

# Level 3 Advanced Technical Certificate in Land and Wildlife Management (360) (0173-30)

# Level 3 Advanced Technical Diploma in Land and Wildlife Management (540) (0173-35)

May 2019 Version 2.0

## Guide to the examination

| Version and date | Change detail                                   | Section                |
|------------------|---|------------------------|
| 2.0 May 2019     | Level 3 third retake opportunity guidance added | 1. Details of the exam |

---

## Who is this document for?

This document has been produced for centres who offer **City & Guilds Level 3 Advanced Technical Certificate in Land and Wildlife Management (360)** and **City & Guilds Level 3 Advanced Technical Diploma in Land and Wildlife Management (540)**. It gives all of the essential details of the qualification's external assessment (exam) arrangements and has been produced to support the preparation of candidates to take the exam/s.

The document comprises four sections:

1. **Details of the exam.** This section gives details of the structure, length and timing of the exam.
2. **Content assessed by the exam.** This section gives a summary of the content that will be covered in each exam and information of how marks are allocated to the content.
3. **Guidance.** This section gives guidance on the language of the exam, the types of questions included and examples of these, and links to further resources to support teaching and exam preparation.
4. **Further information.** This section lists other sources of information about this qualification and City & Guilds Technical Qualifications.

# 1. Details of the exam

## External assessment

City & Guilds Technical qualifications have been developed to meet national policy changes designed to raise the rigour and robustness of vocational qualifications. These changes are being made to ensure our qualifications can meet the needs of employers and Higher Education. One of these changes is for the qualifications to have an increased emphasis on external assessment. This is why you will see an external exam in each of our Technical qualifications.

An external assessment is an assessment that is set and/or marked by the awarding organisation (ie externally). All City and Guilds Technical qualifications include an externally set and marked exam. This must be taken at the same time by all candidates who are registered on a particular qualification. We produce an exam timetable each year. This specifies the date and time of the exam so you can plan your delivery, revision and room bookings/PC allocation in plenty of time.

The purpose of this exam is to provide assurance that all candidates achieving the qualification have gained sufficient knowledge and understanding from their programme of study and that they can independently recall and draw their knowledge and understanding together in an integrated way. Whilst this may not be new to you, it is essential that your learners are well prepared and that they have time to revise, reflect and prepare for these exams. We have produced a Teaching, Learning, and Assessment guide that you should refer to alongside the present document ([Teaching, Learning and Assessment Guide](#)). If a learner does not pass the exam at their first attempt, there is only one opportunity to resit the exam, so preparation is essential.

## Exam requirements of this qualification

- **Land and Wildlife Management** – Theory exam (1) (2 hours).

The exam is graded and a candidate must achieve at least a Pass grade in order to be awarded the qualification. (In addition to the exam, a synoptic assignment must also be completed and passed). You can find full details of the synoptic assignment in the *Qualification Handbook* and the *Synoptic Assessment Guide* – please see the link to the qualification page at the end of this document.

## When does the exam take place?

The exam is offered on two fixed dates in March or June. The exact dates will be published at the start of the academic year in the *Assessments and Exam Timetable* <http://www.cityandguilds.com/delivering-our-qualifications/exams-and-admin>.

At the start of the programme of study, in order to effectively plan teaching and exam preparation, centres should know when the exam will be taking place and allocate teaching time accordingly. Section 2 of this document gives a summary of

the content that needs to be covered in order to prepare learners for the exam and full details of this are given in the Qualification Handbook.

### **Form of exam**

The exam for this qualification can be taken either on paper (0173-501) or online (0173-001).

### **Can candidates resit the exam?**

Candidates who have failed an exam or wish to retake it in an attempt to improve their grade, can do so twice. The third and final retake opportunity applies to Level 3 only. The best result will count towards the final qualification. If the candidate fails the exam three times then they will fail the qualification.

### **How the exam is structured**

Each exam has a total of 60 marks and is made up of:

- approximately 12-18 short answer questions
- 1 extended response question.

Short answer questions are used to confirm **breadth of knowledge and understanding**.

The extended response question is to allow candidates to demonstrate **higher level and integrated understanding** through written discussion, analysis and evaluation. This question also ensures the exam can differentiate between those learners who are 'just able' and those who are higher achieving.

More details about and examples of question types are given in Section 3 of this document.

## Assessment Objectives

The exams are based on the following set of assessment objectives (AOs). These are designed to allow the candidate's responses to be assessed across the following three categories of performance:

- **Recollection** of knowledge.
- **Understanding** of concepts, theories and processes.
- **Integrated application** of knowledge and understanding.

In full, the assessment objectives covered by the exam for this qualification are:

| Assessment objective   | Mark allocation (approx %) |
|--|----------------------------|
| <i>The candidate..</i>   |                            |
| AO1 <b>Recalls knowledge</b> from across the breadth of the qualification.   | 20%                        |
| AO2 <b>Demonstrates understanding</b> of concepts, theories and processes from across the breadth of the qualification.  | 60%                        |
| AO4 <b>Applies knowledge, understanding and skills</b> from across the breadth of the qualification in an integrated and holistic way to achieve specified purposes. | 20%                        |

## **Booking and taking the exam**

All assessments for City & Guilds Technical Exams must be booked through Walled Garden. There is a deadline for booking exams, synoptic assessments and any other centre marked assessments, please refer to the time line to check these dates.

The exam must be taken under the supervision of an invigilator who is responsible for ensuring that it is conducted under controlled conditions. Full details of the conditions under which the exam must be taken can be found in the Joint Council for Qualifications (JCQ) document, [Instructions for Conducting Examinations \(ICE\)](#).

## **Special consideration**

Candidates who are unable to sit the exam owing to temporary injury, illness or other indisposition at the scheduled time may qualify for special consideration. This is a post-examination adjustment that can, in certain circumstances, be made to a candidate's final grade. The Joint Council for Qualifications' guide to the special consideration process can be found at [www.jcq.org.uk](http://www.jcq.org.uk).

To make a request for special consideration, please contact:

[policy@cityandguilds.com](mailto:policy@cityandguilds.com)

## **Access arrangements**

Access arrangements are arrangements that allow candidates with particular requirements, disabilities or temporary illness to take assessments, where appropriate, using their normal way of working. The Joint Council for Qualifications document, *Access Arrangements and Reasonable Adjustments* gives full details and can be downloaded [here](#).

For further information and to apply for access arrangements please see:

[Access arrangements - When and how applications need to be made to City & Guilds](#)

[Applying for access arrangements on the Walled Garden](#)

## 2. Content assessed by the exam

The exam assesses:

- **Unit 303: Land based industry machinery operations**
- **Unit 304: Population surveys, ecology and conservation**
- **Unit 310: Undertake estate skills**

Each exam assesses a sample of the content of these units. This means that a single exam will **not** cover 100% of the unit content. The full range of content will be assessed over a number of examination series. Details of the coverage of a particular exam paper will **not** be released in advance of the exam itself. Centres should **not** make assumptions about what will be assessed by a particular exam based on what has been covered on previous occasions. In order to be fully prepared for the exam, learners **must** be ready to answer questions on **any** of the content outlined below.

The table below provides an overview of how the qualification's Learning Outcomes are covered by each exam and the number of **marks** available per Learning Outcome (ie **not** the number of *questions* per Learning Outcome). In preparing candidates for the exam, we recommend that centres take note of the number of marks allocated to Learning Outcomes and to assign teaching and preparation time accordingly.

In preparing candidates for the exam, centres should refer to the Qualification Handbook which gives full details of each Learning Outcome.

The following is a summary of only that qualification content which is assessed by the exam and **not** a summary of the full content of the qualification.

| Unit   | Learning outcome  | Topics  | Number of marks |
|--|---|---|-----------------|
| 303 Land based industry machinery operations     | LO1 Understand the purpose and operation of land based industry machinery | 1.1 Current legislation and industry guidance for land based industry machinery operation<br>1.2 Purpose and operation of land based machines   | 12              |
|  | LO2 Prepare land based industry machinery for work                        | 2.1 Machinery preparation<br>2.2 Carry out pre-use checks<br>2.3 Identify common faults and suggest appropriate remedial action<br>2.4 Check and report on safety requirements  |                 |
|  | LO3 Operate land based industry machinery                                 | 3.1 Carry out risk assessments<br>3.2 Ways to minimise possible environmental impacts of using selected land based industry machinery<br>3.3 Operate land based industry machinery<br>3.4 Carry out post operating procedures |                 |
| 304 Population surveys, ecology and conservation | Understand the principles of ecology and how ecosystems function          | 1.1 Ecological principles and ecosystems<br>1.2 Population dynamics and how populations change.<br>1.3 Predator prey interactions within populations  | 24              |



|                             |   |   |    |
|-----------------------------|---|---|----|
|                             |   | 1.4 Types of evolution within animal populations and classification   |    |
|                             | 2. Understand human impacts on global ecosystems and biodiversity | 2.1 Changes in global ecosystems<br>2.2 Global wildlife population fluctuations<br>2.3 Population changes in ecosystems                           |    |
|                             | 3. Understand national and international conservation strategies  | 3.1 National conservation strategies for wildlife and their habitats<br>3.2 International conservation strategies for wildlife and their habitats |    |
|                             | 4. Carry out flora and fauna surveys                              | 4.1 Method to survey habitats<br>4.2 Habitat survey planning<br>4.3 Habitat surveying   |    |
| 310 Undertake estate skills | 1. Construct, repair or maintain boundaries                       | 1.1 Types of boundaries<br>1.2 Prepare for work on boundaries<br>1.3 Select equipment and materials   | 12 |
|                             | 2. Construct, repair or maintain structures                       | 2.1 Types of structures<br>2.2 Prepare for work on structures<br>2.3 Select equipment and materials   |    |
|                             | 3. Construct, repair or maintain surfaces                         | 3.1 Types of surfaces<br>3.2 Prepare for work on surfaces<br>3.3 Select equipment and materials   |    |
|                             | 4. Carry out practical habitat management work                    | 4.1 Habitat management activities<br>4.2 Prepare for habitat management work  |    |

---

#### 4.3 Select equipment and materials

---

---

Total marks for sections: 48 marks

---

Integration across units\*: 12 marks

---

**Total marks for exam: 60 Marks**

---

\* *Integration across units*. These marks relate to Assessment Objective 4. These marks are awarded to differentiate between levels of performance by candidates taking the exam. The marks are given for how well a candidate has applied their knowledge, understanding and skills from across the units that make up the qualification in an integrated way to meet the requirements of the exam questions.

### 3. Guidance

#### Vocabulary of the exam: use of 'command' verbs

The exam questions are written using 'command' verbs. These are used to communicate to the candidate the type of answer required. Candidates should be familiarised with these as part of their exam preparation.

The following guidance has been produced on the main command verbs used in City & Guilds Technicals exams.

A more detailed version of this table, which also includes the command verbs used in the assignments is published in *City & Guilds Technical Qualifications Teaching, Learning and Assessment* guide.

| Command verb  | Explanation and guidance  |
|---|---|
| <b>Analyse</b>  | Study or examine a complex issue, subject, event, etc in detail to explain and interpret, elements, causes, characteristics etc   |
| <b>Calculate</b>  | Work out the answer to a problem using mathematical operations  |
| <b>Compare</b> (...and contrast)<br>(or <b>describe</b> the similarities/differences) | Consider and describe the similarities (and differences) between two or more features, systems, ideas, etc  |
| <b>Define</b>   | Give the meaning of, technical vocabulary, terms, etc.  |
| <b>Describe</b>   | Give a detailed written account of a system, feature, etc<br><b>(..the effect of...on...)</b> the impact, change that has resulted from a cause, event, etc<br><b>(..the process..)</b> give the steps, stages, etc |
| <b>Differentiate</b> between  | Establish and relate the characteristic differences between two or more things, concepts, etc   |
| <b>Discuss</b>  | Talk/write about a topic in detail, considering the different issues, ideas, opinions related to it   |
| <b>Distinguish</b> between  | Recognise and describe the characteristic differences between two things, or make one thing seem different from another   |
| <b>Evaluate</b>   | Analyse and describe the success, quality, benefits, value, etc (of an end product, outcome, etc )  |

|                                    |  |
|------------------------------------|--|
| <b>Explain</b>                     | Make (a situation, idea, process, etc) clear or easier to understand by giving details<br><b>(..how..)</b> Give the stages or steps, etc in a process, including relationships, connections, etc between these and causes and effects. |
| <b>Give example(s) illustrate/</b> | Use examples or images to support, clarify or demonstrate, an explanation, argument, theory, etc   |
| <b>Give a rationale</b>            | Provide a reason/reasons/basis for actions, decisions, beliefs, etc  |
| <b>Identify</b>                    | Recognise a feature, usually from a document, image, etc and state what it is  |
| <b>Justify</b>                     | Give reasons for, make a case for, account for, etc decisions, actions, conclusions, etc, in order to demonstrate why they suitable for or correct or meet the particular circumstances, context                                       |
| <b>Label</b>                       | Add names or descriptions, indicating their positions, on an image, drawing, diagram, etc  |
| <b>List</b>                        | Give as many answers, examples, etc as the question indicates (candidates are not required to write in full sentences)   |
| <b>Name</b>                        | Give the (technical) name of something   |
| <b>Propose</b>                     | Present a plan, strategy, etc (for consideration, discussion, acceptance, action, etc).  |
| <b>Select</b>                      | Choose the best, most suitable, etc, by making careful decisions   |
| <b>State</b>                       | Give the answer, clearly and definitely  |
| <b>Summarise</b>                   | Give a brief statement of the main points (of something)   |

## Question types

The following explains, and gives examples of, types of questions used in City & Guilds Technical exams. In preparing candidates to take the exam, it is recommended that you familiarise them with the requirements of each question type so that they can be effective and make best use of the time available when sitting the exam.

- An effective candidate will gauge the type and length of response required from the question and the number of marks available (which is given for each question on the exam paper).
- Short answer questions may not require candidates to write in complete sentences. Extended response questions will require a more developed response.
- Candidates should read the exam paper before attempting to answer the questions and should allocate time proportionate to the number of marks available for each question or section.

| Question type:   | Example question  | Example question:  |
|--|---|--|
| <p><b>Short answer questions (restricted response)</b><br/>These are questions which require candidates to give a brief and concise written response. The number of marks available will correspond to the number of pieces of information/examples and the length of response required by the question.</p> | <p>State <b>one</b> piece of environmental legislation relevant to the use and operation of land-based machines. (1 mark)</p>   | <p><b>ANSWER</b><br/>1 mark for stating one relevant piece of legislation<br/>Any of the following legislation:</p> <ul style="list-style-type: none"><li>• Environmental Protection Act 1990</li><li>• Wildlife and Countryside Act 1981</li></ul>                |
| <p><b>Structured Response Questions</b><br/>These are questions that have more than one part (eg a), b), etc.). The overall question is made up of linked, short answer questions which move the candidate through the topic in a structured way. For example, the question will usually start with a</p>    | <p>a) State <b>two</b> human impacts that have resulted in a reduction in biodiversity. (2 marks)<br/>b) For <b>one</b> of the human impacts stated in 4a), describe how it has resulted in the reduction of a named wildlife</p> | <p><b>ANSWER:</b><br/>a) 1 mark for any of the following (max of 2):</p> <ul style="list-style-type: none"><li>• overharvesting of plants and animals</li><li>• introduction of non-native species</li><li>• habitat destruction</li><li>• fragmentation</li></ul> |

---

'recall'/'state'/'describe' question followed by an 'explain' to draw out understanding of the topic. They usually have a shared introductory 'stem', and the number of marks may increase through the question.

population and the scale of the change. (3 marks)

- climate change and pollution
- changing seasons and phenology
- disease
- decrease in biological diversity
- any other relevant impact

b)

- Identification of wildlife population (1 Mark)
- nature of impact explained (1 Mark)
- size/scale of the population change explained (1 Mark)

Any other suitable answer

---

## Extended response questions

Extended response questions are those that require the candidate to write a longer written response using sentences and paragraphs. These usually require candidates to discuss, explain, etc. a topic in some detail. The question is often based on a short case study, scenario or other prompt. The level of detail should be gauged from the question and the number of marks available.

## Example question

Your supervisor has asked you to carry out vegetation clearance on a wet grassland. The site is designated as a Site of Special Scientific Interest for breeding waders.

Suggest and justify suitable methods and timings of clearing the vegetation and discuss potential issues associated with this course of action that may arise. (12 marks)

## ANSWER

Indicative content

- Suitable mechanical methods eg mower, brushcutter, tractor mounted attachments, strimmer, low pressure machinery
- Suitable non-mechanical methods eg grazing, cutting, chemical application
- Suitable tools and equipment
- Risk assessment
- Adhering to legislation eg Wildlife and Countryside Act 1981
- Time of year – seasonal considerations
- Physical damage to site eg livestock and machinery
- Pollution from machinery, livestock and chemicals
- Contact relevant authorities – SSSI, Natural England, Natural Resources Wales, site management plan
- Disturbance and destruction of bird nesting sites
- Vegetation survey/site survey prior to any work being carried out
- Species specific surveys prior to any work being carried out

### **Band 1: 1 - 4 Marks**

Basic discussion and limited justification of suitable methods and timings, showing some understanding of land management. They have discussed potential issues at a basic level. There will be little or no specialist terms used within the answer.

#### **Example band 1 response**

Care should be taken as to when the work is done so as not to disturb the breeding birds. The method should be something that is quick so that disturbance is kept to a minimum. Access should be by boat but the work done by hand or using a strimmer. Winter work would be best so that the vegetation has time to grow in the spring for nesting again. Life vest should be used along with PPE for strimmer. If the area is large cows could be used to keep the vegetation down but care taken as the cows might trample the eggs.

### **Band 2: 5 - 8 Marks**

Good discussion and clear justification of suitable methods and timings, showing a good understanding of land management. They have discussed potential issues at a good level. There is some use of specialist terms, although they may not always be used appropriately.

#### **Example band 2 response**

Because it is a SSSI, you will need hand tools to limit or to remove the risk of polluting the habitat, which could happen due to spilling of fuel or oil. You will have to ensure that no waders were nesting when carrying out the management, so as to avoid disturbing their birds and their chicks.

By using hand tools it would also reduce the noise that will be produced while working, which will reduce disturbance to waders or other animals nearby. Because waders are ground nesting, vehicles should not be taken close, so as to avoid damaging nests. Using hand tools may take considerably longer to complete the tasks which may lead to more disturbance, so you will have to



weigh up the pros and cons. You should not remove all the vegetation as that would mean there will be no ground cover for birds, which is very important to protect from predators and to give shelter from the elements.

### **Band 3: 9 - 12 Marks**

Thorough discussion and justification of suitable methods and timings, showing a clear understanding of land management. They have discussed potential issues at an excellent level. Specialist terms are used correctly and appropriately throughout.

#### **Example band 3 response**

The best time to carry out this work is when the local bird population are not breeding or nesting. Habitat surveys should be carried out to check for other species which may be affected by the work.

Problems which may happen during the work could involve injury or long term damage to workers if appropriate PPE isn't used, there could be a risk to the public if a risk assessment isn't carried out and the site isn't properly sign posted. If access through the site has to be stopped, then walkers could complain, as the CROW act is in place to ensure access.

Selective removal of vegetation should be preferred over mass as endangered or specialist species may be present such as Roundleaf Sundew or bog Cranberry. When planning it is always important to consider whether the area will recover from work and at what rate.

## Examination technique

Candidates with a good understanding of the subject being assessed can often lose marks in exams because they lack experience or confidence in exams or awareness of how to maximise the time available to get the most out of the exam. Here is some suggested guidance for areas that could be covered in advance to help learners improve exam performance.

### Before the exam

Although candidates cannot plan the answers they will give in advance, exams for Technical qualifications do follow a common structure and format. In advance of taking the exam, candidates should:

- be familiar with the structure of the exam (ie number and type of questions).
- be aware of the amount of time they have in total to complete the exam.
- have a plan, based on the exam start and finish time for how long to spend on each question/section of the exam.
- be aware of how many marks are available for each question, how much they should expect to write for each question and allow most time for those questions which have the most marks available.

### At the start of the exam session

At the start of the exam, candidates:

- should carefully read through the instructions before answering any questions.
- may find it helpful, where possible, to mark or highlight key information such as command words and number of marks available on the question paper.
- identify questions which require an extended written answer and those questions where all or part of the question may be answered by giving bullets, lists etc rather than full sentences.

### Answering the questions

Candidates do not have to answer exam questions in any particular order. They may find it helpful to consider, for example:

- tackling first those questions which they find easiest. This should help them get into the 'flow' of the exam and help confidence by building up marks quickly and at the start of the exam.
- tackling the extended answer question at an early stage of the exam to make sure they spend sufficient time on it and do not run out of time at the end of the exam.

Candidates should avoid wasting time by repeating the question either in full or in part in their answer.

Candidates should **always** attempt every question, even questions where they may be less confident about the answer they are giving. Candidates should be discouraged however, from spending too long on any answer they are less sure about and providing answers that are longer and give more detail than should be necessary in the hope of picking up marks. This may mean they have less time to answer questions that they are better prepared to answer.

## **Extended answer questions**

Before writing out in full their answer to extended questions, candidates may find it helpful to identify the key requirements of the question and jot down a brief plan or outline of how they will answer it. This will help clarify their thinking and make sure that they don't get 'bogged down' or provide too much detail for one part of the question at the expense of others.

## **Towards the end of the exam**

Candidates should always set aside time at the end of the exam to read back through and review what they have written in order to make sure this is legible, makes sense and answers the question in full.

If a candidate finds they are running out of time to finish an answer towards the end of the exam, they should attempt to complete the answer in abbreviated or note form. Provided the content is clear and relevant, examiners will consider such answers and award marks where merited.

Further guidance on preparing candidates to take the exam is given in the City & Guilds publication, [Technical Qualifications, Teaching, Learning and Assessment](#) which can be downloaded free of charge from City & Guilds website.

## 4. Further information

For further information to support delivery and exam preparation for this qualification, centres should see:

### City & Guilds

Qualification homepage: <http://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/environment-countryside-and-conservation/0173-technical-in-land-wildlife-management#tab=documents> which includes:

- Qualification handbook
- Synoptic Assignment
- Sample assessments

*Technical Qualifications, Resources and Support:*

[www.cityandguilds.com/techbac/technical-qualifications/resources-and-support](http://www.cityandguilds.com/techbac/technical-qualifications/resources-and-support)

### Joint Council for Qualifications

*Instructions for Conducting Examinations:* <http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations>