

# Unit 15: Undertake Estate Skills

<b>Unit code:</b>	<b>Y/600/9610</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 introduce learners to the estate skills and knowledge and how these can be applied in practice. It is designed for learners in centre-based settings looking to progress into the sector or onto further/higher education.

## ● Unit introduction

The environmental and land-based sector requires employees with a range of appropriate skills to enable them to construct, maintain and repair estate features such as structures and surfaces. Employees in the sector also need to be familiar with health and safety legislation which underlies all types of work. This unit provides the basic skills and knowledge to carry out practical estate work in the countryside and to understand the legislation governing it. The unit is as broad as possible to allow for regional variations and needs, for flexibility in working conditions and for varying environments.

Learners will explore the construction, repair and maintenance of boundaries, structures and surfaces. The unit will build learners' experience and confidence in using their practical skills in a range of situations. Project management skills, including knowledge of health and safety and environmental legislation, are also covered.

## ● Learning outcomes

**On completion of this unit a learner should:**

- 1 Be able to construct, repair or maintain boundaries
- 2 Be able to construct, repair or maintain structures
- 3 Be able to construct, repair or maintain surfaces
- 4 Be able to carry out practical habitat management work.

# Unit content

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## 1 Be able to construct, repair or maintain boundaries

*Boundaries:* fences eg post and wire fence, post and rail fence, rabbit fence, electric fence (temporary and permanent), netting, tape, rope, panel fence, chestnut paling, deer fence, security fence, board fence, hurdle fence; hedgerows, ditches; walls eg stone, brick, banks; dykes; rivers/canal bank; ha-ha

*Project management:* relevant current health and safety and environmental legislation eg Health and Safety at Work Act 1974; use of relevant tools, materials and machinery; costings and specifications, risk assessment; personal protective equipment (PPE)

## 2 Be able to construct, repair or maintain structures

*Structures:* types eg bollard/post, stile, gateway, basic bridge, door, window, pergola, arbour, planter, trellis, archway, steps, waymarkers, information sign/panel, table, bench, seat, cross country horse jump, showjump, slip rails, bat box, bird box, animal hutch/box/cage, bird cage, pest trap, sculpture/installation, living willow structure, drinking trough/system, feeder, boardwalk

*Project management:* relevant current health and safety and environmental legislation eg Health and Safety at Work Act 1974; use of relevant tools, materials and machinery; costings and specifications, risk assessment; PPE

## 3 Be able to construct, repair or maintain surfaces

*Surfaces:* types eg wood chip, concrete, gravel, soil, stone, grass, paving, rubber, bitumen, hoggin, decking, resin, geotextile

*Project management:* relevant current health and safety and environmental legislation eg Health and Safety at Work Act 1974; use of relevant tools, materials and machinery; costings and specifications, risk assessment; PPE

## 4 Be able to carry out practical habitat management work

*Manage selected habitats:* types eg woodland, scrub, grassland, marsh, saltmarsh, sand dune, fen, heathland, mire, bog, flush, swamp, standing water, moving water, arable land, buildings; introduction to management plans, prescriptions, management options and costings

*Project management:* relevant current health and safety and environmental legislation eg Health and Safety at Work Act 1974; use of relevant tools, materials and machinery; costings and specifications, risk assessment; PPE

## 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> prepare the site appropriately [TW, SM]	<b>M1</b> carry out the construction, repair or maintenance of selected boundaries efficiently to agreed deadlines and specifications	<b>D1</b> evaluate the construction, repair or maintenance of a selected boundary making recommendations for improvements where relevant
<b>P2</b> select appropriate equipment and materials [TW, SM]		
<b>P3</b> carry out the construction, repair or maintenance of selected boundaries to meet given specifications [TW, SM]		
<b>P4</b> prepare the structure appropriately [TW, SM]	<b>M2</b> carry out the construction, repair or maintenance of selected structures efficiently to agreed deadlines and specifications	<b>D2</b> evaluate the construction, repair or maintenance of a selected structure making recommendations for improvements where relevant
<b>P5</b> prepare and ready appropriate equipment and materials [TW, SM]		
<b>P6</b> carry out the construction, repair or maintenance of selected structures to meet given specifications [TW, SM]		
<b>P7</b> prepare the surface appropriately [TW, SM]	<b>M3</b> carry out the construction, repair or maintenance of selected surfaces efficiently to agreed deadlines and specifications	<b>D3</b> evaluate the construction, repair or maintenance of a selected surface making recommendations for improvements where relevant.
<b>P8</b> prepare and ready appropriate equipment and materials [TW, SM]		
<b>P9</b> carry out the construction, repair or maintenance of a selected surface to meet given specifications [TW, SM]		

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>P10</b> carry out appropriate risk assessments [IE]	<b>M4</b> discuss the management options for a selected habitat.	
<b>P11</b> safely carry out appropriate practical habitat management to given specifications [TW, SM]		
<b>P12</b> recommend improvements for future work. [IE, CT, RL, EP]		

**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

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## Delivery

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

Work experience placements should enable learners to gather naturally occurring evidence. For example learners may have the opportunity to carry out fence construction, repair or maintenance. They should be encouraged to ask for observation records and/or witness statements to be provided as evidence of this. Photographic and/or video evidence may also be useful.

Visiting expert speakers could add to the relevance of the subject for learners. For example a countryside manager could talk about their work, the situations they face and the methods they use.

It is essential that tutors stress the importance of environmental legislation and the need to manage the resource using legal methods whilst carrying out practical work. As legislation is constantly changing, the latest legislation must be considered and regional differences (for example to cover England, Scotland, Northern Ireland and Wales) need to be delivered as appropriate.

Health and safety issues must be stressed and regularly reinforced regularly and risk assessments must be undertaken before practical activities. Adequate PPE must be provided and used following the production of suitable risk assessments.

The learning outcomes focus on the practical skills necessary to work in the land-based industries and encompass the many regional variations of working practice, the locally occurring habitats and landscape types and the needs of local employers. They are likely to be delivered by a combination of lecture, demonstration and practical sessions.

Teaching of specialised practical skills is also possible within the unit content. For example, carpentry skills could be taught while building a structure such as a laying pen, Larsen trap, interpretation board or board walk.

Learners should be given the opportunity to carry out a range of construction, repair and maintenance tasks. Flexibility is allowed to cover for local requirements, the vocational area and seasonality, as it is not feasible to cover the entire listed unit content. However, tutors should be satisfied that learners are given every opportunity to experience as wide a range of tasks as possible.

## 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 to the unit, structure and programme of assignments.

**Assignment 1: Boundaries, Structures and Surfaces** (P1, P2, P3, P4, P5, P6, P7, P8, P9, M1, M2, M3, D1, D2, D3)

Tutor introduces the assignment.

Formal input: boundaries – types, legislation, health and safety, use of tools and equipment, risk assessments, PPE.

Formal input: structures – types, legislation, health and safety, use of tools and equipment, risk assessments, PPE.

Formal input: surfaces – types, legislation, health and safety, use of tools and equipment, risk assessments, PPE.

Visiting speakers (eg countryside managers, Wildlife Trust managers).

Visits to country estates.

Practical activities: boundaries.

Practical activities: structures.

Practical activities : surfaces.

Prepare and present materials for specification and written report.

**Assignment 2: Habitat Management** (P10, P11, P12, M4)

Tutor introduces the assignment.

Formal input: habitat types, legislation, health and safety, use of tools and equipment, risk assessments, PPE.

Visiting speakers (eg countryside managers, Wildlife Trust managers).

Practical activities: managing habitats.

Prepare and present materials for written prescription, evaluation and discussion.

Unit review.

## Assessment

Learners are required to construct, repair or maintain boundaries, structures and surfaces.

Learners are required to construct, repair or maintain a minimum of two different types of boundary. For P1 learners need to prepare the sites appropriately. P2 requires learners to select the appropriate equipment and materials and, for P3, to carry out the construction, repair or maintenance of a selected boundary to meet given specifications.

Learners are expected to construct, repair or maintain a minimum of two different types of structure. For P4, learners need to prepare the structures appropriately. P5 requires that learners prepare and ready the appropriate equipment and materials and, for P6, carry out the construction, repair or maintenance of a selected structure to meet given specifications.

Learners are expected to construct, repair or maintain a selected surface. For P7, learners are required to prepare the surface appropriately. P8 requires that learners prepare and ready the appropriate equipment and materials and, for P9, carry out the construction, repair or maintenance of a selected surface to meet given specifications. P10 requires learners to carry out appropriate risk assessments.

A suggested assessment for P1, P2, P3, P4, P5, P6, P7, P8, P9, and P10 could be to monitor and record practical activities undertaken throughout the delivery of the unit. This would involve learners completing a diary or work record. The activities should provide opportunities for the generation of evidence for M1, M2 and M3, in which learners should demonstrate clear competence of the practical work carried out as well as adherence to time and resource restraints. Witness statements/observer records of practical work carried out should be completed by assessors or supervisors. Authentic photographic and/or video evidence may also be appropriate.

For P11, learners are required to carry out habitat management safely to given specifications and, for P12, make recommendations for improvements for future work. This would involve learners completing a diary or work record. Witness statements/observer records should also be completed by assessors or supervisors. Photographic and/or video evidence may also be appropriate. The activities should provide opportunities for the generation of evidence for M4 which could be in the form of written prescription for the management suggested for a selected habitat.

D1, D2 and D3 require learners to evaluate different estate work activities. Evidence could be through a discussion recorded during practical activities or a presentation/report.

### 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, P5, P6, P7, P8, P9, M1, M2, M3, D1, D2, D3	Boundaries, Structures and Surfaces	<p>You have been employed as an assistant groundskeeper on a large country estate. Part of your work involves the construction, repair and maintenance of the boundaries, structures and surfaces within the estate.</p> <p>You must demonstrate that you can construct, repair or maintain a minimum of two different types of boundary, two different types of structure and one selected surface. You should produce your evidence as a written diary of work undertaken. In your diary include details as to how you prepared the site, selected and prepared appropriate equipment and how you carried out the work. You must ask your supervisor/assessor to validate your diary and provide witness statements where appropriate. Photographic and video evidence should also be included where relevant.</p> <p>Devise a record form for risk assessments and carry out a risk assessment for one of the activities you have undertaken as part of this assignment.</p> <p>For one of the activities you have undertaken for this assignment you must prepare a full written specification for the project to meet given objectives.</p>	<p>Practical assessment.</p> <p>Written record.</p> <p>Photographic/video evidence.</p> <p>Witness statements/observations.</p> <p>Risk assessments.</p> <p>Written specification.</p> <p>Written report.</p>

Criteria covered	Assignment title	Scenario	Assessment method
		Produce a short written report which evaluates one of the activities you have undertaken for this assignment. You must include recommendations for future improvements.	
P10, P11, P12, M4	Habitat Management	<p>Part of your work at the estate involves managing habitats. You will choose one habitat and produce a risk assessment for its management.</p> <p>You must demonstrate that you can manage a selected habitat.</p> <p>You should produce your evidence as a written diary of work undertaken. In your diary include details as to how you safely carried out appropriate habitat management to given specifications. You must ask your supervisor/assessor to validate your diary and provide witness statements where appropriate. Photographic and video evidence should also be included where relevant.</p> <p>You must prepare a written prescription for the management undertaken at your selected habitat. List and describe the actions taken and evaluate and discuss the options for the practical management of the selected habitat.</p>	<p>Risk assessments.</p> <p>Practical assessment.</p> <p>Written record.</p> <p>Photographic/video evidence.</p> <p>Witness statements/ observations.</p> <p>Written prescription/ report.</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-related Experience in the Land-based Industries
Participate in Providing Estate Maintenance	<p>Element CU20.1 Maintain structures and surfaces</p> <p>Element CU20.2 Repair structures and surfaces</p>
	<p>Element CU22.1 Construct, maintain and repair boundaries</p> <p>Element CU22.2 Construct, maintain and repair access points</p>



## Essential resources

Learners will need access to sites or an area of land where practical work can be undertaken. They will also need a sufficient range and quantity of hand tools, materials, machinery and PPE..

## Employer engagement and vocational contexts

Visits to large estates, and visiting speakers for example countryside managers, local Wildlife Trust officers and relevant work experience placements will enhance the delivery of this unit.

## Indicative reading for learners

### Textbooks

Agate E (ed), Brooks A and Adcock S – *Dry Stone Walling: A Practical Handbook* (BTCV, 1999) ISBN 9780946752195

Agate E – *Fencing: A Practical Handbook* (BTCV, 2001) ISBN 9780946752294

Agate E – *Footpaths: A Practical Handbook* (BTCV, 2001) ISBN 0946752311

Agate E and Brooks A – *Hedging: A Practical Handbook* (BTCV, 1998) ISBN 9780946752171

Agate E (ed) – *Tree Planting and Aftercare: A Practical Handbook* (BTCV, 2001) ISBN 9780946752256

Agate E – *Tool care: A Maintenance and Workshop Manual* (BTCV, 2000) ISBN 9780946752249

Agate E – *Waterways & Wetlands: A Practical Handbook* (BTCV, 2001) ISBN 0946752303

Agate E (ed) – *Woodlands: A Practical Handbook* (BTCV, 2002) ISBN 0946752338

Ekarius C – *How to Build Animal Housing* (The Crowood Press Ltd, 2006) ISBN 9781580175272

Maclean M – *Hedges and Hedgelaying – A Guide to Planting, Management and Conservation* (The Crowood Press, 2006) ISBN 9781861268686

Stokes A – *Health and Safety Overview for Practical Conservation Project: A Guide to Good Practice for Conservation Groups and Land Managers* (BCTV, 1999)

### Websites

<a href="http://www.btcv.org.uk">www.btcv.org.uk</a>	British Trust for Conservation Volunteers
<a href="http://www.defra.gov.uk">www.defra.gov.uk</a>	Department for Environment, Food and Rural Affairs
<a href="http://www.hse.gov.uk">www.hse.gov.uk</a>	Health and Safety Executive
<a href="http://www.lantra.co.uk">www.lantra.co.uk</a>	Lantra Sector Skills Council
<a href="http://www.wildlifetrusts.co.uk">www.wildlifetrusts.co.uk</a>	The Wildlife Trusts

## 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>	carrying out risk assessments and recommending improvements for future work
<b>Reflective learners</b>	recommending improvements for future work
<b>Team workers</b>	constructing, repairing or maintaining boundaries, structures and surfaces and managing habitats
<b>Self-managers</b>	constructing, repairing or maintaining boundaries, structures and surfaces and managing habitats
<b>Creative thinkers</b>	trying to find solutions to problems they come up against
<b>Effective participators</b>	taking part in discussions regarding the work that needs to be completed.

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>	carrying out research for their assignment work
<b>Reflective learners</b>	evaluating the work they have carried out
<b>Team workers</b>	working with others to construct, repair or maintain boundaries, structures of surfaces or manage habitats
<b>Self-managers</b>	planning their time for the work that needs to be completed.

## ● 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	using ICT systems to research information for the assignments
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	action planning and monitoring work that needs to be completed
Manage information storage to enable efficient retrieval	saving information into files and folders
Follow and understand the need for safety and security practices	safely using ICT systems – sitting correctly at the computer, keeping food and drink away from computer equipment
<b>ICT – Find and select information</b>	
Select and use a variety of sources of information independently for a complex task	carrying out research for assignments
<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>	preparing a full specification for a selected boundary, structure or surface project  preparing prescription for the management undertaken at a selected habitat
Bring together information to suit content and purpose	creating documents from research for assessment activities
Present information in ways that are fit for purpose and audience	creating documents from research for assessment activities
<b>Mathematics</b>	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	preparing a full specification for a selected structure, construction, repair or maintenance project to meet given specifications
Identify the situation or problem and the mathematical methods needed to tackle it	preparing a full specification for a selected structure, construction, repair or maintenance project to meet given specifications
Select and apply a range of skills to find solutions	preparing a full specification for a selected structure, construction, repair or maintenance project to meet given specifications
Use appropriate checking procedures and evaluate their effectiveness at each stage	preparing a full specification for a selected structure, construction, repair or maintenance project to meet given specifications
<b>English</b>	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	taking part in class discussions

Skill	When learners are ...
<b>ICT – Use ICT systems</b>	
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading documents which relate to their assessment activities; diaries, full specification for a project, prescription for habitat management
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing documents for their assessment activities; diaries, full specification for a project, prescription for habitat management.