

**B.Sc Civil
Engineering**

CONTRACT



Project & Contract Management CE 206

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Civil Engineering Contracts

Procurement Routes:

- Procurement is the process of purchasing goods or services.
- There are many different routes by which the design and construction of a building can be procured.
- The selected procurement route should follow a strategy which fits the long-term objectives of the client's business plan.
- Considerations are likely to include:
 1. Speed.
 2. Cost.
 3. Quality.
 4. Specific project constraints.
 5. Risk.
 6. Asset ownership.
 7. Financing.

Traditional Procurement Route:

- The 'traditional' procurement route, sometimes referred to as 'design bid build' (or 'bid build' by contractors) remains the most commonly used method of procuring building works.
- The client first appoints consultants to design the project in detail, and then prepare tender documentation, including drawings, work schedules and bills of quantities. Contractors are then invited to submit tenders for the construction of the project, usually on a single-stage, competitive basis. This may be referred to as a 'traditional contract'.
- The contractor is not responsible for the design

Traditional Procurement Route:

- Traditional construction contracts are most commonly **lump-sum contracts**, however, **measurement contracts** and **cost reimbursement contracts** can also be used for 'traditional' projects where design and construction are separate, sequential activities.
- It is considered to be a low risk method of contracting for the client, as the contractor takes the financial risk for construction.
- However, if design information is incomplete at tender, or if significant variations are required after the contractor has been appointed, the cost to the client can be significant. Because of this, and because of the separation of design and construction, traditional procurement can be seen as adversarial.

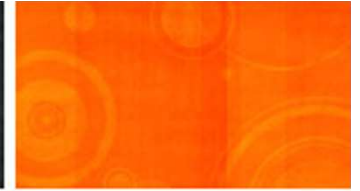
Design and build procurement route:

- In this procurement route, the main contractor is appointed to design and construct the works, as opposed to a traditional contract, where the client appoints consultants to design the development and then a contractor is appointed to construct the works.
- The contractor may use their own in-house designers to design the building, or they can appoint consultant designers, or the client's designers can be employed by the contractor to complete the design.
- It is one of the favourite procurement routes by the government for publicly-funded projects, as it allows a fully integrated team to work together on the project from the beginning.

Design and build procurement route:

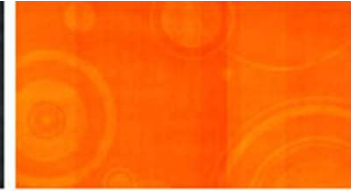
- Design and Build contracts can be awarded on a **fixed-price, lump-sum basis**, but price certainty is then dependent on not making any subsequent changes as these could prove to be expensive (as prices charged by the contractor for those changes will not be subject to competition).

Design build finance and operate (PPP / PFI / DBO / BOOT) procurement route:



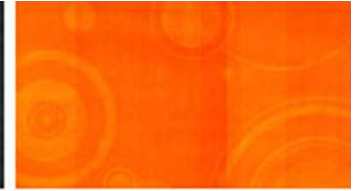
- Examples of a design build finance and operate procurement route may include public private partnerships (PPP) or private finance initiative (PFI), Design Build Operate (DBO) and Build Own Operate Transfer (BOOT) contracts.
- A single contractor with design, construction and facilities management expertise as well as funding capability is appointed to design and build the project and then to operate it for a period of time.
- The contractor finances the project and leases it to the client for an agreed period (perhaps 20-30 years) after which the development reverts to the client.

Engineering procurement and construction contract / Turnkey contract:



- EPC contracts sometimes called turnkey contracts are similar to design and build contracts, in that there is a single contract for the design and construction of the project, but generally with an EPC contract, the client has less say over the design of the project and the contractor takes
- On a design and build project, the client may produce an outline design upon which tenders are sought. On an EPC project, the client may seek tenders based on a performance specification and then have no input into the design, other than if variations are instructed. more risk.
- Generally, EPC contracts are used in engineering and infrastructure projects, or industrial projects, where the aesthetics of design might be considered less important to the client than performance and cost certainty.

Engineering procurement and construction contract / Turnkey contract:



- Payment can be on a **lump sum, cost reimbursable** basis, or some other basis, but generally the client would be likely to seek a **fixed price, lump sum agreement** where the responsibility for cost control is taken by the contractor.
- This gives the client a relatively risk-free arrangement, with one point of responsibility and cost certainty. They can therefore operate the contract with the minimum resource.
- The clients main risk lies in the definition of the specification upon which the contract is based. If the specification is not well developed and concise otherwise the quality and performance of the completed development may be compromised.

Typical Construction Contract Conditions/Clauses:

- A **contract clause** is a specific provision or section within a written **contract**.
- Each **clause** in a **contract** addresses a specific aspect related to the overall subject matter of the agreement.
- **Contract clauses** are aimed at clearly defining the duties, rights and privileges that each party has under the **contract** terms.
- Contract conditions set out the principal legal relationship between the parties to a construction project, determining the allocation of risk and consequently, price.
- Conditions of contract must be read in conjunction with specification documents, drawings bills of quantities, activity schedules and special conditions.



THANK
YOU

