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LEVEL 3 CERTIFICATE OF COMPETENCE IN UTILITY ARBORICULTURE

QUALIFICATION HANDBOOK – Assessment Schedules

Unit UA5.1 Utility Arboriculture Surveyor – Practices and Units UA5.2 Utility Arboriculture Surveyor – Principles

February 2010

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LEVEL 3 CERTIFICATE OF COMPETENCE IN UTILITY ARBORICULTURE – Unit UA5.1 UTILITY ARBORICULTURE SURVEYOR

Candidate Information
This assessment covers the requirements for safe working nearing proximity to overhead conductors which may be live.

Introduction
The scheme will be administered by NPTC.

NPTC will:
- Publish -Scheme regulations
  -Assessment schedule
  -Assessment material
- Approve centres to co-ordinate and administer the scheme
- Set standards for the training of Verifiers and Assessors
- Recruit, train and deploy Verifiers
- Manage verification
- Issue certificates to successful Candidates

The Certificate of Competence
Certificates of competence will be awarded to Candidates who achieve the required level of competence in the Units to which their Certificate relates.

Instruction
Attendance at a course of instruction is not a pre-requisite for an application for an assessment but potential Candidates are strongly advised to ensure that they are up to the standards that will be expected of them when they are assessed.

NPTC does **not** hold a register of instructors; however instruction will normally be available from recognised training providers and/or centres of further or higher education active in the areas covered by this certificate. Further information on training may be obtained from the centre.

Access to Assessment
Assessment Centres will be responsible for arranging assessment on behalf of a Candidate. Assessment may only be carried out by an Assessor approved by NPTC for that scheme. Under no circumstances can either instructor involved in the preparation of candidates, or the candidates work place supervisors**,** or anyone else who might have a vested interest in the outcome**,** carry out the assessment.

The minimum age limit for Candidates taking certificates of competence is 16 years. There is no upper age limit.

Assessment
Assessment is a process by which it is confirmed that the Candidate is competent in the Units within the award to which the assessment relates. It is a process of collecting evidence about his/her capabilities and judging whether that evidence is sufficient to attribute competence.

The candidate must be registered through an NPTC approved Assessment Centre for this qualification prior to assessment.

The result of the assessment will be recorded on the assessment report form.

The schedule of assessment contains the criteria relating to:
- Observation of practical performance
- Assessment of knowledge and understanding

Performance Evaluation for UA 5.1
The result of each assessment activity in UA 5.1 is evaluated against the following criteria:

4 = Meets or exceeds the assessment criteria by displaying a level of practical performance and/or underpinning knowledge, with no 'minor' or 'critical' faults. (Competent).

3 = Meets the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with some 'minor' faults but no 'critical' faults. (Competent).

2 = Does not fully satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or being deficient in underpinning knowledge leading to the recording of minor faults. (Not yet competent).

1 = Does not satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or safely or being deficient in underpinning knowledge leading to the recording of a critical fault. (Not yet competent).

A list of registered Assessment Centres is available from NPTC. (www.nptc.org.uk)

Verification
Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way that NPTC has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness.

Approved Assessors will be subject to a regular visit by the verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the assessor will be evaluated by an NPTC approved verifier.

Compliance with the verification requirements is a pre-requisite for Assessors remaining on NPTC's list of approved assessors.

Complaints and Appeals

NPTC and its Assessment Centres have a formal Complaints and Appeals procedure. In the event of any dissatisfaction with the arrangements and conditions of assessment, the candidate should first contact the Assessment Centre through whom the assessment was arranged and submit the complaint in writing.

For further information on NPTC's Equal Opportunities Policy and Complaints and Appeals Procedures, please refer to www.nptc.org.uk

Learning Outcomes
The candidate will be able to:

- Prepare accurate paper work including line summary, emergency procedure documentation
- Understand E.A.W.R, ESQCR 2002 and amendments

Guidance Notes for Candidates and Assessors

Candidates must also achieve Unit UA1, UA2 part 2.1

UA 5.1 – Introduction to surveying Overhead lines

Certificate Endorsement:
A Level 3 Certificate of Competence in Utility Arboriculture –Assistant Utility Arb Surveyor will be issued to candidates who successfully achieve the unit.

This will allow the successful candidate to accompany a 5.2 surveyor in order to gain the field experience necessary to attain the 5.2 certification

The following should be available for Unit UA5.1
First Aid box
Mobile phone
Ordnance Survey map
Site map
Range of trees species incorporating defects, hazards including dangerous overhang
Authorisation from landowner
LV: Vertical arrangement, minimum 3 lines, maximum 22.5 cm.
HV: Horizontal arrangement, minimum 2 lines, maximum 2 m. between lines

Minimum height of lines 5.2 metres from the ground

5 to 6, 20 – 30 m. “spans” need to be available per candidate (to include clear and working spans)

Safe Practice for Unit UA5.1

1. Assessors must hold a current ‘First Aid at Work’ Certificate.
2. It is strongly recommended that Candidates hold at least a recent, recognised ‘Emergency First Aid’ Training Certificate and may be a requirement of some Electricity Companies.
3. All relevant NO and good practice guidelines must be observed when surveying vegetation next to overhead powerlines and electrical apparatus.
4. The Assessor must ensure a Risk Assessment has been carried out, and sufficient control measures implemented. In particular, the location of the site and weather conditions should be assessed, details of access, etc, which may be required by emergency services must be noted, as well as the nearest Accident and Emergency Hospital Unit. The means of contacting the emergency services must be established.
5. All Personal Protective Equipment (PPE) used in the assessments must comply with current legal requirements in terms of specification and use.
6. A First Aid Kit complying with current Regulations, of the appropriate size for the number of persons on site, must be available on site
7. Warning signs must be erected as appropriate to Risk Assessment
8. Current Industry Best Practice Guidelines for each task carried out need to be followed.
9. Any necessary permission must have been granted, and notifications made as appropriate: (e.g. Regional Electrical Companies, Local Planning Authority, Forestry Authority, Forest Enterprise, Highways Authority, Private owners, Statutory undertakers, Police, etc.).
10. The assessments are carried out in accordance with safety guidelines in the Electricity Act 1989 (Schedule 4 Para. 9), Electricity at Work Regulations, ESQCR 2002 and ESQCR 2006 amendments, ENA-TS 43-8, ENA ETR 132 and 136, HSE Guidance Notes GS6 & HS (G) 47, HS (G) 85 Electricity at Work Safe Working Practices, Electricity Supply Industry (ESI) Model Distribution Safety Rules, ESI Engineering Recommendation G55/2 2008, BS EN 50110-1, local Network Operator’s Distribution Safety Rules (“N.O. DSR’s”) and other relevant Safety Guides and current legislation e.g. the Provision and Use of Work Equipment Regulations (PUWER) 1998
11. It is the responsibility of the Assessment Centre, Assessor and the Candidate to ensure that the additional requirements and provisions are met as relevant to the units

Part 1 Produce brief line span summary survey		
	Assessment Activity	**Assessment Criteria**
1	Identify the key areas of the prepared risk assessment for the site prior to the start of the assessment.	- Comment on any significant hazards and proposed control measures
1a	Carry out a line span survey and prepare line span summary sheet. Reference to be made (as appropriate to the site) to the relevant aspects of:- - Electricity at Work Regulations - Highway legislation/New Road and Street Works Act - HS(G)47, Avoiding danger from underground services - GS6, Avoidance of danger from overhead electrical lines - AFAG 805, Training & Certification - ENA ER G55/2:2008, Safe Tree Working In Proximity To Overhead Electric Lines - BS3998,British Standard Recommendations for Tree Work - COSHH, Control of Substances Hazardous to Health	- Electrical risk assessment. - Site risk assessment - Generic risk assessments - Plans, sketches, marked maps etc. - Site location - Correctly identifying work, clear and permanently clear spans - Live or dead working - Category A,B,C or D - Traffic management - Pedestrian/vehicle access - Equipment required (chipper, MEWP etc) - Estimation of job time/staff/staff hours - Form signed and dated - Identify trees by location and species - Work to be carried out described - Any dangerous overhang to be identified - Clearance distances - Environmental considerations
1b	Identify any <u>significant</u> additional risks that would adversely impact site planning and suggest possible mitigating control measures	- Adjacent live overhead lines - Underground services
1c	Prepare Emergency procedure documentation	- Grid Reference of work site (identified with 2 letter prefix and 6 numbers) and access point if considerably different - Appropriate Telephone Numbers for the N.O. Control Room, Emergency Services. - Mobile phones signal strength and battery checked - Location (Address, Post code) - Name / Number of Circuit / Line etc identified - Pole numbers (span) - Nearest telephone location - Nearest Accident and Emergency Unit
1d	Give grid references on an Ordnance Survey map for common features	- Candidate must give an accurate six figure grid reference including the correct two letter preface
1e	Justify the pruning/felling methods appropriate to the trees along the span	Through pruning: - LV overhead lines in residential areas - Allows conductors to pass through the canopy - Allows sufficient tree/conduct to clearance Under pruning: - Amenity considerations in residential areas - Removal of some branches overhanging, but retaining the general shape of the tree Side pruning: - Woodland or forest locations - All branches on the line side of the tree removed by a pruning cut at the trunk Crown reduction: - For trees directly under or adjacent to the line - Growth directed away from conductors - Alternative to removal where tree has to be retained Felling to ground level - To allow re-coppicing - To remove species completely (wrong tree, wrong place)
1f	Justify the restricted cuts	- Minimum acceptable clearance - Where requested by the landowner - Environmental or planning controls are in place - Where keeping a good form to the tree is important

Part 2 Surveying Knowledge	
Assessment Activity	**Assessment Criteria**
1 Identify the expected conduct for a surveyor undertaking Utility Surveying	- Staff should conduct and present themselves in a professional manner at all times - Use only agreed access routes - Follow the Country Code - Always carry current N.O. identification - Comply with any disease control measures - Try to be courteous at all times
2 Demonstrate knowledge of the Electricity at Work Regulations (Regulation 14)	- Regulation 14, Justification of Live working (working on or near live conductors) - It is unreasonable in all circumstances for the line to be dead - It is reasonable in all circumstances for a person to work on or near the line while it is live - Suitable precautions (including, where necessary, the provision of suitable protective equipment) are taken to prevent injury
3 Identify and give examples of where additional precautions over and above the standard contact with the landowner might be required	- Protected sites (including SSSI's etc) - EPS sites - Network Rail sites - Forestry Commission land
4 Demonstrate an understanding of protected species.	- Species identification - Legislation - Understand statutory requirements.
5 Demonstrate knowledge of the effects of the relevant wildlife and environmental legislation	- Wildlife and Countryside Act 1981(as amended) - Environmental Protection Act 1990 - The Countryside Rights of Way Act 2000 (England and Wales) - The Nature and Conservation (Scotland) Act 2004 - The Wildlife and Countryside Act has been considerably amended and the Schedules of Protected Species are the subject of five yearly statutory reviews - The Conservation (Natural Habitats& c.) Regulations 1994
6 Demonstrate knowledge of the protection available for plants, birds and other animals	- It is prohibited to uproot any wild plant species and forbids any picking, uprooting or destruction of certain listed plants - It is an offence to kill, injure or take any wild bird, or to take damage or destroy the nest of a wild bird while in use or being built. There are additional penalties relating to disturbing listed nesting birds at nest, their eggs or dependant young. - The intentional killing, injuring or taking of listed wild animals is prohibited and it is a criminal offence to do so - Ignorance is now no excuse

LEVEL 3 CERTIFICATE OF COMPETENCE IN UTILITY ARBORICULTURE – Unit UA5.2 –UTILTIY ARB SURVEYOR
Candidate Information

This assessment covers the requirements for safe working nearing proximity to overhead conductors which may be live.

Introduction
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NPTC will:
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The candidate must be registered through an NPTC approved Assessment Centre for this qualification prior to assessment.

The result of the assessment will be recorded on the assessment report form.

The schedule of assessment contains the criteria relating to:
- Observation of practical performance
- Assessment of knowledge and understanding

Performance Evaluation for part 5.2
The result of each assessment activity in part 5.2 is evaluated against the following criteria:

4 = Meets or exceeds the assessment criteria by displaying a level of practical performance and/or underpinning knowledge, with no 'minor' or 'critical' faults. (Competent).

3 = Meets the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with some 'minor' faults but no 'critical' faults. (Competent).

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Learning Outcomes
The candidate will be able to:

- Prepare accurate paperwork including full line survey and emergency procedures
- Understand all essential factors and legislation pertaining to the preparation of a full line survey

Guidance Notes for Candidates and Assessors

Candidate pre-requisites are:
Unit UA1, 2.1and UA 5.1

Certificate Endorsement:

A **Level 3 Certificate of Competence in Utility Arboriculture – Utility Arb Surveyor** will be issued to candidates who successfully complete the following Certificate of Competence

The following should be available for Unit UA5
First Aid box
Mobile phone
Ordnance Survey map
Site map
Schematic diagram
Range of trees species incorporating defects, hazards including dangerous overhang
Authorisation from landowner
LV: Vertical arrangement, minimum 3 lines, maximum 22.5 cm.
HV: Horizontal arrangement, minimum 2 lines, maximum 2 m. between lines

Minimum height of lines 5.2 metres from the ground

5 to 6, 20 – 30 m. "spans" need to be available per candidate (to include clear and working spans

Safe Practice for Unit UA5.2

12. Assessors must hold a current 'First Aid at Work' Certificate.
13. It is strongly recommended that Candidates hold at least a recent, recognised 'Emergency First Aid' Training Certificate and may be a requirement of some Electricity Companies.
14. All relevant NO and good practice guidelines must be observed when surveying vegetation next to overhead powerlines and electrical apparatus
15. The Assessor must ensure a Risk Assessment has been carried out, and sufficient control measures implemented. In particular, the location of the site and weather conditions should be assessed, details of access, etc, which may be required by emergency services must be noted, as well as the nearest Accident and Emergency Hospital Unit. The means of contacting the emergency services must be established.
16. All Personal Protective Equipment (PPE) used in the assessments must comply with current legal requirements in terms of specification and use.
17. A First Aid Kit complying with current Regulations, of the appropriate size for the number of persons on site, must be available on site
18. Warning signs must be erected as appropriate to Risk Assessment
19. Current Industry Best Practice Guidelines (e.g. AFAG Safety Guides 301,401,403) for each task carried out need to be followed.
20. Any necessary permission must have been granted, and notifications made as appropriate: (e.g. Network Operators, Local Planning Authority, Forestry Authority, Forest Enterprise, Highways Authority, Private owners, Statutory undertakers, Police, etc.).
21. The assessments are carried out in accordance with safety guidelines in the Electricity Act 1989 (Schedule 4 Para. 9), Electricity at Work Regulations, ESQCR 2002 and ESQCR 2006 amendments, ENA-TS 43-8, ENA ETR 132 and 136, HSE Guidance Notes GS6 & HS (G) 47, HS (G) 85 Electricity at Work Safe Working Practices, Electricity Supply Industry (ESI) Model Distribution Safety Rules, ESI Engineering Recommendation G55/2 2008, BS EN 50110-1, local Network Operator's Distribution Safety Rules ("N.O. DSR's") and other relevant Safety Guides and current legislation e.g. the Provision and Use of Work Equipment Regulations (PUWER) 1998
22. It is the responsibility of the Assessment Centre, Assessor and the Candidate to ensure that the additional requirements and provisions are met as relevant to the units

Part 5.2 – Principles of Site Surveys (assessed as a viva)

The viva consists of three compulsory parts:

Part 1 – Legislation and good practice guidance

Part 2 – Survey and permission

Part 3 – Wildlife and environment

The minimum pass mark for each section is 60%. Candidates must pass each of the three sections to be accredited with the unit. Where candidates do not successfully pass all sections; subsequent re-assessment will only be necessary in the section(s) where the candidate was previously unsuccessful.

Part 1: Legislation and good practice guidance	
Assessment Activity	**Assessment Criteria**
1. Demonstrate additional knowledge on the principles surrounding the Electricity Act 1989 Schedule 4, Paragraph 9	- Enables work to be carried out to trees and shrubs which obstruct or interfere with the electricity network, or represents a danger - The N.O. may give notice to both the owner and the occupier requiring work to be carried out. For work safety reasons N.O's generally operate their own vegetation management programmes, carrying out work on behalf of landowners. - Work in accordance with good arboricultural practice, doing as little damage as possible to trees, fences, hedges and growing crops - Cause felled trees, limbs, roots or cuttings to be removed in accordance with the directions of the landowner.
2. Explain the additional constraints imposed by the Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR 2002)	- The ESQCR specify safety standards to protect the general public and consumers from danger - The regulations also contain power quality and supply continuity requirements to ensure an efficient and economic electricity supply service to consumers - The N.O's have a duty to maintain minimum clearances
3. Explain the additional regulations imposed by the ESQCR 2006 amendments	- The 2006 amendments extend the N.O's duty to make the overhead networks resilient to the effect of major storms by reducing the effect of falling trees and windborn material hitting the overhead network.
4. Demonstrate knowledge of the main principles of ETR136	- To present generic principles of good practice for vegetation management - To meet the reasonable aspirations of all stakeholders - Covers all phases of work from the planning stage to completion and leaving the site - Provides guidance on all areas of vegetation management not just tree cutting
5. Demonstrate knowledge of HS(G)47 and GS6	- Guidance of identification of all non-electrical utilities plant - Guidance on the avoidance of danger from underground cables - Erection of barriers to prevent unauthorised access - Use of barriers and goal posts for the safe movement of vehicles through a site - Agreement with DNO for positions and height
6. Demonstrate knowledge of the relevant aspects of ER G55/2	- Live zones - Vicinity zones - Category A,B,C and D - Competence of operators, - Electrical risk assessment - Other
7. Demonstrate knowledge of TPO and Conservation Area legislation Demonstrate knowledge of potential exemptions for 'Power Line clearance operations'	- TPO legislation prohibits the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without the consent of the Local Planning Authority (including the cutting of roots) - Anyone proposing to cut down, uproot, top or lop a tree in a Conservation Area is required to give six weeks notice to the Local Planning Authority - Explain the type of exemption that is afforded to Statutory Network Operators - Discuss the limitations of this exemption

Part 1: Legislation and good practice guidance	
Assessment Activity	**Assessment Criteria**
8. Demonstrate knowledge of the Forestry Act 1967 Demonstrate knowledge of potential exemptions for 'Power Line clearance operations'	- The Forestry Act protects forests and woodlands against losses from human activities such as felling, development and inappropriate planting and the spread of pests and diseases - Network Operators are most likely to be affected by felling licence requirements and plant disease orders - A felling licence is required when cutting more than five cubic metres per quarter. Exemptions do include felling trees essential to maintain electricity services, however any felling beyond the statutory clearance would affect the woodland owners quarterly allowance and require a felling licence - Work may involve disease orders i.e. Phytophthora spp - Or notifiable invertebrates i.e. the Great Spruce Bark Beetle (Dendroctonus micans)
9. Demonstrate knowledge of single farm payment schemes and factors restricting clearance issues	- Timing of clearance work - Areas to be cleared limits
10. Identify the key points of Highway legislation/New Road and Street Works Act	- Traffic management - Pedestrian/vehicle access
11. Demonstrate knowledge of the implications of the Hedgerow Regulations 1997	- The regulations apply to any hedgerow adjacent to common, protected, forestry or agricultural land including equine. - The hedgerow must have a continuous length of 20m, or if less than 20m meets another hedgerow at either end. - 'Important hedgerows' are those that have existed for 30 years or more or satisfies at least one of the criteria in Part II of Schedule 1 - Exemptions for the N.O. exist by way of Schedule 4 paragraph 9 of the Electricity Act 1989(c). This allows cutting back or felling to prevent obstruction or interference with the conductors or plant - Specific regard would have to be taken of flight paths for bats along the length of the hedgerow and if there are any nesting birds present
12. Demonstrate knowledge of how the Occupier Liability Act 1984 (amended) can influence the work undertaken during line clearance	- The Act places a duty of care on the landowner towards visitors and other persons - Good practice should ensure that work is completed to good safety standards and no danger is left unguarded at the end of the working day - If work has to be left partially completed, it should be adequately signed and guarded
13. Demonstrate knowledge of the powers that can be used on sites in Britain relating to the Conservation (Natural Habitats & C.) Regulations 1994.	- Special nature conservation orders can be created - Individual management agreements can be made - Bylaws can be made - There is a requirement to give notice of proposed works and there are set out fines for offences - Exemptions are allowed for emergency operations, however the conservation body must be notified immediately - Procedures are set out for considering varying consents under the Electricity Act 1989

Part 2 Survey and permission	
Assessment Activity	**Assessment Criteria**
1. Demonstrate knowledge of introducing yourself to the landowner for the first time	- Proof of identity to owner - Name of Company representing - Name of REC - Confirmation of landowner details - Permission to access owners grounds to assess work
2. Demonstrate knowledge of the need to have tree clearance work carried out	- N.O. require specific clearance - *Trees may be in contact with the line - Public safety - Maintain continuous supply *Branch contact with line may cause: - Interruption of supply - Shock or burn if anyone touches tree - Danger if tree is climbed - Tree to catch fire
3. Communicate to landowner reasons for carrying out work following preparation of proposals	- Specific clearance required to meet with N.O.'s standard - Arboricultural standards explained - Reasons for pruning cuts to gain possible restricted clearance - Reasons for removal of hazard trees - Replanting where/if necessary - Disposal of arisings explained/agreed - Proposals agreed and signed by owner

Part 2 Survey and permission	
Assessment Activity	**Assessment Criteria**
4. Demonstrate knowledge of the obligation to obtain written and signed permission for undertaking the proposed statutory works	- The permission should include specific details of the proposed work - The permission should be easily understood by the land owner - A copy of all paperwork should be left with the landowner - Where written permission is not available details of the verbal agreement should be noted on the form - Detailed access and egress agreements for pedestrians and/or vehicles should also be noted on the permission forms
5. Identify the important elements of the disposal of arisings on any permission.	- Must be agreed with the landowner and confirmed in writing - Must comply with all relevant legislation - Toxic arisings such as Ragwort should be made safe in respect of livestock
6. Demonstrate knowledge of and justify the use of restricted cuts	- Minimum acceptable clearance - Where requested by the landowner - Environmental or planning controls are in place - Where keeping a good form to the tree is important
7. Explain the elements required to identify/ reference individual trees within a working span	- Species - Location - Age type-e.g. young, medium mature - Reference number (if applicable) - Dead or alive - Defects
8. Identify the native species might be suggested for planting close to the conductors, where future pruning will not adversely affect the tree	- Blackthorn - Hawthorn - Rowan - Holly Hazel - Elder - Crab apple - Dogwood - Spindle - Other .
9. Identify species that would be totally unsuitable to plant near conductors	- Willows - Poplars - Ash - Alder - Wild cherry - Lime - Birch - Other
10. Demonstrate knowledge of working on a tree that has decay/defects or damage	Fungal fruiting bodies: - Type of decay (brittle or elastic) Major decay, defect or damage may prevent: - Tree being climbed for dismantling operations - Branch being sectioned in manageable pieces - Winch felling on the tree on a shut down may be necessary - Line may need to be de-energised and dropped to allow the branch to fall
11. Demonstrate knowledge of “over pruning’ and ‘good pruning’	Biological tree reactions to over pruning: - Poor crown architecture - Long whippy stems, end loading - Extensive long lone laterals - Open crowns, over pruning allowing too much movement - Arching branches - Other Biological tree reactions to good pruning: - Good crown architecture - Secondary thickening because of wind/sway - Even distribution of main branches and leaf cover - Typical branch and leaf growth for the species - other
12. Identify signs that a large tree next to an overhead network is in decline	- Crown dieback or thinning of the main canopy. - Fungal fruiting bodies in evidence (possibly season dependant) - Smaller leaves than an adjacent tree of the same species - Peeling bark - Heavy squirrel damage - Insect infestation - Large proportion of dead limbs

Section 3 ~ Wildlife and environment	
Assessment Activity	**Assessment Criteria**
1. Demonstrate knowledge of ; the indicators that bats may be present on a site appropriate site management considerations legal implications	 **Indicators:** - Potentially all woodland sites, individual and groups of trees - Hedge rows - Season, type and size of woodland - Older trees, split braches, cavities ,beneath Ivy or loose bark **Management considerations:** - Presence may not be obvious to a 'non' specialist - Bat surveys by a licensed experienced bat worker - License may be required for works - Suspend works if bats are found, until specialist advice obtained - Managers/surveyors must demonstrate that good practice guidance was followed - For advise contact relevant Statutory Nature Conservation Organization **Legal implications:** - Protected under UK and European law / directives - Offence to disturb or damage bats or their roost (even if unoccupied)
2. Demonstrate knowledge of the actions to take on a site where Schedule 1 birds are present	- No work can be undertaken if Schedule 1 birds are present on the site - Advice will need to be obtained from a specialist
3. Identify schedule 1 birds	Some examples: - Brambling - Crossbill - Firecrest - Fieldfare - Golden Oriole - Redwing - Serin - Short toed Tree Creeper - Crested Tit - Woodlark - Wryneck
4. Identify European Protected Species (not including bats)	- Dormice - Otters - Great Crested Newts - Sand Lizards - Natterjack toads
5. Identify the possible treatments of hedgerows	- Hedge topping or flailing – should only be used on regularly trimmed or previously flailed farm hedgerows - Hedge laying could be undertaken when the right context and material is available - Coppicing can be useful for the regeneration of hedgerows from the base
6. Identify the potential uses and any drawbacks in using herbicide treatments	- - Must be used in accordance with the Approved Code of Practice - Ca n be useful in the management of very fast growing species under the conductors and around sub stations - Many herbicides cannot be used where there is any risk of run-off into watercourses
7. Define the term 'wildlife corridors'	- Wildlife corridors allow the movement of animals and plants from one area to another - The land beneath overhead lines can form excellent wildlife corridors, particularly in urban areas - Examples of good practice for these wildlife corridors would be: use of feathered edges, leaving some areas of low growing plants, providing small numbers of habitat piles of stacked cut material - In dense woodland areas the creation of the open space below overhead lines can actually encourage species diversity
8. Define the term 'Veteran Tree' Identify the management solution for dealing with veteran trees are next to an overhead network	- A Veteran Tree can be defined as a tree that is of interest biologically, aesthetically or culturally because of its age, size and condition - Where Veteran Trees are in proximity to overhead lines, good practice is – where practicable-to seek to remove risk by reduction rather than felling

9. Identify the types of fungi/ fruiting bodies that cause concern	- Honey fungus *Armillaria spp.* - Ganodermas - *Inonotus hispidus* - Giant polypore *Meripilus giganteus*
10. Identify reasons why allelopathic plants can be a useful tool when managing trees adjacent to the overhead network	- Allelopathic plants use chemical means to exclude competition from other plants (including trees) - They could be used as low growing vegetation under the lines in order to exclude tree re-growth - However a number of the more vigorous allelopathic plants are non-native, therefore, care would need to be exercised when planting in certain areas.
11. Demonstrate knowledge of the essential elements of good forestry practice in relation to felling in woodlands	- Site should be left tidy with trees felled with low stumps with no jagged tears and neatly stacked brash - Produce should be free of any sprags, accurately converted, safely and neatly stacked for extraction - All timber operations should be completed in a professional and safe manner. - Leave all water courses and culverts free from arisings - Avoid damage to retained standing trees - Conifer stumps should be treated for *Heterobasidion annosum* with a dye added to the treatment to ensure complete coverage.