differences are that BREEAM is an assessment methodology and sustainability is a philosophy and a way of life.

BREEAM

BREEAM stands for the Building Research Establishment Environmental Assessment Method. This methodology assesses each building project in order to allow the Designer and the Client to make decisions to ensure the building meets the desired targets in terms of environmental, ecological and health issues. It is the most widely used environmental assessment method and sets the standard for best practice in sustainable design.

The BREEAM assessment will start at the earliest design stages and continue through the construction stage to building occupation. It is recommended that the client appoints a BREEAM consultant at the same time as the rest of the team is appointed to guide the process.

The key items that are assessed are;

- Energy Usage
- C02 emissions
- Health building Features
- Air Quality & Ventilation
- Re-use and recycling of materials
- Ecology of the Site
- Water Conservation
- Noise
- Hazardous Materials
- Lighting
- Local amenities and Facilities

The project will be assessed at two points; Design Stage and Completion. At each stage a certificate which rates the building (marks out of one hundred) is issued to the Client. The general grades are good, very good (which are achieved by most buildings) and excellent. The latter is difficult to achieve, although very desirable. The Client should maintain a continuous relationship with the BREEAM assessor and project team to ensure that the BEEAM process continues throughout each stage of the project. The contractor also has a part to play as various activities such as waste management and choice of materials contribute to the points that can be earned.

The result of pursuing a BREEAM certification, is an efficient, low energy, healthy building, which will provide the Client with a sustainable asset for the future.

More information on BREEAM can be found on: **www.BREEAM.org**

Life Cycle Costing

Life Cycle Costing is the third tool in delivering a building, which will be the best that it can be in terms of efficiency. As well as considering the impact on the building design in terms of sustainability and BREEAM assessment, the client should assess the design not only in terms of construction cost, but also in terms of running costs over the life of the building. The assessments should include:

- Initial construction cost
- Lifespan of materials and plant
- Maintenance costs
- Service charges
- Replacement costs
- Running costs

The project QS can assist with this process by running various life cycle cost scenarios to indicate to the client how much the design will cost over the expected life of the building. This will allow the client to make the best decisions regarding types of environmental systems, plant, materials etc. This is best done during Stage D when there is sufficient information available on all the relevant aspects of the project.

Further information on Whole Life Cycle Costing and Cost Management can be found in OGC's Achieving Excellence in Construction Guide 07, Whole Life Costing and Cost Management.

4. General Public Procurement Thresholds and Principles

Public procurement legislation sets out procedures and practices applicable to central and local government and public sector bodies. Procurement can be described as the acquisition of appropriate goods and/or services at the best possible total cost of ownership to meet the needs of the purchaser in terms of quality and quantity, time, and location.

The scope of public procurement ranges from the purchase of routine supplies or services, to formal tendering and placing contracts for large infrastructure projects by a wide and diverse range of contracting authorities.

The legal framework for public procurement includes:

- EC Treaty Principles
- EC Procurement Directives, as implemented in national legislation; and
- European Court of Justice and national case law

EC Treaty

The EC Treaty principles applies to all public procurement activity regardless of value, including contracts below the thresholds at which advertising in the Official Journal of the European Union is required and including contracts which are exempt from application of the EC Procurement Directives. Fundamental principles flowing from the Treaty include;

- transparency – tendering procedures must be transparent and contract opportunities should generally be publicised
- equal treatment and non-discrimination – potential suppliers must be treated equally
- proportionality – procurement procedures and decisions must be proportionate; and
- mutual recognition – giving equal validity to qualifications and standards from other Member States, where appropriate

If contracting authorities employ private sector agents to undertake procurement on their behalf, they should procure these as formal public contracts under EC Treaty Principles and where relevant procurement regulations, including in the terms an obligation on the provider to:

- treaty principles
- comply with EC procurement rules;
- ensure clear allocation of responsibilities; and where appropriate
- obtain the agent's indemnity against any costs incurred as a result of its failure to comply with the legal framework on its behalf.

It is assumed that the PM and or QS will manage the procurement process in the absence of a procurement department.

Formal challenges/complaints

Regulation 47 of the Public Contracts (Scotland) Regulations 2006 allows suppliers to bring proceedings in the Sheriff Court or Court of Session against contracting authorities which have infringed their obligations to

comply with the Regulations, or any other enforceable European Community law provision which may be relevant to awarding a public contract. Where a challenge is successful the contract award can be suspended, the procurement re run, and at the extreme damages awarded including costs of tendering and possible loss of business.

PROCUREMENT UP TO THE OFFICIAL JOURNAL OF THE EUROPEAN UNION (OJEU) THRESHOLDS

The value of a contract must be calculated over the whole life of a contract – therefore a 3 year contract at £50,000 per year has a value of £150,000. When the estimated value of a contract is above the EU threshold the full regulations governing procurement apply.

When valuing the requirement it is vital to bear in mind that it is the overall value of the total requirement (the total consideration payable) that is important, not the value of individual contracts. It is not permissible to break down a requirement into smaller constituent requirements in order to by-pass the constraints imposed on procurement above the EU Threshold.

It should be noted, however, that it is permissible to separate requirements into smaller contracts (with good reason) if these contracts opportunities are then competed in line with OJEU rules.

Regulation 8 (19) of the Public Contracts (Scotland) Regulations 2006 states;

"A contracting authority shall not enter into separate contracts nor exercise a choice under a valuation method with the intention of avoiding the application of these Regulations to those contracts."

This can be seen as an attempt to deliberately disaggregate the requirement, a practice prohibited under the EU Procurement Regulations. Further information regarding EU threshold can be found in Regulation 8 of Public Contracts (Scotland) Regulations 2006.

When the expected value is below the OJEU threshold, the procurement is freed from some of the regulations and timescales. However, there are many regulations and principles that still apply. The principles of transparency and proportionality are key requirements. Contracts that are not subject to OJEU requirements must still be conducted in line with procurement best practice and also in line with the principles of the EC Treaty to afford fairness, competition and transparency in public procurement.

That is to say that for any procurement, regardless of the value there needs to *sufficient* advertising to enable competition amongst suppliers. And that the procurement procedures followed must be fair and transparent.

Closed tendering (i.e. contracting bodies generating competition by simply contacting companies on an ad-hoc basis and inviting them to submit a bid) is not consistent with sufficient form of advertising even if the practice includes inviting companies from other member states or all potential suppliers known to the contracting body.

Minimum contract values requiring publicity?

There is no set minimum decided by the European Union and it is a subject of some debate. For small requirements the costs in terms advertising of effort and materials may outstrip the value of the contract or the benefits that could be reasonably be delivered as a result of advertising. The degree of advertising should be proportional to the value of the contract and consideration given to the interest it would have to suppliers elsewhere in the EU.

Essentially it is up to individual Institutions to decide at what financial levels require advertising. It is recommended that any requirements of £50,000 and above are advertised, this is in line with pan-Scotland

public sector recommendations. Contracts that fall below this level may be suitable for advertising if they are of high importance or risk (for example a pilot project which may lead to tendering of a further contract). The recommendation from the Scottish Government on adequate publicity is outlined in Scottish Procurement Policy Note (SPPN) 04 2009.

Public Contracts Scotland

In order to fulfill the obligations for adequate publicity Institutions can advertise opportunities below the OJEU threshold on www.publiccontractsscotland.gov.uk

The Public Contracts Scotland portal has been developed and is supported by the Scottish Government as a service allowing public sector organisations' to post both OJEU and sub-threshold level contract opportunities. This is a free of charge service for purchasers and suppliers, and advertising on the portal fulfils an Institution's obligations regarding adequate publicity. More details can be found here; www.publiccontractsscotland.gov.uk. Institutions may choose additional means of advertise in addition to the portal.

What is the most appropriate procurement route?

Institutions should consider whether existing framework agreements are available which would meet their requirements. Details of framework agreements Institutions can access can be found on the APUC website or contacting the APUC account manager www.apuc-scot.ac.uk

A useful **decision matrix** is contained in the Scottish Government Procurement Journey toolkit to determine the most appropriate procurement route.

http://www.scotland.gov.uk/Topics/Government/Procurement/buyer-information/spdlowlevel/decisionmatrix

There are three routes within the procurement journey which differ depending on the value/risk associated with a particular procurement.

Route 1

Route One has been designed to be used by staff to conduct low value/low risk/non repetitive procurement for goods or services and ensure all public sector procurement is undertaken in an open, objective and equitable manner.

This process should not be used where advertising is required. Where advertising is necessary, the requirement should be formally tendered.

The step by step process for gathering quotations can be followed below;

http://www.scotland.gov.uk/Topics/Government/Procurement/buyer-information/spdlowlevel/routeonetoolkit

Route 2

Route 2 has been designed to provide guidance of moderate risk and value but where there is still a requirement to adequately advertise the contract. The step by step process leads purchasers through a full procurement cycle but the level of strategy development is much lighter.

http://www.scotland.gov.uk/Topics/Government/Procurement/buyer-information/spdlowlevel/routetwotoolkit/introroute2

Purchasers should consider whether there is scope for collaboration within the institution or with other institutions, and in doing so consider whether this pushes the expected value of the procurement above the EU threshold.

Route 3

Route 3 of the Procurement Journey provides a step-by-step guide to conducting a strategic procurement exercise for high value/high risk requirements. Route 3 highlights the minimum legal and policy obligations involved at each stage of the process.

http://www.scotland.gov.uk/Topics/Government/Procurement/buyer-information/spdlowlevel/routetwotoolkit/introroute3

Procuring and appointing the Design Team

Feasibility Stage- Procurement of Design Team

The first task in commencing any project, is defining the need for the project, and identifying the benefits that will be provided. The Project requires to be assessed against the institutions strategic plan and the estates plan to ensure that it complies with the institution policies.

Once this initial verification has been carried out, the Client needs to appoint its in-house team and progress with collating the outline requirements of the project and identifying the main stakeholders.

Options Appraisal

The first action will be to consider the various options for the project. This can be done by carrying out an Option Appraisal, which will examine all the various options for delivering the project requirements – from a do-nothing option to refurbishment, new build or a combination of both. Each option should be looked at in terms of cost, programme, non-monetary benefits and disadvantages before a final decision is made. (Further information can be found in**" The Green Book"-Appraisal and Evaluation in Central Government, Published by HM Treasury (treasury Guidance)**

If the project is minor, then the above exercise can be carried out in-house (dependant on the relevant skills being available). If not, then the appointment of a Design Team to carry out the options appraisal may be required.

Procuring and Appointing The Design Team

Prior to appointing the design team it is essential to understand whether the Design Team fees will be below or above the threshold for OJEU procurement. In either case public sector Frameworks e.g. OGC can be used. Alternatively, the institution can conduct their own procurement taking into consideration advantages and disadvantages in doing so and following the guidance highlighted in this document. Regardless of the procurement route followed, the Client requires first to identify the disciplines that are required based on the work that is required. This would typically be; PM, Architect and QS.

There are two methods to procure the team, either on the basis of an Integrated Team (one single tender) or on an individual basis (multi stage – two methods available). Both timing and resource influence the decision to appoint the team in one single tender or individual basis. Where the former is preferred, it may be advantageous to appoint on an individual basis whilst tendering as a whole. This provides the institution with more performance related control.

Single Stage Procurement

Where the Client tenders for the services of the whole Design Team at once, specifying every discipline that is required. As the Team is PM led this gives the Client one single point of responsibility, and is recommended for less experienced Clients.

Multi-Stage Procurement-(Method One)

In this case the Client firstly procures the services of the PM via further / mini competition (if accessing an available Framework) or conducts an independent tender and then works with the PM to procure the services of the rest of the team through the Framework or an independent tender. This can be done as one tender or

as a series of mini-tenders. It is all at the client's discretion as to how they wish to manage the second stage of the process. However, to avoid complications, it is strongly suggested that the rest of the team are procured as "one package"

Multi-Stage Procurement-(Method Two)

This is similar to the method one, however, in this case the Client procures the PM and possibly the services and Structural Engineers firstly, and then procures the Architect and the rest of the team either as a single mini-tender (recommended) or in separate packages (as noted above).

It is advantageous for the Client to tender for an integrated team - that is made up of all the necessary disciplines needed to deliver this stage of the project, as this approach will provide the Client with one main point of contact and responsibility i.e. the PM, who will co-ordinate the services of the rest of the Design Team on behalf of the Client. If the appointment is only for the initial stage of the project, this should be made clear to the Team in the tender documentation (Scope of Service)

The criteria for the tender require to be set at the outset. The normal method for assessing tenders is to evaluate the responses on the basis of cost and quality (normally on a ratio of 40%/60%, however, the precise ratio is at the discretion of the Client).

The tender for the Integrated Design Team should include the following information:

- **Background information to the Project**
- **Outline Description of Project**
- **Description of the Scope of the Service**
- **Clear criteria for Evaluation of Tender (typically 40% cost/ 60% Quality)**

Appendix C provides Sample Questions for Integrated Design Teams and Appendix D Sample Quality Questions.

Timescale for Tender process, including date for interviews

Timescale: A typical Non EU tender process is as follows;

Action	Timescale
Preparation of Tender Documentation	Four Weeks
Issue of Tender	One Day
Tender Period	Four Weeks
Return of Tenders	One Day
Evaluation of Tenders	Two Weeks
Interviews (Optional)	One Day
Appointment of the Team	One Day

During the tender period, a tender assessment group requires to be assembled to evaluate the Technical Questionnaire returns. It is recommended that the group is a minimum of 2 and maximum of 4 persons. Each person should be asked to score the returns and the scores averaged to provide a "fair" assessment.

Following the receipt and evaluation of the tenders, the Client may wish to arrange interviews with the Tenderers' (only if this was previously notified to the Tenderers' as forming part of the evaluation process).

It is recommended that if this decision is made, then all tenders should be interviewed and questioned on pre-agreed questions which are consistent across all bidders. The interview panel should consist of a minimum of three and maximum of 6 interviewers, all of whom are conversant with the parameters of the project.

Following the interviews, the scores should be added to those of the Quality Questionnaires and the scores collated to ascertain who the successful Tenderer will be. At the same time as appointing the successful Tenderer, the Client should write to all the unsuccessful Tenderers and give them each individual feedback in regard to their tenders.

Once the Team has been appointed, they can be briefed to carry out the Feasibility Study/ Options Appraisal, which will be utilised in order to seek approval to proceed to the next Stage- Outline Brief.

Outline Brief Stage – Procurement of Design Team (Full Service)

Following the approval of the project to proceed to the outline brief stage, the Project Team can proceed to develop the project in more detail.

Extending the Design Team Contract

If a Design Team has been appointed to work on Stages A/B of the project, and if the institution is happy to allow them to continue, then their appointment can be extended to the rest of the Project **only** if the total value of their service is below the EU Procurement threshold and this possibility was included within the original tender. However, if the value of the service is above that of the threshold, or this was not included within the original tender then the institution may not extend the appointment and must carry out a procurement exercise to obtain Design Team Services for the remainder of the Project.

Small to Medium Projects

If due to the size of the project, the Client has not as yet appointed a Design Team, but has carried out the feasibility stage of the project, in-house, then now is the time to appoint the team, with due regard to the EU procurement thresholds. If the value of the services is below the threshold then the procurement methodology outlined above can be followed, if not then one of the following methodologies will apply:

Method One: Procurement through the OGC Framework:

This method involves the procurement of the Design Team Services utilising the Framework agreement set up by the OGC's Buying Solutions.

The Framework for Project Management and Full Design Team Services (RM 457) provides a comprehensive range of project management and design services for all types of capital projects, of any size or value. Use of this framework is recommended for all Clients in the Public Sector, and is encouraged by SFC as a viable option for institutions.

This framework has already been through an OJEU tendering and assessment process and complies with all EU Procurement law and regulation. Initial rates and percentages for specific project values and procurement options are already established within the framework, however, to ensure best value for money, a mini competition amongst the 12 suppliers on the framework is recommended.

Benefits to the Client are:-

- Ability to call off more quickly, if time is a challenge;
- Initial pricing, rates and costs are available;
- pre-tended through OJEU, and therefore the timescales involved in procuring through the framework are considerable shorter than going through the OJEU process;
- Moving projects forward more quickly as well as saving resources;

The Framework is PM led, and 12 companies are on the framework that can provide the full range of services required. The Client can select from one, a restricted group or all 12 (on the basis of a mini-tender) to obtain Design Team Services.

There are two main routes:

Without further Competition- when the Client has very specific requirements that only one company on the Framework can deliver (very rarely used and only where the Client can defend the decision).

With Further Competition – used where the Client is unable to determine a sole provider. In this case, an invitation is issued to all companies on the framework and a shortlist selected based on the Client's criteria. This is the most commonly used process.

The Framework is very flexible, and the Client can choose the approach that best suits the individual project to select the Design Team.

The approach is at the discretion of the Client, and can be as simple or complicated as desired. Buying Solutions can provide advice at to the best approach to be taken to suit each individual project. However, the cornerstone of utilising the Framework is to make the process as simple as possible, therefore the client is encouraged to select the simplest method. A typical programme of relevant actions is given below;

	Action	Description	Timescale
1	Short listing	The Client issues a short Qualitative Questionnaire to all 12 companies on the Framework in order to shortlist to 3 or 4 who are best placed to deliver the required Service. (At the same time he Client prepares the tender documentation for the next stage.)	1 week
2	Selection	The Client assesses the returns and selects 3 or 4 Companies to go to the next stage.	1 Week
3	Tender	The Client issues the tender to the shortlisted companies , detailing the extent of services required (in this case presumed to be full Design Team Services	2 weeks
4	Assessment Period	The Client assesses the tenders based on their selected criteria (as the cost of the services is already re-tendered – it is recommended that the evaluation is based on 40% cost/ 60 % quality)	2 weeks
5	Award	The Client awards the contract to the selected Team	One day
6	Service	Provision of Service commences	

As seen above, the process is relatively quick. The periods given for each stage will depend on the size and the scope of the project and the resources available to the Client in preparing and assessing the tender documentation.

Once the contract has been awarded, the Client should provide feedback to the unsuccessful Teams.

Method Two: Procurement through the Official Journal of the European Union (OJEU)

The methodology for procuring Design Team Services through the OJEU procedure is lengthy and complex in comparison with utilising the Buying Solutions framework.

The most commonly used method is the Restricted Process; this allows the Client to “restrict “the tender process to a select group of service providers, following a pre-tender Qualification Stage. This methodology is most suited to the selection of a Design Team as it gives the Client the most control over the selection process, and is recommended.

Method Three: Framework Agreement Tendered by Institution

Framework agreements are useful if the Client has a programme of works which constitutes of a defined number of projects over a set period of time. The advantage to the Client is that there is no requirement for constant re-tendering as long as the contract conditions remain unchanged. This approach requires an effort to be made at the beginning of the programme to set up the Framework, however, benefits are subsequently reaped as the Client can obtain Design Team services quickly for the subsequent development programme. Where contract conditions are changed, the Client can set up mini-competitions within the framework to make their choice of Design Team. The Framework agreement must be managed in accordance with EU procurement rules, therefore the methodology used for setting up the Framework is based on Method Two above (OJEU).

Framework agreements are beneficial due to the speed of procurement, improved working relationships with Design Teams and no requirement to tender each individual project.

The downside is that it takes time to complete the process and the terms of the contract have to be defined in advance and ensuring they are suitable for the majority of projects in the clients development programme. The Client needs to have a defined development programme of capital projects at the outset.

Procurement of the Main Contractor

OGC states that the primary consideration in the procurement of construction projects is the need to obtain best value for money. Although, this is normally the prime driver, the Client also needs to bear in mind the relative importance of other criteria in preparing the procurement strategy, those being:

- **Time-** an early completion can be achieved if construction is commenced before the design is fully completed. However, this approach can attract risk in terms of cost certainty.
- **Cost** – the importance of cost certainty at various stages of the procurement process.
- **Quality** – The quality characteristics that are required of the building will have an impact on the cost and the timescale. Some procurement strategies enable the Client to control the quality in detail, whilst others reduce the client's ability to both control and make changes to the building's specification.
- **Risk-** the Clients willingness to take on risk.
- There are three parts to managing the Procurement process, these are :
    - **Procurement Strategy** – this will identify the best way of achieving the project objectives, bearing in mind the four issues noted above.
    - **Choice or Form of Contract** – choosing the most suitable form of contract to deliver the project.
    - **Procurement Route** – The actions required to carry out the Procurement Strategy

Procurement Route for Main Contractor

Once the procurement strategy has been agreed, the Client needs to decide on the appropriate method to procure the Main Contractors Services.

There are Three Procurement routes:

Below the OJEU Threshold

The process is similar to that of the Design Team Procurement except for the fact that the tender documentation is prepared by the project QS, with assistance from the Design Team. The basi process is as follows;

The Client makes the decision to tender the project. The stage at which this will be done is dependent on the procurement strategy that has been selected. For instance for a Design & Build Contract, procurement will commence after Stage D (Detail Design) is completed, while for a Traditional approach Tender Action will be commenced after Stage F (Full Production Information).

Before sanctioning the commencement of Tender Action, the Client should have completed Decision Point Gateway Three - Pre-tender stage. In order to pass this point the key parameters of the project require to be revisited. It is essential that it is confirmed that the project is still meeting its objectives , that a robust cost check has been carried out , the business case reviewed (if necessary) and the programme reviewed. Only once the Decision Point Three Review has been successfully completed, the project can be moved to Tender Stage.

The Client requires to ascertain if the value of the project exceeds that of the EU Threshold for Works. If it does then procurement has to be carried out using the OJEU tendering methodology or the OGC Framework. If it does not, then the Client can take the following steps to carry out the tender action:

1. Design Team and Client Select Contractors

The first step is to identify the Contractors who will be invited to Tender. This can be done by seeking recommendation from the Design Team, for example using Constructionline to identify suitable qualified contractors, or basing the list on previous experience of capital project procurement. Depending upon the value (as per "Minimum contract values requiring publicity")

It is normal to select a maximum of 6 companies to tender. Once the shortlist is selected, it is advisable to carry out financial checks on each contractor. Additionally, the Client may wish to send out a pre-qualification questionnaire to each contractor on the long list.

The Client will then evaluate the responses with the assistance of the Design Team before making the final selection. The Client may also wish to interview the contractors before agreeing the final shortlist. If pre-qualification questionnaires or interviews have not been used, the contractors should be contacted prior to the tenders being sent out to confirm their interest to tender for the project.

2. Client and Team to agree Form of Contract to be used

The Client should consult with the PM and QS to decide on the preferred form of contract. The most commonly used forms are JCT and NEC3. (further information on Form of Contract is provided in page 12)

3. QS and PM to agree preliminaries, contract conditions with Client

Once the form of contract has been decided on, the QS and PM will work with the Client to prepare the preliminaries and to adjust the contract conditions to suit the needs of the individual contract. In some situations, the Client may also wish to consult with their legal representative before concluding the Contract documents.

4. Tender documents are compiled by QS and Design Team

The Design Team prepares the tender documents which include, the contract documents, forms of tender, production drawings (the level of information depends on the procurement strategy that has been developed). The Client liaises with Design Team to agree the level of information that is required.

5. Tender documents are sent out by QS

The Client and the Project Team will fix the deadline for tender returns. This is normally four weeks, but can be extended or shortened dependant on the complexity and size of the project.

6. Contractors price works

Whilst contractors are pricing works, it is normal to request further clarifications. Any queries should be directed to the Project Team for response unless they are concerned with Client matters, such as site access, working hours etc.

7. Tenders returned to Client

Tenders are returned to the Client by the agreed deadline. Any tenders that are received after the deadline cannot be opened. The Client should arrange for a formal tender opening attended by relevant senior officers, including a representative from the Finance/Audit office. The results of the tender should be recorded on an Official Record of Tender sheet. The opened tenders should then be handed to the QS for assessment.

8. Tender Report

The QS will assess the tender returns and prepare a tender report, this can take from one to two weeks, dependant if there are errors or anomalies in the tender returns which will require clarification with the Tenderers. It is normal that tenders are assessed on a financial basis only, whilst for OJEU tenders, a quality assessment is also normally included as part of the tender.

9. Appointment of Contractor

The Client will make their choice and appoint the contractor. This should be formalised in writing. At the same time as appointing the successful Tenderer, the Client should write to all the unsuccessful Tenderers and give them each individual feedback in regard to their tenders.

Above the OJEU threshold

If the value of the works is above the OJEU threshold then the OJEU procurement procedure requires to be followed. The methodology for procuring Main Contractor through the OJEU procedure is lengthy and complex in comparison with utilising a framework agreement.

There are two commonly used approaches to tendering, these are:

- Open Procedure - Any business can bid.
- Restricted Procedure – Again any business can bid, however, bidders are subject to pre-qualification or pre-tender filter.

The most commonly utilised method is the Restricted Process. This allows the Client to “restrict “the tender process to a select group of service providers, following a pre-tender qualification stage. This methodology is most suited to the selection of a contractor as it gives the Client the most control over the selection process, and is recommended.

Typical Timescales

A typical timescale for the entire process is set out below, however, it is important to remember that this timescale does not reflect the time and effort required developing the specifications, requirements and documents required, only the timescales once these have been developed and the advert issued:

As noted previously the process is lengthy and typically takes a minimum of almost four months from start to finish.

Tender Procedure

1. Publish the Contract Notice on Public Contracts Scotland and in European Tender Journal

The Client lodges an electronic notice on Public Contracts Scotland to invite notices of interest from interested tenders. The notice will identify the Client, (Contracting Authority), Title of Project, type of contract, short

description, scope, value, duration, splits, type of procedure, legal and technical requirements and award criteria.

2. Pre-tender Qualification Stage

Prospective tenderers' have (37 days reduced by 7 if electronic contract notice is utilised) that is 30 days to respond to the Client's invitation and to return a Pre Qualification Questionnaire (PQQ),which the Client sends to each tenderer on receipt of their expression of interest. A sample PQQ for use with contractors is provided in Appendix E.

The PQQs are returned on the due date and the Client will assess these with the assistance of the Project Team (if required) to make up a shortlist for the next stage. The Client should keep a record of this process, as contractors may ask for feedback if they have not been selected to move to the next stage. It is normal to shortlist to a maximum of 6 companies only.

3. Tender Stage and Documentation

The Design Team prepare the Tender Documents (this is normally done so that it is completed by the time that the PQQ assessment has been done).The documentation will include, the Contract Documents, Forms of Tender, Production Drawings (the level of information depends on the Procurement Strategy that has been developed- that is whether the Contract is to be Traditional, Design and Build or otherwise). Client will liaise with Design Team to agree the level of information that is required. It is normal for the tenders to be assessed on a Cost and Quality basis. The usual proportion that is selected is Cost (40%) and Quality (60%). The tender documents will therefore include a Quality Questionnaire (see Appendix F for a sample Contractor Questionnaire) which will require to be returned by the Tenderers as part of their tender return. The evaluation Criteria must be included in the tender documentation so that the Tenderers are all aware of how the tenders will be judged.

Once the shortlist has been agreed and the tender documentation is complete, the Quantity Surveyor will send the Tender Documentation to each Tenderer.

The Tenderers have 40 days to return their tender documentation. (This is reduced to 35 Days if electronic notice is used)

4. Tender return

The tenders will be returned to the Client by the agreed deadline. Any tenders that are received after the deadline cannot be opened. The Client should arrange for a formal tender opening attended by relevant senior officers, including a representative from the Finance/Audit office.

5. Tender Evaluation and Report

The opened tenders will be handed to the QS for assessment in regard to the financial evaluation. The Client and the Design Team will assess the quality return. It is usual for up to four parties, one of which should be a representative from the institution, to act as Assessors, and the scores averaged to prevent any biased scoring.

The QS will assess the financial tender returns and prepare a tender report, this can take from two to four weeks, dependant if there are errors or anomalies in the tender returns which will require to be clarified with the Tenderers.

The financial and quality scores are combined to complete the selection process.

Contractor Interviews

Once the Client has received the tender report, a decision requires to be made on which contractor to appoint. In most cases this will be the lowest tenderer, however, the Client is under no obligation to do so. The normal parameters are to accept the lowest economically advantageous tender. The Client may wish to interview the tenderers, before making the final decision. The tender documentation should state that the Client intends to interview the Contractors to give them prior knowledge. All Contractors who have provided tenders must be interviewed. A predefined list of interview questions should be agreed and distributed to the Contractors prior to the interview. It is also normal to ask the Contractors to make a PowerPoint presentation as part of the Interview process.

The Client and Project Team should be present at all interviews and score the performance of the contractors. This score should be combined with the quality scores taken from the tender return and a final evaluation made.

6. The Tender Award

Once the evaluation process has been completed, the Client requires to make arrangements for the appointment of the successful Tenderer. In most cases this will be the lowest Tenderer, but the Client is under no obligation to do this. The normal parameters are to accept the Lowest economically advantageous tender, firmly based on the tender evaluation criteria and the results of the tender assessment and scoring.

7. Notification of Award Decision and the Standstill Period

The mandatory standstill period means that a period of not less than 10 calendar days must elapse between the written communication of the award decision and contract commencement. This communication must be issued at the same time to all tenderers' and, for a Restricted Procedure, to all unsuccessful PQQ applicants. The mandatory standstill period begins the day after the award decision is notified to all tenderers' in writing by either fax or e-mail.

Tenderers' and PQQ applicant are entitled to request a debrief which must be undertaken within prescribed timeframes. Guidance is contained in the Procurement Route process flowchart.

http://www.scotland.gov.uk/Topics/Government/Procurement/buyer-information/spdlowlevel/routetwotoolkit/contractaward/contractawardnotification

Contract Award Notice

Following the successful completion of the standstill period and within 48 days of award of contract a notice of Contract Award Notice must be published through the Public Contracts Scotland Portal (or other means) to OJEU.

It is imperative that records are kept of all stages, as unsuccessful Tenderers are entitled to receive feedback on their tender submissions, and it not unknown for legal challenges to be made, if procedures have not been followed properly or have not been perceived to be clear cut by the Tenderers.

Framework Agreements

Framework Agreements are useful if the Client has a large programme of works which constitutes a defined number of projects over a set period of time. The advantage to the Client is that there is no requirement for constant re-tendering as long as the contract conditions remain unchanged. This approach requires an effort to be made at the beginning of the Programme to set up the Framework, but benefits are subsequently reaped

as the Client can obtain Contractors services quickly for the subsequent Development Programme. Where contract conditions are changed, the Client can set up mini-competitions within the framework to make their choice of Contractor. The Framework agreement must be managed in accordance with EU procurement rules. Use of the Framework Agreement can result in significant savings in terms of timescale and resources as the Client can call-off the services that are required dependant on the terms of the Contract.

The following table provides an overview of the Pros and cons of Framework Agreements.

Positives:

- Quick appointment of Contractor;
- Savings in time in resources;
- Improved working relationships with Contractors;
- No requirement to tender each individual project;
- Continuous improvement by transferring knowledge from one project to the next;

Negatives:

- Time and effort in setting up the Framework;
- Client needs to have a defined Development Programme over a set period of time;

Framework Agreements are normally set up for a fixed term for instance three to four years and on set Contractual Conditions, which should be set on the basis of:

- Incentivising the contractors to improve performance. Requiring the Client to asses risks at the beginning of the project, and choose the service providers best suited to managing the risk;
- Partnering agreements, to promote continuous improvement;

In order to set up a Framework Agreement, the OJEU tendering procedure (as described above) is used. The crucial issue is in the preparation of the Tender documentation, so that the Clients Contractual requirements are clearly described, and have been assessed as being valid for the entire duration of the agreement. The wording of the contract is of primary importance, and should include risk allocation, procedure for problem resolution, and methodology for how the parties will work together, the scope of the relationship. Standard forms of Contract are in existence and it is recommended that these are utilised with minor amendments as required to facilitate the process. The Client also needs to provide the Tenderers with a schedule of all the projects that it is anticipate will be delivered during the term of the Agreement.

The procedure to set up and monitor the framework is lengthy and can be onerous, although for a Client who commissions multiple projects, the benefits will quickly become apparent .It is not cost affective for a client who will commission only a few projects during the period of the Framework.

Further information on Framework Agreements can be found in OGC's Achieving Excellence in Construction Guide 06: Procurement and Contract Strategies.

Appendix A: Project Managers Checklist

Item	Stage	Action
1	Feasibility	Project Request Received from Department and Project No. Allocated
2	Feasibility	Initial Meeting with Department
3	Feasibility	Prepare Outline Brief
4	Feasibility	Obtain approval to Appoint Consultants
5	Feasibility	Carry out Feasibility Study/ Options Appraisal
6	Feasibility	Project Initiation Document prepared - including indicative cost, programme, fabric and services issues, risk, outline procurement strategy defined including enabling works
7	Feasibility	Approval to Proceed with Project
8	Detailed Design	Prepare Project Execution Plan (for large complex projects) including budget, detailed delivery programme, detailed procurement plan and risk register
9	Detailed Design	Survey & Site Investigation Works
10	Detailed Design	Review briefing information
11	Detailed Design	Consultation with Maintenance/ fire/safety/disability
12	Detailed Design	Develop design based upon scope, prepare furniture and room layouts,co-ordinate design information
13	Detailed Design	Review Costs and Programme
14	Detailed Design	Submit Planning Applications and Building Warrant if Required
15	Detailed Design	Review of Detailed Design
16	Procurement	Monitor progress with Building Warrant/Planning and note any conditions or relaxation requirements.
17	Procurement	Update programme and Costs
18	Procurement	Procurement Strategy
19	Procurement	Tender Documentation
20	Procurement	Health & Safety plan prepared - minimum one week prior to tender issue. Review proposed method of Construction with Safety Services
21	Procurement	Tender Action
22	Procurement	Tender return - tender review and receipt of tender report
23	Procurement	Approval to appoint Contractor
24	Procurement	Obtain Contractors Performance Bond, review warranties/novations and formal contract.
25	Mobilisation/ Construction	Ensure Building Warrant/Planning received.
26	Mobilisation/ Construction	Obtain Final version of Contractors Health & Safety Construction Phase plan.
27	Mobilisation/ Construction	Appoint Clerk of Works if required
28	Mobilisation/ Construction	Obtain insurances, CIS certificates, names of personnel, valuation dates.
29	Mobilisation/ Construction	Pre-start meeting
30	Mobilisation/ Construction	Ensure that the working area is clear and that all required staff have been decanted minimum one week before work commences on site

31	Mobilisation/ Construction	Review Contractors programme, information required schedule
32	Mobilisation/ Construction	Agree Site compound and Contractors access
33	Mobilisation/ Construction	Clerk of works - monitor on site construction and progress and ensure quality standards are achieved
34	Mobilisation/ Construction	Finalise furniture layouts, shelving and equipment requirements
35	Mobilisation/ Construction	Monitor overall progress, manage risk, identify and resolve problems ,review and monitor Change control and issue of variations, receive and process invoices
36	Mobilisation/ Construction	Review Contractors progress report, cost reports and monthly progress statements
37	Handover	Obtain Contractors commissioning and training programme including, testing& commissioning, dates of snagging inspections, training programme dates, O&M and Health & Safety Handover Dates
38	Handover	Finalise arrangements for removals connection of phones and IT etc
39	Handover	Carry out final walk round snagging inspection with Project Team, obtain, Practical Completion Certificate, electrical and fire alarm test certificates, Building Warrant completion certificate or certificate of occupation.
40	Handover	Training for Staff
41	Handover	Furniture & Equipment installation
42	Handover	Obtain Health and Safety File and Final O&M manuals
43	Handover	Handover of Completed Works
44	Handover	Carry out six month defects inspection.
45	Handover	Final defects inspection and issue of Final Certificate.
46	Handover	Approve agreement of Final Account.
47	Handover	Post Project Review

Appendix B Sample Project Cost Plan

PROJECT COST PLAN					12th June 2009
Project Number:	PRJ XXX				
Project Title:	Refurbishment of First Floor Offices				
Area (m2):	415 M2			Cost /M2:	£750
Description		Detail	Budget Cost excl vat	Budget Cost incl vat AT 17.5%	Totals
Construction Works					
1	Main Contract Works	Estimate	£311,250	£365,719	
2	Landscaping	Allowance	£25,000	£29,375	
3	Asbestos Removal	Allowance	£15,000	£17,625	
4	Inflation	2.0%	£6,225	£7,314	
5	Risk Allowance	2.0%	£6,725	£7,902	
6	Construction Work Contingency	3.0%	£9,338	£10,972	
			£373,538	£438,907	£438,907
Design Team & Fees					
7	Project Manager	1.0%	£3,735	£4,389	
8	Quantity Surveyor	1.5%	£5,603	£6,584	
9	Integrated Design Team	8.5%	£31,751	£37,307	
10	Specialist Consultants	1.0%	£3,735	£4,389	
11	Surveys & Investigations	Allowance	£5,000	£5,875	
12	BREEAM/Sustainability Advisor	Allowance	£10,000	£11,750	
13	Planning Application	Allowance	£3,000	£3,525	
14	Building Warrant	Allowance	£4,000	£4,700	
15	External Clerk of Works / Inspections	Allowance	£15,000	£17,625	
16	Solicitors / Legal Advice	Allowance	£0	£0	
17	Fees Contingency	2%	£1,636	£1,923	
			£83,461	£98,067	£98,067
Project Costs					
18	IT & Communications Systems	allowance	£25,000	£29,375	
19	Audio Visual Equipment	allowance	£25,000	£29,375	
20	Furniture	allowance	£50,000	£58,750	
21	Equipment - Loose & Fixed	allowance	£25,000	£29,375	
22	Signage	allowance	£5,000	£5,875	
23	Fire Fighting Equipment	allowance	£5,000	£5,875	
24	Sundries	allowance	£25,000	£29,375	
25	Relocations/Removals	allowance	£20,000	£23,500	

26	Temporary Accommodation	allowance	£0	£0	
27	Project Costs Contingency	2.00%	£3,600	£4,230	
			£183,600	£215,730	£215,730
		TOTAL PROJECT BUDGET :			£752,703

Appendix C Sample Questions for Design Team Selection

1	**Please give full title of each Consultant (Team Member) and any former trading names (if any)**
2	What is the trading status of each Consultant?
3	Address of registered office for each Consultant.
4	Address of office where the service will be provided (if different from 4 above)
5	Is the firm registered to BS EN ISO 9000, 9001 or 9002? (Please state which)
6	If the Team Member's firm is a member of a group please provide the name and registered address of the head office
7	Please provide details of the number of partners and staffing levels of each Consultant's office.
8	Please provide brief *curriculum vitae* for the key members of staff from each consultant firm who will be engaged in the management and provision of service for this project.
9	Please provide bank or accountant's reference stating the financial standing of the company.
10	Please provide details of following insurances : Professional Indemnity Insurance Employers Liability Insurance Public Liability Insurance
11	Within the last 3 years, has any member of the Team had to pay financial penalties or had payment deducted arising from failure to perform in accordance with contractual obligations?
12	Within the last 3 years, has any member of the Team had a contract terminated or withdrawn from a contract prematurely or had a contract renewal refused, for failure to perform to the terms of the contract
13	Within the last 3 years, have there been any court actions and/or employment tribunal hearings outstanding against your company?
14	If the answer to any of questions 13-15 is Yes, please provide details
15	Please provide details of the methods and procedures for staff training
16	Please confirm that you operate an Equal Opportunities Policy
17	Please provide an organisational chart showing the relationships between the members of the Project Team and the level of authority afforded to each member.
18	Please list 5 examples of similar services and range of building types the applicant Team has worked on over the past 5 years. Details to include: description of work, value of contract to firm and the value of the completed project. State who in the Team had responsibility for each example
19	Please provide a brief method statement not more than 2 A4 sheets illustrating how the Team' would propose to deliver the service under this project.(include how the project would be resourced and how effective communication with and feedback to the Client would be ensured at the various stages of the project
20	How does the Team envisage controlling the Programme
21	How does the Team envisage controlling costs
22	How does the Team envisage controlling quality on site
23	Please provide evidence of the Teams ability to keep to programme and budget by means of reference to examples of work of a similar nature undertaken by the Team.
24	Please provide list of any awards that the Team has received within the last 5 years

25	Please provide details of any supplementary professional and/or technical skills that the Team can provide to support those of the main disciplines.
26	Please provide evidence that the Team is innovative and at the leading edge of its field. *Particular reference should be made to the firm's quality of service and deliverables*
27	Please provide examples of any BREEAM rated buildings or Highly sustainable projects that the Team have been involved in during last 3 years
28	What does the Team see as the 3 major successes over the past 3 years? And why?

Appendix D Sample Quality Questionnaire for Integrated Design Teams

1 Over View of the Service Provider **Weighting: 20%**
1.1 Team Structure - in light of the proposed workload and range of projects within the Framework please provide your proposed structure, outlining roles and responsibilities and your relationship to the University, Project Manager and Quality Surveyor. (Note the University would not generally anticipate separate teams being created for minor projects, planned maintenance and major projects). (No more than one side of A4).
1.2 CV's – please provide CV's for each key team member (not more than one page long per team member). Including a brief statement on why you believe the Team Members are specifically for work on the Framework.
1.3 – Team Leader – please outline the role of the Team Leader, explaining their ability to manage the proposed Framework commission and the specific skills they will provide (no more than 350 words).
2 Experience and Track Record **Weighting: 20%**
2.1 Provide details, in relation to the proposed range, size and number of projects in the Frameworks, of the Proposed Integrated Design Team members track record of successfully delivering projects of a similar type, and establishing successful relationships with Clients, Contractors etc. (Projects should preferably be in the Higher Education sector, Further Education or other specifically relevant live environment. (No more than 500 words).
2.2 Please provide a specific list of the main issues from your experience in delivering Frameworks of the type proposed and your proposed response to managing these. (No more than 300 words).
3 Approach to Service Delivery **Weighting: 40%**
3.1 In relation to the Method Statement provided in your Pre-qualification Questionnaire please outline your approach to delivering a range of projects over a number of years to achieve a consolidated investment approach that raises value in the University's estate. (Note a co-ordinated team response is required rather than individual submissions from members of your integrated Design Team. (No more than 500 words).
3.2 Please provide details on your approach to identifying and managing CDM and Health & Safety issues e.g. planning work to separate access for Contractors and Staff, Students and the Public. (no more than 300 words)

Appendix E Sample PPQ for Contractor Selection

OJEU Contractors Pre-Qualification Questionnaire	
Ref	Questions
1	Name and address of the company in whose name the tender would be submitted.
2	Contact name, telephone and fax number for the purposes of this tender.
3	Registered address if different from above.
4	Are you a member of Constructionline? If so, please state reference.
5	Registered number of company.
6	What is the trading status of the firm i.e. plc, partnership etc.
7	When was the company founded and incorporated in the UK where applicable.
8	If the company in question 1 is part of a group please provide the name and address of the group headquarters.
9	Are there any court actions and/or employment tribunal hearings outstanding against your company? Have there been any such actions in the last 3 years?
10	Do any of the circumstances set out in the Council Directive 93/37/EEC and the Public Works Contracts Regulations 1991 as amended "Criteria for Rejection of Contractors" apply to your company? If yes please provide details.
11	Please indicate the annual turnover of your organisation over the last three years. If your organisation is part of a group, please provide figures for both the organisation and the group.
12	Please provide audited accounts for your own organisation and the groups where applicable for the last three years.
13	Provide details of any significant post Balance Sheet events if not apparent from the most recent Accounts.
14	Please provide the value of current contracts on site or within the defects liability period and which will still be outstanding on the date when this project is due to start.
15	Would the company named in question 1 have available the resources of other companies in the group to help it undertake this project?
16	Please provide the name and address of your bankers and indicate if they may be approached for a reference.
17	Please indicate the principal areas of business of your organisation.
18	Please indicate the total number of permanent staff employed by your organisation broken down as follows:-
	> Managerial
	> Administrative Support
	> Operational Skilled
	> Operational Unskilled
19	Please provide CVs of the senior staff who would be allocated to this project if you were successful.
20	Provide a separate management chart showing the relationship between differing levels of staff within the team
21	Please provide details of quality assurance accreditation that your company holds or has held.

22	Please indicate the professional bodies or organisations your company belongs to.
23	Please provide the names and addresses of 3 organisations (at least two of whom should be past clients) who would provide the University with a reference relating to your organisation for this type of construction. References should include: Customers names and address and contact name with number
24	Outline your experience in procuring the construction of projects of a similar nature i.e. catering/ retail in the last 5 years and indicate their construction values and locations.
25	Within the last 3 years, has your company had to pay financial penalties or had payment deducted from monies arising from failure to perform in accordance with contractual obligations? If yes please provide details.
26	Provide details of any outstanding claims, disputes, litigation arbitration or adjudication where the potential liability exceeds £0.5 million in which you or any associated company is currently involved.
27	Please list the number and type of policies your organisation holds in respect of professional indemnity. The details should include Insurer Name : : Employers Liability : Public Liability :
28	Please provide details of your organisations Health and Safety policies and note how you would manage the Health and Safety issues on this project with particular emphasis on safety of on-site personnel both those employed by you and those employed by the College
29	Detail any prosecutions or enforceable actions in relation to Health and Safety that have been raised against you or any associated company within the last 5 years
30	Specify the number of Reportable Injuries, Diseases and Dangerous Occurrences that you or any associated companies have reported over the past 5 years.
31	Describe your company's system for vetting and approval of subcontractors, including Health & Safety Competence provision of Method Statements, Risk Assessments, Instruction and Training, all as will apply to this project.
32	Provide details of the nature of parent company or other guarantees of performance that would be available over the term of the contract.
33	A project such as this will have a large amount of complex services. How will you manage the co-ordination of the contractors' detail design, fabrication and installation of services?
34	How will you manage the process of testing, commissioning and demonstrating all of the services and taking possession of the completed building including demonstration of all of the services to College employees?
35	Please state if you hold a current CIS certificate or registration card and state type (CIS4, CIS5 or CIS6).

Appendix F Sample Quality Questionnaire for Contractor Selection

1	**OVERVIEW OF THE SERVICE PROVIDER** **Weighting 25%**
1.1	**Team Structure** **Please provide your proposed structure outlining roles and responsibilities (including health & safety, sustainability) and your team's relationship to other project stakeholders (University, PM, QS, IDT etc.).**
1.2	**CV's** **Please provide CV's for each key member (not more than one page long per team member). Including brief statement on why you believe the Team Members are specifically suitable for work on the Framework.**
1.3	**Resource Histogram** **Please provide a resource histogram for this project as described within the tender document depicting the resource levels required for the scope of works defined to meet the programme for the various team members identified in E1.1.**
1.4	**Project Director** **Please outline role of Project Director, explaining their ability to manage this project and the specific skills they will provide. (No more than 200 words)**
2	**EXPERIENCE AND TRACK RECORD** **Weighting 25%**
2.1	**Relevant Experience** **Please highlight projects completed during the previous 5 years which are in a similar nature to those identified within the tender document.**
2.2	**Lessons Learned** **From the projects listed in E2.1 identify areas where you have revised methodology / procedures as a result of these works to improve efficiency Company wide. (No more than 200 words).**
3	**APPROACH TO SERVICE DELIVERY** **Weighting 30%**
3.1	**Programme** **Having reviewed the scope of works contained, please provide a Gantt programme indicating your proposed sequence of working through the completion of the design, works procurement and actual construction and handover of this project.**
3.2	**Method Statement** **With reference to question E3.1 please provide a brief method statement outlining your proposed methodology for the delivery of this project as described within the tender documents. The Tenderer may wish to make reference to areas such as, Interaction with design team through precontract period, Methods to provide best value, M&E Services ties ins and Commissioning & Handover. (No more than 250 words per project).**

3.3	**Key Issues** **What do you believe are the key issues and challenges that require to be addressed in successfully completing this project? (No more than 250 words).**
3.4	**Management of Quality** **Please outline your approach to managing and monitoring the quality of services provided to ensure that measureable continuous improvement is delivered. (No more than 250 words)**

4	**SUSTAINABILITY** **Weighting 20%**
4.1	**Please Provide Details of your Sustainability Policy and examples of recently completed projects which demonstrate your commitment to Sustainable Issues.**

References

Scottish Funding Council Documentation (all documents are available on the Scottish Funding Council Website):

- Estate strategy guidance, Circular SFC/34/2007 , 20/07/2007
- Published by the Scottish Funding Council
- SCOTTISH FUNDING COUNCIL CAPITAL PROJECTS :DECISION POINT PROCESS, 2009,
- Guidance on the Effective Management of Space for Scotland's Colleges,
- Sustainable Development Guidance for Estate Management,
- Payment of Capital Grant Guidance

Other Relevant Publications:

RIBA Plan of Work

Published by RIBA Publications

Code of Practice for Project Management for Construction and Development

Published by Blackwell Publishing

A Client's Guide to Health & Safety for a construction Project

Published by RIBA publications

CDM 2007, Guidance for Small, One-off and Infrequent Clients

Published by HSE

THE GREEN BOOK-Appraisal and Evaluation in Central Government

Published by HM Treasury (treasury Guidance)

"Value for Money Assessment Guidance"

Scottish Government

Achieving Excellence in Construction

OGC Guidance Documentation

The Green Guide to the Architect's Job Book, by Sandy Halliday,

RIBA publications

Rough Guide to Sustainability (3rd Edition) by Brian Edwards,

RIBA Enterprises.