



Log Standard Specification

**Mt Lofty Ranges
(As at January 2016)**





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INTRODUCTION

This Log Standard is for use in the Mt Lofty Ranges (MLR) Region and brings together key information about roundwood log products produced by ForestrySA's Harvesting Contractors when ordered.

This document is intended for use by Harvesting Contractor personnel as a reference for day to day log making taking note of the SED parameters on the Weekly cutting and delivery instruction.

As such, it is subject to regular review in order to update and improve the information and illustrations to accommodate any changes and to clarify meaning.

It contains descriptive specifications and example illustrations of defects and other log quality considerations.

Use of the information contained in this document will assist in standardisation of operators, and help regulate log making. It gives details of product dimensions to enable correct settings for harvester heads and their calibration, which ultimately leads to the minimisation of out of specification products.

It is understood and accepted that by the very nature of the Logging Industry, rejects are a normal part of the business, but only within low acceptable levels.

From time to time, other specific non-standard products may be required. This includes special arrangements for quality variations, such as fire salvage, or other defect that may be negotiated with the customer at the time.

MLR SAWLOG (SAW) – SA PINE

1. Source	Logs shall be cut from green standing <i>Pinus radiata</i> .
2. Diameter	Diameter range will be run of bush ≥ 150 mm Small End Diameter to 600mm+ depending on Log Supply Agreement.
3. Log Lengths	Log length will be 4.85 metres and / or 6.05 metres.
4. Length Tolerance	The length of a log shall be at least the length designated measured at the shortest point, but as a result of harvesting practices may exceed that length by up to 100mm as a standard length.
5. Length Docking	Logs shall be cleanly docked to within 5 degrees of square to the longitudinal axis of the log.
6. Trimming	Branches shall be trimmed to within 35mm of the log surface with bark on, although up to two branches to a maximum of 75mm are permitted.
7. Knot Size	Individual knots ≤ 100 mm diameter measured across the longer axis are permitted. Up to one knot per log of up to 150mm diameter is permitted. No knot may exceed half of the small end diameter of the log.
8. Spike Knots	Occasional spike knots ≤ 50 mm per length are permitted.
9. Shape	Abrupt changes in diameter are not permitted. This is where the diameter changes by more than 40% anywhere along the length of the log.
10. Sweep	Logs that are not straight shall only be accepted if the sweep is a uniform bow in one direction. Sweep shall be measured as millimetres of deflection from a straight edge laid alongside the log. Maximum sweep for all lengths shall not exceed SED/4.
11. End Splits	Are permitted provided they do not exceed 150mm in length into the log.
12. Butt Tear	Aim for none, but occasional instances of minor butt tear or 'pulled wood' is acceptable.
13. Butt Flair	Permitted to a maximum of 100mm measured as millimetres of deflection from a straight edge placed on the higher side of the butt to the straight edge of the log.
14. Sloven Ends	Slovens are not acceptable.
15. Dryside	Externally visible or extensive dryside is unacceptable.
16. Decay	Is unacceptable.
17. Blue Stain	External blue stain acceptable. Logs affected by internal blue stain will only be accepted with prior approval of the Purchaser.
18. Delivery	Within 10 days of felling. An exception to this is logs stockpiled for use during wet weather.
19. Cleanliness	Logs must not contain charcoal, stones, loose sand, wire or metal.

Occasional Definition:

Occasional defects are effectively the exceptional circumstance and not the rule and reflect custom and practice of ForestrySA harvesting operations.

MLR INDUSTRIAL SAWLOG (ISW)

1. Source	Logs shall be cut from green <i>Pinus radiata</i> and other <i>Pinus</i> species, except in the event of a fire in the Source Forests. In this event logs may be cut from fire-affected trees.
2. Diameter	Diameter range will be run of bush ≥ 150 mm Small End Diameter to 600mm+ depending on Log Supply Agreement.
3. Log Lengths	Length shall be 2.5 metres or 3.7 metres, other lengths by negotiation.
4. Length Tolerance	The length of the Log shall be at least designated measured at the shortest point, but as a result of harvesting practices may exceed that length by up to 100mm as a standard length.
5. Length Docking	Logs shall be cleanly docked to within 5 degrees of square to the longitudinal axis of the log.
6. Trimming	Branches shall be trimmed to within 35mm of the log surface with bark on, although up to two branches to a maximum of 75mm are permitted.
7. Knot Size	For logs <350mm Small End Diameter individual knots ≤ 100 mm diameter measured across the longer axis of the knot are permitted, and one knot up to 150mm diameter is permitted. For logs >350mm Small End Diameter individual knots ≤ 200 mm diameter measured across the longer axis of the knot are permitted, and two knots up to 300mm diameter are permitted. No knot may exceed half the diameter of the log.
8. Spike Knots	Occasional spike knots ≤ 100 mm per length are permitted.
9. Shape	Abrupt changes in diameter are not permitted. These are where the diameter increases by more than 40%.
10. Sweep	Logs that are not straight shall only be accepted if the sweep is a uniform bow in one direction. Sweep shall be measured as millimetres of deflection from a straight edge laid alongside the log. The maximum sweep for all lengths shall not exceed SED/3.
11. End Splits	Are permitted provided they do not exceed 150mm in length into the log.
12. Butt Tears	Aim for none, but occasional instances of minor butt tear or 'pulled wood' is acceptable.
13. Butt Flair	Permitted to a maximum of 100mm measured in millimetres of deflection from a straight edge placed on the higher side of the butt to the straight edge of the log.
14. Sloven Ends	Slovens are not acceptable.
15. Dryside	Externally visible or extensive dryside is unacceptable.
16. Decay	Is unacceptable.
17. Blue Stain	External blue stain is acceptable. Logs affected by blue stain will only be accepted with prior approval of the Purchaser.
18. Delivery	Within 10 days of felling. An exception to this is logs stockpiled for use during wet weather.
19. Cleanliness	Logs must not contain charcoal, stones, loose sand, wire or metal.

Occasional Definition:

Occasional defects are effectively the exceptional circumstance and not the rule and reflect custom and practice of ForestrySA harvesting operations.

PRESERVATION LOG

1.	Source	Preservation shall be cut from green standing <i>Pinus radiata</i> .
2.	Diameter	Diameter range: Posts - Small End Diameter between 75mm and 125mm Rails - Small End Diameter between 100mm and 175mm Strainers - Small End Diameter between 125mm and 200mm. Other diameter ranges may be cut by negotiation.
3.	Pres. Lengths	Posts - mainly 1.8, 2.1 and 2.4 metres Rails - mainly 3.0 and 3.6 metres Strainers - mainly 2.1 and 2.4 metres. Other lengths may be cut by negotiation.
4.	Length Tolerance	The length of preservation, measured at the shortest point, shall be at least the length designated, but as a result of harvesting practices, may exceed that length by up to 50mm as a standard length
5.	Length Docking	Preservation shall be cleanly docked to within 5 degrees of square to the longitudinal axis of the product cut.
6.	Trimming	To be presented flush trimmed. Occasional branch stubs to 15mm in length are permitted.
7.	Surface damage	Occasional minimal surface penetration from the processor feed rolls are acceptable. Surface shaving shall not be wider than 35mm on posts, or 40mm on rails and strainers.
8.	Knot Size	Individual knots ≤ 25 mm diameter measured across the longer axis of the knot are acceptable.
9.	Shape / Taper	Abrupt changes in diameter are not permitted. This is where the diameter changes by more than 20% along the length of the product cut. Excessive butt flair is not permitted.
10.	Sweep	Preservation that is not straight shall only be accepted if the sweep is a uniform bow in one direction. Sweep shall be measured as millimetres of deflection from a straight edge laid along the side of the product cut. Maximum sweep for all lengths and products shall not exceed SED/5.
11.	Butt Tears	Torn ends or 'pulled wood', are unacceptable.
12.	Sloven Ends	Are unacceptable.
13.	Spike Knots	Are unacceptable.
14.	Cracked Ends	Includes end splits and are unacceptable.
15.	Dryside	Is unacceptable.
16.	Decay	Is unacceptable.
17.	Blue Stain	Logs affected by blue stain will only be accepted with prior approval of the Purchaser.
18.	Delivery	Within 10 business days of felling.
19.	Cleanliness	Pulpwood must not contain charcoal, stones, loose sand, wire or metal.

Occasional Definition:

Occasional defects are effectively the exceptional circumstance and not the rule and reflect custom and practice of ForestrySA harvesting operations.



PHOTOGRAPHIC EXAMPLES OF LOG DEFECTS

Bark Inclusion

Butt Fluting that has grown over and re-joined or other imperfections that have occurred during the life of the tree. Double leaders often have bark inclusion between two hearts.



Blue Stain

Blue stain is a common cause for the discoloration of roundwood. Certain dark-coloured microscopic fungi cause a bluish or greyish discoloration in the sapwood of the tree. However, not all blue stains are blue. Common stain shades can be blue to bluish black or grey to brown. Sometimes, the stain coloration in lumber may appear as red, yellow, orange, or purple.

Blue stain is not a decay fungi. Blue stain fungi live on the nutrients stored in the cells of the wood, not on the cellulose fibres of the tree itself.

The blue stain commences on the external of the roundwood and penetrates radially into the centre over a period of time. The progress of blue stain depends on temperature and humidity.



Butt Fluting

Is a misshaped log, usually occurring in butt logs, but may occur higher up a tree.

Butt Tear or Pulled Wood

Often the result of a log separating before a cut is completed.



Decay

Is the destruction or decomposition of the tree as a result of bacterial or fungal action; rot.



Double Heart

Arise from double leaders, and in some cases, large spike knots.





Dry Side

Caused by the scarring of the tree, usually occurs during earlier thinning operations.



End Splits

Occur during the felling of trees, with machine operations by poor cutting practices. Sometimes caused by large slovens – these may 'tear' the log during handling by machinery.





Felling Scar





Nodal Swelling





Sloven Ends

Protruding timber that was not cleanly cut through during processing and creates a 'tear' in the next log. A sloven 'confuses' scanners for accurate log length measurement plus creates issues during the milling process.





Spike Knots and Ramicorns



Knot Size



Sweep



Trimming





Other Variable Quality Issues



Nodal swelling plus spike knot.



'Double Heart' that appears to have rotted plus the bark inclusion and the sloven



End not docked cleanly.



Does not conform to specifications.



Does not conform to specifications



Does not conform to specifications.



Does not conform to specifications



Does not conform to specifications.



Does not conform to specifications.