IN THE DISTRICT COURT
HELD AT MANUKAU

CRI-2020-092-002050

WORKSAFE NEW ZEALAND

Prosecutor

v

CULHAM ENGINEERING COMPANY LIMITED

Defendant

Coram:	G.A. Andrée Wiltens
Appearances:	Mr B. Finn, and Ms A.J. Simpson for the Prosecution
	Mr B.R. Harris for the Defendant
Hearing:	29 May 2023 to 6 June 2023, and 9 June 2023
Date of Decision:	8 August 2023

VERDICT

A. Introduction

1. On 22 February 2019, at around 2.45pm, a young rigger of limited experience, Mr Levarn Nathan-Nasmith, was seriously injured while working with other more senior riggers on the construction of a large industrial building, due to a heavy steel beam falling on him.

2. Resulting from the accident, a criminal charge alleging failure to comply with certain statutory health and safety obligations was issued against the companies involved in the project, one of which disputes criminal culpability.

3. The matter was set down as a judge-alone trial for 9 days. The impacts of Covid-19, and the availability of Counsel as well as Court facilities have significantly and unfortunately delayed the timely hearing of this matter.

4. The case was heard from 29 May 2023 through to 6 June 2023 and completed with final submissions on 9 June 2023. The verdict was reserved. What follows is the verdict and the reasons for coming to such decision.

B. Background

5. The East Tamaki, Auckland site where the construction was undertaken was owned by Fisher and Paykel Healthcare Limited ("F&P"). At the time, a large steel industrial building, occupying an area of some 250 metres by 300 metres, was being constructed from scratch. It was but one of four buildings being erected on the site at the time, one of which was identical to the building Mr Nathan-Nasmith was working on..

6. The overall construction project was in the hands of Leiths Construction Limited ("Leiths"), who had contracted on 15 December 2017 with F&P to undertake the work. Leiths had sub-contracted the steelworks part of the project, by contract dated 13 March 2018, to Culham Engineering Company Limited ("Culham"), a well-established and experienced company specialising in this kind of work.

7. The Leiths - Culham contract required Culham to "…maintain safe and healthy working practices and conditions", as well as to promptly comply with all Leiths' reasonable health and safety

requirements and any safety-related instruction given by Leiths. Further, Culham was required to submit a specific health and safety plan to Leiths prior to commencing work on site. The plan needed to specify how Culham would comply with Leiths' health and safety requirements.

8. Culham, in turn, sub-contracted the erection of the steel skeleton of the building to Rigweld Engineering Services Limited ("Rigweld"). There was no formal documented agreement between Culham and Rigweld. Instead, Rigweld invoiced Culham for the work it undertook on an hourly basis. That apparently suited both parties and was the same arrangement as other works undertaken elsewhere by Rigweld for Culham.

9. Despite having previous experience of working with Rigweld, prior to entering into their oral agreement, Culham also required Rigweld to demonstrate its compliance with Health and Safety standards.

10. That resulted in Rigweld providing documentation, sufficient to satisfy Culham, setting out its work processes in the form of Rigweld's Health, Safety and Environmental Manual, as well as other documents. The Manual set out that all employees would undergo detailed site induction, take part in daily pre-start and regular toolbox meetings, with appropriate records being maintained and shared with Culham.

11. There was evidence that Culham agreed to work with Rigweld on the project in large part due to these assurances. Further Culham had ensured that all Rigweld staff were suitably qualified and experienced.

12. Mr Nathan-Nasmith was directly employed by Rigweld as a junior rigger, having commenced his 90-day trial period in August 2018.

C. The Work Undertaken by Rigweld

13. At the time of the accident, Mr Nathan-Nasmith was part of a small Rigweld team joining together two steel beams, one of some 3 metres in length, and the other of some 30 metres in length and weighing something in the order of 4 tonnes. To make up this truss, three steel beams had been previously delivered to the site by Culham, having been earlier manufactured in Thailand to Culham's specifications and shipped to Whangarei. Culham arranged for the steel beams to be

transported by truck to the F&P site. Two beams were first securely bolted together forming a 30-metre length. The remaining beam was to then be bolted onto that at an angle, prior to the entire truss being lifted up and secured in an upright position, thereby forming the apex of the roof and sides of the new building. The trusses were made up in pairs and lifted as one lift involving two cranes.

14. The building Rigweld was involved in constructing involved the joining and erection of 30 such trusses. On the day in question, it was the final pair of trusses that were being assembled and readied to be lifted into place. There was evidence that this process had been repeated every 7 or 8 days, moving from one end of the building to the other.

15. The joinder of the beams took place on the ground ("at grade"), as opposed to at height, to minimise risks for the workers. The process adopted on each occasion involved the laying of the longer beam in an upright position, with the end to be bolted to the shorter beam held 2 – 3 metres above ground on a wooden load support known as a stye.

16. The stye was a wooden structure, made of numerous lengths of timber, the dimensions of each of which could be variable. The timber used to create such a stye is referred to in the industry as "dunnage".

17. To construct a stye, two or three pieces of timber were laid on flat ground, with a second layer on top comprising two or three further pieces of timber laid at right angles to the first layer. Thereafter, further layers were stacked on top, each at right angles to the immediate lower level until the appropriate height was attained. The end-product was not dissimilar to the way pieces of wood are stacked in the popular game "Jenga". The evidence was that most styes on site were built up 2 x 2, rather than 2 x 3 or 3 x 3.

18. Two things were said to be of particular significance to ensure the strength and stability of a stye, namely:

    - The bottom layer of a stye should always be at right angles to the beam it would support, as opposed to parallel with the beam; and

- The layers were to be constructed so that the weight bearing points were positioned in a direct line down to the ground.

19. It is unchallenged that Culham provided the timber used for the construction of styes on site, and that Rigweld staff were primarily responsible for the construction and siting of the styes. The timber supplied by Culham was painted red on the ends, to distinguish it as dunnage appropriate for styes. The timber ordinarily used was graded timber, with a diameter of 150mm by 100mm, and length of around 1.2 metres.

20. There was evidence that Culham neither signed off nor agreed to the design or properties of styes. However, the very first stye on site was checked by two of Culham's staff, and approved. Thereafter, there no further checks made until following the accident, when the remaining constructed styes were checked by Culham staff prior to being utilised as load supports.

21. Two cranes operated on the site to lift completed trusses. The larger crane belonged to Culham, and the smaller crane was provided by Smith's Cranes Limited ("Smith") and was operated by a Smith's staff member in close conjunction with Rigweld staff who were the riggers and slingers.

22. To make up the final part of a truss, the longer beam was rested on a purpose-built stye constructed close to the smaller crane and to where the final lift would occur. The Smith's crane would lift the shorter beam so that the end to be bolted to the end of the longer beam could be appropriately "offered up", and bolts inserted and loosely fastened to achieve initial joinder. There was evidence to the effect that usually, while the crane lifted the shorter beam to the correct height, the top 2 bolts were put in place first, and podgie bars would then be used to line up two of the remaining bolt holes.

23. Following such initial pairing of the beams, both beams had to be raised further to the appropriate height so that the inverted "V" gap between the angled ends of the beams reduced and the two ends met squarely together. The two ends were to then be securely joined together using 22 strong bolts.

24. Cross members, also called purloins, were put in place across the gap between two completed trusses before the whole structure was tandem-lifted into place as part of the roof and the supporting beams.

25. To lift the two beams, heavy chains running from the Smith's crane were attached by Rigweld staff to both beams, working in close conjunction with the crane operator. The chains were to be wrapped around the beams and the hook used to "choke off" the beams and enable the crane to lift the beams into their correct positions.

26. On 22 February 2019, or perhaps in the days leading up to then, the stye holding up the longer steel beam was constructed by Rigweld staff, namely Mr Tony Ghio the Rigweld site foreman, Mr Jordaan, and Mr Te Ngaru, all of whom were well experienced in such work. Mr Nathan-Nasmith was part of their team and assisted in the construction. On one version, the stye was fully completed prior to the lunch break that day, and the steel beam was left resting on the stye over the lunch period - a total period of about 2 hours. On another version, the stye was completed in the days leading up to the lift on 22 February 2019. In my judgement nothing turned on this inconsistency.

27. It was generally accepted that the stye was 9 levels high.

28. At around 2.45pm on 22 February 2019, Mr Ghio choked a chain on the shorter beam, and when it had been raised to the correct height, Mr Ghio instructed Mr Nathan-Nasmith to reach under the 30-metre beam, pull a chain through from the other side of the beam, and to then pass the chain up to Mr Ghio. Mr Ghio was then standing on top of the adjacent raised shorter beam, as the dogman (communicator) for the crane operator.

29. Mr Nathan-Nasmith was so instructed so that Mr Ghio could choke the chain around the longer beam and the crane could then lift up the two beams to effect the joinder required.

30. However, just as Mr Nathan-Nasmith reached under the longer beam, the timber stye holding that beam above ground level collapsed, pinning Mr Nathan-Nasmith underneath. The beam fell across his shoulder to his hip.

D. <u>The Aftermath</u>

31. There are over 150 photographs produced as part of the evidence, taken at various times by an array of individuals, but they only show the post-accident scene. There are no photos showing what the stye looked like immediately prior to collapse. The descriptions of the structure of the stye pre-accident given by the witnesses involved in its construction were neither detailed nor compelling. Presumably this was so as it was a process frequently undertaken with no special features attracting attention or the ability to clearly recall any detail.

32. While the assembly of the stye was clearly an issue to consider in determining the cause(s) of the accident, there is actually no need to identify the causes of the accident as part of this prosecution.

33. The collapse of the stye resulted in several of the wooden timber lengths breaking into smaller pieces. Fortunately, the bottom layer(s) of the stye remained intact and Mr Nathan-Nasmith survived. There is no doubt that had not some of the stye timbers remained intact, Mr Nathan-Nasmith would have been crushed by the weight of the steel beam.

34. The Rigweld team responded immediately, with the Smith's crane operator, Mr Tribe, instructed to lift the beam off Mr Nathan-Nasmith; and other crew members, namely rigger foreman Mr Jordaan, and Mr Amai the on-site foreman, pulling him out and away from beneath the fallen beam within a short time. Mr Te Ngaru assisted them. They placed him in a recovery position and continued to attract his attention so that he did not slip into unconsciousness.

35. Mr Ghio instructed Mr Amai to call for an ambulance, and then ran to notify Mr Drake, Culham's on-site safety foreman, about the accident. An ambulance arrived some 10-15 minutes later. By then, a Fire Services truck had arrived and constructed a suitable temporary stye to hold up the steel beam. Prior to that, Rigweld staff had placed any timber they could find under the collapsed beam to hold it up temporarily.

36. WorkSafe was advised of the accident that same day and the accident site was secured so that an investigation could be undertaken. Subsequently the timber from the collapsed stye was also secured. There is no question of contamination clouding the reconstruction of what occurred. The investigation included interviewing all Culham and Rigweld on-site employees who could shed light on what had occurred.

37. What is clear from the reconstruction, is that the dunnage used for the stye in question was 150mm by 100mm in diameter, but unusually in the region of 2.5 metres long. Mr Greg Hyde, Culham's site manager told a WorkSafe investigator that the dunnage ordinarily used to construct styes was shorter than the timber used for this stye – he considered the timber ordinarily used was around 1.2 metres in length. He understood that the dunnage ordinarily used had been removed from the site, and in its absence the longer timber was accordingly utilised.

38. Mr Nathan-Nasmith suffered several "life-threatening injuries" which caused him to be hospitalised for approximately 2 weeks until 7 March 2019. He was admitted suffering from:

    - fractures of the distal left fibula, right 4th to 8th ribs, left 2nd, 3rd, 5th, 6th and 7th ribs, right T10 thoracic vertebra, L1 to L3 vertebra, and displaced fracture of the L5 vertebra;

    - displaced right 12th rib;

    - haematoma overlying the right pelvic brim;

    - bilateral pneumothoraces and pleural effusions;

    - air in the left upper abdomen;

    - loss of blood supply to the middle aspect of the left kidney, leading to infarction of part of the kidney, as well as a left kidney laceration;

    - near collapse of the lower left lung, due to haemorrhaging; and
    - subcutaneous emphysema up to his neck.

39. Medical evidence suggests it is likely that he will experience permanent impairment in his lung function, and possible on-going pain in his lumbar spine. On a more heartening note, it was gratifying to see him walking into Court unaided in any way to give his evidence.

40. Culham not only reported the accident to WorkSafe. It also undertook comprehensive enquiries of its own to ascertain how the accident occurred. Culham's Report, completed in early April 2019, was produced as part of the prosecution evidence, at Tab 14. With appendices, it is 58

pages long. The Executive Summary describes the following key contributing factors to the cause of the accident:

- The timber used was ungraded industrial timber, longer than the timber previously used to construct styes;

- The wider spacing of the timber from the previous construction pattern to account for the stability and timber length, resulted in the timber support being weaker due to the wider span and did not allow for a direct load path to the ground;

- The timber was classed industrial grade Pinus Radiata timber, which is ungraded and suitable for packaging, shoring and concrete framing; and

- Although methodology was discussed at pre-start meetings, there was not a site specific safe operating procedure on site for support of steel structures when assembling above ground level.

41. In the body of the report, it was noted that:

- The timber support was not constructed with the correct timber or at the correct distance to ensure adequate support for the structural steel rafter; and

- The practice of pulling the chain under the suspended load by rope between people each side of the beam was not employed.

42. The root causes of the accident were listed as:

- The use of un-graded timber that is longer than previously employed to build the supports;

- That the availability of the Safe Operating Procedure on steel supports for site installation instead of just the JSA and pre-start talks would have reinforced the requirements to correctly construct a support; and

- That the construction of the support did not have a direct load path to the ground.

43. Several corrective actions were set out in the report, which also noted that by the time the report was published, those actions had all been attended to by Mr Hyde or another Culham employee, Mr Cunningham.

44. I noted that the report contained a section (at Tab 12, page 96) in which Culham set out the essential requirements for the safe construction of a timber stye.

E. Alleged Associated Criminal Culpability

45. It should be noted that Culham was not the only party involved in this incident to be charged:

- Leiths, the principal contractor, has pleaded guilty to failing so far as reasonably practicable to consult, co-operate and co-ordinate activities on site with Rigweld and Culham in relation to assembling and rigging load supports and steel loads.

- Rigweld, the sub-sub-contractor, has pleaded guilty to failing so far as reasonably practicable to ensure the safety of workers on site while assembling and rigging load supports and steel loads, which exposed the workers to a risk of death or serious injury.

46. Evidence of those admissions was produced pursuant to section 49(3) of the Evidence Act 2006.

47. I remind myself that these admissions do not establish criminal liability on the part of Culham – the admissions operate only against the companies that made them. The fact of the guilty pleas is however a relevant factor when considering Culham's criminal culpability.

F. Relevant Law

(i) General Criminal Trial Issues

48. The onus of proof rests with the prosecution. Culham does not have to prove anything.

49. For a finding of guilt to be achieved, the standard of proof required is beyond reasonable doubt.
50. All witnesses are to be assessed in relation to their veracity and reliability. Their demeanour in the witness box can be but a small part of any such assessment. Consistency of evidence was given the predominant focus in determining what evidence to accept or reject, although inherent likelihood was also considered. Inferences to be drawn from other reliably established facts could be drawn against Culham where that was the only available inference. If there were inferences in favour of Culham, they were to be given priority over all other available inferences.

51. Several expert witnesses were called. None was challenged as to their expertise. They were accordingly entitled to give opinion evidence, where that is "substantially helpful" to the factfinder. There were no challenges as to the admissibility of their evidence; and accordingly, where there was a divergence of view, that was to be resolved by assessing their evidence in the usual way.

(ii) Legislation

52. The Act sets out some particularly apposite provisions to this prosecution. The following are significant, with emphasis on particularly pertinent considerations highlighted:

> Section 3. Purpose
>
> (1) The main purpose of this Act is to *provide for a balanced framework to secure the health and safety of workers and workplaces by*—
>
> (a) *protecting workers and other persons against harm to their health, safety, and welfare by eliminating or minimising risks arising from work* or from prescribed high-risk plant; and
>
> (b) providing for fair and effective workplace representation, consultation, co-operation, and resolution of issues in relation to work health and safety; and
>
> (c) encouraging unions and employer organisations to take a constructive role in promoting improvements in work health and safety practices, and assisting PCBUs and workers to achieve a healthier and safer working environment; and
>
> (d) promoting the provision of advice, information, education, and training in relation to work health and safety; and
>
> (e) securing compliance with this Act through effective and appropriate compliance and enforcement measures; and
>
> (f) ensuring appropriate scrutiny and review of actions taken by persons performing functions or exercising powers under this Act; and
>
> (g) *providing a framework for continuous improvement and progressively higher standards of work health and safety.*

(2) In furthering subsection (1)(a), *regard must be had to the principle that workers and other persons should be given the highest level of protection against harm to their health, safety, and welfare from hazards and risks arising from work* or from specified types of plant as is reasonably practicable.

Section 17. Meaning of PCBU

(1) In this Act, unless the context otherwise requires, *a person conducting a business or undertaking or PCBU*—

(a) *means a person conducting a business or undertaking*—

(i) whether the person conducts a business or undertaking alone or with others; and

(ii) whether or not the business or undertaking is conducted for profit or gain; …

Section 19. Meaning of worker

(1) In this Act, unless the context otherwise requires, *a worker means an individual who carries out work in any capacity for a PCBU, including work as*—

(a) *an employee*; or

(b) *a contractor or subcontractor*; or

(c) *an employee of a contractor or subcontractor*; or

(d) an employee of a labour hire company who has been assigned to work in the business or undertaking; or

(e) an outworker (including a homeworker); or

(f) an apprentice or a trainee; or

(g) a person gaining work experience or undertaking a work trial; or

(h) a volunteer worker; or

(i) a person of a prescribed class.

Section 22. Meaning of reasonably practicable

In this Act, unless the context otherwise requires, *reasonably practicable, in relation to a duty of a PCBU set out in subpart 2 of Part 2, means that which is, or was, at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters, including—*

(a) the likelihood of the hazard or the risk concerned occurring; and

(b) the degree of harm that might result from the hazard or risk; and

(c) what the person concerned knows, or ought reasonably to know, about—

(i) the hazard or risk; and

(ii) ways of eliminating or minimising the risk; and

(d) the availability and suitability of ways to eliminate or minimise the risk; and

(e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

Section 36. Primary duty of care

(1) *A PCBU must ensure, so far as is reasonably practicable, the health and safety of—*

(a) *workers who work for the PCBU, while the workers are at work in the business or undertaking*; and

(b) *workers whose activities in carrying out work are influenced or directed by the PCBU, while the workers are carrying out the work*.

(2) A PCBU must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

(3) *Without limiting subsection (1) or (2), a PCBU must ensure, so far as is reasonably practicable —*

(a) *the provision and maintenance of a work environment that is without risks to health and safety*; and

(b) the provision and maintenance of safe plant and structures; and

(c) *the provision and maintenance of safe systems of work*; and

(d) the safe use, handling, and storage of plant, substances, and structures; and

(e) the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities; and

(f) *the provision of any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking*; and

(g) that the health of workers and the conditions at the workplace are monitored for the purpose of preventing injury or illness of workers arising from the conduct of the business or undertaking.

Section 48. Offence of failing to comply with duty that exposes individual to risk of death or serious injury or serious illness

(1) *A person commits an offence against this section if—*

(a) *the person has a duty under subpart 2 or 3; and*

(b) the person fails to comply with that duty; and

(c) that failure exposes any individual to a risk of death or serious injury or serious illness.

Section 54. Proof of intention not required for certain offences

In a matter involving a prosecution for an offence against section 48 or 49, it is not necessary to prove that the defendant—

(a) intended to take the action alleged to constitute the offence; or

(b)intended not to take an action, where the failure to take that action is alleged to constitute the offence.

Section 160. Conduct of directors, employees, or agents attributed

(1) *Conduct engaged in on behalf of an individual (person A) by any of the following must be treated, for the purposes of this Act, as having been engaged in also by person A:*

(a) an employee or agent of person A, acting within the scope of his, her, or its actual or apparent authority:

(b) any other person at the direction or with the consent or agreement (whether express or implied) either of person A or an employee or agent of person A, given within the scope of the actual or apparent authority of the employee or agent.

Section 226. Use of approved codes of practice in proceedings

(1) No code of practice issued or amended under this Part confers rights or obligations capable of enforcement in any civil or criminal proceedings.

(2) However, *an approved code of practice is admissible in any civil or criminal proceedings as evidence of whether or not a duty or obligation under this Act has been complied with*.

(3) *The court may—*

(a) have regard to the code as evidence of what is known about a hazard or risk, risk assessment, or risk control to which the code relates; and

(b) rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

(4) Nothing in this section prevents a person from introducing evidence of compliance with this Act in a manner that is different from the code but provides a standard of work health and safety that is equivalent to or higher than the standard required in the code.

(iii) The Charge

53. Culham is charged with a strict liability offence, contrary to sections 48(1), 48(2)(c), and 36(1)(a) of the Health and Safety at Work Act 2015 ("the Act"), with having, on 22 February 2019, breached its statutory duty as a PCBU towards its employees, including Mr Nathan-Nasmith, in respect of undertaking the "…assembling and rigging" of "load supports and steel loads" at the F & P site at 46 Standon Drive, East Tamaki, which breach exposed workers to a risk of death or serious injury.

54. The duty Culham is alleged to have not complied with was to ensure the health and safety of workers "…so far as is reasonably practicable".

55. The particulars of the charge allege that, for Culham to have complied with this duty, it was reasonably practicable for Culham to have:

a) ensured that the hazards and risks associated with the load supports and rigging of steel loads were adequately identified and assessed;

b) ensured the provision and maintenance of an effective safe system of work in relation to the construction of load supports and rigging of steel loads;

c) provided an effective and task-specific load support design that would support the steel loads;

d) ensured load supports were safe and effective;

e) consulted, co-operated with, and co-ordinated activities with other PCBUs, namely Rigweld and Leighs, in relation to assembling and rigging steel load supports and steel loads at the site.

56. The prosecution case is made out if any one of these 5 steps is proved to be reasonably practicable to ensure the on-site health and safety of workers while working but was not taken by Culham – it is not the case that all 5 need to be established.

(iv) <u>The Elements of the Offence</u>

57. There are 4 elements to the charge, as follows:

(i) Culham was a PCBU;

(ii) Culham had a duty to ensure, so far as reasonably practicable, that the health and welfare of its workers, including Mr Nathan-Nasmith, was not put at risk while the workers were at work in the business or undertaking;

(iii) Culham failed to comply with this duty; and

(iv) Culham's failure exposed workers, including Mr Nathan-Nasmith, to a risk of death or serious injury.

58. The only matter in dispute is element (iii) above. This is clear because of the following:

- It is an admitted fact, pursuant to section 9(2) of the Evidence Act 2006, that Culham is a PCBU.

- It is also admitted that while Mr Nathan-Nasmith was directly employed by Rigweld at the time /date of the accident he was "at work" in Culham's undertaking of the contract work for Leiths; and further, that he was seriously injured, as earlier particularised above. I note that Sections 19 and 36(2) of the Act made challenging this aspect extremely improbable.

- The uncontroverted evidence is that Culham influenced and directed the work on site, daily. All staff attending the site were required to sign on, and to attend toolbox meetings, on a daily basis. Those meetings dealt with the work anticipated to be undertaken that day, where specific risks were discussed. All workers involved in certain tasks were also required to participate in and sign off on Culham's Job Safety Analysis ("JSA").

- The size and weight of the beams was such that any step missed in attempting to ensure workers' health and safety could expose the workers to a risk of death or serious injury. There was no evidence to counter this logical consequence.

59. Mr Finn for the prosecution placed emphasis on the purpose of the Act, as set out in section 3 of the Act, the object of the legislation being submitted to be to provide workers with the highest possible level of protection.
60. Emphasis was also placed on the primary duty on PCBUs, as set out in Section 36(1)(a) of the Act, to ensure so far as reasonably practicable worker's health and safety, as well as the duty to ensure the provision and maintenance of a work environment without risks to health and safety (s. 36(3)(a)) and the provision and maintenance of safe systems at work (s.36(3)(c)). Mr Finn referred to *Linfox Logistics (NZ) Ltd v WorkSafe New Zealand* [2018] NZHC 2909, where the Court considered the primary duty of care to be "…of fundamental application and importance".

61. Mr Finn further submitted that Section 30 of the Act requires those subject to the duties provided by the Act to eliminate risks to health and safety so far as is reasonably practicable, or if that is not possible, to minimise the risks so far as is reasonably practicable. Everyone who can influence and control the matter to which the risk relates is subject to this duty by the legislation.

62. He submitted further that Section 33, makes plain that more than one person can have the same duty imposed under the Act, with each such person being required to comply. Where more than one PCBU has an over-lapping or the same duty, they are each under the duty so far as reasonably practicable to consult, co-operate with and co-ordinate activities with each other. A breach of this duty constitutes an offence (s.34(2) of the Act). That such breach can support a prosecution under s.36 was established in *Linfox*.

63. The phrase "reasonably practicable", which is the all-important test, is defined in s.22 of the Act, as set out above. This has been judicially examined in *WorkSafe New Zealand v Department of Corrections* [2016] NZDC 18502, where it was held that the test is objective i.e., "…was it objectively reasonable to predict the relevant circumstances and take those steps." In *WorkSafe New Zealand v Sand Safaris 2014 Limited* [2023] NZDC 8709 the following guidance as to this test was given as follows:

> "Whether or not a step which could be taken by a PCBU is reasonably practicable may include an assessment of the likely risk on one hand and the cost of averting that risk on the other. To some extent this is a balancing act. However, where the risk is reasonably low but the likely outcome catastrophic the level of effort required to avoid the risk may be proportionally increased."

64. Mr Finn relied on these authorities to support the prosecution. I accept that they are clearly of assistance.

G. <u>The Issue</u>

65. Culham's duty to ensure the health and safety of workers on site was alleged to have been breached in relation to the risks involved in the assembling and rigging of load supports and steel loads, a specific area of the overall work undertaken on the site, in the 5 ways spelled out in the particulars of the charge.

66. Culham disputed the allegation on all fronts.

67. Mr Harris, counsel for Culham, took the position that Culham had taken all reasonable and practicable steps to deal with all the risks then known, as well as those which should have been

then known i.e., as at the time of the accident. Culham accordingly denied breaching the primary duty as well as all 5 particulars of the charge.

68. Mr Harris maintained that the correct position in law was not one where the Court could or should look at matters in hindsight seeking unrealistic or unattainable perfection; and it was submitted that the prosecution had erred in doing exactly that.

69. The authority of *WorkSafe New Zealand v Dempsey Wood Civil Limited* [2015] NZDC 8882 was cited as supporting the principle as to the relevant time and manner of assessment, as follows:

> "Furthermore, the practicable steps cannot be determined with the benefit of hindsight. Instead the relevant point is to determine what is practicable immediately anterior to the incident and in the circumstances at that time."

70. The statement by Baragwanath J. in the Rotorua High Court case AP 464 *Department of Labour v Solid Timber Building Systems New Zealand Limited* supports this:

> "I construe the definition of "all practicable steps" as essentially one of objective fact, viewing the matter at a stage shortly before the injury through the eye of an employer conducting the respondent's operation and with the knowledge that such employer could reasonably have been expected to possess as to the nature of the prospective harm from the machine."

71. Further support for this point of view is offered by Hansen J in *Buchan's Foundry Limited v Department of Labour* [1996] 3 NZLR 112, stating that:

> "The requirement to take all reasonably practicable steps is not a counsel of hindsight perfection."

72. I accept these statements of principle. I also accept, as put in *Central Cranes Limited v Department of Labour* [1997] 3 NZLR 694 that the question of what could reasonably and practicably be done must be determined upon the circumstances of each case, with the question of what was practicable being "…a matter of fact and degree in each particular case."

73. To assess the merits of this prosecution, I turn next to the evidence presented. The focus, of necessity, is restricted to what remains in dispute between the prosecution and the defence. Accordingly, much of the evidence led before me will not be specifically referred to.

H. Evaluation of the evidence relating to the "assembling and rigging of load supports and steel loads".

(a) Rigweld staff

74. In my assessment the evidence of Rigweld employees did not significantly advance the position. Accordingly, I will refer only to the more pertinent evidence which advances the case over and above the earlier description of the work being undertaken on the day of the accident.

75. The other preliminary aspect is that there were 3 bundles of agreed exhibits produced at the commencement of the hearing, each divided into Tabs and with pagination numbers. There was also a booklet of photographs which was agreed and produced at the commencement of the hearing, with further photographs produced subsequently. Other exhibits were later admitted into evidence without objection.

76. Mr Levarn Nathan-Nasmith is not able to recall much of what occurred on the day of the accident. He confirmed that he was very inexperienced, this being his first rigging job; and he was being shown what to do and how to be a rigger by his more experienced colleagues.

77. He recalled being instructed by Mr Tony Ghio to pass him the chain to lift the longer beam off the stye, but as he bent down to reach for it under the beam, the stye collapsed. He does not recall where Mr Ghio was at that point. He stated that normally when hooking a beam, he would be on one side of the beam and there would be someone on the other side to throw the chain to him. He considered Mr Corey Amai to be the most senior Rigweld employee then present. He said that Mr Ghio was responsible for supervising him on the day in question.

78. Mr Vehahn Jordaan described himself as a foreman. He confirmed that Mr Ghio had instructed Mr Nathan-Nasmith to pass the second chain to Mr Ghio. He recalled that Mr Nathan-Nasmith had crouched down to pass the chain under the beam. As soon as Mr Nathan-Nasmith had grabbed the chain, the stye collapsed. Mr Jordaan further stated that it was normal for the chain to be passed under a beam; sometimes it was kicked through; at other times it was handed from one person to another – he said there was no set way for this to be achieved. Prior to the

accident, he had no concerns about the procedure adopted in terms of joining the beams at grade. That was on the basis of his 7 years of relevant work experience.

79. Mr Jordaan was experienced and had a valid Site Safety card, as well as several qualifications relevant to the rigging work he undertook. He agreed he had been inducted regarding the site by Culham, and that he had seen the Leigh's site-induction video. The timber used to create the stye in question was supplied by Culham – as can be seen by the fact the ends of the timber was painted red, which was the timber they were to use.

80. Mr Jordaan confirmed that Mr Michael Drake, now deceased, was the Culham staff member responsible for the site. He was referred to Tab 18, the Culham Job Safety Analysis ("JSA"), prepared by Mr Drake. At page 407 of this document, he did not sign off the JSA on the day of the accident, although he agreed he was working on-site that day. He maintained however, that he had attended the pre-start meeting that day. He was electronically recorded as having done so. Mr Jordaan was taken to Tab 12, page 134, the electronic record of that meeting. The record indicates that several specific tasks were to be undertaken, and there was mention of "Don't walk under steel in the air." Mr Jordaan agreed the record identified quite specific tasks, but that there was no mention of dunnage or load supports.

81. Mr Jordaan confirmed also that walking on steel beams was not considered acceptable practice at the time of the accident. He confirmed that immediately prior to the accident, Mr Ghio had been standing on the beam waiting for the chain to be passed to him.

82. Mr Corey Amai was a Rigweld foreman, with over 18 years' experience. He was the chief of the crew. He has numerous NZQA qualifications related to rigging and slinging as well as a Site Safety card. He confirmed he had been initially inducted onto the site by means of Leighs' video.

83. On the day of the accident, Mr Amai arrived later than usual. Mr Nathan-Nasmith, Mr Jordaan, Mr Te Ngaru and Mr Ghio made up the wooden stye in question that day. He said he had no concerns about the stye prior to the accident.

84. Mr Amai advised that at the commencement of the job, he had met with Mr Darke and Mr Hyde from Culham and asked if Culham would supply metal (steel) load supports. They responded that Culham would supply the crane, the operator, the steel beams, and timber for the load

supports. He recalled that the very first stye Rigweld staff had constructed on-site had been checked by Mr Drake and Mr Hyde – they had OK'd it.

85. Mr Amai said Rigweld had gone through the same process of constructing the beams "plenty of other times", without incident. The collapse of the wooden stye was the first time he had seen anything of that sort; although he had previously heard of a stye collapsing. He agreed the use of dunnage was industry wide.

86. Mr Amai indicated that sometimes 2 staff would put a chain under a beam to lift it. He was unsure if Rigweld, Culham or Leighs had any rules relating to load supports. The normal practice was to throw or swing the chain under the beam to another member of the team, although a pole could sometimes be used.

87. Mr Amai was taken through Tab 18, the Culham JSA. He confirmed it makes no mention of dunnage or load supports. He confirmed also signing off on the document on the days Monday through Thursday of the week of the accident, but not on the Friday, the actual day of the accident. He explained that was due to his late arrival at the site that morning. At the time of the accident he was elsewhere, checking completed trusses.

88. Mr Tony Ghio has some 20 years' experience as a rigger. He too had a number of NZQA qualifications relating to rigging and slinging. He confirmed having been inducted onto the site by Leighs. He confirmed also that he was aware of the Culham JSA, and had signed off on it, but he did not do so on the day of the accident.

89. On 27 February 2019, he had attached the first chain to the shorter beam, in readiness for it to be bolted to the longer beam sitting on the stye. To choke off that first chain, he had climbed onto the shorter beam. He then asked Mr Nathan-Nasmith to pass him the second chain. As Mr Nathan-Nasmith reached under the longer beam to get the chain, the stye collapsed and the beam fell onto Mr Nathan-Nasmith.

90. Mr Ghio had participated in building the stye which collapsed and stated that he was well used to doing that in the course of his career. He recalled the stye was made of rough-sawn timber 100mm by 150mm and 2.5 metres in length. It was stacked 9-levels high. The same process had been used throughout the F&P project. They were up to the final 2 lifts to complete the

project. Although Mr Ghio was the Rigweld foreman, and had the final say in the construction of styes and other matters, he considered they all worked as a team and helped each other.

91. He considered the timber used to construct the stye which had collapsed to be new, due to its colour, and he noted that it was longer than other dunnage used previously. Although long, that would not in his view reduce the effectiveness of the stye, but it would be less convenient to use timber of such length. He said that he had concerns about the stye he would have voiced them prior to the lift.

92. Mr Ghio had learnt his trade from others; just as Mr Nathan-Nasmith was doing from him and the other Rigweld staff. What had occurred has "destroyed" him, and he has not worked since the day of the accident. This was the first accident of his working life.

93. Mr Dean Te Ngaru was the final Rigweld witness. He has over 40 years of rigging experience, and a number of relevant NZQA qualifications.
94. He confirmed that on commencement at the site he had been inducted by Leighs. He was aware of the Culham JSA (Tab 18) and confirmed signing off on it on the day of the accident.

95. Mr Te Ngaru gave evidence that the timber used to construct the stye which collapsed was not the same as timber used previously. This dunnage was longer but was used as the timber ordinarily available for this purpose had been removed from the site. Other than that, the same routine as for the previous stye constructions and lifting operations was adopted.

96. At the time of the accident, he was over 40 metres away, attending to other work.

(b) Crane Operator

97. Mr Shaun Tribe was the Smith crane operator. He had learnt on the job to start with, but later attended appropriate courses to operate cranes and is qualified to now teach others to undertake such work. He had worked for Smith as a crane operator for some 18 months at the time of the accident.

98. He confirmed on the morning of 22 February 2019 he had attended a toolbox meeting run by Mr Drake from Culham, followed by attending the Rigweld toolbox meeting run by Mr Manihera. He

did not recall Mr Ghio attending the Rigweld toolbox meeting. He confirmed also signing on to the Culham JSA (Tab 18) for the entire week of the accident, except on the Thursday.

99. There was a Site Specific Risk Assessment form completed by Smith (Tab 54), which Mr Tribe was aware of but had not prepared himself.

100. He had initiated a Lift Plan for the day (Tab 27) , which was shown to Mr Amai and to Mr Drake for their approval. Mr Ghio was to be his dogman, the person on the ground who communicates with the crane operator in relation to a lift.

101. During the lift, he observed Mr Ghio standing on top of the shorter steel beam waiting for the second chain to be passed to him and attached to the longer steel beam so the lifting could commence. He then heard a cracking noise and came to realise the stye holding the longer beam had given way. His view of the actual incident was blocked. He then followed instructions and promptly lifted the fallen beam off Mr Nathan-Nasmith.

102. As he took no part in the construction of the stye which collapsed, in my view, he could have no responsibility for the accident. I accepted his evidence as accurate and credible.

(c) WorkSafe staff

103. Mr Ben Mitchell-Allam was a WorkSafe warranted inspector. He attended the site in March 2019 with Inspector Cridland. Apart from taking some photographs of the sealed off area at the site, he secured as an exhibit the timber which had been part of the collapsed stye.

104. Ms Susan Cridland was the initial WorkSafe lead investigator. As well as initially visiting the site, subsequently securing numerous documentary exhibits and post-accident photographs and DVD recordings from several different sources, all of which she produced in evidence, she interviewed several the relevant workmen which interviews were also produced.

105. Ms Cridland recounted that Mr Hyde, when interviewed, had expressed his view that in hindsight there should have been an additional stye in the middle of the load; and that he believed the timber of the collapsed stye had been placed too far apart. She further stated that Mr Hyde had also advised that Culham had signed off on the stye dunnage design of 2 x 2 timbers being

used. Ms Cridland noted that several the stye timber pieces had snapped at the exact position of a knot in the wood, as shown in several of the photographs.

106. There was no challenge to her evidence, and I accepted it.

107. Mr Kevin Montague, a further WorkSafe investigator, also produced some photographs of the scene post-accident.

108. Mr Michael Allen, Mr Stuart Wright, Ms Alana McClintock, Mr Carl Wedderburn, and Ms Donna Farrell gave evidence about a routine, unannounced visit to the F&P site in October 2018 to check on health and safety compliance. There were few issues of concern at that time, but what was observed was passed onto to Culham. I considered this evidence to have limited value when considering the present charge.

109. Ms Michelle Kedian took over as the lead WorkSafe investigator from Ms Cridland in November 2019. She has considerable experience in the form of being appointed as an Inspector in January 2016 to January 2018. She was then re-engaged in that role from July 2018 until the present. Her education specialised in health and safety; and prior to her work at WorkSafe, she had spent 12 years as a Health and Safety Manager and Consultant, mainly in the fields of log transport, and in the auto industry. She had also worked in the crane industry in the same capacity for 6 years.

110. In the course of her investigative work, Ms Kedian interviewed numerous potential witnesses, in particular Mr Drake of Culham. Mr Drake has now passed away, and his evidence in the form of the interview was produced into evidence. I will deal with his evidence after completing discussing the evidence of Ms Kedian.

111. Ms Kedian concluded, having reviewed all the material assembled by WorkSafe prior to her involvement, that Culham had failed to take reasonably practicable steps in the ways alleged and set out in the charge. She elaborated on how she came to such conclusions.

112. Ms Kedian firstly noted that s. 36(1)(a) of the Act imposed a duty on Culham to eliminate or reduce risks to health and safety, so far as reasonably practicable. She noted that Culham had a Health and Safety Manual from July 2017 (exhibit Tab 20) which required a JSA to be

developed in relation to all work with a potential to create medium or greater risks; and further that Culham imposed strict requirements on all sub-contractors to ensure Culham and sub-subcontractors' employees were protected from harm. The JSA created by Culham in respect of the F&P project was produced in evidence at Tab 18. Ms Kedian was critical of this JSA in that it was only irregularly signed off by staff, it inappropriately identified only generic hazards, and made no mention of load supports or the rigging of steel beams. The mention of rigging loads in the JSA related solely, in her view, to general crane lifts.

113. She further noted that Leighs' documentation required subcontractors (i.e. Culham) to impose similar requirements to any sub-subcontractors (i.e. Rigweld) to be engaged on the project. Rigweld did not produce a JSA for the work it undertook. Instead, because of oral agreement with Culham, Rigweld operated throughout under Culham's JSA. There was no challenge to these assertions by Ms Kedian. Late disclosure by the defence evidenced a Rigweld JSA dealing with the movement of steel on site by telehandler. Ms Kedian was not asked about this.

114. Ms Kedian opined that Culham "…ought to have been aware load support collapse was a hazard and that a hazard identification and risk assessment of load supports and rigging of steel beams needed to be carried out." This was especially so, in Ms Kedian's opinion, due to Culham's awareness of such risk being spelled out in a report relating to an earlier dunnage accident in Kinleith in November 2018 (of which more will be explained subsequently). She stated that the connecting of the steel beams to form completed trusses involved a large number of identifiable steps, each of which should have been detailed in the JSA and assessed as to risk, as well as dealt with, in terms of suitable steps required to be taken to eliminate or reduce those risks.

115. Ms Kedian next focussed on s. 36(3)(c) of the Act, which required Culham to provide and maintain a safe system of work, so far as reasonably practicable. In this regard she again pointed to the JSA as being inadequate for purpose, and inconsistently signed-off by staff. She considered it significant that the risk of load support collapse was entirely missing from the JSA. As well, she considered that Culham had not ensured that Rigweld had established a safe system of work in relation to the construction of load supports or the rigging of loads.

116. Ms Kedian was taken to Tab 30, the 2012 Approved Code of Practice ("ACOP") for load lifting and rigging. She accepted the ACOP did not mention accepted safe processes for the construction of constructing wooden loads supports.

117. She deferred to the evidence of Mr Leatherby as to the correct design of timber load supports but considered that task-specific load supports were likely to be more effective.

118. She pointed also to the lack of evidence from Culham as to monitoring of load supports and rigging of loads to ensure they were safe and fit for purpose.

119. Ms Kedian further noted that Culham had not required Rigweld to provide evidence of a safe system of work, which she considered evidenced a lack of consultation, co-operation and co-ordination. She pointed to that failure as being contrary to Culham's own Health and Safety manual.

120. Ms Kedian accepted that although not unusual in the industry, the oral arrangement between Culham and Rigweld that Rigweld could fall under Culham's JSA, that was an arrangement that more usually occurred where self-employed tradesmen were involved. This was not something that Ms Kedian considered should have occurred with Rigweld, which was an experience and much larger company. She considered Rigweld should have put their own safe system of work in place, and more importantly, that Culham should have required such.

121. Ms Kedian was cross-examined about the previous NZ legislation (dated 1992) and the situation in Australia. Neither subject was of great assistance. The nub of this line of questioning was that not all hazards/risks could be eliminated; and that the identification of risk is not always obvious. Ms Kedian accepted the obvious but pointed to the layers of safeguards that could and should have been adopted to alleviate risks.

122. Ms Kedian was particularly questioned on Culham's JSA. She maintained that in her view it was written as a hazard register, and not as its intended purpose which was to set out the steps involved in hazardous tasks. She was taken to Culham's Health and Safety manual (Tab 20) and agreed there was a 2-page hazard register, setting out hazards relating to cranage and rigging operations. Although the register included mechanical failure, loss of load, failure of lifting equipment and poor communication, Ms Kedian pointed to the lack of "load support collapse" as

another potential hazard, especially having regard to Culham's involvement in the previous incident in Kinleith. She confirmed that Culham's undisputed knowledge of the Kinleith incident should have made this hazard more obvious.

123. Ms Kedian was unable to advise how many load support collapses have occurred in New Zealand in the past 5 to 10 years, despite having made endeavours to ascertain this.

124. Ms Kedian was taken to Tab 28, F&P's project risk register. She considered the risks spelled out in that document related to cranage, not load supports or rigging of loads.

125. Ms Kedian was cross-examined about the Kinleith incident, it being suggested that what had occurred was the load initially rolling or shifting, which then caused the cross-cutter machine on the load support to topple. It was suggested that only after the machine had toppled that the dunnage had become unstable. It was suggested that in this incident the timber had not broken or splintered as it had on the F&P site. She accepted the description in the report (at Tab 29) to that effect but maintained that the dunnage had failed and that Culham had been made aware of such risk as a result.

126. I accepted Ms Kedian's evidence in relation to her experience, her expertise and the steps she had taken during the investigation. Her criticisms of the Culham JSA were justified and highly relevant. I considered her to be a competent and accurate witness who made concessions when appropriate but otherwise reasonably maintained her views.

127. Mr Michael Drake's interview by Ms Kedian was accepted into evidence by consent. He was employed by Culham as a site supervisor for some 13 years. At the time of the accident, he had over 30 years' trade experience, part of which included rigging and slinging. He commenced work on the site in October 2018, prior to any construction commencing, and he worked closely in conjunction with Mr Hyde. He was involved in writing the Culham JSA, which he stated was a "general" and "active" document; and he led the daily morning briefings on site. He was also kept abreast of Rigweld's pre-start meetings.

128. Mr Drake confirmed that Culham supplied the timber used by Rigweld for dunnage. He advised that no one had been responsible for checking the timber. He was unaware of any rules relating to how riggers slung the loads; and confirmed it was Culham policy (as well as Leighs') to not work while standing on steel beams. He stated he did not at any time see anyone walking

on beams on site. He also stated that he did not know if there were rules around the construction of timber styes to support the steel beams.

129. Mr Drake maintained that he was not responsible for the monitoring of load supports for the steel beams, nor the slinging of loads. He went further to state that there was no one at Culham responsible for that. After the accident, he took on that responsibility, with William from Leigh's who would sign off on the load supports. He stated that Mr Hyde did a drawing of what was expected in relation to the construction of styes.

130. Mr Antoni Leatherby was called by the prosecution as a rigging and load support expert. He explained his background, over 35-years' working experience, specific training in his field and a large number of relevant qualifications. He is currently a technical training specialist in scaffolding and rigging, having been so employed for some 19 years. He was not challenged on any of this, and I accordingly accepted him as an expert witness.

131. Mr Leatherby emphasised the need for, and importance of, pre-planning such work and utilising step-by-step methodology. If the work was repetitive, as in the case at hand, he considered it appropriate to design specific equipment to hold loads, and he opined that he would seldom entertain using timber for load supports. His preferred methodology is to use steel support, trestles or elephant feet to support steel beams such as those involved in this case. He also considered that the steps involved with rigging and slinging, as well as loads supports, should be incorporated into the job JSA.

132. Mr Leatherby stated that he had learnt about the construction of styes through personal experience, and what he had learnt from other experienced riggers. He was unaware of any formal training being available in this area.

133. He set out what he considered relevant to a risk assessment in relation to this case. The following issues were noted as impacting on his planning: load weight and dimensions, height of item to be supported, ground conditions and stability, layout plan, and additional materials/equipment required.

134. Mr Leatherby preferred the use of steel supports as they are more stable, do not rot, contain knots, and are less prone to damage. He considered steel supports could be moved

around the site as easily, if not more conveniently, than timber dunnage. However, he also conceded that there can be slipping when steel is supported on steel, although that could be alleviated by using wooden packers.

135. He set out step by step the process of safely and appropriately constructing a timber stye. He stressed that 'things have to be kept aligned". He preferred the use of graded timber, without knots. He accepted that if tasks were done repetitively, that would potentially make it less hazardous.

136. Despite preferring steel load supports, Mr Leatherby readily accepted that timber dunnage is commonly used in the industry; and that there is no such thing as a perfect load support.

137. Mr Leatherby supported Ms Kedian's view that the Culham JSA was generic and lacking in detail. He would have expected load supports to be identified as a hazard and appropriately discussed in a separate JSA; and the fact these matters were not addressed at Tab 18 was an omission.

138. Mr Leatherby was concerned that photographs post-accident did not show sand being used to level the ground in the vicinity of the collapsed stye – it was his view this should have been done to level the area. He considered the actual timber used as inappropriate, given the photographs of the breakage points being immediately adjacent to knots in the wood. He also considered the dunnage used was excessively long for the task at hand.

139. Although not relevant, Mr Leatherby suggested he might have approached the task at hand by laying the steel beams on their side and making the attachment while the beams were lying on a single piece of dunnage to reduce the risk. He was questioned about this, and later evidence was given to demonstrate the impracticability of doing this. I did not find this evidence of assistance.

140. Mr Leatherby also pointed to what he considered poor construction of the stye which was photographed post-accident. He suggested he could see shading, which indicated the timber was not correctly aligned. However, I consider this to be incorrect. After the accident, the evidence was that a hastily constructed stye was made to keep the steel beam up off Mr Nathan-

Nasmith. This was done when the workmen were under stress and seeking only to assist their colleague – it was not indicative of how the stye had been constructed before the accident.

141. Mr Leatherby was cross-examined unduly about his preference for steel rather than timber load supports. I do not take his evidence to be that only steel load supports are appropriate. What Culham did in instructing Rigweld to use timber cannot be fairly criticised, and I do not see Mr Leatherby doing so. It is a process widely used in the industry, and it was an acceptable way of going about the process of joining the beams to make trusses.

142. Mr Leatherby was a credible witness in my view.

(d) The Kinleith Incident

143. The WorkSafe Report into this incident was produced as Tab 29. The incident occurred at a paper mill, where a particular machine described as a cross-cutter was placed on dunnage by Culham staff so that regular maintenance could be done. The report confirms that while staff were lifting the lid of the cross-cutter into place manually, the cross-cutter became unstable and toppled, which shifted the weight of the load on the dunnage and caused the dunnage on the end of which the cross-cutter had been balanced to collapse. Although there were workers in the vicinity no was injured. The report concluded that the …"improper placement of dunnage enabled one end to collapse". The report indicated that the preferred method of steel trestles being used was unavailable as those were then deployed elsewhere, and accordingly wooden dunnage had been used on this occasion.

144. WorkSafe made several recommendations to prevent re-occurrence, in the form of a "directive letter", which was conveyed to Culham and accepted in its terms, as evidenced the signature of Ms Dana O'Carroll, the then-Culham health and safety advisor. Of significance is what Culham was advised; namely that the cross-cutter had fallen from the dunnage on which it had been placed. Culham was instructed to remedy the situation by developing and implementing a safe system of work, including proper training in hazard identification and risk management.

145. A different interpretation of the lessons to be learned was taken by the defence. It was argued that the incident occurred because the machine toppled, not because the dunnage had

collapsed. That is a fair view. However, Culham cannot legitimately argue that the incident did not involve dunnage. The risk of items toppling off dunnage was surely apparent following this Kinleith incident?

(e) Culham Witnesses

146. Mr Julian Kerwyn is the Manager and Director of Culham. He advised he owns 50% of the shares in the company. He stated that Culham commenced operations in 1958. It is a "heavy fabricator" in the construction area, mainly in the north island of New Zealand. In 2018-9, he thought that Culham employed some 300 staff; currently there are some 1200 staff.

147. Mr Kerwyn confirmed that Culham was invited to tender for the F&P construction project, with Leighs as the principal contractor. Culham duly won the tender and was awarded the work as set out in the contract (Tab 14), which included obligations on the part of Culham to maintain safe and healthy work practices and conditions, to comply with any reasonable Leighs' safety related instructions, and to submit Culham's site specific safety plan to Leighs. Health and Safety issues were considered in a very large way when the tender was formulated. He confirmed further that Culham then sub-contracted out the steel assembly work to Complete Rigging in respect of one building, and to Rigweld to erect the second identical building on the site, both based on hourly rates. He confirmed Rigweld was appointed after it had supplied several relevant documents to Culham detailing Rigweld's health and safety work processes.

148. Mr Kerwyn confirmed the inductions to site by Leighs, as well as Culham's daily toolbox meetings. He confirmed also that Culham provided the dunnage for styes, which he stated was industrial grade timber, purchased new and specifically for the construction of styes. It could be easily distinguished as it was painted red. He accepted that Culham had made the decision about which materials were to be made available to Rigweld.

149. Mr Kerwyn denied having knowledge or concerns about the risk of styes collapsing. He said he had never heard of that occurring in his 43+ years in the industry. He considered the construction of styes was the responsibility of riggers, not steel fabricators such as Culham. He confirmed that Culham use wooden dunnage on all their construction sites.

150. He agreed that JSAs are live documents, and that they can be added to from time to time as and when necessary. He agreed also that Rigweld did not produce their own JSA, despite requirements to do so being set out in Culham's Health and Safety manual and in Leighs' contract with Culham. He considered that Rigweld simply used Culham's JSA out of convenience. Mr Kerwyn agreed that Tab 18 made no reference to load supports; and that the signatory pages had numerous gaps where employees should have signed to accept their daily understanding of the risks outlined and the steps required to be taken to eliminate or reduce the risks.

151. Mr Kerwyn was asked of his knowledge of the Kinleith incident. He did not consider that to involve the collapse of dunnage or breakage of any timber. He considered the machine had become unbalanced when the lid was re-connected, which caused the machine to fall to the floor. There is now a purpose-built frame that is used to ensure that there is no repeat of the accident. He maintained that the matter was taken seriously by Culham.

152. Mr Kerwyn accepted the Culham report into the F&P accident – Tab 12. He agreed he had signed off on the conclusions and remedial steps contained in it. When asked if those recommendations could not have been in place prior to the accident, he did not respond. I considered that significant, as the answer was obvious, and it indicated a reluctance to accept by him to accept the obvious. Further, had Mr Kerwyn answered in the affirmative, that would not have established by itself that it was reasonably practicable to have done so. His reluctance indicated, in my assessment, an attitude of not wanting to take any responsibility for the accident.

153. Mr Greg Hyde was the Culham site construction manager in respect of the F&P project at the relevant time. Although he was one of 4 Culham staff interviewed by Ms Cridland when she commenced the WorkSafe investigation (Tab 7 is the transcript), he was called to give evidence for Culham.

154. He confirmed he had gone through a PowerPoint site induction with Leighs. Mr Hyde related that he and Mr Drake put all workers through a Culham scope of work. He recalled that Culham had toolbox meetings once a week; and the sub-subcontractors held daily toolbox meetings. He confirmed Rigweld maintained electronic records of such meetings which were forwarded to Culham.

155. Mr Hyde was referred to several toolbox records, in particular one dated 9 November 2018, wherein it was recorded that staff were reminded to not be under suspended loads. Mr Hyde considered that referred to loads suspended by cranes or load supports, pending final positioning. He referred also to exclusion zones put in place to protect staff from lifting work and suspended loads, and he also spoke of staff working on the steel beams suspended on styes. He later accepted in cross-examination that the records made no reference to load supports or dunnage. He could not explain why there were no records of what had occurred at the Culham toolbox meeting, save for daily lists of attendees, in relation to the week immediately prior to the accident. The relevance of those documents was accordingly diminished.

156. He considered Tab 18, Culham's JSA to be task-specific, despite the obvious inconsistent sign-offs recorded. Mr Hyde agreed that having staff sign on daily to the JSA was an important part of daily briefings, as that indicated which members of staff were present and who understood the particular risks on site on any given day. He accepted that Culham was responsible to get those sign-ons, and if staff arrived late to speak to each late person and communicate the particular items relevant to that day's work.

157. When cross-examined he agreed the JSA did not systematically break down the task of rigging a load, nor refer to the setting up of wooden styes. He accepted also that the JSA did not identify individual responsibility for minimising risks – he considered that everyone on site had that responsibility. He agreed the toolbox records he produced showed that Rigweld had prepared a JSA in relation to moving steel on site by telehandler.

158. Mr Hyde confirmed he did not check every stye on site. However, he and Mr Drake had checked the very first stye constructed and had given it the ok. He explained that he and Mr Drake had assisted Mr Amai to assemble that first stye. He said that was to ensure safety, but at the second time of asking agreed it was also part of his responsibility to oversee the work of sub-subcontractors. He agreed that following the accident, all further styes were checked by Culham staff.

159. He also accepted, after some prompting, that timber dunnage without knots was preferable; and he agreed there were photographs of the collapsed stye showing timber having broken at the point of knots in the wood.

160. Mr Hyde was referred to Tab 12, Culham's Report following its investigation into this accident. He agreed the purpose of doing such investigation was not only to ascertain what had gone wrong but also seeing how to avoid the repetition of accidents – to improve overall safety performance. He agreed he had taken steps as recommended in the report to improve future safety.

161. Mr Hyde agreed he had been the Culham staff member who had advised Rigweld that timber dunnage would be used on site, as opposed to steel load supports. He stated that active consideration to using steel supports had been given but was ruled out. The decision was based on the undulating nature of the ground. He was later shown a photograph (Tab 12, page 116) which showed not just a slope to the ground but actual undulation.

162. He agreed further that the longer timber used to construct the stye which collapsed was a factor in the accident – as stated in Culham's report. He felt the longer timber had problematically spanned undulating ground. He did not recall advising Ms Gridland that in his opinion the collapsed stye timbers had been placed too far apart. He did however confirm that he still considered that to be the case.

163. In his previous 5 years of work experience, Mr Hyde had not heard of any timber stye collapsing in similar fashion, or of timber dunnage breaking in quite the same way.

164. Mr Hyde confirmed to being on site 30 – 40 hours a week around February 2019. He initially stated that during the whole week of the accident, he was at another job – in Kawerau. He confirmed that when specifically asked a second time. There then followed a change in his demeanour following the morning break. After the break, in re-examination, Mr Hyde changed his evidence and explained that he had returned from Kawerau on the Thursday evening immediately prior to the accident, and he stated that he was present at the site on the day of the accident. This was a volte face of considerable proportion.

165. Mr Hyde then went on to mention, for the first time, that Mr Drake had spoken to him on that Friday morning about a lack of supervision of rigging and slinging staff on site by senior and experienced Rigweld staff. It is notable that any such lack of supervision by Rigweld was not mentioned in Culham's investigation report, was not mentioned by Mr Hyde to Ms Cridland when she interviewed him and was not mentioned by Mr Hyde in his evidence in-chief or during cross-examination. Despite the production subsequently, by consent, of an email addressed to

Rigweld making this point, the obvious change I discerned in Mr Hyde gave real cause to doubt his credibility. I considered he was attempting to move responsibility for the accident from Culham to Rigweld.

166. Mr Andrew Barrow is a structural supervisor for Culham. He described himself as a Steel Erection Specialist. He detailed his 40 years' experience in the rigging and steel erection industry, both in New Zealand and overseas. He was unchallenged as to his expertise. He accepted the expertise of Mr Leatherby.

167. He had no knowledge of the Kinleith incident described elsewhere but considered from the WorkSafe report that the dunnage had rolled rather than collapsed. In cross-examination, he reluctantly accepted that the description of the incident did in fact raise the issue of dunnage collapse.

168. Mr Barrow's opinion was not based on personal knowledge of the accident at the F&P site, but on what he learnt subsequently and what he knows could and should have been done, in practical terms, to keep riggers safe.

169. He had the advantage of reading the 3 statements provided by Mr Leatherby. He disagreed strongly, having seen photographs of the uneven ground involved, that steel load supports should have been utilised. He considered the use of timber dunnage as common rigging practice in New Zealand. He has not encountered engineering designs for timber styes. He preferred the use of timber styes to steel load supports, as he had concerns of steel slipping while on steel. He was unconcerned whether the timber was graded or not, and also whether the timber used contained knots. What was crucial, in his opinion, was that the stye be properly constructed.

170. Mr Barrow also considered the responsibility for rigging and slinging the steel beams on site lay solely with Rigweld, albeit that overall safety on site was a joint responsibility for all engaged. He agreed that this opinion may have been better substantiated had he first read the health and safety documents of the entities involved on site. He was taken through those documents in cross-examination and accepted that Culham had a responsibility to supervise the work of Rigweld staff as well as their own. He agreed also with Mr Leatherby's opinion that planning was extremely important when considering health and safety issues involved at construction projects.

171. Mr Barrow agreed that something more than a generic JSA was required. He agreed there was no mention of load supports in Culham's JSA, but he had never seen mention of stye construction in such documents previously. He also agreed that ground conditions are an important consideration when constructing timber dunnage, and that it is desirable to level out and stabilise the ground where the stye is to be constructed.

172. Although some concessions were only grudgingly made, I considered Mr Barrow to be credible and reliable.

173. Mr James O'Donoghue is Culham's North Island regional manager.

174. He was taken to Tab 29, the report into the 10 November 2018 Kinleith incident involving Culham. He signed off on that report at the time and was aware of the circumstances referred to. He explained that the cross-cutter machine was due for maintenance, part of which involved the removal and subsequent re-attachment of a heavy lid. To perform this task the machine was elevated onto steel trestles ordinarily, but if they were unavailable, onto wooden dunnage. The machine was inherently unstable as it was supported on it's more narrow edge. While the lid was being re-attached, the machine was bumped, which caused it to topple over and off the dunnage support. He noted there was no breakage of any of the timber used.

175. It was his view that even if steel trestles had been used, that would not have prevented the machine toppling. Steps have subsequently been taken to further reduce, if not eliminate, the risk of repetition of the accident.

176. In cross-examination, Mr O'Donoghue confirmed that one of the causes leading to the incident at Kinleith was found to be a lack of documentation setting out the procedure to be adopted. He made light of that, suggesting that documentation alone would not have avoided the accident. He agreed however, somewhat reluctantly, that a further cause of the accident was inadequate hazard identification and risk assessment in Culham's JSA for the task.

177. I considered Mr O'Donoghue was giving his evidence in line with what his employers expected of him. Accordingly, I did not accept everything he stated.

178. Mr Nicholas Bamford is the principal of Bamford Associates Limited. He has engineering qualifications and both New Zealand and overseas experience since 2006. He worked for both Leighs and Culham on the F&P project, as instructed by each of those entities. Despite his links with two entities involved in the project, he felt he was able to give independent evidence. While his expertise and experience as an engineer was not significantly challenged, he agreed that he was not a rigger and had never worked as such.

179. He accepted also that he had no health and safety qualifications.

180. Despite that he agreed that safety on site was the responsibility of all involved. He was taken through the contractual and other documentation stipulating those obligations, the vast majority of which he had not previously sighted when asked to give his written opinion. He accepted, on the basis of the documents shown, that Culham was responsible for checking all sub-contractors work practices.

181. Mr Bamford critiqued Mr Leatherby's written evidence. He did not consider that wooden styes were less safe than steel supports, or unsuitable for the F&P project. He stated that they were generally safe and widely used in the industry, having the advantage of being light, easily manoeuvrable and re-purposed, as well as being adaptable to most circumstances. He was not concerned about the presence of knots in the timber used, provided those pieces of timber were placed "in bearing" as opposed to "in bending". However, he conceded that the use of ungraded timber to construct styes could be problematic.

182. Mr Bamford agreed with Mr Leatherby's opinion that loads can be rigged without putting personnel under the beam, for example by passing/throwing the chain under the beam, thus eliminating any need for personnel to go under the beam while it was rigged. He agreed also that there was no need for personnel to be walking on steel beams, which he described "could be dangerous" as it could cause movement. He also accepted that planning was an important feature when dealing with load supports.

183. Mr Bamford was asked to comment on the Kinleith incident, after being shown the relevant material. He considered the incident was not simply a collapsed stye, but a case of the cross-cutter toppling off the support which then caused the dunnage to fail.

184. Mr Bamford was also asked to comment on Culham's JSA – Tab 18. He agreed it was generic in nature.

185. When challenged about the lack of detail in relation to load supports and rigging, he commented that not every step of every process could be covered by a JSA, rhetorically asking where the line should be drawn.

186. I considered Mr Bamford to be credible, but much of his evidence was outside his area of expertise and accordingly unpersuasive.

I. Discussion

187. The defence to the overall charge which denied breaching Culham's statutory obligations in all of the particulars alleged, can be summarised as I best understood it, in no particular order, as:

- (i) As timber load supports is an industry standard, there is nothing inherently unsafe about adopting such load support structure – as demonstrated by the previous 29 successful lifts made on the F&P site and at other significant construction projects over as considerable period; and

- (ii) Culham did all that could reasonably be expected of it, given the various safeguards Culham had put in place in relation to health and safety on the F&P site, which the included adequate-for-the-task Culham JSA; and

- (iii) There is no history of accidents occurring in similar circumstances and therefore little evident risk that Culham should have been aware of at the time; and

- (iv) The ACOP does not deal with safety issues relating to timber dunnage or any other form of load supports, nor to rigging of loads. Accordingly why should Culham be required to specify such as risks and deal with this pursuant to the Act?; and

- (v) The Kinleith incident was not something that should have put Culham "on notice"; and

- (vii) The prosecution is looking at matters in hindsight and with an eye to perfection, which is inappropriate and contrary to the legislation.

188. I accept the use of timber dunnage on the F&P project cannot be described as inappropriate. However, the construction of timber styes to ensure safety require planning, care and knowledge. Culham was obligated to ensure these matters were part of the project planning and it was further obligated to supervise this aspect of work.

189. I accept that Culham certainly attended to numerous health and safety aspects in undertaking this project, including imposing obligations on Rigweld. However, Culham did not oversee the work undertaken by Rigweld to prevent Mr Ghio actually walking on the steel beam which was to be attached at the time of the accident, nor any of the assembly of timber styes apart from the very first and then those created after the accident. Adequate supervision would also have prevented Mr Nathan-Nasmith from going under the steel beam.

190. I do not accept the contention that Culham did not know or could not have known of the risks associated with load supports and the slinging of steel. Mr Amai was aware of a previous collapsed wooden stye. Further, the Kinleith incident had sufficient similarity to have put Culham on notice to the risk of load supports failing.

191. I accept that the ACOP makes no mention of load supports or rigging processes. Section 226 of the Act does not bind the Court to adhere to the advice in the Code – it is permissive only. It is noted however that the ACOP is now somewhat dated, and clearly incomplete given what occurred. In my view, the lack of advice in the ACOP cannot absolve Culham of responsibilities imposed under the Act.

192. I do not find that the Kinleith incident was so different from the accident at the F&P site that it has no bearing on Culham's future actions as demonstrated by the evidence adduced.

193. Of necessity, hindsight has been utilised. There is no other way to regard what occurred other than by a reconstruction. However, I consider that to be appropriate, providing the situation as it was at the time of this accident is kept clearly in mind.

194. On my assessment of the evidence, each of the five specific allegations set out as particulars of the charge against Culham and adverted to by Ms Kedian and other witnesses are made out, namely that Culham failed to:

(a) ensure that the hazards and risks associated with the load supports and rigging of steel loads were adequately identified and assessed. There was clearly insufficient planning in relation to this aspect of the project, which resulted in potential risks not being recognised and identified and further that no steps were put in place to minimise or eliminate the risks. Culham's JSA was generic and accordingly insufficient in the circumstances. Culham could and should have required Rigweld to create and circulate a JSA in relation to this work;

b) ensure the provision and maintenance of an effective safe system of work in relation to the construction of load supports and rigging of steel loads. I note that Rigweld has pleaded guilty this allegation. Culham's JSA at Tab 18 makes no mention of the risks associated with this aspect of the work, and Rigweld should have prepared a suitable JSA setting them out, the absence of which Culham could and should have enforced. It is significant the inconsistent sign-offs by workers to the JSA. The Minutes of toolbox and pre-work meetings are all absent any mention of this aspect of the job. Notably, Culham did set up systems post-accident;

c) provide an effective and task-specific load support design that would support the steel loads – Mr Leatherby produced such, and Mr Hyde was also able to do at the time of giving his evidence. I noted also that Culham had included a section in the accident Report (Tab 12) dealing with the correct assembly of a stye. These steps all occurred post-accident and could and should have occurred at an earlier stage, namely when planning how the construction was to occur;

d) ensure load supports were safe and effective – to state the obvious, the collapsed load support was neither effective nor safe. The responsibility for that was not Rigweld's alone – it also devolved to Culham, as well as Leighs. I note that both Rigweld and Leighs have accepted such responsibility by pleading to similar allegations, which also acknowledged their supervisory responsibilities; and

e) consult, co-operate with, and co-ordinate activities with other PCBUs, namely Rigweld and Leighs, in relation to assembling and rigging steel load supports and steel loads at the site – the evidence is that Culham dictated to Rigweld how to go about the process without any evidence of prior consultation. Given who were the supposed experts, it is surprising that Culham took it on itself to set out how matters were to proceed.

195. What remains to be considered is whether it was reasonably practicable for Culham to have done any of those 5 steps. In determining that, I have foremost regard to the purpose of the Act as set out in section 3 – in particular, subsection (g), namely, to provide a framework for continuous improvement and progressively higher standards of work health and safety. That requires Culham to continually advance health and safety considerations on each project it undertakes, and not simply rely on what occurred on other earlier projects. This is why JSAs are living documents that can incorporate new features as issues arise, which are then signed off on by staff becoming aware of such additional issues.

196. When the work on the F&P site commenced, Culham was fully aware of how the steelwork was to be assembled on site; and indeed, it instructed Rigweld how to go about the process. Culham (through Mr Hyde) determined that timber dunnage would be used; with the use of steel load supports being specifically considered but dismissed. This despite Culham's senior management including Mr Hyde, having knowledge of the then recent Kinleith incident; and with full knowledge of the need for appropriate dunnage to be used and correctly assembled to create an effective and safe load support. Mr Kerwyn described Culham as changing the way dunnage was dealt with, no longer allowing just any timber to be used. However, that is not what occurred in relation to the stye which collapsed.

197. It was always obvious that if a steel beam weighing in the region of 4 tonnes fell either while being moved, while on a load support or while being lifted, that any staff in the vicinity would be at considerable risk of losing their lives or being severely injured.

198. I find that it has not been established that steel load supports were the only safe option, even though they would in my view have been a better option for Culham in terms of safety especially given the repetitive nature of the work involved.

199. The need to properly construct the timber styes to avoid the risk of collapse or shifting and thereby becoming ineffective as a load support must have been obvious; and ways to deal with those risks were readily available. Had Rigweld been compelled to produce a JSA dealing with the rigging of loads and load supports, there would have been recognition by all involved of the potential risks, and the need to carefully construct the styes would have been emphasised. Alternatively, had Culham's JSA spelled out the various steps involved in the assembly process of the steel beams, that too would have raised awareness.

200. Culham was aware of the obligation to supervise all sub-subcontractors' staff as well as their own, yet that obligation was observed largely in the breach. To have overseen only the very first stye construction was a breach of Culham's obligations under the Act. There was no oversight to prevent Mr Ghio walking on a steel beam which was up in the air; nor to prevent Mr Nathan-Nasmith reaching under a suspended steel beam.

201. Culham should have insisted that only the correct timber was used to create styes on ground that was level and stable. Culham should have supervised the assembly of each and every stye to ensure the correct timber was used, the ground at that point was suitable (i.e. level and compacted) and that the assembly process addressed the two most important factors, namely that:

- The bottom layer of a stye was at right angles to the beam to be supported, as opposed to parallel with the beam; and

- The layers constructed so that the weight bearing points were positioned in a direct line down to the ground.

202. Closer supervision would have cost Culham in terms of man hours, and possibly caused some time delays in completing the project. I do not regard either as prohibitive or grossly disproportionate to the risk.

203. There would be very little costs involved for Culham to have expanded on the JSA at Tab 18 to include step by step process evaluation.

204. The cost to Culham of requiring Rigweld to prepare such a JSA would have been minimal if anything.

205. I find that it was reasonably practicable for Culham to have taken the further health and safety steps set out in the charge.

J. Verdict

206. The charge is proved.

207. I find Culham guilty as charged.

K. Next Steps

208. Leighs and Rigweld have pleaded guilty to the charges they face and await sentencing, pending the outcome of this case. Now that Culham has been found guilty, it too must be sentenced. It is convenient to deal with the sentencing of all 3 entities at the one hearing.

209. I accordingly set the sentencing for 10am on 20 September 2023 at the Papakura District Court. If that is not suitable to counsel, please advise the Court accordingly and the date can be moved if need be.

210. On the basis that the date is suitable, submissions should be filed and served by the prosecution three weeks in advance of that date. Defence submissions are to be filed and served one week prior to that date.

Judge G AndreeWiltens
District Court Judge | Kaiwhakawā o te Kōti ā-Rohe
Date of authentication | Rā motuhēhēnga: 08/08/2023