

Higher Nationals

Construction and the Built Environment

Unit Study Guide

Unit 13: Tender & Procurement

**Higher National
Certificate** Lvl 4

**Higher National
Diploma** Lvl 5

Simon Topliss, Author
Geoffrey Makstutis, Editor



Pearson
BTEC

Edexcel, BTEC and LCCI qualifications

Edexcel, BTEC and LCCI qualifications are awarded by Pearson, the UK's largest awarding body offering academic and vocational qualifications that are globally recognised and benchmarked. For further information, please visit our qualifications website at qualifications.pearson.com. Alternatively, you can get in touch with us using the details on our contact us page at qualifications.pearson.com/contactus

About Pearson

Pearson is the world's leading learning company, with 35,000 employees in more than 70 countries working to help people of all ages to make measurable progress in their lives through learning. We put the learner at the centre of everything we do, because wherever learning flourishes, so do people. Find out more about how we can help you and your learners at qualifications.pearson.com

Simon Topliss, Author

Simon is a quantity surveyor and educator in construction and the built environment, with more than 25 years experience with BTEC qualifications. He has been involved in the development and teaching of construction qualifications at all levels. As an author, he has written books and publications on a range of different subjects in construction. He currently teaches at Leeds College of Building, where he develops curriculum to support students in the journey to professional practice in the construction industry.

Geoffrey Makstutis, Editor

Geoffrey is the Subject Lead for Construction, Art & Design and Creative Media Production; at Pearson. He is an architect and educator with more than 25 years experience in higher education and professional practice. He has worked in architectural practices in the US and UK on projects; ranging from small residential to large commercial and cultural institutions, around the world. He has taught, lectured and external examined in the US, UK, Spain, Hong Kong and South Africa. He is also the author of books and articles on architecture, construction, art and education.

References to third-party material made in this specification are made in good faith. Pearson does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)

ISBN 978-1-83961-266-4

All the material in this publication is copyright
© Pearson Education Limited 2020

Exploring Learning Outcomes and Assessment Criteria



Through this section of the Study Guide we will examine each LO in more detail, We will seek to establish an approach to exploring the associated Essential Content and how this may inform our understanding of the relationship between the Essential Content and the Assessment Criteria, that will be used to measure our achievement of the learning outcome.

This unit contains four learning outcomes as follows

1. Define what constitutes a tender and the information required for this process.
2. Explain the procedures and contractual arrangements for tendering.
3. Analyse the factors that affect the selection of construction procurement methods.
4. Calculate an estimate for a work activity.

LO1 Define what constitutes a tender and the information required for this process

Essential Content

Topic: Information required to produce a tender

What information (drawings, specification, schedules) are necessary to include in a tender package?

Does the tender process need to be managed formally?

How will you confirm what you have sent?

How can you record the whole process to ensure integrity of tenders?

How many drawings do you send?

Can tendering be done paperless?

Will a site visit be required?

Things to Remember

A tender can take many different forms and needs to be formally defined; often using defined standards and methods; either institutionally-defined, industry-standards, or government required.

Tendering must be a fair and equal process for all; so no complaints can be raised if a public contract is been tendered. In public contracts, such as those for a Government body, it is of paramount importance that the tender process can be audited, to ensure a fair and equal treatment for all those submitting tenders. The process must also be transparent; allowing all parties to see and understand the process of review and decision-making.

Time for preparation and tendering must be planned and organised as part of the tendering process. Depending on the size of the project, the process can taking many weeks or months. Since a construction project will usually have an expected overall time, from inception to completion, the amount of time taken in preparing a tender may have an impact on the amount of time that is available to prepare tender submissions. It is, therefore, crucial that all those involved have a clear understanding of the return date and time (E.G. "...all tenders are to be returned by 5pm on 26 May 2019"). As part of the transparency and fairness of the process, there is a need to clearly set-out and adhere to the return date and time, and any late tender submissions will not be considered in the subsequent consideration of tenders.

Topic: Constraints on Tendering

What do we mean by 'constraint'?

Is time a constraint in the tender process? Why/Why not?

Is quality a constraint? How might this be defined?

How will I establish what are tendering common constraints?

Things to Remember

A constraint is anything that may prevent the smooth operation of the tendering process and the ability of the process to result in a fair outcome.

Constraints must be identified and defined so that the tender process can be planned with an understanding of the potential risks posed by a constraint.

Constraints can be caused by many different conditions. A client, for example, may define the tender period or the contract conditions such that they are onerous; resulting in fewer contractors submitting tenders or submitting tenders at a higher price (in order to ensure against the risk of onerous conditions).

Topic: Tendering Documentation

What types of drawings are required for a tender package?

How do you quantify the different elements required within a project?

What type of contract will the tender be based on?

How is BIM going to help tendering and procurement?

Things to Remember

As you will see, when looking at the Assessment Criteria, the range of tender documentation you explore needs to reflect a major project. In some cases, this may be a project that is given by your tutor. However, if you are asked to select a project, yourself, you will need to make sure that the project is of a scale and complexity that is appropriate. One simple way to ensure that you are working with a major project is to look for a project that has/had a construction cost over £1,000,000 (approximately \$1.3m). The requirement of a major project is to ensure that the following are suitably detailed to provide a broad you with a broad range of activities related to the unit:

- tender drawings
- tender specification or
- bills of quantities

Activity: Tender Preparation

The following projects are required to be sent out to tender. Prepare a list of information that will be required to be sent out with each tender package. Compare your two lists and consider the differences that arise from the different types of project.

Project 1

A maintenance contract on entrance and exit doors to supermarkets retail units for the North East region covering 60 stores. Contract requires 24 hr call out for door repairs to keep the retail units accessible for customers 2-hour response time is required to maintain security of the premises.

Project 2

The demolition of an existing structure and the rebuilding of a school, to include parking, a sports field and a community library. The contract will be a design and build type with a specialist main contractor brought in on a negotiated tender package. The specialist contractor has built six schools last year and the client wants to utilise this experience.

Assessment Criteria

LO1 Define what constitutes a tender and the information required for this process.	
Assessment Criteria	Areas for consideration
P1 <i>Explain</i> the information required to be produced prior to tendering.	<p>What is a tender seeking to communicate? What do you need to define this?</p> <p>Why do we have different sets of information for different tenders?</p> <p>Do I need to involve the client?</p>
P2 <i>Explain</i> the documentation required to formulate a tender for a major project.	<p>What is required to constitute a tender package?</p> <p>Note the fact that this AC refers to a 'major project'. You will need to ensure that you are working on a project of suitable size, scope and scale.</p>
P3 <i>Discuss</i> the potential benefits of Building Information Modelling in the tender and procurement process.	<p>Are you familiar with Building Information Modelling (BIM)?</p> <p>You may need to undertake some specific research to understand how BIM informs a tender process. (See the key resource links, below) You may benefit from reviewing the HN Unit Study guide for Unit 14: Building Information Modelling.</p>
M1 <i>Compare</i> the use of specifications and bills of quantities as tendering methods used for a privately funded project.	<p>How does a bill of quantities differ from a specification?</p> <p>Can we use both for a tender?</p> <p>How do these lead to different outcomes when used in a tender process?</p> <p>Are drawings required for both?</p>
D1 <i>Critically evaluate</i> the use of specifications or bills of quantities in terms of providing a competitive tender.	<p>Having compared specifications and bills of quantities (in M1), this AC asks you to go further in your investigations and consider the way that these are used in a competitive tender.</p> <p>Take note of the use of the term 'critically'. To be critical means that you must consider the matter in greater detail; contrasting the advantages and the disadvantages, with reasoned argument and justification.</p>



In the assessment criteria above, we have italicised the command verbs. These are the operative words that give you a clear indication of what you are asked to evidence to achieve the criteria. A full list of command verbs is included in Appendix 1. It is strongly recommended that you carefully review the definitions of the command verbs and what they suggest; particularly in terms of the type of work that you might need to produce.

Take note of the use of the term 'critically'. To be critical means that you must consider the matter in greater detail; contrasting the advantages and the disadvantages, with reasoned argument and justification.



Activity: Critical Analysis

There are two methods of quantifying work that can be used to tender for projects:

- a bill of quantities
- a specification without quantities

Both, of the above, also require tender drawings, in order to form the tender information.

Search the web to obtain copies of a simple bill of quantities and a sample specification. As you read through these, prepare a tabulated comparison; highlighting the key similarities and differences.

Based on your tabulated comparison, try to answer the following questions, providing justification and reasoned argument for your response:

- Which is more appropriate to calculating prices?
- Which can ensure a minimum level of quality?
- Which is more useful to a main contractor?



Backing up a statement by a citation or reference to a quotation or external source is considered good practice in Higher Education.

Remember: always reference your sources as plagiarism software will pick up unacknowledged sources that you have used.