

Chainsaw Use SOP



About this document

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1. Background

1.1 Purpose

Using Chainsaws is a fundamental part of Conservation work. This SOP Provides a clear set of rules around the use of Chainsaws so that all our staff, contractors and volunteers can use chainsaws safely in all situations.

The Department has split the use of chainsaws into three parts:

- Base level work. This is work where the major danger is cutting oneself with the chainsaw. Most of the Department's work and most chainsaw staff will be operating at this base level.
- High level work. This is work where the possibility of being injured or killed by the tree is also a reality. Our most skilled people will be operating at this level.
- Advanced level work. This is work where the tree or windfall has been identified as having a high level of defect or difficulty. This requires specialty skills and experience to safely assess and dismantle the tree.
- This SOP has four important components:
 - The introduction of a senior chainsaw operator. This person will act as a coach and mentor in each district or region.
 - The use of Competenz as an external party as an assessment agency.
 -
 - The emphasis on team leadership. All members of the team should help one another to make good and safe judgements about the way in which they work.
 - The link to the New Zealand Certificate in Non-Production Tree Felling (Level 3).

This SOP aligns with the Worksafe NZ Approved Code of Practice for Safety and Health in Forest Operations (ACOP). This SOP was developed in association with Competenz.

1.2 Compliance

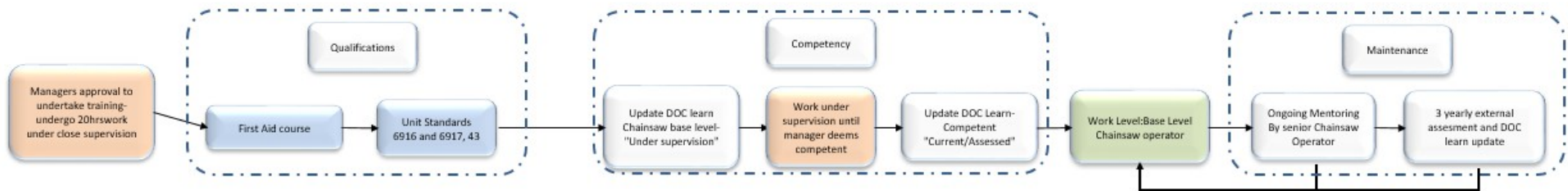
Managers, or higher levels of management, are authorised to approve variation from the SOP requirements and are accountable for those decisions. They are required to use their professional judgement and to seek advice, or to escalate when in doubt. All decisions should be documented. It is expected that variations from requirements in this SOP will be the exception rather than the norm, and that legal (i.e. legislation and judge-made laws) and health and safety requirements are compulsory. Common sense should prevail in the case of exceptional or emergency field situations.

2. Process

The Process below outlines the qualifications, competency and work planning required for chainsaw use in the Department of Conservation.

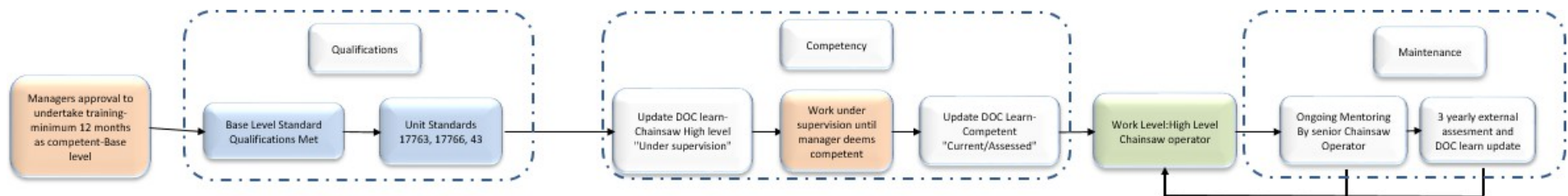
Becoming an authorised chainsaw operator

Achieving base level chainsaw operator status

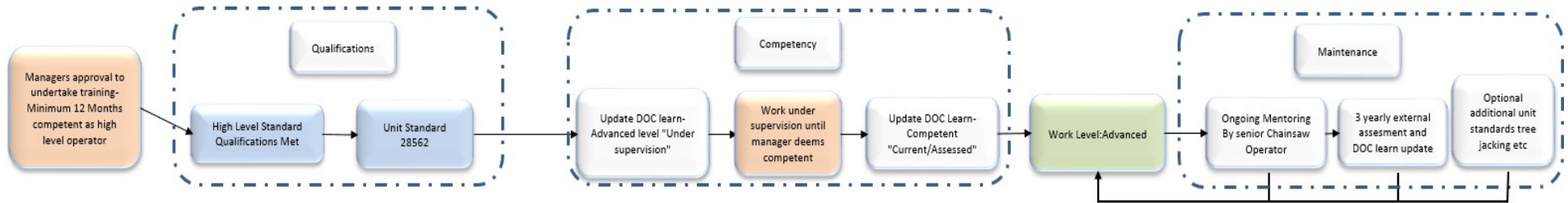


*Please Note, From 2022 unit standards 6916 and 6917 will be combined into 6917 only

Achieving high level chainsaw operator status



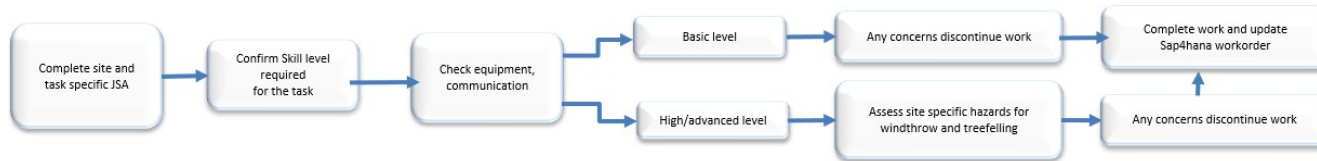
Achieving Advanced level chainsaw operator status



Work planning



Work delivery



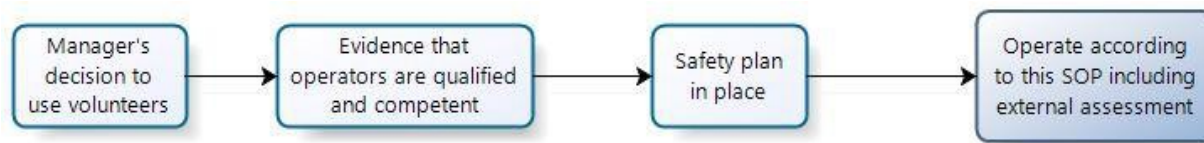
External chainsaw operators process

Contractors/concessionaires



***External assessment required where no other proof of competency available**

Volunteers (including community groups)



***External assessment required where no other proof of competency available**

Arborists (e.g Asplundh, Treescape)



***However, when arborists undertake conventional 'forestry' type chainsaw work, such as track clearing contracts, this work will be subject to the Departments' Chainsaw SOP**

3. Requirements for Chainsaw Use

1. An employee may be required to operate a chainsaw as part of their role in the Department of Conservation. A volunteer or contractor may be required to operate a chainsaw while working on public conservation land. An employee under the guidance of their manager and a senior chainsaw operator is assisted with training, supervision and mentoring to gain the necessary skills and knowledge required to be competent at either the base or high level of work. No one is to use a chainsaw by themselves.

3.1 Qualifications

Any chainsaw operator whether an employee, contractor or volunteer must have the relevant qualifications for the level of work they wish to carry out. These are set out below.

3.1.1 First aid

Any employee, contractor or volunteer who operates a chainsaw must hold a current first aid certificate

3.1.2 Base level chainsaw use

The minimum requirement for base chainsaw use is the following NZQA unit standards;

- 6916 – Demonstrate knowledge of the Approved Code of Practice relating to chainsaw use
- 6917 – Demonstrate base chainsaw operation
- 43 - Maintain Chainsaw

*Please Note, From 2022 unit standards 6916 and 6917 will be combined into 6917 only

A new staff member will be expected to have worked under direct supervision of the senior chainsaw operator in a controlled environment before the initial unit standard training and assessment. This is to ensure their suitability and familiarity of chainsaws. Following attainment of the unit standards, the Manager approves the level of competency after discussion with the Supervisor and Senior Chainsaw operator and updates DOC Learn.

In the case of volunteers and contractors the manager must satisfy themselves that contractors and volunteers have the necessary experience to carry out the work they are to do. This may require some groups to pass an external assessment by Competenz if they are not able to adequately demonstrate competence.

Base level chainsaw use is basic cuts of any standing tree with a diameter of less than 200mm or any sized tree on the ground not under tension or compression. For example:

- track clearance/maintenance
- clearing vegetation from around hut sites, helicopter pads and the like
- wilding pine removal
- firewood

- carpentry
- fencing

3.1.3 High level chainsaw use – tree felling/windfall clearing

High level chainsaw use is tree felling/windfall clearing that involves any tree standing or on the ground with a diameter greater than 200mm. This would include felling straightforward trees greater than 200mm in diameter, non-technical windthrow that includes some tension and compression where standard practice cuts are able to be used

The minimum requirement for tree felling/windfall clearing is the following unit standards;

- 17763 - Demonstrate knowledge of tree felling
- 17766 - Fell trees safely using a chainsaw
- This is in addition to the requirements for base level work. Staff should hold the base level competency for a minimum 12 months before progressing.

The Operations Manager or Supervisor is to approve high level work and the competence of the chainsaw operator. If the Manager or Supervisor does not feel confident to make this judgement it is expected that they will take advice from one of their colleagues who does.

3.1.4 Advanced Level Chainsaw use- Hazardous tree felling and windfall

Advanced level clearing and felling refers to removing trees which, because of physical damage, butt, stem or crown rot, malformation, growth characteristics, or specific characteristics of the tree species, constitute a serious hazard to the worker. Examples of these trees are:

- hang-ups
- heavy leaners
- spars
- multi leaders
- broken tops
- rotten trees
-
- It also includes complex windfall trees, i.e., large overhanging root plates, windfall involving multiple entangled trees, extreme tension and compression situations and situations where facilities and structures are impacted by windthrow.
- The Minimum requirement for Hazardous tree felling and windfall is 28562
-

All advanced level tree felling work should be identified and recorded through AMIS, with adequate pre planning and Job safety analysis completed prior to undertaking the work. The Operations Manager or Supervisor is to approve advanced level work and the competence of the chainsaw operator. If the Manager or Supervisor does not feel confident to make this judgement it is expected that they will take advice from one of their colleagues who does.

3.2 Progression

3.2.1 Progression to high level work and Advanced work

The Operations Manager will decide if there is a requirement for a high level/advanced chainsaw operator. The senior chainsaw operator will assist in identifying a chainsaw operator who demonstrates an advanced level of technical skill and desired behaviour who aspires to the challenge of high level chainsaw work, or advanced level chainsaw work. Once this commitment is made the senior chainsaw operator will be responsible for the coaching and mentoring of the new person and assist them to obtain the required high level NZQA standards. The final step in this process will be to pass the external assessment through Competenz.

3.2.2 District Senior chainsaw operator Role

The role is to:

- undertake or oversee the high level and advanced work in the district(s)
- to coach/mentor all chainsaw operators both base and high level
- drive the consistency, culture and standards across the Department
- maintain a close working relationship with Competenz assessors
- Support and collaborate alongside other Senior Operators in the region to improve consistency
- Provide advice and assurance to Operations Managers regarding district chainsaw operations

The Department will require chainsaw operators who have the necessary qualifications, skills and experience to fill the role of senior chainsaw operators. They will likely be selected by their peers and managers and formally approved by the Operations Director. Not all work places will have or need a senior chainsaw operator. Where this is the case, they will be shared across districts or regions. The senior chainsaw operator will already be a high level or advanced chainsaw operator. There is an expectation that senior chainsaw operators will meet together either regionally or nationally on occasion. Mentoring should include spending at least one day annually working in the field with all operators, and once every six months with newly competent staff. This is to ensure good work practices are being followed, compliance with our SOP and identifying any bad habits.

A Senior Chainsaw Operator has:

- completed all unit standards and assessments required for high or advanced level work
- been recognised by their peers and colleagues as being the senior person in the team, district or region with the necessary skill, aptitude and experience to undertake coaching mentoring and development work with all chainsaw operators

- been approved by the Operations Manager to undertake and oversee the advanced work in the district.

4. Assessments

All chainsaw operators working for the Department must have:

- an initial assessment for base work by a registered Competenz assessor upon completion of the relevant unit standards
- an initial assessment for high level work by a registered Competenz assessor following completion of the relevant unit standards
- Staff new to the department who already hold the required unit standards will only need to have the competenz assessment completed for their relevant level to confirm level of competence prior to work
- a re-assessment (verification across the relevant unit standard(s)) every three (3) years) by a registered Competenz assessor. This should be to the highest current level held.
- The appropriate Assessment form should be provided upon completion of all assessments.

[Chainsaw Base Level External Assessment Record DOC-3237464](#)

[Chainsaw High Level External Assessment Record DOC-3237470](#)

[DOC Advanced Level chainsaw operator assessment form](#)

- DOC learn Records updated and reviewed to show current level of competence
- Completed log book showing:
 - date, location**
 - hours chain sawing**
 - type of work undertaken**
 - training undertaken**
 - team leader and team members**
 - other information/comments (Recording out of work use in a log book is considered relevant)**

Log books are available via Blue star on the Intranet

5. Work Planning

5.1 Pre-trip

A team leader with suitable experience for the type of work being carried out must be appointed. A safety plan must be in place for the work being carried out. Relevant work or project intentions are held with the Operations Manager and/or Supervisor. Local intentions systems and any local controls relevant to the office must be followed. All chainsaw operators must hold the appropriate unit standards and have suitable experience for the required work.

Consideration must be given to the biodiversity implications of your tasks e.g. work carried out in the presence of bats and protocols to appropriately manage this.

Where high level work is being undertaken a second chainsaw user (this can be either a high level or base level operator, depending on the situation) is required to be on site, who is capable of providing cutting assistance in the event of an emergency situation.

Teams size refers to per saw- ie a 2-person team should only operate one saw, with one spotter, not two people individually using saws.

Where work is identified to be advanced level work, this should be recorded as a specific job through EAM. The Senior Chainsaw operator for the district should be consulted to help plan the team makeup and appropriate chainsaw operator to safely deliver the work.

Advanced level Chainsaw work will require a minimum team number of three people, one of which should hold the High Level chainsaw use competency, and can provide assistance to the primary cutter in the event of an emergency. They will also be used in hazard identification and cut planning. In high complexity situations consider a team that includes two or more advanced level chainsaw operators.

5.2 On-site

The team leader will undertake a daily hazard briefing with all chainsaw operators and support staff involved on the day. In the case of difficult tree felling or difficult windfalls a site specific hazard assessment will be undertaken and led by the team leader.

5.3 Post Trip

Complete log book. In the case of large blocks of work or complex work an after action review will occur. A large block of work is, for example, where windfalls were dealt with over 3 or more days or where a track was cut for 3 or more days or a complex windfall.

This review will include:

- a discussion of how the work went
- improvements that could be made (team leader to make a decision on any wider application)
- any training needs or opportunities that are identified.

6. Equipment

6.1 Personal protective equipment

Personal protective equipment for the work must be worn as described below.

All chainsaw operators for the Department must wear protective clothing and equipment which complies with New Zealand standards or their overseas equivalents.

- safety helmet complying with AS/NZS1801:1997 A1
- eye protection complying with AS/NZS 1337:1 2010 (Exception: Where the eye protection itself is likely to cause a greater hazard)
- hearing protection (grade 5) complying with AS/NZS1270:2002
- hi-visibility clothing complying with AS/NZS 4602.2:2013
- trauma based first aid kit including two No 15 large wound dressings and emergency blankets.
- leg protection complying with AS/NZS4453.3:1997. Where the protective inner fabric has been damaged in any way the legwear shall be discarded and replaced.
- safety footwear complying with AS/NZS2210.1:2010

6.2 Operating equipment

Required equipment for the work includes:

- correct sized saw for the work
- A chainsaw that is well maintained as per manufacturers specifications
- chainsaw tool kit
- sufficient fuel/oil in approved containers
- wedges and driving tool for high level/advanced work
- signage for public safety may be required
- spare bar and chain.

7. Communication

A minimum of two people are required to carry out chainsaw work. Two reliable forms of immediate communication are required. This can include VHF radio, HF radio, Satellite tracker, cell phone, or satellite phone. Three people are required where there is not direct communication available or where the communication may not be reliable. The intention is that one person can stay with an injured person while the third person goes for help. In remote situations 2 reliable forms of communication are required one of which may be an EPIRB.

8. Electric chainsaws

Electric chainsaws are becoming increasingly popular as the technology becomes more reliable. However, the hazards present on traditional chainsaws still remain, ie cuts, tree hazards etc. Therefore, electric chainsaws are still covered by all components in this SOP, and should be operated as per the manufacturers instructions, and will all associated PPE .

The exception to these are hand held garden pruners (see Image below) These are not considered chainsaws under this SOP, however all manufacturer's instructions should still be followed,



9. Pole Saws and Top Handled Saws

For specific jobs specialist saws may be used, such as long handled pole saws and top handled arborists saws. In all cases this SOP covers their use. All standard PPE, training and competency requirements remain relevant for use of pole saws, arborists saws and electric chainsaws. This also includes the level of use, i.e. when pole saws are used in advanced felling techniques to provide safe isolation to the operator from hazardous trees.

These saws may also have specific safety requirements and limitations on their use. All operators should ensure that they have read, understood and are following the requirements of the operator's manuals, and that these saws are used within their operating limits.

Please note that top handled saws are for use only in above ground arborist work, and this is covered in their operators manuals and the Arborists code of practice.

10. Contractors and Concessionaries

Contractors and concessionaires operating chainsaws must:

- operate according to this chainsaw SOP
- Have completed a competenz assessment as per internal staff
- provide a safety plan
- provide evidence that employees operating a chainsaw have the relevant unit standards and are competent for the type of work carried out.

11. Volunteers (Including community groups)

Volunteers operating chainsaws on work for the Department of Conservation must;

- hold the relevant unit standards required for the type of work being carried out
- adhere to the requirements of this chainsaw SOP including external assessment
- work under an approved safety plan
- Have completed a competenz assessment as per internal staff

12. Arborists (e.g. Treescape, Asplundh)

The use of arborists for tree dismantling involving ropes, bucket trucks and working at height is not covered by this Standard Operating Procedure. To undertake Arborist work for the Department you must meet the requirements found in the [Work at Heights – Arboriculture One-Page SOP \(docdm-1545022\)](#). Arborist work is specialised and involves a high level of chainsaw and other specialised techniques. Managers engaging arborists should satisfy themselves that the individuals are competent and qualified for the work they are to do and that a suitable safety plan is in place. However in situations where Arborists (either contract or volunteer) undertake conventional chainsaw work such as tree felling or track clearing, this work is subject to the Department's Chainsaw SOP.

13. Terminology and Definitions

Approved Code of Practice for Safety and Health in Forest Operations published by Worksafe NZ.

Assessment

An assessment of a chainsaw operator is conducted by a registered Competenz assessor against the relevant NZQA unit standard. This could be the initial assessment following achievement of the unit standard or a follow-up assessment.

Base level chainsaw operator

A chainsaw operator who has:

- achieved unit standards 6916, 6917 and 43
- a current first aid certificate
- been assessed as competent to carry out base level work by a Competenz assessor
- been approved to carry out the intended work by the appropriate manager.

High level chainsaw operator

A chainsaw operator who has:

- achieved unit standards 6916, 6917, 17763, 17766, and 43
- a current first aid certificate
- been assessed as competent to carry out high level work by a Competenz assessor
- been approved to carry out the intended work by the appropriate manager

Advanced Level Chainsaw operator

A Chainsaw Operator who has

- achieved unit standards 6916, 6917, 17763, 17766, 43, 28562.
- a current first aid certificate
- been assessed as competent to carry out Advanced level work by a Competenz assessor
- been approved to carry out the intended work by the appropriate manager

Senior chainsaw operator

A senior chainsaw operator has:

- completed all unit standards and assessments required for high level work
- been endorsed by the Operations Director to undertake and oversee the high level work in the district or region.
- been recognised by their peers, manager and colleagues as being the senior person in the team, district or region with the necessary skill, aptitude and experience to undertake coaching, mentoring and development work with all chainsaw operators.

Competent person

A competent person is someone who has:

- achieved the required unit standards for the type of work they are engaged in
- can successfully demonstrate the skill and knowledge derived from experience and training
- passed assessment by a Competenz assessor.

Competenz

Recognised forest industry standards and training provider

Competenz assessor

A registered trainer and assessor contracted by Competenz to assess a chainsaw operator's technical skills

Direct Supervision

To be physically present, in direct line of sight or within calling distance where direction, advice, feedback or assistance can be immediately given

Supervision

Not necessarily physically present, but where direction, advice, feedback or assistance can be given via suitable communication

Worksafe NZ

The Government department with oversight for workplace health and safety

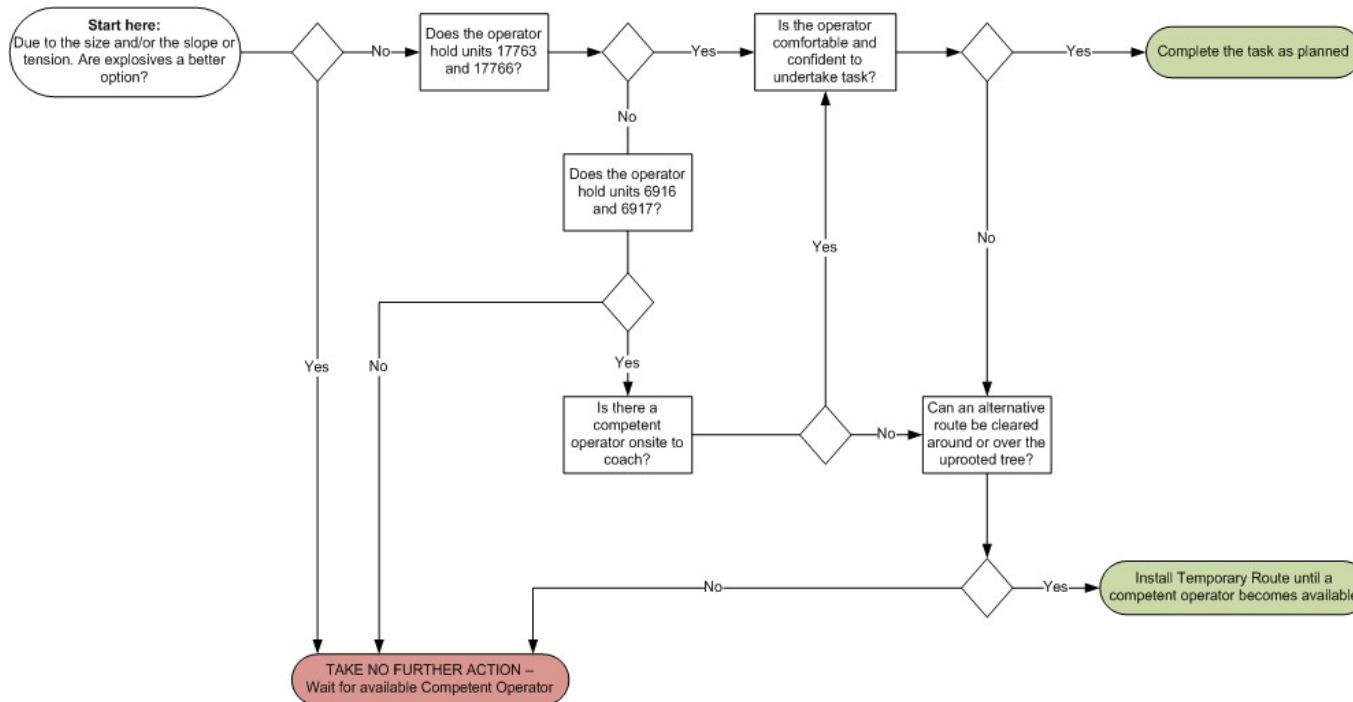
14. Document History

Amendment Date	Amendment details	docDM version	Amended by
3/11/14	This document issued, replacing previous Chainsaw SOPs docdm-673792 docdm-673822 docdm-673823		Allan Munn
18/11/14	re-formatted to HTML appropriate format	DocDM 1473489	Alex McCormack
20/08/18	SOP Review following Annual Chainsaw Hui	DOC-1473489	Grant Tremain
06/09/18	Approved by Harry Maher	doc-1473489	Mike Massaar
01/11/21	SOP review following hui	DOC-1473489	Grant Tremain

04/07/22	Added Link for Advanced assessment	DOC-1473489	Grant Tremain
21/12/22	Added electric chainsaw section, updated PPE standards reference numbers	DOC-1473489	Grant Tremain

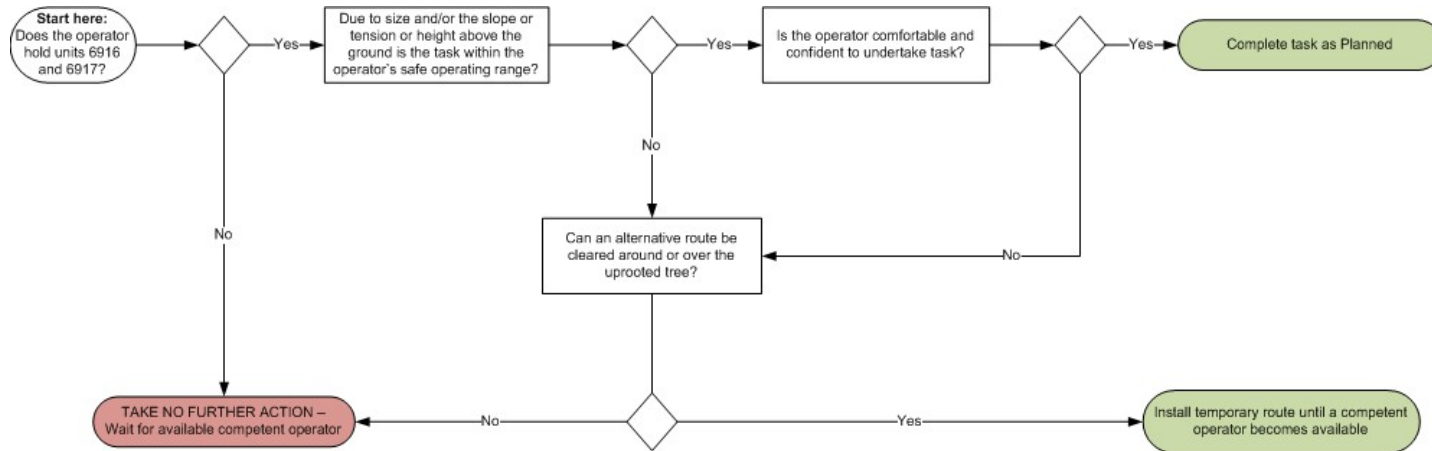
Decision Flowcharts

Scenario one – “Clear a large (>200 mm diameter) storm affected tree from across a walking track with a chainsaw”



Clear a large fallen (>200 mm diameter) storm affected tree from across a walking track v04

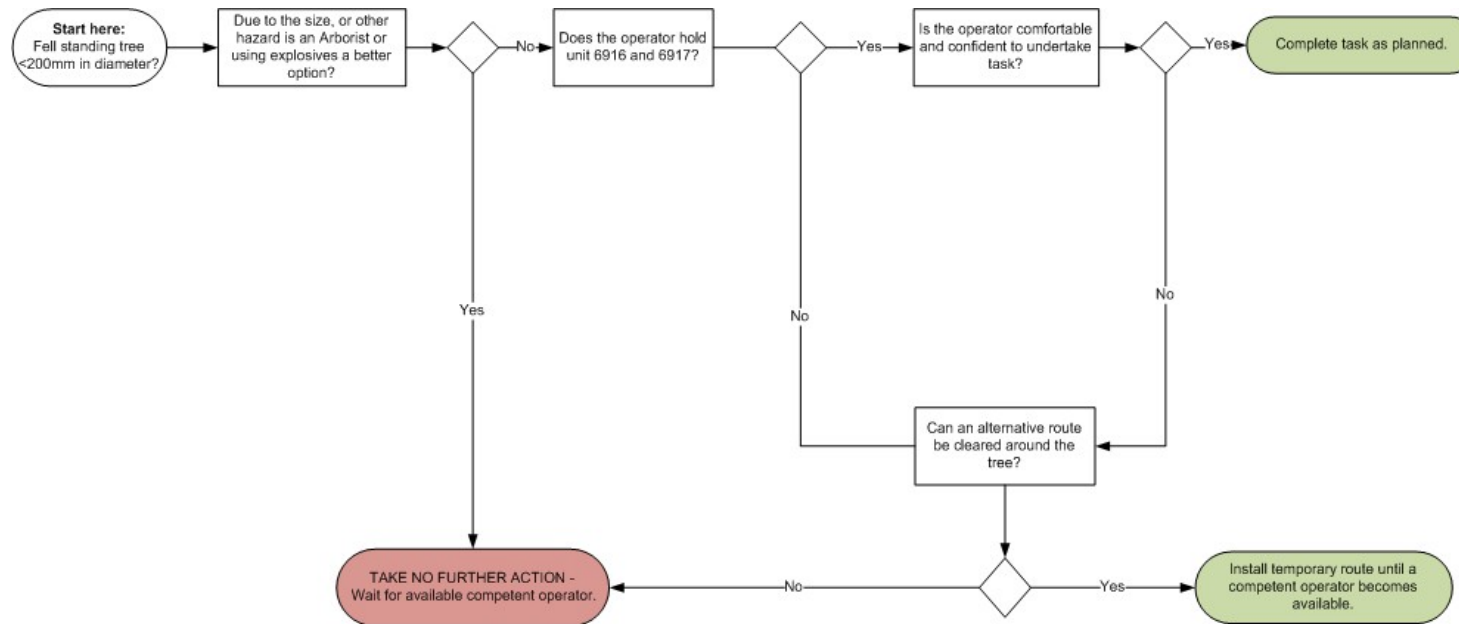
Scenario two – “Clear a small (<200 mm diameter) storm affected tree from across a walking track with a chainsaw”



Clear small fallen (<200 mm diameter) storm affected tree from across a walking track with a chainsaw v04

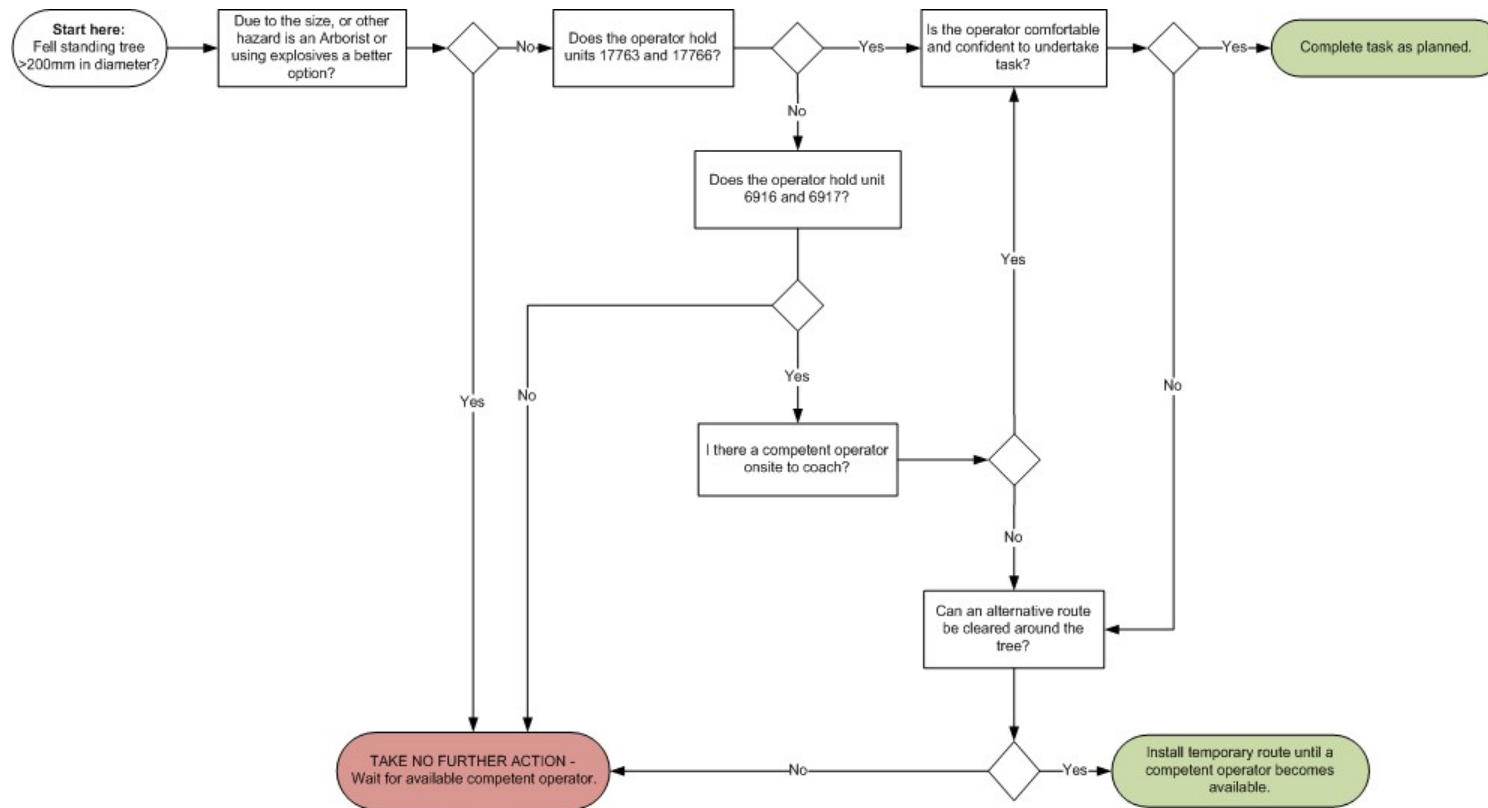
Scenario three – “Fell a live standing tree using a chainsaw”

Small Tree:



Fell a small (<200mm) live standing tree using a chainsaw v01

Large Tree:



Fell a large (>200mm) live standing tree using a chainsaw v01