Regulations, Approved Codes of Practice, Guidelines and Rules

Reason for additional rules

It is the Company policy to have full compliance with the Regulations and Approved Codes of Practice (ACoP). These are our primary sources of safety rules.

Best Practice Guidelines (BPG) contain ‘proven’ method statements, training techniques and hazard controls that shall be followed unless suitable alternatives (offering the same or better outcomes) are in place.

Rules in the Regulations, ACOP and BPG’s are not repeated in this document. Where these lack coverage, the Company’s ‘general safety rules’ and ‘Safe OP’ shall be followed.

Observed breach of an ACoP or general safety rule

Safety rules and best practice guidance, when followed, ensure work is carried out to the highest safety standards preventing harm or death. In view of that, any breach shall require an immediate response, including:

- An investigation taking into account factors leading to the breach.
- Re-education, written warnings, stand-downs and removal.

Disciplinary procedures for breaches of safety rules – (Employees and Contractors)

Primary supervisors (with the support of the HR Manager) shall deal promptly with those in breach of safety rules following correct ‘Employment Law’ processes and the following guidelines:

- **First offence** (Focus – training and education): – discuss the matter with the offender and issue a written letter of warning.

- **Second offence** (Focus – disciplinary): – reinforce the Company’s standards and issue a second written letter of warning. This warning shall advise a stand down of 48-hours, without pay.

- **Third offence** (Focus – removal): – issue a final written letter of warning advising a stand down of one-month without pay. Those on a final warning shall satisfy Senior Management of their ability to fully comply with safety rules prior to returning to work.

NB: Representative safety committees e.g. the Zero Tolerance Scheme (ZTS) and contractors shall conform to this disciplinary procedure.

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8 [http://www.competenz.org.nz/industry/forestry/#section-238](http://www.competenz.org.nz/industry/forestry/#section-238)
9 A second and/or third offence may be incurred for the same or similar category of breach.
10 Appointed Safety Committees, that have been granted a collective authority to represent PF Olsen employees and contractors shall, in respect of contractor’s employees always address notices and letters of warning to the ‘principal contractor’. The principal contractor shall receive the notice/letter of warning and thereafter ensure that the disciplinary procedure is applied to its employee.
In respect of safety duties and Laws; visitors and authorised persons that enter our managed worksites do so with permission and full trust.

Any breach of the rules may result in the revocation of a permit and could lead to a trespass from the Company’s managed forests.

In previous versions of this management system, safety rules were divided into two sections; the first containing the ‘10 critical rules’ and the second containing other ‘general safety rules’.

PF Olsen considers that all safety rules are critical to safety excellence and has therefore removed this distinction.

Headings may be explained with a brief definition/description and then followed by rules that relate to the topic.

References may be made to a section in the ACoP, relevant BPG, PF Olsen document, form (through a hyperlink), or web page.

The acronym ‘GSR’ used in this section means a ‘General Safety Rule’.

When a detailed series of GSR and instructions on one subject is required – PF Olsen has a documented procedure called a ‘Safe OP’.

An ‘Active Operation’ means a workplace where hazardous activities are in progress, including – by way of example (but not limited to):

- All forms of tree felling.
- Tree extraction including the breaking-out process.
- Machines that are working or under maintenance.
- Log processing – including log sort and stack, quality control (QC), stock-take, and log auditing.
- Silviculture including aerial chemical spraying and pest control.
- Log transport including log loading.
- Road engineering and maintenance.

The term may also apply more generally to a forest that is open for work.
Incident reporting

- Record incidents and report serious harm to WorkSafe NZ – ASAP.
- All serious harm incidents shall also be reported to the PF Olsen supervisor immediately (verbally) and followed up with a written investigation report within 5 work-days – see this manual, section 9.
- All other incidents e.g. minor first aid, near hits etc. shall be reported to PF Olsen within 3 work-days of occurrence.

First aid

See ACoP p. 20.

- First aid kits are to be stocked per the Worksafe NZ ‘First Aid for Workplaces; A Good Practice Guide’ – e.g. see table below:
- A ‘current first aid certificate’ (training) shall cover:
  - For office based employees e.g. ‘first aiders’ for the purposes of emergency management; unit standards 6401 and 6402
  - For all operational employees and contractors; unit standards 6400, 6401 and 6402

NB: Unit standards 6400, 6401, and 6402 are expiring standards. They will be fully replaced by unit standards 26551 & 26552 by 31st December 2015.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individually wrapped moist wipes or saline solution</td>
<td>2</td>
</tr>
<tr>
<td>Individually wrapped sterile adhesive dressings</td>
<td>2</td>
</tr>
<tr>
<td>Sterile eye pads (individually wrapped)</td>
<td>2</td>
</tr>
<tr>
<td>Individually wrapped sterile ‘triangular’ bandages</td>
<td>2</td>
</tr>
<tr>
<td>Clasps or safety pins</td>
<td>2</td>
</tr>
<tr>
<td>Individually wrapped roller (stretch) bandages, (50mm)</td>
<td>2</td>
</tr>
<tr>
<td>Sterile wound dressing (2 – 18cm², 6 – 12cm²)</td>
<td>8</td>
</tr>
<tr>
<td>Large disposable gloves</td>
<td>2 pair</td>
</tr>
<tr>
<td>Resuscitation mask</td>
<td>1</td>
</tr>
<tr>
<td>Adhesive wound dressing (100mm packets)</td>
<td>1</td>
</tr>
<tr>
<td>Waterproof adhesive plaster (50mm wide, red)</td>
<td>1</td>
</tr>
<tr>
<td>Non-adhesive sterile pads (100mm x 100mm pads)</td>
<td>5</td>
</tr>
<tr>
<td>30ml Sodium Chloride capsules for irrigation</td>
<td>8</td>
</tr>
<tr>
<td>Antiseptic liquid (125ml)</td>
<td>2</td>
</tr>
<tr>
<td>Scissors (stainless steel)</td>
<td>1 pair</td>
</tr>
<tr>
<td>Splinter forceps, fine point (stainless steel)</td>
<td>1 pair</td>
</tr>
<tr>
<td>Incident register (incl. pen or pencil) – usage inventory</td>
<td>1</td>
</tr>
<tr>
<td>Hepatitis B/AIDS caution notice (on first aid kit)</td>
<td>1</td>
</tr>
<tr>
<td>Emergency numbers and contact list</td>
<td>1</td>
</tr>
</tbody>
</table>
Vehicles and driving

See ACoP, Section 2.10 – 2.11:

- Drivers of forest going vehicles shall be licensed and trained.
- Drivers with learners or restricted licenses shall not operate a vehicle in the forest.
- Driving on un-metalled tracks requires PF Olsen approval.
- Vehicle RT shall not be used as a substitute for safe driving practices.
- All vehicles must face an exit route when parked and be maintained in a state of readiness i.e. with keys in ignition and sufficient fuel.
- Forest driving speeds shall be reduced to:

<table>
<thead>
<tr>
<th>Speed (kph)</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;70</td>
<td>when on unsealed secondary roads</td>
</tr>
<tr>
<td>&lt;50</td>
<td>when on single carriage/lane roads</td>
</tr>
<tr>
<td>&lt;30</td>
<td>for travel through an active operation</td>
</tr>
</tbody>
</table>

Mobile phone use in vehicles

Drivers of vehicles shall obey the ‘Land Transport (Road User) Amendment Rule 2009’; in particular, s7.3a which states that it is illegal for drivers to ‘create, send, or read messages under any circumstances, or use a mobile phone to make, receive or end a call when driving unless:

- The driver does not have to hold or manipulate the phone to do so (completely voice activated mobile phone), or
- The mobile phone is securely mounted to the vehicle and the driver manipulates the phone infrequently and briefly, or
- There is a genuine emergency event (111, *555 call) and it is unsafe or impracticable for the driver to stop and park.

All-Terrain Vehicles (ATV and ATVU)

See ACoP, Section 6.7 and Guidelines for the safe use of quad bikes

- ATV operators shall:
  - Be trained and hold NZQA unit standards.
  - Follow the manufacturer’s recommendations for maintenance and towing, attachments and carrying loads.
  - Ride with both hands on the handle bars, both feet on the foot pegs and only on formed roads and tracks.
  - Stop the ATV and get off it, before performing any other task.
Visitors

See ACoP, Section 2.7:

- All Visitors, including forest land owners and service providers that require entry to a forest shall first complete a visitor safety induction and, thereafter, hold a current forest entry permit.
- The visitor safety induction shall include information on:
  - Hazards; commonly found when entering a forest.
  - PPE and Fire Authority requirements in a forest work place.
  - Safe driving practice in a forest environment.
  - Emergency and communication procedures.
- The visitor safety induction ‘acknowledgement form’ shall be signed.

General Safety Rules and Guidance:

- **Service Providers** to Contractors e.g. mechanics, shall receive permission to enter an active operation. Contractor’s that approve such an attendance shall ensure the service provider:
  - Has a safety system including safe work procedures.
  - Has the PPE/Fire Suppression equipment they require (or is provided with it).
  - Is supervised at all times, while in the active operation.
  - Is provided instruction on ‘site specific hazards’ and safe zones – daily as necessary.
  - Has signed the Contractor’s induction acknowledgment form;
    NB: See Safe OP – Using Radio Transmitters (RT)
- **All other Visitors** shall provide 48-hours written notice to PF Olsen that they intend to visit. Such notice shall include the date, time, forest and duration of the proposed visit.

Final entry approval (and conditions) will be dependent on the following two scenarios:

- **Active operation** (where work is taking place): PF Olsen will consult with its contractors to ensure a visit can be made safely and, thereafter, provide final approval for the visit.
  
  **NB:** If an active operation is deemed safe to visit, visitors shall be: Briefed on ‘site specific hazards’ and safe zones, provided with any PPE they require, and accompanied by a PF Olsen representative at all times.
- **Inactive operation** (where no work is taking place): PF Olsen will approve the visit and advise the visitor of any forest specific hazards. The visitor may enter unaccompanied.
See ACoP, Section 3:

It is the employer’s duty to provide PPE, ensure it remains in good condition and that it is used by employees. Employees shall use PPE!

- High Visibility (Hi-Vis) clothing (compliance by 1 November 2015):
  - Hi-Vis clothing shall display AS/NZS 4602 or NZFOA labelling and be, in all cases ‘Class D/N’ i.e. having 24-hour visibility.
  - **NB:** This includes wet weather/rainwear.
  - Hi-Vis clothing shall be checked regularly (a minimum daily) against an approved swatch (or chart) and replaced immediately when non-compliant.
  - Silviculture workers and visitors shall wear Hi-Vis vests.

- Leg protection e.g. chaps when using chainsaws:
  - Chainsaw cut-resistant legwear (chaps) shall have the purchase date recorded either on the garment or in the PPE register and replaced after six months continuous (daily) use.
  - Damaged chaps shall be immediately taken out of service and may only be repaired by an authorised repair person.

- Safety Footwear:
  - Spiked boots shall not be worn while operating machinery or while working on metal ladders (metal on metal).
  - Chainsaw operators shall wear Class/Level 3 (or higher) leather or rubber boots.
  - Chainsaw cut resistant boots shall be replaced when cut or holed.

- Safety Helmets:\13
  - Beanies or any headwear that limits the usefulness of hearing protection, shall not to be worn underneath safety helmets.

- Eye protection:
  - Eye protection shall be worn when welding, sawing during pruning, plotting, in dusty/windy conditions, working as a poleman, around helicopters and performing maintenance.

- Gloves:
  - Gloves shall comply with EN 388:1994 (or similar) standard.

11 Pertaining to ‘daily use’ e.g. skidwork and not irregular use e.g. by a PF Olsen employee.
12 Currently – Skellerup Industries produce a Level 4 rubber chainsaw cut-resistant boot. There are a number of Class 3 boots available in both spiked and un-spiked configurations.
13 Products meeting EN 397:2012 and EN 12492 embody AS/NZ 1801 and are suitable for use in New Zealand.

Continued on next page...
Hearing protection:
- All workers shall wear Grade 5 hearing protection when within 30m of an operating chainsaw or machine emitting > 95dBA.
- Machine operators, in respect of machine noise, shall wear the following classes of hearing protection:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80 – 85dBA</td>
</tr>
<tr>
<td>2</td>
<td>86 – 95dBA</td>
</tr>
<tr>
<td>5</td>
<td>&gt; 96dBA</td>
</tr>
</tbody>
</table>

NB: Operating machine, cabin noise, shall be tested annually.

Fire extinguishers
- **Fire requirements (365 days)**

The following represent the minimum requirements and are listed by operation, machine and/or equipment type:

- Chainsaw operators felling trees – one, 340 grams dry powder.
- Light vehicles – one, 1 kg dry powder.
- Heavy trucks – one, 2 kg dry powder.

All other machines – one, 9 litres pressurised foam (or water); and one, 2 kg dry powder.

**NB:** A permanent automatic fire suppression system is the preferred extinguisher discharge mechanism.

- The following table matches fuel and extinguisher classes (type):

<table>
<thead>
<tr>
<th>Class</th>
<th>Materials e.g.</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>wood, paper</td>
<td>water and dry powder types.</td>
</tr>
<tr>
<td>B</td>
<td>flammable liquids e.g. petrol</td>
<td>dry powder, CO2, foam, light water types.</td>
</tr>
<tr>
<td>C</td>
<td>gases e.g. acetylene, LPG</td>
<td>any of the types listed above. NB: Turn the gas off at source</td>
</tr>
</tbody>
</table>

- Extinguishers shall be checked after use and during monthly and annual inspections. They shall display the dates of annual inspections and/or recharges.
- All motorbikes, ATV, chainsaws and heavy machinery, except those with turbo chargers, are to be fitted with an approved spark arrestor, or a designated spark-arresting muffler.

See also – Form of Contract, Schedule 1 Fire, Security and Protection.

**NB:** The ACoP, Section 9.5 Emergency Response has additional and specific ‘fire extinguisher’ requirements in respect of Hazardous Substances such as stored fuels.
### Safety at fires

See ACoP, Section 7:
- Fire-fighters shall wear approved/rated flame stop (proof) clothing, helmets and footwear. NB: No polypropylene shall be worn.
- ‘Fire-season’ – individual and crew equipment:
  - Silviculture crew (including tree thinning) – one shovel per person and two full knapsack pumps (20 litres) held on site.
  - Harvesting crew – one shovel per person, two full knapsacks pumps (20 litres), and 200 litres of water held close to the active work area.
  - When requested by the duty fire officer, each tree feller shall have (held with fuel containers) one short handled shovel.

### Fire-season and fire prevention

See ACoP, Section 7: - (Obey Fire Authority requirements at all times).
- Vehicles shall be parked on clear ground and not blocking exits.
- A battery-isolating ‘cut-out’ shall be fitted in all heavy machinery.
- Firebreaks, roads, tracks including access to installations (power poles, towers etc.) shall be kept clear of all slash and debris.
- No fires shall be lit in any active operation at any time of the year.
- Working hours may be restricted by PF Olsen due to fire danger.
- Fire patrol will be carried out half an hour after work has ceased as instructed by the duty fire officer.

### Welding

- Welding shall be carried out with a permit obtained from PF Olsen and all permit conditions shall be adhered to; including:
  - Welding shall only be undertaken above bare soil.
  - One shovel and one 2 kg dry powder fire extinguisher shall be on-site within 5 meters of the welding.
  - The welder shall monitor the site for a minimum of 30 minutes after welding has been completed.
  - Welders shall wear flame/melt resistant clothing and other required PPE.

### Smoking

- Smoking may be permitted on firebreaks, areas cleared to bare ground, huts and vehicles (subject to a smoke-free agreement).
  - Drivers shall not smoke while driving a vehicle in the forest.
- Cigarettes and matches shall not be thrown from vehicle windows.
**Firearms**
- Firearms shall not be carried or discharged in any forest during working hours, unless authorised by PF Olsen.

**Chainsaws**
See **ACoP, Section 4.2**:
- Chainsaws shall not be:
  - Drop started – a ‘warm start’ is permissible.
  - Covered with combustible materials unless fully cooled down.
  - Operated if in any way malfunctioning.

**Helicopter operations**
See **ACoP, Section 15** (on Helicopter Logging):
- Passengers are prohibited when aircraft are carrying materials in a sling or net.
- Dogs are not permitted in the pilot compartment of an aircraft and shall be properly restrained when in the passenger compartment.

**Communications – tree fellers including waste thinning**
See **ACoP, Section 10.5.1, 11.7**:
- Supervisors of waste thinning operations shall monitor that the system of work does not isolate workers from each other.
- In the event workers do become isolated – the ‘working alone’ system of rules (GSR) shall apply.
- In all cases, a thinning crew ‘buddy system’ shall be established and documented so that a ‘person shall be available’ to each tree feller.
- Tree feller ‘call-in’ (usually by RT) is a radio check conducted at least every 30 minutes between a feller and the person available to receive, record and respond to transmissions.
Ladders and ladder pruning

See *ACoP*, Section 10.4:

- When a pruner’s feet are between 3.01 and 4.49 metres above the ground, a pruner may choose not to use a fall restraint providing that pruner holds:
  - NZQA Unit 1245 “Prune plantation trees from off the ground” for **manual ladder pruning**, or
  - NZQA Unit 6972 “Prune plantation trees with a chainsaw from off the ground” for **ladder pruning using a chainsaw**.
- When the pruner’s feet are 4.5 metres or more above the ground, the fall restraint device shall be attached to the tree immediately upon reaching the work position.

Mechanised Processors – Chain Shot

See *ACoP*, Section 6.3:

Machines used for mechanical felling and/or processing shall have in place a ‘chain shot prevention’ and ‘chain maintenance’ plan, including:

- Install 19mm polycarbonate/acrylic as front screen protection. This is a minimum thickness and mandatory for all mechanised harvesters whether they process or fell.
- Install, inspect and maintain a purpose built chain shot deflector.
- Establish a chain-shot exclusion zone using marker cones or a goal-post system. Draw a plan of the exclusion zone and absolutely prohibit all people and machines from entry. Use signage to alert everyone to this hazard, the exclusion zone, and to stay clear.

The diagram above details a ‘cone-shape’ danger zone. This zone changes with as the felling or processing head is repositioned. The BPG for Mechanical Harvesting and Processing p. 32 therefore indicates a 70m exclusion zone for unprotected workers. Protective barriers may be used to reduce this distance

**Reference material:**
- Waratah – ‘Chain Shot Awareness and Management’

- Preventative maintenance **reduces the likelihood of chain breakage**. Only use high-speed chain and inspect the chain daily. Maintain chain speeds and bar pressures at factory settings.
Mobile Plant including specialised plant.

See ACoP, Section 6:

- Mobile Plant shall be maintained and inspected to manufacturer’s requirements and operated in accord with forest driving speeds.
- Transporters, and other ‘over-dimension’ vehicles shall be piloted into the forest unless the distance travelled (from the forest gate) is less than 500 meters and it is daylight.
- Operators shall maintain 3 points of contact when climbing into or out of the machine. (see Operating Hazards, BPG Mobile Plant p. 31)
- Any machine or vehicle e.g. a Moxy used outside its original design intention (to cart logs) shall be classed as ‘mobile plant’. A registered engineer, having a working knowledge of forestry plant shall be retained to:
  - Determine the safe working payload of the plant.
  - Calculate the degree of slope that the plant may work on and advise as to fitness, and suitability of application.
  - Certify the machine as fit for purpose (structure/condition).
  - Specify the maintenance requirements (regime/routine).

Quarry Management in Forestry Operations

The Mining and Quarrying Operations Regulations 2013 require that a quarry operator “appoint a person to manage the quarrying operation and supervise the health and safety aspects of the quarrying operation on every day on which a quarry worker is at work” – see s14.

NB: A quarry operator is the person who controls a quarrying operation.

If you are extracting or processing rock or gravel from your forests to build or maintain infrastructure (or sell for gain or reward) you need to:

- Appoint an ‘A or B grade’ quarry manager.
- Advise Worksafe NZ of your quarry operations by 1 July 2015.
- Jointly (operator and manager) prepare a Principal Hazard Management Plan (PHMP) for the quarrying operation.
- Have the PHMP established and functional by 1 January 2016.

For issues or queries phone WorkSafe on 0800 030 040, or email the High Hazards Unit hhu.extractives@worksafe.govt.nz

See also: \pfo\common$\BC\Health&Safety\Legislation\Quarry Management Regulation Change.pdf

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14 In a forestry context, if the material has to be processed e.g. screened or crushed or is moved from A to B by a truck then the source is a quarry. Rock arising’s won from road construction activity and pushed around with an excavator or bulldozer would not be a quarry.
Haulers including tower certification

See ACoP, Section 14:

- Topped trees together with guy ropes may be used in conjunction with hauler rigging if specified in a harvesting plan or by PF Olsen.
- Haulers including poles, swing-yarders, tong-throwing excavators, harvest line excavators, and independent spar-yarders etc. shall be:
  - Certified as inspected three years from new, then annually.
  - Stood down from services and not operated with an expired tower certificate.
- Hauler operators (owners) shall maintain a log book that details:
  - Remedial actions taken in order to achieve tower certification.
  - Any repairs, maintenance and modifications undertaken on the hauler and any instance of tower collapse.
- All shackles shall be replaced if faulty and, at a minimum, every two years to coincide with the tower inspection date.

Fuel, explosives and chemicals

See ACoP, Section 9, 3.10 – 3.11:

- Smoking is not permitted when handling fuels.
- Turn off plant and equipment before refuelling it.
- Where fuel tanker trailers (full of fuel or not) are primarily stationed within the forest the coupling shall be inspected prior to any movement of the trailer onto a formed forestry or public roadway.
- Explosives shall not be used or stored in any PF Olsen workplace without the express consent of the Company.
- Those working with fuel/chemicals shall have potable water (20 litres per person/day) made available for hygiene and first aid.
  
  NB: Wash your hands before eating, drinking or using the toilet.

Poleman

See ACoP, Section 14.9 Poleman shall:

- Have constant communication with the hauler operator:
- Approach hooked-up stems from the front of the drag.
- Not work or stand on any elevated stem.
- Request machine assistance when the stems may move.
Basic Training — General Requirements

All operational employees and contractors shall hold unit standard 17769 (General Requirements – DKO general health, safety, and environmental requirements in forestry). The target achievement period is within two months of commencing employment.

NB: Visitors to forest operations may be required to hold unit 17769 – see Inductions.

School age Employees

See ACoP, Section 2.3.6: The Education Act 1989, part 3 states:
- ‘Every person is required to be enrolled at a registered school at all times … beginning on the person's 6th birthday and ending on the person's 16th birthday.’
- ‘Employers, complying with this legislation, shall ensure that any person(s) between the age of 15 and 16, in their workplace, have a school leaver’s certificate’ (exemption).

Skid work

See ACoP, Section 13, 6.2.11:
- Processing area work-stations shall be organised and spaced so that the actions of one worker will not create a hazard for another. Organization shall include a ‘skid lay-out diagram’ showing:
  - Where men and machines can work in relation to each other and where various tasks will be performed.
    - NB: The distance apart shall be a minimum of 20 meters moving to one tree-length when machines are working with full length stems.
  - The location of log stacks, processing decks and QC areas.
  - Safe areas for workers and visitors.
  - Truck loading and turn-around areas
- Machine operators shall not operate a machine in reverse without first checking that their path is clear of all other workers.
- Skid workers shall not work with backs to an operating machine.
- Sufficient space (an average .5 metres) shall be provided between stems for walking access, accurate log making and safe processing.
- Skidworkers shall stand on solid ground when marking, trimming and cross cutting.

Communication

- A radio transmitter (RT) shall be available to all operational employees along with the correct procedure for operating it.
Guidelines for Ceasing Work in Trees in High Winds

- This guideline, based on the Beaufort Scale, is connected to the following safe systems of work – e.g.:
  - Safe and Productive Felling, see Adverse events.
  - Working Near Live Power Lines – see: Caution during planning.

- The table below shall be displayed at all forest work sites. All persons, including Visitors to forests, shall comply with its content.

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>Beaufort Wind Force (scale)</th>
<th>Wind Category (term)</th>
<th>10m Wind Speed (km/h)</th>
<th>Observed Wind Effects (things that can be seen in the environment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Calm</td>
<td>&lt; 1</td>
<td></td>
<td>No wind; and smoke would rise vertically</td>
</tr>
<tr>
<td>1</td>
<td>Light Air</td>
<td>1 to 5</td>
<td>Wind direction can be determined.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Light Breeze</td>
<td>6 to 11</td>
<td>Wind felt on the face. Leaves rustle.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Gentle Breeze</td>
<td>12 to 19</td>
<td>Leaves and small twigs in constant motion. Wind extends a light flag.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Moderate Breeze</td>
<td>20 to 28</td>
<td>Dust raised from the ground. Paper blown about. Small branches are moving.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fresh Breeze</td>
<td>29 to 38</td>
<td>Small trees begin to sway.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Strong Breeze</td>
<td>39 to 49</td>
<td>Large branches are moving. Whistling heard in wires/ropes. Signs are hard to put up and blow over.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Constant Breeze</td>
<td>50 to 61</td>
<td>Whole trees (the trunk of larger trees) are moving. The wind is making walking more difficult.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Fresh Gale</td>
<td>62 to 74</td>
<td>Twigs are falling from the trees. The wind hinders progress when walking.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Strong Gale</td>
<td>75 to 88</td>
<td>Large branches may break from trees. Structural damage occurs (if not tied down will blow away).</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Whole Gale</td>
<td>89 to 102</td>
<td>Very rarely experienced. Trees uprooted (wind throw). Considerable damage occurs.</td>
<td></td>
</tr>
</tbody>
</table>

Decision Support Tool (Based on Beaufort Wind Scale)

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>In most situations, wind will not pose a hazard to forestry operations, including tree felling.</td>
</tr>
<tr>
<td>5</td>
<td>Felling in small trees (waste thinning) shall cease. Move to an alternative task.</td>
</tr>
<tr>
<td>6</td>
<td>All tree felling (including for clearfell harvesting) shall cease. Move to an alternative task which shall be a minimum of two tree lengths from standing trees.</td>
</tr>
<tr>
<td>7</td>
<td>Cease all forestry work - seek shelter which shall be a minimum of two tree lengths from standing trees and do not resume until wind speed reduces to category 6 or less.</td>
</tr>
<tr>
<td>8 - 10</td>
<td>Do not enter the forest in gale conditions. If gale conditions are forecast and start to develop, exit the forest and do not re-enter until wind speed reduces to category 6 or less.</td>
</tr>
</tbody>
</table>