

# Unit 30: Undertake Contract Management in the Land-based Industries

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

## ● 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.

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 look at contracts and management plans. They will look at 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 industry and enable them to estimate and cost Land-based projects, they will also look bills of quantities and the materials and activities appropriate to specific land-based projects

Finally learners will research the estimating and costing process in the land-based industry. Learners will be able to calculate costs, 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

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### 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 hand over; defects liability; maintenance; final certification

*Maintenance projects:* assess 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 surveyor; clients agents; clerk of works; project managers; craftsmen

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

*Estimating:* pricing-up of 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

*Sources of data; standard minute values; material and activities costings; cost of labour; cost of non-work items; determine rate; present 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 assessment 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:
<b>P1</b> evaluate the main legislative framework relating to a specific land-based industry [IE]	<b>M1</b> explain the planning process for a selected project to meet given objectives	<b>D1</b> 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
<b>P2</b> describe the roles of councils and local authorities in planning and how to obtain planning permission		
<b>P3</b> summarise sources of grant aid and funding for land-based projects		
<b>P4</b> describe the roles of public bodies in influencing projects within land-based industries		
<b>P5</b> prepare contracts and detailed specifications appropriate to specific projects	<b>M2</b> evaluate selected types of contract and recommend a contract for a given situation	
<b>P6</b> prepare a management plan		
<b>P7</b> sequence operations for a land-based scheme		
<b>P8</b> 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:	
<b>P9</b> explain the significance of accurate and detailed specifications	<b>M3</b> produce preliminaries and specifications for a selected project to meet given objectives	<b>D2</b> produce a full set of contract documents for a selected project to meet given objectives.	
<b>P10</b> evaluate a range of media to convey specifications, that is appropriate for a specific land-based industry			
<b>P11</b> summarise the preliminaries associated with a specific land-based project			
<b>P12</b> prepare Bills of Quantities which cover all materials and activities appropriate to specific land-based projects	<b>M4</b> quote against a selected set of contract documents.		
<b>P13</b> produce resource estimates for specific projects [TW]			
<b>P14</b> prepare a schedule of costs and a quote for specific projects			
<b>P15</b> explain the stages and techniques in preparing Bills of Quantity			
<b>P16</b> identify sources of data and standard minute values to facilitate the costing of materials and activities			
<b>P17</b> describe how to calculate the cost of measured work and non-work items			
<b>P18</b> describe how to determine a rate and present costs			
<b>P19</b> explain how to assess materials and products for quality, conformity, condition and supply. [RL]			

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

<b>Key</b>	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 assessments, written assessment, visits to suitable collections and will have links to industrial experience placements.

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

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

Work placements should be monitored regularly in order 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.

Whichever delivery methods are used, it is essential that tutors stress the impact of health, safety and welfare on employers and employees.

Health and safety issues relating to working in repair workshops and in the field must be stressed and regularly reinforced, and risk assessments must be undertaken prior to practical activities.

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.

The learning outcomes are directly linked. These are likely to be delivered through formal lectures, discussion, site visits and independent learner research. Tutors could concentrate their delivery around certain land-based technology businesses or facilities, for example a college's own engineering workshops.

## 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.

Topic and suggested assignments/activities and/assessment
<b>Assignment 2: Contracts and Management Plans</b> (P5, P6, P7, P8, M2) Tutor introduces the assignment brief Contracts, contract management, management plans.
<b>Assignment 3: Planning Application and Project Plan</b> (D1) Tutor introduces the assignment brief. Specifications and preliminaries.
<b>Assignment 4: Function of Preliminaries and Specification, Estimation and Cost of Land-based Industries</b> (P9, P10, P11, P12, P13, P14, M3, M4, D2) Tutor introduces the assignment brief. Bills of quantity, estimations, quotes and schedule of costs.
<b>Assignment 5: Costings</b> (P15, P16, P17, P18, 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 be able to evaluate the main legislation frame work relating to the 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 and size of the complexity of the tasks should be the same for all learners.

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

P3 learners will look at and be able to summarise sources of grant aid and funding for land-based projects. 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 and size of the complexity of the tasks should be the same for all learners.

P4 learners will be able to describe the influence public bodies have on projects going through the planning process, and be able to describe public bodies roles 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 will enable 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.

P6 learners will be able to 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 and size of the complexity of the tasks should be the same for all learners.

P7 learners will be able 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 and size of the complexity of the tasks should be the same for all learners.

P8 will enable the learner to explain the contracting process, including the different types of contract and the roles and responsibilities which go with the contract.

P9 and P10 will enable the learner to explain the significance of accurate and detailed specification, and also 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.

P11 learners will be able to 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 and size of the complexity of the tasks should be the same for all learners.

P12, P13 and P14 allows the learner to prepare and produce a Bill of Quantities for materials and activities, resources 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 and size of the complexity of the tasks should be the same for all learners.

P15 and P16 learners will be able to identify sources of data and standard minute values to facilitate the costing of materials and activities. In order to do this the learner must have 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 and size of the complexity of the tasks should be the same for all learners

P17 and P18 the learner will be able to calculate the cost of measured work and determine a rate. The learner will also be able to present these cost 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 and size of the complexity of the tasks should be the same for all learners

P19 learners will be able to assess materials and products for quality, conformity, condition and supply. In order to do this the learner must have access to sufficient material and products.

M1 learners will be able 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 and size of the complexity of the tasks should be the same for all learners.

M2 will enable the learner 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 and size of the complexity of the tasks should be the same for all learners.

M3 learners will produce preliminaries and specifications for a selected project to meet given objectives as agreed with the tutor. 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 and size of the complexity of the tasks should be the same for all learners.

M4 learners will be able to 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 and size of the complexity of the tasks should be the same for all learners.

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 and size of the complexity of the tasks should be the same for all learners.

D2 learners will be able to produce a full set of contract documents for a selected project as agreed with the tutor. 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 and size of the 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 show your boss to include the following:</p> <ul style="list-style-type: none"> <li>i) the legislative planning framework relating to the Land-based industry</li> <li>ii) the roles councils and local authorities have in planning and how to obtain planning</li> <li>iii) What sources of grant aid are available for funding projects</li> <li>iv) describe the role public bodies have on influencing projects</li> </ul> <p>You are also required to explain the planning process for a selected project as agreed with your tutor.</p>	Oral/visual presentation, written assessment.
P5, P6, P7, P8, M2	Contracts and Management Plans	<p>For a project as selected with your tutor, produce a contract for the project as well as a management plan, a sequence of operations. Also explain the contracting process and 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>	Oral/visual presentation, written assessment.
D1	Planning Application and Project Plan	You are required to submit a planning application for a project as agreed with your tutor. You must include your planning application, the project plan and any contracts that will be needed.	Oral/visual presentation, written assignment.

Criteria covered	Assignment title	Scenario	Assessment method
P9, P10, P11, P12, P13, P14, M3, M4, D2	Function of Preliminaries and Specification, Estimation and Cost of Land-based Industries	<p>1.) Using a selected project (as agreed with your tutor)</p> <p>i) explain the significance of accurate detailed specifications for the project.</p> <p>ii) Evaluate a range of media to convey the specifications, and summarise the preliminaries associated with the selected project.</p> <p>iii) From the information gathered from the two questions above produce a set of preliminaries and specifications for the selected project.</p> <p>2.) For the selected project prepare a bill of quantities and produce resource estimates and a quote for the project.</p> <p>3.) From the information gathered from questions 1 and 2, produce a full contract for the given project.</p>	Oral/visual presentation, written assessment, witness statement, peer assessment.
P15, P16, P17, P18, P19	Costings	<p>You are undertaking a project as agreed with your tutor for a project in the land-based industry. For the project produce the following information:</p> <p>i) Sources of data and standard minute values to facilitate the costings of materials and activities</p> <p>ii) Show how to calculate the costs of measured work and non-work items and give examples</p> <p>iii) show how to calculate and determine the rate and present these costs</p> <p>iv) Explain how to assess materials and products for quality, conformity, condition and supply</p>	Oral/visual presentation, written assessment.

## 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 0131298275

Dibb S, Simkin L, Pride W and Ferrell O – *Marketing Concepts and Strategies* (Houghton Mifflin, 2005)  
ISBN 061853203X

Dyson J – *Accounting for Non-Accounting Students* (FT Prentice Hall, 2003) ISBN 0273683853

Gillespie A – *Business in Action* (Hodder Arnold, 2002) ISBN 0340848200

Jones R, Raffo C and Hall D – *Business Studies, 3rd Edition* (Causeway Press, 2004) ISBN 1902796837

Mason R – *Finance for Non-financial Managers in a Week, 3rd Edition* (Hodder Arnold, 2003)  
ISBN 0340849622

### Websites

[www.direct.gov.uk/RightsAndResponsibilities](http://www.direct.gov.uk/RightsAndResponsibilities)

DirectGov: Rights and Responsibilities

[www.hse.gov.uk](http://www.hse.gov.uk)

Health and Safety Executive

[www.jncc.gov.uk](http://www.jncc.gov.uk)

Joint Nature Conservation Committee

[www.netregs.gov.uk/netregs/legislation](http://www.netregs.gov.uk/netregs/legislation)

Environment Agency

[www.planningportal.gov.uk](http://www.planningportal.gov.uk)

UK Planning System

[www.uk-legislation.hmso.gov.uk](http://www.uk-legislation.hmso.gov.uk)

Office of Public Sector Information

## 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 ...
<b>Independent enquirers</b>	preparing a planning application document explaining the planning process
<b>Reflective learners</b>	discussing the planning process
<b>Team workers</b>	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 ...
<b>Independent enquirers</b>	calculating costings and bills of quantity
<b>Creative thinkers</b>	producing presentations for costings and planning applications
<b>Reflective learners</b>	receiving feedback from peers and tutor for presentations
<b>Team workers</b>	working on the planning application form
<b>Self-managers</b>	managing their workload to complete the assignments on time
<b>Effective participators</b>	discussing costings and rates when they give presentations of their own findings.

## ● Functional Skills – Level 2

Skill	When learners are ...
<b>ICT – Use ICT systems</b>	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	producing costings and bills of quantise
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	
<b>ICT – Find and select information</b>	
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	
<b>ICT – Develop, present and communicate information</b>	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> <li>• text and tables</li> <li>• images</li> <li>• numbers</li> <li>• records</li> </ul>	producing quotes and costings
Bring together information to suit content and purpose	producing quotes and costings, presentation of project
Present information in ways that are fit for purpose and audience	presentation of 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 ...
<b>Mathematics</b>	
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	
<b>English</b>	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	