

Unit 25: Undertake Contract Management in the Land-based Industries

Unit code:	R/600/9962
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

This unit aims to provide learners with an understanding of how to undertake contract management in the land-based industries manage heritage gardens and arboreta and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

● Unit introduction

All aspects of land-based industries require the use of contracts to supply services or products. It is therefore essential that learners have a working knowledge of contract management, regardless of whether they will be working in the future as suppliers or purchasers, clients or contractors.

This unit links to all of the units in this qualification as it is important that the specification writer (specifier) has a detailed knowledge of the industry for which they are writing. Knowledge of working practices, materials, contracts and bills of quantities are essential to write concise, accurate and unambiguous specifications.

Learners will consider the foundation of the planning process. They will look at how planning affects projects and what grant aids are available for projects and study contracts and management plans. They will examine how contracts affect their roles and responsibilities and how management plans determine the sequence of events.

Learners will develop their understanding of the function of preliminaries and specifications in relation to the land-based industries and learn how to estimate and cost land-based projects. They will also look at bills of quantities and the materials and activities appropriate to specific land-based projects.

Finally, learners will study the estimating and costing process in land-based industries. Learners will calculate costs and rates, and assess materials for quality, conformity, condition and supply.

● Learning outcomes

On completion of this unit a learner should:

- 1 Understand UK planning and legislative regulations and the effects of European law relating to a specific land-based industry
- 2 Be able to develop contracts and plan projects
- 3 Understand the function of preliminaries and specifications
- 4 Be able to estimate and cost land-based projects
- 5 Understand the estimation and costing of land-based projects.

Unit content

1 Understand UK planning and legislative regulations and the effects of European law relating to a specific land-based industry

Legislation: current relevant legislation and codes of practice eg Law of Tort and Law of Contract, Health and Safety at Work etc Act 1974, Food and Environment Protection Act (FEPA) 1985, Control of Substances Hazardous to Health (COSHH), Provision and Use of Work Equipment Regulations (PUWER) 1998, Construction (Design and Management) (CDM) Regulations 1994; risk assessments; role of the Health and Safety Executive; Town and Country Planning Act 1990; building regulations; role of the planning department of the local authority; Highways Act 1980; listed buildings

2 Be able to develop contracts and plan projects

Construction projects: client's brief; investigation stage; design stage; production of documentation and estimates; tender stage; selection of contractors; awarding of contract; construction; practical completion and handover; defects liability; maintenance; final certification

Maintenance projects: assessing demand; policies and standards; financial constraints; preparation of documents; tender stage; selection of contractors; award contract; maintenance stage and payments; review of contract; renewal/re-tender of contract

Roles and relationships of those involved in a contract: client; contractor; sub-contractor; nominated suppliers and contractors; architects; surveyors; quantity surveyors; clients agents; clerk of works; project managers; craftspeople

Types of contract: management contracts; cost plus; approximate quantities; lump sum; design build; package deals

3 Understand the function of preliminaries and specifications

Specification writing: passing to the contractor information on quality and type of materials; standards of workmanship; prime cost items; use of drawings; clarity of wording; correct use of technical language; British Standards; Common Arrangement of Work Sections (CAWS)

Preliminaries: general definitions; health and safety; working rules and general organisation of the contract; sheds; storage; general standards of work and behaviour; insurance; disposal of waste; access; programme of work; supervision; nominated contractors and suppliers; notices and fees

Contract documentation: compiling all parts so that they work coherently for a given project; drawings; specifications; preliminaries; bills of quantities; conditions of contract/standard form of agreement; letter of invitation; instructions to tenderers; form of tender; variation orders; interim certificates; final certificates

4 Be able to estimate and cost land-based projects

Bills of quantities: CAWS; Standard Method of Measurement 7 (SMM7); taking off measurements from drawings; approximate quantities; schedule of rates

Estimating: pricing up bills of quantities; sources of estimation data; prime costs; unit rates; overheads; machinery rates; labour rates

Quoting for contract: requirements of specifications and conditions of contract or standard form of agreements; health and safety; supervision; profit margins; time scales; site restrictions; completing forms of tender

5 Understand the estimation and costing of land-based projects

Estimating and costing: sources of data; standard minute values; material and activities costings; cost of labour; cost of non-work items; determining rate; presenting costs; material and product quality; material and product conformity; material and product condition; material and product supply

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 evaluate the main legislative framework relating to a specific land-based industry [IE]	M1 explain the planning process for a selected project to meet given objectives	D1 prepare and present a planning application for a selected project with in the land-based industry, taking into account the project plan and contracts needed
P2 describe the roles of councils and local authorities in planning and how to obtain planning permission		
P3 summarise sources of grant aid and funding for land-based projects		
P4 describe the roles of public bodies in influencing projects within land-based industries		
P5 prepare contracts and detailed specifications appropriate to specific projects	M2 evaluate selected types of contract and recommend a contract for a given situation	
P6 prepare a management plan		
P7 sequence operations for a land-based scheme		
P8 explain the contracting process, including types of contract and the roles and responsibilities of those involved		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P9 explain the significance of accurate and detailed specifications	M3 produce preliminaries and specifications for a selected project to meet given objectives	D2 produce a full set of contract documents for a selected project to meet given objectives.
P10 evaluate a range of media to convey specifications, that is appropriate for a specific land-based industry		
P11 summarise the preliminaries associated with a specific land-based project		
P12 prepare Bills of Quantities which cover all materials and activities appropriate to specific land-based projects	M4 quote against a selected set of contract documents.	
P13 produce resource estimates for specific projects [TW]		
P14 prepare a schedule of costs and a quote for specific projects		
P15 explain the stages and techniques in Preparing Bills of Quantity		
P16 identify sources of data and standard minute values to facilitate the costing of materials and activities		
P17 describe how to calculate the cost of measured work and non-work items		
P18 describe how to determine a rate and present costs		
P19 explain how to assess materials and products for quality, conformity, condition and supply. [RL]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Delivery of this unit will involve practical and written assessments, visits to suitable collections and will link to industrial experience placements.

Tutors delivering this unit have opportunities to use a wide range of techniques. Lectures, discussions, seminar presentations, site visits, supervised health, safety and welfare practicals, research using the internet and/or library resources and personal and/or industrial experience would all be relevant. Delivery should stimulate, motivate, educate and enthuse learners.

Work placements should be monitored regularly to ensure the quality of the learning experience. It would be beneficial if learners and supervisors were made aware of the requirements of this unit prior to any work-related activities so that naturally occurring evidence can be collected at the time. For example, learners may have the opportunity to carry out risk assessments and they should be encouraged to ask for observation records and/or witness statements to be provided as evidence of this. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Tutors should consider integrating the delivery, private study and assessment for this unit with other relevant units and assessment instruments learners are taking as part of their programme of study.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives an **indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
Assignment 1: Planning Processes (P1, P2, P3, P4, M1) Tutor introduces the assignment brief.
Planning legislation and role of councils and public bodies.
Funding and grants.
Assignment 2: Contracts and Management Plans (P5, P6, P7, P8, M2) Tutor introduces the assignment brief
Contracts, contract management, management plans.
Assignment 3: Planning Application and Project Plan (D1) Tutor introduces the assignment brief.
Specifications and preliminaries.
Assignment 4: Project Specifications (P9, P10, P11, P12, P13, P14, M3, M4, D2) Tutor introduces the assignment brief.
Bills of quantities, estimations, quotes and schedule of costs.

Topic and suggested assignments/activities and/assessment

Assignment 5: Costings (P15, P16, P17, P19)

Tutor introduces the assignment brief.

Sources of data and minute values.

Calculation of rates and cost.

Assessment of materials and products for quality, conformity, condition and supply.

Unit review.

Assessment

For P1, learners must evaluate the main legislative framework relating to land-based industry. Tutors should identify the business or agree it through discussion with learners. The business may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For P2, the learners will need to describe the role that councils and local authorities play in the planning process, and how to obtain planning permission.

For P3 learners, must summarise sources of grant aid and funding for land-based projects. Tutors should identify the project or agree it through discussion with learners. The business may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

P4 requires learners to describe the influence public bodies have on projects going through the planning process, and the roles of public bodies within the planning process. The activities may be the same as those used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

P5 requires learners to prepare contracts and detailed specifications appropriate to specific projects. The activities may be the same as those used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For P6, learners must produce a development plan for a project. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

P7 requires learners to produce a sequence of operations for a project which they are working on. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For P8, learners need to explain the contracting process, including the different types of contract and the roles and responsibilities which go with the contract.

P9 and P10 require learners to explain the significance of accurate and detailed specification, and to evaluate the range of media to convey specification. Learners may need differing media for this task, and the tutor should supply as much information as possible.

For P11, learners must summarise the preliminaries associated with a specific project. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For P12, P13 and P14, allows learners need to prepare and produce a Bill of Quantities for materials and activities, resource estimates, schedule of costs and an estimate for a project. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

P15 and P16 require learners to identify sources of data and standard minute values to facilitate the costing of materials and activities. In order to do this, learners need access to sufficient material and products. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For P17 and P18, learners need to describe the calculation of cost of measured work and determination rate. Learners need to present these costs in an appropriate format. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners

For P19, learners need to explain how to assess materials and products for quality, conformity, condition and supply. In order to do this, learners must have access to sufficient material and products.

M1 requires learners to explain the planning process of a selected project. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For M2, learners need to evaluate different contracts and recommend a contract for a given project. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

M3 requires learners to produce preliminaries and specifications for a selected project to meet given objectives. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For M4, learners must produce a quote from a selected set of contract documents. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

For D1, learners must prepare and present a planning application for a selected project as agreed with the tutor. The project must take into account the project plan and the types of contract needed. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

D2 requires learners to produce a full set of contract documents for a selected project. Tutors should identify the project or agree it through discussion with learners. The project may be the same as that used to provide evidence for other grading criteria. Where possible, to ensure fairness of assessment the size and complexity of the tasks should be the same for all learners.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, P4, M1	Planning Processes	<p>You are required to explain to your boss the process and purpose of planning. In order to do this you must produce a presentation to include the following:</p> <ol style="list-style-type: none"> the legislative planning framework relating to the land based industry the roles councils and local authorities have in planning and how to obtain planning permission what sources of grant aid are available for funding projects describe the role public bodies have on influencing projects <p>You are also required to explain the planning process for a selected project.</p>	<p>Oral/visual presentation.</p> <p>Written assessment.</p>
P5, P6, P7, P8, M2	Contracts and Management Plans	<p>For a selected project produce a contract as well as a management plan and sequence of operations. Also explain the contracting process, the types of contract and the roles and responsibilities of those involved.</p> <p>From the differing types of contract, select one type of contract which would be most beneficial for the project and evaluate its use over other types of contract.</p>	<p>Oral/visual presentation.</p> <p>Written assessment.</p>
D1	Planning Application and Project Plan	<p>You are required to submit a planning application for a project. You must include your planning application, the project plan and any contracts that will be needed.</p>	<p>Oral/visual presentation.</p> <p>Written assignment.</p>
P9, P10, P11, P12, P13, P14, M3, M4, D2	Project Specifications	<p>Using a selected project explain the significance of accurate detailed specifications for the project. Evaluate a range of media to convey the specifications, and summarise the preliminaries associated with the selected project.</p> <p>From the information gathered from the above, produce a set of preliminaries and specifications for the selected project.</p> <p>For the selected project, prepare a bill of quantities, resource estimates, a quote for the project and a full contract for the given project.</p>	<p>Oral/visual presentation.</p> <p>Written assessment.</p> <p>Witness statement.</p> <p>Peer assessment.</p>

Criteria covered	Assignment title	Scenario	Assessment method
PI5, PI6, PI7, PI8, PI9	Costings	<p>For a project in the land-based industry, produce sources of data and standard minute values to facilitate the costings of materials and activities, show how to calculate the costs of measured work and non-work items and give examples, and show how to calculate and determine the rate and present these costs</p> <p>You also need to explain how to assess materials and products for quality, conformity, condition and supply.</p>	<p>Oral/visual presentation.</p> <p>Written assessment.</p>

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Land-based sector suite. This unit has particular links with:

Level 2	Level 3
Undertake Work Related Experience in the Land-based Industries	Undertake and Review Work Experience in the Land-based Industries

Essential resources

Learners will need access to good library resources and good contacts with local authorities and contractors. They will also need live projects to link into.

Indicative reading for learners

Textbooks

Ashworth A – *Contractual Procedures in the Construction Industry, 5th Edition* (Prentice Hall, 2005)
ISBN 9780131298279

Dibb S, Simkin L, Pride W and Ferrell O – *Marketing Concepts and Strategies* (Houghton Mifflin, 2005)
ISBN 9780618532032

Dyson J – *Accounting for Non-Accounting Students* (FT Prentice Hall, 2003) ISBN 9780273683858

Gillespie A – *Business in Action* (Hodder Arnold, 2002) ISBN 9780340848203

Jones R, Raffo C and Hall D – *Business Studies, 3rd Edition* (Causeway Press, 2004) ISBN 9781902796833

Mason R – *Finance for Non-financial Managers in a Week, 3rd Edition* (Hodder Arnold, 2003)
ISBN 9780340849620

Websites

www.hse.gov.uk

Health and Safety Executive

www.jncc.gov.uk

Joint Nature Conservation Committee

www.netregs.gov.uk/netregs/legislation

Environment Agency

www.opsi.gov.uk

Office of Public Sector Information

www.planningportal.gov.uk

Planning Portal

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	preparing a planning application document explaining the planning process
Reflective learners	discussing the planning process
Team workers	working on the planning application.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	calculating costings and bills of quantities
Creative thinkers	producing presentations for costings and planning applications
Reflective learners	receiving feedback from peers and tutor for presentations
Team workers	working on the planning application form
Self-managers	managing their workload to complete the assignments on time
Effective participators	discussing costings and rates when they give presentations of their own findings.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	producing costings and bills of quantities,
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	producing quotes and costings
Bring together information to suit content and purpose	producing quotes and costings presenting projects
Present information in ways that are fit for purpose and audience	presenting planning application
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	