CERTIFICATE OF FINDINGS

Section 94, Coroners Act 2006

IN THE MATTER of **Walter Terence COLLIER**

The Secretary, Ministry of Justice, Wellington

As the Coroner conducting the inquiry into the death of the deceased, after considering all the evidence admitted to date for its purposes, and in the light of the purposes stated in section 57 of the Coroners Act 2006, I make the following findings:

Full Name of Deceased:	Walter Terence COLLIER
Late of:	564 Rangitukia Road Tikitiki
Occupation:	Forestry Worker
Sex:	Male
Date of Birth:	18 November 1963
Place of Death:	Huiarua Forest Mata Road Tokomaru Bay New Zealand
Date of Death:	09 January 2020

Cause of Death

1(a). Direct cause:	Positional asphyxia
1(b). Antecedent cause	
1(c). Underlying condition	
2. Other significant conditions contributing to death, but not related to disease or condition causing it	

Circumstances of Death

[1] I find that Walter Terence Collier died at Huiarua Forest, Tokomaru Bay, East Cape on 9 January 2020 as a result of positional asphyxiation resulting from a forestry accident.

Comments/ Recommendations

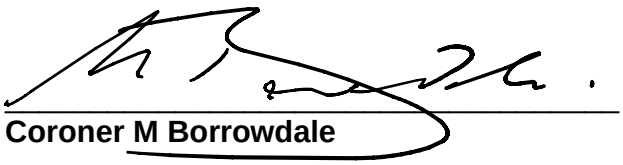
[2] Having given careful consideration to all of the circumstances of this death, I do not consider there are any comments or recommendations that could usefully be made pursuant to section 57(3) of the Coroners Act 2006. Existing industry guidance and workplace training modules expressly address the risks of manual tree felling, and mitigation techniques. That guidance cannot be improved upon here.

Non-publication order

[3] Under section 74 of the Coroners Act 2006, I prohibit making public any photographs taken of Walter Terence Collier entered into evidence during this inquiry, on the grounds of personal privacy and decency. I am satisfied that such interests outweigh the public interest (if any) in the publication of those images.

Those findings, and my reasons for making them, are also set out in my written findings dated 14 January 2022.

Signed at Wellington on 14th day of January 2022.



Coroner M Borrowdale

THIS FINDING IS SUBJECT TO PROHIBITIONS AND RESTRICTIONS ON PUBLICATION UNDER S 74 OF THE CORONERS ACT 2006

IN THE CORONERS COURT
AT WELLINGTON **CSU-2020-HAS-12**

(IN CHAMBERS)

UNDER	THE CORONERS ACT 2006
AND	
IN THE MATTER OF	An Inquiry into the death of WALTER TERENCE COLLIER

Date of Findings: 14 January 2022

FINDINGS OF CORONER M BORROWDALE

RESTRICTION ON PUBLICATION UNDER SECTION 74 OF THE CORONERS ACT 2006

Under section 74 of the Act, I prohibit making public any photographs taken of Walter Terence Collier entered into evidence during this inquiry, on the grounds of personal privacy and decency. I am satisfied that such interests outweigh the public interest (if any) in the publication of those images.

Introduction

[1] Walter Terence Collier, aged 56 (known as "Terry" or "Boo," at least at work), died on 9 January 2020 of injuries sustained while working felling trees in an east cape forest.

[2] Mr Collier's death was reported to the Coroner, and an inquiry was opened once the workplace accident investigation by WorkSafe New Zealand (**WorkSafe**) had been completed.

Jurisdiction and issues to be decided

[3] I have decided to conclude this inquiry by holding a hearing on the papers and making chambers findings pursuant to section 77 of the Coroners Act 2006. This is because I have sufficient evidence before me in documentary form to fulfil the purposes of opening and conducting an inquiry as set out in section 57 of the Act, and no interested person has given notice that they require this matter to go to inquest.

[4] Consistently with section 57 of the Act, I am making findings into the causes and circumstances of Mr Collier's death. I have specifically considered whether to make any comments or recommendations for the purpose of reducing the chances of further deaths occurring in circumstances similar to those in which Mr Collier died.

Circumstances of death

[5] Mr Collier's death was investigated by WorkSafe, and a copy of its report and source evidence supplied to my inquiry.

[6] Mr Collier was a tree faller, employed since 2015 by Eastside Logging Company Ltd (**ELC**). A tree faller is a highly skilled chainsaw operator who is responsible for felling mature trees. It is a demanding job, requiring the faller to select and fell trees carefully and safely, avoiding boundaries and hazards, so that the tree stems can be extracted to a landing site ("skid") and processed.

[7] Mr Collier had over 30 years' experience in the forestry industry. He had passed all relevant qualifications, and was a Level 4 tree feller. He had passed all accreditations and regular assessments with flying colours, including commercial forestry units and advanced techniques units. His Competenz record of learning shows that he achieved almost straight A grades, over twenty years. His tree falling endorsement from November 2019 scored him at 99%, and on it the assessor wrote:

> Terry a very competent faller, does a good job SAFELY.

[8] On the day before his death, 8 January 2020, a Tree Felling Assessment of Mr Collier was completed. He passed all criteria, with the additional comment, *"Very competent faller."*

These assessments were done unannounced and from a distance, so that the assessor would see the faller *"doing his natural thing."*

[9] Mr Collier's employer, Martin Strybosch of ELC, states that he regarded Mr Collier as a "master" and his "right hand man." He says that Mr Collier was the best worker that he employed off the east coast, that he was trusted, conscientious and consistent in his felling. His technique was praised, especially the accuracy and cleanness of his cuts.

Location and risks in forest setting

[10] On 9 January 2020 Mr Collier was felling trees in a setting in Huiarua Forest, on the east coast of the North Island, around 90km north of Gisborne. The land underneath the Huiarua Forest is owned by Māori iwi Ngati Porou. A company, Ernslaw One Ltd (**Ernslaw**), owns the trees within the forest and has harvesting rights over them.

[11] Ernslaw contracted with ELC to fell and process the trees. ELC had two crews working in the forest. The crew in which Mr Collier worked had eight or nine people, including a processor operator, breaker-outs, hauler driver, loader drivers and a manual tree faller. The trees being felled were pinus radiata and, once manually felled, ELC extracted them from the setting using a cable hauler system.

[12] The ELC crew had started back at work after the Christmas break on 6 January, and were settling back into their routines. On 6 January high winds prevented felling, so the crew worked on maintenance. The evidence indicates that the crew was under no particular production or time pressure, and that Mr Collier was under no individual pressure, as he was felling well ahead of the haulage crew. WorkSafe stated that, after Mr Collier's death, it took the crew almost four weeks to haul and process the trees that he had felled.

[13] A Site Risk Assessment had been carried out, noting hazards specific to the setting, updated with any hazards identified in daily 'tailgate meetings,' at which the crew gathered to outline the day's workplan for fallers, breakout, skid, extraction and other functions. Mr Collier signed the Site Risk Assessment, indicating that he was aware of the presence of wind-thrown and wind-wrenched trees in the setting, along with the available controls for those hazards. To prepare the site assessment, Mr Strybosch had walked the setting with Mr Collier, and together they had identified the hazards. This hazards identification and planning process seems to have entirely accorded with the Best Practice Guidelines developed by WorkSafe.[1]

[1] *Safe Manual Tree Felling*: *Best Practice Guidelines*, WorkSafe New Zealand 2014 available at https://www.worksafe.govt.nz/topic-and-industry/tree-work/safe-manual-tree-felling/.

[14] A "wind-thrown" tree has been blown down and may have had the stem snapped, or the tree uprooted, with the root plate still attached. A "wind-wrenched" tree has blown over but is still standing. Such trees pose extra difficulties for extraction, and can have extreme and complex tension or compression forces. Competenz recommends that only highly experienced fallers should work within wind-throw areas.[2]

[15] The identified controls for wind-wrenched trees included "observer if needed", and on 9 January qualified tree faller Heath Hovell was available to Mr Collier. Mr Hovell had performed this role before for Mr Collier, but was not asked to assist him within this setting.

[16] Controls also included "machine assist" (such as using a bulldozer to help clear a path to the wind-wrenched trees)[3] and "leave if too dangerous." Mr Collier had left some trees within this setting, for reasons of danger, on the back line towards the east; those trees were never felled.

[17] The likelihood of a faller being hit or crushed by a falling tree is a well-known risk, and one that is documented in industry publications and codes of practice. Severe injury or death is an equally well-acknowledged consequence of that event.

[18] The *Approved Code of Practice for Safety and Health in Forest Operations* states that machine assisted felling should be the first choice of felling mechanisms within a wind-throw area. Similarly, the *Eastside Logging Tree Felling Policy and Procedures* stated that:

> Eastside Logging will in the first instance always consider the use of machinery where wind-throw is encountered, rather than risk injury to fallers.

[19] However, in his WorkSafe interview Mr Strybosch explained why machine-assisted felling was not adopted in this forest setting. A wind-throw setting, necessitating machine-assisted felling, would be one in which *"the whole setting has blown over. That's a wind-throw setting, not just one or two trees."*

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[2] *Best Practice Guidelines for Tree Felling*, Competenz.org.nz, 2000 at 5 and *How to Manage Forestry Risks*, available at www.safetree.nz.

[3] WorkSafe advises that "machine assist," in this context, means that a machine should fell or cut the tree, or be used to shift the tree into position where it can be safely cut, eg push it over; available at https://www.worksafe.govt.nz/topic-and-industry/forestry/safety-and-health-in-forest-operations/ .

Events of 9 January 2020

[20] On 9 January Mr Collier collected his workmate, hauler driver Te Kani Haenga, at around 5.20am near Ruatoria, and they arrived at the skid site around 7am. Mr Collier was his usual self that morning.

[21] On arrival at the skid site, the crew gathered for the tailgate meeting. Mr Collier discussed with Mr Strybosch his 'faller plan' for the day at the E5 grid site, and they agreed that there were no new site hazards for which allowance should be made. After the meeting, the crew went to their work areas. Mr Collier collected his fuel can, saw and wedges and headed downhill to start felling in grid area E5.

[22] On this day, Mr Collier was located towards the right-hand boundary of the setting, working solo as the faller. To the left of him, and on the other side of a spur, three breaker-outs were working, hooking cables onto the logs so the hauler could pull them to the top of the skid site. To the right of Mr Collier was another spur, so he was working in a pocket between two spurs and could not be seen by the other crew-members.

[23] Mr Collier was required to radio to Mr TK Haenga in the hauler at half-hourly intervals, for a welfare 'check in.' He did so at 8 and 8.40am. At 9am Mr Collier spoke to Mr Strybosch to ensure that he would not inadvertently cut over the boundary. They met and spoke for 15 minutes, there were no other hazards or issues, and Mr Collier indicated that he had about a day and a quarter left of falling to do in the setting. Mr Collier checked in as expected at the following other times: 9.22am. 9.56am, 10.22am and 10.58am. A further check-in from Mr Collier was heard by Mr Hovell, but not recorded by Mr TK Haenga in the record book as he was out of the hauler at the time.

[24] When Mr Collier did not make a subsequent check-in call, shortly before 12pm Mr TK Haenga asked the rest of the gang whether they had heard Mr Collier radio in. The crew had not heard from Mr Collier. A breaker-out, Nopera Haenga, tried calling Mr Collier, then went downhill to check on him, calling for him along the way.

[25] Mr N Haenga found Mr Collier lying face down and unresponsive across a windthrown tree, with a log from the tree he had been cutting lying across his back. The trunk of the tree was standing about 10 feet out of the ground, with evidence that a tremendous force had torn the tree apart.

[26] Mr N Haenga called for assistance, and other crew members came to the scene. Mr Haenga found that Mr Collier was without a pulse and obviously deceased. His helmet was

on the hillside, and his chainsaw was off and located behind him. The crew assembled the equipment to remove the tree (Mr Collier's saw being out of fuel), cutting into it and hauling Mr Collier out. Mr Strybosch called emergency services at 12.20pm. He activated a GPS locator, and marked out a rescue helicopter landing area, then guided paramedics down to Mr Collier's position within the site. Paramedics verified Mr Collier's death at 1.20pm.

Post mortem examination

[27] A post mortem examination was conducted by pathologist Dr Mark Wickham. Dr Wickham gave his opinion that Mr Collier died as a result of positional asphyxia, due to being pinned in a face-down prone position by a falling log. Mr Collier also suffered multiple rib fractures with pulmonary contusion, and traumatic splenic laceration.

[28] Toxicology testing showed that no drugs were present in Mr Collier's blood, and only trace alcohol, attributable to natural processes rather than deliberate ingestion.

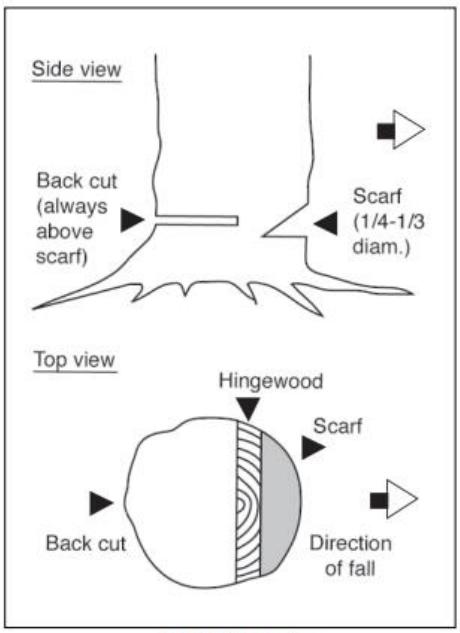
WorkSafe investigation

[29] WorkSafe was notified of the death of Mr Collier the same day, and on 10 and 11 January conducted a site examination and site survey. The setting was found to contain wind-thrown and wind-wrenched trees. WorkSafe forestry inspector, Mr A Powell, found that Mr Collier had cut down multiple standing trees and uprooted wind-thrown trees on the day before his death. Mr Powell stated that:

> … Terry's workmanship up to the cutting of the tree involved in the incident showed no indication of poor technique or Terry creating any increased risk to himself, except for one other stump which showed minimal holding.

[30] The final tree that Mr Collier attempted to fell was under tension, due to being previously damaged by wind. When cut by Mr Collier, the tree released violently and "barber chaired" around 4.3m in the air, before crashing to the ground and breaking into pieces on impact. The length of all pieces was 38m.

[31] Mr Collier had made ‘bore and release’ cuts into the tree: scarf cuts (top and bottom), bore cut and a back cut.



Basic felling cuts

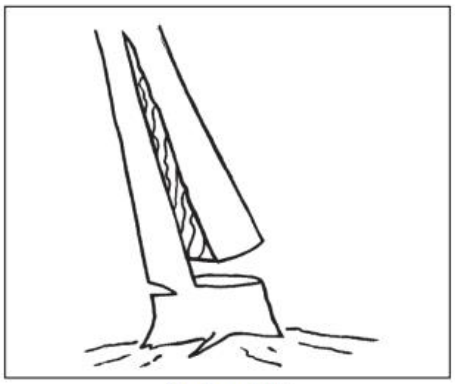
[32] When back cutting, Mr Collier had sawn around 90mm into the trunk before the tree had “barber chaired.” A tree is described as “barber chairing” when high tension forces within the uncut wood causes the tree to split vertically, with the tree feller losing control of the tree.[4]

[33] The initial scarf cut in the tree is designed to determine the direction of the tree’s fall, and to minimise barber chairing or other unexpected effects. Safe felling demands that the bottom cut of the scarf meets the two outside points of the top cut.

[34] The back cut, which is made after the scarf cut, is made to allow the tree to fall forward. It must be made above the level of the bottom scarf cut – between 50 and 75mm is recommended – and must always be horizontal. One-tenth of the diameter of the tree is left uncut to act as hingewood. This provides a “step” for the tree to push against when it falls over, minimising the chances of the tree sliding backwards off the stump.

[4] *Best Practice Guidelines* at 34.

[35] WorkSafe concluded that Mr Collier, while an experienced, skilful and respected tree faller, had made uncharacteristic errors on the last tree he cut. These errors did not follow industry good practice and ultimately led to his tragic death. The investigation did not find sufficient evidence to explain why Mr Collier had made these uncharacteristic errors.



"Barber chair"

[36] The following cutting errors were identified by Leon Basher, Competenz forestry trainer and assessor:

a. There was a bad overcut on the bottom scarf cut. The top and bottom cuts did not meet cleanly.

b. The back cut was on an angle, starting above the scarf on one side and ending below the scarf on the other side. Safe practice prescribes that the hinge must be not less than 10% of the tree's diameter and parallel to the scarf. In this instance, one side was less than 10% and the other side was significantly more than 10% (around 50%).

c. The release cut is meant to be below the bore cut. The lower down the release cut, the slower the tree will fall. In this instance, the release cut was 100mm below on one side but was level on the other.

[37] Mr Basher opined that the hazard risk assessment by ELC was sufficient, and that it had a robust tree felling policy.

[38] Vaughan Davies, Ernslaw Harvest Manager, gave his opinion that the technique of these cuts was *"wrong – no good."* Mr Davies concurred that there was too much hinge between the bore cut and the scarf, and that the release cut should have been made lower. The excessive amount of hinge caused the trunk to barber chair. Mr Davies stated that he had

observed Mr Collier doing a bore and release cut numerous times previously, without any cause for concern.

[39] Mr Strybosch was unable to explain why Mr Collier did not utilise the available controls, including a bulldozer to machine clear wind-thrown trees, accessing the observer, or leaving the trees standing, as he had previously done. However, Mr Strybosch was clear that it was Mr Collier, as a fully-qualified and experienced faller, who needed to make these judgment calls.

[40] WorkSafe accepted – as do I – that Mr Collier was the most appropriate crew-member to decide the process for each tree considered for manual felling. He had correctly identified the site hazards, and had utilised the agreed controls before. The evidence of Mr Strybosch was that Mr Collier, as faller, was unquestionably in charge of the decisions on each tree:

> If the faller says, 'I'm not falling today.' That's the… bottom line, you're not falling.

[41] Various witnesses speculated whether Mr Collier may have rushed the final tree he cut, due to his chainsaw being almost out of fuel. WorkSafe found that there were too many variables to accurately estimate the amount of fuel that was in the saw at the time of the accident, a hesitation that I consider well-founded.

[42] There were no identified safety or mechanical issues with the chainsaw or other equipment used by Mr Collier.

[43] WorkSafe decided that no action should be taken against ELC or Ernslaw in respect of the workplace fatality. WorkSafe concluded that neither company had contravened the Health and Safety at Work Act (**HSWA**) 2015 in relation to Mr Collier's death. Mr Collier was qualified and competent in tree felling, and he was vastly experienced. He was doing the work that he was trained to do, and was making the judgments that he was expected to make as the faller within the setting, who was aware of the applicable hazards and controls. The stumps of trees that Mr Collier had just felled were of a good standard.

Post-accident changes implemented

[44] It is material to record the changes that ELC and Ernslaw implemented following Mr Collier's death.

[45] Mr Basher identified in his report that the majority of this setting could have been felled utilising a tethered mechanised felling machine. At the time of the incident, ELC did

not own or have access to such a machine. WorkSafe was uncritical of this, noting that the machines are a very large investment cost, and require in-depth training of operators.

[46] Additionally, machine felling a small wind-thrown area may not be practical, and human interaction with machines creates its own set of risks.

[47] ELC was able to complete the felling in the setting, using a borrowed mechanised felling machine and qualified operator. Subsequently, ELC purchased a mechanised felling machine (at a cost in excess of $550,000) and was getting the crew trained to the applicable standard.

[48] Ernslaw increased ELC's per tonne price to support it in completing this purchase, and explicitly supports its contractors in moving towards mechanised falling across its estate.

How and why did this death occur?

[49] I have reviewed the fruits of the WorkSafe investigation, including the witness statements and expert guidance. I am guided by and agree with the assessments made by WorkSafe as to the causes of Mr Collier's tragically premature death.

[50] For reasons that are likely to remain unexplained, Mr Collier made uncharacteristic errors of technique in his cutting of the final tree he attempted in the setting on 9 January 2020. These cuts were contrary to the training he had received, and to industry guidance, and were inconsistent with his usual scrupulously accurate practice. The propensity for such cuts to cause the tree to split or 'barber chair' were realised, and Mr Collier died when a large section of the split tree pinned him down on top of an adjacent wind-thrown tree.

[51] No breach of duties under the HSWA 2015 were identified by WorkSafe in relation to either ELC or Ernslaw.

[52] When consulting with Mr Collier's whānau, I received criticisms of the lengthy duration of the WorkSafe investigation, and the difficulty whānau experienced in accessing the WorkSafe findings. Whānau report that these factors accentuated their hurt and frustration. These are not matters that fall within my jurisdiction to comment upon, but I will forward them to WorkSafe to address as it considers best.

[53] Whānau urged me to consider the appropriate assignment of risk responsibility as between ELC and Mr Collier, and that ELC had not taken all practical steps to reduce the risks to Mr Collier of felling trees within a wind-thrown area. I have considered those issues in

depth, and in my view the risk assessment and mitigation strategies were properly approached as a partnership between Mr Collier and Mr Strybosch; but Mr Collier was ultimately the decision-maker on how to approach or mitigate each identified risk.

[54] A business operator is required to take all reasonably practicable steps to minimise workplace risks.[5] However, what is "reasonably practicable" is assessed by weighing the competing considerations listed in legislation,[6] including the cost of eliminating or minimising the risk and whether that cost is disproportionate to the risk. The events that led to Mr Collier's death demonstrate that an identified risk had not been eliminated. But I concur with the views of WorkSafe that the mitigation strategies that were in place were suitable, and that Mr Collier was well-equipped to determine the best approach to felling or leaving each tree.

Findings

[55] I find that Walter Terence Collier died at Huiarua Forest, Tokomaru Bay, East Cape on 9 January 2020 as a result of positional asphyxiation resulting from a forestry accident.

[56] The circumstances of this death are as set out herein.

Comments/ Recommendations

[57] Having given careful consideration to all of the circumstances of this death, I do not consider there are any comments or recommendations that could usefully be made pursuant to section 57(3) of the Coroners Act 2006. Existing industry guidance and workplace training modules expressly address the risks of manual tree felling, and mitigation techniques. That guidance cannot be improved upon here.

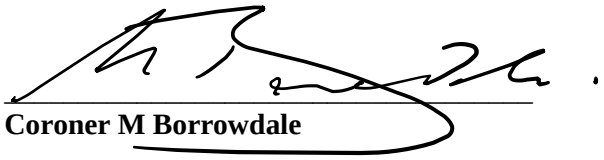
Non-publication order

[58] Under section 74 of the Coroners Act 2006, I prohibit making public any photographs taken of Walter Terence Collier entered into evidence during this inquiry, on the grounds of personal privacy and decency. I am satisfied that such interests outweigh the public interest (if any) in the publication of those images.

[5] HSWA 2015, section 36.
[6] Ibid, section 22. See also *How to Manage Forestry Risks* at 1.

Conclusion

[59] I would like to extend my condolences to Mr Collier's family on their very sad loss.



Coroner M Borrowdale