MAGISTRATES COURT *of* TASMANIA

CORONIAL DIVISION

RECORD OF INVESTIGATION INTO DEATH (WITH INQUEST)

Coroners Act 1995
Coroners Rules 2006
Rule 11

I, Olivia McTaggart, Coroner, having investigated the death of

Christopher William WAGG

BY AN INQUEST HELD: in Hobart in Tasmania on 16, 17, 18, 19, 20 December 2013, find as follows:

INTRODUCTION

1. On 3 August 2009 Christopher William Wagg, in the course of his employment, was using a mobile elevating work platform ("the EWP") at the Nyrstar premises in Lutana in Tasmania. An EWP is also known as a boom lift and as a cherry picker. A diagram of an EWP is shown in this finding. Mr Wagg, a qualified diesel fitter, was employed at Instant Scaffolds, a machinery hire business. The company that owned the business, and was the employer of Mr Wagg, was Tasmanian Access Systems Pty Ltd.

2. The EWP had been hired from Instant Scaffolds by Russell Allport to assist in the performance of contract work for Nyrstar Hobart Pty Ltd. Nyrstar is a large zinc smelting and alloy operation located on an industrial site on the shore of the Derwent River in Lutana. Russell Allport and Co is the trading name for R and J (Tas) Pty Ltd. Russell Allport is a steel fabricating firm managed by Robert Godfrey.

3. The contract work for Nyrstar involved replacing a copper sulphate condensate pipeline at the premises. Nathan Graham, an employee of Russell Allport, commenced to operate the EWP but found it erratic. He called Mr Wagg, who was on the premises after having delivered the EWP. Mr Wagg operated the EWP in an attempt to remedy reported defects in its operation, so that the contract work could proceed that day as scheduled. As he was operating it, the EWP travelled backwards in an apparently unexpected manner. Mr Wagg, who was situated in the operator's basket of the machine, was crushed between the rail on the basket of the EWP and an overhead rail

on an access walkway. Rescue efforts commenced immediately, albeit with initial difficulty in releasing him. Mr Wagg was released from his trapped position, administered CPR following cardiac arrest, and was conveyed to the Royal Hobart Hospital by ambulance.

4. Tragically, his crush injury was severe. In hospital, surgery was conducted to relieve pressure on Mr Wagg's brain. However he remained in a coma from the time of suffering the injury. On 9 August 2009 it was concluded by doctors that the extent of his brain injury was so severe that Mr Wagg could not live without life-support. He passed away on 9 August 2009, with his family involved in the decision to cease life-support.

5. The State Forensic Pathologist, Dr Christopher Lawrence, performed a post mortem examination upon Mr Wagg. I find, in accordance with the determination of Dr Lawrence that Mr Wagg died as a consequence of hypoxic/ischaemic brain damage due to mechanical asphyxia and neck compression as a result of Mr Wagg becoming trapped whilst operating the EWP.

6. Mr Wagg was born on 11 September 1956. He was aged 52 years at the date of his death. He was married to Janine Kay Wagg, and had been married for 30 years. Mr and Mrs Wagg have a daughter Renee Jayne Wagg who was 19 years of age at Mr Wagg's death. The loss of a much loved husband and father in these circumstances has been devastating for Mrs Wagg and Renee. The length of time taken for all proceedings associated with his death has understandably caused distress. In the circumstances their patience and strength has been commendable.

7. In holding the inquest, my duty under section 28 of the *Coroners Act 1995* is to find, if possible, the following:

- the identity of the deceased
- how death occurred
- the cause of death
- when and where death occurred
- the particulars needed to register death under the *Births, Deaths and Marriages Registration Act* 1999 (being uncontentious personal and family details of the deceased)
- the identity of any person who contributed to the cause of death.

8. The question of **how Mr Wagg's death occurred** and **the identity of any person who contributed to his cause of death** were the central issues at inquest.

9. Workplace Standards Tasmania conducted a comprehensive investigation for the coroner and for the purpose of charges arising. The report compiled by Workplace Standards and the investigation documents and statements formed the main part of the evidence at the inquest. I am very grateful to senior Workplace Standards Inspectors Mark Smith and Frederick Sears for the high quality of their investigation and their great assistance to me in the preparation of the inquest. Mr Read SC, for whose assistance I am also grateful, appeared as counsel assisting.

10. It has unfortunately taken a considerable time for the inquest into Mr Wagg's death to occur. This has been due to the practical necessity to wait until the resolution of all charges surrounding the circumstances of the accident. In particular, the charges have focused upon alleged defects in the EWP and inadequate systems in maintaining the EWP in a safe condition and working order.

11. It is appropriate to state in some detail the nature and outcome of the charges to explain the setting of the inquest. This must be done with reference to details of Mr Wagg's employment.

MR WAGG'S EMPLOYMENT

12. The corporate structure of Mr Wagg's employer is somewhat complicated. He was employed by a trust, the *TR and MM Whitford Family Trust*. The trust operates the company *Tasmanian Access Systems Pty Ltd*, which in turn trades as *"Instant Scaffolds / Kelly's Tower Hire and Maintenance"*. It appears that the EWP used by Mr Wagg was owned by Brisam Pty Ltd (an associated entity and beneficiary of the trust) and leased to the trust. However there is some evidence that the EWP was owned by Tasmanian Access Systems Pty Ltd itself. Little turns on this point. The business and corporate structure of the plant hire business was operated and controlled by Mr Tony Whitford and his wife Maxine Whitford. In particular, Mr Tony Whitford was the managing director of Tasmanian Access Systems and ran the operation of the plant hire business. He was a qualified diesel mechanic and had operated the business for 15 years at the time of Mr Wagg's death. Mrs Whitford performed the role of office administrator. The trading name for the business, most often used in the evidence, is Instant Scaffolds, and I will refer to it as such in this finding. In total there were about 28 people employed by the entities controlled by Mr Whitford.

13. Also employed by the entities controlled by Mr Whitford at Instant Scaffolds was Mr Gerard Sullivan. Mr Sullivan is a motor mechanic and in fact the brother–in–law of Mr Whitford. He became a permanent employee on 15 February 1999 working 4

days a week. The other working day he spent as a registered plant inspector, working on his own account.

14. Both Mr Wagg and Mr Sullivan worked at that part of the business conducted from Whitestone Drive, Austins Ferry. Mr Wagg had been employed there since March 2003.

COURT PROCEEDINGS BEFORE INQUEST

15. Charges were laid against Tasmanian Access Systems Pty Ltd and Mr Sullivan. On 2 August 2010 Gerard Sullivan was charged with breaching s16 of the *Workplace, Health and Safety Act* 1995 (now repealed) by failing to take reasonable care for his own health and safety and the health and safety of Mr Wagg. In this complaint the prosecution alleged 4 particulars as to the manner in which Mr Sullivan failed to take such reasonable care. They were as follows:

(a) failed to place a key in the ground controls of the EWP;

(b) failed to ensure that the emergency stop button on the EWP was functioning and operable;

(c) failed to ensure that directional markings were in place on the EWP displaying the direction that the EWP would travel in response to the employee engaging its controls;

(d) failing to ensure that the EWP had been recently and appropriately serviced, including a service after 10 years of operation.

16. Mr Sullivan pleaded not guilty to the charge.

17. On 23 December 2011, after a hearing, Magistrate Rheinberger dismissed the complaint against Mr Sullivan, not being satisfied to the criminal standard that any of the 4 particulars of the breach had been proved.

18. Tasmanian Access Systems Pty Ltd was charged with failing to maintain plant contrary to section 9(1) of the Workplace *Health and Safety Act 1995*. The charge was that on 3 August 2009 it failed to ensure so far as reasonably practicable, that an employee, Christopher Wagg, was whilst at work safe from injury and risks to health.

19. There were 8 particulars, 4 of which were common to the charge against Mr Sullivan. They are as follows:

1. No key in the controls located on the base of the EWP to enable the operation of emergency ground controls;

2. The emergency stop button in the basket was inoperable;

3. No directional markings on the EWP to enable employees to ascertain the direction it would travel in response to engaging controls;

4. No functioning hour usage meter to alert the company to the number of hours that the EWP was used;

5. No service after 10 years of operation in contravention of the applicable Australian Standard;

6. The log book did not detail annual servicing of the EWP;

7. The "out of level" alarm on the EWP was sealed over with heavy duty tape and not operational;

8. The warning horn was not functioning and operable.

20. On 17 June 2011 Tasmanian Access Systems Pty Ltd pleaded guilty to the charge before Magistrate Mollard. The essence of the company's plea was that the company and Mr Whitford accepted the defects but that Mr Whitford had no knowledge of those defects. The company, in its plea in mitigation, stated that Mr Sullivan, as its employee, fell short in his responsibilities.

21. On 17 June 2011, in sentencing, Magistrate Mollard stated:

"It (the company) employed Mr Wagg as an assistant to Mr Gerard Sullivan. Part of the latter's duties was to administer repairs and maintenance to vehicles as a mechanic. Mr Gunson's submission in summary said Mr Sullivan's duties were such as to ensure plant was adequately inspected, maintained and repaired and subject to adequate pre and post hire checks, and that the lift and boom were in appropriate condition. He held all necessary qualifications, was a registered plant inspector and conducted his own business as such while employed by the defendant. The defendant conducted this small operation as a plant hirer and the day to day responsibilities for the above were Mr Sullivan's; the defendant relied upon him. Mr Whitford, described as the company's alter ego, had none of these qualifications. It is correctly conceded that as a matter of law, however, the company cannot delegate its duties to another, for instance, to Mr Sullivan…..Mr Whitford could have employed a person part time

to conduct random or routine checks or even done so himself to a limited extent."

22. At the sentencing hearing the prosecution specifically stated that it did not assert that the breaches caused the death of Mr Wagg. Magistrate Mollard in sentencing stated:

"The particulars of the charge cannot be shown to have caused or contributed to the behaviour of the machine under the operation of both Mr Wagg and before him, Mr Graham, which is described in paras 25, 26, 29 and perhaps 33 to 36 inclusive of the learned prosecutor's facts. There is no explanation for the rapid, erratic and uncontrollable movements of the machine because post accident, this could not be re-created."

23. Nevertheless, Magistrate Mollard in sentencing attributed weight to the fact of Mr Wagg's death and the impact upon his family. Magistrate Mollard imposed a fine upon Tasmanian Access Systems Pty Ltd in the sum of $50,000.

24. The sentence of Magistrate Mollard was appealed to the Supreme Court.

25. On 8 February 2012 Justice Evans found that Magistrate Mollard erred in giving Mr Wagg's death some weight in assessing penalty and erred in receiving the victim impact statement from Mrs Wagg. Justice Evans reduced the fine payable from $50,000 to $40,000.

26. After proceedings had been finalised, the completed coroner's file was received into the coroner's office on 23 May 2012, after which preparation commenced for inquest, with the inquest hearing taking place over 5 days in December 2013.

REASONS FOR INQUEST

27. An inquest into a workplace death is mandatory under the *Coroners Act*, section 24 (1) (ea), except in very limited circumstances. In this case there have been differing court outcomes with focus upon workplace breaches rather than an analysis of causation for Mr Wagg's death. It is therefore particularly important to determine in an inquisitorial setting the circumstances surrounding Mr Wagg's death, and whether any person contributed to the cause of death. This case highlights the importance of the coronial system in our society in determining the circumstances and contribution to death.

28. The requirement to find contribution under s28 (1) (f) requires only the identification of any person who contributed to the cause of the death. It does not involve the attribution of criminal or civil liability. The coroner is concerned with finding facts in accordance with his or her statutory functions.

29. Before the inquest I determined that the possible persons against whom adverse findings, and possibly findings of contribution to death might be made were Tony Whitford, Gerard Sullivan, Nathan Graham, Robert Godfrey and Nyrstar.

ISSUES AND PARTIES

30. I set out below in respect of each of the named persons the matters that were defined to be the main focus of evidence at the inquest.

Tony Whitford

- The adequacy of the maintenance of equipment and record keeping of machinery, and in particular the EWP;
- Mr Whitford's alleged failure as an assessor of High Risk Licence applicants to assess the practical aspect of the test for Mr Graham and Mr Joshua Breda (another Russell Allport employee); and
- His own capacity as an assessor of High Risk Work licences.

Robert Godfrey

- Whether he adequately assessed the risk of the work, and circumstances surrounding completion of the Job Safety Analysis form ("JSA");
- His use of an out-dated JSA , and
- His assessment of the High Risk Work licences of Mr Graham and Mr Breda, the process for which was shortened by not completing the practical aspect.

Gerard Sullivan

- The inadequacy of the pre-inspection check on 3 August 2009;

- His alleged failure to register the EWP until 7 March 2009;
- His inspection of his own maintenance work on the EWP, contrary to conditions of his registration as a plant inspector;
- His alleged failure to advise Workplace Standards Tasmania of the problems with the EWP and certify it non-compliant;
- General issues surrounding his responsibility for the lack of directional markings, inadequate log book entries, the non-functioning emergency stop button and failure to perform the 10 year service within the correct time period.

Nathan Graham

- His alleged failure to check the EWP log book before use;
- His alleged failure to conduct pre-start checks before moving the EWP to the workplace;
- His use of the EWP without directional decals positioned as required;
- His continued use of the EWP when:
    - the speed control dial was not working properly,
    - the movement speed was unpredictable,
    - the emergency stop mechanism was not working at all, and
    - the engine was 'revving' excessively when in use;
- His alleged failure to advise Mr Wagg of the issues with the EWP; and
- Allowing Mr Wagg to use the EWP in the condition it was at the time.

Nyrstar

- Generally, whether the risks associated with the work had been properly assessed and that the work method used in the circumstances was safe and free from risk;

- Compliance with duties under Regs 17, 18 and 19 of the *Workplace Health and Safety Regulations 1998*;
- That an older and out-dated JSA form was used by Russell Allport and not reviewed by Nyrstar upon receipt of the completed form;
- The JSA referred only to a boom lift and was not specific to any type of EWP;
- The JSA was not amended or changed when the EWP was changed to EWP 1104;
- The determination by Mr Deane Fox (the Nyrstar contract co-ordinator) that the first EWP could be driven in, the boom extended and retracted without the need to rotate the machine;
- That the JSA took no account of the presence of the skip bin;
- That the JSA did not include a rescue plan;
- That the current Nyrstar Risk Assessment document, the more comprehensive Job Safety Environment Analysis ("JSEA") (SC1 - 1.9.08), was not rolled out to contractors when it should have been;
- Whether procedures for machinery entry on site were adequate; and
- Adequacy of procedures for annual inspection of or checking that annual inspection has occurred for registered plant kept on site.

LEGAL PRINCIPLES

Meaning of "contribution to the cause of death"

31. The test of contribution is solely whether a person's conduct caused the death: *Keown v Khan* [1999] I VR 69 per Callaway JA at p76.

32. Various authorities, both within and outside the coronial sphere have dealt with relevant principles relating to causation that should be applied. They are as follows:

- The actions of the person must be a substantial contributing cause of death. The concept of "substantial" means an operative cause - not too remote, not merely part of the history of events, and more than *de minimis*; *Royall v The Queen* [1991] HCA 27; (1991) 172 CLR 378 per McHugh J at 442; *R v Smith* (1959) 2 QB 35.

- The actions of the person need not be the sole, direct or immediate cause of death; *Keown v Khan, (supra)*; *Royall v The Queen (supra).* However, when the death is not caused directly by the actions of the person there is a question of whether the chain of causation has been broken. *Pagett* [1983] EWCA Crim 1; (1983) 76 Cr App R 279.

- The question of causation is determined by applying common sense to the facts as found, not resolved by philosophical or scientific theories and bearing in mind the serious nature of a finding that a person contributed to death; *E & MH March v Stramare Pty Ltd* (1991) 171 CLR 506; *Campbell v The Queen* (1981) WAR 286; *Chief Commissioner of Police v Hallenstein* [1996] 2 VR 1.

- The question of causation is one of objective fact; and is not dependent upon the person's appreciation of his actions: *R v Hallett* (1969) SASR 141.

- The question of contribution to the cause of death is not simply an exercise in logical progression of events. Some element of departure from the reasonable standards of behaviour will ordinarily be thought to be required, and must be properly established. However, as it is not the function of the coroner to determine civil liability, a finding of contribution is not confined to circumstances that would give rise to a finding of civil liability: *Chief Commissioner of Police v Hallenstein,(supra),* at 19-20.

- Care must be taken in an assessment of contribution to guard against the use of hindsight in considering what could have been done differently that might have avoided the death: *Wyong Shire Council v Shirt* (1980) 146 CLR 40 at 47; *Vairy v Wyong Shire Council* (2005) 223 CLR 422 at [128]; *New South Wales v Fahy* (2007) 232 CLR 486 at [57]; *Roads and Traffic Authority (NSW) v Dederer* (2007) 234 CLR 330 at [67].

The standard of proof in coronial inquiries is the civil standard of the balance of probabilities. However, where the findings may reflect adversely on an individual, such as in this inquest, the standard is to be applied in accordance with the principle in *Briginshaw v Briginshaw* (1938) 60 CLR 336. In that case, Dixon J (as he then was) stated:

> "…reasonable satisfaction is not a state of mind that is attained or established independently of the nature and consequence of the fact or facts to be proved. The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding are considerations which must affect the answer to the

> question whether the issue has been proved to the satisfaction of the tribunal. In such matters "reasonable satisfaction" should not be produced by inexact proofs, indefinite testimony, or indirect inferences…"

Similarly *in Chief Commissioner of Police v Hallenstein (supra)*, Hedigan J said at p19:

> "The identification of appropriate standards of proof and satisfaction is important, a matter that at all times must be borne in mind by any coroner who has to consider findings of contribution which must not lightly be made and only be made when there has been established the necessary degree of satisfaction of mind."

FACTUAL FINDINGS

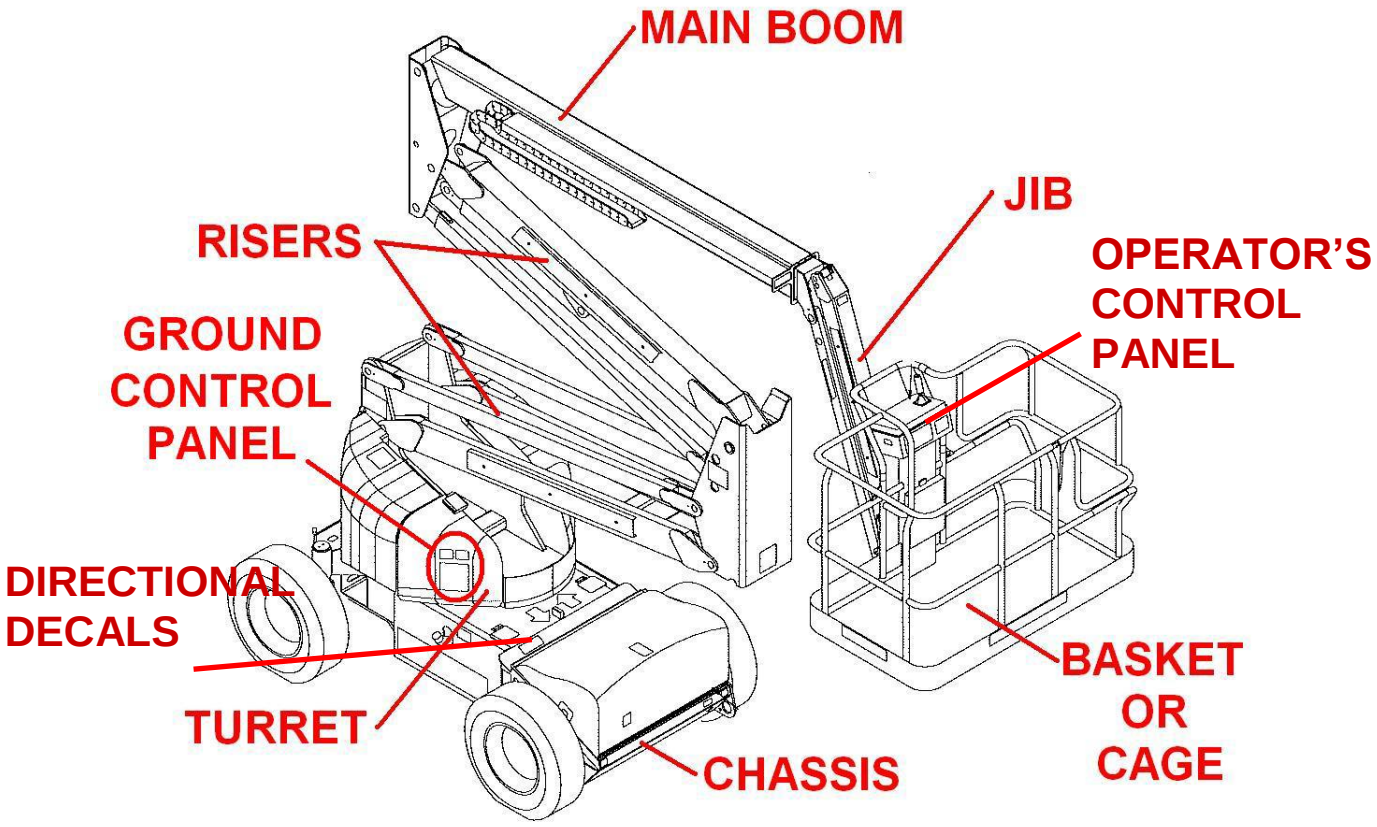
33. It is appropriate initially to describe the EWP that Mr Wagg was operating at the time of his injury.

34. Mobile Elevating Work Platforms (EWPs) are items of mobile plant that are intended to move persons, tools and material to working positions and consists of at least a work platform with controls, an extending structure and a chassis.

35. There are a wide variety of EWPs available in Australia with varying characteristics and features. Australian Standards 1418.10 and 2550.10 are recognised across the industry as applicable standards for their safe use and operation. These standards are now recognised as applicable under the new *Work Health and Safety Act 2012.*

36. The particular type of EWP that Mr Wagg was using at the time of the accident on 3 August 2009 was an Upright AB46D model. This indicates it has a maximum reach of 46 feet (14.02 metres) and is diesel powered. The serial number is 1104.

37. A diagram of the AB46D Mobile Elevating Work Platform when in its normal driving position is depicted below.



38. I had the opportunity to inspect the EWP involved in this matter and also to inspect a similar EWP so as to understand its method of operation.

39. Of particular significance in the inquest was the absence of directional markings on the EWP. These enable the operator to ascertain the direction that the EWP will travel in response to engaging the controls. They are most important because the turret of an EWP may be rotated or "slewed" around 180° so that the controls for direction of travel are reversed. Three sets of directional markings should be present.

40. Firstly, directional markings (yellow and orange arrows) are present above and below the control joystick. They are considered as warning signs to alert the operator that when standing at the normal position facing the control panel that pushing the joystick away from their body will move the chassis in the direction of the yellow arrow and when the joystick is pulled back towards themselves the chassis will move in that direction.

41. Secondly, corresponding yellow and orange arrows should be clearly visible on both ends of the chassis so that the operator can look at the chassis, recognise which direction the yellow or orange arrows are pointing and move the vehicle in the correct direction. They are referred to in this finding as “directional decals”.

42. Much of the relevant lead up to, and circumstances of, Mr Wagg’s accident are well documented with unchallenged findings able to be made.

43. I set out below my factual findings. Where there is conflicting evidence I will give reasons for my conclusion.

44. Entry to the Nyrstar site is restricted. Entry of vehicles is restricted to those approved in accordance with the Nyrstar Access Management Policy. A contract emergency management organisation is utilised by Nyrstar to monitor site security and emergency response services. The people employed are known as Fire and Watch personnel. These people man the main entrance gate and control access to the site, including the entry of vehicles used by contractors. As will be further discussed, it seems that vehicles were not the subject of checks or inspection by Fire and Watch personnel at the entry point, although vehicles were not permitted to enter unless a Daily Vehicle Inspection Checklist had been completed by the person entering with the vehicle.

45. I had the opportunity to inspect the Nyrstar site and in particular the purification plant. This enabled me to better understand the evidence.

46. The area in which Mr Wagg suffered his ultimately fatal injuries was in the basement area of Nyrstar’s purification building. The building has a large steel framed basement area that is partly enclosed. The base of the purification building is 20 metres x 18 metres; it is about four storeys in height. The building itself contains a vast and complex array of tanks, pipeworks, access ways and platforms.

47. In around mid-2009 Nyrstar identified the need to replace a leaking copper sulphate condensate line in the basement of the building (‘the work’). The approximate budget by Nyrstar was $20,000. It contacted several contractors to price the work. Ultimately Russell Allport and Co was given the opportunity to quote.

48. Russell Allport is an established firm of good reputation and the work was well within the capabilities of its employees. In fact, the work was considered by all involved to be straightforward and able to be completed without difficulty.

49. On 23 June 2009, Mr Godfrey attended the site and discussed the work involved with the Nyrstar contract coordinator for the purification area, Mr Deane Fox. It was the role of Mr Fox, together with Mr Godfrey, to assess hazards and risks associated with the work.

50. The line that required replacing was located approximately 3 metres above ground level. Discussion occurred about the method of reaching the line with Mr Godfrey considering it undesirable to use ladders, scaffolding or scissor lifts to access the line. Scaffolding was considered too risky due to the amount of climbing, the need to move the scaffolding and its proximity to tanks. Mr Fox considered the area too sloping to safely use a scissor lift.

51. Access without machinery from above via the access ways was discussed but discounted. In this regard Mr Godfrey stated in his interview with Workplace Standards Investigators;

> "I didn't like the idea of that because we would have then had to plank it out and then they would have been in a cavity there where our blokes would have had to lean down inside to gain access to the pipe and I thought that would be too unsafe. Then also you've got operators walking around even though it would have been barricaded off, the chances are that it could have caused an accident so Deane Fox – after I explained that to Dean he agreed with me and it was my idea to use the boom lift because I thought it was the safest thing to do, we could gain access from underneath and where it was going close to tanks…"

52. Therefore it was decided that a mobile elevated work platform should be used to reach the pipeline. It is difficult to determine whether access from above may have been a better option. However, I accept in principle that the use of an EWP was not unreasonable. Mr Godfrey then prepared the quote on behalf of Russell Allport to supply and install the line.

53. EWP 1088, which was *not* the EWP involved in Mr Wagg's injury, was to be made available for the contract work. EWP 1088 was already at the Nyrstar premises, as it was on long term hire from Instant Scaffolds.

54. Mr Godfrey undertook a risk assessment and compiled a Job Safety Analysis (JSA) document for the work using a form obtained some years before. For Nyrstar, a job safety analysis document in respect of contract work was a critical part of industrial safety. *The Workplace Health and Safety Regulations* 1998, (regs 17-19) (now repealed) required an identification and assessment of the risks associated with a hazard in a

workplace and to implement appropriate measures to control that risk. It may not have been the case that regulation 18 actually required a written risk assessment document in the circumstances of this work. Clearly it was a good practice to adopt this approach.

55. Mr Godfrey used a form from Nyrstar that was well out of date. Nyrstar had a newer version of the form, the Job Safety Environment Analysis form "JSEA", and policies that stated unless that form was used the job would not start. This form was not used as it had not been "rolled out" to relevant contractors at that time being about 7 months after it commenced use.

56. The work was scheduled for 3 August 2009. There was no particular urgency for the work to take place.

57. On 3 August 2009 at 8.10am Russell Allport employees Nathan Graham and Joshua Breda arrived at Nyrstar to commence the work. Robert Godfrey was also present. Mr Godfrey arranged to meet with the relevant Nyrstar personnel to discuss the work. Mr Godfrey, Mr Graham and Mr Breda then met with Mr Deane Fox, the Nyrstar contract coordinator for Purification and Leach. Mr Fox was the Nyrstar employee responsible for safety and risk in relation to the work.

58. The main purpose of this meeting was to walk through the area to discuss how the work would be done and to ensure that all personnel involved knew what to do. In this process the JSA was considered and finalised by both Nyrstar and Russell Allport. After a discussion occurred, Mr Michael McCreghan, the team leader in Leach, was called by Mr Fox to come to the basement area to run through specific risk control issues. Mr McCreghan attended and emphasised that, due to the fire and explosion risk, only one weld should take place and the pipeline should otherwise be fixed with bolts and flanges to avoid potential ignition sources.

59. After the walk through with Mr McCreghan, Mr Fox determined that the JSA provided by Mr Godfrey was adequate as a risk assessment for the hazards and risks associated with the work.

60. The JSA did not specify hazards in using a mobile EWP and risks from those hazards. In particular, a large metal skip bin was located on the ground in the purification building in close proximity to the area of the line replacement that was not referred to in the JSA. This was present on a temporary basis to collect residue overflow. As the timing of this process could be controlled by Nyrstar at its discretion,

and there was no intention to discharge overflow, there was no operational need for the bin to remain in the area.

61. There was discussion in general terms about the manner in which the person operating the EWP would gain access to the line. I accept that the discussion envisaged that there was no need for the EWP to approach close to the skip bin to access the line. I also accept that with planning, a properly working EWP and competent operator, it was possible for the work to be done around the skip bin without too much difficulty . Nevertheless, it would have been desirable for the skip bin to have been removed to clear the area of the work, once an EWP was selected as the preferred method of access. On any view the EWP would be required to be in proximity of the skip bin. There was no particular urgency for the work, and there was no need for release of residue requiring the presence of the skip bin.

62. Two hazardous work permits were then signed for Hot Work Activities and for Working at Heights together with a work permit clearance certificate to collate the two permits.

63. At about 8.55am Mr Godfrey, Mr Graham and Mr Breda left Nyrstar to return to the Russell Allport workshop. At the workshop Mr Godfrey made some minor additions to the JSA.

64. At about 10.50am Mr Graham and Mr Breda returned to Nyrstar and prepared to undertake the work. Mr Graham attempted to start EWP 1088 but was unable to have the engine continue to run properly. He asked a Nyrstar diesel mechanic to look at it but that person was unsuccessful in fixing the problem.

65. Mr Graham then telephoned Mr Godfrey to say that EWP 1088 was not working and asked for a replacement.

66. At 12.08pm Mr Godfrey telephoned Mr Sullivan, who was present with Mr Wagg at the Instant Scaffolds workshop at Whitestone Drive, Austins Ferry. As a result of the telephone conversation Mr Sullivan commenced to organise a replacement EWP, this being the subject of the evidence and known as EWP 1104.

67. A pre-delivery inspection of machinery before hire was required to be undertaken by Instant Scaffolds' personnel. I have real reservations about the veracity of Mr Sullivan's evidence regarding whether he conducted any such inspection, and if so, the extent of it. I accept that this *may* have been conducted, albeit inadequately, by

Mr Sullivan and *possibly* Mr Wagg. However, there are no other witnesses apart from Mr Sullivan who can give evidence regarding any pre-delivery inspection of the EWP. Mr Sullivan claims they inspected all functions of the EWP including emergency lowering, emergency stop, base and basket functions over a period of about ½ to ¾ of an hour at this time. He stated in evidence that he and Mr Wagg replaced the riser joystick on the control panel that was jamming in the neutral position. I note that it took 59 minutes from the time of Mr Godfrey's call at 12.08pm to the time Mr Wagg reached Nyrstar at 1.07pm with the EWP. Given the time of travel from Austins Ferry to Nyrstar, the loading time, and the completion of the Vehicle Checklist it seems unlikely that any adequate inspection could possibly have been performed. Mr Sullivan himself in his record of interview with Workplace Standards could not properly explain that period of time. My discussion about the credibility of Mr Sullivan's evidence and exactly what was done in the pre-delivery inspection is set out in detail below. However it is clear, regardless of whether there was such an inspection or not, that there were significant defects in the machine that ought to have led to it being "tagged", immediately put out of service and not delivered to a hirer. Those defects were:

- The absence of direction decals on the chassis;
- An inoperative emergency stop button in the basket controls;
- An inadequate log book that, at the very least, showed no record of an important 3 monthly inspections and service.

68. In February 2009 Mr Sullivan in his capacity as a registered plant inspector had completed an inspection report on that EWP under reg 53 of the *Workplace Health and Safety Regulations 1998*. He found that the decals were damaged and missing. He gave one month for this to be remedied. The persons responsible for remedying this critical issue were Mr Sullivan and/or Mr Wagg.

69. The extent to which Mr Wagg assisted in the pre-delivery inspection at Austins Ferry is unclear. I am satisfied that Mr Sullivan was not formally employed directly as Mr Wagg's supervisor. The extent of his supervision over Mr Wagg was a significant focus of the charges against him. I do not need to make further findings on this point. Mr Sullivan completed and signed the checklist, and he was a licensed Plant Inspector. Mr Wagg did not have such a qualification. On the evidence before the inquest there can be no question that Mr Sullivan had a duty to perform a proper pre-delivery check to ensure that the EWP was in working order and safe for hire.

70. Mr Sullivan and Mr Wagg loaded the EWP onto a flat tray truck and Mr Wagg drove it approximately 15 kms to Nyrstar. When Mr Wagg arrived at the Nyrstar entry gate he filled in a Daily Vehicle Inspection Check List and left it at the Fire and Watch office. Mr Wagg, by signing the checklist, certified that the EWP, as an item of lifting equipment, complied with Australian Standards and had a current log book. Neither of those was correct. Although Nyrstar reserved the right to perform compliance checks, one was not performed.

71. Mr Wagg unloaded the EWP at an area near the purification building and then drove to the position of the EWP 1088 to attempt to find out why that machine would not run properly.

72. Meanwhile Mr Graham and Mr Breda became aware that the EWP had been delivered. Mr Graham put on his harness (required for use in the basket of an EWP) and approached it with a view to commencing to operate it.

73. Mr Graham did not complete a pre-start check of the EWP, either visual or functional, which is a necessary part of the use of such machinery by virtue of AS2550.10 clause 6.4.2, the operating instructions for the EWP and good safety practice. Mr Graham was aware of the necessity for such a check and the importance of it. His evidence, however, was that he could not conduct the check on the perceived uneven ground where the EWP was initially delivered. He therefore decided to drive it into the actual purification building close to the worksite and conduct the pre-start check at that point.

74. Mr Graham drove the EWP northward inside the building towards the site of the work. As he was driving it, he noticed the EWP picking up speed but did not believe that the operation of the machine was abnormal at that point.

75. Mr Graham held a High Risk Work licence allowing him to operate an EWP with a boom height greater than 11 metres. As it happened this licence was in fact assessed by Mr Whitford, a qualified assessor. No practical component formed part of the test in February 2009 as it should have. At 3 August 2009, however, Mr Graham had experience in operating such machinery.

76. When Mr Graham reached the position where the work was to occur he realised he would need to slew (rotate) the turret 180° around from its normal driving position so the basket of the EWP would reach the overhead pipeline that required replacement. Mr Graham elevated the basket prior to slewing in order to clear the 1

metre high skip bin. He then successfully rotated the turret so that the basket was then positioned at the opposite end of the chassis of the EWP. With the basket of the EWP slewed 180° from the normal driving position the joystick controls operated in the opposite direction. Once rotated, the basket was to the north of the chassis but Mr Graham was facing south away from the area of the work. The controls were reversed. Mr Graham then tried to move the chassis of the EWP (that is, the wheeled base of the whole machine) so it could be better positioned to reach the work area. Mr Graham pushed the lever forward and the machine accelerated rapidly in reverse. In doing this, Mr Graham had forgotten the controls were reversed and did not intend to move the EWP backwards towards the work area. As the machine reversed he was surprised by the speed of it. It hit the skip bin and it moved with such force that it displaced the skip bin a small distance.

77. Being aware of the reversed controls, Mr Graham pulled the joystick towards him to move the EWP forward. It again accelerated rapidly and went forward with more speed than he had previously experienced with similar machines. Subsequent attempts by Mr Graham to move it forward resulted in either no response or jolting movements with abnormally high “revs”. He turned the speed controller of the basket to the slowest speed possible but received no response. He then asked Mr Breda to find Mr Wagg to see if he could look at the EWP. At a point in Mr Graham’s attempts to successfully operate the EWP, he pressed the emergency stop button 2 or 3 times but it did not work. This was a critically important function that should have been the subject of pre-delivery and pre-start checks.

78. Mr Wagg arrived about 5 minutes after Mr Graham sent for him. He was wearing his helmet and glasses but was not wearing a safety harness. Mr Wagg climbed into the basket of the EWP with Mr Graham. Mr Graham told Mr Wagg that the EWP would not drive properly. Mr Wagg took over the controls. It appears Mr Wagg was also confused about the reversed controls, as Mr Wagg pushed the lever forward which caused the EWP again to strike the skip bin. Mr Graham then told Mr Wagg that the controls were reversed due to the turret being turned, and apologised for not telling him at first.

79. Mr Wagg then produced a screwdriver from his pocket and unscrewed the face of the control panel in the basket of the EWP. I find that he was attempting to ascertain the fault in its movement at that time.

80. Mr Graham felt unsafe and so he unhooked his harness and climbed out of the basket onto the edge of the skip bin and onto the ground. He commenced to telephone

Mr Godfrey to complain about the EWP. Whilst Mr Graham was on the telephone he heard the EWP revving "as it was about to take off". He turned and saw it moving rapidly towards the overhead structural walkway to the north. Mr Graham then witnessed Mr Wagg being crushed between the top of the handrail of the EWP basket and a structural beam located about 300mm above and behind him.

81. Just prior to suffering the injury Mr Wagg had been operating the EWP whilst facing south, away from the work area and standing in the basket operating the controls. Mr Wagg's back came into contact with the structural beam overhead and behind him. The beam bent him forward over the handrail of the basket. Due to the momentum of the movement of the EWP, Mr Wagg was pinned and compressed between the beam and the handrail of the basket. It is likely that the time of this occurrence was about 2.02pm when Mr Graham was making a call to Mr Godfrey about the defects of the EWP.

82. Mr Wagg was released from his crush position about 8 minutes after he became trapped. His release occurred after Mr Graham and Mr Breda attempted to operate the manual override mechanism to release Mr Wagg. This is situated on the chassis of the vehicle. The evidence revealed that the successful operation of this mechanism is complex, even for trained operators of the machinery. There was also no key in the ground control panel. It therefore took the people at the scene longer than would be expected to release Mr Wagg. The inquest has not significantly focused upon the time for the rescue of Mr Wagg. This is because the medical evidence available to me does not establish that Mr Wagg would have survived or had a better outcome if he was released at an earlier time. There is also no evidence of any deficiencies in the Nyrstar emergency procedures or of Nyrstar personnel who attended the scene. The evidence reveals that ambulance paramedics commenced attending to Mr Wagg at 2.25pm, after an ambulance was called.

DEFECTS IN THE EWP

83. It is important to make findings about the actual defects in respect of the EWP. The expert evidence relating to the defects comprised reports by International Testing and Certification Services Pty Ltd (ITACS) by Mr Yin Kit Chin, by registered plant Inspector Robert McCulloch , by registered plant Inspector Donda Ahipene, and by service manager of FRM Toyota Andrew McNeill.

84. The expert evidence given by the above persons reveals a number of serious defects in the EWP. The only significant point of challenge to this expert evidence was

from Mr Sullivan, who maintained that the emergency stop button was in fact operating correctly when he conducted the inspection before the hire of the machine. Given the comprehensive nature of the expert reports, I do not repeat in detail the evidence. However I will set out under various headings my findings relating to particular defects and the reasons for such findings.

Emergency Stop Button

85. The emergency stop button is a crucial safety element of the EWP. It is located on the left hand side of the control panel in the basket and coloured bright red. In such machines the emergency stop button can be depressed to cease all mechanical and electrical functions of the EWP. In this EWP the emergency stop button is designed to be pushed to lock in the depressed mode until it is released by twisting the knob in the direction of the release arrow. When the button is depressed power is interrupted to the electrical system driving the electric motors and control circuits that operate the hydraulic solenoids.

86. Mr Graham gave evidence that, whilst he was in the basket of the EWP, he tried to operate the emergency stop button but he could not do so. Inspection of the EWP on 18 September 2009 by Mr Ahipene found the emergency stop button to be seized and not functional.

87. Subsequently, the emergency stop button was subject to specialised testing by testing engineer Mr Yin Kit Chin of ITACS. Mr Chin noted that it was or had been subjected to moisture exposure, with rust evident, which contributed to the need for a considerable amount of force to latch it. When it was tested, the emergency stop button required in excess of 122 Newtons of pushing force to activate the latching mechanism compared to 32 Newtons and 25 Newtons for other test samples. Mr Chin provided evidence that Australian Standard 3947 requires that the pulling force for latching must not exceed 50 Newtons. Mr Chin noted that there were no actual electrical issues preventing the emergency stop button from operating although there was evidence of oxidation on the contact surfaces. Mr Chin concluded that, on the basis of his testing, the EWP's emergency stop button must not have been tested regularly as the corrosion appeared to be from long term contact with moisture rather than a short term acidic attack.

88. Mr Sullivan asserted that in his pre-hire inspection on 3 August 2009 he tested the emergency stop button. His final position on the matter was that he noted that the emergency stop button had been depressed during the replacing of the riser joystick in the control box. Upon resetting the emergency stop button the EWP started and

operated as normal. He also stated that the emergency stop button was activated once the EWP was loaded onto the truck to be taken to Nyrstar. I wholly reject the evidence of Mr Sullivan in this regard. It is against the weight of all other evidence. His evidence was embellished and unimpressive, dramatically demonstrating how he tested the switch by slamming his hand onto it. He then, on the next day of giving evidence, reverted to his version of testing that was advanced by him only after he had been charged with offences under the *Workplace health and Safety Act*. Mr Read submitted that Mr Sullivan's evidence was a clear case of recent invention, and I fully accept that this is the case. His particular lack of credibility in his evidence regarding the directional decals, as I have set out further in this finding, also supports my conclusion.

89. I find that on 3 August 2009 the emergency stop button was inoperative and had been so for some period of time.

The absence of directional decals on the chassis of the EWP

90. On the chassis of the EWP, there were no directional decals on the base of the unit which showed an operator the direction the EWP would travel. Manufacturer specifications of the EWP clearly indicated yellow and orange arrows are required. Mr Sullivan accepted in his evidence that the decals were not present when he conducted the pre-delivery inspection.

91. AS 1418.10 clause 1.10.6 states that where a self-propelled elevating work platform has a control box that can rotate relative to the chassis, drive controls and chassis should be clearly marked to indicate the direction of travel that would occur when the controller is moved in either direction, irrespective of the control box position.

92. Neither applicable standard governing mobile elevating work platforms, AS1418.10 or AS2550.10, was listed in Schedule 2 of the *Workplace Health and Safety Regulations 1998*, which in turn regulates inspection requirements under Regulation 53. However these standards were relied on, quite appropriately, by Mr Sullivan as governing the manner of his inspection. Both standards are also included in the Nyrstar document "Safe Work at Heights", governing its policy in this regard. It was not in dispute in this inquest by any party that those standards provided the correct guidelines, standards and procedures governing the EWP.

93. In accordance with the standards, the expert evidence and indeed common sense, the presence of directional decals on the chassis is essential for the safety of the operator, to prevent the disorientation that can easily occur when the turret and

controls are reversed. Even experienced operators intent upon the work at hand might be expected to make directional errors. The chance of this occurring for *any* operator without the benefit of decals on the chassis must be significantly increased. I reject the evidence of Mr Sullivan that directional decals are not commonly relied upon by an operator of an EWP. This was self-serving and against the weight of all other expert evidence. In an industrial setting involving potentially fatal hazards, it is crucial to have these decals to ensure control over the direction of travel. As a safety related problem, the EWP should not have been returned to service until they were replaced; AS2550.10, clause 6.4.4.1.

The absence of creep speed when the boom was lifted

94. The credible evidence of Mr Graham and Mr Breda causes me to accept that the EWP was not travelling at the limited slow speed (known as "creep speed") whilst it was in the purification building on 3 August 2009. There was evidence from both about the unusually high revs of the EWP and the surprisingly fast speed when the basket was elevated and Mr Graham and Mr Wagg were attempting to manoeuvre it. There was video evidence at the inquest showing the creep speed of the EWP with the basket elevated. Upon viewing the video Mr Breda was confident that Mr Graham was going at the "rabbit" speed, not the "snail pace" shown by the testing in the video. Both witnesses were credible and genuine in their observations. I did not perceive any exaggeration or desire not to state the truth.

95. On 12 August 2009, a test was carried out by Mr McCulloch to try and simulate a rapid movement of the unit. All motions were used, and after a considerable time of using combinations of controls a "savage slew" motion was created when turning the turret. It occurred three times and could not be reproduced further. In any event, this appears to be a problem with the turret rotation rather than the chassis speed along the ground. Mr McCulloch could not reproduce the faster chassis ground speed at all; the EWP operated for him appropriately in creep speed.

96. I accept that the creep speed of the EWP was not operative when Mr Graham drove it, except for the regulated downhill function. Similarly, when the speed was tested by Mr Ahipene on 18 September 2009 he found no operable creep speed. He stated "the speeds were tested with the boom raised and with the boom lowered. There was no appreciable difference in speeds and certainly no indication that the driving motion at the critical configurations were in creep speed". Mr Ahipene's testing was not as rigorous as that of Mr McCulloch. However I still place weight upon his observations as an expert. I find on the evidence that the EWP's creep speed functioned inconsistently, a most unsatisfactory and dangerous state of affairs. It was in

particularly dangerous when combined with an absence of directional decals on the chassis.

97. I accept Mr Read's submission that the evidence of Mr Sullivan, and the lack of any corroboration for it, would not permit a positive finding that he checked the creep speed in all modes of operation and found it to be in working order in the pre-delivery check.

98. I must accept however, given the inconsistent operation, that even if Mr Sullivan did check the creep speed in the pre-delivery check on 3 August 2009, it may have functioned correctly at that time.

No key in the ground controls

99. Mr Ahipene stated that the absence of a key in the ground control panel indicated the EWP did not comply with AS1418.10 clause 1.5.13.8.4 (Emergency Retrieval), as the upper controls were not capable of being overridden at base level and the basket could not be retrieved from its elevated position. I accept his opinion and that the practice of having only one key in the basket is unacceptable in terms of safety. Mr Sullivan was of the view that it is preferable to have no key in the ground controls as this would protect the operator from a third party interfering with the controls. Again, I do not accept that Mr Sullivan's view represents good practice. I prefer the view of Mr Ahipene, corroborated by the relevant Australian Standard. As it happened, Mr Wagg would have been released from his crush position several minutes earlier if there was a 2nd key in the ground control panel. Mr Wagg's outcome was likely to have been the same even if rescued at an earlier time. However, it is obvious that in any case of serious injury it is desirable that rescue occur immediately to give the injured person the best chance of recovery or survival. In Mr Wagg's case the time taken to release him was unacceptable. Moreover, the panic and distress of all concerned of trying unsuccessfully to operate the accumulator to rescue him has had lasting impact upon them.

Log Book Incomplete

100. A current log book for machines such as a mobile elevating work platform is crucial. It is to be kept with the machine. Clause 6.6 of AS2550.10 states that a continuous working record, including log book and service/maintenance history shall be kept and readily available. That clause provides that the minimum records that are to be in the log book are copies of:

(a) a summary statement of the last major inspection;

(b) a summary statement of the last periodic inspection;

(c) a summary statement of the last routine inspection;

(d) the complete daily preoperational reports for not less than the last 14 days of operation, or since the last routine inspection; and

(e) action taken or repairs carried out to rectify the malfunctioning or damaged components.

101. In respect of the EWP the last log book entry was the note of the inspection on 7 February 2009 conducted by Mr Sullivan. There were no notations at all subsequent to this date relating to replacement of the decals, or a record of the required 3 monthly service (AS2550.10 clause 6.4.3). I also note that a 3 month routine inspection must, by clause 6.4.3(h) include inspection of "signage, including warning signs, decals and control markings". The last 3 monthly inspection noted in the log book was for the date 21 January 2009. Mr Sullivan did not know whether any inspection was done subsequent to this but acknowledged that if he had looked at the log book and noticed the lack of record of that inspection, he would not have made the EWP available for hire. He appeared to indicate that it was Mr Wagg's responsibility to conduct that inspection. However, quite strangely, he indicated that he was able to assist Mr Wagg with the inspections. It seems likely that the one or two routine inspections omitted from the log book did not actually occur. This would be consistent with the fact that the decals had been missing since at least February 2009 and the corroded state of the emergency stop button that was fixed into an inoperable position.

102. In July 2009 Mr Wagg operated the EWP for his personal use at his home. Mr Wagg had an opportunity at the time he was using the EWP at his home, as well as during the Nyrstar entry process on the day of his accident, to view the log book and ascertain the glaring omissions that should have caused him to prevent any use of the machine until he was satisfied that it was safe and properly operating.

103. Further, I can find that the EWP was operated for at least 85 hours that was not accounted for in the log book documentation. I accept that the EWP was hired for use at Mt Nelson College between May and July 2009. However no pre-delivery checks for these periods of hire were located.

104. Mr Graham could also have taken the opportunity to ascertain the omissions in the log book, although of course he did not have the responsibility for maintaining and inspecting it as did Mr Sullivan and Mr Wagg.

105. I comment now upon the failure of the EWP to be subject to the important major inspection by the end of the 10th year of operation, being April 2007. By this time all critical components should have been inspected; AS2550.10 clause 6.4.1 (e). It is highly likely that this major overhaul would have remedied all faults with the machine. I note also that the machine was 12 years old, being manufactured in 1997. It was purchased by Mr Whitford's company in March 2007 and not registered for 2 years until February 2009 despite it being in service since April 2007 .

106. No existing log book for the previous owner's use was in evidence or referred to in any of the proceedings. I can only assume that it was not available to Mr Whitford. This in itself should have caused real concern and triggered an overhaul. It is difficult on the evidence to determine when the EWP originally commenced service. However, there were already 3585.1 hours on the hour meter when Mr Whitford took possession of it. This hour meter reading was noted by Mr Wagg in the log book. Next to it was his notation "new log book". There was no reference to the existence to any previous log book.

107. In my view, given the absence of records and its general state of disrepair, absolute priority should have been given to this major service. It was simply inadequate to believe, as Mr Sullivan did, that the machine should remain in service for a further 12 months from February 2009 without undergoing an inspection of all critical components. As discussed, if it had undergone such a major overhaul as required by the 10 year service, the faults would have been remedied.

Other faults

(a)Warning horn not operating

108. A warning horn on the EWP alerts personnel that the EWP is locating in close proximity to them or when the operator in the basket wants to attract the attention of other personnel, either on the ground or in adjacent areas. The warning horn was found to be inoperable by Mr McCulloch. I accept this is the case and reject the evidence of Mr Sullivan that it worked. The photograph shows clearly the duct tape that had been placed over it.

(b) Out of level alarm (tilt sensor) muffled

109. Mr McCulloch stated that this alarm was muffled but did not expose his reasoning. It seemed to be operational when Mr Ahipene tested it. There is no evidence as to whether or not it activated whilst the machine was on the slope on 3 August 2009. Ultimately the evidence does not permit me to make a positive finding that it was muffled.

(c) Hour meter not operational and damaged

110. Whilst I accept that the casing on the hour meter was smashed, it is not clear that the digital function of the meter had stopped working. Mr McCulloch indicated it was not operational but his reasoning for this conclusion is not exposed. As stated, there had been 85 hours clocked on the hour meter since February 2009. This is consistent with the machine being hired to Mt Nelson College between 6 May and 9 July 2009. There was no evidence of residual glass on the ground at the accident that would have been detected if it was smashed in the accident. Therefore it is likely to have also been a pre-existing defect.

111. These faults are not critical to the occurrence of Mr Wagg's accident. However they form part of the litany of items that amply demonstrate the appalling condition of the EWP, and signifying particularly the long-standing lack of attention to remedying obvious safety features.

(d) The state of instructions and warning signs on the EWP

112. I noted that the important warning signs and instructions for an operator in the basket were virtually illegible due to wear and tear. Mr Ahipene stated all base panel and basket control levers and instructions require clearer identification of their correct functions. He also stated that the emergency retrieval system functions are not clearly defined and require written instructions in the immediate vicinity to validate and confirm graphic symbols. I accept that this is the case.

WHO CONTRIBUTED TO THE DEATH AND WHY?

Nathan Graham

113. At the inquest, Mr Graham was represented by Mr Adam Gregory of counsel.

114. Mr Graham was experienced in the operation of an EWP. He was sensible, competent and trusted by his employer. He was a credible witness and did not attempt to shirk his responsibility.

115. He readily admitted he did not do the required pre-start check and had he done it he would have tagged the machine for the variety of reasons that Mr Sullivan should have tagged it. Of course, had the machine been tagged the accident would not have occurred.

116. He possessed a High Risk Work licence so that others were able to rely upon his ability to operate it and his knowledge of the safety aspects.

117. His High Risk Work licence assessment was inadequate in that it contained no practical component. Nevertheless, the evidence of Mr Whitford and Mr Godfrey satisfies me that Mr Graham was competent in the general operation of an EWP.

118. Mr Graham well knew of the need for a pre–start check. Whilst there may have been some unevenness of ground level at the area of the EWP delivery, there is no doubt that he could have driven it to an open flat space or if necessary had it delivered to an appropriate area. This was particularly important as he had just encountered this particular EWP for the first time. The evidence is that such machines contain variations. Further, even without relocating it to a flat open space, a cursory check would have revealed the apparent age of the EWP, the inoperable emergency stop button, and lack of directional decals on the chassis and the illegibility of the warning signs above the control box of the basket.

119. In his determination to progress with the work he made a very poor decision to drive the EWP into the purification building. Although I accept he intended to perform a check there, albeit limited, it is clear that the imperative to position the EWP ready for the work overtook him, and his intention to conduct the pre–start check dissipated. The desire to get on with work in favour of routine preparatory tasks is seen time and again in the workplace. Workplace health and safety legislation is designed to protect workers from this desire and to ensure safety procedures are adhered to at all times.

120. If Mr Graham had followed his training and the ordinary requirements for use of an EWP, he would have easily detected at least the defects in the emergency stop button and lack of decals. He then should have immediately ceased use and taken steps to return the machine to the hirer.

121. Even when driving the machine and detecting an apparent uncontrolled speed, he again had the opportunity to cease use, report it, and allow no one to use it whilst in the building. Instead he took steps to position it for the work. Whilst the machine was

located near many overhead hazards and close to a large skip bin, he then called for Mr Wagg. Again, the human desire to complete the work puts this into a somewhat understandable context; however he was effectively allowing Mr Wagg into an inherently dangerous workplace situation. Mr Wagg had no High Risk Work licence, was not experienced in working on such an area, and was not prepared for it. His experience was mostly driving the machinery around the hire premises as a mechanic. Mr Graham did not advert to these matters.

122. Mr Graham accepts he ought not to have moved the EWP into the purification building without performing the full pre-start check at another location. Nor should he have attempted to fix, or continued to use, an EWP that was displaying such erratic behaviour. It is also difficult to understand why Mr Graham positioned the EWP so close to the skip bin. It may have been that, given that he was no longer working with a telescopic boom, he thought a machine with a knuckle boom could come in closer and effectively lift the operator vertically towards the work area. He may simply have lacked experience with this type of machine in a space with surrounding obstacles. On the evidence there is no reason why the EWP could not have remained well clear of the southern side of the skip bin, as was planned for the original EWP with the telescopic boom.

123. Had he conducted the pre-start check he would have tagged the machine and put it out of service. He ceased use of the machine when the dangers were clear to him. Unfortunately rather than tagging the machine which might have led to a more considered approach to the problems he left Mr Wagg at the controls.

Summary – Nathan Graham

I conclude that Mr Graham contributed to Mr Wagg's death in that he:

- Failed before use to check the EWP log book and ascertain that it was incomplete;
- Failed to conduct the required pre-start check outside the purification building; and at least failed to observe the lack of directional decals on the chassis;
- Failed to ensure that the machine was tagged and put out of service whilst it was still outside the purification building.
- Moved the EWP into the purification building, not having conducted a pre-start check;

- Once in the purification building he failed to conduct a pre-start check, and at least failed to observe the lack of directional decals and discontinue use;
- Continued to use the EWP in the purification building when -
    - the speed control dial was not working properly,
    - the movement speed was unpredictable,
    - the emergency stop mechanism was not working at all, and
    - the engine was 'revving' excessively highly when in use.
- Encouraged and allowed Mr Wagg to use the EWP in the condition it was at the time and without adverting to whether Mr Wagg had the qualifications or experience to do so in that environment.

124. Notwithstanding these regrettable decisions and actions, Mr Graham was helpful and honest in his evidence. There is no evidence, nor did he give the impression in evidence, that he was generally a person who had disregard for safety issues. He was making the decisions at the time that he saw as appropriate to progress the work. His actions were not the sole contributors to Mr Wagg's death. Mr Wagg's death has had a great impact upon him and he greatly regrets his lack of proper thought.

Nyrstar

125. At the inquest, Nyrstar was represented by Mr Nick Sweeney of Counsel.

(a)Nyrstar's assessment of the work

126. Nyrstar requires all contractors to comply with its *Site Work Conditions* document (SC1). Version 18 of the *Site Work Conditions* (SC1) was the current edition on 3 August 2009.

127. SC1 version 18 at clause 6.2.3 states "*it is a Nyrstar and Contractors responsibility to carry out a risk assessment for* all *activities or tasks to be undertaken and outline controls required".*

128. SC1 version 18 at clause 6.2.3 states *"the risk assessment shall be completed in accordance with the risk management procedure included in Appendix A – HP-854-03709"*

129. Procedure HP-854-03709 is titled “Personal Risk Management: Personal Pre Starts & JSEAs” and outlines the process to be used by employees and contractors to manage the day-to-day risks they will face at Nyrstar Hobart.

130. In version 18 there is a heavy emphasis upon the risk assessment process. Nyrstar prescribed in their policies that all work carried out at Nyrstar by contractors required a safety analysis to take place using their JSEA document.

131. On 28 October 2002 Mr Godfrey, on behalf of Russell Allport, acknowledged receipt of a copy of *Site Work Conditions (SC1) version 9* that was issued on 18 October 2002. SC1 version 9 did not contain specific information about risk assessment requirements for working at the Nyrstar site. Mr Godfrey in fact did not have a Nyrstar risk assessment document at all, and procured the JSA that he used from another source.

132. As can be seen, there were 9 later versions of the Nyrstar Site Conditions of which Mr Godfrey was not aware. I accept that Russell Allport may not have contracted with Nrystar for a lengthy period of time. Nevertheless Russell Allport was a well-known firm and it would be expected that it would not be a difficult task for Nyrstar to keep it apprised of every new version of their Site Conditions.

133. The use of the newer form (JSEA) attached to version 18 of the *Site Work Conditions*, although said to be mandatory from 6 January 2009, had not been rolled out to contractors by 3 August 2009. Mr Godfrey certainly did not know of it.

134. The old JSA used by Robert Godfrey can be seen to be effectively just a list of job steps, equipment to be used, potential hazards and safe conditions. There was no provision to prompt proper analysis of the potential hazards and methods of risk reduction. It was not conducive to a thorough risk assessment at all. Further, if Mr Godfrey had been supplied with and read version 18 of the Site Conditions – at least the risk assessment portion – he would have seen that the example provided in the same section as the JSEA form dealt with a crush injury associated with the use of a cherry picker.

135. It is therefore possible that the form of the new JSEA may have triggered Mr Godfrey and Mr Fox to specifically direct their minds further to assessing the condition of the EWP that would be used for the work.

136. It is in fact surprising that Mr Fox, being responsible for risk assessment, did not provide Mr Godfrey with version 18 of the *Site Work Conditions* or require him to use the current and more comprehensive JSEA. Mr Fox was aware of the Nyrstar JSA form. However, as the job was not complex and there were several on-site discussions between him and Russell Allport, he did not see that it was necessary to use the JSEA. He was satisfied that the risks had been covered, including a safe method of using an EWP for the work.

137. Despite the lack of complexity of the work, this was still a situation whereby a boom lift was to be used within a building and near obstacles. Crush injuries are well known as occurring with the use of this type of machine. It was insufficient that the risk assessment document specified only that a boom lift would be used accompanied by a licensed operator. It should have specified the position of the EWP with regard to the skip bin and overhead structures and analysed the manner in which the risk of crush injuries could be reduced. I accept that in their discussions Mr Fox and Mr Godfrey took into account the fact that the chassis of the EWP would stay well clear of the skip bin. In this regard they were contemplating a machine with a telescopic boom, not a knuckle boom such as EWP 1104. I also accept that they were also aware of the safeguard that the licensed operator would necessarily be responsible for the appropriate pre-start checks. In compiling a risk assessment document Mr Fox also was aware that the hired EWP would be subject to a signed Vehicle Inspection Checklist at the Nyrstar gate, that Instant Scaffolds had a legal duty to supply safe and operating equipment and that Russell Allport was a reputable contractor who should be relied on to provide proper equipment.

138. It would have been good practice, despite the discussions, to commit the issue of the use of the EWP to writing in the JSA. There could then have been no misunderstanding if the document was circulated to all involved as to the type of EWP and its intended safe position for the work. Then, when there was a variation to that situation by the necessity to use an EWP with a knuckle boom, the risk assessment should have been revised, dealing with differences in its position to take this into account. At the very least there could have been a brief "toolbox meeting" involving Mr Fox (or an available safety representative from Nyrstar), Mr Godfrey, Mr Graham and Mr Breda to discuss how the new EWP would be used safely. This may also have triggered a decision to delay the work to move the skip bin to make the work safer.

139. I ultimately accept Mr Read's submission that the use of the new JSEA document would not have caused further emphasis to be placed upon assessing the **condition** of the EWP, either the original or replacement. Good safe operating

condition of the EWP was assumed and entitled to be assumed. However Nyrstar did not properly arm Mr Godfrey with their *Site Work Conditions* emphasising safety and risk assessment. Considering Nyrstar's heavy reliance upon contractors the approach to safety and risk assessment should have been more thorough on this occasion.

140. Mr Sweeney submitted that the evidence overwhelmingly establishes that Robert Godfrey, on behalf of the contractor Russell Allport, together with Nyrstar, had planned the work to be carried out that day, had properly assessed the best and safest method to remove the condensate line and taken all precautions appropriate to that work.

141. In particular, the following submissions were made by Mr Sweeney on behalf of Nyrstar:

- There were appropriate discussions between Mr Godfrey and Mr Fox as to the process to be adopted in relation to the work concluding with the use of the EWP 1088.

- On the day of the accident when Messrs Godfrey, Graham and Breda attended the Risdon site the job was "walked through" on a number of occasions, a third walk through occurred when Mr McCreghan arrived and went through the same process with particular reference to hot works.

- Accordingly there is no doubt that those persons carrying out the work were fully aware of what the job involved and that there were no risks attaching to it (other than those identified and addressed through the Job Safety Analysis process).

- That there was no apparent difficulty associated with the work once it had been properly assessed.

- Mr Godfrey's use of the JSA form and not the JSEA form is not a critical point, given that the job had been assessed properly in any event. What was important was that as a matter of fact there is a thorough assessment of the risks associated with the job rather than the paperwork which may eventuate. Neither Mr Graham nor Mr Breda were in any doubt about the work method to be adopted and saw it was safe. Mr Godfrey was very experienced in assessing risks of jobs as was Mr Fox.

- There is no evidence to suggest that the job of replacing the condensate line would have proceeded in a different way if Nyrstar's JSEA form had been used

rather than Mr Godfrey's. There is no reason to doubt that if that EWP had been correctly operating the pipe work could have been removed with ease.

- Nyrstar accept that the analysis of this job and the risks associated with it were not set down on the new JESA. It should have been in the sense that that accords with Nyrstar's policy but the fact that it wasn't was irrelevant.

142. I agree that the discussions were conscientious and that on the face of it the work was not seen to be complex. However the work did involve the use of specialised mobile plant near obstacles and in particular a large skip bin close to the work area. It required two specific permits for Hot Works and High Risk Work respectively. It was by no means free of risk. If the positioning of the EWP was committed to writing Mr Graham may have been more diligent to comply with that directive in the JSA. If the skip bin had been removed to allow more space for the work then the EWP may not have been positioned as it was close to the overhead beams. If a "toolbox" meeting had been convened upon the change of EWP then the positioning of it may have been reinforced to Mr Graham and caused him to consider a prestart check. I accept that no Nyrstar employee was aware of the sudden decision to change the EWP. However that then raises the question of whether the work should have been better supervised. The work was on Nyrstar's premises, for the benefit of Nyrstar. Mr Fox, the appointed supervisor, at the time was elsewhere on the site and not readily available. The inquest also heard that at the time he was doing the work of two people and his capacity was stretched.

143. Mr Fox was a good credible witness and had long experience and training in managing industrial safety and risk. His immediate superior Jeremy Kuipers was a specialised engineer who did not know that the new JSEA form and procedures were not being routinely used in the workplace. This shows an apparent disconnect between the supervisors and persons on the ground. Mr Kuipers indicated that Mr Fox was managing his area correctly and well. I find that Mr Fox was efficient, experienced and well respected in his work. However, there appeared to be inadequate ability and support from his superiors in the process of regularly reviewing his workload, performance and professional development. This was particularly required before and at the time of Mr Wagg's death when Mr Fox was performing an extremely important role, combined with the role of another person.

144. The matters I have raised are all worthy of critical comment. As with such tragedies as occurred, the reasons and causes are multi-factorial. There can be no doubt that the risk assessment was not sufficiently thorough in its written form; and that the old JSA should not have been accepted by Mr Fox. I accept that this was

ameliorated somewhat by the walk throughs that discussed the type of EWP and its position, and that these discussions formed part of the assessment. There is no doubt that the removal of the skip bin should have been considered. The failure in the written document to specify the type of EWP to be used (even though it was discussed) caused a lack of emphasis on the importance of this risk consideration, so that there was little thought by others given to the consequences of the change in EWP to a knuckle boom and emphasis on its position vis-a-vis the work area. Further, the risk of crush injuries whilst using the EWP, and response to that risk using the EWP was not stated in the JSA.

145. However it must be borne in mind that incorrect position of the EWP was only one part of the cause of Mr Wagg's death. The fact is that he was there because the machine was defective, malfunctioning and operating erratically. The immediate reason for Mr Wagg's death was by reason of these factors relating specifically to the machine. Putting aside the fact that such a machine should simply not have reached the point where it was positioned for the work in the building, any risk assessment process would be based upon the reasonable assumption that the contractor will provide plant and equipment in good order. The concept of using a knuckle boom instead of a telescopic boom can also not be criticised, provided the risks were reassessed. They should have been, but the responsibility for this was with Russell Allport who knew of this change. I accept that Mr Fox did not know of the change in EWP. Any fresh assessment would properly focus on positioning, removal of the skip bin, skill of the operator, but not the possibility that the machine would not be fit for purpose and dangerously defective.

146. I therefore conclude that the inadequacies with the risk assessment and JSA form were several. Contribution is a very difficult question. One can always reason that if a full and complete written risk assessment had occurred Mr Wagg would not have died. However I must take a common sense approach to causation. There are other significant, more immediate causes of death. Nyrstar's deficiencies meant that circumstances arose that were not conducive to prevention of this tragedy. However I cannot positively find that any actions or omissions of Nyrstar personnel in the risk assessment of the work **contributed** to Mr Wagg's death. The most unfortunate circumstances as they unfolded were primarily due to the faulty EWP and outside the consideration of a reasonable risk assessment process.

(b) Nyrstar's vehicle entry procedures

147. The second focus relates to Nyrstar's policy in relation to vehicles entering its site. Should Nyrstar have ensured that the EWP was safe and fit for purpose?

148. The defects with this machine were obvious. Anyone with basic knowledge of an EWP would have been able to see the directional decals on the chassis were absent. A look at the log book would at least have given cause to question why the last entry was in February. A quick look at the body of the machine would have revealed the duct tape covering the warning horn. The warning and instruction signs for an operator in the basket were almost unreadable. The Nyrstar policy was not sufficiently stringent to pick up even these obvious defects. The question is whether it should have been?

149. On one hand Nyrstar relies heavily on contractors for its operation, and those contractors are responsible for bringing safe plant and equipment onto the site. As Mr Sweeney submits, when a business such as Nyrstar engages a contractor to perform specialist work involving specialist equipment then in the normal course of events it is entitled to rely upon the expertise of the contractor both as to the work that they perform and the machinery that they use.

150. On the other hand the work is on Nyrstar's own premises for its benefit and it has duties in law to provide a safe workplace. Nyrstar acknowledges such duties and I accept it updates its safety practices regularly. It takes the measures it sees as appropriate to discharge those duties. Mr Sweeney submits that Nyrstar had a reasonably sophisticated entry policy for vehicles coming onto the site. No vehicle of any nature could come on-site without going through security. There was paperwork to be completed in relation to all vehicles, including EWPs coming onto site and that paperwork was completed by Mr Wagg. Nyrstar also had a system for random checking of vehicles. The EWP was not subject to this random check on 3 August 2009. I cannot determine in absence of comparison with other similar sites, whether such a process was sophisticated.

151. In this case Mr Wagg brought the EWP to site. He signed a document in which he acknowledged that the EWP had a current log book. This necessarily entailed acknowledging correct entries relating to services and inspections as prescribed by the Australian Standards. He also signed an acknowledgment that the EWP complied with the Australian Standards. If either of these answers were correct then almost certainly the EWP would be in good and safe condition for entry onto the site.

152. The Fire and Watch personnel would collect the forms at the end of each shift, but the evidence was unclear on exactly what was done with the information. It was certainly not the evidence that there was a system in place that would have prevented the EWP from entering when it did. The completed checklist was not inspected at the time of entry, indeed not until the end of each shift.

153. Nyrstar personnel generally have no expertise in relation to the use of EWPs. Whilst it might be obvious to persons knowledgeable in EWPs that there were defects in any EWP, it imposes a significant burden upon Nyrstar to check every different item of plant and equipment used by contractors. They rely upon contractors, such as Russell Allport, to provide appropriately skilled personnel and in this case appropriately qualified personnel to operate the EWP that came on-site.

154. I find myself unable, on the evidence I have, to conclude that Nyrstar's vehicle entry process was so inadequate that Nyrstar contributed to Mr Wagg's death by failing to detect the defects in the EWP at the entry point. However the system by its nature did not encourage vigilance on the part of the person entering with the vehicle. In particular it focussed upon questions relating to regular vehicles, (for example the truck carrying the EWP), with the one question about lifting equipment in an inconspicuous spot on the second page of the checklist.

155. Thus Nyrstar's vehicle entry process depended upon the person bringing the EWP onto the site correctly completing documentation in relation to an EWP. The system also was dependent upon licensed operators operating EWPs. However to a significant extent it was entitled to assume that if an EWP was brought on site then an appropriate pre-start would be conducted by any licensed operator (whether a High Risk Work licence or ordinary licence) as part of the contractor's specialist work. A licensed operator was required by the JSA form.

156. I am aware that the system has been significantly improved since Mr Wagg's death. In response to Mr Wagg's accident Nyrstar developed a pre-approval system, a red sticker system, a daily vehicle inspection check list and EWP log book check. It also has designated EWP lay down areas. There is no doubt that the check list now emphasises the requirements for plant such as an EWP and the requirement for a licensed operator. It also has a tally sheet system conducted by security at Nyrstar so it is aware of what vehicles are on site. These are improvements upon the previous system, and appear to adequately reflect the balance between the safety considerations of Nrystar and its entitlement to rely upon specialist contractors to provide safe equipment.

157. In summary, if an EWP came on site as part of contract work it could not be expected that; (a) the hire company would provide a dangerous and defective machine; (b) the representative of the hire company delivering it would incorrectly complete entrance documentation; and that (c) a licensed operator would not perform a pre-

start check that should have identified that the machine should not have been used at all.

Summary – Nyrstar

Contribution to death

- I am not satisfied that Nyrstar, including any of its employees, contributed to the cause of Mr Wagg's death.

Comments

- An older and out-dated JSA form was used by Russell Allport and accepted by Nyrstar;
- The current Nyrstar Risk Assessment document, the more comprehensive Job Safety Environment Analysis ("JSEA") (SC1 - 1.9.08), was not rolled out to contractors in a timely manner;
- That the JSA form did not refer to the presence of the skip bin and its associated risks as it should have; nor was the skip bin removed to allow room for the work using an EWP;
- The JSA form did not refer to the type of EWP to be used, its position or how to avoid the possibility of crush injuries;
- There was workload pressure upon Mr Fox and an apparent lack of ongoing supervision/professional development that may have contributed to his absence at the time of the work and his acquiescence in the use of the older JSA form.
- The checklist for vehicle entry, whilst not grossly inadequate, did not properly focus upon the condition of specialised vehicles such as EWPs and did not provide for the requirement for licensed operators;
- The changes actually made subsequent to Mr Wagg's death to vehicle entry procedures are to be commended.

Gerard Sullivan

158. Mr Sullivan was unrepresented at the inquest.

159. In February 2009, six months before Mr Wagg's death, Mr Sullivan in his capacity as a registered plant inspector had completed an inspection report on the EWP

under the *Workplace Health and Safety Regulations 1998* (reg 53). This was submitted to Workplace Standards. He found that the decals were damaged and missing, and allowed one month for this to be remedied.

160. I find that there were no decals on the EWP when Sullivan did his pre-delivery check on 3 August.

161. Mr Sullivan completed the pre-delivery check on the EWP. It is clear that at that time there were significant defects in the machine that ought to have led to it being tagged and put out of service. Those defects included at the very least:

1. The absence of direction decals on the chassis;

2. An inoperative emergency stop button in the basket controls;

3. Incomplete log book that did not record required services.

162. Mr Sullivan accepted in his oral evidence that there were no direction decals on the machine at the time of the accident. He claimed they may have been removed during a hire but as he did not work on EWPs that was the responsibility of Mr Wagg. The second time he gave evidence he resiled from this position somewhat suggesting he did assist Mr Wagg. He attempted to justify the absence of directional decals by referring to occasions when they could not be used and to the fact that an experienced operator might not rely on them at all times. However, this was a "dry hire" – he knew nothing of the experience of the person who might operate the machine. Indeed the evidence tends to indicate that the absence of directional decals was an immediate contributor to the accident. The evidence of Joshua Breda and Nathan Graham is compelling as to the confusion of both Mr Wagg and Mr Graham once the basket was rotated 180 degrees. It is more likely than not that Mr Wagg did not intend to travel in the backward direction immediately before he was injured. There was no obvious reason why he needed to travel in that direction and it seems he was confused without the benefit of decals on the chassis. It is possible that he may have been testing the backward motion as part of the attempted repair process, but this is much less likely.

163. The significance of the lack of decals was therefore; (a) the confusion it caused Mr Wagg in the operation of the EWP and (b) in the fact that the EWP should not have left the premises of Instant Scaffolds. Mr Sullivan did agree that in hindsight he would not have let the EWP leave the workshop without the directional decals on it.

164. I have already rejected Mr Sullivan's evidence that the emergency stop button was functioning when he tested it on 3 August 2009. Given the evidence of the tests by Mr Chin, the video record of the difficulty of depressing the button and the extreme

force Mr Sullivan suggested was 'fine', it is clear that the emergency stop button was not operational when the EWP left the yard at Whitestone Drive.

165. As discussed the creep speed of the EWP was absent when Mr Graham drove it, except for the regulated downhill function. It had apparently returned when Mr McCulloch tested it, at least when the boom was not elevated. It is not possible to make an affirmative finding as to defects in the creep speed when it left Whitestone Drive. However, the evidence of Mr Sullivan, and the lack of any corroboration for it, would not permit a positive finding that he checked the creep speed in all modes of operation and found it to be in working order. However if Mr Sullivan had attended to the 10 year service when he should have the problem would have been identified.

166. The lack of an operational emergency stop button in the basket was not a direct cause of the accident as there is no evidence that Mr Wagg attempted to use it and could not. But of itself it was a reason to tag the machine and had this been done the accident would not have occurred.

167. Most importantly, as discussed earlier, there were additional defects with EWP that should have seen it tagged by Mr Sullivan and left at the yard.

168. Mr Sullivan knew that Mr Wagg would have to complete the vehicle entry form to get on-site at Nyrstar. He knew that involved an affirmative answer to this question:

> *(Does) all lifting equipment brought on-site meet required Australian Standards and had a current inspection certificate and Log Book?*

169. When asked how he expected Mr Wagg to get the machine on-site when it did not have a current log book Mr Sullivan answered "*I'm not sure*".

170. Mr Sullivan was one of only three accredited EWP inspectors in Tasmania at the time. He had worked in his present position since 1999. He was very experienced. He knew this was a dry hire and did not know anything of the capacity of who might use it. All of his experience and training should have told him to tag the machine until its defects were fixed.

171. Mr Sullivan is a person who contributed to the cause of death. That contribution comes foremost from permitting EWP to leave Whitestone Drive without directional decals and a completed log book.

Summary- Gerard Sullivan

172. Mr Sullivan contributed to Mr Wagg's death by;

- The inadequacy of his pre-delivery check on 3 August 2009;

- Allowing the EWP to leave the hire yard on 3 August 2009;
- Failing to replace directional decals on the EWP after they were detected by him as absent in February 2009;
- Failing to perform or arrange for the 10 year major service that would have remedied the defects.

Christopher Wagg

173. Mr Wagg is likely to have been involved in some part, possibly minor, of the pre–delivery inspection at Whitestone Drive. There is insufficient reliable evidence to conclude to the requisite standard that he was directly involved in the pre-delivery check of the EWP. It may be that he was but it may also be that he relied on Mr Sullivan's check (the check list is in Mr Sullivan's hand) or that he was only involved in part of the check.

174. However it was Mr Sullivan who took responsibility for the EWP's overall inspection and certifying it ready for operation by the hirer. By the nature of Instant Scaffolds' business, neither Mr Sullivan nor Mr Wagg would necessarily know of the expertise of the persons who may operate the machine or the complexity of the work environment. This was an additional reason why the EWP was required to be in a safe operating condition.

175. When arriving at Nyrstar, Mr Wagg had the responsibility of correctly completing the Daily Vehicle Inspection Check List. To complete this he needed to turn his mind to the questions, rather than rely on Mr Sullivan's pre-delivery check. He should have looked at the log book and *at least* at the chassis. He could, with little effort, have determined that there had not been any recent service, that the emergency stop button was not operable and that there were no directional decals on the chassis. Had he done so he could not have correctly certified that it met the required Australian Standards.

176. Mr Wagg was an experienced diesel fitter/mechanic working in the business of hiring plant. The evidence clearly permits a finding that Mr Wagg, as part of his work, knew how to operate an EWP, knew the important features (including safety) and knew that the pre-delivery inspection was for the purpose of ensuring the plant or equipment was in good and safe condition to hire.

177. The evidence at inquest was that Mr Wagg was familiar with the EWP, and had in fact borrowed it for use at his home the month before his accident. At that time he

did not complete the log book. Whilst there may have been no requirement for him to do so, he could have checked the log book at that time. He had a professional interest in ensuring that it was complete and services up to date. At that time there were no decals present and the emergency stop button did not work. Again there is no evidence that Mr Wagg noticed these or if he did, took steps to remedy the faults.

178. Had Mr Wagg answered the checklist to the effect that the EWP did not comply with the Standards and did not have a current log book it is still likely that the EWP would be let onto Nyrstar premises as I have previously discussed. Mr Wagg regularly entered the site. He may have been accustomed to the passive system of vehicle entry that by its nature did not encourage vigilance on the part of the person entering with the vehicle.

179. If Mr Wagg had realised that he could not complete the checklist correctly he should have immediately returned the EWP to Whitestone Drive. This of course would have delayed the work. Naturally Mr Wagg's imperative was to deliver the EWP to replace another non-functioning machine, the latter already having delayed the work. I do not suggest that Mr Wagg was untruthful in completing the checklist. The most likely explanation in the circumstances is that he did not properly turn his mind to the specific questions in his determination to deliver the EWP for use in the work, in circumstances where he may have perceived some urgency.

180. When Mr Wagg was later called into the purification building he became aware through Mr Graham of the erratic operation of the EWP. He was aware that Mr Graham was sufficiently concerned to remove himself from the basket of the EWP after its erratic movements. Mr Wagg chose to remain in it to try and repair it. He was necessarily in a dangerous situation. Tragically, in his determination to repair the EWP, he did not appreciate the full extent of the danger.

181. By playing a part in allowing the EWP to be on the Nyrstar premises, and by operating it in dangerous circumstances, he unfortunately contributed to his own death. I note that when Mr Wagg was approached by Mr Graham to attend to the EWP he had another opportunity to cast his eye over the outside of it and detect the lack of directional decals. There is no evidence that Mr Wagg was doing anything irresponsible to cause the EWP to move backwards, thus crushing him. The most likely scenario is that he did not intend to travel in that direction but was disorientated by the lack of decals, and/or the speed of travel, not being creep speed, and was much faster than expected.

Summary-Christopher Wagg

182. I find that Mr Wagg contributed to his own cause of death by;

- Failing to check the log book of the EWP at the Nyrstar entry point;
- Failing to note the lack of directional decals and;
- Attempting to repair the EWP once called to it by Mr Graham.\

Robert Godfrey

183. Mr Godfrey was unrepresented at the inquest.

184. Mr Godfrey impressed me as an excellent witness and very competent and knowledgeable in his work. Mr Godfrey did not know of the existence of the new JSEA. He took his men for a walk through of the safety issues with the job. He did not have experience in the actual operation of an EWP. However he was most confident in the skills and ability of Nathan Graham, to the point where he had made him a leading hand. Whilst he was not aware of the need for a pre-start check, he assumed that Mr Graham would conduct the operation of the EWP appropriately in all respects given his accreditation.

185. He did not envisage that Nathan Graham would take the machine as close as he did to the skip bin. I accept his evidence that in the walk throughs with Mr Fox, Mr Graham and Mr Breda they discussed the positioning of an EWP in respect of the skip bin. I accept that the discussion generally was that the EWP they then intended to be used would be able to remain located at the Hobart side of the skip bin as the first part of the pipe towards the north had already been cut.

186. I also accept Mr Godfrey's evidence that there was discussion that the boom of the EWP would extend north at an angle to be positioned correctly for the work. Mr Godfrey should have re-attended Nyrstar once he knew a different EWP would be used, and reassessed the method of access using the new machine. However Mr Godfrey was not experienced in the operation of EWPs, and even if he had stayed and supervised the work he may not have had any useful input into the assessment of the condition and the positioning of the EWP. But he was the author of the JSA document, responsible with Mr Fox for proper risk assessment, and was the person in charge of the work. It was not an insignificant job. It would have been reasonable for Mr Godfrey to re-attend Nyrstar to initiate further discussions regarding the correct and safe approach to the work in light of the change of machinery. This may have triggered a more considered approach by all involved, particularly Mr Graham. However it is speculative and remote to determine that Mr Godfrey contributed to Mr Wagg's death.

Summary-Mr Godfrey

- Mr Godfrey is not a person who contributed to Mr Wagg's death.

- However, upon being told of the need for a replacement EWP, Mr Godfrey should have convened a meeting to reassess the risk involving Mr Graham, Mr Breda and Mr Fox (or appropriate Nyrstar supervisor).

Tony Whitford

187. At the inquest, Mr Whitford was represented by Mr Gunson SC.

188. The evidence is respect of Mr Whitford was that he was the effective owner of the EWP and the effective employer of Mr Wagg and Mr Sullivan. He was also an accredited Assessor for High Risk Work licences, and accredited Mr Graham and Mr Breda for their High Risk Work accreditation.

(a)Mr Whitford's oversight of the business and record keeping

189. The business run by Mr Whitford was effectively in two parts. The first was scaffolding, operated from 5 Pearl Street, Derwent Park. The other part of the business was for plant hire situated at Whitestone Drive Austin's Ferry. The EWP came from those premises.

190. The evidence suggests that Mr Whitford effectively left the Whitestone Drive business to be run by his brother-in-law Mr Sullivan, along with Mr Wagg.

191. He visited it perhaps every 6 weeks but did not have any serious "hands on" involvement in matters such as safety or the suitability of plant at the premises for hire. He did not conduct any formal audit or check on the work of Mr Wagg or Mr Sullivan. He was not able to say that the company safety policy was given to Mr Sullivan or Mr Wagg.

192. He received inspection reports on the plant, but relied on Mr Wagg and Mr Sullivan to remedy problems identified in those reports. He did not follow up to determine whether or not there had been a proper action as a result.

193. Mr Whitford had a duty, at common law and under the relevant workplace legislation as an employer to ensure, as far as reasonably practicable, that his employee was safe from risk of injury.

194. He acknowledged by his plea of guilty that his failure to oversee the system for plant inspection and safety at Whitestone Drive breached this duty. He did not take the steps he should reasonably have taken to protect Mr Wagg. Whilst it was not determined that such failure actually contributed to Mr Wagg's death, it was acknowledged that such failure left Mr Wagg generally exposed to the risk of injury.

195. Mr Whitford's earnings and profits were derived from the hire of potentially hazardous plant. His operation comprised employment of 28 persons; not a small business but by no means large. Mr Whitford was himself a qualified mechanic; and he was also a qualified assessor of High Risk Work licences. He should well have known that as employer he was required to implement and maintain effective systems to ensure that his plant did not deteriorate to a state where his employees' health and safety was at risk when they necessarily were required to operate it in the course of their employment. Of course he also had an obligation to hire plant that was in proper working order, not only for the hire to be effective but for the hirer's safety.

196. I accept that Mr Whitford went a significant way to complying with his duty by employing Mr Sullivan, a qualified plant inspector. This superior qualification is not common in the industry. Mr Whitford was entitled, to some extent, to assume that Mr Sullivan was maintaining the plant to proper standard, including the essential task of completing current log books. Mr Wagg and Mr Sullivan were both skilled and experienced tradesmen. They were well versed in the type of machines in the yard. The delegation of the care of plant and safety issues was by no means an irresponsible one.

197. In respect of the EWP, it was at least 2 years overdue for the 10 year service by the time of Mr Wagg's injury. Given the age of the machine, it should have been considered crucial by Mr Whitford to have such service conducted in a timely manner.

198. Mr Whitford can rightfully be criticised for not having a system of audits on a regular basis. The completely unacceptable state of the EWP is clearly linked to this failure. Even if he had only implemented an effective system to ensure ***major*** services were conducted when due then the EWP would not have had defects on 3 August 2009.

199. There was evidence from witnesses at the inquest to the effect that in general plant hired from Instant Scaffolds was often in poor condition. Without accepting or rejecting such evidence, I observe that it might well be expected that Mr Whitford's general lack of proper oversight at Whitestone Drive might be expected to affect the condition of other items of plant at those premises. Moreover, Mr Whitford had specific legal duties under regulation 95 of the *Workplace Health and Safety Regulations* to make and keep records of any relevant tests, maintenance, inspection, commissioning or alteration of the EWP. As an employer involved in hiring plant such a breach of that duty should simply not have occurred.

200. The important question for me to determine is whether Mr Whitford ***contributed*** to Mr Wagg's death. This is a very difficult question. If the EWP had been

subjected to proper procedures for oversight and audit it either would have been in a proper working condition or not available for hire at the time of Mr Wagg's death. The faults were longstanding. Therefore, such failure does comprise a link in the chain of events leading to Mr Wagg's death.

201. However, I must bear in mind that the "but for" test should not be the sole way of assessing contribution. Mr Sullivan purported to check the EWP. Mr Wagg signed the relevant vehicle inspection documentation at the entry gate at Nyrstar. Mr Graham failed to undertake a pre-start check outside the purification building. He then called for Mr Wagg to seek his assistance. Further, it could not be predicted that Mr Wagg would have been on the premises and attempting to operate it in the proximity of solid structures.

202. It can therefore be clearly seen that Mr Whitford's failure is not the sole or the direct cause of Mr Wagg's death.

203. I must be satisfied that, before a finding of contribution is made, that it is a "substantial" cause of his death, approaching this assessment on a common sense basis. In making this assessment I bear in mind the reasonableness of his delegation to Mr Sullivan, the experience of both Mr Sullivan and Mr Wagg and the other substantial and more proximate causative factors that I have already described. I bear in mind also the seriousness of the finding of contribution.

204. Using the words of the authorities, the link I have described to Mr Wagg's death should be categorised rather as a background circumstance rather than substantially causative. I accept minds may perhaps differ on this point. Questions of causation and contribution in circumstances where there are multiple causes are notoriously difficult to assess. Mr Whitford's lack of proper oversight in record keeping and maintenance of the EWP is a serious matter. However bearing in mind the *Briginshaw* standard in respect of such a grave finding, I am not persuaded that Mr Whitford, by his failures in this regard, contributed to Mr Wagg's death, as prescribed by section 28 (1)(f) of the *Coroners Act.*

(b) Mr Whitford's assessment of Mr Graham's High Risk Work licence

205. There is no doubt that when Mr Whitford assessed and accredited Mr Graham for his High Risk Work licence that he, Mr Whitford, failed to follow the assessment manual. The manual, produced by Workplace Standards provides for a most comprehensive practical assessment on all aspects of the setting up, operation and shutting down of an EWP. Notably, the Manual prescribed requirements to demonstrate pre-operational checks including knowledge of the log book and checking for signage. I note also that the practical assessment would have required Mr Graham

to demonstrate the operation of the emergency descent controls, as well as show that he could position the EWP correctly relative to the work.

206. Mr Whitford was a registered assessor appointed under the *Workplace Health and Safety Regulations.* The requirement for a rigorous assessment, the subject of legislative requirements, stems from the potentially dangerous nature of the operation of such plant. The assessor's unequivocal duty is to approach the assessment task exactly as set out in the Manual. If Mr Graham had been required to perform the practical assessment he may well have retained valuable knowledge as well as insight into the importance of the pre-start check. Again, this significant failing of Mr Whitford to take his duty seriously meant that Mr Graham was not armed with safety information that he may have used on 3 August 2009 to ensure that the defective EWP was not taken into the work area. However, it would be to speculate to conclude that had Mr Graham completed this aspect of the assessment this accident would not have occurred, or that in fact it would have made a difference to Mr Graham's approach.

Summary - Tony Whitford

- Mr Whitford (including entities controlled by him) did not contribute to Mr Wagg's cause of death.

- However, Mr Whitford did not implement adequate systems of oversight to ensure the hire equipment was properly maintained especially in respect of the 10 year service and with accurate log books showing inspections and services. These inadequacies contributed to the defective state of the EWP; and

- Mr Whitford, as a registered High Risk Work licence assessor, inappropriately failed to assess Mr Graham and Mr Breda for the practical aspect of their High Risk Work licence.

RECOMMENDATIONS AND COMMENTS

207. The new *Work Health and Safety Regulations 2012* part 4.5 now regulate licensing for High Risk Work. A High Risk Work licence is only required to operate an EWP if the length of the boom exceeds 11 metres. The same requirement applied at the time of Mr Wagg's accident. It appears that the boom of the EWP did in fact exceed 11 metres. Mr Wagg did not have a High Risk licence but a "yellow card" issued by the Elevating Work Platform Association. However he was permitted by the regulations to be operating it for the purpose of repairing it. This exception for repair still exists in the new regulations. The evidence in the inquest causes me to question whether that exception should remain.

208. I note that the *Work Health and Safety Act* 2012 now makes the two relevant standards applicable to EWPs part of actual Codes of Practice by virtue of section 274 of the *Act*, based on National Model Codes.

209. I also note that Part 3.1 of the Code of Practice deals with hiring plant. It states;

> "**Hiring plant**
>
> When you hire plant, both you and the person you have hired it from must ensure, so far as is reasonably practicable, that the plant is safe to use. During the time that the plant is in your possession you will have control over the way the plant is used in the workplace.
>
> Before you hire the plant you should assess whether the plant is suitable for its intended use. You should also check that the plant has been inspected and maintained by the supplier according to the manufacturer's specifications. This may involve checking the log book or maintenance manual.
>
> You should also ensure that the supplier provides you with the manufacturer's I nformation about the purpose of the plant and its proper use.
>
> Any person who hires or leases plant to others will have duties as a supplier of plant and as a person with management or control of plant. This means that they must ensure, so far as is reasonably practicable, that the plant is safe to use and properly maintained. They must also provide specific information with the plant about how to operate it safely."

210. I urge hire firms and persons hiring such plant as an EWP to heed this portion of the Code of Practice.

211. The new regulations no longer require that EWPs be registered with WorkSafe Tasmania (formerly Workplace Standards) ("WST"). Plant that doesn't require registration with WST must nevertheless be compliant with regulation 213. This provides that a person with management or control of plant at a workplace must ensure that the maintenance, inspection and, if necessary, testing of the plant is carried out by a competent person. The maintenance, inspection and testing must be carried out, in accordance with the manufacturer's recommendations, if they exist or if there are no manufacturer's recommendations, in accordance with the recommendations of a "competent person". In any event inspection of such plant must take place annually.

212. Under the Regulations the definition of a "competent person" is "a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task." The selection of a "competent person" is to be made by the

"Person Conducting a Business or Undertaking" ("PCBU"). WST gives guidance on its website on the selection of a "competent person". Clearly a significant onus relating to the safety of plant rests upon the PCBU in selecting a competent person to maintain, inspect and test plant. A breach is punishable as an offence.

213. I am informed by WST that it does not have in place any specific ongoing audit or reporting requirements to ensure compliance with regulation 213 with respect to unregistered plant, such as EWPs. WST have no current knowledge of the owners and location of unregistered plant. I am informed that WST would only become aware of and involved in checking the condition of unregistered plant after receiving complaints, whilst on an inspection or as a result of a reported failure or accident.

214. I **recommend** that consideration be given to reviewing the regulatory requirements for a High Risk Work licence to operate boom-type elevating work platforms, so that such a licence is required for all persons operating such plant and regardless of the length of the boom.

215. I **recommend** that there be a review of the current ability of WST to maintain a system of audit to assess whether the "competent person" has properly inspected *registered* plant, and to ensure that unsafe registered plant is not in service. I am informed that current resourcing to undertake this vital safety task is inadequate.

216. I **recommend** that there be a review of the current ability of WST to assess and audit determinations by PCBUs of "competent persons" on a regular basis, given that such system underpins the safety of both registered and unregistered plant in this State. I am informed that current resourcing to undertake this vital safety task is inadequate.

217. I r**ecommend** that Nyrstar review its vehicle entry procedures on an ongoing basis to ensure that there is an effective system of detecting defective vehicles and equipment.

218. I **recommend** that Nyrstar give priority to ensuring prompt distribution of every new version of its Site Conditions; and to ongoing education of its contractors with regards its safety policies.

219. It is appropriate to issue a caution to all persons operating machinery such as a mobile EWP. Crush injuries have occurred in Australia on a not infrequent basis in similar circumstances. The operation of an EWP is complex and can be difficult and dangerous even for those with experience. In particular I urge all users to do the following;

- Undertake training and obtain proper qualifications to operate an EWP;

- Always conduct a pre-start check as per the manufacturer's instructions or the Australian Standard;
- Conduct a proper risk assessment for the work;
- Before use always check the log book to determine whether the necessary services and inspections have taken place;
- To avoid collision hazards when working near structures, ensure a full understanding of the function and response characteristics of all controls for the machine in use.

220. There is no need for any recommendation that Worksafe Tasmania or the Director of Public Prosecutions consider further charges arising out of Mr Wagg's death.

221. In concluding, I convey my sincere condolences to Mrs Wagg and Renee for the loss of their dearly beloved husband and father in such tragic circumstances.

Dated: 23 May 2014 at Hobart in the State of Tasmania.

Olivia McTaggart
CORONER