Level 3 Advanced Technical Extended Diploma in Land and Wildlife Management (1080) (Countryside) (0173-37)

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 Extended Diploma in Land and Wildlife Management (1080) (Countryside).** 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)
- **Land and Wildlife Management** – Theory exam (2) (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 – p*lease 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 (0173-509) or online (0173-009).

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 12-15 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 *The candidate..*	Mark allocation (approx %)
AO1 **Recalls knowledge** from across the breadth of the qualification.	30%
AO2 **Demonstrates understanding** of concepts, theories and processes from across the breadth of the qualification.	50%
AO4 **Applies knowledge, understanding and skills** 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.

To make a request for special consideration, please contact: 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 306: Principles of physical and biological environmental processes**
- **Unit 307: Woodland habitat management**
- **Unit 318: Ecological concepts and application**

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
306 Principles of physical and biological environmental processes	L01 Recognise the scientific principles and processes that influence weather and climate	1.1 Weather and climate 1.2 Water and hydrological cycle	24
	LO2 Know the physical and biological processes within the lithosphere	2.1 Origins and characteristics of rocks 2.2 Factors affecting soil composition and formation 2.3 The distrivution of major rock and soil types found in the British Isles	
	LO3 Understand the biological processes within the biosphere	3.1 Biotic 3.2 Energy transfers in plants and animals	
	LO4 Relationship between environmental processes and land use	4.1 Land cover 4.2 Land use 4.3 Future land use	
307 Woodland habitat management	LO1 Understand the historical development of woodland	1.1: Historical influences that have created the current level of woodland cover in the UK 1.2: The development of woodland types and management systems 1.3 Historic features within woodland	15
	LO2 Survey the structures and features within a woodland ecosystem	2.1 Carry out woodland survey 2.2 Report on structures and features of a woodland ecosystem	

		2.3 Summarise the ecological importance of a woodland	
	LO3 Understand the management of woodland habitats	3.1 Different woodland habitats and relevant management techniques 3.2 Equipment and resources for practical management of woodland habitats	
	LO4 Manage woodland habitats	4.1 Recommend improvements to the management of woodland habitats 4.2 Produce method statements for improvements to the management of woodland habitats	
318 Ecological concepts and application	LO1 Understand the principles of behavioural ecology for life history strategies	1.1 Aspects of behaviour that influence reproductive success 1.2 Relationships between parental investment and breeding systems	9
	LO2 Understand the principles of population dynamics and metapopulation theory	2.1 The metapopultion cycle 2.2 Habitat fragmentation and local extinction	
	LO3 Ecological surveys for flora	3.1 Plan a flora survey 3.2 Flora survey 3.3 Potential sources of survey error	
	LO4 Ecological surveys for fauna	4.1 Plan a fauna survey 4.2 Fauna survey 4.3 Potential sources of survey error	

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

Explain	Make (a situation, idea, process, etc) clear or easier to understand by giving details **(..how..)** Give the stages or steps, etc in a process, including relationships, connections, etc between these and causes and effects.
Give example(s) illustrate/	Use examples or images to support, clarify or demonstrate, an explanation, argument, theory, etc
Give a rationale	Provide a reason/reasons/basis for actions, decisions, beliefs, etc
Identify	Recognise a feature, usually from a document, image, etc and state what it is
Justify	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
Label	Add names or descriptions, indicating their positions, on an image, drawing, diagram, etc
List	Give as many answers, examples, etc as the question indicates (candidates are not required to write in full sentences)
Name	Give the (technical) name of something
Propose	Present a plan, strategy, etc (for consideration, discussion, acceptance, action, etc).
Select	Choose the best, most suitable, etc, by making careful decisions
State	Give the answer, clearly and definitely
Summarise	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:
Short answer questions (restricted response) 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.	State **three** characteristics of sandy soil. (3 marks).	**Answer: (3 from the following)** • Free draining /very porous • Large grain size • Low nutrient holding capacity • Acidic pH
Structured Response Questions 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	**4a.** Explain how human manipulation of the nitrogen cycle has affected the natural environment. (4 marks) **4b.** Describe the importance of carbon within an ecosystem (3 marks)	**Answers 4a: 4 Marks for any of the following:** Man-Made Nitrate fertilisers (are produced industrially and) added to soils to enhance growth of crops **(1 Mark)**

'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.

Atmospheric N deposition has enriched soils **(1 Mark)** leading to changes in plant communities in natural ecosystems **(1 Mark)**

Excess N can pollute aquatic ecosystems/freshwater habitats through run-off. **(1 Mark)**

N causes Enrichment/Eutrophication of water bodies **(1 Mark)** and damages aquatic ecosystems **(1 Mark)**

Marine/Coastal ecosystems also damaged by Nitrogen enrichment **(1 Mark)**

Excess N can also lead to acidification of soils **(1 Mark)**

Any other suitable response.

Answer 4b: 3 marks from any of the following:
The carbon cycle is critical to the food chain. (1 mark)
Living tissue contains carbon – in form of building blocks such as proteins, fats and carbohydrates. (1 mark)
The carbon in these (living or dead) tissues is recycled in various processes. (1 mark)

Any other suitable response.

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

You are to attend a Parish meeting to discuss the acquisition of a series of new small woodlands. You should prepare a set of notes explaining the reasons why woodlands have become fragmented historically and the negative consequences of species isolation. You should also include information on woodland management techniques that can be employed to reduce species isolation and increase habitat connectivity.

Mark scheme

Indicative content
- Agriculture
- Industry
- Urbanisation
- Land use change
- De-forestation
- Natural disasters
- Extinction
- Reduction in fitness of populations
- Genetic inbreeding
- Mortality
- Isolation
- Ride management
- Coppice rotation
- Planting of new hedgerows
- Acquisition of new woodlands
- Natural regeneration

- Broadleaf reversion

Band 1: 1 - 4 Marks

A limited range of factors that have resulted in the historical fragmentation of woodlands being discussed. The negative affect of species isolation has been covered but the general level of knowledge is lacking. A narrow range of woodland management techniques and ideas were suggested that would improve habitat connectivity and reduce species isolation.

Example band 1 response

Woods cut down for agriculture fields and for fuel burning, this means that the animals that live there often find that the size of the wood was too small for them to survive and became more prone to predation. If the wood size was big enough then they often inter breed with each other or could not breed. To help these woodland species move easily between the small wood would be to plant trees to increase their size and to plant hedges between them.

Band 2: 5 - 8 Marks

A broad range of factors that have resulted in the historical fragmentation of woodlands have been discussed. The negative affect of species isolation has been covered well and the candidate has demonstrated a good level of knowledge and understanding of the subject matter. A varied range of woodland management techniques and ideas were suggested that would improve habitat connectivity and reduce species isolation.

Example band 2 response

As the population of Britain increased, the amount of land needed for agriculture rather than forestry increased. Woodland size was much reduced but some small patches were left in the landscape to provide local wood for fires and building materials. These also provided habitat for animals and birds that could be harvested by locals as an alternative food source.

The size and location of these pocket woodlands was controlled by the need for increased agriculture and the development of local industry and growth of towns. At first, things like the enclosure act left good connectivity via hedgerows, but as field sizes increased then a lot of these hedgerows were removed. This has led to species which are less mobile to become isolated and have led to local extinctions.

An isolated population can also suffer from in-breeding, and any increase mortality from predators as then cannot escape the small size of the woodland. In order to increase biodiversity in the woods, different management techniques can be used; rotational coppice - allowing more light into certain bits of the wood; increase the floral diversity thus increasing the potential food supply for invertebrates and the potential for bigger food chains and webs. By increasing the size of the woodland would help by planting the edges with locally sourced broadleaved trees. To increase connectivity, hedgerows and wider shelter belts could be encouraged in-between the woods.

Band 3: 9 - 12 Marks

An extensive range of factors that have resulted in the historical fragmentation of woodlands have been discussed in detail. The negative affect of species isolation have been fully covered and the candidate has demonstrated an excellent level of knowledge and understanding of the subject matter. An extensive range of woodland management techniques and ideas were suggested that would significantly improve habitat connectivity and reduce species isolation.

Example band 3 response

Most of the UK was covered in woodland shortly after the last ice age, with some grass land resulting from animal gazing and soil type. As man started to settle, they used slash and burn to grow crops before moving on. As more people started to settle the clearance of woodland for agricultural crops and domestic grazing increased. With the complexity of settlement development and increase size of ships, the woodlands were used as the main source of material, often with the trees not being replaced that were cut down. With the increase of population size and organised land ownership, the land owner's controlled the supply of wood for industry and the agricultural production.

Small parcels of land were left in fields, cut off from the main woodlands, for local sources of fuel and to provide shelter for some of the gentry game species. The enclosure act had left connectivity in the landscape with hedgerows a common feature. This allowed movement of animals and some plants between woodlands. As these hedgerows were removed to allow bigger machinery to access bigger fields, the woodlands became isolated from each other. This lead to a decrease in the species using the woodland and the number it could support.

Today many of these woodlands are not managed and this has led to them becoming unsuitable for many species which either survive at low numbers or have become locally extinct. The Common Dormouse is one such species, with sub optimal habitats and isolated populations and any increase in mortally can easily wipe out the population. This can be because of in-breeding, the arrival of a predator that increases the death rate, or a natural disaster such as the removal of the main food source due to storm damage or human intervention, like tree felling.

By re-introducing the old woodland management techniques, it is possible to increase biodiversity but before any work is carried out you must carry out an environmental impact assessment to ensure you help, rather than destroy the species present. I would consider coppice rotation to increase the floral diversity already present but not showing in the soils seedbank, open up some of the paths using ride creation techniques this will allow members of the parish to enjoy the wood more and get support for other enhancements. This would include increasing the size of the wood with extra planting and re-contacting the woodland with at least a hedgerow, but hopefully a wider shelter belt of trees and scrub, and so allow a greater genetic mix between two or more isolated groups.

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-technicals-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

Joint Council for Qualifications
Instructions for Conducting Examinations: http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations