

**VARIATION DEED
Coastal WSA and Pole WSA**

THIS DEED is made the 19 day of June 2014.

1. PARTIES

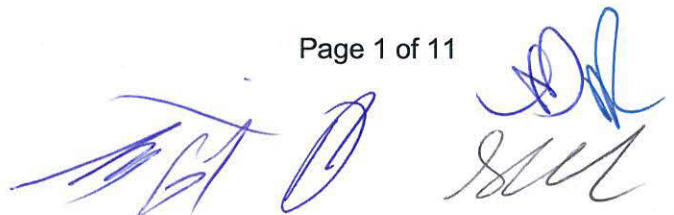
- 1.1 **THE FORESTRY CORPORATION OF NEW SOUTH WALES** a statutory State owned corporation constituted under the Forestry Act 2012 ("FCNSW")
- 1.2 **ALLEN TAYLOR & COMPANY LIMITED (ACN 000 003 056)** ("ATL")
- 1.3 **DUNCAN'S HOLDINGS LIMITED (ACN 000 080 704)** ("Duncans")
- 1.4 **THE STATE OF NEW SOUTH WALES ("the State")**

2 RECITALS

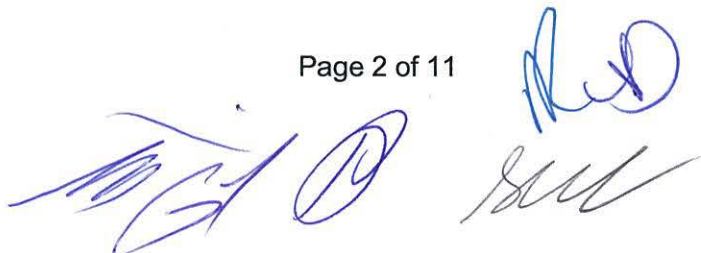
- 2.1 FCNSW, ATL, Duncans and the State are parties to a Wood Supply Agreement dated 26 August 2003 providing for FCNSW to supply an annual volume of timber from State forests and other land on the NSW North Coast until 31 December 2023 ("the Coastal WSA").
- 2.2 FCNSW, ATL and the State are parties to a Wood Supply Agreement (Type B – Class 1 and 2 Poles) providing for FCNSW to supply an annual volume of Class 1 and 2 Poles to ATL from State forests and other land on the NSW North Coast until 31 December 2023 ("the Pole WSA").
- 2.3 Agreement has been reached:
- (a) by FCNSW, ATL, Duncans and the State regarding amendments to the Coastal WSA;
 - (b) by FCNSW, ATL and the State regarding amendments to the Pole WSA; and
 - (c) between all parties regarding a payment to be made by FCNSW of the amount of [REDACTED] (plus GST if applicable) ("the Agreed Amount") to ATL and Duncans in consideration of the future rights they surrender as a consequence of the amendments to the Coastal WSA made by this Deed.

3. AGREEMENT

- 3.1 From 1 July 2014 the Pole WSA is amended in accordance with Schedule 1 to this Deed.



- 3.2 From 1 July 2014 the Coastal WSA is amended in accordance with Schedule 2 to this Deed.
- 3.3 On or before 30 June 2014 FCNSW must pay the Agreed Amount by payment of 60% of the Agreed Amount to Duncans and the balance to ATL.
- 3.4 The payment of the Agreed Amount is to be made by electronic funds transfer into the following account in the names of ATL and Duncans:
- National Australia Bank: BSB 084-004 Acc 48 303 9646
- Maroochydore office: PO Box 5561 Maroochydore BC 4558.
- 3.5 Each of ATL and Duncans shall receive the payment of the Agreed Amount as provided in this Deed in full satisfaction of the rights they each surrender as a result of the amendments to the Coastal WSA set out in Schedule 2, but this Deed does not otherwise alter or affect any rights of ATL or Duncans arising from or in connection with default or non-compliance with the Coastal WSA by FCNSW or the State or liability, damage, loss or expense incurred by ATL or Duncans, whether prior or subsequent to the date of this Deed.
- 3.6 This Deed constitutes express consent in writing for the purpose of:
- (a) Clause 33.2 of the Coastal WSA; and
 - (b) Clause 33.2 of the Pole WSA.

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EXECUTED AS A DEED

**EXECUTED BY the FORESTRY
CORPORATION OF NEW SOUTH
WALES** by its delegate
in the presence of:

.....
Witness signature

.....
Witness name

.....
Delegate's signature

.....
Delegate's name

**EXECUTED BY ALLEN TAYLOR
& CO LIMITED BY [two of its directors]
Or [a director and secretary]**

.....
Secretary/Director

.....
Director

**EXECUTED BY DUNCAN HOLDINGS
LIMITED BY [two of its directors]
Or [a director and secretary]**

.....
Secretary/Director

.....
Director

**SIGNED SEALED AND DELIVERED by
THE HONOURABLE KATRINA
HODGKINSON MP Minister for Primary
Industries in and for the State of New South
Wales for and on behalf of the Crown
(but not so as to incur any personal liability)
in the presence of:**

.....
Witness

.....
Minister for Primary
Industries

SCHEDULE 1
Amendments to the Pole WSA

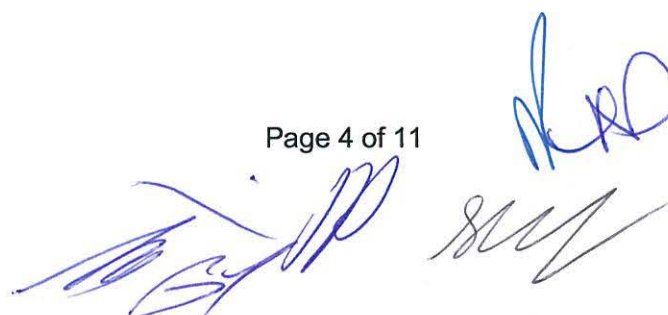
In Schedule 2 Part 1 of the Pole WSA delete the text defining Allocation 1 and insert instead:

Allocation 1

For the Year commencing 1 July 2004 and each Year thereafter until 30 June 2014: 1493m³

For the Year commencing 1 July 2014 and each Year thereafter until 30 June 2023: 5503m³

For the Year commencing 1 July 2023:- 2752m³ (half of Allocation 1 for the previous Year)



SCHEDULE 2
Amendments to the Coastal WSA

1. Clause 1.5.5

1.1 In Clause 1.5.5(a) delete "2023" and insert instead "2028".

2. Clause 2.1 Definitions

2.1 Insert the following definitions in alphabetical order:

'Base Allocation Percentage' for a Year means the percentage of the Base Allocation taken by the Companies during the Year where the quantity taken is deemed to include any quantity requested by the Companies but not made available by State Forests during the Year by default of State Forests;

'Blackbutt Base Quantity' for a Year means a quantity of Timber of the species Blackbutt calculated by multiplying 58,000 cubic metres by the Base Allocation Percentage for the Year;

'B4 Base Quantity' for a Year means a quantity of Timber of the group of species Spotted Gum, Brush Box, Tallowwood and Blue Gum calculated by multiplying 24,000 cubic metres by the Base Allocation Percentage for the Year;

'Monthly Quantity' for a month means the quantity of Timber to be made available to Companies in the month;

2.2 In the definition of **Annual Delivery Plan**:

- (a) Delete "monthly volumes of Timber" and insert instead "Monthly Quantity"; and
- (b) Insert immediately after "Delivery Sites" the words "each month during the Year"

2.3 Delete the definition of **Area of Supply** and insert instead:

'Area of Supply' means the Crown-timber lands within Supply Zones 1-6 inclusive;

2.4 In the definition of **Monthly Delivery Schedule**:

- (a) In the first sentence delete "volume of Timber" and insert instead "Monthly Quantity";
- (b) In the second sentence delete "volume" and insert instead "Monthly Quantity".

2.5 In the definition of **Quota Quality Logs** insert "Small Logs and" between "means" and "the".

3. **Clause 4**

In clause 4 delete "2023" and insert instead "2028".

4. **Clause 6**

Delete clause 6 and insert instead:

"6.1 Each Year State Forests must make the Base Allocation (or such greater or lesser quantity as may be requested by the Companies in accordance with this Agreement) available to the Companies.

6.2 Each Year State Forests may make available as part of the Timber supplied under this Agreement:

6.2.1 a quantity of Small Logs of the species Blackbutt that does not exceed 85% of the quantity of Blackbutt Small Logs harvested by State Forests in the Area of Supply during the Year;

6.2.2 a quantity of Small Logs of the species Spotted Gum that does not exceed 49% of the quantity of Spotted Gum Small Logs harvested by State Forests in the Area of Supply during the Year; and

6.2.3 a quantity of Small Logs of any other species of Timber up to but not exceeding 25% of the total volume of those other species supplied to the Companies during the Year.

6.3 Each Year State Forests must make no less than the Blackbutt Base Quantity for the Year available to the Companies as part of the Timber supplied under this Agreement.

6.4 Without limiting **Clause 6.3**, each Year State Forests must use its best endeavours to make available to the Companies a minimum percentage of all Timber of the species Blackbutt harvested by State Forests in the Area of Supply during the Year determined in accordance with the formula:

$$(BAP \times 58,000) / ((BAP \times 58,000) + 10,200),$$

where BAP means the Base Allocation Percentage and Timber for the purpose of this **Clause 6.4** shall not include Blackbutt that is harvested as poles, piles, girder or veneer logs.

6.5 Each Year State Forests must make no less than the B4 Base Quantity for the Year available to the Companies as part of the Timber supplied under this Agreement.

6.6 Without limiting **Clause 6.5**, each Year State Forests must use its best endeavours to make available to the Companies a minimum percentage of all Timber of the species Spotted Gum, Tallowwood, Brushbox and Blue Gum harvested by State Forests in the Area of Supply during the Year determined in accordance with the formula:

$$(BAP \times 24,000) / ((BAP \times 24,000) + 25,100),$$

where BAP means the Base Allocation Percentage and Timber for the purpose of this **Clause 6.6** shall not include Spotted Gum, Tallowwood, Brushbox and Blue Gum that is harvested as poles, piles, girder or veneer logs.

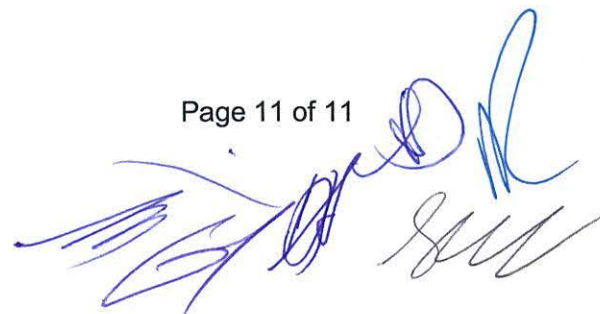
- 6.7 Each Year State Forests must make available to the Companies as part of the Timber supplied under this Agreement the following minimum quantities of the species Spotted Gum, Tallowwood, Brushbox, and Blue Gum:
- 6.7.1 In the case of Spotted Gum: the quantity of Timber calculated by multiplying 8,000 cubic metres by the relevant Base Allocation Percentage and including in that quantity a quantity of Timber other than Small Diameter Timber calculated by multiplying 5,000 cubic metres by the relevant Base Allocation Percentage;
- 6.7.2 In the case of Tallowwood: the quantity of Timber calculated by multiplying 4,000 cubic metres by the relevant Base Allocation Percentage;
- 6.7.3 In the case of Brushbox: the quantity of Timber calculated by multiplying 2,000 cubic metres by the relevant Base Allocation Percentage; and
- 6.7.4 In the case of Blue Gum: the quantity of Timber calculated by multiplying 4,000 cubic metres by the relevant Base Allocation Percentage.
- 6.8 Each Year the quantity of Timber comprising New England Hardwood species made available by State Forests must not exceed 6,000 cubic metres.
- 6.9 In each Year State Forests must make Timber available to the Company:
- 6.9.1 firstly by making no less than 90% of the Base Allocation (or such greater or lesser quantity as may be requested by the Companies in accordance with this Agreement) available from the Crown-timber lands within the Supply Zones; and
- 6.9.2 secondly, any balance required to be supplied to the Companies from alternative areas determined in accordance with this Agreement by State Forests within Supply Zones 1, 5 and 6.
- 6.10 In determining the alternative areas referred to in **Clause 6.9.2**:
- 6.10.1 State Forests must consult with the Companies; and
- 6.10.2 Subject always to State Forests not being required to breach its obligations to supply Quota Quality Logs under contracts with third parties, State Forests must select areas using its best endeavours to minimise timber haulage distances.

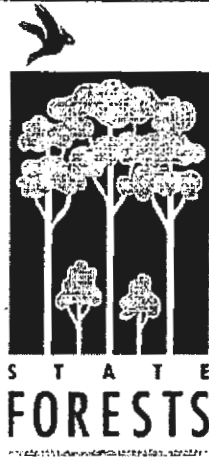
- 6.11 State Forests must not unfairly or inequitably disadvantage the Companies in its selection of the Compartments from within which the Base Allocation is to be made available.
- 6.12 From time to time the Companies may give written notice to State Forests of an intention to:
- 6.12.1 vary a previously advised intention to take an Overcut or accept an Undercut, or the extent of an Overcut or Undercut, in the Year in which the notice is given; and/or
- 6.12.2 take an Overcut or accept an Undercut in a subsequent Year,
- ("Intake Notice").
- The Intake Notice must specify the rate at which the Companies intend to take Timber when the notice takes effect expressed as a percentage of the Base Allocation ("Intake Rate").
- 6.13 Subject to **Clauses 6.14 to 6.19** inclusive State Forests must make Timber available in accordance with an Intake Notice.
- 6.14 In any Year the Companies may take more or less than the Base Allocation in accordance with the following conditions:
- 6.14.1 in any Year the quantity of Timber taken by the Companies must not exceed 115 percent of the Base Allocation;
- 6.14.2 in any Year the quantity of Timber taken during that Year must not be less than 85 percent of the Base Allocation; and
- 6.14.3 the cumulative Undercut or Overcut aggregated at the end of any Year must not be greater than 15 percent of the Base Allocation.
- 6.15 An Intake Notice must comply with the following notice requirements:
- 6.15.1 in the case of a 0-5% variation, at least 3 months' written notice;
- 6.15.2 in the case of a 5.01-10% variation, at least 6 months' written notice;
- 6.15.3 in the case of a 10.01-15% variation, at least 9 months' written notice; and
- 6.15.4 in the case of a variation greater than 15% at least 12 months' written notice,
- provided:
- 6.15.5 the reference to a percentage variation is a reference to the percentage variation between the Intake Rate specified in the Intake Notice and the Intake Rate specified in the last Intake Notice provided by the Companies (the latter being "the Base Rate", which shall be deemed to be 100% in the case of the first Intake Notice issued by the Companies);
- 6.15.6 the variation must be implemented in the month following the month during which the notice period expires; and

- 6.15.7 the Companies may issue Intake Notices whose notice periods overlap ("Concurrent Notices") provided:
- (a) the cumulative effect of those notices must not purport to achieve a percentage variation in the Intake Rate in a shorter period than would be possible were a single Intake Notice to be issued under this **Clause 6.15**;
 - (b) all the Concurrent Notices must request either an increase in the Intake Rate, or a decrease in the Intake Rate; and
 - (c) the Base Rate for each of the Concurrent Notices must be treated as being the Intake Rate for the last Intake Notice issued before the series of Concurrent Notices; and
- 6.15.8 an Intake Notice may be withdrawn by the Companies by giving State Forests:
- (a) in the case of an Intake Notice involving a 0-10% variation, written notice no less than 3 months prior to the scheduled implementation of that notice; and
 - (b) in the case of an Intake Notice involving a greater than 10% variation, written notice no less than 6 months prior to the scheduled implementation of that notice.
- 6.16 If an Intake Notice takes effect prior to the end of the Year in which the notice is given, the Intake Notice shall be given effect by varying the Monthly Quantities specified in the Annual Delivery Plan for the remaining months of the Year after the notice takes effect by the percentage determined by the formula:
NewIR/OldIR,
where:
NewIR means the Intake Rate specified in the Intake Notice; and
OldIR means the Intake Rate specified in the last Intake Notice provided by the Companies except:
- (a) in the case of a Concurrent Notice where OldIR means the Base Rate associated with the Concurrent Notice; and
 - (b) OldIR shall be deemed to be 100% in the case of the first Intake Notice issued by the Companies.
- 6.17 If an Intake Notice takes effect after the end of the Year in which the notice is given, the Annual Delivery Plan for that subsequent Year must provide:
- 6.17.1 in the months before the Intake Notice takes effect, an intake reflecting the last Intake Notice provided by the Companies that takes effect prior to the start of the subsequent Year; and
- 6.17.2 in the months after the Intake Notice takes effect, the intake determined in accordance with **Clause 6.16**.

- 6.18 In no case will State Forests be required to make available more Timber to the Companies during the term of this Agreement than the Total Allocation (less any deductions under **Clause 8.1**).
- 6.19 The Companies are not entitled to an Undercut or Overcut except in accordance with the conditions set out in **Clause 6.14**.
- 6.20 The parties acknowledge that as the last six months of this Agreement is a half Year, their respective obligations to make available and to take Timber in those periods require modification. To that end, and despite any other provision of this Agreement, in the last six months of this Agreement, the Base Allocation shall be one half of quantity specified in **Schedule 2** and all State Forests rights and obligations in relation to making that quantity available under this **Clause 6** and all the Companies' obligations to take a proportion of the Base Allocation under **Clause 8** are adjusted accordingly."
5. **Clause 8**
- 5.1 In clause 8.1 delete "**Clause 6.8**" and insert instead "**Clause 6.14**".
- 5.2 In clause 8.2.2 delete "year" and insert instead "Year".
- 5.3 In clause 8.3 delete "90%" wherever occurring and insert instead "85%".
6. **Clause 10**
- 6.1 In clause 10.5 delete "**Clause 6.8**" and insert instead "**Clause 6.14**".
- 6.2 Insert a new clause 10.6 as follows:
- "10.6 The Annual Delivery Plan for a Year must be amended in accordance with **Clause 6.16** or prepared in accordance with **Clause 6.17**, as the case may be or to give effect to a proper notice under **Clause 6.15.8**."
7. **Clause 15.9**
- 7.1 Delete clause 15.9.1
- 7.2 In clause 15.9.2 delete "55%" and insert instead "60%"
8. **Clause 28.6**
- In clause 28.6.2:
- (a) delete "and to duplicate the species mix expected from the Supply Zones"; and
- (b) delete "**Clause 6.4.2**" and insert instead "**Clause 6.9.2**".

- 9 Schedule 2**
Delete the text of Schedule 2 and insert instead:
"In the period from the Effective Date to 30 June 2014, **165,000**
cubic metres of Quota Quality Logs .
In the period from 1 July 2014 to 31 December 2028, **116,000** cubic
metres of Quota Quality Logs."
- 10 Schedule 10**
Delete Schedule 10.

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**WOOD SUPPLY
AGREEMENT**

**ALLEN TAYLOR & Co
LIMITED**

**DUNCAN HOLDINGS
LIMITED**

TABLE OF CONTENTS

1. PARTIES AND RECITALS	1
2. DEFINITIONS AND INTERPRETATION	1
3. SCOPE OF AGREEMENT	6
4. DURATION OF AGREEMENT	6
5. CONSOLIDATION OF THE COMPANIES RIGHTS AND OBLIGATIONS	6
6. BASE ALLOCATION	7
7. METHOD OF SUPPLY	9
8. SHORTFALL	9
9. PLANNING INFORMATION	10
10. ANNUAL VOLUME AND ANNUAL DELIVERY PLAN	11
11. MONTHLY DELIVERY SCHEDULES	11
12. AMENDMENT OF ANNUAL DELIVERY PLAN OR MONTHLY DELIVERY SCHEDULES	12
13. ACCEPTANCE OF DELIVERY AND DELIVERY HOURS	12
14. TITLE AND RISK	14
15. SPECIFICATIONS	14
16. DETERMINATION OF QUANTITY OF TIMBER	16
17. DELIVERED PRICE	16
18. STUMPAGE PRICE	17
19. DELIVERY CHARGES	17
20. PAYMENT	19
21. COMPLIANCE AND WARRANTIES	20
22. INDEMNITY AND INSURANCE	20
23. SALE OF TIMBER TO OTHER PERSONS	21
24. SECURITY	21
25. FORCE MAJEURE	22
26. LEGAL RESPONSIBILITY AND LIMITATION OF LIABILITY	23
27. GOODS AND SERVICES TAX	23
28. DEFAULT OR INSOLVENCY	25
29. RESOLUTION OF DISPUTES	27
30. ASSIGNMENT	28
31. MINISTER'S APPROVAL FOR AN ASSIGNMENT	28
32. ASSESSMENT OF VALUE ADDED PERFORMANCE	29
33. VARIATION	30
34. INTEREST	30
35. NOTICE	30
36. GOVERNING LAW	31
37. SEVERABILITY	31
38. GENERAL	31
39. CONFIDENTIALITY	32
SCHEDULE 1	SPECIFICATIONS
SCHEDULE 2	BASE ALLOCATION
SCHEDULE 3	SUPPLY ZONES, PRICE ZONES AND MANAGEMENT AREAS
SCHEDULE 4	CODE OF PROCEDURE
SCHEDULE 5	STUMPAGE PRICE
SCHEDULE 6	APPROVED FORM OF UNCONDITIONAL UNDERTAKING
SCHEDULE 7	DELIVERY HOURS
SCHEDULE 8	HARDWOOD LOG MEASUREMENT MANUAL
SCHEDULE 9	HANDLING FEE
SCHEDULE 10	SMALL DIAMETER TIMBER

WOOD SUPPLY AGREEMENT

THIS AGREEMENT is made the 26TH day of AUGUST 2003

1. PARTIES AND RECITALS

- 1.1 **THE FORESTRY COMMISSION OF NEW SOUTH WALES** a corporation constituted under the Forestry Act 1916 (NSW) trading as **STATE FORESTS** ('State Forests')
- 1.2 **ALLEN TAYLOR & CO LIMITED** (ACN 000 003 056) ('TAYLORS')
- 1.3 **DUNCANS HOLDINGS LIMITED** (ACN 000 080 704) ('DUNCANS')
- 1.4 **THE STATE OF NEW SOUTH WALES** ('State of NSW')
- 1.5 **Recitals**
 - 1.5.1 Taylors and Duncans (the Companies) are part of the Boral Timber Division, an administrative division of Boral Limited ('Boral').
 - 1.5.2 Duncans is a wholly owned subsidiary of Taylors.
 - 1.5.3 The Companies entered into a wood supply agreement with State Forests and the State of NSW on 5 March 1999 (the Earlier Agreement).
 - 1.5.4 It is part of the Governments' policy that where feasible State Forests supply timber from Crown-timber land by harvesting and hauling it to the customer.
 - 1.5.5 The parties and the State of NSW have agreed that:
 - (a) the term of the Earlier Agreement should be extended to 31 December 2023;
 - (b) the Companies should have a reduced timber allocation of 165,000 m³ per annum of Quota Quality Logs from 1 July 2004; and
 - (c) the review of the Base Allocation, referred to in **Clause 7** of the Earlier Agreement, will have no impact on the Companies' timber allocation under this Agreement.
 - 1.5.6 The parties and the State of NSW now wish to enter into this Agreement to give effect to the provisions of **Clause 1.5.5** and to replace the provisions of the Earlier Agreement, on and from the Effective Date of this Agreement.

2. DEFINITIONS AND INTERPRETATION

- 2.1 In this Agreement unless a contrary intention appears:

'a Company' means Duncans or Taylors as the case may be;

'Act' means the Forestry Act 1916 (NSW) and all regulations made under that Act;

'Annual Delivery Plan' means a schedule for the Year to which it applies setting out indicative information regarding the supply of the Base Allocation (or such greater or lesser volume as the Companies are entitled to require State Forests to make available) particularly the areas from which it is intended the Timber be taken and the monthly volumes of Timber proposed to be delivered to each of the Delivery Sites. The Annual Delivery Plan must recognise:

- (i) the need for the Companies to stockpile Timber in some months to compensate for events preventing delivery such as wet weather preventing harvesting of Timber;
- (ii) the need for the Companies to otherwise manage its mill site stockpiles to control inventory costs and minimise deterioration in the quality of stockpiled Timber;
- (iii) unless otherwise agreed the supply of 55% of the Base Allocation in the first half of each Year and the balance in the second half of each Year;

'Area of Supply' means the Crown-timber lands within the Chichester, Coffs Harbour, Coopernook, Dorrigo, Glen Innes, Gloucester, Grafton, Kempsey, Kendall, Mt Marsh, Taree, Urunga, Wauchope and Wingham Management Areas on the North Coast of NSW;

'Base Allocation' means the quantity of Timber specified in **Schedule 2**;

'Code of Procedure' means State Forests Code of Procedure annexed as **Schedule 4** as amended from time to time;

'Compartment' means an administrative area within a Management Area identified by State Forests as a Compartment from which State Forests will make a supply of Timber available to the Companies;

'Contract Harvesting' means the harvesting, debarking, loading and haulage of Timber and ancillary works including minor roading, tracking, log dump construction and site rehabilitation, by a Contractor engaged by State Forests, necessary to deliver the Base Allocation to the Companies;

'Contractor' means a person under contract with either the Companies or State Forests to conduct forestry operations and includes employees, subcontractors and agents of the Contractor;

'Delivery Charge' means State Forests' costs of harvesting and hauling Timber from a Price Zone to a Delivery Site calculated in accordance with **Clause 19**;

'Delivered Prices' means the prices payable for Timber made available to the Companies under this Agreement;

'Delivery Charge Schedule' means a schedule for calculating the Delivery Charges prepared and amended from time to time in accordance with **Clause 19**;

'Delivery Hours' means the hours during which State Forests may deliver Timber to a Delivery Site in the course of Contract Harvesting;

'Delivery Sites' means Taylors' mills at Koolkhan, Bostobrick, and Kempsey, and Duncans' mills at Herons Creek and any other site nominated by the Companies;

'Duncans' means Duncans Holdings Limited and includes all employees, servants and agents of that company;

'Effective Date' means 1 July 2004;

'Force Majeure' means an event (other than the payment of money) arising from an act of God, industrial dispute, act or omission of government or government department or instrumentality (except State Forests), war, sabotage, riot, civil disobedience, epidemic, disease, fire, explosion, failure of power supply, accident, natural disaster, calamity or unlawful act by any other person, or any similar cause which prevents a party from performing its obligations (in whole or in part) under this Agreement;

'Hardwood Log Measurement Manual' means State Forests' hardwood log measurement manual 1st January 2002 edition, a copy of which is annexed as **Schedule 8**, as amended from time to time following consultation with the Companies;

'Management Area' means an area of land designated as a 'Management Area' on the plan prepared by State Forests and attached as **Schedule 3**;

'Minister' means the Minister administering the Act;

'Monthly Delivery Schedule' means a schedule stating the volume of Timber to be delivered to each of the Delivery Sites and the areas from which the Timber will be harvested during the month to which it applies, together with any special delivery requirements for that month. The volume and area will be based on, but not bound to, the indicative information in the Annual Delivery Plan for that month, and should recognise:

- (i) the need for the Companies to stockpile Timber in some months to compensate for events preventing delivery such as wet weather preventing Contract Harvesting; and
- (ii) the need for the Companies to otherwise manage its mill site stockpiles to control inventory costs and minimise deterioration in the quality of stockpiled Timber;

'Overcut' means the amount by which the actual quantity of Timber taken by the Companies in any Year is greater than the Base Allocation;

'Plan of Operations' means a plan scheduling the various Compartments from which State Forests intends to provide the Base Allocation including an indication of the forest types in the various Compartments and the expected yields of Timber;

'Price Schedule' means a schedule for calculating the Stumpage Price of Timber prepared by State Forests in accordance with the principles of The Price System and annexed as **Schedule 5**;

'Price Zone' means an area nominated by State Forests from time to time as a Price Zone for the purposes of setting Delivery Charges and being a generally contiguous geographical area of forest which in the opinion of State Forests is suitable for uniformity in pricing of Timber. The Price Zones applicable to the Supply Zones 1 to 6 inclusive at the commencement of the Agreement are as set out in **Schedule 3**;

'Quota Quality Logs' means the hardwood timber described as Quota Quality Logs in the Specifications;

'Salvage operations' means the taking of windthrown timber or damaged timber, pushed over or felled for purposes other than timber harvesting, including road construction, powerline construction and extraction of forest materials;

'Small Diameter Timber' means Small Logs and Quota Quality Logs which have centre diameter under bark of less than 40cms;

'Small Logs' means the hardwood timber described as Small Logs in the Specifications;

'Specifications' means the specifications for the hardwood timber set out in **Schedule 1**;

'Stumpage Price' means the value of Timber before it is sawn or otherwise treated as determined in accordance with **Clause 18**;

'Supply Zones' means Supply Zones 2, 3 and 4;

'Supply Zone 1' means the area described on the plan annexed as **Schedule 3** as a Zone 1;

'Supply Zone 2' means the area described on the plan annexed as **Schedule 3** as a Zone 2;

'Supply Zone 3' means the area described on the plan annexed as **Schedule 3** as a Zone 3;

'Supply Zone 4' means the area described on the plan annexed as **Schedule 3** as a Zone 4;

'Supply Zone 5' means the area described on the plan annexed as **Schedule 3** as a Zone 5;

'Supply Zone 6' means the area described on the plan annexed as **Schedule 3** as a Zone 6;

'Taylors' means Allen Taylor & Co Limited and includes all employees, servants and agents of that company;

'The Companies' means Taylors and Duncans;

'The parties' means State Forests and the Companies;

'The Price System' means a statewide system for determining the price of timber in accordance with particular methodologies and principles adopted by State Forests and as may be varied from time to time;

'Timber' means the timber described in the Specifications;

'Total Allocation' means the sum of all the Base Allocations for the term of this Agreement;

'Undercut' means the amount by which the actual quantity of Timber taken by the Companies in any Year is less than the Base Allocation;

'Value Adding Criteria' means criteria either regarding the sawing, drying, dressing or other processing of Timber, or regarding the marketing of Timber, which adds value to the Timber;

'Year' means a period of twelve months commencing on 1 July in any year.

2.2 In this Agreement, unless the context requires otherwise:

- 2.2.1 a reference to the Act includes all amendments, regulations, rules, by-laws and proclamations under the Act;
- 2.2.2 words and phrases defined in the Act will have the same meanings attributed to those words and phrases in the Act unless the word or phrase is defined in this Agreement in which case the word or phrase will have the meaning attributed to it in this Agreement;
- 2.2.3 headings are for convenience only and do not affect the interpretation of this Agreement;
- 2.2.4 words importing the singular include the plural and vice versa;
- 2.2.5 words importing a gender include any gender;
- 2.2.6 a reference to a person includes a company, partnership, joint venture, association, corporation or other body corporate and any governmental agency;
- 2.2.7 a reference to any thing includes a part of that thing;
- 2.2.8 a reference to a clause, party, annexure, exhibit or schedule is a reference to a clause of and a party, annexure, exhibit and schedule to this Agreement;
- 2.2.9 a reference to a document includes all amendments or supplements or replacements or novations of that document;
- 2.2.10 a reference to a party to a document includes that party's successors and permitted assigns;
- 2.2.11 no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this agreement or any part of it;
- 2.2.12 a reference to dollars or \$ is a reference to the lawful currency of the Commonwealth of Australia;
- 2.2.13 a reference to the Minister is a reference to the Minister acting in his capacity as representative of the Crown in the right of the State of New South Wales but not as a statutory officer under the Act;
- 2.2.14 a reference to State Forests making Timber available is a reference to making Timber available by the method described in **Clause 7.1**;

2.2.15 a reference to taking Timber is a reference to accepting delivery of Timber delivered by State Forest in the course of State Forests conducting Contract Harvesting.

3. SCOPE OF AGREEMENT

- 3.1 The Companies carry on the business of sawmilling and processing of hardwood timber on the NSW North Coast.
- 3.2 The Companies require consistent volumes of timber at their major log processing centres to enable each of their processing operations to be conducted in a satisfactory manner.
- 3.3 On and from the Effective Date the Earlier Agreement is terminated and each of the parties and the State of NSW now releases each of the others from any rights or claims that it might now have or have had under the Earlier Agreement except any right of action that accrues after the date of this Agreement but before the Effective Date and in relation to the operation of Clause 9.3.1 of the Earlier Agreement.
- 3.4 State Forests will make the Timber available and the Companies must take and pay for the supplies of Timber made available upon the terms and conditions set out in this Agreement.
- 3.5 Each of the Companies must pay State Forests the Delivered Prices calculated in accordance with **Clauses 17, 18, and 19** for the Timber made available by State Forests.
- 3.6 The State of NSW undertakes to ensure that State Forests has sufficient resources and the necessary capacity to make Timber available to the Companies and will cause State Forests to perform its obligations as required by the provisions of this Agreement. The State of NSW will only be excused for any failure to perform its undertakings set out in this Clause if prevented from doing so by Force Majeure. For the purposes of this Clause the words 'act or omission of government or government department or instrumentality' in the context of Force Majeure will be deemed to mean 'act or omission of a government or government department or instrumentality other than the government or a department or instrumentality of the State of NSW'.

4. DURATION OF AGREEMENT

- 4.1 This Agreement will take effect from the Effective Date and will operate until 31 December 2023 unless determined at an earlier date under a provision of this Agreement.

5. CONSOLIDATION OF THE COMPANIES RIGHTS AND OBLIGATIONS

- 5.1 If a condition or term of this Agreement requires State Forests to consult with, to confer with, to negotiate with, to reach agreement with, to provide an opportunity or a document to, to advise, to give notice or to otherwise deal with, the Companies, it will be full and sufficient compliance with that condition or term if State Forests only consults with, confers with, negotiates with, reaches agreement with, provides the opportunity or the document to, advises, gives notice to, or otherwise deals with (as the case may be), Taylors.

- 5.2 If a condition or term of this Agreement provides for a variation of the requirements of the condition or term by arrangement or agreement between State Forests and the Companies, any arrangement or agreement between State Forests and Taylors varying the requirements, will be binding on Duncans as if the arrangement or agreement was made directly with Duncans and Taylors.
- 5.3 Duncans will have no claim against State Forests under this Agreement in relation to any act or omission by State Forests if the act or omission occurred with the consent of Taylors or otherwise in accordance with any agreement or arrangement made between State Forests and Taylors.
- 5.4 The Companies shall be jointly and severally liable for the performance of any obligation imposed on the Companies or either of them by this Agreement.

6. BASE ALLOCATION

- 6.1 Each Year State Forests must make the Base Allocation available to the Companies.
- 6.2 Subject to Clause 6.11, each Year State Forests may substitute up to 24,350 cubic metres of the Base Allocation of Quota Quality Logs with Small Logs as follows:
- 6.2.1 The substitution rate will be 1.25 cubic metres of Small Logs equals 1 cubic metre of Quota Quality Logs;
- 6.2.2 State Forests must consult with the Companies before determining to make a substitution;
- 6.2.3 Subject to availability of supply and the requirements of proper forest management, State Forests must use its reasonable endeavours to minimise substantial variations in the amount of substitution from one Year to the next and to make the substituted Small Logs available at a even rate throughout the Year.
- 6.3 In each Year State Forests must make that part of the Base Allocation comprising Quota Quality Logs available to the Company:
- 6.3.1 firstly by making available, from the Crown-timber lands within each of the Supply Zones, the quantity of Timber represented by the lesser of either:
- (a) the percentage of the total production of Quota Quality Logs from Crown-timber lands in the Supply Zone during that Year which is specified in **Schedule 2** as the Percentage of Production for that Supply Zone; or
- (b) the Maximum Allocation specified in that Schedule for the Supply Zone;
- 6.3.2 secondly, the balance, if any, from alternative areas determined by State Forests within Supply Zones 1, 5 and 6.
- 6.4 In determining the alternative areas referred to in **Clause 6.3.2**:
- 6.4.1 State Forests must consult with the Companies; and

- 6.4.2 Subject always to State Forests not being required to breach its obligations to supply Quota Quality Logs under contracts with third parties, State Forests must select areas using its best endeavours to minimise timber haulage distances and to duplicate the species mix expected from the Supply Zones.
- 6.5 State Forests must not unfairly or inequitably disadvantage the Companies in its selection of the Compartments from within which the Base Allocation is to be made available.
- 6.6 When supplying Small Diameter Timber in accordance with the terms of this Agreement, State Forests must comply with the table set out in **Schedule 10** both in relation to the Management Areas from which the Small Diameter Timber is to be supplied and the maximum volume of Small Diameter Timber that can be supplied to the nominated Delivery Sites.
- 6.7 In the course of the consultation process referred to in **Clause 11.2** State Forests must consult with the Companies regarding the degree of substitution referred to in **Clause 6.2** ("the Quota Quality Log/Small Log Ratio") and the anticipated sources of the Small Log involved. Following that consultation State Forests must provide the Companies with a schedule providing indicative information regarding the Quota Quality Log/Small Log Ratio and anticipated sources of the Small Log involved during the following Year:
- 6.7.1 The purpose of such a schedule is to provide information relating to possible sources of Timber;
- 6.7.2 State Forests is not able to make any firm commitment that all the Timber will be available as indicated in such a schedule.
- 6.8 In any Year the Companies may take more or less than the Base Allocation in accordance with the following conditions:
- 6.8.1 in any Year the quantity of Timber taken by the Companies must not exceed 110 percent of the Base Allocation;
- 6.8.2 in any Year the minimum quantity of Timber taken during that Year must not be less than 90 percent of the Base Allocation;
- 6.8.3 the cumulative Undercut or Overcut aggregated at the end of any Year must not be greater than 10 percent of the Base Allocation; and
- 6.8.4 the Companies must give:
- (a) not less than 6 months advance notice in writing to State Forests of an intended Overcut; and
 - (b) not less than 3 months advance notice in writing to State Forests of an intended Undercut provided that notice less than 3 months in advance will be adequate notice if State Forests will not suffer loss or inconvenience in allowing the Undercut sought.
- 6.8.5 unless otherwise agreed between State Forests and the Companies, an Overcut or an Undercut in a Year must comprise the same ratio of Quota Quality Logs to Small Logs as the Quota Quality Log/Small Log Ratio indicated in the schedule provided to the Companies by State Forests under **Clause 6.7** for that Year.

- 6.8.6 in no case will State Forests be required to make available more Timber to the Companies during the term of this Agreement than the Total Allocation (less any deductions under Clause 8.1).
- 6.9 The Companies are not entitled to an Undercut or Overcut except in accordance with the conditions set out in Clause 6.8. Despite the requirements of Clause 6.8 if the Companies apply for an Overcut by giving less than 6 months notice State Forests will use reasonable endeavours to make the Overcut available.
- 6.10 The parties acknowledge that as the last six months of this Agreement is a half Year, their respective obligations to make available and to take Timber in those periods require modification. To that end, and despite any other provision of this Agreement, in the last six months of this Agreement, the Base Allocation shall be one half of quantity specified in Schedule 2 and all State Forests rights and obligations in relation to making that quantity available under this Clause 6 and all the Companies' obligations to take a proportion of the Base Allocation under Clause 8 are adjusted accordingly.
- 6.11 Despite any other provision of this Agreement State Forests must not supply or require the Companies to take more than 35,000 cubic metres of Small Diameter Timber in any Year.

7. METHOD OF SUPPLY

- 7.1 State Forests shall make Timber available by conducting Contract Harvesting and delivering the Timber to the Delivery Sites.

8. SHORTFALL

- 8.1 Any quantity of Timber which the Companies fail to take in any Year and which is not part of an Undercut allowed under the conditions of Clause 6.8 may be forfeited by the Companies at the election of State Forests and may be sold by State Forests under a separate agreement. The quantity of Timber which the Companies fail to take and which State Forests may sell will be calculated by State Forests and deducted from the Total Allocation. State Forests must notify the Companies by written notice within 42 days after the end of the Year of the quantity of timber which has been deducted from the Total Allocation and the amended volume of the Total Allocation.

- 8.2 If the Companies:

8.2.1 take less than 80 percent of the Base Allocation for three consecutive Years during the term of this Agreement; or

8.2.2 take less than 70 per cent of the Base Allocation in any year,

State Forests may terminate this Agreement under the provisions of Clause 28.

- 8.3 If the Companies fail in any Year to take at least 90% of the Base Allocation and State Forests does not elect to have the Companies forfeit Timber under Clause 8.1 and does not terminate this Agreement under Clause 8.2:

- 8.3.1 the Companies must pay State Forests within 90 days after the end of the Year the sum of money equal to the difference between the price that would have been payable had the Companies taken 90% of the Base Allocation and the price paid or payable for the quantity of Timber actually taken by the Companies for that Year. Any sum payable by the Companies under this Clause is payable as pre-estimated and liquidated damages and not as a penalty;
- 8.3.2 in any Year in which the Companies make a payment under Clause 8.3.1 (or pursuant to Clause 9.3.1 of the Earlier Agreement) if the Companies take a quantity of Timber in excess of 90% of the Base Allocation the price payable by the Companies for the quantity of Timber above 90% for that Year will be reduced to take account of any sum paid or payable under Clause 8.3.1 (or pursuant to Clause 9.3.1 of the Earlier Agreement); and
- 8.3.3 the amount of any reduction in price allowed under Clause 8.3.2 must not exceed the sum that would have otherwise been payable for the quantity of Timber above 90% at the price applicable for that Year.

9. PLANNING INFORMATION

- 9.1 In this Clause 9 "Planning Information" means information concerning:

- 9.1.1 the geographical areas; and
- 9.1.2 the size, species and volumes of Timber;

proposed by State Forests in making the Base Allocation available to the Companies during each Year of the three Year period immediately following the period covered by a draft plan of operations referred to in Clause 9.2.

- 9.2 In November of each Year State Forests must commence consultation with the Companies and other interested parties regarding a draft plan of operations for the next two years. After initial consultation with the Companies and other interested parties State Forests will prepare and supply to the Companies by the end of the sixth month of the Year a draft plan of operations for each Management Area for the next two Years.
- 9.3 No later than January of each Year, after taking into account the comments of the Companies and other interested parties regarding the draft plan of operations, State Forests will prepare and supply to the Companies a final draft plan of operations for the next two Years.
- 9.4 State Forests will use its best endeavours to prepare and supply to the Companies by the end of March of each Year a Plan of Operations for the next Year.
- 9.5 If requested by the Companies, at the same time State Forests consults with the Companies in relation to the draft plan of operations, State Forests will consult with Companies and, as soon as practicable thereafter, will provide the Companies with Planning Information compiled in good faith.

- 9.6 The Companies accept that any draft Plan of Operations, Plan of Operations or Planning Information provided is an estimate made in good faith.
- 9.7 The Companies will have no claim against State Forests of any kind whatsoever arising directly or indirectly from State Forests' provision of any draft Plan of Operations, Plan of Operations or Planning Information including without limitation any claim arising from the Companies reliance on any draft Plan of Operations, Plan of Operations or Planning Information.

10. ANNUAL VOLUME AND ANNUAL DELIVERY PLAN

- 10.1 The Annual Delivery Plan for the Year commencing with the Effective Date shall be the Annual Delivery Plan established for that Year in accordance with Clause 14 of the Earlier Agreement. To resolve doubt despite the termination of the Earlier Agreement on the Effective Date the parties must comply with that Clause 14 of the Earlier Agreement for the purpose of establishing the Annual Delivery Plan for the Year of the Effective Date.
- 10.2 In February in each Year State Forests must consult with the Companies on a draft Annual Delivery Plan for the following Year. After that consultation State Forests must provide the Companies with the draft Annual Delivery Plan by the end of February. The parties must then over the following 3 weeks confer and negotiate in good faith to reach agreement on the Annual Delivery Plan for the following Year. In default of agreement during that 3 week period State Forests may determine the Annual Delivery Plan for the following Year.
- 10.3 No later than the end of March in each Year, State Forests must provide the Companies with a copy of the Annual Delivery Plan for the following Year as agreed between the parties or determined by State Forests in accordance with this Agreement.
- 10.4 Agreement by State Forests to an Annual Delivery Plan or Monthly Delivery Schedule or amendment thereto which would result in the Companies taking less than a volume of timber the Companies are required to take under this Agreement in any Year will not constitute a waiver of any obligation imposed or right given by this Agreement.
- 10.5 Any agreement or determination of an Annual Delivery Plan under this Clause 10 must give effect to the Companies requirements regarding the proportion of the Base Allocation (with any Overcut or Undercut in accordance with Clause 6.8) to be delivered to individual Delivery Sites.

11. MONTHLY DELIVERY SCHEDULES

- 11.1 Each Year State Forests will use its best endeavours to ensure that the volume of Timber to be delivered under the relevant Annual Delivery Plan is delivered substantially in accordance with the Monthly Delivery Schedules for that Year and otherwise at regular intervals and in regular volumes.
- 11.2 Each calendar month no later than 7 days prior to the next month the parties must meet to review the parties performance regarding the Monthly Delivery Schedule for the current month and to negotiate the Monthly Delivery Schedule for the next month. In default of

agreement the Monthly Delivery Schedule for the next month will be determined by State Forests provided:

11.2.1 State Forests will have due regard to the Companies' requests; and

11.2.2 If either of the Companies has a special requirement regarding volume, log dimensions, species and quality mix in a particular month State Forests will, with due regard to the practicalities and the rights of other persons supplied with Timber by State Forests, use all reasonable endeavours to meet the Companies' request.

11.3 The parties acknowledge:

11.3.1 the practical problems State Forests will have from time to time in delivering the various types of Timber at a regular rate;

11.3.2 the practical problems the Companies may have in regulating the flow of Timber they each obtain from methods or sources other than delivery by State Forests; and

11.3.3 that in order to maintain the optimum composition of Timber stockpiles at the Delivery Sites they must cooperate and take these practical problems into account in the management of their respective harvesting operations and in negotiating or determining each Monthly Delivery Schedule.

11.4 If any of the parties wishes to vary a current Monthly Delivery Schedule, it must notify the other parties as soon as practicable and the parties must negotiate in good faith to reach agreement on an amended Monthly Delivery Schedule. In default of agreement the original Monthly Delivery Schedule shall apply.

11.5 State Forests must notify the Companies as soon as practicable after it becomes evident to State Forests that there will be a variation of plus or minus 10% between the volume of Timber likely to be delivered to a Delivery Site during a month and the volume indicated by the Monthly Delivery Schedule for the Delivery Site and if required by the Companies the parties must negotiate in good faith to reach agreement on measures to be implemented to either reduce the variation and/or the effects of it.

12. AMENDMENT OF ANNUAL DELIVERY PLAN OR MONTHLY DELIVERY SCHEDULES

Where any timber in a Compartment has been damaged or destroyed by fire, disease or other natural cause or access to a Compartment intended to supply the Base Allocation is otherwise prevented by Force Majeure, State Forests may, after consultation with the Companies, amend any Annual Delivery Plan or Monthly Delivery Schedule as it deems necessary to facilitate Salvage operations or to adjust to the unavailability of timber in Compartments.

13. ACCEPTANCE OF DELIVERY AND DELIVERY HOURS

13.1 Each of the Companies must accept Timber delivered by State Forests:

- 13.1.1 to a Delivery Site substantially in accordance with the Monthly Delivery Schedule;
and
 - 13.1.2 during the Delivery Hours for that particular Delivery Site.
- 13.2 At the date of this Agreement the Delivery Hours for each Delivery Site are as set out in Schedule 7.
- 13.3 Each Year at least two months prior to the commencement of the following Year the parties must confer to review the Delivery Hours and must negotiate in good faith to reach agreement on the Delivery Hours to apply for the following Year. In default of agreement on the Delivery Hours to apply to a particular Delivery Site during the following Year, the Delivery Hours to apply to that Delivery Site will be the Delivery Hours applicable to it at the time of the review.
- 13.4 In any negotiation of an agreement under **Clause 13.3** the following factors must be considered and taken into account:
 - 13.4.1 The availability of log unloading equipment and operators at the Delivery Site;
 - 13.4.2 Occupational Health and Safety matters including log yard lighting and accreditation of truck drivers to operate log unloading equipment;
 - 13.4.3 Efficient log truck utilisation and cycle times.
- 13.5 The parties acknowledge that any agreement under **Clause 13.3** must optimise the arrangements for the delivery of Timber to Delivery Sites for all of the parties.
- 13.6 From time to time either of State Forests or the Companies may request a review of Delivery Hours if it can be demonstrated there has been a material variation in any of the factors listed in **Clause 13.4**. If such a request is made the parties must negotiate in good faith to reach agreement on a variation of Delivery Hours commensurate with the variation in the relevant factor.
- 13.7 Except where the parties have agreed that State Forests' contractors will unload the timber each of the Companies must promptly unload timber delivered to it in accordance with this Agreement with due regard to the practicalities and available unloading equipment.
- 13.8 Each of the Companies must ensure that all unloading operations carried out by it at any Delivery Site under its control are performed in a safe manner in accordance with:
 - 13.8.1 any relevant code issued by New South Wales WorkCover or other relevant agency which replaces or exercises the functions carried out by New South Wales WorkCover; and
 - 13.8.2 the Companies safety policies for the Delivery Site.
- 13.9 State Forests must ensure all truck drivers delivering Timber, and who are required by arrangement with the Company to unload trucks at the Delivery Sites, are accredited to operate log unloading equipment, and attend the Companies site induction training. The

Companies must provide the site induction training free of cost and may refuse entry to any truck driver who has not attended such training.

14. TITLE AND RISK

- 14.1 Ownership of the Timber taken by or on behalf of a Company will pass to that Company on payment for the Timber by that Company to State Forests.
- 14.2 The risks of ownership of the Timber will pass to a Company when that Company or its agent takes delivery of it.
- 14.3 A Company will not be entitled to dispute that it has taken delivery of the Timber if the Timber is accepted by an authorised person in the yard of that Company's sawmill or in the yard of the sawmill of a person to whom that Company has sold the Timber.
- 14.4 For the purposes of **Clause 14.3** an authorised person is a person who represents himself or herself to the person delivering the Timber as having authority to accept delivery of the Timber.

15. SPECIFICATIONS

- 15.1 The Companies must accept any timber which conforms with the Specifications.
- 15.2 Timber will be deemed to conform with the Specifications if the Timber is accepted by a Company at the Delivery Site and that Company does not object to its failure to meet Specifications by notice in writing to State Forests within seven days of its delivery.
- 15.3 If a Company objects to timber in terms of **Clause 15.2** it must set the timber aside for inspection. State Forests must arrange for the inspection of the timber by a suitably qualified State Forests officer within 7 days after receipt of the objection.
- 15.4 A decision of a suitably qualified State Forests officer, that the timber is Timber, will be accepted by the Company as final, and the timber will be deemed to meet the Specifications.
- 15.5 If the suitably qualified State Forests officer decides the timber does not meet the Specifications and the parties cannot agree on terms upon which the Company would purchase the timber, State Forests must within 7 days remove the timber from the Delivery Site at its own cost.
- 15.6 If the timber is removed from the Delivery Site by State Forests in accordance with **Clause 15.5**, the Company will be entitled to charge State Forests the handling fee determined in accordance with **Schedule 9** for unloading and reloading the timber, such fee to be payable by State Forests within 30 days of receipt of invoice.
- 15.7 If quantities of Timber which conform to the Specification are not available in a Year for any reason including Force Majeure the Companies and State Forests must confer with a view to exploring the possibility of the Companies accepting timber from categories of logs which are not within the Specifications. State Forests must give written notice to the Companies as soon as practicable and in event within 28 days of becoming aware of a likely

shortage and will in the same notice provide an opportunity for the Companies to meet with State Forests and details of other timber which could be supplied. In any circumstances where but for this **Clause** State Forests would have committed a breach or a material breach of this Agreement, the Companies will not be entitled to invoke the provisions of **Clause 28.6.1** or to claim any damages for breach against State Forests unless both parties have in good faith made all reasonable endeavours to meet the Companies' needs for Timber from timber available from State Forests but outside the scope of the Specifications.

15.8 Other timber supplied to the Companies under the provisions of **Clause 15.7** will be deemed to be Timber supplied under this Agreement subject to the price for the timber being determined under The Price System.

15.9 State Forests recognises the importance, to the operation of the sawmills at the Delivery Sites, of consistency in species, diameter and length of delivered Timber. The Companies also recognise the difficulties associated with supplying a delivered log mix that does not vary to reflect the inherent variability of the forest from which it is harvested. Subject always to State Forests' sole discretion to determine from time to time the location of Contract Harvesting operations necessary to supply Timber under this Agreement, in accordance with State Forests' opinion of good forest management, and the limitations that flow from the exercise of that discretion, State Forests will use its best endeavours to deliver Timber:

15.9.1 which complies, on an annual basis, with the following requirements regarding volume by major species:

Major Species	Maximum or Minimum	Percentage of Base Allocation
Blackbutt	Minimum	60%
Spotted Gum	Minimum	5%
Tallowwood	Minimum	3%
Brushbox	Minimum	2%
Blue Gum	Minimum	3%
New England Hardwood (Including E.viminalis, E.fastigata, E.andrewsii, E.cameronii, E.obliqua, E.laevopinea, E.radiata, E deanii, E.albens, E.dunnii)	Maximum	12%

- 15.9.2 which complies on an annual basis with the following requirements regarding volume by diameter:

Diameter Range Centre Diameter Under Bark	Maximum or Minimum	Percentage of Base Allocation
40-49 centimetres	Maximum	55%
50-59 centimetres	Minimum	15%
60+ centimetres	Minimum	10%

- 15.9.3 which complies on an annual basis with the following requirements regarding volume by preferred lengths (124 decimetres (dm), 118 dm, 112dm 100 dm, 94dm, 62 dm, 59 dm, 56dm, 50dm and 47dm):

Major Species	Maximum or Minimum	Percentage of Major Species Volume per Year in Preferred Lengths
Blackbutt	Minimum	50%
New England Hardwood (Including <i>E.viminalis</i> , <i>E.fastigata</i> , <i>E.andrewsii</i> , <i>E.cameronii</i> , <i>E.obliqua</i> , <i>E.laevopinea</i> , <i>E.radiata</i> , <i>E.deanii</i> , <i>E.albens</i> , <i>E.dunnii</i>)	Minimum	40%

16. DETERMINATION OF QUANTITY OF TIMBER

- 16.1 The method of determination of the quantity of Timber upon which the price is payable under this Agreement will be as set out in the Code of Procedure. The Code of Procedure may be amended by State Forests as may be considered necessary by State Forests from time to time but State Forests will consult with and take into account any comments of the Companies before any amendments are effected or implemented.
- 16.2 In the event that the parties agree the Base Allocation is to be made available by weight and if a Company provides a weighbridge or other measuring device approved by State Forests, that Company must maintain and verify the weighbridge or other device as required by the manufacturer's specifications.
- 16.3 State Forests may from time to time undertake an independent verification of the operation and accuracy of the weighbridge or other device.

17. DELIVERED PRICE

- 17.1 The prices payable under this Agreement for Timber taken by the Companies under this Agreement shall be the Delivered Prices:

- 17.2 The Delivered Prices payable from time to time shall be the total of:
- 17.2.1 the Stumpage Price determined in accordance with **Clause 18**; and
 - 17.2.2 the Delivery Charges determined in accordance with **Clause 19**;
- in respect of the Timber.

18. STUMPAGE PRICE

- 18.1 The Stumpage Price payable from time to time for Timber shall be calculated by reference to the category and rates set out in the Price Schedule for the Timber.
- 18.2 State Forests may amend or vary the Price Schedule from time to time following a review by State Forests of the various components of the Price Schedule.
- 18.3 In conducting a review of the Price Schedule State Forests:
- 18.3.1 will be subject at all times to the requirements of the Act;
 - 18.3.2 must conform with the methodologies and principles set out in The Price System; and
 - 18.3.3 may consider various pricing elements including (without limitation) the commercial value and best prices reasonably obtainable for various types and categories of available timber.
- 18.4 A Price Schedule which is varied or amended by State Forests following a review may be implemented at any time during a Year provided State Forests gives not less than 28 days prior written notice to the Companies of the varied or amended Price Schedule.
- 18.5 State Forests may review and vary The Price System from time to time. In performing any review of The Price System State Forests will at all times be subject to the policies and directions of the State of NSW. Without limiting the range of matters State Forests may take into account in reviewing or the manner in which State Forests determines to amend or vary The Price System, State Forests must consult with the Companies in the course of any review of The Price System.
- 18.6 State Forests will provide to the Companies a copy of The Price System as it applies at the Effective Date and will promptly forward a copy of The Price System to the Companies if varied or amended following a review.

19. DELIVERY CHARGES

- 19.1 The Delivery Charges for Timber harvested and hauled from a Price Zone to a Delivery Site shall be determined by applying the rates set out in the Delivery Charge Schedule for the type of Timber, the Price Zone and the Delivery Site involved. State Forests must prepare the Delivery Charge Schedule as agreed or determined in accordance with this Clause.

- 19.2 The Delivery Charge Schedule will comprise a schedule of the Price Zones, Delivery Sites and types of Timber under this Agreement and will provide a Delivery Charge for each Price Zone/Delivery Site combination for each type of Timber.
- 19.3 A Delivery Charge for Timber harvested from a Price Zone and hauled to a Delivery Site will be the total of:
- 19.3.1 A cost per cubic metre for the type of Timber being an aggregate of costs for the various items of work comprising the Contract Harvesting necessary to harvest and haul the Timber from the particular Price Zone to the particular Delivery Site; and,
 - 19.3.2 A cost per cubic metre for State Forests' management and administration of the Contract Harvesting involved which the parties agree in March 1999 was \$1.00 per cubic metre.
- 19.4 The Delivery Charge Schedule at the Effective Date shall be the Delivery Charge Schedule which would have been in effect on the Effective Date under the Earlier Agreement but for its termination. To resolve doubt the parties must comply with Clause 22.7 of the Earlier Agreement in order to establish the Delivery Charge Schedule for the Year commencing with the Effective Date.
- 19.5 If at any time the Companies request State Forests to supply a Delivery Site not specified in the Delivery Charge Schedule, then, as soon as practicable after the Companies request the parties must confer and negotiate in good faith to reach agreement on amendments to the Delivery Charge Schedule which:
- 19.5.1 specify any new Delivery Sites involved; and
 - 19.5.2 specify the rates to apply to any new Price Zone/Delivery Site combination for the various types of Timber;
- and in default of agreement by 7 days prior to the proposed date of delivery to a new Delivery Site, as the case may be, State Forests may determine the matters referred to in **Clauses 19.5.1 and 19.5.2** and amend the Delivery Charge Schedule accordingly.
- 19.6 Any agreement or determination of a Delivery Charge under **Clause 19.5** must take into account the following factors:
- 19.6.1 the market rates for the various items of work comprising the Contract Harvesting necessary to harvest and haul the Timber involved from the particular Price Zone to the particular Delivery Site being considered provided:
 - (a) those rates are comparable, having regard to the type of Timber produced, the yield per hectare, operation type, physical circumstances of harvesting and haulage and the particular Price Zone and Delivery Site being considered;
 - (b) the party tabling rates as relevant must verify them to the reasonable satisfaction of the other parties;
 - 19.6.2 the costs to State Forests of managing and administering the Contract Harvesting necessary to harvest and haul the Timber involved from the particular Price Zone to the particular Delivery Site being considered;

- 19.6.3 the benefits to the Companies which arise because State Forests' conduct of the Contract Harvesting has relieved the Companies of liabilities associated with their conduct of harvesting and haulage operation including without limitation liabilities related to Occupational Health and Safety obligations, workers compensation, environmental compliance obligations, and contractual arrangements with harvesting and haulage contractors; and
- 19.6.4 the benefits to State Forests or the Companies, as the case be, arising because the other party has introduced measures related to the harvesting haulage or delivery of Timber resulting in efficiency gains.
- 19.7 In each Year and commencing no later than the end of April the parties must confer to review the Delivery Charge Schedule and must negotiate in good faith to reach agreement on amendments to the Delivery Charge Schedule to apply for the following Year. In default of an agreement on the required amendments by one week prior to the commencement of the following Year State Forests may determine which amendments it considers are necessary. State Forests may amend any of the rates specified in the Delivery Charge Schedule in accordance with the agreement of the parties or the determination of State Forests as the case may be, and those rates will apply from the first day of the following Year.
- 19.8 In negotiations to reach agreement or in any determination under **Clause 19.7** State Forests and the Companies must take into account:
- 19.8.1 the factors set out in **Clause 19.6**;
- 19.8.2 changes in the level of the costs of conducting Contract Harvesting which have occurred during the preceding 12 month period; and
- 19.8.3 efficiency changes in Contract Harvesting operations, which have occurred during the preceding 12 month period as a consequence of legislative, regulatory or technological changes.
- 19.9 State Forests must ensure that the Delivery Charges which it determines under **Clauses 19.4, 19.5, or 19.7** are fair, reasonable and competitive.
- 19.10 State Forests must provide the Companies with a copy of the Delivery Charge Schedule as amended from time to time prior to applying the Schedule.
- 19.11 At any time which State Forests intends to amend the area of any Price Zone, State Forests must:
- 19.11.1 consult with the Companies in relation to the proposed amendment(s); and
- 19.11.2 also review the Delivery Charge Schedule in accordance with the principles set out in **Clauses 19.7 to 19.10**.

20. PAYMENT

- 20.1 State Forests will issue monthly invoices for Timber taken by a Company during the previous month.

- 22.3 State Forests indemnifies each of the Companies against all actions, proceedings, claims, demands and expenses by any person (other than a party to this Agreement) in respect of or arising out of the performance by State Forests of its obligations under this Agreement other than any action, proceedings, claims, demands or expenses arising out of any negligent act or omission of the party seeking State Forests' indemnity.

23. SALE OF TIMBER TO OTHER PERSONS

- 23.1 State Forests reserves the right to:

23.1.1 supply Timber and other timber from within the Area of Supply; or

23.1.2 issue licences to obtain Timber, timber, products or forest materials within the Area of supply;

to any other person.

- 23.2 Each of the Companies may from time to time sell Timber which it owns to any person without the need for processing the Timber.

- 23.3 If a Company sells Timber under **Clause 23.2** it must provide State Forests with details in writing of the volume by log category of sales and the identity of the purchaser within 60 days after the end of each Year.

24. SECURITY

- 24.1 State Forests may at its sole discretion require the Companies to provide security for the purpose of ensuring the due and proper performance of each of the Companies' obligations under this Agreement.

- 24.2 If State Forests requires the Companies to provide security the Companies must provide the security ('security') in the amount determined by State Forests from time to time which must not exceed a sum equivalent to 15% of the Delivered Price of the volume of Timber State Forests is to make available in each Year assuming it was made available in accordance the with Annual Delivery Plan for the Year ('secured amount').

- 24.3 State Forests will give the Companies written notice of any amount determined under **Clause 24.2** and any adjustment to or variation of the secured amount that may be determined by State Forests under the provisions of **Clause 24**.

- 24.4 the Companies must adjust or vary the secured amount within 28 days of the receipt of a notice from State Forests under **Clause 24.3**.

- 24.5 The security must:

24.5.1 be in the form of cash, bonds or inscribed stock issued by the Australian Government or the Government of a State or Territory of Australia, an unconditional undertaking (in the form set out in **Schedule 6**) given by a financial institution or

insurance company approved by State Forests or in any other form approved by State Forests;

24.5.2 be lodged within fourteen (14) days of the execution of this Agreement; and

24.5.3 be in a form which allows State Forests to draw upon the secured amount if the Companies or either on them are in breach of this Agreement.

24.6 If the security is not transferable by delivery, it must be accompanied by an executed transfer or other documentation sufficient to effect transfer of the security. The costs (including stamp duty) of any transfer or retransfer must be borne by the Companies.

24.7 State Forests may at any time, draw upon the secured amount to meet any loss or damages arising from a Company's or the Companies' failure to perform any of its or their obligations under this Agreement.

24.8 If State Forests draws on the secured amount under this Agreement but does not terminate this Agreement as a result of any breach, then the Companies must provide additional security so that the secured amount is maintained at the level notified under **Clause 24.3**.

24.9 State Forests may suspend the Companies' rights to take any Timber if the Companies fails to lodge the security or to vary or adjust the secured amount within the time required by any notice to the Companies under **Clause 24.3**.

24.10 State Forests must release the security to the Companies within six months of the date of termination of this Agreement if no money is then due to State Forests or any earlier date that may be otherwise agreed.

25. FORCE MAJEURE

25.1 If the Companies are prevented from taking or accepting Timber or from carrying on production of sawn timber by Force Majeure and:

- (a) the Force Majeure was not caused by any act or omission on the part of the Companies or any employee or agent of the Companies;
- (b) the Companies had taken all reasonably practicable precautions to prevent the Force Majeure; and
- (c) the Companies has made all reasonable efforts to contain the effect of the Force Majeure;

then each of the Companies may apply to State Forests for suspension or modification of its obligations under this Agreement to the extent that its ability to meet its obligations have been adversely affected by the Force Majeure.

25.2 Where either of the Companies makes an application under **Clause 25.1**, State Forests will negotiate with the Companies in good faith to review the Base Allocation taking into account the functions and obligations of State Forests under this Agreement and the Act and the requirements for the Companies to do all things reasonable and practicable to mitigate the effect of the Force Majeure.

25.3 If State Forests is prevented from performing all or any of its obligations under this Agreement by reason of Force Majeure:

- 25.3.1 the Companies jointly or severally will have no claim against State Forests under this Agreement, to the extent that the non-performance is due to the Force Majeure;
- 25.3.2 if the Force Majeure prevents State Forests from making Timber available at a rate greater than that necessary to enable it to supply more than 50% of the Base Allocation on a Yearly basis and if State Forests is unable to resume the performance of its obligations within a period of 18 months from the date of the occurrence of the Force Majeure or the date when the occurrence of the Force Majeure first became apparent (the 'relevant date') any party may terminate this Agreement by written notice. The right to give notice under this Clause must be exercised within a period of 21 months from the relevant date and in this regard time will be of the essence; and
- 25.3.3 State Forests may allocate any Timber which is available to the Companies and other persons in a manner which reflects State Forests functions and obligations under the Act and accords with any directions of the Minister.
- 25.4 A party affected by Force Majeure must give initial notice of the existence or occurrence of the Force Majeure as soon as is practicable to do so and in any case it must provide a more detailed notice within 28 days of the Force Majeure being apparent which provides clear details of the event or occurrence claimed as Force Majeure and setting out particulars of the likely effects of the event or occurrence in question.

26. LEGAL RESPONSIBILITY AND LIMITATION OF LIABILITY

- 26.1 Where the Companies jointly or severally are prevented from taking Timber:
 - 26.1.1 by an act or omission of State Forests which is a breach of this Agreement, then State Forests and not the State of NSW will be the party, if any, responsible to the Companies for any loss suffered; or
 - 26.1.2 by an act or omission of the State of NSW which is a breach of this Agreement, the State of NSW and not State Forests will be the party, if any, responsible to the Companies for any loss suffered; or
 - 26.1.3 by an act or omission or law of the Commonwealth of Australia, then neither State Forests nor the State of NSW will be in any way responsible to the Companies for any loss suffered.
- 26.2 Where State Forests or the State of NSW is in breach of this Agreement by reason of any failure to make Timber available or to supply or deliver Timber any loss suffered by the Companies will be limited to any loss, damage or expense incurred by the Companies as a direct result of the failure to make Timber available or to supply or deliver Timber under this Agreement and will not include any loss of profits or consequential loss.

27. GOODS AND SERVICES TAX

- 27.1 The Delivered Prices and any other consideration for supplies specified in this Agreement do not, subject to the operation of this clause, include any amount in respect of GST unless provided otherwise.
- 27.2 The GST may be imposed on the prices for Timber delivered under this Agreement.
- 27.3 If GST is or will be imposed on a supply made under this Agreement, the supplier may:
- 27.3.1 increase the consideration otherwise provided for that supply under this Agreement by the amount of that GST; or
 - 27.3.2 otherwise recover from the recipient the amount of that GST.
- 27.4 The supplier must ensure that any invoice issued under this agreement in respect of a taxable supply is a Tax Invoice or Adjustment Note as appropriate or, if no invoice is to be otherwise issued under this Agreement, must issue a Tax Invoice or Adjustment Note as appropriate within 7 days of GST being imposed on a taxable supply made under this Agreement. Notwithstanding any other provision of this Agreement the payment of any amount by the recipient in respect of a taxable supply is subject to the issuing of the relevant Tax Invoice or Adjustment Note to the recipient.
- 27.5 Costs required to be reimbursed or indemnified under this Agreement must exclude any amount in respect of GST included in the costs for which an entitlement arises to claim an input tax credit provided that the reimbursement or indemnification does not amount to consideration for a taxable supply.
- 27.6 If the consideration for a supply under this Agreement is calculated by reference to the consideration or value of other supplies, in performing that calculation, the consideration or value for those other supplies excludes any amount in respect of GST payable on those supplies.
- 27.7 In this clause:
- 27.7.1 **Adjustment Note** includes any document or record treated by the Commissioner of Taxation as an adjustment note or as enabling the claiming of an input tax credit for which an entitlement otherwise arises;
 - 27.7.2 **GST** includes any replacement or subsequent similar tax;
 - 27.7.3 **GST Act** means A New Tax System (Goods and Services Tax) Act 1999 (Cth);
 - 27.7.4 **New Tax System changes** has the same meaning as in the Trade Practices Act 1974 (Cth);
 - 27.7.5 **Tax Invoice** includes any document or record treated by the Commissioner of Taxation as a tax invoice or as enabling the claiming of an input tax credit for which an entitlement otherwise arises; and
 - 27.7.6 Terms defined in the GST Act have the same meaning in this clause unless provided otherwise.

28. DEFAULT OR INSOLVENCY

28.1 If the Companies or either of them or State Forests breaches or repudiates this Agreement, nothing in this Clause will prejudice the right of either party to recover damages or exercise any other right.

28.2 If the Companies or either of them commits a material breach of this Agreement and State Forests considers that damages may not be an adequate remedy, State Forests may give the Companies a written notice to show cause. Material breaches include without limitation:

28.2.1 failing to take the quantities of Timber set out in Clause 8.2;

28.2.2 failing to accept Timber in breach of Clause 13.1 or Clause 15.1;

28.2.3 failing to make payments in breach of Clause 20;

28.2.4 failing to take out and maintain any insurance in breach of Clause 22.2;

28.2.5 failing to meet any one or more of the requirements of Clause 21;

28.2.6 failing to provide security or to adjust or vary the secured amount in breach of Clause 24;

28.2.7 purporting to assign the whole or any part of this Agreement without the approval of the Minister in breach of Clauses 30 and 31;

28.2.8 failing to comply with conditions imposed by the Minister pursuant to Clause 31; and

28.2.9 failing to comply with the provisions of Clause 32.

28.3 A notice under Clause 28.2 must:

28.3.1 state that it is a notice under Clause 28.2;

28.3.2 specify the alleged material breach;

28.3.3 require the Companies to show cause in writing why State Forests should not exercise its right to terminate under Clause 28.4;

28.3.4 specify the time and date by which the Companies must show cause (which must not be less than 14 days); and

28.3.5 specify the place at which cause must be shown.

28.4 If by the time specified in a notice under Clause 28.2 the Companies fails to show reasonable cause why State Forests should not exercise its right of termination, State Forests may by notice in writing to the Companies terminate this Agreement.

28.5 If:

- 28.5.1 a Company informs State Forests in writing or its creditors generally that it is insolvent;
- 28.5.2 a meeting of creditors of a Company is called with a view to:
 - (a) entering into a scheme of arrangement or composition with creditors; or
 - (b) placing the Companies under administration;
- 28.5.3 a Company enters into a scheme of arrangement or composition with creditors;
- 28.5.4 a resolution is passed at a meeting of creditors to put a Company under administration;
- 28.5.5 a Company is put under administration;
- 28.5.6 a receiver of the property or a material part of the property of a Company is appointed;
- 28.5.7 an application is made to a Court for the winding up of a Company and not stayed within 14 days;
- 28.5.8 a winding up order is made in respect of a Company; or
- 28.5.9 execution is levied against a Company, in respect of the whole or a material part of its property, by creditors, debenture holders or trustees or under a floating charge.

State Forests may, without giving a notice to show cause, terminate this Agreement by notice in writing to the Companies (which notice must indicate that it is a notice under this **Clause 28.5** and state which provision of this **Clause 28.5** is being relied upon by State Forests)..

- 28.6 If State Forests commits a material breach of this Agreement and the Companies considers that damages may not be an adequate remedy, the Companies may give State Forests a written notice to show cause. Material breaches include without limitation:
 - 28.6.1 failing to make available the Base Allocation in any Year in breach of **Clause 6**;
 - 28.6.2 failing to use its best endeavours to minimise timber haulage distances and to duplicate the species mix expected from the Supply Zones in breach of **Clause 6.4.2**;
 - 28.6.3 failing to use its best endeavours to ensure the Base Allocation is delivered substantially in accordance with the Monthly Delivery Schedules for that Year in breach of **Clause 11.1**; and
 - 28.6.4 failing to properly process any application requesting an assignment of this Agreement in breach of **Clauses 30 or 31**.
- 28.7 A notice by the Companies under **Clause 28.6** must:
 - 28.7.1 state that it is a notice under **Clause 28.6**;

- 28.7.2 specify the alleged material breach;
 - 28.7.3 require State Forests to show cause in writing why the Companies should not terminate this Agreement;
 - 28.7.4 specify the time and date by which State Forests must show cause (which must not be less than 14 days); and
 - 28.7.5 specify the place at which cause must be shown.
- 28.8 If by the time specified in a notice under **Clause 28.6** State Forests fails to show reasonable cause why the Companies should not exercise its right of termination, the Companies may by notice in writing to State Forests terminate this Agreement.

29. RESOLUTION OF DISPUTES

- 29.1 If a dispute or difference between the parties arises out of or in connection with this Agreement or concerning the interpretation or operation of any provision of this Agreement (except **Clauses 14.3, 15.4, 17 and 19**) which cannot be settled by the parties within 28 days, the parties agree that they must endeavour to settle the dispute or difference by mediation before having recourse to arbitration. The mediator must be a person agreed by the parties or failing agreement a party may request the Australian Commercial Disputes Centre (ACDC) to appoint a mediator and the mediator will be so appointed.

The mediator must conduct proceedings under this **Clause** in accordance with the Guidelines for Commercial Mediation of the ACDC. During the course of any mediation each party must be represented by a person having authority to agree to a resolution of the dispute.

- 29.2 In the event that the dispute has not been settled within 56 days or such other period as agreed to in writing between the parties, after the appointment of the mediator, the dispute or difference must be submitted to arbitration.

Any arbitration must be conducted by a person acceptable to the parties but if the parties are unable to agree to the appointment of an acceptable person within 28 days of one party giving the others a written nomination of a suitable person or persons, then a party may request the President for the time being of the Institute of Arbitrators, Australia, to appoint an arbitrator and the arbitrator will be so appointed. Any arbitration must be undertaken in accordance with, and subject to, The Institute of Arbitrators Australia Rules for the Conduct of Commercial Arbitration.

- 29.3 The Arbitrator or some person appointed on the Arbitrator's behalf may investigate the Companies' and State Forests' affairs and accounts so far as may be necessary to assist the Arbitrator to determine any matter referred for arbitration. The Companies and State Forests must give the Arbitrator full access to all accounts and papers necessary for that purpose and must afford the Arbitrator full information and assistance.
- 29.4 Any mediation or arbitration must be held in Sydney, NSW and either party may be represented by a legal practitioner.

30. ASSIGNMENT

- 30.1 A Company may not without the prior written approval of the Minister assign its rights and entitlements under this Agreement in whole or part to any person.
- 30.2 Any change in control of a Company (or in the case of Duncans, any change in control of its immediate holding company) will be deemed to be an assignment of the Company's rights and entitlements under this Agreement. For the purpose of this **Clause** 'change in control' means change in control of more than 50% of the shares with the right to vote in general meetings of the corporation provided that no change in control will be deemed to have occurred as a result of any dealing or dealings in shares which are listed on the Australian Stock Exchange unless the effect of the dealing or dealings is that control of more than 50% of the shares with the right to vote in general meetings of the corporation is consolidated in one person or a group of related bodies corporate or related entities within the meaning of the Corporations Act 2001.
- 30.3 If a Company ('the assignor') wishes to assign the whole or any part of this Agreement it must make a written application to State Forests requesting an assignment and must provide all details and information concerning the assignee and the effect of the assignment as may be reasonably required by State Forests.
- 30.4 The assignor must pay all debts due and payable to State Forests under this Agreement before an assignment (in whole or part) of its interest in this Agreement.
- 30.5 Upon receipt of any request for an assignment of the whole or any part of this Agreement, State Forests must process the application in accordance with **Clause 31** provided the assignor has supplied any details and information required by State Forests under this **Clause 30**.
- 30.6 The assignor must ensure that any assignee executes all agreements and other documents which State Forests may reasonably require to record or effect any assignment including an undertaking to remedy or rectify any existing material breach.
- 30.7 In the event of an assignment of this Agreement, State Forests, the assignee and the State of NSW will execute an agreement upon the same terms as this Agreement but including provisions incorporating an obligation upon the assignee to comply with any conditions imposed under **Clause 31.3** or the provisions of **Clause 30** as obligations under the agreement (and it is agreed that non-compliance with the conditions or provisions will be a material breach for the purposes of **Clause 28.2**).

31. MINISTER'S APPROVAL FOR AN ASSIGNMENT

- 31.1 State Forests must consider any application requesting an assignment of the whole or part of this Agreement and recommend to the Minister the action that the Minister should take on the application. The Minister will have regard to any recommendation of State Forests but is not bound by any recommendation.

31.2 The Minister may determine an application requesting an assignment of the whole or part of this Agreement by granting the application (either unconditionally or subject to conditions of the kind set out in Clause 31.3) or by refusing the application. An application may only be refused on the following grounds:

31.2.1 the proposed assignee fails to satisfy such Value Adding Criteria as have been adopted from time to time by the Minister;

31.2.2 such grounds as may be prescribed by regulations under the Act;

31.2.3 such grounds as the Minister considers relevant having regard to the need to promote a competitive timber industry and to prevent misuse of market power; or

31.2.4 at the time the application is made the Companies or either of them has committed a material breach which has not been remedied or rectified including without limitation any failure to make payment to State Forests as required under Clause 20 of this Agreement.

31.3 The Minister may impose (without limitation) the following kinds of conditions on an application requesting an assignment of the whole or part of this Agreement:

31.3.1 a condition requiring the proposed assignee to take action to comply with or satisfy Value Adding Criteria as have been adopted by the Minister;

31.3.2 a condition requiring proposed assignee to prepare, and submit to the Minister; a business plan ('designated business plan') setting out the Companies' or any assignee's policies, practices and procedures for the implementation or maintenance of any Value Adding Criteria;

31.3.3 a condition requiring the Companies or any assignee to furnish to the Minister (at the times and for the periods as the Minister may decide) information the Minister may require to enable the Minister to determine whether or not the Companies or the assignee has satisfied or is complying with any Value Adding Criteria or is conducting its business in accordance with a designated business plan; and

31.3.4 in the event the Companies or either of them has committed a material breach which has not been remedied or rectified including without limitation any failure to make payment to State Forests as required under Clause 20 of this Agreement, a condition requiring any assignee to undertake the rectification or remediation of the material breach including the payment in full of any accrued debts due and owing to State Forests.

32. ASSESSMENT OF VALUE ADDED PERFORMANCE

32.1 The Companies must during the term of this Agreement meet the Value Adding Criteria for the forestry industry as have been adopted by the Minister from time to time and of which the Companies have received reasonable notice in order to meet the Value Adding Criteria.

32.2 If requested by State Forests at any time after the Effective Date, the Companies must submit to State Forests all records, information and data necessary to enable State Forests to

assess whether the Companies have satisfied the Value Adding Criteria as have been adopted by the Minister. The Companies must afford State Forests all reasonable assistance and must provide all further details as may be reasonably required by State Forests.

33. VARIATION

33.1 This Agreement comprises the entire understanding of the parties and the State of NSW in relation to the matters referred to herein.

33.2 None of the provisions of this Agreement may be varied, waived, discharged or released either at law or in equity, unless by the express consent of the parties and the State of NSW in writing.

34. INTEREST

In the event that the Companies fail to pay any money due to State Forests when required to do so by this Agreement, interest will accrue on all unpaid money from the date of default until payment in full at the rate of interest per annum for the time being payable under Schedule J of the Supreme Court Rules (NSW).

35. NOTICE

35.1 Any notice required to be served under this Agreement:

- (a) must be in writing;
- (b) must, subject to Clause 35.3, be served;
 - (i) in the case of the Companies:
Executive General Manager,
Boral Timber Group
89 St Hilliers Rd, Auburn NSW 2144
PO Box 6026 Silverwater NSW 2128
Ph 02 9735 5500, fax 02 9748 6131
 - (ii) in the case of State Forests:
General Manager, Marketing
State Forests of NSW
Building 2, 423 Pennant Hills Rd
Locked Bag 23, Pennant Hills NSW 2120
- (c) must be signed by the party serving the notice or (on its behalf) by the solicitor for, or by any attorney, director, secretary, or authorised agent of, that party;
- (d) must be delivered or posted by prepaid post to the address, or sent by fax to the number, of the addressee, in accordance with clauses 35.1(b) and 35.3; and
- (e) will be deemed to be received by the addressee:

- (i) (in the case of prepaid post) on the third business day after the date of posting to an address within Australia, and on the fifth business day after the date of posting to an address outside Australia;
- (ii) (in the case of fax) at the local time (in the place of receipt of that fax) which then equates to the time at which that fax is sent as shown on the transmission report which is produced by the machine from which that fax is sent and which confirms transmission of that fax in its entirety, unless that local time is a non business day, or is after 5.00 pm on a business day, when that notice will be deemed to be received at 9.00 am on the next business day; and
- (iii) (in the case of delivery by hand) on delivery, unless that delivery is made on a non business day, or after 5.00 pm on a business day, when that notice will be deemed to be received at 9.00 am on the next business day.

35.2 In this Clause 35, 'business day' means any day other than a Saturday, Sunday or public holiday in the place of receipt of the relevant notice

35.3 The parties may change the address for service of notice from time to time by notice in writing to the other party.

36. GOVERNING LAW

This Agreement is governed by the laws of New South Wales and the parties agree to the jurisdiction of the Courts of New South Wales.

37. SEVERABILITY

If any provisions of this Agreement are held to be invalid, illegal or unenforceable by a Court or other tribunal of competent jurisdiction, the validity, legality and enforceability of the remaining provisions will not in any way be affected or impaired thereby.

38. GENERAL

A party terminating this Agreement as a result of a failure or default of the other party may only claim damages for any loss resulting from the failure or default if the claim for damages is not excluded under this Agreement.

39. CONFIDENTIALITY

No party will disclose the contents or terms of this Agreement or any information or documents received by it in connection with the negotiation of this Agreement or pursuant to the provisions of this Agreement without the prior written consent of the other parties, except to the extent that:

- 39.1 the information is available to the public generally;
- 39.2 that party is required to make the disclosure by law or to make any filing, recording or registration required by law including without limitation any disclosure required by the listing rules of the Australian stock exchange;
- 39.3 the disclosure is necessary or advisable for the purpose of obtaining any consent, authorization, approval or licence from any public body or authority;
- 39.4 it is necessary that the disclosure be made to any taxation or fiscal authority;
- 39.5 the disclosure is made on a confidential basis to:
 - 39.5.1 the professional advisers of that party (including any industry association) for the purpose of obtaining advice in relation to this Agreement or the enforcement of this Agreement or otherwise for the purpose of consulting those professional advisers; or
 - 39.5.2 any financier to the Companies or Boral; or
 - 39.5.3 any prospective purchaser of the Companies or of any of their assets or undertakings; or
- 39.6 the disclosure is required or desirable to be made in pursuance of any procedure for discovery of documents and any proceedings before any court, tribunal or regulatory body.

IN WITNESS whereof the parties hereto have executed this Agreement as a deed the day and year first hereinbefore written.

I PETER DUNCAN)
)
(name))
D/MANAGING DIRECTOR)
(position))

have hereunto affixed the)
Seal of the **FORESTRY COMMISSION**)
OF NEW SOUTH WALES)
in the presence of:)

[Signature])
Secretary 14/8/03.)

THE COMMON SEAL of ALLEN)
TAYLOR & CO LIMITED)
was hereunto affixed in accordance)
with its Articles of Association in the)
presence of:)

[Signature])
Secretary)

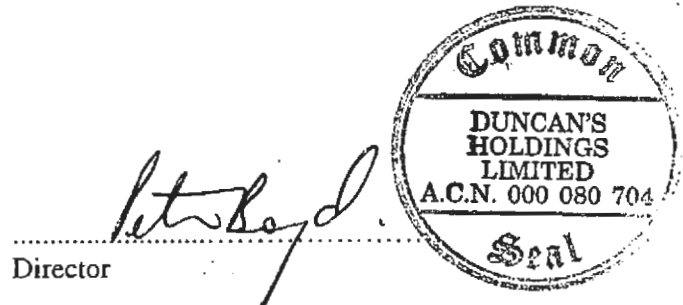
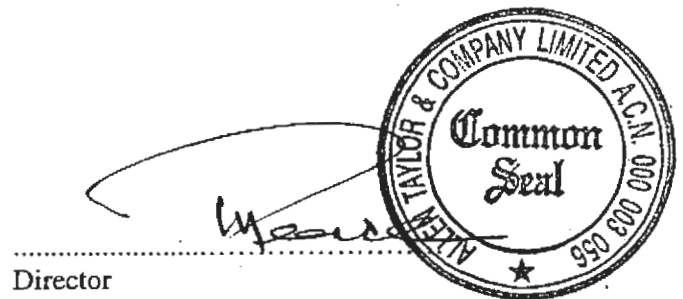
THE COMMON SEAL of DUNCANS)
HOLDINGS LIMITED)
was hereunto affixed in accordance)
with its Articles of Association in the)
presence of:)

[Signature])
Secretary)

SIGNED SEALED AND DELIVERED)
by THE HONOURABLE)
CRAIG KNOWLES Minister for)
Infrastructure and Planning and)
Minister for Natural Resources)
in and for the State of New South Wales)
for and on behalf of the Crown (but not)
so as to incur any personal liability) in the)
presence of:)

[Signature])
Witness)

[Signature])
Director)



[Signature])
Minister for Infrastructure and Planning and)
Minister for Natural Resources)

SCHEDULE 1

Specifications

A

This schedule sets out the specification for Quota Quality Logs in Wingham, Urunga Coastal, Urunga Upriver, Wauchope Coastal, Wauchope Inland, Wauchope Upriver, Doyles, Carrai, Lower Creek and Kempsey Price Zones.

SPECIES

All species of the genera Eucalyptus, Corymbia, Lophostemon, Syncarpia suitable for sawmilling and meeting the specifications for size and defect set out hereunder.

MINIMUM LOG SIZE

Centre Diameter Under Bark (CDUB): 40 centimetres

Small End Diameter Under Bark (SEDUB): 30 centimetres

Large end Diameter Under Bark (LEDUB): 41 centimetres

Length: 2.6 metres

The measurement of defect for the purpose of calculating the maximum defect % will be in accordance with the Hardwood Log Measurement Manual.

MAXIMUM DEFECT BY LOG DIAMETER

Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)	Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)
<26	Nil	(12)	25	92	58	(17)	64
26	2	(12)	25	94	60	(17)	64
28	4	(12)	27	96	62	(17)	65
30	6	(12)	29	98	64	(17)	65
				100	64	(18)	65
32	8	(12)	31	102	66	(18)	65
34	10	(12)	33	104	68	(18)	65
36	12	(12)	36	106	68	(19)	65
38	14	(12)	38	108	70	(19)	65
40	16	(12)	40	110	72	(19)	66
42	18	(12)	43	112	74	(19)	66
44	20	(12)	45	114	74	(20)	66
46	22	(12)	47	116	76	(20)	66
48	24	(12)	49	118	78	(20)	67
50	26	(12)	51	120	80	(20)	67
52	28	(12)	53	122	80	(21)	67
54	30	(12)	54	124	82	(21)	67
56	32	(12)	56	126	84	(21)	67
58	34	(12)	58	128	84	(22)	67
60	36	(12)	59	130	86	(22)	67
62	38	(12)	60	132	88	(22)	67
64	38	(13)	60	134	90	(22)	67
66	40	(13)	60	136	90	(23)	67
68	42	(13)	60	138	92	(23)	67
70	42	(14)	60	140	94	(23)	68
72	44	(14)	61	142	94	(24)	68
74	46	(14)	62	144	96	(24)	68
76	48	(14)	62	146	98	(24)	68
78	48	(15)	62	148	100	(24)	68
80	50	(15)	62	150	100	(25)	68
82	52	(15)	63	152	102	(25)	68

Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)	Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)
84	54	(15)	63	154	104	(25)	68
86	54	(16)	63	156	104	(26)	68
88	56	(16)	64	158	106	(26)	68
90	58	(16)	64	160	108	(26)	68
				180	122	(29)	68

B

This schedule sets out the specification for Quota Quality Logs in Kendall, Coopernook and Taree Price Zones.

SPECIES

All species of the genera *Eucalyptus*, *Corymbia*, *Lophostemon*, *Syncarpia* suitable for sawmilling and meeting the specifications for size and defect set out hereunder.

MINIMUM LOG SIZE

Small End Diameter Under Bark (SEDUB): 25 centimetres

Large end Diameter Under Bark (LEDUB): 41 centimetres for logs equal to or greater than 40 centimetres CDUB and 29 centimetres for logs less than 40 centimetres CDUB.

Length: 2.6 metres for logs equal to or greater than 40 centimetres CDUB and 4.2 metres for logs less than 40 centimetres CDUB.

Length Deductions for logs less than 40 centimetres CDUB:

- All logs less than 40cm CDUB shall have a maximum of one allowable length defect within the 3.6 metres at the head.
- Except for the above 3.6m at the head, at any other point on the log, at least two thirds of the circumference shall be free of length defect. The rule about there being a minimum of 2.4m between separate length defects still applies (otherwise, the separate faults are counted as the one length defect, as previously).
- A limb is defined as being at least 10cm in diameter, as measured between the actual sides of the limb itself (as distinct from surrounding distorted wood), across its narrowest point when cut flush with the log surface.

The measurement of defect for the purpose of calculating the maximum defect % will be in accordance with the Hardwood Log Measurement Manual.

MAXIMUM DEFECT BY LOG DIAMETER

Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)	Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)
<26	Nil	(12)	25	92	58	(17)	64
26	2	(12)	25	94	60	(17)	64
28	4	(12)	27	96	62	(17)	65
30	6	(12)	29	98	64	(17)	65
				100	64	(18)	65
32	8	(12)	31	102	66	(18)	65
34	10	(12)	33	104	68	(18)	65
36	12	(12)	36	106	68	(19)	65
38	14	(12)	38	108	70	(19)	65
40	16	(12)	40	110	72	(19)	66
42	18	(12)	43	112	74	(19)	66
44	20	(12)	45	114	74	(20)	66
46	22	(12)	47	116	76	(20)	66
48	24	(12)	49	118	78	(20)	67
50	26	(12)	51	120	80	(20)	67
52	28	(12)	53	122	80	(21)	67
54	30	(12)	54	124	82	(21)	67
56	32	(12)	56	126	84	(21)	67
58	34	(12)	58	128	84	(22)	67
60	36	(12)	59	130	86	(22)	67
62	38	(12)	60	132	88	(22)	67
64	38	(13)	60	134	90	(22)	67
66	40	(13)	60	136	90	(23)	67
68	42	(13)	60	138	92	(23)	67
70	42	(14)	60	140	94	(23)	68
72	44	(14)	61	142	94	(24)	68
74	46	(14)	62	144	96	(24)	68
76	48	(14)	62	146	98	(24)	68
78	48	(15)	62	148	100	(24)	68
80	50	(15)	62	150	100	(25)	68
82	52	(15)	63	152	102	(25)	68

Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)	Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)
84	54	(15)	63	154	104	(25)	68
86	54	(16)	63	156	104	(26)	68
88	56	(16)	64	158	106	(26)	68
90	58	(16)	64	160	108	(26)	68

C

This schedule sets out the specification for Quota Quality Logs in Gloucester East, Boonabilla, Morisset, Bulahdelah and Putty Price Zones.

SPECIES

All species of the genera Eucalyptus, Corymbia, Lophostemon, Syncarpia suitable for sawmilling and meeting the specifications for size and defect set out hereunder.

MINIMUM LOG SIZE

Centre Diameter Under Bark (CDUB): 40 centimetres in Gloucester East, Boonabilla, Morisset and Putty Price Zones.

Small End Diameter Under Bark (SEDUB): 30 centimetres in Gloucester East, Boonabilla, Morisset, Bulahdelah and Putty Price Zones.

Large End Diameter Under Bark (LEDUB): 41 centimetres in Gloucester East, Boonabilla, Morisset and Putty Price Zones.

Length: 2.6 metres in Gloucester East, Boonabilla, Morisset and Putty Price Zones. 2.6 metres for logs greater than or equal to 40 centimetres CDUB and 3.6 meters for logs less than 40 centimetres CDUB in Bulahdelah Price Zone.

The measurement of defect for the purpose of calculating the maximum defect % will be in accordance with the Hardwood Log Measurement Manual.

MAXIMUM DEFECT BY LOG DIAMETER

Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)	Log Diameter (cm)	Maximum Pipe (cm)	Minimum Net Wood Thickness (cm)	Maximum Defect % (Including Length Allow.)
<26	Nil	(12)	25	92	58	(17)	64
26	2	(12)	25	94	60	(17)	64
28	4	(12)	27	96	62	(17)	65
30	6	(12)	29	98	64	(17)	65
				100	64	(18)	65
32	8	(12)	31	102	66	(18)	65
34	10	(12)	33	104	68	(18)	65
36	12	(12)	36	106	68	(19)	65
38	14	(12)	38	108	70	(19)	65
40	16	(12)	40	110	72	(19)	66
42	18	(12)	43	112	74	(19)	66
44	20	(12)	45	114	74	(20)	66
46	22	(12)	47	116	76	(20)	66
48	24	(12)	49	118	78	(20)	67
50	26	(12)	51	120	80	(20)	67
52	28	(12)	53	122	80	(21)	67
54	30	(12)	54	124	82	(21)	67
56	32	(12)	56	126	84	(21)	67
58	34	(12)	58	128	84	(22)	67
60	36	(12)	59	130	86	(22)	67
62	38	(12)	60	132	88	(22)	67
64	38	(13)	60	134	90	(22)	67
66	40	(13)	60	136	90	(23)	67
68	42	(13)	60	138	92	(23)	67
70	42	(14)	60	140	94	(23)	68
72	44	(14)	61	142	94	(24)	68
74	46	(14)	62	144	96	(24)	68
76	48	(14)	62	146	98	(24)	68
78	48	(15)	62	148	100	(24)	68
80	50	(15)	62	150	100	(25)	68
82	52	(15)	63	152	102	(25)	68
84	54	(15)	63	154	104	(25)	68
86	54	(16)	63	156	104	(26)	68
88	56	(16)	64	158	106	(26)	68
90	58	(16)	64	160	108	(26)	68
				180	122	(29)	68

D

This schedule sets out the specification for Quota Quality Logs in Urbenville, Murwillumbah, Casino, Richmond Range, Ewingar, Tenterfield Tablelands, Tenterfield Slopes, Glen Innes, Grafton Coastal, Grafton Inland, Bom Bom, Dorrigo Central, Dorrigo West, Coffs Harbour, Styx and Walcha Price Zones.

SPECIES

All species of the genera Eucalyptus, Corymbia, Lophostemon, Syncarpia suitable for sawmilling and meeting the specifications for size and defect set out hereunder.

MINIMUM LOG SIZE

Centre Diameter Under Bark (CDUB): 40 centimetres

Small End Diameter Under Bark (SEDUB): 30 centimetres

Large End Diameter Under Bark (LEDUB): 41 centimetres

Length: 2.6 metres

MAXIMUM DEFECT BY LOG DIAMETER

Log Diameter (Cm)	Maximum Pipe (cm)	Maximum Defect % (Including Length Allow.)
<20	0	25
20	0	25
22	2	25
24	4	27
26	6	30
28	8	33
30	10	36
32	12	38
34	14	41
36	16	44
38	18	46
40	20	49
42	22	51
44	24	52
46	26	53
48	26	54
50	28	55
52	30	56
54	32	57
56	32	57
58	34	58
60	36	59
62	38	60
64	38	60
66	40	60
68	42	60
70	42	60
72	44	61
74	45	62
76	48	62
78	48	62
80	50	62
82	52	63
84	54	63
86	54	63
88	55	64
90	58	64
92	58	64
94	60	64
96	62	65
98	64	65
100	64	65
110	72	65

Log Diameter (Cm)	Maximum Pipe (cm)	Maximum Defect % (Including Length Allow.)
120	80	67
130	86	67
140	94	68
150	100	68
160	108	68

E

This schedule sets out the specification for **Small Logs** in all Price Zones, except for **Bulahdelah, Kendall, Coopernook and Taree**.

SPECIES

All species of the genera *Eucalyptus*, *Corymbia*, *Lophostemon*, *Syncarpia* suitable for sawmilling and meeting the specifications for size and defect set out hereunder.

MINIMUM LOG SIZE

Centre Diameter Under Bark (CDUB): 30 centimetres

Length: 3.0 metres

MAXIMUM DEFECT BY LOG DIAMETER

Log or End Diameter (cm)	Maximum Pipe (cm)	Maximum Defect % (Including Length Allowance)
24	Solid	25
26	Solid	25
28	2	26
30	6	29
32	8	31
34	12	35
36	14	39
38	16	42
40	18	44
42	20	47
44	22	49
46	24	51
48	26	51
50	26	52

SCHEDULE 2

165,000 cubic metres of Quota Quality Logs (subject to Clause 6.2)

Supply Zone	Maximum Allocation (Quota Quality Logs)	% of Production (Quota Quality Logs)
2	55,000	72%
3	95,000	88%
4	15,000	52%

SCHEDULE 3

*Plan of:
Supply Zones 1-6 inclusive;
Management Areas;
and
Price Zones*

SCHEDULE 4

State Forests' Code of Procedure



**CONTRACTOR CODE OF
PROCEDURE
FOR
NATIVE FOREST MILL DOOR
SALES**

**NORTH EAST, MID NORTH COAST AND HUNTER
REGIONS**

NOVEMBER 2002

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

TABLE OF CONTENTS

SECTION 1: MEASURING AND MARKING OF LOG PRODUCTS.....	1
1.1 MEASURING OF LOG PRODUCTS	1
1.2 MARKING OF LOG PRODUCTS	2
1.2.1 <u>Log Product Code</u>	2
1.2.2 <u>Species Code</u>	3
1.2.3 <u>Log Branding</u>	4
1.2.4 <u>Log Marking Format</u>	5
SECTION 2: DELIVERY DOCKETS.....	6
2.1 ISSUE OF DELIVERY DOCKETS	6
2.2 COMPLETION OF DELIVERY DOCKETS	7
2.3 DELIVERY DOCKET DISTRIBUTION	7
2.4 CUSTOMER RECEIPT OF DELIVERY	8
2.5 MULTIPLE DROPS	8
2.6 DOCKET ERRORS.....	8
2.7 DELIVERY OUTSIDE OF NORMAL DELIVERY HOURS	9
2.8 AUDIT PROCEDURES.....	9
SECTION 3: SALE BY WEIGHT	10
3.1 SALE BY WEIGHT USING TRUCK SCALES.....	10
3.1.1 <u>Tare Weight</u>	10
3.1.2 <u>Routine Weighing</u>	10
3.1.3 <u>Verification of Truck Scales and Audit Procedures</u>	11
3.1.4 <u>Inoperable Truck Scales</u>	12
3.2 SALE BY WEIGHT USING WEIGHBRIDGES	12
SECTION 4: DISPUTED LOGS	13
SECTION 5: DEFINITION OF TERMS.....	14

1. Section 1: Measuring and Marking of Log Products

1.1 Measuring of Log Products

1.1.1 Volume Sales

The Harvesting Contractor must ensure that Log Products which are sold by volume are measured in accordance with Table 1.

Table 1 : Log Measurement

PRODUCT	LENGTH	DIAMETER
Quota, smalls, veneer, and salvage (where sold by volume)	Actual length in decimetres rounded down to the next whole decimetre	Centre diameter underbark to the backward centimetre
Standard poles	Nominal length in decimetres rounded down to multiple of 15 decimetres	Groundline diameter underbark in millimetres
Piles and girders	Actual length in decimetres rounded down to the next whole decimetre	Toe diameter underbark in millimetres
Export poles	Nominal length in decimetres	Groundline diameter underbark in millimetres

1.1.2 Weight Sales

Salvage logs (except when sold by volume) and pulpwood are the only products sold by weight. Weight sales are sold using either weighbridge or truck scale measurements.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

1.2 Marking of Log Products

1.2.1 Log Product Code

The Harvesting Contractor must ensure that all logs are marked on one end using paint or crayon with the appropriate log product code in accordance with Table 2.

Table 2: Log Product Code

PRODUCT	CODE
Quota	O
Veneer	Ø
Face Veneer	F
Poles	P
Piles	I
Export Poles	E
Girders	G
Graded Smalls/Thinnings	T
Sleeper	S
Salvage	Z
Pulpwood	DOT If >25cms Butt Diameter

In special cases, quota and small logs of individual species may be downgraded in some Price Zones where the net wood quality of the significant majority of logs is below that normally expected of that species.

Downgrading can only take place with State Forests prior approval and is Price Zone specific.

Downgraded logs are still graded as the same log product but to distinguish them, are marked with a "D". Downgraded logs should be marked with a "D" before the relevant product code, ie "DO" for downgraded quota and "DT" for downgraded small logs.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

1.2.2 Species Code

The Harvesting Contractor must ensure that the species code is branded on logs in accordance with Table 3.

Table 3 : Species Code

SPECIES CODE	DELIVERY DOCKET SYMBOL	SPECIES
1	IBK	Ironbark
2	TWD	Tallowwood
3	GBX	Grey Box
4	BG	Blue Gum
5	STS	Silvertop Stringybark
6	SG	Spotted Gum
7	NEB	New England Blackbutt
8	BBT	Blackbutt
9	RM	Red Mahogany
10	MM	Messmate
11	FAS	Fastigata
12	VIM	Viminalis
13	DHS	Diehard Stringybark
14	BBX	Brushbox
15	TRP	Turpentine
16	GG	Grey Gum
17	WM	White Mahogany
18	WS	White Stringybark
19	FG	Flooded Gum
20	RG	Forest Red Gum
21	RLG	Round Leaf Gum (<i>Euc. deanei</i>)
22	NOT TO BE USED	
23	BLW	Bloodwood
24	BLS	Blue Leaf Stringybark
25	PEP	Peppermint
26	QBX	Whitetopped box
27	RUM	Steel Box
28	SBA	Smoothbark Apple
29	SCG	Scribbly Gum
30	WG	White Gum (<i>Euc. Dunnii</i>)
31	YBX	Yellow Box
32	GMM	Gympie Messmate
33	SM	Swamp Mahogany

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

1.2.3 Log Branding

The Harvesting Contractor must ensure that all log products are branded in accordance with Table 4 below:

Table 4 : Log Branding

ITEM TO BE BRANDED	SALE BY VOLUME	SALE BY WEIGHT		
	All products	Salvage Native Forest	Salvage Plantation	Pulpwood
Length	Yes	Not Required	Not Required	Not Required
Diameter	Yes Not on export poles	Not Required	Not Required	Not Required
Species Code	Yes	Not required for logs <25cms butt diameter and not for BBT in MNC	Not required unless species is different from that recorded on docket	Not Required Unless required by customer
Compartment Number	Yes	Not Required	Not Required	Not Required
Log Graders Id	Yes	Yes Except for logs < 25cm butt diameter	Yes Except for logs < 25cm butt diameter	Yes Except for logs < 25cm butt diameter

Note that all logs, irrespective of quality and sales method (except for salvage logs and pulpwood sold by weight with a butt diameter < 25cms as indicated in Table 4) must be branded with the identification number of the log grader.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

1.2.4 Log Marking Format

The Harvesting Contractor must ensure that logs are branded on one end in the format shown in Figure 1 below. The Product code may be placed around or over the branded items.

Figure 1 - Log Marking Format



** Salvage logs and pulpwood sold by weight with a butt diameter < 25cms as indicated in Table 2 only requires the product code except where a customer requires the species code.

Where a log is multi-graded, ie two products in the one log, both sets of measurements including the product code are to be marked on the **same** end of the log.

Figure 2 - Log Marking Format – Multi-graded Logs



Section 2: Delivery Dockets

2.1 Issue of Delivery Dockets

Delivery Dockets will be supplied by State Forests at State Forests' cost. Dockets will be printed in quadruplicate and will be sequentially numbered.

State Forests will issue Delivery Docket books to the Harvesting Contractor in a sequential series of books.

The Harvesting Contractor is responsible for ensuring that sufficient stocks of Delivery Docket books are maintained and allocated in a sequential manner.

In the event of a Delivery Docket book that has been commenced not being used for one calendar month, the Harvesting Contractor must submit to State Forests a nil return by marking "Nil Return" on the next available Delivery Docket.

The Harvesting Contractor must ensure that Delivery Docket books and Delivery Dockets are maintained in safe locations, kept in good condition and available for inspection by State Forests at all times.

The Quadruplicate copy of the completed Delivery Docket must be retained by the Harvesting Contractor.

In the event of a partly used docket book being misplaced or destroyed, the Harvesting Contractor must submit a written declaration to State Forests stating the number of completed Delivery Dockets involved and, where known, any information contained thereon.

In the event of an individual docket being misplaced, cancelled or destroyed, prior to being picked up from the loading site by the Haulage Contractor, the Harvesting Contractor must submit a written declaration to State Forests stating the number of the Delivery Docket and any information contained there on.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

2.2 Completion of Delivery Dockets

The Haulage Contractor must ensure that, prior to departure from the Loading Site, the following details are completed on the Delivery Docket:

- i) Customer/Location
- ii) Date
- iii) Time
- iv) Region
- v) State forest
- vi) Harvesting Plan No
- vii) Age Class (where relevant)
- viii) Compartment
- ix) Stack (where relevant)
- x) Operation Type
- xi) Product
- xii) Grade
- xiii) Length (where relevant)
- xiv) Diameter (where relevant)
- xv) Count
- xvi) Harvest, Load and Haulage Contractor
- xvii) Truck & Trailer Registration Number
- xviii) Truck Type
- xix) Name of Truck Driver and Log Grader,
- xx) Gross, Tare and Net Weight (where weight sales are by truck scales) Tare weight will be predetermined at the commencement of each quarter on the basis of a certified weighbridge).

Where logs are to be accounted for by volume, the following additional details must be recorded for each log on the load:

- Length
- Diameter (refer to Table 1)
- Species Code (refer to Table 3)
- Product Code (refer to Table 4)

In the case of non-standard export poles, the length, the number of poles of that length and the product code must be entered on the Delivery Docket.

2.3 Delivery Docket Distribution

The Haulage Contractor is responsible for picking up completed Original, Duplicate and Triplicate copies of Delivery Dockets from the Loading Site and distributing them in the following manner:

ORIGINAL – The Original copy must be forwarded to State Forests' Regional Office;

- within one working day of the end of each week (ie close of business Monday unless a public holiday),
- within one working day of the end of each calendar month.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

- In lieu of the above, where requested by State Forests, a facsimile or scanned copy must be forwarded to State Forests' Regional Office within:
- one working day of the end of each week (Close of business Monday unless public holidays apply); and
- one working day of the last day of each Calendar Month.
- Where facsimile or faxed copies are requested by State Forests, the original must be forwarded by mail and postmarked on the same day.

DUPLICATE – The Duplicate copy must be retained by the Customer (eg. sawmiller);

TRIPLICATE - The Triplicate marked Haulage Contractor copy must be retained by the Haulage Contractor;

The **Quadruplicate** marked Harvesting Contractor copy, must be retained by the Harvesting Contractor.

In the event of individual dockets being misplaced or destroyed after being picked up from the Loading Site, the Haulage Contractor must submit a written statutory declaration to State Forests stating the number of the Delivery Docket involved and, where known, any information contained there on.

2.4 Customer Receipt of Delivery

Upon delivery of a load of logs at the Delivery Site the Haulage Contractor's driver must arrange for the Delivery Docket to be signed, dated and marked with the time of delivery by the Company's representative. This signature will verify the load was received and that the Gross Weight (where relevant) has been verified.

2.5 Multiple Drops

Where a load is to be delivered to more than one destination (multiple drop) a separate docket must be completed for each customer. Prior to leaving the Loading Site, an approval for the double drop must be obtained from a State Forests Officer and the approval number written at the top of the of the each Delivery Docket.

2.6 Docket Errors

In the case of an error being made on the Delivery Docket, and the error is identified prior to delivery to the Delivery Site, mistakes must be crossed out and corrected with all changes initialled by the truck driver.

In the event of a Delivery Docket error (other than errors relating to log grade) being identified at the Delivery Site prior to the truck which delivered the load departing the site, the necessary amendment must be made on the Delivery Docket and such changes initialled by the Company's representative and the truck driver.

Errors relating to log grade are to be treated as a disputed log as these changes can only be made by a State Forests Officer – refer to Section 4.

2.7 Delivery outside of normal delivery hours

On the occasions where a mill representative is not available when the load is delivered and where specific arrangements have been made for delivery outside of normal delivery hours, the Haulage Contractor may unload the timber and leave the duplicate copy of the Delivery Docket at a predetermined location.

These loads must be placed separately from other loads and clearly marked by the Haulage Contractor with the docket number, so as to enable its identification by a Company representative.

All details of the Delivery Docket will be completed by the Haulage Contractor except for the signature of the Company representative.

By no later than the 3.00 pm on the first working day following delivery, a Company representative will sign the mill copy of the Delivery Docket and fax it to the relevant Haulage Contractor. The Haulage Contractor will then be responsible for attaching the signed faxed copy, to the original Delivery Docket and forwarding it to State Forests.

2.8 Audit Procedures

State Forests will, from time to time, undertake random sample checks of the following nature:

- checks of Delivery Dockets for correctness/completeness and check-measures of log dimensions either at the Loading Site, enroute to the sawmill or in the mill yard;
- random observation checks of registration numbers of loaded log trucks for reconciliation with submitted Delivery Dockets.

The Haulage Contractor will, from time to time, undertake random sample checks of Delivery Dockets for correctness/completeness enroute to the sawmill or in the mill yard and submit these to State Forests as the basis of performance monitoring.

Section 3: Sale by Weight

3.1 Sale by Weight Using Truck Scales

Where logs are to be accounted for by weight as measured by truck scales, the following procedure must be followed:

3.1.1 Tare Weight

The tare weight of each truck/trailer combination delivering logs using the truck scale system will be calculated by State Forests from tare weight certificates provided by the Haulage Contractor. The tare weight certificates must be obtained from a weighbridge, which has current certification by the NSW Department of Fair Trading in the presence of a State Forests Officer.

Haulage Contractors must submit tare weight certificates to State Forests before commencing delivery and at quarterly intervals throughout the year. Tare weight certificates are to clearly identify the truck and trailer combination by make, model, registration number and or serial no. of each unit. Any changes to truck / trailer configurations will necessitate the obtaining of a new tare certificate.

Tare weights are to be measured using the normal running truck and trailer configuration (ie all bolsters, spare tyres and chains), full tank of fuel and driver in the cabin. At the time of weighing the fuel capacity of the truck fuel tanks will be identified and agreed to with SFNSW. Amended tare weights for each truck/trailer combination will be calculated using a specific density conversion factor of diesel fuel, to recalculate the tare weight of the truck with fuel tanks at 50% capacity. The amended tare weight will be used for all Delivery Docket entries.

SFNSW will affix a sticker to the truck dashboard, identifying the truck/trailer combination and the tare weight to be used on Delivery Dockets.

3.1.2 Routine Weighing

Prior to the departure from the Loading Site each truckload of logs shall have the relevant details including the source of the logs recorded on a Delivery Docket. In addition the tare weight of the truck shall be recorded on the Delivery Docket.

The truck, following loading at the dump, is required to stop at the next available level and firm site, so that the gross weight can be determined. The time required before an accurate gross weight can be determined from the truck scales varies but generally is advised to be 5 minutes.

The gross weight and the calculated net weight shall then be recorded on the Delivery Docket. The site on which the gross weight is determined must be within 1Km of the log dump, unless otherwise negotiated with a State Forests Officer.

On arrival at the customer/location and prior to the commencement of unloading, the truck driver must request the Company to verify the gross weight recorded on the delivery docket by comparing it to that shown on the truck scales.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

If the difference between the gross weight recorded on the Delivery Docket and the gross weight shown on the truck scales at the Delivery Site is greater than one percent (of the gross weight recorded on the Delivery Docket), the gross weight shown at the Delivery Site shall be recorded on the Delivery Docket. The initial gross weight recorded in the forest shall be deleted.

Any change to the gross weight resulting from the verification at the Delivery Site in accordance with the above will require the resultant net weight to be altered. Any such changes to the gross weight and net weight must be initialled by both the truck driver and a Company representative.

Where a full load of one product is not available the load may be made up with another Log Product. In this case an interim gross weight is recorded after the first product has been loaded and the final gross weight after both products have been loaded. Both the gross weights and the net weights of each product must be clearly indicated on separate Delivery Dockets. No more than two Log Products per load may be carried.

If one product is sold by log volume rather than weight, the measurements of each log of that product is to be recorded on a separate delivery docket.

3.1.3 Verification of Truck Scales and Audit Procedures

The Haulage Contractor must ensure that each truck obtains a weighbridge docket to verify the Gross Weight of one load each month. The weighbridge docket is to be attached to the original copy of the Delivery Docket.

Truck scale weights as read at the weighbridge which are inconsistent with weighbridge recordings for gross weight by more than one percent must have weighbridge dockets attached to the Delivery Docket of every subsequent load until the required level of accuracy is obtained.

In the event that the truck scales are not verified to be within one percent of the weighbridge reading the gross weight recorded by the weighbridge will be used for accounting purposes. Otherwise the weights recorded on the Delivery Docket will be used.

Where a full load of one product is not available, the load may be made up with another Log Product. In this case, an interim gross weight is recorded after the first product has been loaded and the final gross weight after both products have been loaded. Both the gross weights and the net weights of each product must be clearly indicated on separate Delivery Dockets. No more than two Log Products per load may be carried.

If one product is sold by log volume rather than weight, the measurements of each log of that product are to be recorded on a separate Delivery Docket.

State Forests may direct any load to be checked on a certified weighbridge at any time. Where the variation in gross weight as measured by truck scales and as measured by public weighbridge exceeds +/- 1%, the certified weighbridge measurement will be accepted and the weighbridge docket attached to the original copy of the Delivery Docket for forwarding to State Forests by the Haulage Contractor.

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

3.1.4 Inoperable Truck Scales

If truck scales become inoperable or inaccurate, alternate methods of accounting for the load will be made between State Forests and the Haulage Contractor.

Alternate methods of accounting may include weighbridge measure or log volume measure.

3.2 Sale by Weight Using Weighbridges

The gross weight of the truck, trailer and load is to be recorded on an approved printed docket on arrival at the Delivery Site.

The tare weight of the truck and the trailer and the net weight of the load is to be printed on the docket referred to above following the unloading of the truck. The tare weight, gross weight and net weight are to be recorded on the Delivery Docket and a copy of the weighbridge docket is to be attached to the original copy of the Delivery Docket.

Section 4: Disputed Logs

- 4.1 A disputed log is a log where the Company disagrees with either the log details or the grade of the whole or part of the log. A log may also become a disputed log if the log details are entered on the docket in error and this was not detected and corrected prior to the Haulage Contractor leaving the Delivery Site.
- 4.2 The Company, if disagreeing with the log details or the grade, must notify State Forests of the disputed log within five (5) business days of the delivery of the log.
- 4.4 A State Forests Officer will inspect the log within five (5) working days of being notified.
- 4.5 Where the State Forests Officer determines that the disputed timber fails to meet the Specifications and a change to log details is required, action as determined in Table 5 will occur.
- 4.6 Where the State Forests Officer determines that the disputed timber fails to meet the Specifications and the customer refuses to accept the log, State Forests will request the Harvesting contractor to arrange for the log to be picked up and delivered to an alternative delivery site. Where this is not practical, State Forests will make those arrangements. Any logs so redirected will require a new Delivery Docket to cover the delivery as set out in this Code. The action required is set out in Table 5.
- 4.7 Any dispute over a decision made by a State Forests Officer regarding disputed logs, should be referred to the Log Supply Manager whose decision shall be final.

Table 5 - Disputed log actions

DOCKET OR LOG GRADING ISSUES		ACTIONS					
Problem	Details	Re-hammer and brand log	Complete 'Assessment of Disputed Logs' form	Arrange to shift log(s)	Complete a new docket	Recalculation of payment to harvesting contractor	Recalculation of payment to haulage contractor
Docket	Log measurement information incorrect		Yes			Yes	Yes
	Load weight information incorrect		Yes			Yes	Yes
	Logs incorrectly tallied		Yes			Yes	Yes
Log Branding	Incorrect branding	Yes	Yes			Yes	
Regrading	Change grade or reject	Yes	Yes			Yes	
	Re-servicing	Yes	Yes			Yes	
Redirection	Redirected following regrading	Yes	Yes	Yes	Yes	Yes	
	Delivery to incorrect location by haulier			Yes	Yes		Yes
	Rejects loaded and delivered by haulier		Yes	Yes	Yes	Yes	Yes

CONTRACTOR CODE OF PROCEDURE – NATIVE FOREST MILL DOOR SALES

Section 5: Definition of Terms

Customer	: Means the principle of a sawmill or other processing plant to which the log products entered upon a Delivery Docket are to be delivered
Delivery Docket	: Means a sequentially numbered docket for recording the details of each truck load of logs as set out in Clause 1.3
State Forests	: Means the State Forest Regional Office of the Region from which the load was obtained.
Loading Site	: Means the point from which log product is loaded onto a haulage vehicle
Log Supply Manager	Means the person responsible for the log supply to customers in each region
State Forests Officer	: Means an employee of State Forests
Harvesting Contractor OR Haulage Contractor	: Means the Contractor referred to in the Harvesting Agreement or Haulage Agreement to which this Code is appended

SCHEDULE 5

Price Schedule

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Bom Bom Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003								
Species		25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm	70+cm
Blackbutt	\$									
Blue Gum	\$									
Diehard Stringybark	\$									
Flooded Gum	\$									
Grey Box	\$									
Grey Gum	\$									
Ironbark	\$									
Forest Redgum	\$									
Messmate	\$									
Red Mahogany	\$									
Spotted Gum	\$									
Silvertop Stringybark	\$									
Tallowwood	\$									
White Mahogany	\$									
White Stringybark	\$									

Cofts Harbour Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003								
Species		25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm	70+cm
Blackbutt	\$									
Brush Box	\$									
Blue Gum	\$									
Bloodwood	\$									
Diehard Stringybark	\$									
Flooded Gum	\$									
Grey Box	\$									
Grey Gum	\$									
Ironbark	\$									
Messmate	\$									
New England BBT	\$									
Red Mahogany	\$									
Smooth Bark Apple	\$									
Spotted Gum	\$									
Silvertop Stringybark	\$									
Turpentine	\$									
Tallowwood	\$									
Viminalis	\$									
White Gum	\$									
White Mahogany	\$									
White Stringybark	\$									

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Casino Coastal Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003								
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm	70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Flooded Gum	\$								
Grey Box	\$								
Grey Gum	\$								
Ironbark	\$								
Forest Redgum	\$								
New England BBT	\$								
Red Mahogany	\$								
Red Stringybark	\$								
Scribbly Gum	\$								
Spotted Gum	\$								
Silvertop Stringybark	\$								
Steel Box	\$								
Turpentine	\$								
Tallowwood	\$								
White Gum	\$								
White Mahogany	\$								
White Stringybark	\$								

Dorrigo West Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003								
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm	70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Diehard Stringybark	\$								
Fastigata	\$								
Flooded Gum	\$								
Grey Box	\$								
Grey Gum	\$								
Ironbark	\$								
Messmate	\$								
New England BBT	\$								
Whitetop Box	\$								
Red Gum	\$								
Roundleaf Gum	\$								
Red Mahogany	\$								
Spotted Gum	\$								
Silvertop Stringybark	\$								
Turpentine	\$								
Tallowwood	\$								
Viminalis	\$								
White Mahogany	\$								
White Stringybark	\$								

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Dorrigo Central Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species		25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm 70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Diehard Stringybark	\$								
Fasligala	\$								
Flooded Gum	\$								
Grey Box	\$								
Grey Gum	\$								
Ironbark	\$								
Messmate	\$								
New England BBT	\$								
Whitlop Box	\$								
Forest Redgum	\$								
Roundleaf Gum	\$								
Red Mahogany	\$								
Scribbly Gum	\$								
Steel box	\$								
Spotted Gum	\$								
Silvertop Stringybark	\$								
Turpentine	\$								
Tallowwood	\$								
Viminalis	\$								
White Gum	\$								
White Mahogany	\$								
White Stringybark	\$								
Yellow Box	\$								

Ewengar WC Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species		25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm 70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Flooded Gum	\$								
Grey Box	\$								
Grey Gum	\$								
Ironbark	\$								
Messmate	\$								
New England BBT	\$								
Forest Red Gum	\$								
Red Mahogany	\$								
Red Stringybark	\$								
Spotted Gum	\$								
Turpentine	\$								
Tallowwood	\$								
White Mahogany	\$								
White Stringybark	\$								

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Glen Innes Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species		25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm 70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Diehard Stringybark	\$								
Fastigata	\$								
Grey Box	\$								
Grey Gum	\$								
Messmate	\$								
New England BBT	\$								
Peppermint	\$								
Forest Redgum	\$								
Red Mahogany	\$								
Steel Box	\$								
Roundleaf Gum	\$								
Silvertop Stringybark	\$								
Tallowwood	\$								
Viminalis	\$								
White Mahogany	\$								
White Stringybark	\$								

Grafton Inland Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species		25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm 70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Diehard Stringybark	\$								
Flooded Gum	\$								
Grey Box	\$								
Grey Gum	\$								
Ironbark	\$								
Messmate	\$								
New England BBT	\$								
Forest Redgum	\$								
Red Mahogany	\$								
Steel Box	\$								
Spotted Gum	\$								
Silvertop Stringybark	\$								
Turpentine	\$								
Tallowwood	\$								
Viminalis	\$								
White Gum	\$								
White Mahogany	\$								
White Stringybark	\$								

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Grafton Coastal Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003								
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm	70+cm
Blackbutt	\$								
Brush Box	\$								
Blue Gum	\$								
Bloodwood	\$								
Diabard Stringybark	\$								
Flooded Gum	\$								
Gray Box	\$								
Gray Gum	\$								
Ironbark	\$								
Messmate	\$								
New England BBT	\$								
Forest Redgum	\$								
Red Mahogany	\$								
Scribbly Gum	\$								
Steel Box	\$								
Spotted Gum	\$								
Silvertop Stringybark	\$								
Turpentine	\$								
Tallowwood	\$								
Viminalis	\$								
White Gum	\$								
White Mahogany	\$								
White Stringybark	\$								

Murwillumbah Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003								
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm	70+cm
Blackbutt	\$								
Brushbox	\$								
Blue Gum	\$								
Bloodwood	\$								
Flooded Gum	\$								
Grey Gum	\$								
Ironbark	\$								
Forest Redgum	\$								
Red Mahogany	\$								
Tallowwood	\$								
Turpentine	\$								
White Mahogany	\$								
White Stringybark	\$								

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Richmond Range WC Price Zone

Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003	
Species	25-28cm 30-31cm 32-33cm 34-35cm 36-37cm 38-39cm 40-49cm 50-69cm 70+cm
Blackbutt	\$
Brush Box	\$
Blue Gum	\$
Bloodwood	\$
Flooded Gum	\$
Gray Box	\$
Gray Gum	\$
Ironbark	\$
New England BBT	\$
Forest Redgum	\$
Red Mahogany	\$
Roundleaf Gum	\$
Steel Box	\$
Spotted Gum	\$
Turpentine	\$
Tallowwood	\$
White Gum	\$
White Mahogany	\$
White Stringybark	\$

Styx Price Zone

Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003	
Species	25-29cm 30-31cm 32-33cm 34-35cm 36-37cm 38-39cm 40-49cm 50-69cm 70+cm
Brush Box	\$
Blue Gum	\$
Mountain Gum	\$
Oldhard Stringybark	\$
Fastigata	\$
Flooded Gum	\$
Gray Box	\$
Gray Gum	\$
Ironbark	\$
Massmate	\$
New England BBT	\$
Whitetopped Box	\$
Forest Redgum	\$
Red Mahogany	\$
Spotted Gum	\$
Silvertop Stringybark	\$
Turpentine	\$
Tallowwood	\$
Viminalis	\$
White Mahogany	\$
White Stringybark	\$

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Tenterfield Slopes Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm
Blackbutt	\$							
Brush Box	\$							
Blue Gum	\$							
Bloodwood	\$							
Diehard Stringybark	\$							
Fasligala	\$							
Gray Box	\$							
Gray Gum	\$							
Ironbark	\$							
Messmate	\$							
New England BBT	\$							
Forest Redgum	\$							
Roundleaf Gum	\$							
Red Mahogany	\$							
Red Stringybark	\$							
Spotted Gum	\$							
Silvertop Stringybark	\$							
Tallowwood	\$							
White Mahogany	\$							
White Stringybark	\$							

Tenterfield Tablelands Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-69cm
Blackbutt	\$							
Brush Box	\$							
Blue Gum	\$							
Bloodwood	\$							
Diehard Stringybark	\$							
Gray Box	\$							
Gray Gum	\$							
Ironbark	\$							
Messmate	\$							
New England BBT	\$							
Roundleaf Gum	\$							
Red Mahogany	\$							
Spotted Gum	\$							
Silvertop Stringybark	\$							
Tallowwood	\$							
Viminalis	\$							
White Mahogany	\$							
White Stringybark	\$							

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Urbenville Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-59cm
Blackbutt	\$							
Brush Box	\$							
Blue Gum	\$							
Bloodwood	\$							
Brown Stringybark	\$							
Diehard Stringybark	\$							
Flooded Gum	\$							
Grey Box	\$							
Grey Gum	\$							
Ironbark	\$							
New England BBT	\$							
Forest Redgum	\$							
Red Mahogany	\$							
Red Stringybark	\$							
Steelbox	\$							
Spotted Gum	\$							
Silvertop Stringybark	\$							
Turpenline	\$							
Tallowwood	\$							
White Gum	\$							
White Mahogany	\$							
White Stringybark	\$							
Yellow Box	\$							

Urunga Coastal Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-49cm	50-59cm
Blackbutt	\$							
Brush Box	\$							
Blue Gum	\$							
Bloodwood	\$							
Diehard Stringybark	\$							
Flooded Gum	\$							
Grey Box	\$							
Grey Gum	\$							
Hardwood	\$							
Ironbark	\$							
Messmate	\$							
New England BBT	\$							
Forest Redgum	\$							
Red Mahogany	\$							
Spotted Gum	\$							
Silvertop Stringybark	\$							
Turpenline	\$							
Tallowwood	\$							
Viminales	\$							
White Gum	\$							
White Mahogany	\$							
White Stringybark	\$							

SCHEDULE 6
Stumpage Price Schedule
To 30 September 2003

Urunga Upriver Price Zone

		Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003					
Species		25-29cm	30-34cm	35-39cm	40-44cm	45-49cm	50-54cm
Blackbutt	\$						
Brush Box	\$						
Blue Gum	\$						
Bloodwood	\$						
Flooded Gum	\$						
Grey Gum	\$						
Hardwood	\$						
Ironbark	\$						
Massmate	\$						
New England Blackbutt	\$						
Forest Redgum	\$						
Red Mahogany	\$						
Smoothbark Apple	\$						
Spotted Gum	\$						
Turpenline	\$						
Tallowwood	\$						
White Mahogany	\$						
White Stringybark	\$						

SCHEDULE 5
Stumpage Price Schedule
To 30 September 2003

Walcha Price Zone

	Stumpage prices in Australian dollars per cubic metre, for specific centre diameter underbark size classes, exclusive of the Goods and Services Tax and exclusive of Delivery Charges, to apply until 30 September 2003							
Species	25-29cm	30-31cm	32-33cm	34-35cm	36-37cm	38-39cm	40-41cm	42-43cm
Blackbutt	\$							
Brush Box	\$							
Blue Gum	\$							
Blueleaf Stringybark	\$							
Bloodwood	\$							
Mountain Gum	\$							
Oldfield Stringybark	\$							
Fastigata	\$							
Flooded Gum	\$							
Grey Box	\$							
Grey Gum	\$							
Ironbark	\$							
Monkey Gum	\$							
Messmate	\$							
New England BBT	\$							
Whitetopped Box	\$							
Forest Redgum	\$							
Red Mahogany	\$							
Spotted Gum	\$							
Silvertop Stringybark	\$							
Turpentine	\$							
Tallowwood	\$							
Viminalis	\$							
White Gum	\$							
White Mahogany	\$							
White Stringybark	\$							

SCHEDULE 6

Approved form of Unconditional Undertaking (Clause 24)

At the request ofACN('the Companies')
and in consideration of .State Forests('the Principal')
accepting this undertaking in respect of the Hardwood Timber Term Agreement for
.....('the Agreement')
.....ACN.....('the Financial Institution')
unconditionally undertakes to pay on demand any sum or sums which may from time to time be
demanded by the Principal to a maximum aggregate sum of \$.....
(.....).

The undertaking is to continue until notification has been received from the Principal that the sum is no longer required by the Principal or until this undertaking is returned to the Financial Institution or until payment to the Principal by the Financial Institution of the whole of the sum or such part as the Principal may require.

Should the Financial Institution be notified in writing, purporting to be signed by a delegate for and on behalf of the Principal that the Principal desires payment to be made of the whole or any part or parts of the sum, it is unconditionally agreed that the Financial Institution will make the payment or payments to the Principal forthwith without reference to the Companies and notwithstanding any notice given by the Companies not to make payment.

Provided always that the Financial Institution may at any time without being required so to do pay to the Principal the sum of \$.....
(.....)
less any amount or amounts it may previously have paid under this undertaking or such lesser sum as may be required and specified by the Principal and thereupon the liability of the Financial Institution hereunder shall immediately cease.

This undertaking will expire on the day of 20....

DATED atthis day of 20....

SCHEDULE 7

Delivery Hours

Koolkhan 6:30am - 3:30pm Monday to Thursday
6:30am - 1:00 pm Friday

Bostobrick 6:30am - 3:30pm Monday to Thursday
6:30am - 1:00pm Friday

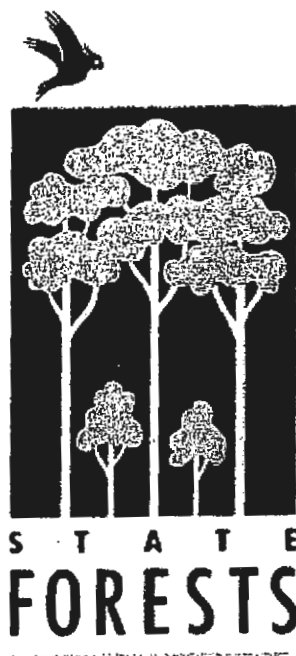
Kempsey 6:30am - 3:30pm Monday to Thursday
6:30am - 12:30pm Friday

Heron's Creek 6:55am - 3:30pm Monday to Thursday
6:55am - 1:00pm Friday

Delivery outside of the above hours will be by prior agreement with the Companies.

SCHEDULE 8

Hardwood Log Measurement Manual



HARDWOOD LOG MEASUREMENT MANUAL

NORTH EAST, MID NORTH COAST AND HUNTER REGIONS

1 JANUARY 2002

FOREWORD

The Hardwood Log Measurement Manual (1996) was originally prepared in 1995 and based primarily on earlier versions of "local" manuals.

The Manual was adopted by the coastal hardwood Regions of State Forests of NSW as an accepted uniform basis for hardwood log measurement and reviewed by the FPA and Boral Pty Ltd. The only variation between Regions is the Compulsory Utilisation Schedules - which are regionally based.

The Manual was the basis for courses presented on Log Measurement to State Forests' and industry personnel in the above Regions.

CONTENTS

	Page
• INTRODUCTION AND PURPOSE	1
• HISTORY OF LOG MEASUREMENT	
• The Gross Hoppus System	2
• Metric and True Measurement	2
• Flat Rate Log Sales	2
• Log Value Pricing System	3
• Importance of Grading Logs	4
• LOG MEASUREMENT	
1. Gross Dimensions	5
1.1 Log Length	5
1.2 Log Diameter	7
1.2.1 Ropy Logs	8
1.2.2 Sun-cracked Logs	8
1.2.3 Half (split) Logs	9
1.3 Log Volume	9
1.4 Agents for Measurement	10
1.5 Common Measurement Errors	10
2. Defect Assessment	
2.1 General	11
2.2 Pipe Defects	12
2.2.1 Open Pipe	16
2.2.2 Discontinuous and Irregular Shaped Pipes (Rot doze, punk, cateye or brittle heart)	16
2.2.3 Loose Gum Veins, Gum Pockets and Rings	18
2.2.4 Termites and Grubs	21
2.2.5 Hearts out of Centre	22
2.2.6 Brown Stain	23
2.2.7 Black Borer	24
2.2.8 Black Heart	25
2.2.9 Straight Shakes	25
2.2.10 Shakes in Spiral Grain	26
2.2.11 Overgrowth and Doze Pockets	26
2.2.12 Small Log Pipe Allowances	26
2.3 Length Defects	27
2.3.1 General	27
2.3.2 Non Allowable Defects (Cutbacks)	27
2.3.3 Allowable Length Defects	28
2.3.3.1 Limbs	29
2.3.3.2 Multiple Length Defects	32
2.3.3.3 Burn Scars, Bumps and Swells	34
2.3.3.4 Kinks, Sweep and Poor Shape	35
2.3.3.5 Straight Splits	36
2.3.3.6 Curly Grain	37
2.3.3.7 Spiral Grain and Associated Splits	37

	Page
Appendix 1 – Determination of Defect Percentage.....	39
• <i>Method A - Sharp Pocket Computer Model PC-1248.....</i>	<i>39</i>
• <i>Method B - Sharp Programmable Calculator Model EL-5120.....</i>	<i>40</i>
• <i>Method C - Tables</i>	<i>41</i>
Appendix 2 – Conversion of Area to Equivalent Pipe Diameter	42

INTRODUCTION AND PURPOSE

Log measurement has always been the basis for determining volume and therefore value of logs sold to industry (although in recent years sale by weight has occurred).

In most cases only gross volume is necessary to determine value - often based on industry's log measurements.

This module's purpose is to provide:

- a reference document;
- a mechanism and aid for training;
- a means to ensure royalty returns and sustained yields are maintained; and
- a means to ensure some uniformity in approach to log measurement occurs.

Whilst gross measurements provided by industry are primarily used to determine volumes, there is a need to accurately assess the defect of logs. This need occurs both as a regular check to verify log grading assessments or to resolve log grading disputes. Hence a major component of the module will be on definition and determination of log defect - the basis for log grading.

Defect measurement practices historically are very localised. Whilst input into these uniform guidelines has been made by a number of State Forests' staff and industry, there will be a need for change and compromise by some to adopt what could be new practices in some areas.

Although providing references for defect assessment, the need for observation of milling on a regular basis cannot be over emphasised. Log quality varies from area to area and, often, log defect variations do not become obvious until logs are milled.

HISTORY OF LOG MEASUREMENT

- **The Gross Hoppus System**

This British system of log measurement was in place for many years prior to 1973. As it is no longer used, only a brief appreciation of the system is necessary.

The system determined volume on a Hoppus basis. Simply this system defined log volumes as units of wood 12" x 12" x 1". These units are defined as super feet (sft). Consequently volume was not true or actual log volume. However pipe defect (a square or rectangle) was in true measurement.

All gross log measurements were undertaken by industry, with volumes and royalty values being determined by the then Forestry Commission. This was in the pre computer era and it was a tedious process to individually calculate gross, defect and net volumes for each log.

By a stumpage appraisal system, an allowance was made for the defect contained in a log by deducting the "value" of all defect volume at the mill door.

The volume of defect was determined by a complex system of allowances for the many forms of defect found in native hardwood logs. Determination of this defect by forestry employees (usually measuring/marketing foremen) required considerable time, experience and expertise. As this measurement had considerable impact on log value, disputes with industry were common. For example, if defect reached a critical and variable pre-determined level, then the log became optional or ex-quota. As well as such a log having a low value, it was not obligatory for a sawmiller to accept it.

- **Metric and True Measurement**

In 1973, following metrication, log measurement, volume determination and thus value determination, became based on true or actual measurement. Defect measurement procedures of individual logs did not vary.

- **Flat Rate Log Sales**

From 1988 all hardwood logs sales began to be based on flat rates, ie variable rates in \$'s per m³ based on gross volume of the log.

These rates were derived from detailed analysis of past sales adjusted to reflect the anticipated log quality of areas remaining to be logged. Industry agreement was generally obtained. Rates were generally determined for at least a management area or a Region.

This system eliminated the need for defect measurement of every log. Additionally with the introduction of *Delivery Dockets*, industry determined gross log measurements and species - with random checking by State Forests' personnel. *Codes of Procedure* were agreed to covering the essential requirements of use of delivery dockets.

As the royalty return from the flat rate system was meant to equate with previous log values it was necessary to have a system to determine which logs were *Compulsory* (quota quality or *graded*) and which were *Non-compulsory* (ex-quota logs/salvage or *non-graded*) logs - based on defect. In some management areas, some small (mid diameter <40cm) quota quality or graded logs are not part of a sawmiller's quota allocation.

To ensure this equating occurred, a *Utilisation Line* was compiled - on a regional basis mainly, which determined a maximum defect for compulsory logs. Logs above this specification were compulsory logs, those below non-compulsory. This line specified the maximum pipe defect allowable for a log of any diameter. Incorporated in this calculation was an allowance for the historical level of length defect. Both these factors were determined from detailed analysis of the defect of logs cut over a period of time.

Whilst this is a maximum defect specification (which also includes minimum length and diameter specification), there is no need to determine defect for logs with defect levels well below the maximum level (except as a basis for "keeping your eye in").

However, for logs approaching the minimum specification a need exists to determine whether a log is compulsory or not. Alternatively, this calculation of defect may be required to assess whether log servicing is required. To achieve this, defect must be measured and volume (as a percentage of total gross log volume) calculated to compare with the maximum defect permissible under the *Utilisation Line* specification. This calculation has been simplified by the use of a hand held programmed computer.

A sound knowledge of defect measurement principles is necessary to undertake this comparison.

- **Log Value Pricing System**

Whilst the Flat Rate system addressed a number of serious deficiencies of the preceding sales system, both State Forests and industry recognised that it had too few categories by which to price a wide range of hardwood sawlogs. Some of the inherent anomalies of the flat rate system included inequalities between customers, inadequate recognition of variation in log quality between species and lack of response to market dynamics.

As well as the joint initiative of State Forests and industry to introduce an improved log pricing system, the Cabinet decision of September 1996 signalled the Government's intention to change the nature of the NSW native forest industry towards a more efficient, technologically advanced and economically sustainable industry driven by a requirement for all levels within the industry to maximise product value. The Government, as part of its Forest Reform Policy, gave an undertaking to introduce a new hardwood log pricing system that more realistically reflects the inherent difference between the various species, sizes and qualities of hardwood logs sold from coastal and tablelands forests in NSW.

The Log Value Pricing System was designed to provide greater differentiation of log values for graded logs to reflect the end-products recoverable from the variety of species, log sizes and log qualities available within a particular price zone. For each species and size class combination within a price zone, the stumpage price was calculated based on the inherent defect and the potential end-product mix that could be achieved.

- **Importance of Correct Grading of Logs**

This is demonstrated as follows:

(a) ROYALTY VALUE

Compulsory logs vary in value and can range from as low as \$20 per m³ to as high as \$150 per m³ for logs within specification. The average price for compulsory logs in 1996/97 was \$42. Non-compulsory logs currently average at \$12 per m³. For an average 5m³ log, if incorrectly graded as non-compulsory, State Forests stands to "lose" \$150 on that log alone. Obviously if incorrectly applied to only a small percentage of logs sold in a Region, the "loss" is magnified to a greater extent - even more so for the State. If say, 1% of the State's (less Western) hardwood quota cut of 400,000m³ was incorrectly graded as non-compulsory, then State Forests would "lose" \$120,000 royalty per year (based on \$42 per m³ average for compulsory logs).

Long serving State Forests' employees will recall that under the Gross Hoppus system log value increased *gradually* from the minimum value (optional log) to a maximum value (defect free log). Then it was not so critical if a higher defect log was accidentally classified as optional - State Forests' royalty was only marginally affected. However, under the Flat Rate and Log Value Pricing systems, incorrect grading can have a major impact on royalty received.

(b) SUSTAINED YIELD

Sustained yield is normally based on quota (compulsory) log availability - from assessment results. Logs graded as non-compulsory do not contribute to allocated quota. Hence, if a log is incorrectly graded as non-compulsory, an additional log of similar volume must be felled to meet annual quota commitments. Every time this happens the sustained yield of the forest is eroded by overcutting, resulting in some reduction in sustained yield allocation at the next yield review.

Procedures and respective roles of industry/State Forests log graders in relation to identification of non-compulsory logs are detailed in the relevant sections of this course and the Codes of Procedure.

LOG MEASUREMENT

1. Gross Dimensions

1.1 LOG LENGTH

Hardwood log length is measured in decimetres (ie tenths of a metre or 10 cm) and rounded *down* to the *next* decimetre below the actual measurement. If the measurement falls on the full decimetre unit the actual measurement is recorded without any adjustment.

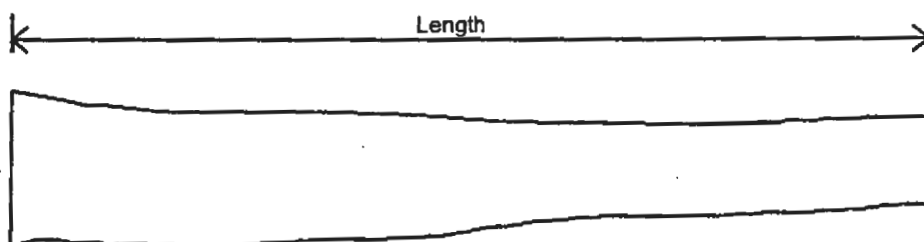
(Note: **Length** and **diameter** measurements are rounded *down*, **defect** measurements are rounded *up*).

For example:

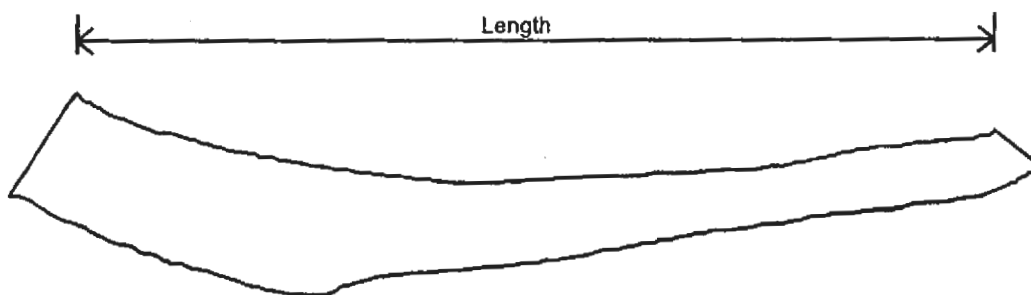
Actual Measurement	Recorded Measurement	Shown on Log
124.8 dm (12.48 m or 1248 cm)	124 dm	124
78.4 dm (7.84 m or 784 cm)	78 dm	78
93.9 dm (9.39 m or 939 cm)	93 dm	93
149.0 dm (14.90 m or 1490 cm)	149 dm	149

The length measured should be the **shortest length** of the log.

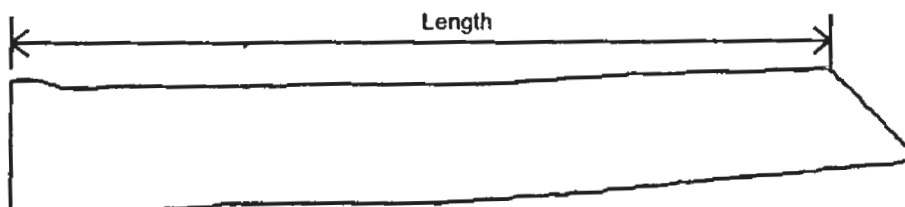
The following examples demonstrate the principles:



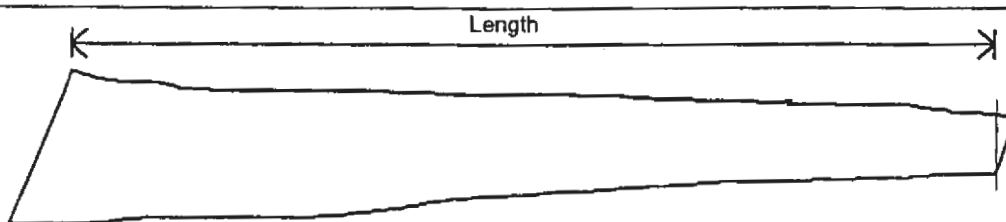
- Log with ends square - measure as



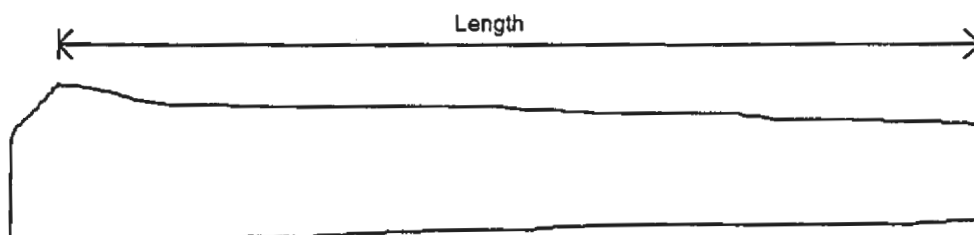
- Log with sweep - inside length



- Log with head not square - measure shortest



- Log with butt and head not square - measure shortest length (not common)



- Log with scarf not trimmed - measure from shortest part of scarf.

1.2 LOG DIAMETER

Log diameter is the *centre* diameter (mid length) measured *underbark* in centimetres and is rounded *down* to the *next* centimetre below the actual measurement. If the measurement falls on the full centimetre unit the actual measurement is recorded without any adjustment.

For example:

Actual Measurement	Recorded Measurement	Shown on Log
97.8 cm	97 cm	97
44.2 cm	44 cm	44
67.0 cm	67 cm	67

To make the measurement the bark should be fully removed from the entire log, or a ring of bark fully removed at the midpoint of the log and a diameter tape passed around the log to give the diameter reading.

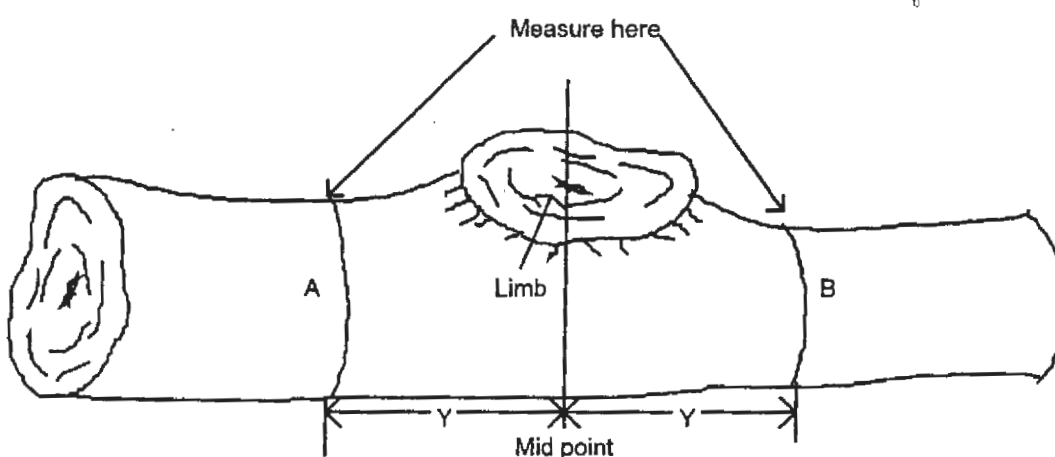
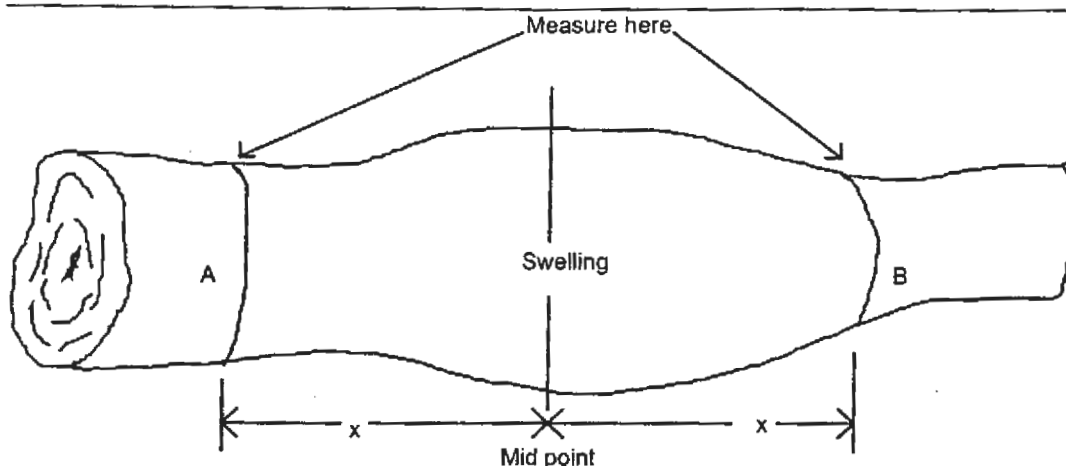
Other Options

1. If the bark cannot be removed, a chip of bark should be removed from the midpoint of the log and the bark thickness measured at that point. This measurement of thickness should then be doubled and subtracted from the overbark diameter measurement. **Note - this practice is highly undesirable**

For example:

Overbark Measurement	Bark Thickness	2 x Bark Thickness	Calculated Underbark Measurement	Recorded Measurement
84.8 cm	1.5	3.0	81.8	81 cm
64.8 cm	1.7	3.4	61.4	61 cm
78.4 cm	1.2	2.4	76.0	76 cm

2. Where it is not possible to measure the centre diameter of the log, a good approximation is the average of the head and butt diameters measured underbark (take care that butt flare doesn't influence butt diameter **Note - this practice is highly undesirable**).
3. Callipers can be used by removing a small section of bark on opposite sides of the log. Several measurements (averaged) are required. Generally only applicable to uniform small regrowth logs.
4. If the log has a swelling or abnormal diameter at the midpoint of the log, diameter measurements should be taken *equidistant* from the midpoint of the log - both above and below the abnormal diameter where the log diameter returns to normal and these diameters averaged to give the true diameter. Generally, the principle adopted should be to adopt a representative point(s) to measure.



$$\text{Log Diameter} = \frac{\text{Diameter at A} + \text{Diameter at B}}{2}$$

2

For example:

Measurement above Bump	Measurement below Bump	Average of Measures	Recorded Measurement
76.4 cm	82.8 cm	79.6 cm	79 cm
36.6 cm	42.8 cm	39.7 cm	39 cm

1.2.1 **Ropy logs** appear to have a ropy outside layer. If this is severe with deep hollows between the "ropes", the measured diameter of the log should be *reduced by at least twice the depth of hollows*, and rounded down as necessary. The recorded and branded diameter should be the reduced measurement shown as a "cutback" diameter - for RTA purposes.

1.2.2 **Sun-cracked logs** salvaged can be compensated for by reducing log diameter by twice the depth of suncracks (or if only half of the log affected then reduce by the depth of sun-cracks). Again, show as a "cutback" diameter. Alternatively, allow as a defect by application of a length deduction.

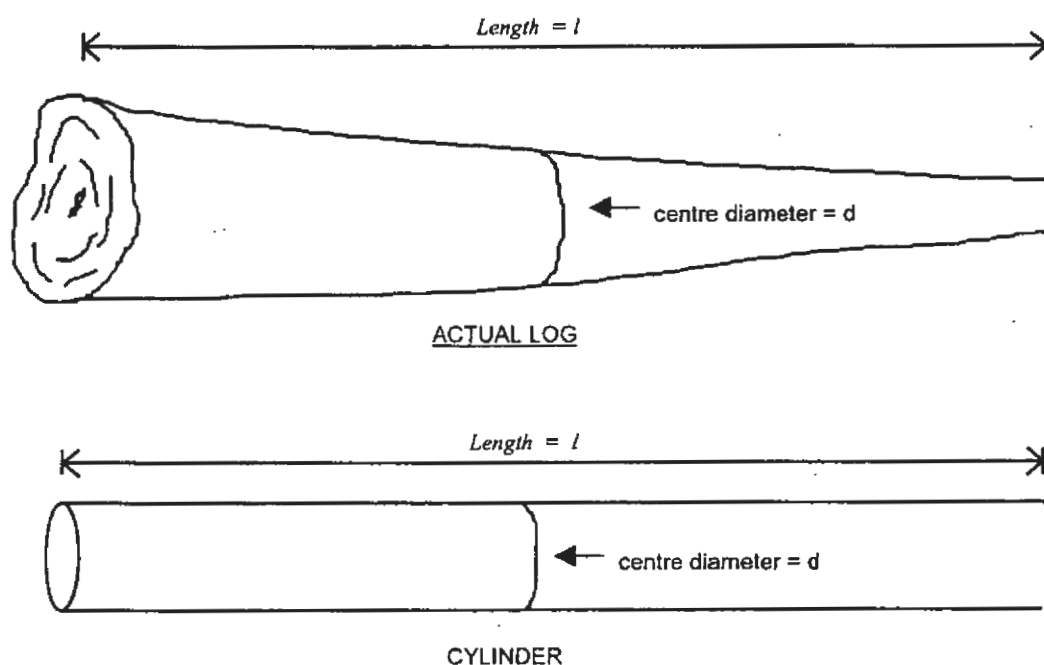
1.2.3 Half (split) logs

- Diameter, either:
 - Measure diameter (at centre point) across split surface with a *dm length* tape (convert to cm diameter) for half logs, or
 - measure around the circumference with a diameter tape (for logs not evenly round) and double the measurement.
- Length - adopt half of the measured length (as a cutback - for RTA purposes.)

Note: For logs greater than one half eg. $\frac{3}{4}$, apply the same methodology, ie. measure the diameter as above and record the length as a cutback based on the proportion of the log that is missing eg. $100/75 \times 40$.

1.3 LOG VOLUME

Hardwood log volume is measured in cubic metres as a true or gross volume based on cylinder of equivalent length and mid section diameter. Whilst this does not give the exact volume for every log shape it gives a fair approximation.



Note: To calculate the log volume the recorded **length is rounded down to an even decimetre**. (Tables are in even decimetres.) Recorded diameter is used.

For example:

Length: 125 dm is rounded down to 124 dm
124 dm remains as 124 dm.
Diameter: 57 cm remains at 57
50 cm remains at 50.

Volume can be obtained by either using the "Log Volume Tables in Metric True Volume for NSW Sawmillers" or by using the formula for volume of a cylinder:

$$\text{Volume} = \pi r^2 \times l$$

where π is π ($\frac{22}{7}$) or (3.1416), r is half of the mid length diameter underbark and l is

the length of the log. (Use of Tables or this formula requires r and l to be in *metric units*. The tables explain how to calculate volumes for logs of larger diameter and length, eg larger than 159 cm diameter and longer than 200 dm.)

1.4 AGENTS FOR MEASUREMENT

Contract employees or accredited log graders generally carry out gross dimension measurements and stamp these on logs, and Supervisors undertake a check as directed of logs selected at random.

1.5 COMMON MEASUREMENT ERRORS (GROSS LOG MEASUREMENTS)

- Using tapes with incorrect units, eg inches - not cm (diameter).
- Using excavators to lift logs during measurement and measuring outside forks (not centre of log).
- Not measuring shortest length from toe or scarf.
- Measuring and recording to the *nearest* digit, or to *even* digits - rather than to the *next* digit down.
- The place at which centre diameter is measured is guessed rather than measured accurately.
- Residual bark left on the centre bark ring, resulting in an overmeasure.
- Using tapes with ends missing resulting in an overmeasure.
- Diameter tapes not calibrated right to the end, which the user reads as if calibrated to the end (results in an undermeasure).
- Measuring with a knot in the tape.
- Worn callipers, resulting in an undermeasure and measuring only one plane.
- Cut tape, spliced - resulting in an overmeasure.
- Not ensuring tape is at right angles to length of log ie oblique angle around log.
- "Home-made" steel tapes incorrectly calibrated.

2. Defect Assessment

2.1 GENERAL

The assessment of defect is a visual skill that combines written principles common to all log graders with each log graders' knowledge of local timber species.

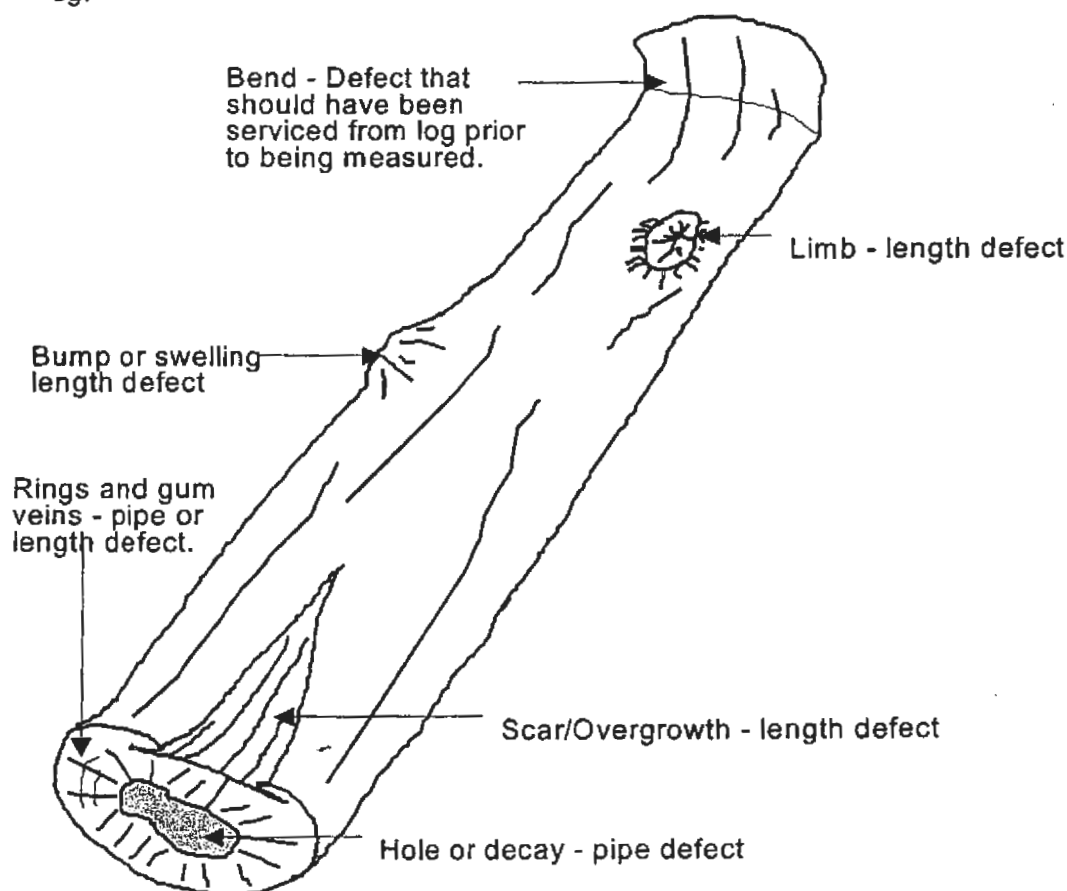
Following are some of the principles and guidelines for log graders, but it is stressed that due to variation within and between species, log graders marry these guidelines with the knowledge they acquire from milling observations at which they compare visual allowances with actual defect and recovery.

Each type of defect is addressed individually even though in practice they commonly occur in combination. Some additional allowance may need to be considered to those set out here where combinations of defect occur.

Hardwood logs may have various forms of internal and external effects as well as having shape defects. Defect is regarded as the part of the log that cannot be processed into the normal run of products complying with F11 grade of the Australian Standard 2082-1979 (excluding woodchips). For all quota species below Strength Group 4, the timber must meet Structural Grade 2 or better.

Defect includes pipe defects, length defects (including external defect and internal defect distinct from pipe), and serviceable (non allowable) defects.

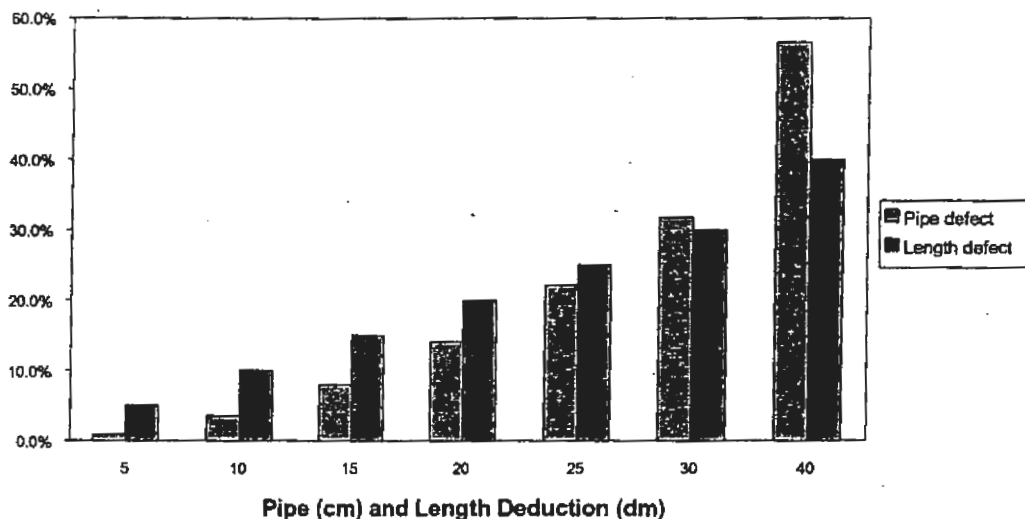
eg:



Effect of Defect Allowances on Gross Volume

The following graph demonstrates the relative effects of pipe and length deductions on net log volume. A 10 m log with a diameter of 60 cm was used in this example (gross log volume = 2.827 m³). Remembering that 1 dm = 10 cm, you will note that the influence of pipe defect on net log volume is considerably more than length defect, ie. a 5 cm increase in pipe has a greater impact than a 5 dm increase in length deductions.

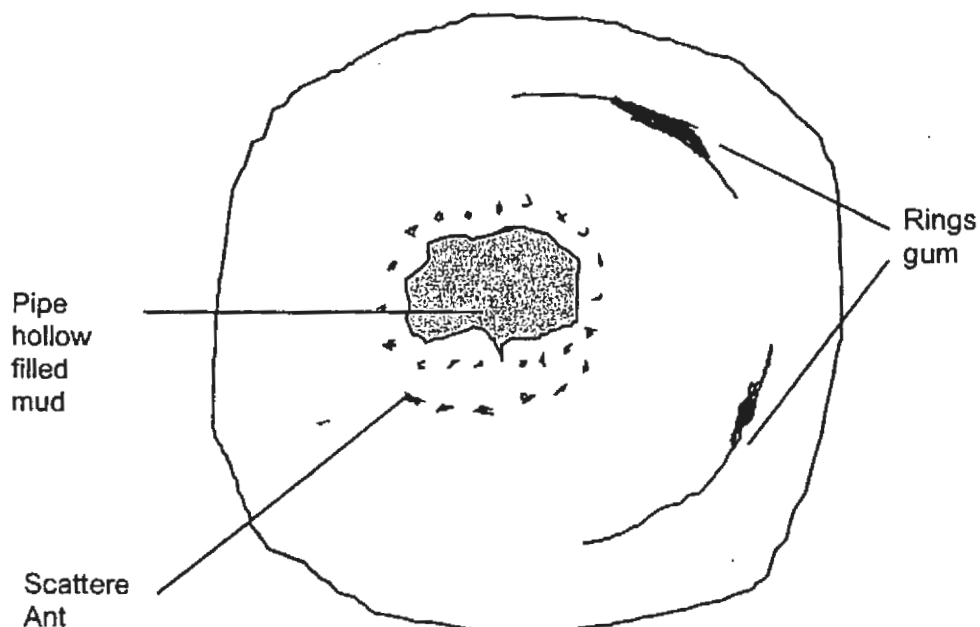
Comparison of the Effect of Pipe and Length Defect on Net Volume



Volume measurements are rounded *down*, defect measurements are rounded *up*.

2.2 PIPE DEFECT

Internal defect is usually called pipe defect because, at its extreme, a hole is present. It is still called a pipe even if this usually central area of the log is filled with termite's nests, mud, decayed wood or rings.



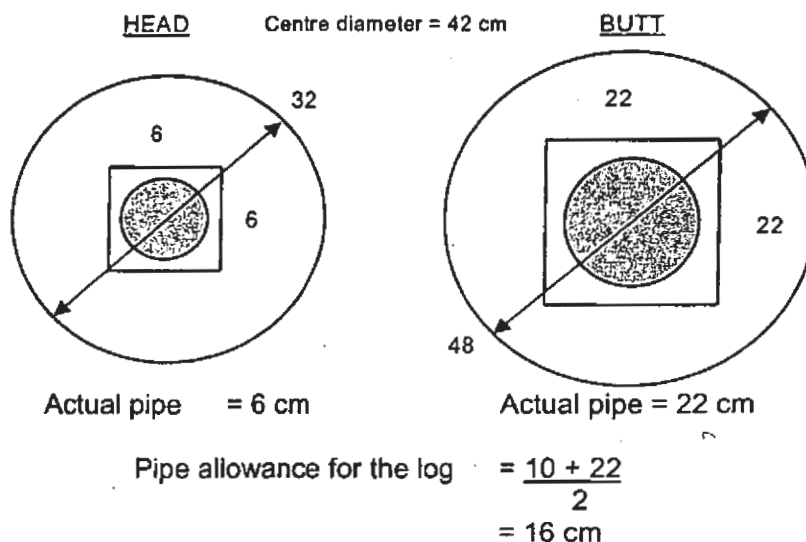
Even though there is no visible defect at the end sections of some logs, all logs 40 cm centre diameter and over qualify for a minimum pipe allowance. This minimum allowance is a 10cm square pipe that covers pith, occluded limbs and other minor heart defect. *The minimum pipe allowance is only for the purpose of calculating a log's overall defect* (ie. the combination of pipe and length defects).

The minimum pipe allowance does not apply to logs with a centre diameter of less than 40cms. The actual measured pipe is to be used for these logs.

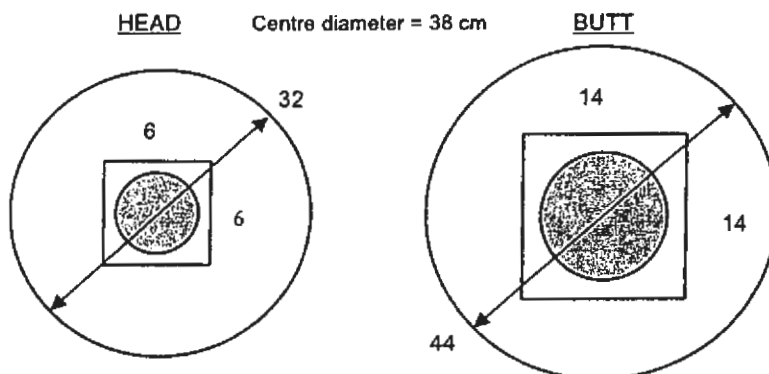
The 10cm minimum pipe allowance is **not** to be applied to the individual ends of logs when determining if that end meets the compulsory log specifications. To determine if the end of a log meets the compulsory log specifications, the **actual** pipe at that end is compared against maximum pipe allowable from the relevant Compulsory Utilisation Schedule.

To calculate the overall log defect for logs 40 cm centre diameter and over, the 10 cm minimum pipe allowance is applied to the ends of logs where the actual pipe is less than 10 cm to get the average pipe allowance for the log. For example if the actual pipe on the end of a log with a centre diameter 40 cm or over is less than 10 cm, the pipe for that end used to calculate the log's pipe allowance is taken up to 10 cm.

For logs with centre diameters 40cms and greater



For logs with a centre diameter less than 40cms.



Actual pipe = 6 cm

Actual pipe = 14 cm

$$\begin{aligned} \text{Pipe allowance for the log} &= \frac{6+14}{2} \\ &= 10 \text{ cm} \end{aligned}$$

- This minimum allowance may be inadequate for some species, eg. Brushbox - where collapse effect near the heart may necessitate an increase in pipe allowance. Other species where this minimum allowance may be inadequate include Turpentine and Bloodwood.

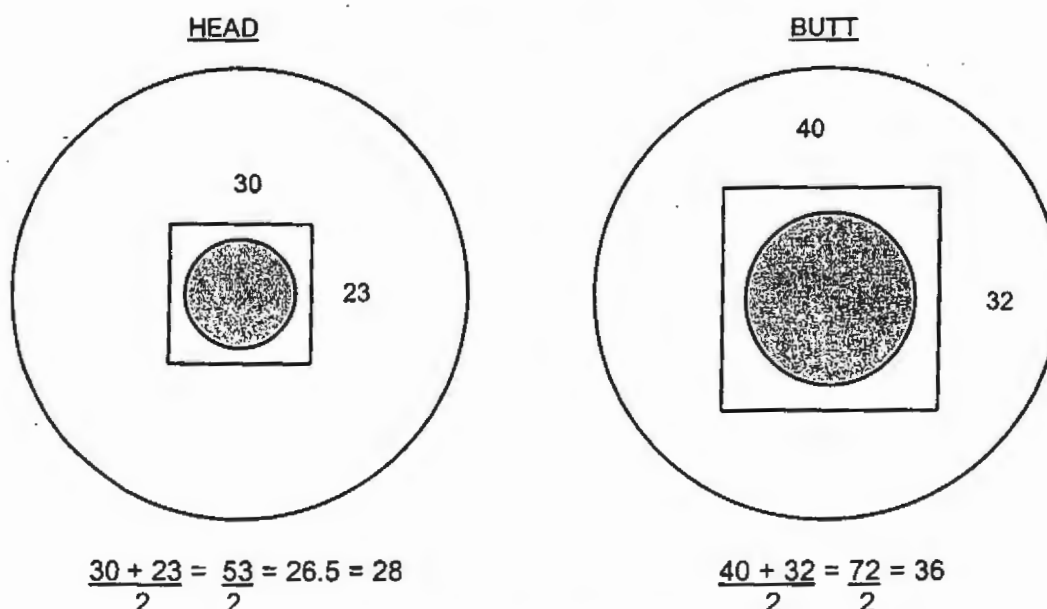
Measurement Rules

To measure pipe, a rectangle that encloses the defect is marked on the end of the log. *It is often of assistance if this is marked with chalk.*

Step 1 • Measure each side of rectangle - to the next cm up.

Step 2 • Average (halve) these measurements - to the next even cm up. This is the pipe allowance for that end of the log. **Note:** Allowances for other "pipe" defects are to be added to the basic pipe allowance at each end of the log prior to rounding up the total pipe allowance to the next even centimetre.

Step 3 • Average (halve) both the head and butt pipe allowances - to the next even cm. This is the recorded pipe allowance for the log.

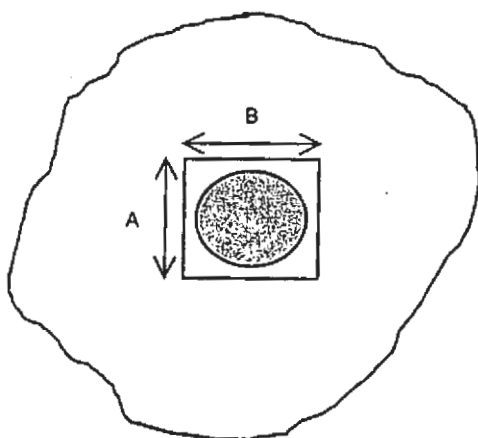


$$\text{Pipe} = \frac{28 + 36}{2} = \frac{64}{2} = 32\text{cm}$$

Pipe defect can be one or more of the following:

- 2.2.1 Open Pipe.
- 2.2.2 Discontinuous or Irregularly Shaped Pipes (Rot, Doze, Punk or Cateye).
- 2.2.3 Loose Gum Veins, Gum Pockets and Rings.
- 2.2.4 Termites and Grubs.
- 2.2.5 Hearts out of Centre.
- 2.2.6 Brown Stain.
- 2.2.7 Black Borer.
- 2.2.8 Blackheart.
- 2.2.9 Straight Shakes (Star).
- 2.2.10 Shakes in Spiral Grain.
- 2.2.11 Overgrowth and Dōze Pockets.
- 2.2.12 Small Log Pipe Allowances.

2.2.1 Open Pipe



Defect is a *hole with a clean edge* and no additional defect outside of the limits of the hole. On the diagram, the measured pipe is shown. The recorded pipe for that end of the log is

$$\frac{A + B}{2}$$

If side A is 31 cm long and side B is 24 cm, the pipe is 28 cm.

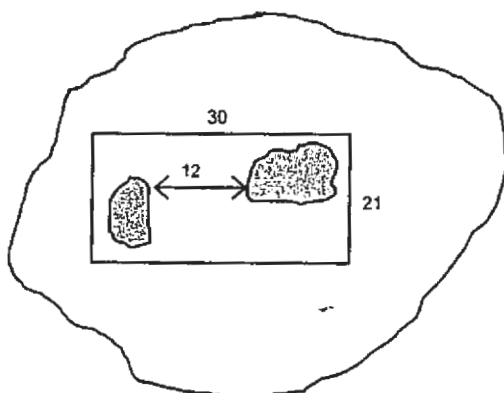
$$\text{eg } \frac{31 + 24}{2} = \frac{55}{2} = 27.5 = 28$$

Note:

- (i) Measurement of open pipe must include some solid wood outside the pipe (as a *guide at least 2 cm*) to provide for incipient decay, wandering heart and to hold the boxed heart together. This allowance may include some apparently non-defective wood.
- (ii) As a general rule, unless otherwise specified, there must be at least 10cm of useable wood between the pipe and defects or the edge of the log. The 10cm of useable wood must be measured from the outside of the round pipe, which includes the allowance covered in (i).
- (iii) Wandering heart - mainly due to kinks and bends, will invariably result in the need for increased pipe defect beyond that visible at the ends of the logs. This may be further exacerbated in some species and in smaller diameter logs that carry pipe defect.

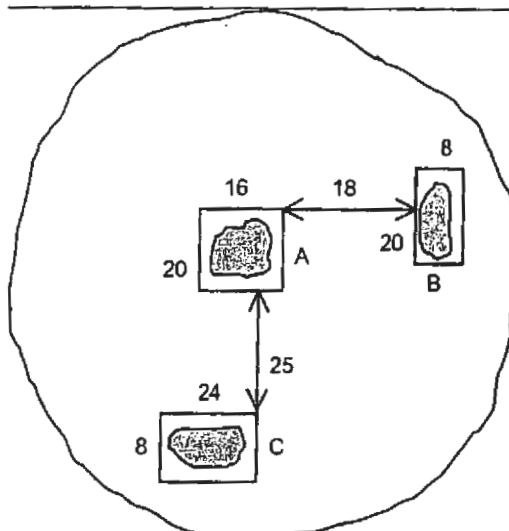
2.2.2 Discontinuous and Irregular Shaped Pipes (Rot, Doze, Punk, Cateye or Brittle Heart)

Unless 150 mm (15 cm) of useable wood is between separated defects, discontinuous and irregular shaped pipes should be boxed out as a single pipe defect.



- (1) If there is an area of defective material to one side of the central defect area of minimum pipe area, so that no useable wood lies between, a rectangular box should be sufficient to enclose all unusable wood and defect.

$$\text{Pipe} = \frac{30 + 21}{2} = \frac{51}{2} = 25.5 = 26$$



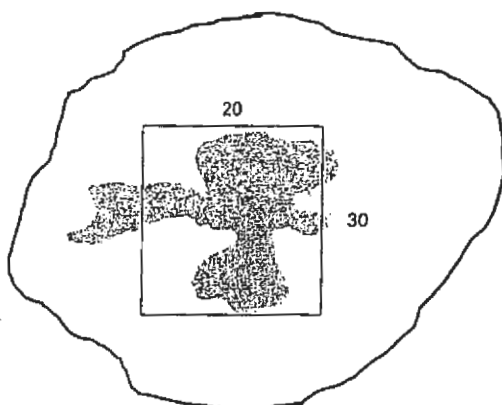
- (2) If there are defective areas separate from but so far located from the area of central pipe that useable wood lies between (minimum 150 mm), these should be boxed out separately.

$$\begin{aligned}
 \text{Pipe} &= \sqrt{(\text{area A} + \text{B} + \text{C})} \\
 &= \sqrt{(16 \times 20 + 8 \times 20 + 8 \times 24)} \\
 &= \sqrt{(320 + 160 + 192)} \\
 &= \sqrt{672} \\
 &= 25.9 \\
 &= 26
 \end{aligned}$$

(Due to limitations in relation to useable wood requirements between defects, this situation would only apply to large diameter logs).

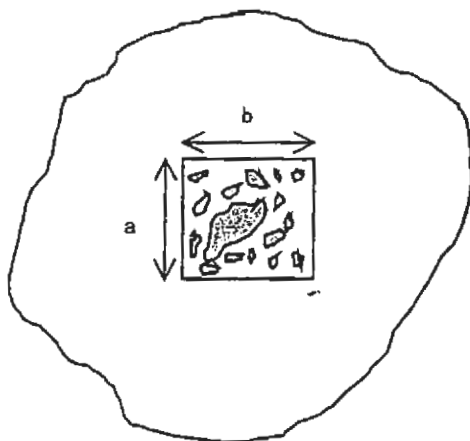
Note:

- (a) This can be calculated with a calculator, eg enter 672, press $\sqrt{\quad}$, answer = 25.9 = 26, or alternatively, refer to Appendices 1 and 2 (attached).
- (b) In (1) and (2) above a length allowance may be more appropriate - particularly when it is obvious that defect is likely to occur only in a section of the log, or at either end.



- (3) Where a central pipe defect radiates out irregularly, it is not appropriate to provide a pipe allowance that encompasses the full defect. A compromise is required to balance pipe and sound wood.

$$\text{Pipe} = \frac{30 + 20}{2} = 25 \rightarrow 26$$



- (4) Usually the wood around these obvious decay patches is discoloured when freshly cut.

2.2.3 Loose Gum Veins, Gum Pockets and Rings

These defects cover:

- *Gum Veins*
- *Open Rings*
- *Wet Rings (mainly Spotted Gum)*
- *Gum Pockets*

(1) *Gum veins and Rings*

- (a) *Tight gum veins* – are veins that have sufficient connecting wood across the vein so that they do not open. Generally these have little effect on recovery and should be ignored, eg seen in coastal Blackbutt. No allowance is made for tight gum veins. Caution should be exercised with gum veins wider than 2mm as these are prone to open up, even where connecting wood is evident.
- (b) *Loose gum veins and open rings* - Based on principle that loose gum veins/open rings may cause timber to shell off and therefore an allowance should recognise non-useable widths of timber between veins.

A basic allowance of 1cm is added to the pipe for every 25cm or part thereof of loose gum veins/open rings. This basic ring allowance is doubled where there is only 11-15cm of useable wood between rings, pipe or the edge of the log.

- (c) *Wet Rings*- are generally species specific, have no connecting wood, often produce a milky sap, are unpredictable throughout the log and commonly move from side to side. Common in Spotted Gum, White Mahogany and Woollybutt. The basic ring allowance is doubled to recognise rings that can be missed in freshly cut logs and the discontinuous nature of wet rings.

Warning: Care should be exercised when assessing whether veins and rings in some species are loose or tight, eg. New England species, White Mahogany. It may be possible to put these logs aside for a couple of days to see if they will open up. Clear distinction and recognition of the difference between tight and open rings is essential.

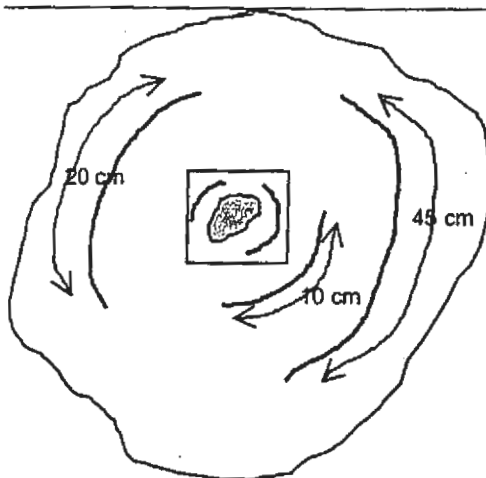
- (2) *Gum pockets* – are formed where the tree grows around a pocket of kino. When associated with rings, remember allowance should be made only once for each defect.

Loose gum veins and gum pockets less than 4 cm from the outside of the log should be ignored as this tends to be in the part of the log that is not converted into sawn wood. In this case the gum vein or gum pocket becomes the outside of the log in the section it occurs when determining pipe allowance.

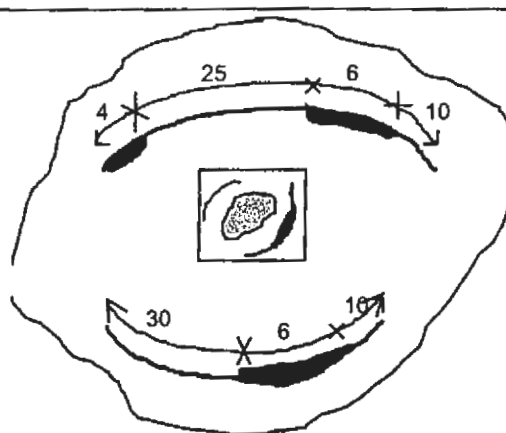
Measurement Rules

1. No allowance is necessary for tight gum veins.
2. Ignore loose gum veins, open rings and gum pockets less than 4 cm from log edge.
3. If distance between rings, between ring and pipe or between ring and the outside of the log is *10 cm or less - allow section as full defect*. This defect can be allowed for as addition to main pipe, a discontinuous pipe or as a length allowance.
4. Where loose veins or rings completely circle the log and are within 10cm of the edge of the log, ie. no useable wood outside ring, reduce the diameter of the log. Reduced log diameters can be recorded as a cutback (eg. 100 x 56/48).
5. Allowances are made for **each individual ring**. Individual allowances are then totalled and added to the pipe.
6. If distance between rings, between ring and pipe or between ring and the outside of the log is *greater than 15 cm - allow 1 cm per 25 cm of ring, or part thereof* (in relation to distance between ring and pipe, the edge of the actual pipe is to be used).
7. If distance between rings, between ring and pipe or between ring and the outside of the log is *11-15 cm inclusive - double the ring allowance arrived at in 6 above*.
8. For *wet rings*, eg Spotted Gum and White Mahogany, *double the allowance arrived at above*.
9. For gum pockets allow 1 cm per 2 cm of gum pocket.
10. The ring allowance is to be added to the basic pipe allowance at each end of the log *prior to rounding up the total pipe allowance to the next even centimetre*.

Type of defect	Distance between pipe and/or pipe	Allowance
Tight gum veins		Nil
Loose gum veins and open rings	<10 cm	Allow section as full defect
	>15 cm	1cm/25cm of ring or part thereof
	11 – 15 cm	Double basic allowance
Wet rings		Double allowance given above
Gum veins and pockets		1cm per 2cm

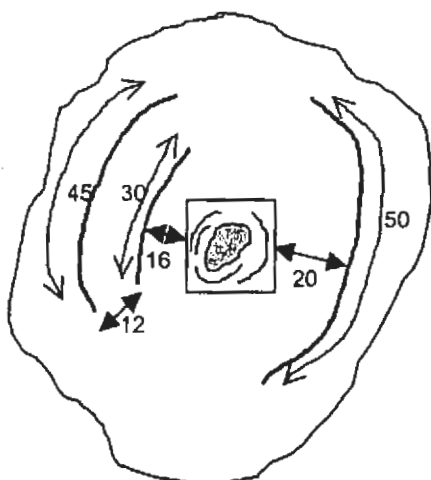


3 gum rings of lengths 20, 10 and 45 cm
Basic pipe increased by $1 + 1 + 2 = 4$ cm



Ring lengths = 40 cm and 35 cm
Allowance = $2 + 2 = 4$ cm
Length of gum pockets = 16 cm
Allowance = 8 cm
Total additional allowance to basic pipe =
 $4 \text{ cm} + 8 \text{ cm} = 12 \text{ cm}$

- Loose veins or rings which completely circle logs *and* are closely (less than 10 cm) concentric to the extent that useable timber cannot be sawn in between may render the log non-compulsory.
- In many species, such as Spotted Gum, rings tend to occur only in the butt section of the log. In this case, where rings cause the butt to be non-compulsory, the defect should be either butted off or given as a cutback in length (if agreed to by the customer). Where rings in the butt are expected to cut out and the butt is still compulsory, it may be possible to allow for the defect as a length allowance rather than increase the pipe, though this is less desirable.



Allowance:

Pipe = 10 cm (min)

Single Ring = 50 cm
Allowance = 2 cm

Multiple Rings 45 cm ring = 4 cm allowance
30 cm ring = 4 cm allowance
Allowance = 8 cm

Therefore Rings = 10 cm allowance

Therefore total pipe allowance
= 20 cm

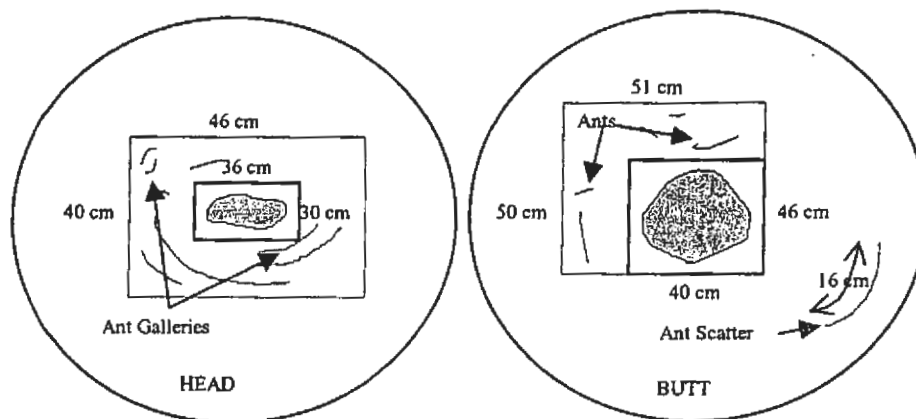
2.2.4 Termites and Grubs

Termites are commonly associated with hollows and mud-guts associated with or adjacent to the central pipes. Where there are no useable widths of wood between central pipe and heavy gallery formations the entire affected section should be boxed-out and become the basic pipe.

Isolated and scattered galleries can be allowed for by adding an appropriate allowance to the basic pipe. (As a guide $\frac{1}{4}$ of the arc distance of the scatter can be added to the pipe allowance.)

The presence of exit holes and bumps along the length of the log may attract length allowance and are signals of a generally lower quality log.

Grubs should be treated in a similar fashion.

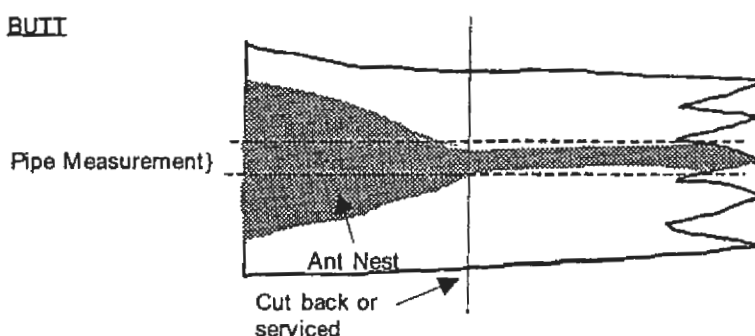


Basic Pipe = 44cm

Basic Pipe = 51 cm + (16 cm for scatter
x $\frac{1}{4}$) = 51 + 4 = 55 = 56 cm

Average pipe = $\frac{44 + 56}{2} = 50$ cm

BUTT



Where ants show only at one end, an estimate should be made of the ant workings. Again, this is often area dependent. At times "ant windows" or swellings can give a guide to the extent of the workings.

Ant nests cause a large pipe at the butt of the log but often cut out in a very short distance. This is best allowed for as either a cut back or serviced off depending on the log quality at the butt. Provided maximum pipe defect is not exceeded (taking into consideration any butt flaring), and on the basis that there is not an opportunity to cut off a short length of log, as well as a length cut back the appropriate diameter of pipe at the butt to record would be similar to that occurring at the head.

Odd grub holes are not related to the pipe, occurring anywhere in the log. They are usually species/area related, with Grey Gum being a culprit species. Again allowances should be based on how the logs are cutting rather than strict formulas.

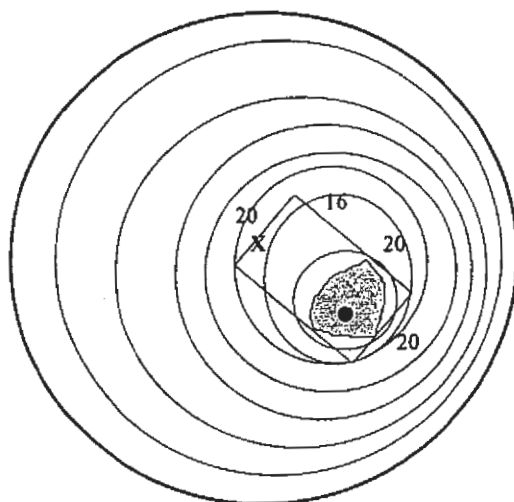
2.2.5 Hearts out of Centre

Hearts out of centre that do not wander require no allowance. This generally is only the case in straight logs of regular shape, and is signalled by the heart being offset in the same quadrant in both ends.

A heart out of centre in only one end of a log and which is not expected to wander, may be piped by allowing the actual width of the pipe by the distance from the geometric centre of the log to the outside of the actual pipe (or edge of log if less than 10 cm of wood between pipe and edge of log). The other end is piped normally.

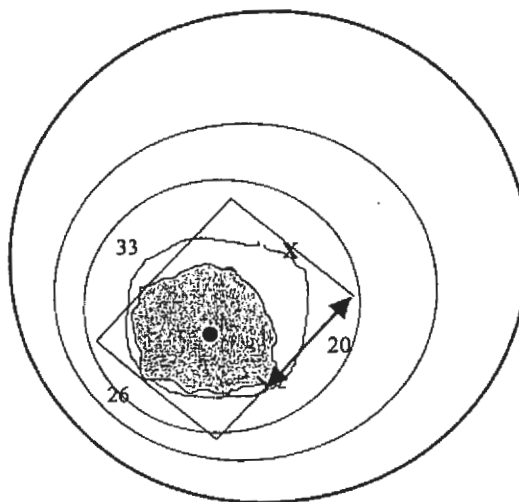
Hearts significantly out of centre and which are expected to wander as evidenced by the presence of kinks and bends in the log, and the hearts appearing in different quadrants at each end, attract an additional allowance. The pipe at either end of the log is piped by allowing their actual width by the distance from the geometric centre of the log to the outside of the actual pipe (or edge of log if less than 10 cm of wood between pipe centre and edge of log). Half the distance from pipe centre to geometric centre of log is given as an additional allowance.

Heart out of centre on one end only



$$\Rightarrow 40 \quad \text{Pipe} = \frac{36 + 20}{2} = 28$$

Wandering heart



$$\text{Pipe} = \frac{26 + 33 + 20}{2} = \frac{79}{2} = 39.5$$

2.2.6 Brown Stain

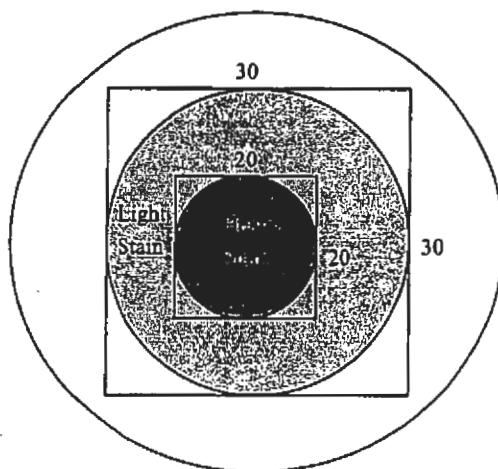
Brown stain is common in old trees and is a transitional phase between sound wood and incipient decay (more common in some tableland species).

Brown stain often appears worse when logs are freshly fallen and wet, and allowances may be unnecessarily inflated in comparison to allowances given on logs which have been given some days to dry, the drying process tending to lighten the stain and lead to more appropriate allowances being made.

Brown staining is generally heaviest at the centre of the log and lightens and/or disappears radiating out towards the sapwood. The point at which the wood cell structure and strength is lost is where the basic pipe should be given and may be determined either visually or by chipping with an axe, puncture test, splinter test or otherwise an estimate of this position is required. Any white flecking is a sign of decay.

Brown stain, and particularly light brown stain, where wood strength has not been lost, is not an allowable defect. It needs to be determined if the wood is structurally sound.

A guidelines for measuring this defect is to allow $\frac{1}{2}$ of the lightly stained wood as defect (provided some evidence of heavy stain exists). **Close local observations of mill recovery are required to assist in determining appropriate allowances for this defect.**



Allowance

Heavy Stain = 20 cm

Light Stain = $30 - 20 = 10 \times \frac{1}{2} = 5$ cm

Allowance = 25 cm

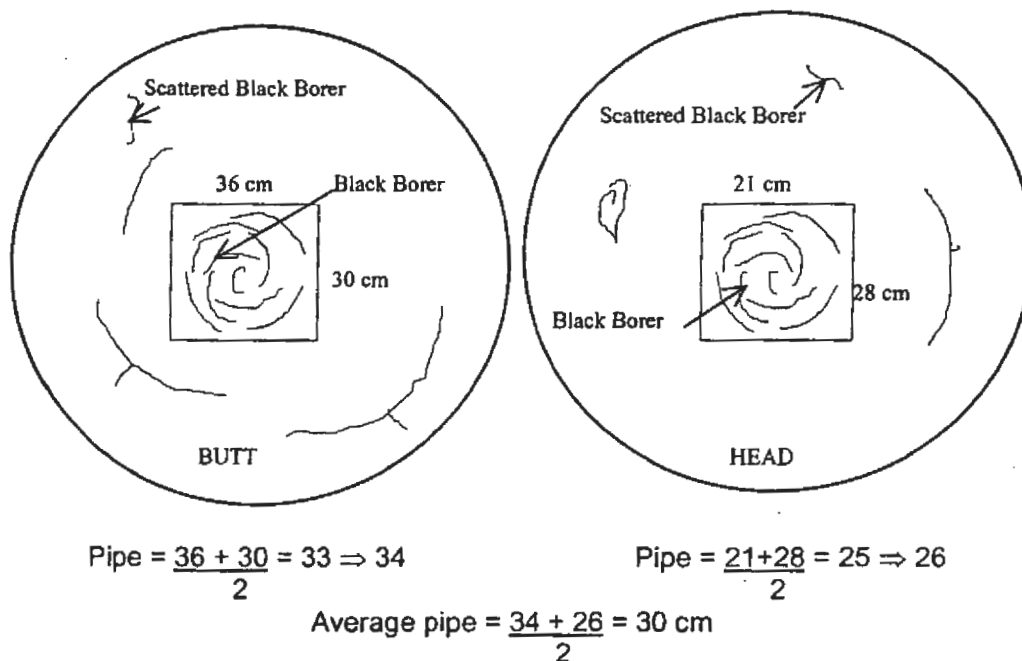
= 26 cm (rounded up)

2.2.7 Black Borer (Wireworm)

This defect appears as concentric black rings 1-3 mm approximately in thickness, usually confined to within 30 cm of the heart and, unless scattered, should be piped out.

Where only occasional borer tracks occur, not concentric in shape and well outside the heart as described above, such can be ignored, or a minor additional pipe allowance given.

Generally where black borer is in evidence, look carefully for the presence of black heart (occurs in Turpentine and Brushbox generally).



Other borers such as *Ambrosia* (Pin Hole) borer can reduce wood quality to the extent that the log is non-compulsory. Allowances for lesser damage by necessity need to be arbitrary.

2.2.8 Black Heart

Black heart should not be confused with brown stain in mature wood. The latter can have a dark brownish colour but black heart is readily discernible and identified by fine black lines radiating from centre towards sap. Black heart is often found in Turpentine logs but can also occur in other species, eg Bluegum.

Determination of extent of black heart needs to be made on a freshly cut face, as discolouration fades rapidly. To determine if an allowance is required, it must firstly be determined if the affected wood is utilisable. (If in doubt consult with miller/observe milling, puncture or splinter test.) Simply - if useable then no allowance applies. If decay has advanced to the stage that the affected wood is no longer utilisable - then all affected wood is defect and should be piped out. Discolouration is not necessarily an indication that wood has decayed beyond use.

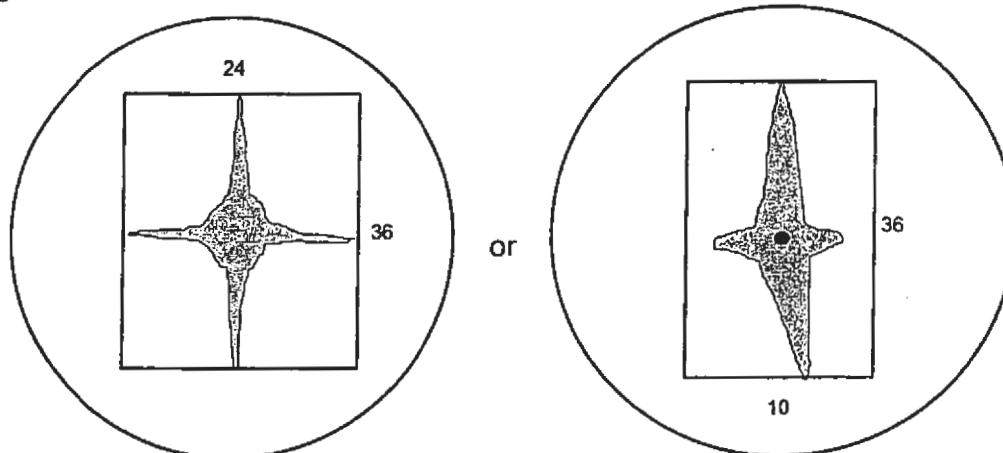
When examining the possible extent of discolouration on the ends of a Turpentine log, the use of a wire brush is essential to "bring out" the defective area.

2.2.9 Straight Shakes (Star)

Straight shakes are where the shake follows the form of the log and there is no spiralling in the grain.

For clean narrow (3 mm) star shakes, $\frac{2}{3}$ of the extent of the shake should be allowed for as pipe defect.

eg:

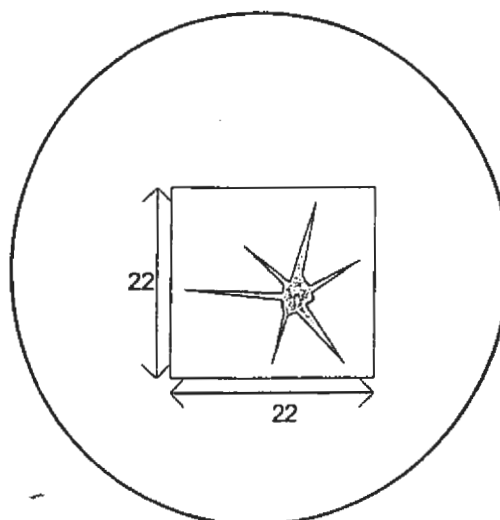


$$\begin{aligned}
 &\text{ie Pipe} \\
 &\frac{(24 \times \frac{2}{3}) + (36 \times \frac{2}{3})}{2} \\
 &= \frac{16 + 24}{2} \\
 &= 20 \text{ cm}
 \end{aligned}$$

$$\begin{aligned}
 &= \text{ie Pipe} = \frac{(36 \times \frac{2}{3}) + 10}{2} \\
 &= \frac{24 + 10}{2} \\
 &= 17 \Rightarrow 18 \text{ cm}
 \end{aligned}$$

Note: If these shakes are likely to affect only a short (ie less than 50%) section of the log, a reduced allowance may be appropriate.

If widespread star shake, box out fully as pipe.



$$\text{eg Pipe} = \frac{22 + 22}{2} = 22 \text{ cm}$$

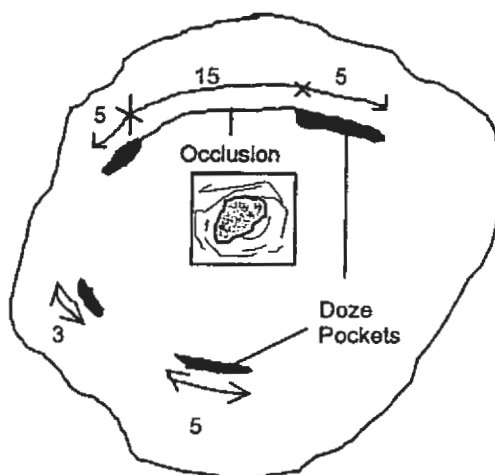
2.2.10 Shakes in Spiral Grain

Where shakes follow spiral grain, the sawn recovery will be considerably less than equivalent shakes in straight grain logs, and therefore additional pipe allowance should be made after consideration of the acceptability of the extent of spiral grain (max. 1:8).

Shakes rotating around the axis of a log generally render all wood in the arc of the rotation useless.

In a log with spiral grain where "excessive" shakes occur, the full area affected should be regarded as defect and boxed out.

2.2.11 Overgrowth and Doze Pockets



An allowance of 1 cm for every 6 cm of length or part thereof of overgrowth and/or doze pockets should be made (as for gum pockets).

For longer pockets see 2.2.3(2).

Note: If the defect can be best related to a length allowance rather than pipe that is preferable - normally this is the case.

eg: Doze (18cm)	- 3 cm allowance
Occlusion (15cm)	- 3 cm allowance
Total	- 6 cm (plus pipe allowance)

2.2.12 Small Log Pipe Allowances

The same principles apply in the measurement of small logs (under 40 cm cdub), with the exception that there is no minimum pipe allowance. While clean small logs also contain pith, occluded limbs and other minor heart defect, this material is usually recovered as pallet in these logs. However, any pipe defect in small logs can have a large impact on recovery especially if associated with sweep.

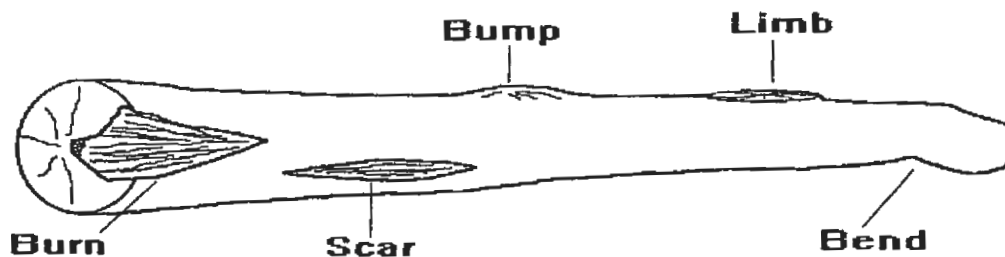
Whilst the Compulsory Utilisation Schedule will provide for the limit of acceptable defect, additional care is required to recognise and adequately allow for pipe defect in small logs.

2.3 LENGTH DEFECTS

2.3.1 General

Some defects on logs are better accounted for by length allowance rather than pipe defect. These defects are usually found on a section of the log rather than the whole length of the log (as is pipe), but there are exceptions, eg scar for full log length.

Defects usually include bumps, limbs, swellings, overgrowths, monkey eyes, punks, bends, dry sides and at times ant nests and other internal defects, eg doze, that only affect part of the length of the log.



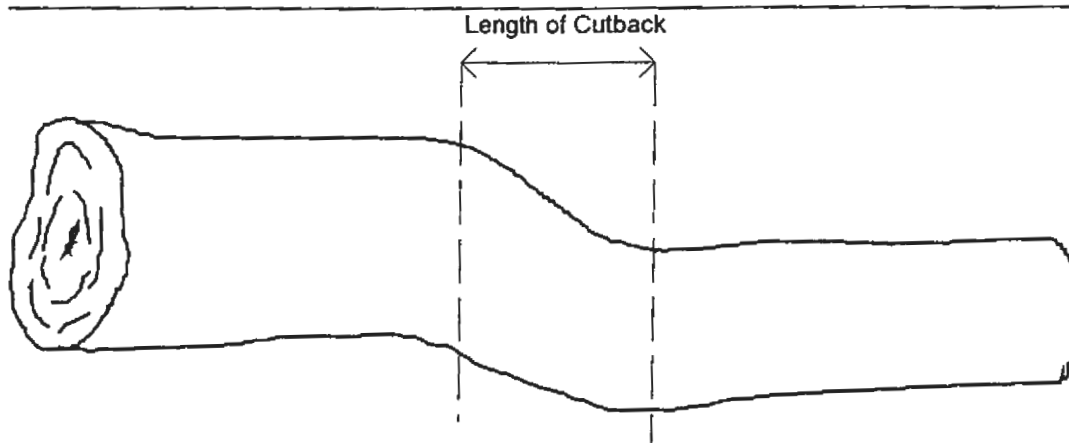
The following characteristics of logs are not classified as length defect:

1. Small sound limbs that affect only a small volume of wood do not qualify for length allowance unless they occur in large numbers.
2. Epicormic branches and small bumps resulting from them do not attract allowances. (If these result from a major fire, other defects may be present, eg scars).
3. Bumps and swellings, which experience and observations indicate to be above sound wood, ie there is no defect under the bump or swelling. (Not common - care needs to be taken in adopting this conclusion.)
4. Spiral or curly grain less than the specified maximum permissible.

2.3.2 Non-allowable Defect (Cutbacks)

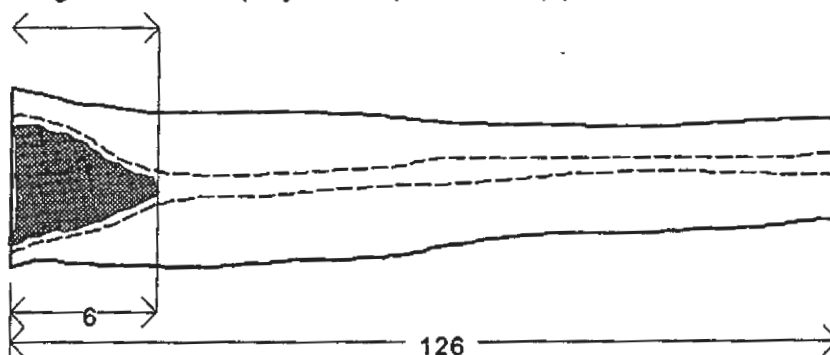
A cutback is a method of removing a section of log on paper that should have been removed by servicing the log. It usually covers a section of the log that is below minimum specifications. This section could be part of a bend or kink in the log, which by its shape is below specification but was left in the log for ease of handling and haulage.

Cutbacks apply to ends of logs or where a section of the log is unusable due to lack of straightness, or an obvious ant's nest or limbs encircling a log. Cutbacks for other defect located at other than the end of logs should be avoided with the defect being more accurately determined by cross cutting (other than due to kinks).



Cutbacks can also include heads or butts that are below specifications but which were not cut off, either by mistake or to deliberately downgrade the log.

Length of Cutback (only if max. permissible pipe is exceeded)



Cutbacks are recorded as two length measurements separated by a diagonal line (to nearest unit).

Log No.	Length	Diameter	Pipe
	126/120		

This log has 6 dm (0.6 m) of defect that should have been serviced from the log. The shorter measurement is used when calculating the volume of the log, or assessing log defect.

2.3.3 Allowable Length Defects

This is a length defect, which is part and parcel of the log and cannot reasonably be excluded by servicing. These can be at the ends of logs or anywhere along the length.

Logs may have both allowable and non-allowable length deductions.

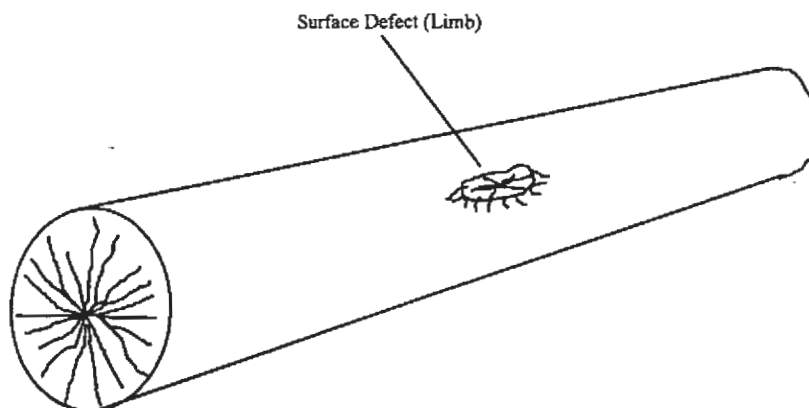
Examples of common length defects and method of measurement follow, but notwithstanding the guidelines remember the approach is to estimate defects that are not generally acceptable in the F11 SAA sawn standard, and make allowance using the principles given.

Length deductions are given for:

- 2.3.3.1 Limbs.
- 2.3.3.2 Burn Scars, Bumps and Swells.
- 2.3.3.3 Multiple Length Defects.
- 2.3.3.4 Kinks and Bends (Sweep).
- 2.3.3.5 Straight Splits.
- 2.3.3.6 Curly Grain
- 2.3.3.7 Spiral Grain and Associated Splits.

2.3.3.1 Limbs

Step 1: A surface defect (limb) is observed



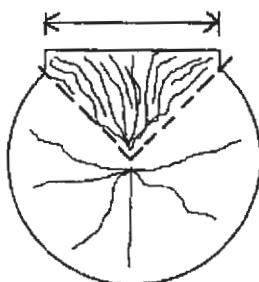
Sound limbs *may* have minimal effect on sawn recovery. Even when an effect occurs, in many cases this effect does not go to the central pipe. Hence the section affected will often be less than that caused by a hollow limb extending to the pipe.

Whilst F11 specifications tolerate some sound limb affected timber, large sound limbs will distort timber to the extent that defect occurs.

Step 2: The cross section or proportion of circumference of the log is imagined at that point, as is the area affected by the defect (in this case about $\frac{1}{4}$). Note the actual limb is measured - not the section affected by cutting limb flush with the log.

Normally this is best assessed as a fraction, namely $\frac{1}{10}$, $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{3}$ or $\frac{1}{2}$, $\frac{2}{3}$ or $\frac{3}{4}$.

Section Affected $\frac{1}{4}$



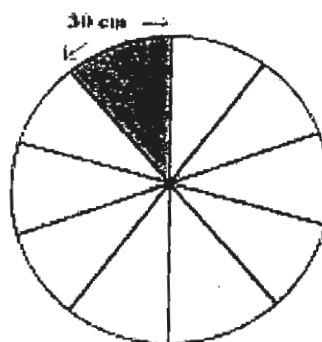
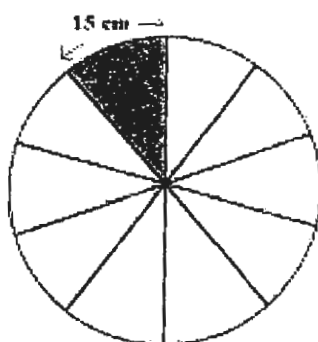
Note: Care should be taken in assessing proportion affected eg for a defect in a log of 50 cm dia., to affect $1/10$ the defect needs to be 15 cm across.

**Proportion
Affected**

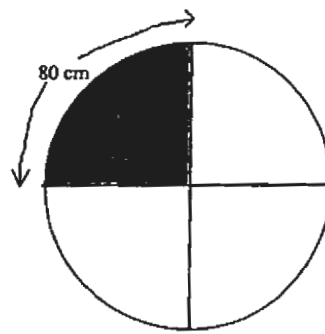
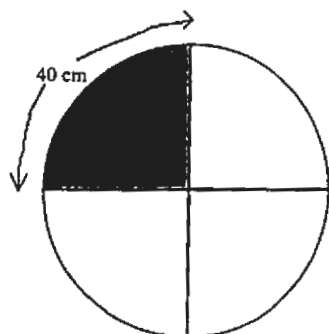
50 cm dia. log

100 cm dia. log

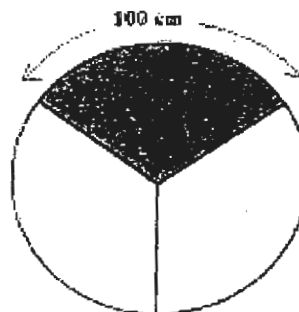
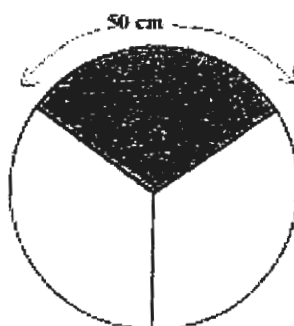
$1/10$



$1/4$



$1/3$



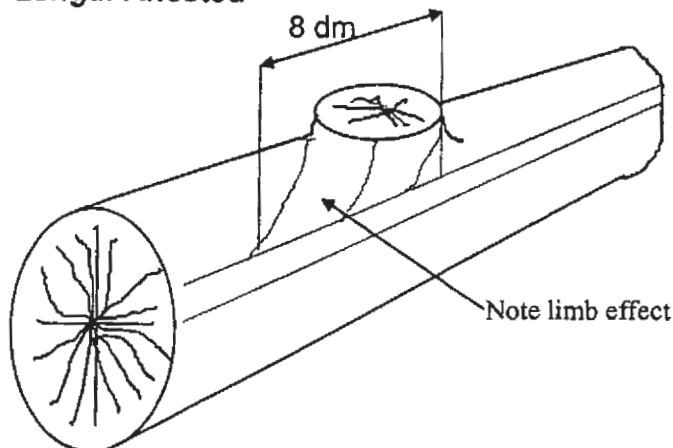
To achieve a 1 dm (minimum) allowance for a length defect, the following examples show the length of log that must be affected by a length defect at various sections:

eg:

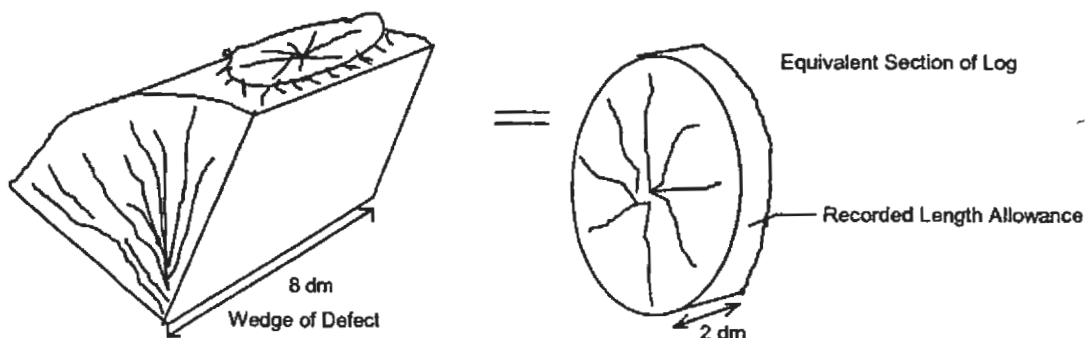
$1/10$ -	10 dm affected	= 1 dm allowance
$1/4$ -	4 dm affected	= 1 dm allowance
$1/3$ -	3 dm affected	= 1 dm allowance.

Step 3: From a knowledge of broken down logs, the length of the log that is affected by the limb is estimated (in this case 8 dm).

Length Affected

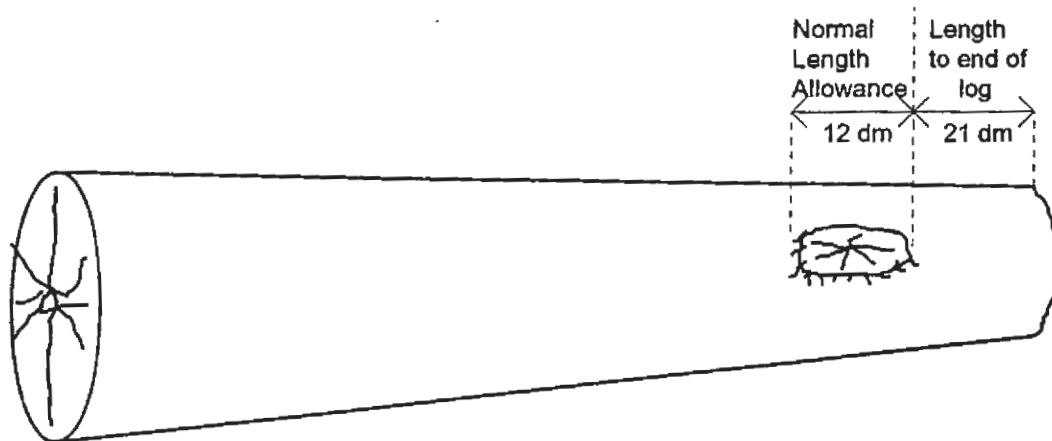


Step 4: The affected part is a wedge and it is necessary to convert it to an equivalent round volume (in this case $\frac{1}{4} \times 8 = 2$ dm).



Measurement Rules

1. Cross sectional area affected should be assessed in fractions, namely $\frac{1}{10}$, $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{3}$ or $\frac{1}{2}$, $\frac{2}{3}$ or $\frac{3}{4}$.
2. A length defect has to have at least 24 dm (2.4m) between it and another length defect, or the end of the log, otherwise the whole section (including separating clear wood) is included in the length allowance as shown below.
3. The allowance for individual length defects must be calculated and rounded up to the next even dm before totalling the length allowance for the whole log.
4. Individual defects attracting less than 1 dm length allowance should be ignored - unless such defects occur together (cumulatively).
5. The minimum length allowance is 4 dm for any log that has a length defect.
6. Epicormic branches and small bumps affecting only the outermost 40 mm of the bole should not attract allowances.
7. Special rules often apply for measurement of small logs.

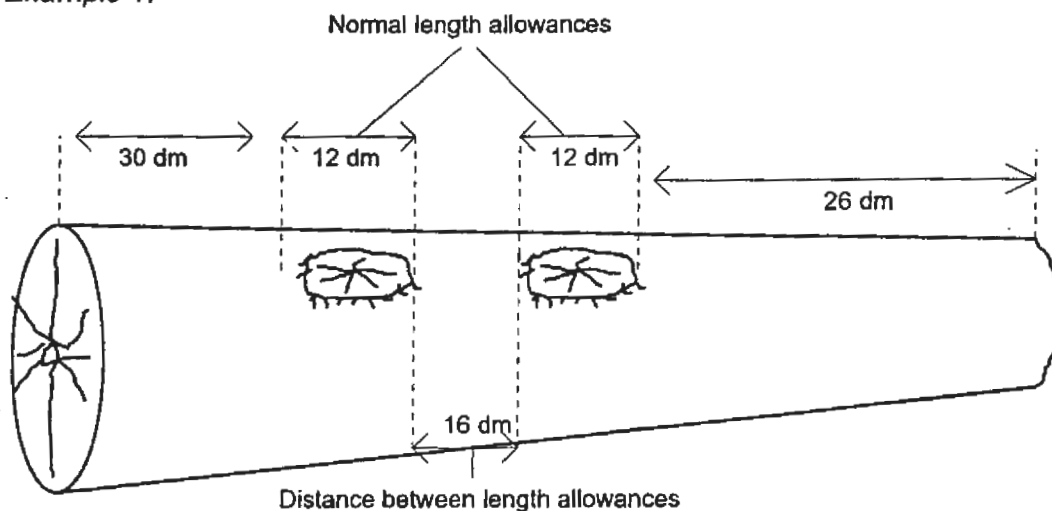


If the limb affects 1/3 of the log cross section for 12 dm but is 21 dm away from the end of the log, the allowance is:

$$\begin{aligned} \frac{1}{3} (12 + 21) &= \frac{1}{3} (33) \\ &= 11 \text{ which is rounded up to } 12. \end{aligned}$$

2.3.3.2 Multiple Length Defects

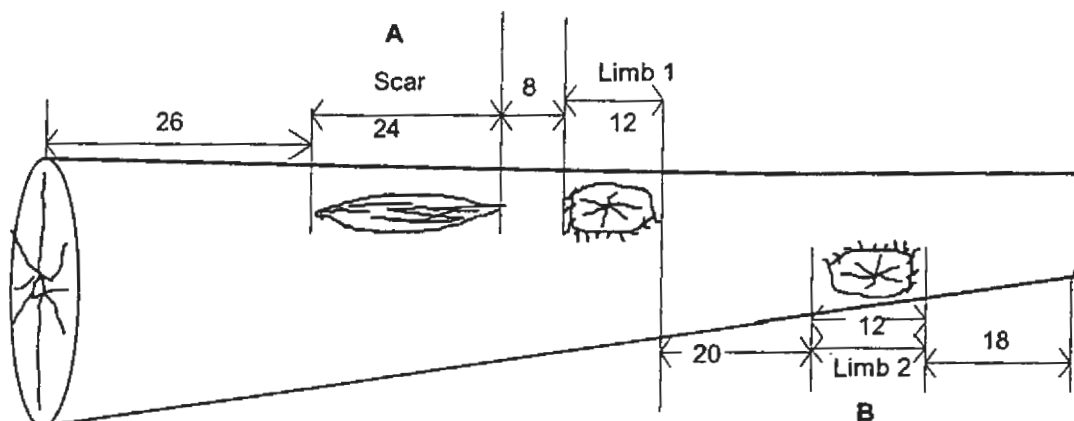
Example 1:



If the two limbs both affect 1/3 of the log cross section for 12 dm but both line up and are 16 dm apart the allowance is:

$$\begin{aligned} (12 + 16 + 12) \times \frac{1}{3} &= 40 \times \frac{1}{3} \\ &= 13 \text{ rounded up to } 14. \end{aligned}$$

Example 2:



In this case the following length defects occur.

- Scar - affects $\frac{1}{4}$ of the log cross section for 24 dm.
- Limb 1 - affects $\frac{1}{4}$ of the log cross section for 12 dm but is on the same side as the scar and is 8 dm from the scar.
- Limb 2 - affects $\frac{1}{3}$ of the log cross-section for 12 dm and is on the opposite side of the log to the other limb separated from it by 20 dm. This limb is also 18 dm from the end of the log.

Allowances would be:

$$\text{Defect A - (Scar + space + limb1)} \times \frac{1}{4} = 24 + 8 + 12 = (44) \times \frac{1}{4} = 11 \Rightarrow 12 \text{ dm.}$$

$$\text{Defect B - (Limb2 + space)} \times \frac{1}{3} = 12 + 18 = (30) \times \frac{1}{3} = 10 \text{ dm.}$$

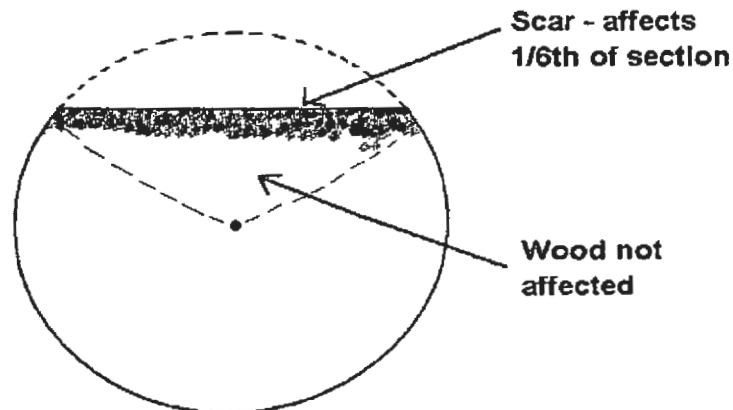
$$\text{Total} = 22 \text{ dm.}$$

In instances where multiple offset defects occur, consideration needs to be given as to where the log will be crosscut to achieve the best obtainable sections. Crosscutting normally would result in an increase in the non-utilisable wood, ie increase in defect allowance. This complex situation is best provided for by increasing the estimated proportion of the log affected, eg say from $\frac{1}{3}$ to $\frac{1}{2}$. *Multiple defects can also render a section of a log unusable.*

In all cases, watching logs being broken down at a sawmill is important to help gain experience in estimating the effect of each type of defect, and how much of the length and cross section of a log is affected by particular defect types. Logs will vary from area to area as will the effect of the defect.

2.3.3.3 Burn Scars, Bumps, and Swells

These are allowed for by estimating the proportion of the cross sectional area affected and multiplying this by the length. (Based on defect affecting only a proportion of log depth. Note that defect may occur on scar interface, eg ants, fungal attack.).

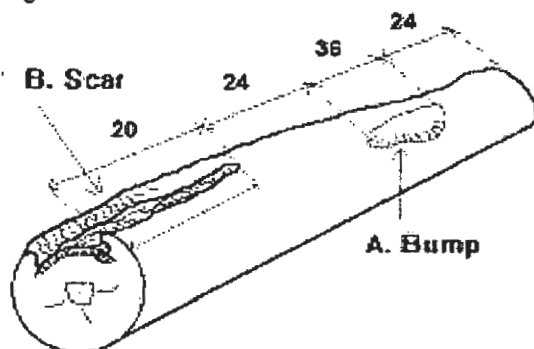


Scars and bumps, which are assessed as being only surface in extent (outermost 40 mm) and therefore not affecting sawn recovery, should not be allowed. **Caution applying this guide to bumps.**

Recent epicormic shoot bumps would generally not be allowed if assessed as affecting only the sapwood.

Ant windows along the log in association with heavy and gallery evidence at the ends is indicative of a poor log and will generally require caution and allowance. If unsure, consider further cross cutting to expose the extent of the defect.

eg:



A. Bump affects $\frac{1}{4}$ cross sectional area, so allow $36/4 = 9$. Rounded up to 10 dm



B. Scar affects $\frac{1}{3}$ cross sectional area, so allow $20/3 = 7$. Rounded up to 8 dm



Total allowance = 18 dm.

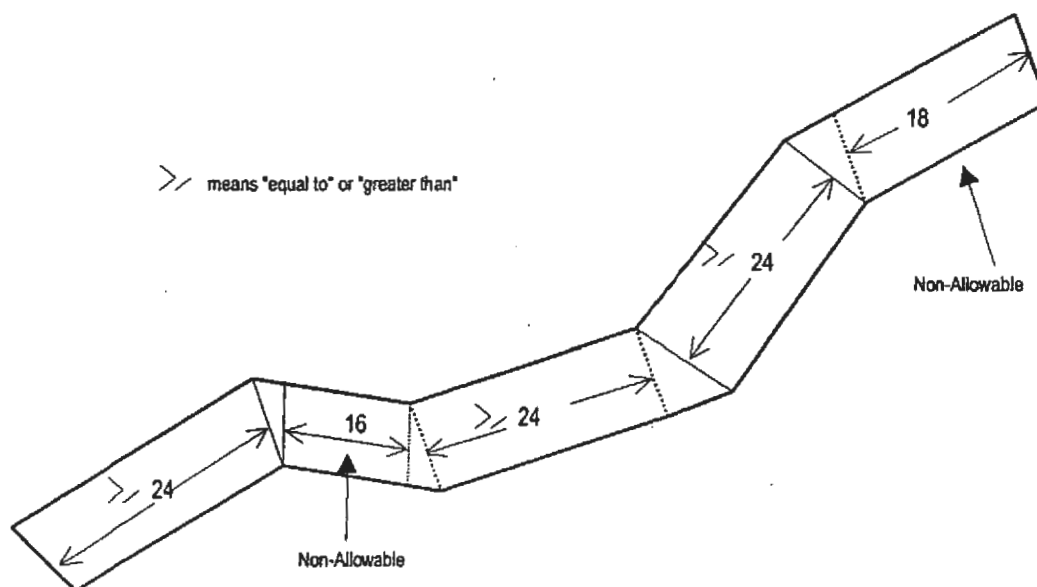
2.3.3.4 Kinks, Sweep and Poor Shape

Kinks

Where the log can be cross cut in the mill yard at the position of kinks or bends without significant useable length being lost, and where the useable lengths recovered are equal to or in excess of 24 dm, then no allowance is given.

A kink or bend within 24 dm of either end of a log should attract a non-allowable cutback if no useable timber can be recovered (these sections should have been serviced off).

Similarly, where any length less than 24 dm is lost along the log between kinks and bends, then full length of such sections should be serviced out or allowed for as a cutback.



So, if the total length of this log as presented was 106, it would be tallied 106/72.

Sweep

Sweep is a even change in direction over a distance of usually no less than 24dm. Shorter changes of direction are bends or kinks and should not be measured as sweep.

The maximum sweep a log or section of a log can carry is one fifth of the diameter of the log over a minimum length section (24dm for logs >40cm mid diameter or 30dm for logs <40cm mid diameter). If the sweep in any minimum length section of the log is greater than $\frac{1}{5}$ of the diameter at that point, (measure with stringline) then that whole, or part of that section of the log, can be either cut out of the log or allowed for as a cutback.

It should be recognised that whilst a log may not exceed the maximum allowable sweep, there will still be a loss in recovery as sweep increases. To make an allowance for sweep the following procedure should be undertaken.

- a) Determine the level of sweep and the length affected remembering the maximum level of sweep allowable.

- b) Apply the following length allowances over the affected length. This allowance is in addition to any other allowances applicable to that length.

Level of sweep	Allowance	Allowance over 24dm length
Sweep less than 1 in 10	No allowance	0
Sweep between 1 in 10 and 1 in 8	25% of affected length	6dm
Sweep between 1 in 8 and 1 in 5	33% of affected length	8dm
Sweep greater than 1 in 5	Not acceptable as a graded log	Not applicable

Measurement of sweep

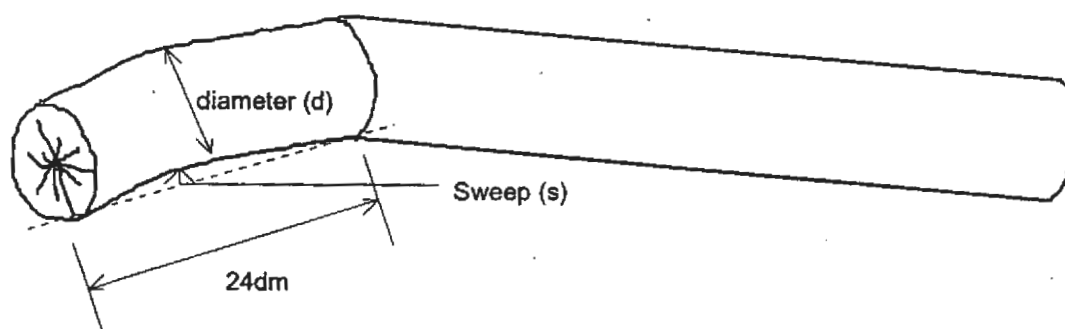


Table showing deflection by log diameter of various levels of sweep

Log diameter (cms)	Maximum defection (sweep) over 24dm length		
	1:10	1:8	1:5
30	3	4	6
35	4	4	7
40	4	5	8
45	5	6	9
50	5	6	10
55	6	7	11
60	6	8	12
65	7	8	13
70	7	9	14
75	8	9	15
80	8	10	16

When applying an allowance for sweep, the allowance is to be applied in addition to other length allowances. Logs cannot exceed the maximum allowable defect percentage for their diameter.

If a log can be straightened by crosscutting the deflection is usually caused by a kink and not by sweep. In cases such as this no allowance for sweep should be made.

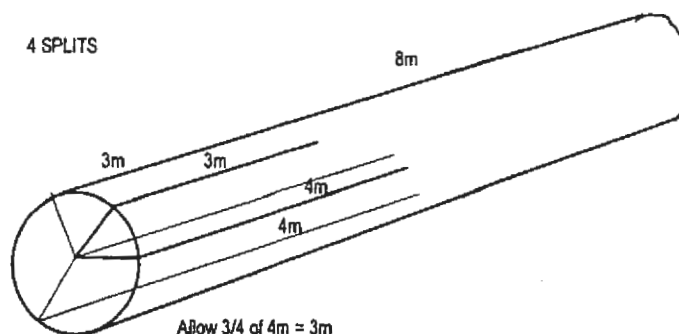
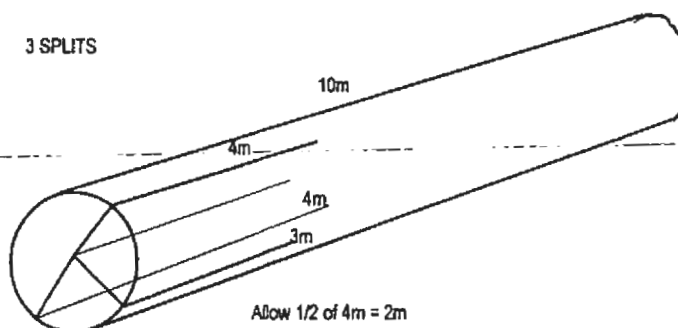
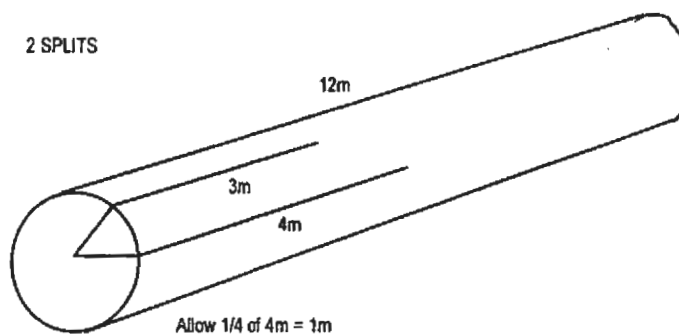
Poor Shape

Where logs are of very poor shape, an allowance equivalent to the estimated length deemed to be lost through shape should be made, eg if estimate one third of the log is going to be lost in sawn recovery due to misshapen form, then allow $\frac{1}{3}$ in length. This allowance will be higher for logs with pipe.

2.3.3.5 Straight Splits

Straight splits along the log which are inherent in the log, may be allowed as length deduction as follows:

1 x Split	- no allowance
2 x Splits	- 25% of length of log affected
3 x Splits	- 50% of length of log affected
4 x Splits	- 75% of length of log affected



In some cases, excessive splits should have been serviced off and a non-allowable deduction may be appropriate.

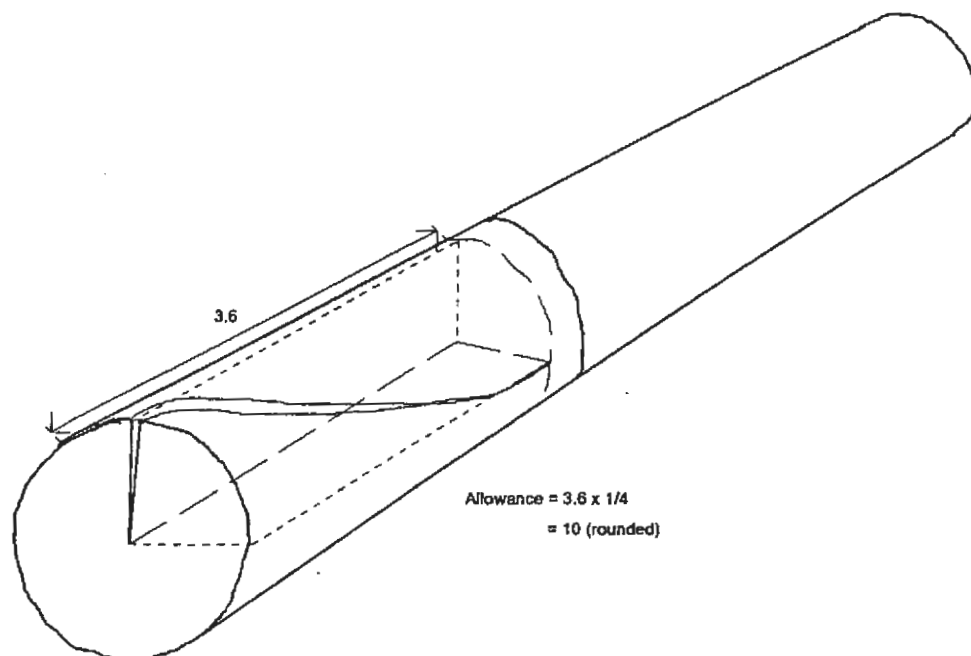
2.3.3.6 Curly Grain

Excessive curly grain, where proven to extend through to the heartwood in Brushbox, may cause a log to be downgraded.

2.3.3.7 Spiral Grain and Associated Splits

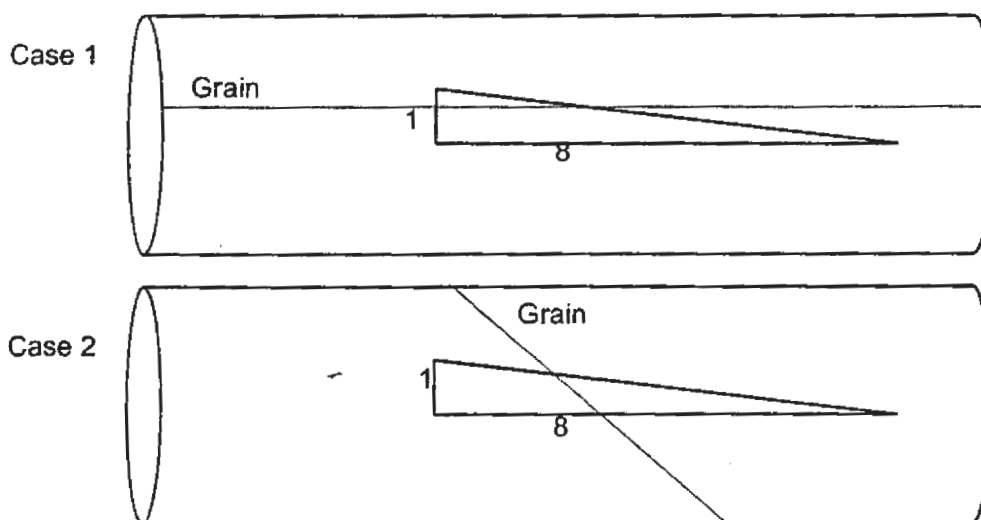
Spiral grain in excess of 1 in 8 will render logs non-compulsory, less than 1 in 8 is acceptable and no allowance is given. *The log grader should always check that spiral grain extends beyond the sapwood.*

Splits associated with spiral grain will render affected section of log useless and in most cases may be serviced off. Where some useable wood appears available, an adequate allowance to cover the unusable section of log should be made.



Spiral Grain

To determine acceptability of spiral grain in comparison to the maximum spiral permitted (1 in 8), the following procedure can be undertaken:



1. Remove bark to ensure spiral is in wood. Again check to ensure spiral is more than sapwood deep.

-
2. With chalk draw a triangle as shown above on log. Short side 10 cm, long side 80 cm or multiples thereof.
 3. If grain is steeper than slope of the triangle (Case 2) the grain is steeper than 1:8, if not (Case 1) the log is acceptable.

APPENDIX 1**Determination of Defect Percentage****Method A - Sharp Pocket Computer Model PC-1248****Operation**

- Press ON.
- Press SHIFT
- Press = (RUN)
- Press ENTER

Display will prompt you for the next move

- Enter length in dm
- Press ENTER
- Enter diameter in cm
- Press ENTER
- Enter pipe in cm
- Press ENTER
- Enter length deduction in dm (If Nil press 0.)
- Press ENTER

Display will indicate defect %

Note: Some pocket computers may also display gross, defect and net volumes each time ENTER is pressed.

APPENDIX 1**Determination of Defect Percentage****Method B - Sharp Programmable Scientific Calculator Model EL-5120****Operation of normal calculator function**

- Press **ON**
- Press **MODE** until display shows <MODE SELECT>
- Press **1:REAL** then use as a normal calculator
- Use **ENTER** key to calculate
- To exit, Press **2ndF** (yellow button) and **ON/OFF** button (top left)

Note: to calculate the square root ($\sqrt{}$) of an equation, the equation must be first enclosed in parenthesis, eg $\sqrt{(320 + 160 + 192)}$

Operation of defect program function

- Press **ON**
- Press **MODE** until display shows <MODE SELECT>
- Press **4:PROG** then use as a normal calculator
- Press **1:RUN**. Display will ask which program you want to run, ie RUN
→01:DEFECT You may have to use the arrow keys to scroll to the program of your choice if there is more than one program in the calculator.
- Press **ENTER**. Display will prompt you to enter the length.
- Enter length in dm
- Press **ENTER**. Display will prompt you to enter the diameter.
- Enter diameter in cm
- Press **ENTER**. Display will prompt you to enter the pipe diameter.
- Enter pipe diameter in cm
- Press **ENTER**. Display will prompt you to enter the length deduction.
- Enter length deduction in dm. If there are no length deductions, enter 0
- Press **ENTER**. Displays "Gross volume"
- Press **ENTER**. Displays "Defect volume"
- Press **ENTER**. Displays "Net volume"
- Press **ENTER**. Displays "Defect percent"
- Press **ENTER** and program starts again, display will prompt you to enter the next length
- To exit, Press **2ndF** (yellow button) and red **CL/CA** button.
- Press **QUIT**. Displays PROGRAM MODE
- Press **2ndF** and **ON/OFF** button (top left)

APPENDIX 1**Determination of Defect Percentage****Method C - Tables****TABLE A - PIPE DEFECT %**

- Refer to left hand column of log diameters. Refer to pipe diameter allowance along top of page. Where these intersect read off pipe defect percent.
- If the log has no length deduction, this defect percent can be then compared with the defect percentage permitted from Compulsory Utilisation Schedules.
- If log also has length deduction then note % defect for pipe.

TABLE B - LENGTH DEFECT %

- Refer to left hand column of log lengths. Refer to length allowance (in dm) along top of page. Where these intersect read off length defect percent.
- Note length defect percent.

TABLE C - LOG DEFECT

- From pipe and length defect percentages determined from tables A and B, apply these to this table with pipe defect % across the top and length defect % down left hand column.
- Where these intersect read off defect percentage for log.

Then compare this defect % with maximum, defect percentage permitted from Compulsory Utilisation Schedules.

- if less, log is compulsory
- if greater, log is non-compulsory.

ACCURACY

The individual tables are calculated to the nearest whole percentage figure. This means that Tables A and B are calculated to within 0.5% and Table C is accurate to about 1%.

APPENDIX 2

Conversion of Area to Equivalent Pipe Diameter

Pipe Allowance (cm)	$\sqrt{\text{equivalent (sq cm)}}$	Pipe Allowance (cm)	$\sqrt{\text{equivalent (sq cm)}}$
10	100	68	4624
12	144	70	4900
14	196	72	5184
16	256	74	5476
18	324	76	5776
20	400	78	6084
22	484	80	6400
24	576	82	6724
26	676	84	7056
28	784	86	7396
30	900	88	7744
32	1024	90	8100
34	1156	92	8464
36	1296	94	8836
38	1444	96	9216
40	1600	98	9604
42	1764	100	10000
46	2116	102	10404
48	2304	104	10816
50	2500	106	11236
52	2704	108	11664
54	2916	110	12100
56	3136	112	12544
58	3364	114	12996
60	3600	116	13456
62	3844	118	13924
64	4096	120	14400
66	4356		

SCHEDULE 9

The handling fee for the purposes of Clause 15.6 shall be [REDACTED] per cubic metre for the Year commencing with the Effective Date. The handling fee for each Year ('the relevant Year') thereafter shall be the handling fee for the previous Year varied in the same proportion as the average Delivery Charge for the previous Year varies in relation to the average Delivery Charge for the relevant Year.

SCHEDULE 10
Small Diameter Timber

Supply Zone	Management Areas	Maximum Small Diameter Timber m ³	Nominated Sites
1	Casino	12,000	Koolkhan
2	Glen Innes Grafton Dorrigo Coffs Harbour		
3	Urunga		
3	Urunga Kempsey Wauchope Kendall Coopernook	23,000	Heron's Creek (1)
4	Taree Wingham		
Total Maximum Small Diameter Timber		35,000	

Note: (1) or other nominated sites