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REFERENCE DOCUMENTS

Relevant UK Legislation

- Badgers Act 1992
- Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995
- Conservation of Habitats and Species Regulations (2017)
- Countryside and Rights of Way Act 2000
- Environment (Northern Ireland) Order 2002
- Environment Action 2021
- Forestry Act (Northern Ireland) 2010
- Forestry Act 1967
- Natural Environmental and Rural Communities Act (NERC 2006)
- Planning (Listed Buildings and Conservation Areas) Act 1990
- The Planning Act (Northern Ireland) 2011 (and associated regulations)
- Town and Country Planning (Tree Preservation) (England) Regulations 2012
- Wildlife (Northern Ireland) Order 1995
- Wildlife and Countryside Act (1981)

British Standards:

- BS 5837:2012 – Trees in relation to design, demolition, and construction – Recommendations
- BS 3998:2010 – Tree work – Recommendations
- BS 42020:2013 – Biodiversity – Code of practice for planning and development
- BS 8596:2015 – Surveying for bats in trees and woodland – Guide
- Micro guide to surveying for bats in trees and woodland. An introduction to BS 8596.

Industry Guidance:

- [N1] NATIONAL JOINT UTILITIES GROUP (NJUG). Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees. Volume 4, issue 2. London: NJUG, 2007. (UK Wide)
- Forest Service Tree Safety Management Practice Guide v3 Nov 2020 (Northern Ireland Only)
- CCGBC – Guidance Notes – TW1 – Making an application for Tree Works – 16.08.2018. (Northern Ireland Only)
- National Tree Safety Group (2011) Common sense risk management of trees. (UK Wide)
- Application for Tree Works: Work to Trees Subject to a Tree Preservation Order and Notification of Proposed Works to Trees in a Conservation Area. Planning Portal – Application Type Guidance. V1.1 England (England Only)
- Bat Conservation Trust (2015) Bats & Trees. Updated Jan 2018

DEFINITIONS

- **Arboriculturist** – A person engaged in the profession of arboriculture who, through experience, education, and training, possesses the competence to pursue the management of trees.
- **Bird Breeding Season** – The year from 1st March to 31st August.
- **Competent Person** — A person with training and experience relevant to the matter being addressed and understanding the task's requirements. A competent person is expected to be able to advise on the best means of undertaking works in accordance with the recommendations of the referenced documents listed, which may be implemented or as per Client specifications.

To undertake cutting trees, a **competent person** must have a working knowledge of and undertake the work by the following:

- Relevant UK Legalisation
- BS 5837:2012 – Trees in relation to design, demolition, and construction – Recommendations
- BS 3998:2010 – Tree work – Recommendations
- BS 42020:2013 – Biodiversity – Code of practice for planning and development
- BS 8596:2015 – Surveying for bats in trees and woodland – Guide
- Forest Service Tree Safety Management Practice Guide v3 Nov 2020 (Northern Ireland Only)
- National Tree Safety Group (2011) Common sense risk management of trees. (UK Wide)
- Under the supervision of an ecologist where trees are found to have any European and UK Biodiversity Action Plan (BAP) Priority Species or form part of Priority Habitats.
- Under the supervision of an arboriculturist where trees are found to be protected (i.e. Tree Preservation Order, Within Conservation Area, Statutory Designation or Ancient or Veteran Tree)

Chainsaw operatives should have been trained in (*or equivalent to*):

- CS30 Maintenance Assessment Schedule 0412
- CS31 Felling Assessment Schedule 0412
- CS38 Aerial Rescue Assessment Schedule 0412
- CS39 Rope & Harness Assessment Schedule 0412

BACKGROUND

The British Standards (3998:2010 and 5837:2010) acknowledge the importance of trees as dynamic, continually self-optimizing organisms that provide a range of vital ecosystem services, such as species habitat, carbon storage and sequestration and stabilise soil structure to ensure water and nutrients are transferred. Trees also provide visual amenities, soften or complement the effects of the built environment, and improve the conformability of areas by contributing to shade, reducing wind speed, and intercepting precipitation. Many trees also hold significant cultural value; therefore, their protection is important when working alongside them.

Viberoptix is a Teir 1 Contractor. We aim to minimise tree management through comprehensive surveying, planning, and design of our routes and to uphold all relevant UK legalisation, British Standards, and Industry Guidance in our operations. Tree management is required in our operations to facilitate the establishment of new connections to the existing infrastructure.

1. PURPOSE

PRO_EN_04 Tree Management outlines the tree management process undertaken by Viberoptix and subcontractors. It aims to reduce the impact of Viberoptix activities on affected trees and species and ensure compliance with legal obligations.

It shall take account of current best practices regarding planning for the management and protection of trees, nesting birds, bats, and other priority species (i.e. red squirrels and dormice) potentially affected by the organisation's activities.

2. SCOPE

This procedure applies to Viberoptix tree management activities, which are within the scope of the CEO, all staff, and subcontractors involved in Viberoptix operations.

2.1. Terms of Reference

For PRO_EN_004 Tree Management:

- It is assumed that appropriate mitigation or consent notices are in place before tree trimming works are scheduled since Surveyors and Desktop Planners would have identified when our route impacts one of the following:
 - a) European and UK BAP Priority Species/Habitats
 - b) Tree Preservation Orders
 - c) Trees within Conservation Areas
 - d) Trees form part of Statutory Designations (i.e. SSSI, SAC, SPA)
 - e) Ancient or Veteran Trees.
- Site supervisors and managers, specialist consultants (e.g. ecological or arboriculturists), and operatives undertaking tree trimming comprehensively understand this procedure to ensure compliance with relevant UK legalisation, British Standards, Industry Guidance, and Client specifications.
- Any tree works required must only be carried by a suitably qualified, insured, and competent person following Viberoptix authorisation and a pre-works tree trimming survey.

3. COMPLIANCE

Damaging protected trees without consent is a criminal offence, including damaging their roots or branches. Working on any tree without the landowner or relevant authority's consent can lead to fines, damage to reputation, or internal investigation.

Viberoptix has a duty of care to ensure that all its activities associated with tree management are specified, have appropriate consent or approval from the landowner and relevant authorities, be undertaken by a competent person in line with PRO_EN_004 Tree Management, and should have an arboriculturist or ecologist on site when a tree is identified as protected during survey or design stages. To ensure effective tree management, all staff, including contractors and sub-contractors involved with the operational aspect of Viberoptix, must adhere to the actions outlined in Section 4. Procedure.

4. PROCEDURE

The following procedure is summarised in Annex 1.

4.1. Procedure for Site Supervisor or Manager of Tree Management Crews

- 1) Ensure a tree trimmer contractor is onboarded, meeting Viberoptix standards:
 - a) There is a **competent person** and **arborist** within the tree-trimming crew.
 - b) The tree trimming crew is suitably qualified and insured. Training Matrix should be provided.
 - c) Chainsaw operatives should have been trained in (*or equivalent to*) the qualification highlighted for a **competent person**.
 - d) Undertaken Viberoptix Induction and signed off in PRO_EN_04 Tree Management and its associated documentation.
- 2) Develop a site plan of works, including the scope of works and green waste requirements, and highlight whether any specialist contractor or application is required. The ESG Team or a specialist consultant can assist in developing these plans.
- 3) Pass details of the site plan to the tree-trimming crew. Speak with the ESG Team about whether the specialist contractor or application is required to arrange services.
- 4) During work, inspect the site and review the details of the tree trimming survey. Stop work, following the 4.3. process. Stand down the crew if it does not meet onboarding or procedural requirements. Immediately report to ESG Team for internal investigation.
- 5) Once works are completed, provide details to the ESG Team for them to add to records.

4.2. Procedure for Site Survey Before Starting Tree Management Works.

- 1) Review the site plan and the work required by the supervisor developed as a part of 4.1.
- 2) A suitably qualified and competent person must complete a site survey.
- 3) The competent person shall inspect (Annex 2):
 - a) Features of the trees or trees, including but not limited to knot and manmade holes or cavities, cracks, bark condition, cankers, compression forks, crossing stems, and ivy.

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Check validity with list of documents on shared drive

- b) Signs of nesting birds (an active nest is considered such when the first twig is laid), woodpecker holes, and bird boxes.
 - c) If the trees suit the signs and sites of bats or bat roosting (Annex 3, [Bat Conservation Trust](#)).
 - d) Signs and sites of European and UK BAP species/habitats and badgers (**Annex 4**)
 - e) If works are **deemed necessary** within the bird breeding season, the site survey must include a comprehensive check for nesting birds; details, including mitigation practices, must be recorded.
- 4) The survey must be recorded in the HSEQ App (Evotix)—Tree Trimming Survey (Annex 2) and communicated to the site supervisor and/or manager prior to work.
 - 5) Calculate the root protection area:
 - a) The root protection area is calculated using the diameter of the tree's trunk at 1.5m above ground level.
 - b) It is an area equivalent to a circle with a radius 12π times the stem diameter
 - c) An arboriculturist may assist in this calculation.
 - 6) Ensure tools and equipment are disinfected before use.
 - 7) Vehicles and heavy equipment must be parked on hard-standing ground away from vegetation and not within the root protection zone.
 - a) Suitable buffers and protection measures must be placed between vehicles and heavy equipment to protect the root system.
 - 8) Potential pollutants must be stored in a secure and bunded area (PRO_EN_003 Environmental Spillage) away from vegetation and outside the root protection area to protect root systems.
 - 9) No refuelling activities are to occur within the root protection zone.

4.3. Procedure for Stopping Works Following Site Survey

- 1) Works must **stop immediately** or **not start**:
 - a) if consent notices or appropriate mitigation is not in place.
 - b) Unless an ecologist is present, where nesting birds, bats, bat roosts or European and UK BAP species/habitats are confirmed or suspected to be present. The DfE process to follow.
- 2) Submit site survey. The location of nesting birds, bats or bats shall be reported **immediately** to the Environment, Sustainability, and Governance Team (ESG Team) to enact an investigation, who will seek professional advice.
- 3) **No works shall be undertaken** until verified by the ESG Team and an ecologist where birds' bats and European and UK BAP species/habitats are present or suspected to be present.

4.4. Procedure for Tree Management Works after Site Survey

- 1) Protect all nearby vegetation, bird nests, and potential bat roosting features through suitable buffers and protection measures.
 - a) Ensure branch removal is undertaken in a controlled manner, as stated in British Standards 3998:2010.
- 2) Update the site survey if conditions change. **Stop work immediately**, as required in Section 4.2, and follow the process.

- 3) Report details of work once completed to the supervisor, including details on green waste.
- 4) Submit site survey.

4.5. Procedure for Works Around Root Protection Areas

- 1) Works around root protection areas:
 - a) Remember roots can extend beyond the canopy, so it is important to take extra care when working.
 - b) Avoid where possible and explore options other than hand digging (e.g. airspace or soil vacuum).
 - c) When hand digging is **deemed necessary**, ensure works are undertaken as per BS5837:2012 and NJUG Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees. Volume 4, issue 2. London: NJUG, 2007 (Annex 5)
 - d) Where trees are identified to be protected under the supervision of an arboriculturist.

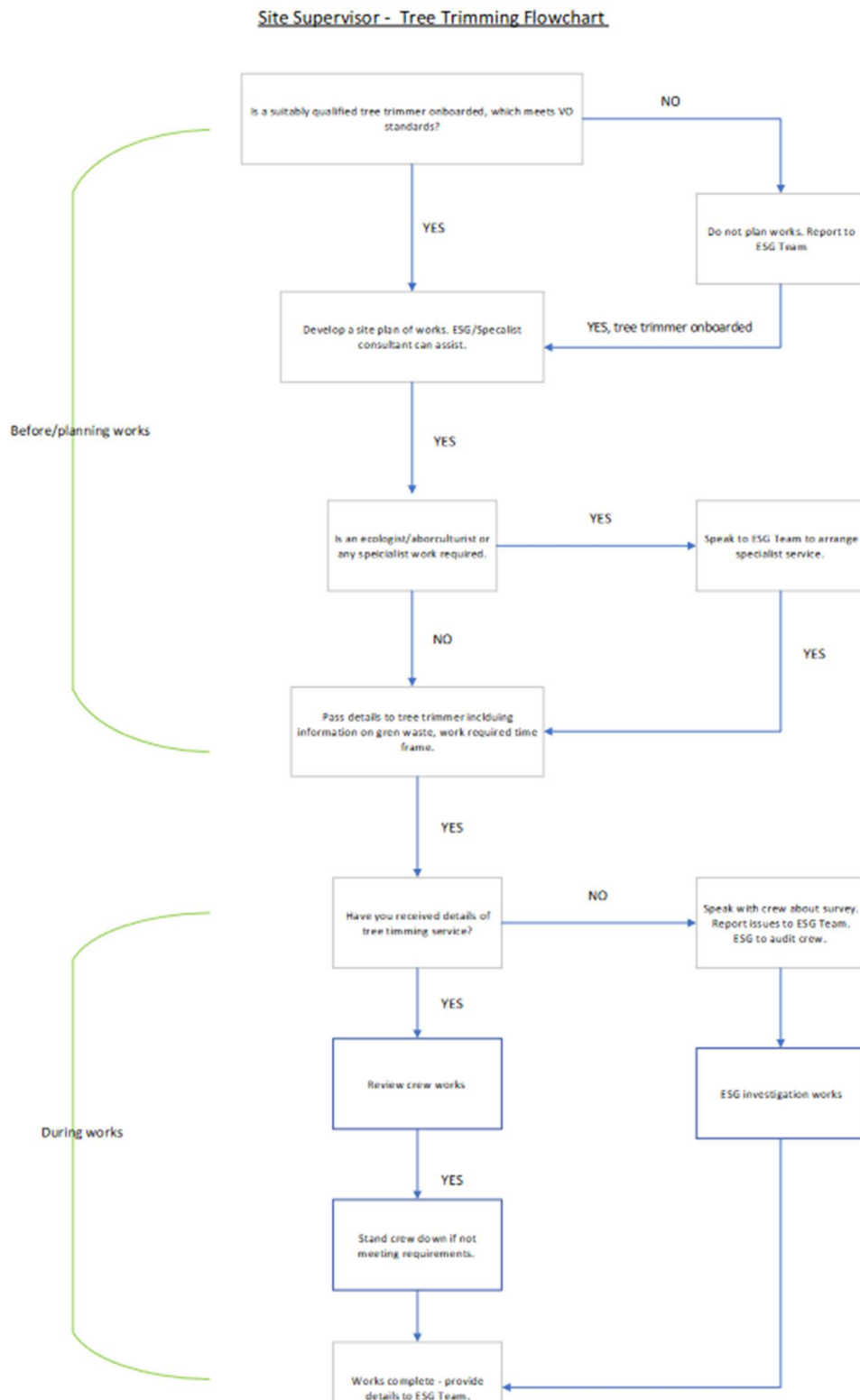
5. TRAINING

Employees will receive training during induction and other relevant training courses. All staff will receive additional information and training as necessary or on request through toolbox talks and information following updated or latest guidance on the company app.

6. ANNEX

6.1. Annex 1: Process Flow

For Supervisors and Site Managers:



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graph TD
    Start([Review site plan and scope of works provided by supervisor]) --> Speak[SPEAK WITH SITE SUPERVISOR ABOUT WORKS REQUIRED]
    Speak --> Review[Review Works Required]
    Review --> Competent{Has a competent person completed the Evotix Tree Trimming Survey before work commences? Annex 2}
    
    Competent -- No --> Survey[COMPETENT PERSON TO COMPLETE TREE TRIMMING SURVEY BEFORE WORKS BEGIN Annex 2]
    Survey --> Competent
    
    Competent -- Yes --> Issues{Have any issues* been identified during Tree Trimming Survey?}
    
    Issues -- No --> NoIssues[No issues proceed with pre-work set up and report site survey findings to the Supervisor]
    NoIssues --> Report[Report to finding to supervisor]
    Report --> RPZCalc[Calculate the Root Protection Zone RPZ. <Tree's Diameter At 1.5m> x 12π >]
    
    RPZCalc --> RPZ[Calculate Root Protection Zone]
    RPZ --> Barriers[Place barriers to protect RPZ. Ensure tools and equipment are disinfected]
    Barriers --> ProtectRPZ[Protect the RPZ]
    ProtectRPZ --> Vans1{Are vans parked and equipment stored outside the RPZ?}
    
    Vans1 -- No --> MoveVans[MOVE VANS/EQUIPMENT TO HARDSTANDING GROUND OUTSIDE RPZ Place appropriate barrier.]
    MoveVans --> Vans1
    
    Vans1 -- Yes --> Vans2{Are vans parked and equipment stored outside the RPZ?}
    
    Vans2 -- No --> MoveCoshh[MOVE COSHH MATERIALS OUTSIDE THE RPZ. NO REFUELLING TO TAKE PLACE IN RPZ.]
    MoveCoshh --> Vans2
    
    Vans2 -- Yes --> NoRefuel[Yes, no refuelling activities to take place in RPZ]
    NoRefuel --> WorkingRPZ{Are you working in the RPZ?}
    
    WorkingRPZ -- No --> NoIssues
    WorkingRPZ -- Yes --> Guidance{Are you following the Guidance for working in RPZ?}
    
    Guidance -- No --> StopWork1([STOP WORKS. Submit Site Survey and report to the ESG Team])
    StopWork1 --> ESG1[ESG/Specialist to Investigate]
    ESG1 --> NoRestart1[DO NOT RESTART WORKS, until ESG/Specialist Investigation is finished. Can works restart?]
    NoRestart1 -- No --> StopWork1
    NoRestart1 -- Yes --> Undertake[Undertake Tree Trimming works]
    
    Undertake --> ReviewTrim[Review while Tree Trimming]
    ReviewTrim --> Protected{Have you protected nearby vegetation, nesting birds, bats, or other species?}
    
    Protected -- No --> StopWork2([STOP WORKS. Submit Site Survey and report to the ESG Team])
    StopWork2 --> ESG2[ESG/ Specialist to Investigate]
    ESG2 --> NoRestart2[DO NOT RESTART WORKS, until ESG/Specialist Investigation is finished. Can works restart?]
    NoRestart2 -- No --> StopWork2
    NoRestart2 -- Yes --> Undertake
    
    Protected -- Yes --> Conditions{Have any conditions changed or new aspects been identified?}
    Conditions -- No --> NoWorkFinished([No works have finished])
    NoWorkFinished --> SubmitSurvey([Submit Tree Trimming Survey. Report details to Supervisor])
    SubmitSurvey --> Report
    
    Conditions -- Yes --> StopWork3([STOP WORKS. Submit Site Survey and report to the ESG Team])
    StopWork3 --> ESG3[ESG/ Specialist to Investigate]
    ESG3 --> NoRestart3[DO NOT RESTART WORKS, until ESG/Specialist Investigation is finished. Can works restart?]
    NoRestart3 -- No --> StopWork3
    NoRestart3 -- Yes --> Undertake
    
    Undertake --> Buffer[Yes, Buffer in place]
    Buffer --> NoRestart4[DO NOT RESTART WORKS, until ESG/Specialist Investigation is finished. Can works restart?]
    NoRestart4 -- No --> StopWork4([STOP WORKS. Submit Site Survey and report to the ESG Team])
    StopWork4 --> ESG4[ESG/ Specialist to Investigate]
    ESG4 --> NoRestart5[DO NOT RESTART WORKS, until ESG/Specialist Investigation is finished. Can works restart?]
    NoRestart5 -- No --> StopWork4
    NoRestart5 -- Yes --> Undertake
    
    Undertake --> NoWorkContinuing[No Works are Continuing.]
    NoWorkContinuing --> Conditions
  
```

Note:
 *Issues include, if consent notice or mitigation is not in place or where nesting birds, bats, bat roosts or protected species are found onsite without a present ecologist.
Key:
 Green - Pre-work requirements
 Red - Stopping works requirements
 Blue - During work requirement
 Purple - Working in RPZ requirements

6.2. Annex 2: Tree Trimming Survey

To be completed by competent person or arborist before tree trimming works commence.

Tree Trimming Pre-works Survey		
Section 1 Background Questions		
Question No.	Question (Please answer ALL questions)	Answers (Complete as per prompt)
1	What is the starting location of the works?	Text Response (What3Words/ Address/ JNT)
2.	What is the ending location of the works?	Text Response (What3Words/ Address/ JNT)
3.	What is the date of the works?	Date Response
4.	Does the person completing this survey meet the definition of a competent person as outlined in PRO-EN-004 Tree Management?	Single-Selection Response Yes No (If Yes, provide the name of the competent person) (If No – Works do not commence, and it is reported to ESG)
5.	What are the names of the other individuals undertaking the Tree Management?	Text Response (List of Names onsite)
6.	Do the individuals have the correct training and insurance to undertake tree management? (Provide evidence of insurance details)	Single-Selection Response Yes No (If No – Works do not commence, and it is reported to ESG)
7.	Is an arborist onsite?	Single-Selection Response Yes No (If No – Works do not commence, and it is reported to ESG)
8.	Have you received any information regarding Tree Management of TPO or Trees within a Conservation Area?	Single-Selection Response Yes No (If Yes, prompt to check ARC Maps to read the site plan and LPA requirements. No green waste will be left on site if in the Conservation Area.)
9.	Has an ecologist undertaken a pre-works check?	Single-Selection Response Yes No (If Yes, go to Section 2. If No, go to Section 3)
Section 2 Ecology Pre-Works Checks Findings		
The response to Question 9 in the previous section has highlighted an ecologist has undertaken a pre-works check to identify potential ecological concerns. Please complete the following section to highlight the findings of the pre-works check and the mitigation requirements. You will not be		

required to undertake any non-specialist secondary check after the preliminary checks. Works must stop if any species or ecological condition changes following the works commencing.		
1.	Did you receive prior information on ecological findings on one of the following?	Multi-Selection Response Nesting Birds Bats Red Squirrels Other EU/UK BAP Species (i.e. protected animals) Ancient Woodlands Veteran Trees Other <i>(If other, crews must specify details of information)</i>
2.	What are the required mitigation measures	Text Response <i>(Summary of required mitigation measures in place. If no mitigation measures are required, crews must specify this detail)</i>
Section 3 Preliminary Survey		
1.	Is the tree management on an individual or group of trees?	Single-Selection Response: Individual Group of Trees
Prompt	<i>Please proceed with the tree survey for each tree and update it when necessary. Before works commence on a group of trees, a competent person must complete a site survey of all trees. Document the number of trees being managed. When recording survey details, a number system (e.g., T1) should be used, and details such as species should be included. Update the tree survey when necessary.</i>	
2.	Are the tree(s) identified to be? \	Multi-Selection Response Ancient Veteran Neither <i>(Please provide a photo of the tree if identified to be ancient or veteran)</i>
3.	Does the tree(s) have any of these features?	Multi-Selection Response: Knot-holes Man-made holes or cavities Woodpecker holes Crack/splits in a stem or branches Partially detached plate bark Cankers – which cavities have developed. Other hollows or cavities Compression forks Crossing stem or branches Ivy stems Other features that offer a place of shelter Suitable habitats or evidence of UK and EU priority species None of the above. <i>(Please provide a photo of each feature if identified)</i>

)Stop works if protected species are found onsite)
<p>For every feature identified in the preliminary survey, a non-specialist secondary survey must be conducted to examine aspects closer and determine the presence of breeding birds, bats, or bat roosts. This is not needed if an ecologist has already undertaken a pre-work check.</p> <p>This secondary non-specialist assessment should be undertaken only by arboriculturists who have received basic bat and bird awareness training or under the supervision of ecologists.</p> <p>If a trained arboriculturist and ecologist are not on site, work should not commence until further notice. You must submit the referral through the HSEQ App (Evotix) – Environmental Queries and wait for the Environmental, Sustainability, and Governance Team to assess and inform a specialist consultant.</p> <p>Please confirm there is a trained arborist or ecologist on site to support in the non-specialist secondary survey. Yes/No (<i>if No, stop works and report to the ESG Team</i>)</p> <p>Examinations at height must comply with the Work at Height (Amendment) Regulations 2007 and the Lifting Operations and Lifting Equipment Regulations 1998.</p>		
Section 3 Non-Specialist Secondary Survey		
1.	Are any of the following signs on-site?	<p>Multi-Select Response:</p> <p>Presence of Bird or Bats (live or dead)</p> <p>A Bird Nest</p> <p>Presence of Eggs</p> <p>Open cavities that extend above the opening have sections that are smooth and free of debris.</p> <p>Bird or Bat droppings in, around or below the entrance</p> <p>Birds exhibit nesting behaviours such as alarm calling, collecting twigs and other debris for nest building, and gathering food, often indicating an active nest.</p> <p>Staining immediately around the potential entry point</p> <p>Smoothing of surfaces around the potential entry point</p> <p>A distinctive smell of bats or ammonia</p> <p>Audible chattering at dusk or in warm weather</p> <p>An accumulation of prey debris, such as insect wings</p>
<p>If you identified any feature in the secondary non-specialist survey, no work may commence until further notice. You must submit the referral through the HSEQ App (Evotix) – Environmental Queries and wait for the Environmental, Sustainability, and Governance Team to assess and inform a specialist consultant.</p>		
Other Considerations Guidance		

Tree work should not recommence without approval and the acquisition of any licence that might be required.

If birds or bat roosts are discovered during tree work operations, work should cease immediately or as soon as it is safe. A minimum buffer zone of 5m must be provided to protect the potential nest and/or bat roost until advice from a specialist consultant (e.g., an ecologist) is sought.

If significant noise or vibrations occur from any proposed works, this can affect roosting bats within trees.

Artificial lighting must not be allowed to illuminate the tree, potential features, or linear features (tree lines, etc.).

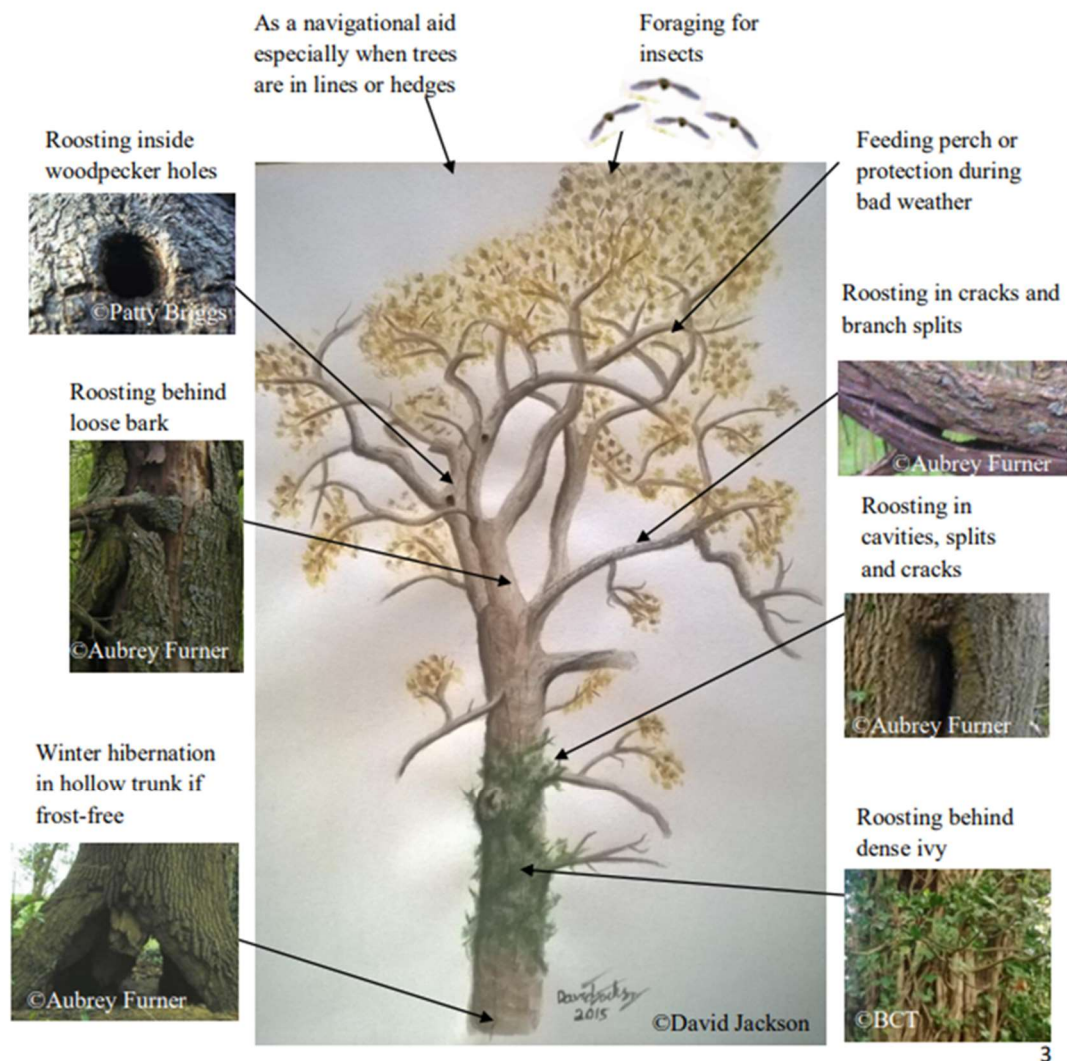
If the work results in live bats being discovered loose on the ground, they should be placed in a well-ventilated dark container or box, and fresh water should be provided. A specialist consultant (i.e. ecologist) must be contacted immediately, who can advise on the safety and recovery of the bat(s) or can contact a local bat rescuer.

I confirm I have read the other consideration guidance – Yes.

Signature	
Date	


6.3. Annex 3: Bats in Trees

How do bats utilise trees?



3

6.4. Identification of Protected/Priority Mammals (Woodland and Trees)

Species	Description	Habitats Information/Photos
 <p>Hedgehog</p>	<p><u>Woodland Trust Description:</u> Hedgehogs are 20-25cm long and typically weigh up to 1.2kg. They have a distinctive waddling gait and are covered in characteristic brown spines. They have long snouts and no spines on their underbellies, faces, or limbs.</p>	<p><u>Woodland Trust Description:</u> Hedgehogs hibernate in winter in nests made from fallen leaves in a sheltered spot.</p> <p>They can live in various habitats, including woodland, farmland, parks and gardens.</p>
 <p>Pine Marten</p>	<p><u>Woodland Trust Description:</u> Pine Martens have a long body with chocolate brown fur and a pale-yellow patch around their throat. They have large ears and a long, bushy tail. They measure around 60-70cm and weigh approximately 1-2 kg.</p>	<p><u>Woodland Trust Description:</u> Pine Martens favour woodland habitats with mature trees with holes, and cavities that are used as sheltered spaces to raise their young. Pine Martens can survive in more open country, provided some tree cover exists.</p>
 <p>Hazel Dormouse</p>	<p><u>Woodland Trust Description:</u> Dormice have a gingery-brown fur, large black eyes and long fluffy tail; it is much smaller than a squirrel.</p> <p>They sleep during the day, are active at night, and often live at the base of trees in logs or leaves.</p>	 <p>Dormice nests are made out of grass and leaves.</p>
 <p>Polecat</p>	<p><u>Woodland Trust Description:</u> Polecats have two-tone coats: dark brown guard hairs cover buff-coloured underfur. They have a distinct bandit-like appearance, with white strips across their dark faces. Their body length is 32-45 cm, and their tail length is 12-19 cm.</p>	<p><u>Woodland Trust Description:</u> Polecats are found in grassland, farmland, wetland and woodland habitats in burrows. They can be found in hollows in trees.</p> 



Red Squirrel

Woodland Trust Description:

Red Squirrels are our native squirrels. They have a reddish-brown coat, a pale underside, large ear tufts, and a characteristically busy tail.

It is smaller in size than non-native grey squirrels.



Red Squirrel Drey



European Badgers

Woodland Trust Description:

Badgers are large and grey with a short, fluffy tail, black belly and paws and a black and white striped face,

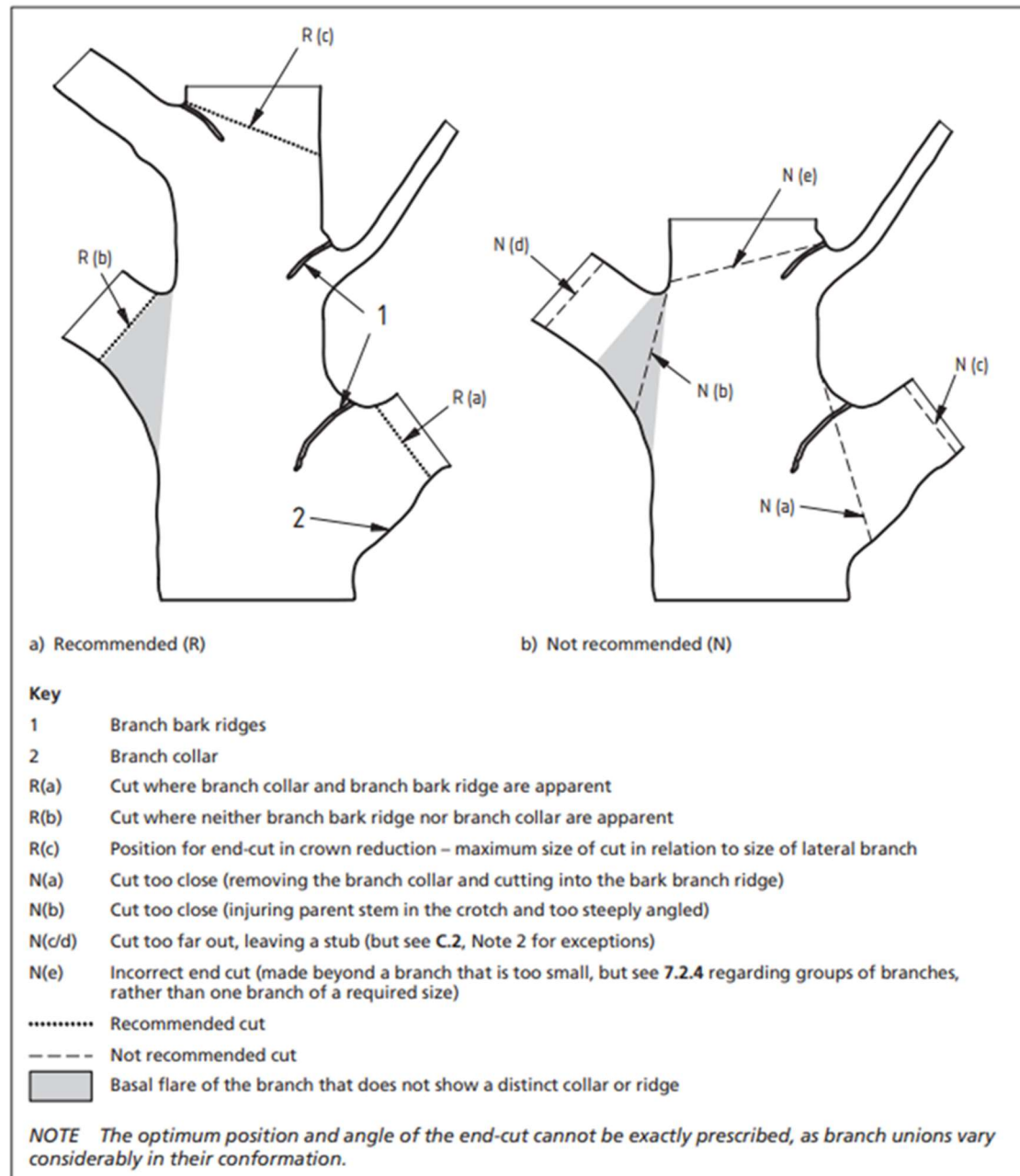
They are protected by the Badger Act 1992.



Badger set in a woodland setting

6.5. Annex 5 BS3398:2010 – Tree Work Recommendations

Figure 2 Positions of final cuts

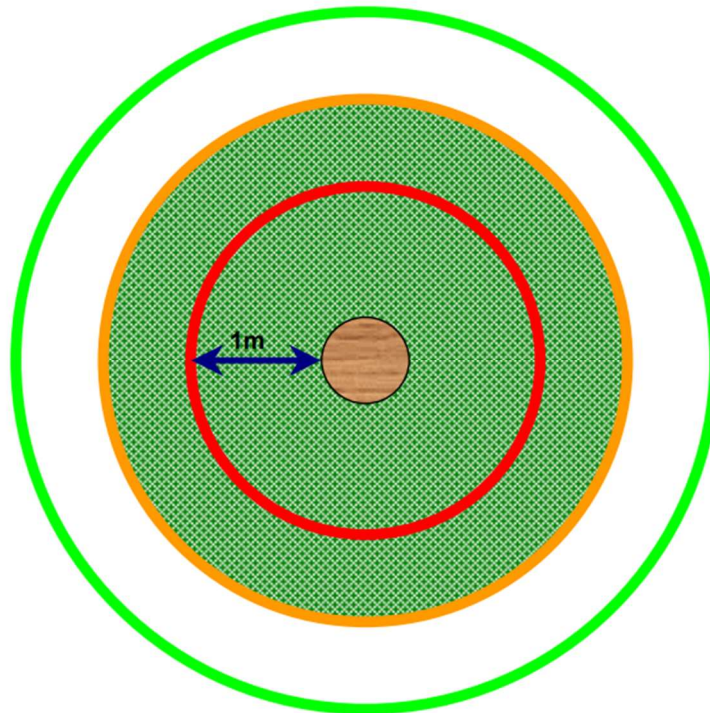


6.6. Annex 4: NJUG Guidelines



NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

FIGURE 1 – Tree Protection Zone



Key



Trunk of tree



Canopy or branch spread



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with the local authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.



PRECAUTIONARY ZONE – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with the local authority Tree Officer if in any doubt.



PERMITTED ZONE – outside of the precautionary zone. Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

TABLE 1 - Prevention of Damage to Trees Below Ground

Causes of Damage	Type of Damage	Implications to Tree	Precautions
Trenching, mechanical digging etc.	Root severance	<ul style="list-style-type: none"> The tree may fall over Death of the root beyond the point of damage Potential risk of infection of the tree <p>The larger the root the greater the impact on the tree.</p>	Hand excavate only within the Precautionary Zone. Work carefully around roots. Do not cut roots over 25mm in diameter without referring to the local authority tree officer. For roots less than 25mm in diameter use a sharp tool and make a clean cut leaving as small a wound as possible.
Trenching, mechanical digging, top soil surface removal etc.	Root bark damage	<ul style="list-style-type: none"> The tree may fall over If the damage circles the root it will cause the death of the root beyond that point Potential risk of infection of the tree <p>The larger the root the greater the impact on the tree.</p>	Do not use mechanical machinery to strip the top soil within the Precautionary Zone. Hand excavate only within the Precautionary Zone. Work carefully around roots. Do not cut roots over 25mm in diameter without referring to the local authority tree officer. For roots less than 25mm use a sharp tool and make a clean cut leaving as small a wound as possible.
Vehicle movement and plant use. Material storage within the precautionary area.	Soil compaction & water saturation	Restricts or prevents passage of gaseous diffusion through soil, the roots are asphyxiated and killed affecting the whole tree.	Prevent all vehicle movement, plant use or material storage within the Precautionary Zone.
Top-soil scouring, excavation or banking up.	Alterations in soil level causing compaction or exposure of roots.	Lowering levels strips out the mass of roots over a wide area. Raising soil levels asphyxiates roots and has the same effect as soil compaction.	Avoid altering or disturbing soil levels within the Precautionary Zone.
Use of herbicides.	Poisoning of the tree via root absorption	<ul style="list-style-type: none"> Death of the whole tree Death of individual branches <p>Damage to leaves and shoots.</p>	The selection and application of herbicides must be undertaken by a competent person in accordance with COSHH regulations.
Spillage of oils or other materials.	Contamination of soil	Toxic and asphyxiation effects of chemicals, oils, building materials (cement, plaster, additives etc.) on the root system can kill the tree.	Never store oils, chemicals or building materials within the Precautionary Zone or within the branch spread of a tree, which ever is the greater.
Placement or replacement of underground apparatus.	Various	Death of all or part of the tree.	Effective planning and liaison with local authority tree officer, taking into consideration the position of trees, and their future growth potential and management

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

TABLE 2 - Prevention of Damage to Trees Above Ground

Causes of Damage	Type of Damage	Implications for the Tree	Precautions
Impact by vehicle or plant Physical attachment of signs or hoardings to the trunk Storage of materials at base of tree Rubbing by winch or pulling cables	Bark bruising, bark removal, damage to the wood, damage to buttress roots, abrasion to trunk	Wounding with the potential for infection ultimately resulting in death of all or part of the tree. Structural failure of the tree	Surround the trunk with protective free-standing barrier. Exclude vehicles, plant or material storage from the Precautionary Zone. Ensure sufficient clearance of cables or ropes.
Impact by vehicle or plant Rubbing by overhead cables	Bark damage to branches, breakage and splitting of branches, abrasion to branches	Structural failure of the branch. Wounding or loss of a branch with the potential for infection ultimately resulting in death of all or part of the branch or tree.	Exclude vehicles, plant or material storage from the Precautionary Zone. Ensure sufficient clearance of cables or ropes. All pruning should be carried out in accordance with BS3998 (<i>prune affected branches to give appropriate clearance from cables</i>)
Inappropriate siting of overhead apparatus, such as CCTV, lighting fixtures and communications masts and dishes.	Inappropriate pruning, unnecessary tree removal	Severely pruning tree to acquire line of sight signal for communications dish etc.	Effective planning and liaison with local authority tree officer / arboriculturist, taking into consideration the position of trees, and their future growth potential and management.
Lack of forethought in design and location of apparatus and services entries on new developments	Complete tree removal	The tree is removed unnecessarily	Agree the location and installation of services at the design stage. Consideration should be given to the creation of dedicated service routes wherever possible.
Use of herbicides	Poisoning of the tree via absorption through bark, leaves and shoots	Death of the whole tree, death of individual branches, damage to leaves and shoots	The selection and application of herbicides must be undertaken by a competent person in accordance with COSHH regulations.

6.7. Annex 6: The Law

Subject	Applicable legislation/sources of information (all legislation as amended)		
	England and Wales	Northern Ireland	Scotland
Tree Preservation Orders and Conservation Areas	Town and Country Planning (Tree Preservation) (England) Regulations 2012 Town and Country Planning (Trees) (Amendment) (Wales) Regulations 2017 Planning (Listed Buildings and Conservation Areas) Act 1990	The Planning Act (Northern Ireland) 2011 (and associated regulations)	Town and Planning (Scotland) Act 1997 The Town and Country Planning (Tree Preservations orders and Conservation Areas) (Scotland) Regulations 2010
Felling Licences (Scotland Felling Permissions)	Forestry Act 1967 Forestry Commission (www.forestry.gov.uk)	Forestry Act (Northern Ireland) 2010	Forestry and Land Management (Scotland) Act 2018 (and associated regulations)
Habitats and Species regulations	Wildlife and Countryside Act 1981 Conservation of Habitats and Species Regulation 2017 Countryside and Rights of Way Act 2000 Environment Act 2021 The Environmental Damage (Prevention and Remediation) (England) Regulations 2015 The Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 National Planning Policy Framework (NPPF) (2023)	Wildlife (Northern Ireland) Order 1985 Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 Environment (Northern Ireland) Order 2002 Environment Act 2021 The Environmental Liability (Prevention and Remediation) Regulations (Northern Ireland) 2009	Wildlife and Countryside Act 1981 Conservation (Natural Habitats, etc.) Regulations 1994 Conservation of Habitats and Species Regulation 2017 Nature Conservation Act (Scotland) 2004 Environment Act 2021 The Environmental Liability (Scotland) Regulations 2009
Statutory nature conservation organisations*	Natural England (www.naturalengland.org.uk) Natural Resource Wales (www.naturalresourcewales.gov.uk)	Northern Ireland Environment Agency (https://www.daera-ni.gov.uk/northern-ireland-environment-agency)	NatureScot (www.snh.org.uk)