

AS2550.10 draft changes in response to the HAL submission

1.0 Background and Objectives

Keith Batten & Associates is engaged to represent the interests of growers in the review of Australian Standard AS2550.10, Elevating Work Platform (EWP) Safe Operation. The project is funded cross-industry under the auspices of Horticulture Australia Limited (HAL) and administered through Summerfruit Australia Ltd (SAL).

Previous papers describe the background issues associated with use of EWP's in orchards ⁽¹⁾ and the HAL submission presented by Keith Batten to the AS2550.10 review committee ⁽²⁾. To view these papers or a short video of an orchard EWP go to – <http://www.homevaluer.com.au/orchard-EWP/index.htm> To activate the link place the pointer on the address then Ctrl + click. Please save to your hard drive to view correctly as the site download is limited.

The objective of this paper is to:

- Report on the changes to the AS2550.10 draft adopted by the standard review committee 4 – 5 October to accommodate the issues raised in the HAL submission. Outline how these changes might be used to meet the needs of the orchard industry. Note that the draft is subject to change and will go to public comment before formal acceptance by Standards Australia. The process will be monitored and reported as necessary.
- Describe a 'going forward' strategy that might be managed by the various grower groups to help growers comply with legal obligations under the State Occupational Health and Safety (OH&S) Act and Regulation.
- Report on the possible adoption of the ISO 16368 Mobile elevating work platform design standard as the basis of the Australian EWP design standard, AS1418.10 to be reviewed before August 2006. The move is supportable technically. However, ISO standard has a number of requirements that would need to be modified to meet the needs of the Australian orchard industry. Action is recommended to extend the current contract to include representing the orchard industry on the AS1418.10 review.

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2.0 The Key Issues of the HAL submission

Keith Batten presented the HAL submission ⁽²⁾ to the AS2550.10 review committee on 4-5 October. The submission outlined two requirements of AS2550.10 that have adverse outcomes for orchard operations:

1. AS2550.10 mandates the use of a fall-arrest system for most orchard EWP applications. Mandating the fall-arrest system prevents consideration of the additional risks that implementing a fall-arrest system would introduce, the ineffectiveness of the implied fall arrest harness in many orchards, or the inherent safety of orchard EWP's.
2. The central objective of the 'major inspection' requirement of AS2550.10 as an extended-life maintenance program is not well understood by industry. The result is that a cost-effective service is generally not available. The standard requires that professional engineering and testing personnel are employed when those skills are not generally available in rural Australia. It is argued that existing maintenance skills available in rural Australia, with some additional training, can meet the objectives of the standard.

The AS2550.10 review committee considered the HAL presentation and adopted changes to the draft to accommodate the orchard industry concerns. The following section discusses the changes to the draft and how the orchard industry might employ the changes effectively.

3.0 Changes to the AS2550.10 draft

3.1 Fall-arrest system

The review committee has amended the AS2550.10 draft such that the fall-arrest system is no longer mandated. However, the draft now requires that a fall-arrest system is required in all EWP's, industrial and horticulture, where there is a risk of the operator being ejected from the operator platform. The draft goes further to provide guidance as to how the risk of ejection might be assessed.

The changes to the draft provide scope for the orchard industry to demonstrate by a formal risk assessment that the operator of an orchard EWP is not at risk of ejection. An important consideration in that assessment is that the majority of orchard EWP's feature short stiff booms that are not prone to whipping and ejection of the operator. In contrast, long-boom industrial EWP's are said to provide a risk of ejecting the operator.

It may be argued that a combination of the EWP design features, the maintenance regime, and the operating environment effectively control the risk of ejection without employing a fall-arrest harness. The formal argument in the risk assessment would form the defense if a decision not to employ a fall-arrest harness were taken. Such a decision would be further supported by demonstrating that a fall-arrest harness would introduce additional risks, for example, the risk of the harness becoming entangled in tree branches.

The above strategy may appear complex but there are three reasons why a single definitive 'orchard' resolution or exemption to the fall-arrest system is not feasible :

1. The OH&S Regulation in each State specifically requires that the risk of 'falls from height' in the workplace be managed. The obligation obviously includes falls from orchard EWP's.

AS2550.10 is the recognised EWP Safe Use standard. By definition a standard is subordinate to the legislated State OH&S Act and Regulation. It follows that an objective of AS2550.10 should be to provide a practical solution to manage the 'fall from height' obligations of the Regulation. The risk assessment that has now been introduced to the draft is that practical solution. Exemption from the obligation to manage the risk of falls is not a logical alternative.

2. By observation, the design of EWP's and operating risks vary significantly across orchard sectors.

For example, a typical stone-fruit EWP operates on flat ground with a maximum lift of 3.8 metre. In contrast, some avocado and exotic fruit EWP's are reported to operate to 11 metres in hilly environments. The risks are clearly different across various sectors. The new standard will now provide for each sector or grower group to carry out its own independent risk assessment and arrive at conclusions that will be defensible for that work environment.

3. Thirdly, the standard has to provide for an evolving industry. It must provide for future EWP designs and therefore could not presume to provide a 'blanket' solution to unknown future risks.

Fall Arrest – Essential Considerations

As discussed above, a documented risk assessment will be essential to defend a decision not to employ a fall-arrest harness in orchard EWP's. The 'do nothing' alternative is to:

- Run the risk of an OH&S prosecution in a routine audit,
- Limit the strength of a defense against likely prosecution in the event of an accident,
- Limit the strength of defense against civil action in the event of an accident injury.

Assessment of each individual EWP in relation to the use of fall-arrest would appear to be impractical. However, completing the required risk assessment at say grower council level would be more efficient and would provide a level of protection for the EWP's in that geographical area. In addition, the risk assessment at that level could be carried out more thoroughly.

While it is important to build defenses against the risk of legal action, the essence of all OH&S strategy is to build a safer workplace by managing the risk of injury. Previous papers (1) and (2) discuss a number of design and maintenance issues that need to be corrected to reduce the risk of fall from orchard EWP's. For example, the gates fitted in the top rail of the platform on some makes of orchard EWP's are generally not self closing and are known to contribute to the risk of falls from the EWP platform. Such known risks need to be corrected.

State OH&S Regulations include an obligation to manage the risk of fall in the workplace. Any risk assessment associated with the fall-arrest question will need to develop a total fall management package and address issues of design, maintenance, and operating conditions. Developing a reason for not using a fall-arrest system alone will not be defensible against the obligation of the Regulation unless it is imbedded in a total fall-risk management package.

Professional input is recommended to ensure the risk assessment is structured so that the outcome will meet both the obligations of the OH&S Act and Regulation and the requirements of AS2550.10

3.2 Major Inspections

The AS2550.10 review committee has accommodated the orchard industry concerns by removing from the draft the requirements for professional resources to be involved in routine major inspections. The draft has also been extensively edited to improve understanding of the objectives of major inspections.

A problem for the orchard industry is that orchard EWP manufacturers have not generally included the major inspection programs in their documentation. To add to this many EWP's currently in service were produced by manufacturers who are no longer in business. The absence of valid major inspection programs produced by the manufacturers was the motivation for the 'major inspection'

requirement being introduced into AS2550.10. The major inspection is a valid requirement to extend the useful life of an EWP past its design life. However, as explained in the previous papers the major inspection can be relatively simple if the EWP is of proven reliable design and the program is constructed with full knowledge of the objectives of the standard.

The way forward

To comply with the standard, a major inspection program needs to be produced. The first preference will be for the manufacturers to produce the programs although this may not happen without some grower pressure. Some advice on preparing a simple major inspection is provided with reference (1) and (2).

A practical solution would be for the orchard industry to sponsor development of a number of generic major-inspection programs to cover the industry's needs. From observation, it appears that possibly three thousand EWP's of relatively similar design exist along the Murray River. An experienced engineer with knowledge of the standard and maintenance systems could produce a simple program to cover the requirements of most of these EWP's. The single document would account for the various differences across the multiple manufacturers. The same principle would be expected to apply to other sectors where manufacturer sponsored programs are not available.

The previous reports also mentioned deficiencies in the maintenance programs used by orchard EWP owners. If growers take up the recommendation to engage an engineer to develop a generic major inspection program, the project could also incorporate simple advice on effective and defensible routine maintenance programs.

4.0 Imminent review of AS1418.10 – Design of EWP's

The EWP design standard AS1418.10 is due for review before August 2006. The review committee resolved at the meeting 4 – 5 October to consider adopting the international standard for EWP design (ISO 16368) as the basis of the future AS1418.10.

The move is supportable. The ISO standard is comprehensive and its adoption would considerably reduce the ongoing time and cost of maintaining the Australian standard.

However, the ISO standard holds considerable threats to the orchard industry. The most notable is that the maximum travel speed allowed in the ISO standard is about half that currently common in Australia. From an engineering view point, the issue should be resolvable. It would be necessary, for example, to research the reasoning behind the ISO speed requirements, and the stability implications,

and determine an engineering basis for the Australian orchard EWP's continuing to operate at higher speeds.

4.1 The Orchard Industry and Australian Standards

The orchard industry might give consideration to an ongoing input to relevant Australian Standards. The committees responsible for the standards are generally made up of the industry stakeholders: OH&S representation, manufacturers, designers, suppliers, product users, and support industry representatives. The standards committees are a stake-holder's forum and are a valuable source of information on compliance issues.

Where a standard has OH&S implications, the standard endeavours to provide solutions that will help industry comply with the OH&S legislation. This is essential to assure a safe workplace and to establish commonly understood operating boundaries.

An orchard industry presence on future committees would ensure the industry remains informed, its needs are met, and the presence would generally improve the integrity of the standard.

5.1 Recommendations

1. Previous reports noted a number of design and maintenance issues that should be taken up by the orchard industry. The most significant is that gates on orchard EWP's need to be self closing and latching to manage the risk of falling from the platform and compliance with the EWP design standard. Grower organisations are urged to focus attention to the issues raised in previous reports references (1) and (2).
2. As discussed in this report, the mandated requirement for a fall-arrest system has now been deleted from the draft and replaced with the need for a risk assessment if the recognised fall-arrest solution is not to be employed. The OH&S Regulations include an obligation to manage the risk of falls in the workplace. A formal documented risk assessment is recommended as defense for any decisions to move away from adoption of a fall-arrest harness. The assessment will need to include a total fall-risk management strategy to meet the obligation of OH&S Regulations. Taking a narrow view focused on problems implementing a fall-arrest harness alone would not be defensible unless it were part of an effective fall-management strategy.
3. Grower organisations are urged to ensure that major inspection programs are developed for the EWP's either by the manufacturer or by engaging professional assistance to produce a generic program for 'like groups' of orchard EWP's.

4. The orchard industry is encouraged to ensure industry interests are represented on the imminent review of the AS1418.10 EWP Design standard and future standards. Preferably extend the current contract to include representation for the industry on the AS1418.10 review committee.

Acknowledgements

A large number of Occupational Health and Safety personnel, orchard industry representatives, EWP manufacturers, growers, and other orchard industry stakeholders contributed to the project. The high level of assistance has contributed to the integrity of the information collected.

The orchard industry is grateful to the standards review committee for halting proceedings to enable the industry to provide input, and for their accommodating the concerns of the industry in the draft standard.

In particular we wish to acknowledge the effort of the project manager Kaye Neale who spent considerable effort and time liaising across the industry in an honorary capacity to communicate with industry stakeholders and arrange for them to be available to contribute. Thanks also to Summerfruit and Jo Solly for administering the project.

Disclaimer

Keith Batten & Associates declare that the information contained within this report and previous reports during the project has been collected in good faith and the veracity of the information is not guaranteed. Statements in the report do not constitute legal opinion and should not be relied upon as such. The strategies suggested are not guaranteed to achieve any particular result either expressed or inferred.

References

- (1) 'Information Paper' The paper provides background to the project and is available at <http://www.homevaluer.com.au/orchard-EWP/index.htm>
- (2) 'HAL Input to AS2550.10 Review Committee' The paper provides the arguments presented at the committee meeting 4 -5 October 2005 and is available at <http://www.homevaluer.com.au/orchard-EWP/index.htm>

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