+

Prepared By: [Insert Your Name] for and on behalf of;



**Risk assessment document**  
**[Insert Client name]**  
**[insert client address]**

**[Client address line 2]**  
**Client town  
Client Post code**

**1:0 EMERGENCY CONTINGENCIES** Completed by: [Insert Your Name]

Date: [Insert Date]

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| 1.1 | Staff or other personnel on site suffer injury, including infection with communicable disease, e.g. HIV, Hepatitis B and TB  See also **Section 2: Site considerations** | Fatality, ill health, worsening of injury, worsening of condition, complications. Viral infection, psychological trauma | Work team/ client/general public | AFAG Safety Guide 401,402, 802:  “A Guide to Good Climbing Practice”. “Aerial Rescue Guidance Notes”:  HSE INDG317 “Chainsaws at work”. HSE:  “RIDDOR” |  | Appropriate First Aid Kit on site. Climbers carry personal First Aid Kit. All staff trained and certificated in First Aid. At least one of ground staff trained, equipped and certificated in Aerial Rescue. All staff know site location and means of contacting emergency services. All staff trained to complete Accident Book. Be aware. Items of concern should be carefully handled with protective gloves and disposed of correctly |  |  |  |  |
| 1.2 | Fire/explosion | Burns/blast injuries | Work team/ client/general public | AFAG Safety Guide 301, 302, 401, 802: HSE HSG47 “Avoiding danger from underground services” |  | As above and fire extinguishers fitted in works vehicles: staff trained in their use |  |  |  |  |

**1:0 EMERGENCY CONTINGENCIES (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| 1.3 | Contact with energised power lines  See also **2.2 Power lines – over and underground** | Serious injury/ fatality. Third party electrocution. | Work team/ client/general public | AFAG Safety Guide 302, 401, 402, 802, 804: HSE HSG47 “Avoiding danger from underground services” |  | As above, and all staff trained. Emergency procedures known. Accurate assessment of situation. Means of contacting Regional Electricity Company is known to all staff |  |  |  |  |
| 1.4 | Emergency call-out work: night-time work. Poor weather conditions. | Cut/crush/ impact injury due to poor visibility/ unstable trees or structures/ other people/ vehicles on site. | Work team/ client/general public | AFAG Safety Guide 301, 302, 303, 304, 306, 307, 308, 310, 501, 802, 804: HSE INDG317 “Chainsaws at work”, HSE HSG47 “Avoiding danger from underground services”: NPTC CS 34, 35: |  | All operators trained and certificated. Co-ordination with emergency services, local authorities, utility company etc. Portable lighting on site. Unauthorised personnel excluded from work area: signs, barriers, etc. PPE. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| a | Works vehicles | Personal injury from contact with sharp edges (doors, lockers, tailgates, etc.). Jump/fall from load bed, trailer, cab, etc. Crush injuries from tipper bed, trailer, unexpected movement, etc. | Work team/ client/general public | AFAG Safety Guide 403, 501, 502, 503, 603, 701, 702: routine preventative maintenance in accordance with internal procedures and manufacturers’ recommendations |  | All operators trained. Vehicle manufacturers instruction manual available. All guards and warnings in place. Regular vehicle maintenance and servicing. Loading and securing of load in accordance with Department for Transport guidelines. Appropriate PPE, such as safety helmet, safety boots and suitable gloves. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| b | Theft of work equipment from works vehicles. Theft of works vehicles, including trailed loads. | Serious injury/ fatality arising from untrained use/abuse/ misuse of stolen work equipment. Severe injury from contact with stolen vehicle moving at speed. Jump/fall from load bed, trailer, cab, etc. Crush injuries from tipper bed, trailer, unexpected movement, etc. | User/abuser/ misuser/ general public/ work team/ client/ emergency services personnel | Internal procedures designed to ensure security of work equipment on site |  | Awareness training for all operators. Comply with all in-company security instructions. Do not leave machinery running when unattended; do not leave ignition keys in unattended vehicles or idle plant such as brushwood chippers or stump grinders. Timing of operations in sensitive areas (see also **2.6 Working in sensitive/emotionally charged locality)**. Regular vehicle servicing and maintenance. All guards and warnings in place. Loading and securing of load in accordance with Department for Transport guidelines. |  |  |  |  |
| c | Use of hand tools | Cuts, muscular strain | Work team | AFAG Safety Guide 201, 302, 304, 307, 401 |  | Edged tools guarded. Safe stance/positioning. Safe working distance from colleagues. PPE. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| d | Access equipment.  Ladders, steps and temporary platforms  See also **5.7 Mobile elevated work platform (MEWP)** | Falling, injury from falling object, concussion, crushing | Work team/ client/general public | AFAG Safety Guide 401, “A Guide to Good Climbing Practice”. |  | All staff fully trained and competent. Ensure stability, especially on soft or uneven ground. Ladders should be secured at the top if used as a working platform, and operator independently secured.  Follow manufacturer’s safety instructions. Regular inspection of all access equipment. |  |  |  |  |
| e | Powered tools and machinery | Cut injuries, crushing, electrocution, infection from hydraulic oil | Work team/ client/general public | Operator’s certificates; AFAG Safety Guides 105, 203 |  | All staff fully trained, with full access to machinery manuals and records. Manufacturers’ guidelines to be followed, as is guidance published by AFAG, HSE etc. |  |  |  |  |
| f | Manual handling | Muscular strain/ back injury, crush injuries | Work team | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 302, 303, 304. |  | Avoid manual lifting where practicable: use mechanical aids. Move smaller pieces. Use hand aid tools. Use ergonomic work systems, work planning. PPE. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| g | Weather: Extremes of temperature; wet, windy, electrical storm | Poor visibility, loss of grip/ slipping, physiological stress, hypothermia, electrocution | Work team | AFAG Safety Guide 302, 401, 802: “A Guide to Good Climbing Practice” |  | Change task. Stop work. PPE. Thermal blanket available. |  |  |  |  |
| h | Terrain | Slipping/ tripping | Work team/ client/general public | AFAG Safety Guide 302, 307, 401, 802. |  | Prepare site. Change task. Change access. Appropriate footwear for staff / tyres for vehicles |  |  |  |  |
| i | Staff or other personnel on site suffer injury from communicable disease, e.g. HIV, Hepatitis B, TB  See also **Section 1: Emergency contingencies** | Fatality, ill health, worsening of condition, complications. Viral infection, psychological trauma | Work team/ client/general public | Health monitoring and surveillance |  | Appropriate First Aid Kit on site. All staff trained and certificated in First Aid. Site location and means of contacting emergency services is known to all staff. Treat all blood or body fluid as infected and take universal precautions i.e. use of gloves, wash hands thoroughly, bag items carefully and seal bag. Be aware. Items of concern should be carefully handled with latex gloves and disposed of correctly. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| j | Stings or bites | Transmitted infections (bacterial or viral)/ allergic reactions | Work team/ client/ general public | Health monitoring and surveillance |  | Identify any team member with specific allergy. Identify the animal / insect / vegetation with the potential to cause harm and monitor position, activity and movement and treat with caution. Where the risk of injury is real then use the appropriate PPE. First Aid training. Guidance published by AAIS, AA, HSE etc. Programme work for most appropriate time/season. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| k | Needle stick injuries | Viral infection, psychological trauma | Work team/ client/ general public | Health monitoring and surveillance |  | Identify sites with the potential to harbour discarded hypodermic syringes and treat with caution. Where the risk of injury is real then use “sharps” containers for the acceptable disposal of syringes. Under no circumstances shall syringes be re-sheathed because of risk of needle stick injury. Appropriate PPE. Appropriate First Aid and post exposure treatment, counselling. Guidance published by AAIS, Arboricultural Association, HSE etc. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| l | Deer tick bites | Lyme disease, infection from the bacteria carried by deer ticks, irritation of areas affected by ticks | Work team/ client/ general public: most likely from May to October | Reporting of any ill health. Operatives at risk should maintain regular health checks.  “Tick bites and Lyme disease”, Kingston and Richmond & Twickenham PCT |  | Where deer are believed to be present wear long trousers tucked into socks, long sleeves buttoned at wrist and tucked in at waist during May – October |  |  |  |  |
| m | Salmonella | Fatality, ill health | Work team/ client/ general public | Reporting of any ill health. Operatives at risk should maintain regular health checks |  | Be aware, wear gloves. Wash hands thoroughly before eating, smoking etc |  |  |  |  |
| n | Tetanus | Fatality, ill health | Work team/ client/ general public | Regular booster injections. Reporting of any ill health. Operatives at risk should maintain regular health checks |  | Keep anti-tetanus injections up to date. |  |  |  |  |
| o | Dog and cat faeces: Toxicara | Toxocariasis: Loss of sight, ill health | Work team/ client/ general public | Health monitoring and surveillance |  | Be aware, wear gloves. Wash hands thoroughly before eating, smoking etc. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.1 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| p | Weils Disease  (Leptospirosis) – transmitted to humans by contact with urine from infected rats | Fatality, ill-health | Anyone who is exposed to rats, rat or cattle urine: those in contact with canal and river water are also at risk | Reporting of any ill health. Operatives at risk should maintain regular health checks. HSE INDG84 Leptospirosis – are you at risk? |  | Wear protective clothing. Cover all cuts and broken skin with waterproof plasters before and during work. Wash hands after handling contaminated clothing or other materials and always before eating, drinking or smoking. See local Public Health Laboratory Service or hospital consultant microbiologist for advice and serological testing |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

**2.2 WORK SITE – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| 2.2 | Power lines – over and underground | Electrocution, contact with live lines | Work team/ client/general public | AFAG Safety Guide 401, 804; HSE HSG47 “Avoiding danger from underground services”. NPTC suite of certificates of competence in Utility Arboriculture (if working within vicinity zones) |  | All staff trained. Observe safe working distances: No work within 15 m of any overhead power line without contacting Regional Electricity Company supplier (REC). If working within vicinity zone, follow instructions and procedures of REC. Shut down power. |  |  |  |  |
| 2.3 | Other utility wayleaves  (e.g: Telephone lines, gas mains, water or sewage pipes) | Rupturing gas/ water/ telecomm supplies: explosions, flooding loss of communication ability, loss of data | Work team/ client/general public | AFAG Safety Guide 401: HSE HSG47 “Avoiding danger from underground services”: |  | Establish existence / position of wayleaves: Utilities’ site plans; CAT scanner used by trained operator. Avoid excavation or excavate only using hand tools; Avoid significant ground impact from falling timber; Avoid contact with overhead telecomm lines. |  |  |  |  |

**2:0 SITE CONSIDERATIONS**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| 2.4 | Buildings or other obstructions | Trees/parts of trees in contact with building or obstruction | Work team/ client/general public | AFAG Safety Guide 302, 307, 310, 401: NPTC Certificates of Competence: CS31, 32, 33, 41, 44 |  | Work planning. All staff trained and certificated in felling and dismantling operations. Buildings evacuated as necessary. |  |  |  |  |
| 2.5 | Working near roads/ footpaths/ public areas | Trees/parts of trees hitting passing traffic/ pedestrians. Workers struck by passing traffic | Work team/ client/general public | AFAG Safety Guide 401: Department for Transport Approved Code of Practice “Safety at street works and road works” to support NRSWA. |  | All staff trained to appropriate level. AT least one certificated operator on site on public roads. Adequate staff on site to maintain traffic control. Use of “Hi-viz” clothing/PPE. Public excluded from work area: signs, barriers, tape. |  |  |  |  |
| 2.6 | Working in sensitive/ emotionally charged locality | Offending or alienating the general public. Work team becoming the victim of verbal or physical abuse | Work team/ client/general public/local special interest group/anti- social element of local community | In-company code of practice / instruction. |  | Use of hand tools where possible for pruning works; clear work site: Take brash off-site without chipping to reduce the risk that noise may cause nuisance and/or signal the presence of the work team. Refer situation to supervisor/ team leader/manager/client. Seek to calm the tensions. Guide and educate the general public. |  |  |  |  |

**3:0 ENVIRONMENTAL CONSIDERATIONS**

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| **Ref:** | | **Hazard** | | **Risk** | | **Persons**  **involved** | | **Industry best practice/guidance** | | **Date Issued** | | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | | **By**  **(date)** | | **Completed**  **(date)** | |
| 3.1 | | Mineral oil/ herbicides/ pesticides in or near watercourses.  Tree work adjacent to watercourses | | Pollution threat to aquatic life forms, be they plant or animal  Sawdust, chippings, brushwood, timber causing blockage to watercourse | | Work team, client, general public | | BS 3998:1989 “Recommendations for Tree Work”, BS 5837: 1991 “Guide for trees in relation to construction”.  Forestry Commission: “Forests and water guidelines”  Countryside and Rights of Way Act 2000  EC Directive 2000/60/EC Water Framework Directive | |  | | All staff to receive training. Refuelling of vehicles, plant and equipment to be carried out away from watercourses.  No mixing and decanting of pesticides and herbicides or other chemicals in the vicinity of a watercourse.  Gain Environment Agency licence for herbicide application within 20m of a watercourse.  Ensure watercourses and banks are kept clear of arising’s from tree work | |  |  |  | |  | |

**3:0 ENVIRONMENTAL CONSIDERATIONS**

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| **Ref:** | | **Hazard** | | **Risk** | | **Persons**  **involved** | | **Industry best practice/guidance** | | **Date Issued** | | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | | **By**  **(date)** | | **Completed**  **(date)** | |
| 3.2 | | Proposed work adjacent to protected species / habitat | | Damage to protected species or habitat:  Damage to badger setts and so community of badgers.  Disturbance to nesting or roosting places.  Disturbance to habitat. | | Work team, client, general public | | Wildlife and Countryside Act 1981 as amended.  EC Directive on the Conservation of Wild Birds 1979 (79/409/EEC).  EC Directive on Conservation of Natural Habitats and Wild Flora and Fauna 1992 (92/43/EEC).  EC Directive 2000/60/EC Water Framework Directive.  Badger Act 1981.  The Deer Act 1991.  The Protection of Badgers Act 1992.  Countryside and Rights of Way Act 2000.  English Nature “Bat mitigation guidelines” 2004.  Arboricultural Association Guidance Note 1 “Trees and Bats” 2003 | |  | | Experienced surveyor to carry out visual check before works commence. If protected species present either:   * delay works until animal moves off of its own accord (e.g. otter, snake etc.). or * delay works until a non-critical season – out of nesting, breeding or migration season, or * change scope of works to avoid disturbance of habitat, or * obtain relevant licence from English Nature (badger sett, bats, crayfish, water voles).   as appropriate for the species or habitat present.  Groundwork’s within 50 m of an active badger sett will require a license from English Nature. | |  |  |  | |  | |

**3:0 ENVIRONMENTAL CONSIDERATIONS**

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| **Ref:** | | **Hazard** | | **Risk** | | **Persons**  **involved** | | **Industry best practice/guidance** | | **Date Issued** | | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | | **By**  **(date)** | | **Completed**  **(date)** | |
| 3.3 | | Excessive noise or noise at inappropriate times.  Excessive dust. | | Loss of enjoyment of property through noise or dust. | | Work team, client, general public | | Noise at Work Regulations 1989 | |  | | Only use correctly maintained and silenced vehicles, plant and equipment.  Unless emergency work, limit working hours to 7:00 to 19:00 Monday to Friday.  Site chipping equipment to avoid wind blowing debris onto private property. | |  |  |  | |  | |

**4:0 OPERATIONS**

**4:1 CHAIN SAWS – Common Factors**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| a | Fuelling | Fire/explosion: burns/blast injuries | Work team/ client/general public | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 308;  NPTC CS30.1 |  | All operators trained and competent. Shaded fuelling site. Safe distance from any ignition source. Correct sealed containers. Saw fuel caps replaced securely. |  |  |  |  |
| b | Maintenance: chain / bar | Cuts from chain / bar / hand tools | Work team | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301; NPTC CS30.1 |  | Avoid bare hand contact with chain and bar. Ensure files have handles. PPE. |  |  |  |  |
| c | Noise | Deafness | Saw operator/ work team | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 801; NPTC CS30.2 |  | Correct saw maintenance (exhaust baffles, chain and bar). Hearing protectors. PPE |  |  |  |  |

**4:0 OPERATIONS**

**4:1 CHAIN SAWS – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| d | Vibration | Vibration-induced White Finger (VWF), Hand Arm Vibration Syndrome (HAVS) | Saw operator, and particularly operators of large chainsaws | HS (G) 88 “Guide to Hand Arm Vibration”: INDG317 “Chainsaws at work”; HSE 246/31 “Reducing Risks of HAV Injury From Hand Held Power Tools”; AFAG Safety Guide 301; NPTC CS30.2 |  | Select appropriate equipment, monitor and carefully regulate exposure times against published data. Correct maintenance for A/V systems, chain and bar. Gloves worn. PPE. Use of lorry-mounted crane to reduce the need to cut large diameter or long lengths of round wood into manageable pieces |  |  |  |  |
| e | Poor handling | Muscular strain/ long-term injury | Saw operator | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 302, 303, 304; NPTC CS30 - 45 |  | All operators trained and competent. Use of ergonomic work systems. Work planning. |  |  |  |  |
| f | Contact with moving chain/ kickback | Cut injuries / laceration | Saw operator | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 302, 303, 304, 306, 307, 308. Appropriate level of chainsaw competence as per NPTC CS units 30 to 45. |  | All operators trained and competent. Saw safety features fitted and working. Correct bar and chain maintenance. PPE |  |  |  |  |

**4:0 OPERATIONS**

**4:2 TREE CLIMBING – Common Factors**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| a | Weak tree structure.  See also **5.4 Mobile Elevating Work Platform** | Failure of climber’s anchor point, climber falls from tree, limbs fall on climber/ ground crew | Climber/ ground crew | AFAG Safety Guide 401, 403: “A Guide to Good Climbing Practice; NPTC CS38; HSE Research Report 123 Use and effectiveness of mobile elevating work platforms for tree work |  | All operators trained and certificated. Assessment of anchor points and tree. Ensure strength of anchor points. Use of supplementary anchor points. Avoid climbing: Consider the use of a Mobile Elevating Work Platform (MEWP) as means of access and/or as working platform. |  |  |  |  |
| b | Equipment failure | Climber falls from or within tree: major or minor contact injuries | Climber/ ground crew | AFAG Safety Guide 401: “A Guide to Good Climbing Practice”, NPTC CS38.  HSE AIS 30: “LOLER: How the Regulations apply to Arboriculture” |  | Daily checks of equipment. Worn/damaged equipment withdrawn from service.  Thorough Examination of Lifting Equipment (PPE climbing equipment every 6 months) |  |  |  |  |
| c | Poor climbing technique: Free climbing, unprotected position, loss of balance | Climber falls from, or within, tree: major or minor contact injuries | Climber/ ground crew | AFAG Safety Guide 401, “A Guide to Good Climbing Practice”, NPTC CS38 |  | All operators trained and certificated. Use of correct equipment and procedures. PPE. |  |  |  |  |

**4:0 OPERATIONS**

**4:2 TREE CLIMBING – Common Factors – (continued)**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| d | Falling objects: equipment, tools, branches | Injury to persons and /or property below | Work team/ client/general public | AFAG Safety Guide 401, “A Guide to Good Climbing Practice”; NPTC CS38, 39, 40, 41, 45 |  | All operators trained and certificated. Correct use of tools, equipment and tool strops. Identified hazard areas. Communication procedures. |  |  |  |  |
| e | Awkward movements when working in tree | Muscular strain, back injury | Climber | AFAG Safety Guide 401: “A Guide to Good Climbing Practice”: “Aerial Rescue Guidance Notes”: NPTC CS38, 39. |  | All operators trained; Planned work programme. Ergonomic climbing techniques, and routing of ropes to achieve best working positions. Use of supplementary anchors. |  |  |  |  |

**4:0 OPERATIONS**

**4:3 CHAIN SAW IN TREE – Common Factors**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| a | Top-handled saw use by climber | Kickback, cut injury / laceration. Cutting climbing rope causing fall injury / fatality | Saw operator/ ground crew | HSE INDG317 “Chainsaws at work”: HSE CRR 402/2001 “Safe working methods with top-handled chainsaws”; AFAG Safety Guide 301, 308, 401; “A Guide to Good Climbing Practice”; NPTC CS30, 38, 39, 40 41 |  | All operators trained and certificated. Top handled saws used only in tree (apart from warm-up). Operator in correct position. Ropes kept in safe position. Use of supplementary anchor. Use of cut-proof strop if applicable. Chain brake applied before and after cutting. Two-handed use wherever possible, never “cut and hold”. PPE. |  |  |  |  |
| b | Passing saw to or from climber | Saw falling on ground staff. Rope damage | Saw operator/ ground crew | HSE INDG317 “Chainsaws at work”: HSE CRR 402/2001 Safe working methods with top-handled chainsaws: AFAG Safety Guide 308, 401: “A Guide to Good Climbing Practice”: NPTC CS30, 38, 39, 40, 41, 45. |  | All operators trained and certificated. Good communication. Correct methods of attaching/ securing saw. Use of tool line if appropriate. PPE. |  |  |  |  |

**4:0 OPERATIONS**

**4:3 CHAIN SAW IN TREE – Common Factors**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| c | Large saw use.  See also **4.1 d Vibration** | Kickback, cut injury / laceration, Vibration. Muscular strain, back injury. Cutting climbing rope/strop leading to slip or fall injury / fatality | Saw operator/ ground crew | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 401: “A Guide to Good Climbing Practice”: NPTC CS30, 39, 41, 45. |  | All operators trained and certificated. Saw is appropriate to task. Saw supported centrally on harness or on tool line if appropriate. Operator in correct position. Ropes kept in safe position. Use of supplementary anchor. Use of cut-resistant strop if applicable. Chain brake applied before and after cutting. Two-handed use at all times. PPE. |  |  |  |  |

**4:0 OPERATIONS**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | **Completed**  **(date)** |
| 4.4 | Branch removal | Cuts, impact/ crush injuries, | Climber, ground crew, client/general public | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 401, 403, 308: “A Guide to Good Climbing Practice”: NPTC CS30, 38, 39, 40, 41 |  | All operators trained and certificated. Correct climber position. Accurate severing cuts. Team communication. Work equipment, plant and machinery stored securely at suitable distance from tree. PPE. Client / General public excluded form work area |  |  |  |  |
| 4.5 | Use of lowering equipment. | System failure, impact/crush injuries. Rope friction burns | Climber/ ground crew/ | AFAG Safety Guide 301, 308, 401,403: “A Guide to Good Climbing Practice”: NPTC CS38, 39, 40,41. HSE AIS 30: “LOLER: How the Regulations apply to Arboriculture” |  | All operators trained and certificated. Equipment inspected regularly by a competent person. Thorough Examination of Lifting Equipment (lowering equipment every 12 months). Correct routing of ropes. Appropriate position and strength of anchor points, pulleys, etc. Working within Safe Working Load. Team communication. |  |  |  |  |

**4:0 OPERATIONS**

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| 4.6 | Tree felling | Impact/crush injuries | Work team/ client/general public | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 302, 303, 304, 306, 307, 310, 501; NPTC CS30, 31, 32, 33, 44. |  | All operators trained and certificated. Safe working distances. Escape routes maintained. Accuracy of cuts. Use of felling aids. PPE. |  |  |  |  |
| 4.7 | Delimbing and crosscutting. | Chainsaw injury: Kickback, cut injury/ laceration. Impact/crush injury. | Work team/ client | HSE INDG317 “Chainsaws at work”: AFAG Safety Guide 301, 303, 304.  NPTC CS30, 31, 32, 33 |  | All operators trained and certificated. Work planning. Safe working distances. Escape routes maintained. PPE |  |  |  |  |
| 4.8 | Storm damaged trees: Extreme tension. | Chainsaw injury: Kickback, cut injury/ laceration. Impact/crush injury. | Work team/ client/ emergency services personnel | AFAG Safety Guide 302, 304, 306, 310; NPTC CS31, 32, 34, 35 |  | All operators trained and certificated. Work planning. Safe working distances. Escape routes maintained. Correct assessment of tension and compression. Safe use of winch. PPE |  |  |  |  |

**4:0 OPERATIONS**

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| 4.9 | Chemical spraying. | Contamination, poisoning. | Operator/ work team/ client/general public | AFAG Safety Guide 102, 202;  NPTC PA1, PA2, PA6 |  | All operators trained and certificated. Choice of application method. Safe and secure storage. Operation in accordance with COSHH assessment. Data information available. Accurate calibration and mixing. PPE. Washing facilities. Correct disposal of waste. Médical Surveillance. |  |  |  |  |

1. **MACHINERY**

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| **Ref:** | **Hazard** | **Risk** | **Persons**  **involved** | **Industry best practice/guidance** | **Date Issued** | **Control measures** | **Adequate**  **? Y/N** | **Action Required** | **By**  **(date)** | | **Completed**  **(date)** |
| 5.1 | Brushwood chippers | Cuts, noise (deafness), limb injury, eye injury. | Operator/ work team/ client/general public. | AFAG Safety Guide 604: HSE Agricultural Information Sheet 38: “Power-fed mobile wood chippers: Operator protection at infeed chutes”; NPTC Certificate of Competence in Brushwood Chipper Operations |  | All operators trained. Manufacturers’ instruction manual available. All guards and warnings in place. Regular machine maintenance. Safe fuelling and storage of fuel. Unauthorised personnel excluded from work area: signs, barriers, etc. PPE. |  |  |  |  | |
| 5.2 | Stump grinders | Cuts, noise (deafness) injury from flying debris. Injury from contact with cutter wheel or contact with underground services | Operator/ work team/ client/general public. | AFAG Safety Guide 606: HSE HSG47 “Avoiding danger from underground services”: NPTC Certificate of Competence in Stump Grinding Operations |  | All operators trained. Manufacturers’ instruction manual available. All guards and warnings in place. Regular machine maintenance. Safe fuelling and storage of fuel Adequate barriers for flying debris. Unauthorised personnel excluded from work area: signs, barriers, etc. PPE. |  |  |  |  | |

**5.0 MACHINERY**

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| 5.3 | Winches – hand or mechanical | Injuries from: failure of equipment, whiplash, and worn cables. | Operator/ work team/ client/general public. | AFAG Safety Guide 310, 502: HSE AS15 “Farm and estate forestry operations”: NPTC CS32, 34, 35, 44. |  | All operators trained. Regular machine maintenance. Equipment inspected regularly by a competent person. Thorough Examination of Lifting Equipment (every 12 months). SWL known: all strops, shackles and cables to SWL minimum. PPE. |  |  |  |  |
| 5.4 | Brushcutters / Clearing saws | Cuts, noise (deafness) injury from flying debris. Injury from contact with cutting head / blade. Damage to windows, vehicles due to flying debris. | Operator/ work team/ client/general public. | AFAG Safety Guide 203; NPTC Certificate of Competence in Brush Cutting Operations |  | All operators trained. Regular machine maintenance. Safe fuelling and storage of fuel Correct fitting of harness. Unauthorised personnel excluded from work area: signs, barriers, etc. PPE. |  |  |  |  |
| 5.5 | Hedge-trimmers  **(See also:**  **2.1 d: Access equipment)** | Cuts, noise (deafness) Injury from contact with cutting knives | Operator/ work team/ client/general public. | Manufacturer’s operator manual.  NPTC AO 11: “Specialist pruning” |  | All operators trained. Regular machine maintenance. Safe fuelling and storage of fuel. Unauthorised personnel excluded from work area: signs, barriers, etc. PPE. |  |  |  |  |

**5.0 MACHINERY**

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| 5.6 | Mechanised pole pruner | Cuts, noise (deafness); Injury from contact with chain, severed sections falling on operator / others | Operator/ work team/ client/general public. | Manufacturer’s operator manual.  NPTC CS 48: “Mechanised pole pruner” |  | All operators trained. Regular machine maintenance. Safe fuelling and storage of fuel. Observe working height / angle limits. Unauthorised personnel excluded from work area: signs, barriers, etc. PPE. |  |  |  |  |
| 5.7 | Mobile elevated work platform (MEWP) | Injuries from:  Operator falling from MEWP. MEWP falling over. Equipment failure. MEWP colliding with power lines/ vehicles/other structures | Operator/ work team/ client/general public. | AFAG Safety Guide 403; NPTC Certificate of Competence in Mobile Elevated Work Platforms. HSE Research Report 123: “Use and effectiveness of mobile elevating work platforms for tree work”, HSE information sheet MISC 614: “Preventing falls from boom-type mobile elevating work platforms” |  | All operators trained and certificated. Manufacturer’s instruction manual available. Regular machine maintenance. Regular inspection by a competent person. Thorough Examination of Lifting Equipment (every 12 months) Appropriate work restraint / fall arrest system used. SWL clearly marked and observed. Safe positioning in accordance with manufacturer’s recommendations. Safe working area clearly defined. No work within power line exclusion zone. PPE. |  |  |  |  |

**5.0 MACHINERY**

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| 5.8 | Cranes | Equipment failure. Crush injuries from falling or swinging material. Working from hook/basket. Contact with power lines. | Operator/ work team/ client/general public. | AFAG Safety Guide 504: |  | All operators trained. Trained crane operator conversant with tree work. All guards and warnings in place. Regular machine maintenance. Unauthorised personnel excluded from work area: signs, barriers, etc. Team communication. Agreed work plan. PPE. Insurance covering any hire agreement is adequate. |  |  |  |  |
| 5.9 | Lorry mounted hydraulic loading arm, e.g. HIAB | Equipment failure. Crush injuries from falling or swinging material. Working from hook/basket. Contact with power lines | Operator/ work team/ client/general public. | Manufacturer’s instruction manual |  | All operators trained and conversant with tree work. All guards and warnings in place. Regular machine maintenance. Unauthorised personnel excluded from work area: signs, barriers, etc. Team communication. Agreed work plan. PPE. Insurance covering any hire agreement is adequate. |  |  |  |  |