Unit 20: Understand and Undertake Wildlife Management and Rehabilitation

Unit code: H/600/9447

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of wildlife management and rehabilitation and how these can be put into practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or to further education and training.

The learner will be able to survey, monitor and manage wildlife populations in situ as well as assess wildlife casualties and plan for their successful rehabilitation and release back into the wild. The learner will also be able to understand the issues between humans and wildlife that often lead to conflict between the two.

● Unit introduction

The field of wildlife population management and rehabilitation of wildlife casualties has advanced significantly over recent years. Learners who enter the animal care sector via veterinary work or rescue centres are likely to have to care for a wildlife casualty at some point.

This unit will give the learner an understanding of wildlife populations, species behaviour patterns, and human effects on wildlife which is required to ensure that any casualty, once recovered, can be released with a good chance of survival.

Those working with wildlife also need to understand the ethical issues related to intervention and the habitat requirements for wildlife species covered in this unit.

Throughout the unit learners will be made aware of health and safety and animal welfare issues and follow relevant guidelines.

● Learning outcomes

On completion of this unit a learner should:

1   Be able to carry out wildlife population monitoring

2   Be able to rehabilitate wildlife

3   Understand wildlife and human interaction

4   Know how to manage wild animal populations.

Unit content

1 Be able to carry out wildlife population monitoring

Population surveys: planning requirements; mark-recapture; harvesting; distance sampling; age: sex ratio; risk assessment; health and safety; relationship between monitoring findings and wildlife population sustainability

Capture equipment: nets; live capture cages

Marking equipment: rings; tags; tattoos; dyes; radio tracking; microchips

2 Be able to rehabilitate wildlife

Initial assessment: animal welfare; consciousness; shock; haemorrhage; dehydration; fracture; emaciation; parasite load; infection; health and safety

Rehabilitation plan: appropriate methods for species such as social grouping; isolation; fostering; hand-rearing; feeding eg provision of forage, live prey; human interaction; bat flights; type of release; health and safety; risk assessment; animal welfare

Enclosure: construction eg wood, brick, aviary; bedding; light; heat

3 Understand wildlife and human interaction

Threats: habitat destruction; pollution; injury; persecution; disease; release of non-indigenous species; predation

Ethical issues: arguments for and against rescue; rehabilitation; permanent captivity; euthanasia; display to public; population dynamics; relocation; views of different groups eg farmers, conservationists, city dwellers, road users; current legislation

4 Know how to manage wild animal populations

Species identification: owls; badgers; foxes; hedgehogs; water birds; passerines; falcons; hawks; differences between similar species eg shrew/voles/mice, stoats/weasels/polecats

Behaviour: normal behaviour eg feeding, activity levels, sociability, sleeping patterns, precocial or altricial juveniles; stages of development

Habitat requirements: conspecifics; food; water; shelter; predators; human proximity

Population management plan: monitoring of population numbers; availability of food; predator numbers, home range; capture and release factors; animal physiological and behavioural characteristics in relation to wildlife rehabilitation and release; survival of released wildlife; ecology and population dynamics in relation to survival of released wildlife

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:
P1 plan a wildlife population survey [IE]	**M1** assess the sustainability of a given wildlife population using findings from a population survey	
P2 carry out a wildlife population survey		
P3 carry out initial assessment of wildlife casualties	**M2** explain routine measures that can be taken to reduce health and safety risks to humans and unnecessary stress to wildlife casualties	**D1** justify the rehabilitation plan created for the selected wild animal casualty describing a release and post-release monitoring method
P4 create a rehabilitation plan for a wildlife casualty [SM]		
P5 explain human threats to wildlife populations and individuals		
P6 examine the ethical implications of wildlife intervention strategies [CT]		
P7 identify wild animal species and behaviour patterns	**M3** explain how physiological and behavioural characteristics of a selected wildlife casualty relate to its successful release.	**D2** explain the ecology and population dynamics of a selected wildlife species in relation to survival of a released animal.
P8 describe species habitat requirements [RL]		
P9 outline a population management plan for a wildlife species		

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.

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

Essential guidance for tutors

Delivery

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

Whichever delivery methods are used, appropriate risk assessments should be carried out prior to any activities. It is essential that tutors stress the importance of animal welfare during any observations of, or interactions with, animals.

Learners will benefit from viewing some of the many television programmes related to British wildlife and visits to any wildlife hospitals or rescue centres where possible.

Relevant work placements should be monitored for quality of provision. 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 observe a variety of wildlife casualties and they should be encouraged to ask for observation records and information to assist their studies.

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.
Theory sessions: wildlife surveys.
Practical sessions: carrying out surveys and monitoring.
Assignment 1: Wildlife Population Surveys and Monitoring (P1, P2, M1) Tutor introduces assignment brief
Learners complete assignment using tutor guidance and self-directed study.
Theory sessions: wildlife rehabilitation.
Practical sessions: visit to rehabilitation centre.
Assignment 2: Wildlife Rehabilitation and Release (P3, P4, M2, D1) Tutor introduces assignment brief
Learners complete assignment using tutor guidance and self-directed study.
Theory sessions: threats to wildlife; ethics.
Practical sessions: site visits to wildlife habitats.
Assignment 3: Threats to Wildlife and Ethics of Intervention (P5, P6) Tutor introduces assignment brief
Undertake completion of assignment using tutor guidance and self-directed study.
Theory sessions: species behaviour, habitat requirements and population management.

Topic and suggested assignments/activities and/assessment
Assignment 4: Behaviour, Habitat and Population Management of a Wildlife Species (P7, P8, P9, M3, D2) Tutor introduces assignment brief
Learners complete assignment using tutor guidance and self-directed study

Assessment

For P1 and P2, learners will need to plan and carry out wildlife population surveys using methods agreed by the tutor. Risk assessments should be carried out before any activity and any live animal handling should follow health and safety and animal welfare guidelines. Appropriate PPE must be worn or used as required. Evidence is likely to be in a recorded plan and observation of practical activities using witness statements and/or observation records.

P3 requires learners to carry out initial assessment of a wildlife casualty. This could be achieved by simulation using a relevant species of animal in an animal unit, for example rabbit, ferret. If no live animals are available, high quality models may be used. Learners must list and describe the types of problems looked for when first assessing a casualty. The same risk assessments and health and safety considerations should be observed as for P1 and P2 if live animals are involved. Evidence could be from recorded observation or a completed casualty assessment record.

P4 asks learners to design a plan to rehabilitate a wildlife casualty. This could be in the form of a diary or presentation BTEC and must include all the relevant elements for the species chosen. The tutor should agree any species chosen and encourage a range of coverage across the cohort.

P5 and P6 concentrate on threats to wildlife and the ethical aspects of intervention. Learners could show evidence for these criteria in the form of an explanatory poster for P5 and an essay for P6.

For P7, learners must research the different species of British wildlife and species-specific behaviour. Evidence for this could be in the form of posters, an illustrated presentation or essay. At least two species should be covered.

P8 requires learners to investigate the habitat requirements of a wildlife species. One species can be chosen from those covered in P7. Again evidence for this can be in poster or illustrated presentation format.

P9 asks learners to outline a management plan for a wildlife population. This should include all aspects listed in the unit content and can be achieved via a diary, poster or short essay. The population species should be agreed by the tutor and should be a British species.

M1 requires learners to discuss their findings from the activity for P2 with regard to how sustainable the population is. They should give reasons why it is, or is not, sustainable. Evidence could be in the format of a completed report.

For M2, learners must explain measures taken to reduce health and safety and welfare issues regarding wildlife casualties and the individuals looking after them. They should also evaluate the different methods, stating which ones are most effective and why they are required. Evidence could be captured in a report related to M1.

For M3, learners must explain how physiology and behaviour of a wildlife species can help to ensure that the animal can be released successfully. Evidence could be in the form of a presentation or essay.

D1 requires learners to apply the knowledge gained from the unit to justify their rehabilitation plan carried out for P4. They are also required to describe a suitable release and monitoring programme for the species chosen.

D2 asks learners to explain the relationship of a wildlife species to its surroundings and the population

dynamics of the species how such information can help a released animal to survive. Learners will need to carry out research into the ecology of the species and then apply the knowledge gained from the other tasks in this unit to achieve this criterion.

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, M1	Wildlife Population Surveys and Monitoring	You work for a wildlife rescue unit and have been asked to assess the sustainability of Greater Horseshoe bats in a local area. You need to plan and carry out a wildlife population survey using a method agreed with your tutor.	Written plan, practical survey, written report.
P3, P4, M2, D1	Wildlife Rehabilitation and Release	The wildlife rescue unit has had a wildlife casualty brought in. You have been asked to assess the casualty, describing the type of problems you are looking for, and then place it in suitable rehabilitation accommodation. You need to explain the measures taken whilst the animal was in rehab to reduce any risks to carers and any distress for the animal. You should justify your chosen plan and how you would release and monitor the animal once it was recovered.	Written assessment to include any or all of the following: ■ diary ■ annotated diagram ■ illustrated essay ■ tables.
P5, P6	Threats to Wildlife and Ethics of Intervention	You need to explain various human threats to wildlife species in the UK and examine the ethics regarding intervention of threatened species.	Written assessment to include any or all of the following: ■ diary ■ annotated diagram ■ illustrated essay ■ tables ■ illustrated presentation.
P7, P8, P9, M3, D2	Behaviour, Habitat and Population Management of a Wildlife Species	You have a wildlife casualty to release, but in order to give it the best chance of survival you must find out the physiology and natural behaviour of the animal, how it fits into its ecological niche and the population dynamics of the species in a specific area where it is to be released. When you have found out this information, explain how such knowledge contributes to the success of the release and the animal's best chance of survival.	Written assessment to include an: ■ illustrated essay ■ illustrated presentation.

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
Maintain Animal Accommodation	Element AC20.1 Release animals
Undertake Practical Animal Feeding	Element CU34.1 Promote and maintain the health and wellbeing of animals
	Element CU34.2 Deliver basic treatments to animals
Contribute to the Nursing of Animals	Understand the Principles of Wildlife Populations, Ecology and Conservation
	Understand and Promote Animal Health
	Undertake Animal Handling and Safe Working

Essential resources

Resources for this unit could include in-house animals and site visits to animal collections or facilities such as wildlife rescue centres. Speakers from local wildlife rescue facilities, wildlife groups, for example badger groups and the police wildlife liaison officer and local ranger office, will enhance delivery.

Learners should have access to appropriate wildlife DVDs.

Employer engagement and vocational contexts

Any work placements in the animal care sector will enhance and assist the learning experience. Centres are encouraged to develop links with a variety of local animal establishments to facilitate such placements. Work placements in wildlife rescue centres and vets who treat wildlife casualties will help learners to gain relevant knowledge.

Indicative reading for learners

Textbooks

Harris S – *The New Handbook of British Mammals* (Elsevier Science and Technology, 2002)
ISBN 9780856611339

Mullineaux E, Best D and Cooper J (eds) – *BSAVA Manual of Wildlife Casualties* (Wiley-Blackwell 2003)
ISBN 9780905214634

Sinclair A, Fryxell J, and Caughley G – *Wildlife Ecology, Conservation and Management* (Wiley-Blackwell, 2006)
ISBN 9781405107372

Stocker L – *Practical Wildlife Care* (Wiley-Blackwell, 2005) ISBN 9781405127493

Journals

BBC Wildlife

Wildlife Rehabilitation and Animal Welfare Journal

Zoology journal

CD ROM

Wildpro CD ROM *'UK Wildlife First-aid and Care'*

Websites

www.bwrc.org.uk	British Wildlife Rehabilitation Council
www.defra.gov.uk	Department for Environment, Food and Rural Affairs
www.field-studies-council.org	Field Studies Council
www.iwrc-online.org	International Wildlife Rehabilitation Council
www.wildlifeinformation.org	Wildlife Information Network

Delivery of personal, learning and thinking skills (PLTS)

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

Skill	When learners are …
Independent enquirers	explaining different surveying techniques to use
Creative thinkers	considering the ethical implications of wildlife interventions
Reflective learners	comparing species habitat requirements
Self-managers	organising own time when planning wildlife rehabilitation.

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

Skill	When learners are …
Independent enquirers	evaluating routine measures that can be taken to prevent risks to human health and safety and unnecessary stress to wild animal casualties
Creative thinkers	examining current ethical issues involved in animal wildlife rescue and explaining the benefits of having clear policies covering ethical issues
Reflective learners	providing appropriate advice to inexperienced individuals presented with a specified wild animal casualty
Team workers	demonstrating appropriate animal management skills as part of a team for wildlife rehabilitation
Self-managers	planning the rehabilitation, release and post-release monitoring of a selected wild animal casualty.

Functional skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	planning the rehabilitation, release and post-release monitoring of a selected wild animal casualty
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: ■ text and tables ■ images ■ numbers ■ records.	
Bring together information to suit content and purpose	planning the rehabilitation, release and post-release monitoring of a selected wild animal casualty
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing current ethical issues involved in animal wildlife rescue and explaining the benefits of having clear policies covering ethical issues giving presentations
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	carrying out research
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing assignments, essays and reports.