



Tree felling (one-onto-two tree driving)

OPERATIONAL GUIDANCE

October 2016

PURPOSE

To provide guidance for forestry inspectors when they are considering the actions to take when an observer is not on site and a one-onto-two tree drive has been unsuccessful or tree driving has or is likely to be undertaken.

Also how the competency of tree fellers should be considered.

DECISION MAKING FACTORS

When making any enforcement decisions inspectors must use the Enforcement Decision-Making Model (EDM) to determine the appropriate enforcement action(s) to take.

MANDATORY STANDARDS

In some instances the factors considered must be recorded on the EDM record form. The current recording requirements are included in the Practice Alert: Recording of enforcement decisions

GUIDANCE

In a tree felling operation where it is possible for a one-onto-two tree drives to be unsuccessful, can WorkSafe prohibit a crew from tree felling where there is no 'Competent' observer available?

CONSIDERATIONS

1. HSW Act s36 (1) (a) requires PCBU's – must ensure, so far as reasonably practicable, the Health and Safety of workers working for the PCBU.
2. ACOP 2.5.2 requires there to be a documented Health and Safety system that includes hazard management.
3. ACOP 2.8.1 hazards need to be identified and regularly reviewed.
4. ACOP 11.7.4 requires that if a one-onto-two tree drive is unsuccessful, falling shall cease until an observer is present to help plan management of that hazard.
5. ACOP Appendix 1 defines an observer as a competent person that can assist a faller when falling difficult trees, or when carrying out an unplanned multiple tree drive. It also defines a Competent Person – a person who can consistently demonstrate the skill and experience and or training for the type of work in which the person employed and the approved code the person is required to work under.
6. The ACOP does not require an observer to be on site at all times.
7. Other factors which may need to be considered when assessing the risks (eg stand characteristics such as multi leader trees, wind damaged trees and snow damaged trees, terrain, prevailing wind, power lines and roads).
8. Tree driving is a practice that is common in forestry operations; therefore there is a high likelihood that there will be unsuccessful one-onto-two-tree drives.

USING EDM TO DETERMINE OUTCOME

Whilst Health and Safety Management Plans are generally considered an administrative control, under EDM in this circumstance an ineffective Health and Safety Management Plan introduces a direct risk, therefore the risk gap is applied.

There is a risk of severe personal injury, it is probable and there is an immediacy of risk as the practice of tree driving is common in forestry operations.

As this is a hazard that should be managed, it is considered that all practicable steps to manage the hazard is the presence of an effective hazard management plan to bring an observer onto site should a one-onto-two tree drive fail, or to have an observer there at all times.

Using EDM this would result in a substantial or extreme risk gap.

Inspectors need to determine whether they believe the risk is imminent or immediate when deciding on the most appropriate enforcement. Where there is evidence that unsuccessful one onto two tree driving has, or will occur, it is considered that this meets the threshold for imminent risk of serious harm.

EDM flowchart 1, would land in the red pathway, indicating a Prohibition Notice be served if the risk gap cannot be addressed before the inspector leaves the site. The Prohibition Notice would be served prohibiting tree felling on the site.

Appendix 1 provides example wording for a Prohibition Notice.

FURTHER CONSIDERATIONS

The ACOP requires an observer to be present if a one-onto-two tree drive is unsuccessful; it does not require the observer to be on site at all times. If the duty holder can demonstrate they have a plan on how to manage the risks associated with unsuccessful driving, it is not appropriate to issue a Prohibition Notice, for example:

- > the plan may define how and when an observer is brought to the site and how the risks posed by the hung up or cut up trees are managed until the observer is on site.

The plan may require the use of a Machine to assist felling when required.

EVIDENCE TO CONFIRM INSPECTORS BELIEF

The inspector needs to confirm that unsuccessful one onto two tree drives are taking place or are likely to take place. Inspectors must be clear about the area tree felling is prohibited.

Evidence could include but is not limited to:

- > observation of multiple tree driving without a competent observer
- > an admission of multiple tree driving without a competent observer
- > successive trees leaning back from the intended felling direction
- > multiple hung up trees
- > interlocked tree crowns
- > broken branches in the tree crown.

Photographs and other evidence supporting the inspector's belief must be taken to support their final decision. Photographic examples of circumstances that would support the view that unsuccessful one onto two tree driving is likely are shown in the Appendix. All evidence supporting inspector's belief must be recorded in the inspector's notebook.

How does an Inspector assess what 'Competent' means anyway? What are the elements or mix of elements (eg qualifications, training, and experience) that meet the required Competency?

CONSIDERATIONS

1. HSW Act s(36) (3) (f) requires PCBU's - must ensure, so far as reasonably practicable, the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their Health and Safety.
2. ACOP 2.3.1 requires every person undertaking forestry work to be either under documented training and close supervision, or deemed competent.
3. ACOP2.5.1 requires the employer to ensure that a competent person is in charge of each operation, who shall supervise and ensure work is supervised and performed in a safe manner.
4. ACOP Appendix 1 defines a Competent Person as a person who can consistently demonstrate the skill and experience and/or training for the type of work in which the person employed and the approved code the person is required to work under.
5. The ACOP also defines how to assess competency:
Competency: a measure of a person's ability to consistently demonstrate the skill to carry out a job. Competency shall be supported by detailed documented evidence showing:
 - > The task being carried out.
 - > The situation the task was carried out in.
 - > The person who deemed the worker competent and their qualifications and/or experience.
 - > How long the competency assessment took and when it was carried out.
 - > What visual demonstrations were observed.
 - > The process of assessment used to deem the person competent.

CHECK THE CHECKER

The duty to ensure workers are competent lies with the duty holder. The duty holder should be able to demonstrate how competency is assessed. Rather than checking competency of a worker the inspector should 'Check the checker' and look for evidence that the duty holder has a system in place to assess competency, that this is adequate for the tasks being undertaken and is being carried out to demonstrate on-going competency.

The standard of competency will include or be equivalent to NZQA unit standard 17765

However, if the inspector observes practice or makes other observations (eg stumps or stems that indicate poor felling technique), this should be raised with the duty-holder.

USING EDM TO DETERMINE OUTCOME

POSSIBLE SCENARIOS AND OUTCOMES

1. If there is a poor standard of checking competency or no checks carried out and there is physical evidence to support unsafe tree felling techniques, then EDM may indicate there is an extreme/substantial risk gap and an immediacy of risk. Once all duty holder factors have been considered the outcome may be to consider prohibiting tree felling on the site and issue of an Improvement Notice to improve the system used to ensure staff are trained and competent or alternatively under supervision.
2. The inspector may identify one tree feller who is demonstrating unsafe tree felling or stumps showing unsafe tree felling technique was used. A check may indicate that an audit regime was in place, but failed to pick up the unsafe technique. If the inspector considers the circumstances do not pose a risk, the compliance and administrative path in EDM is followed with the likely outcome being that an improvement notice be issued to address the inadequacies in the auditing system, supervision or training.
3. If a risk is identified then the Risk Gap table is applied. Depending on the particular circumstances, and once the duty-holder factors have been taken into account, the outcome may be to prohibit the tree feller and issue an improvement notice to improve the auditing system.

Note: Each site will be different, inspectors need to consider all factors and apply the EDM model to determine the outcomes.

RECORDS

- > Link to EDM record form.
- > Inspectors should record all findings in their notebook refer to The Use of inspector notebooks for further information.

RELEVANT LEGISLATION/REGULATION/POLICY

- > Health and Safety at Work Act 2015.
- > Approved Coded of Practice for Safety and Health in Forest Operations.
- > EDM recording requirements.

APPENDIX

- > Example of Prohibition Notice wording.
- > Examples of the types of photographic evidence that should be collected to support any enforcement decision.

PROHIBITION NOTICE

This notice is issued pursuant to sections 105 and 116 of the Health and Safety at Work Act 2015



Notice issued to:

Person issued to: ABC Ltd
 Address: 1 Red Street, ~~8000000~~
 Date of issue: 07 / 04 / 2016 Time: 1420 AM /pm Day of week: M T W **T** F S S

Details of person notice left with:

Name: James White Position: Director
 Address: 253 Smiths Rd
~~Kajjagagaga Forest~~

I, Lester Square

Being an inspector appointed under section 163(1) of the Health and Safety at Work Act 2015 (the Act) believe that grounds for the issue of a prohibition notice exist in respect of the following workplace/~~plant/substance/work*required-to-be-authorized/mining*~~ operation
 Compartment 253, Smiths Road, ~~Kajjagagaga Forest~~ (* delete as appropriate)

- I reasonably believe that an activity: (delete 1 or 2)
~~is occurring at the workplace that involves or will involve*~~
~~may occur at the workplace and, if it occurs, will involve*~~ (* delete as appropriate)
 a serious risk to the health and safety of a person arising from an immediate or imminent exposure to a hazard.
- ~~In respect of the workplace, plant, or substance, or work required to be authorized, or a mining operation, I believe:~~
~~that there is a serious risk to the health and safety of any persons because of a failure to comply with the Act or Regulations*~~
~~on reasonable grounds, that it is likely that a person will fail to comply with the Act or regulations made under the Act;~~
~~and that a failure would be likely to cause a serious risk to the health and safety of any person*~~ (* delete as appropriate)

Legislative provision(s) being or likely to be contravened (if applicable): Section 36 Health and Safety at Work Act 2015

Basis for believing grounds exist:
 Conclusion after enquiries that ABC Ltd, does not have effective ~~controls~~ in place to manage the risks that may arise from an unsuccessful 1 onto 2 tree drive.

Matter or activity that does or will give rise to the risk:
 Manual tree felling which is likely to result in an unsuccessful 1 onto 2 tree drive which could result in a person being struck by a falling tree

I therefore prohibit the carrying on of the matter or activity ~~in any way*/in the way specified below*~~ until an inspector is satisfied it has been remedied: (* delete as appropriate)
 All manual tree felling at compartment 253, Smiths Road, ~~Kajjagagaga Forest~~ where the hazards arising out of tree driving may occur.

Recommended measures to remedy:
 Implement the controls as described in the ACOP for safety & health in Forest Operations to manage the risks, include how the area will be made safe until an observer is present to help plan the management of the risks, include the use a machine assistance

Inspector: ~~L Square~~ Contact email: lestersquare@worksafe.govt.nz

YOU MUST NOT RESUME THE MATTER OR ACTIVITY UNTIL YOU HAVE RECEIVED NOTICE FROM AN INSPECTOR THAT THIS NOTICE IS NO LONGER IN EFFECT. FAILING TO COMPLY WITH THIS NOTICE IS A SERIOUS OFFENCE.
A COPY OF THIS NOTICE MUST, AS SOON AS POSSIBLE, BE DISPLAYED IN A PROMINENT PLACE AT OR NEAR THE WORKPLACE, OR PART OF THE WORKPLACE, AT WHICH WORK IS BEING CARRIED OUT THAT IS AFFECTED BY THE NOTICE. IT IS AN OFFENCE NOT TO DO SO, AND/OR TO INTENTIONALLY REMOVE, DESTROY, DAMAGE OR DEFACE THIS PROHIBITION NOTICE WHILE IT IS IN FORCE.
 Information: If you wish to discuss the circumstances giving rise to this notice, in the first instance please contact the Inspector who issued the notice. Any other queries or correspondence related to this notice should be addressed to WorkSafe New Zealand at the address shown below.

Street Address: WorkSafe New Zealand, ~~88~~ Customhouse Quay
 Postal Address: P O Box 165 Wellington 6140 Town/City: Wellington

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 PO Box 165, Wellington 6140 0800 030 040 www.worksafe.govt.nz New Zealand Government

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IMAGES SHOWING CIRCUMSTANCES IN WHICH MULTIPLE TREE DRIVING IS LIKELY

Felling direction is indicated with RED arrow



Figure 1: Successive trees leaning backward from the intended felling direction



Figure 2: Hung up trees



Figure 3: Interlocked tree crowns



Figure 4: Broken branches in the tree crown with potential to fall onto tree fallers

DISCLAIMER

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