

Salvage of Logs in Association with Informal Reserves



Sustainable Forest Management Series

Department of Environment and Conservation

SFM Advisory Note No. 5
2007

Some or all of this document will form part of the proposed
Guidelines for the Management of Informal Reserves



Department of
Environment and Conservation

Framework for Guidance Documents from Sustainable Forest Management Division

The Forest Management Plan 2004-2013 (FMP) requires that there be developed *Guidelines for the management of informal reserves*. The Guidelines, when developed, will cover the following topics:

- Types of informal reserves and other sensitive areas;
- Identification and demarcation in the field;
- Disturbance and allowable activities;
- Approval process for disturbance operations; and
- Information management.

Guidance for operations staff on the above topics is currently available in a number of existing documents (see below). This Advisory Note, and others that are being developed, is to provide guidance on issues not already covered in existing documents but needed before the Department has synthesised existing guidance information and developed all the new material required to produce the *Guidelines for the management of informal reserves*.

This Advisory Note relates to existing guidance documents, and proposed and existing Advisory Notes associated with the management of informal reserves as outlined in the table below.

Existing guidance documents related to the management of informal reserves	Proposed and approved Advisory Notes related to the management of informal reserves
<ul style="list-style-type: none"> • Forest Management Plan 2004-2013, Appendix 3 • Manual of Management Guidelines for Timber Harvesting in Western Australia • Contractors' Timber Harvesting Manual – South West Native Forests (FPC) 	<ul style="list-style-type: none"> • Blade-up Access on State Forest and Timber Reserves. SFM Advisory Note No. 2 (2006) • Management of Access in Informal Reserves and Other Protected Areas Within State Forest and Timber Reserves. SFM Advisory Note No. 3 (2006) • Pre-operation Checklist for Disturbance Operations on State Forest and Timber Reserves. Proposed SFM Advisory Note • Approvals Matrix for Operations on State Forest and Timber Reserves. Proposed SFM Advisory Note • Salvage of Logs in Association with Informal Reserves. SFM Advisory Note 5

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The recommended reference for this publication is: Department of Environment and Conservation 2007, Salvage of Logs in Association with Informal Reserves, Department of Environment and Conservation, Sustainable Forest Management Series, SFM Advisory Note No. 5.

*Cover photograph: Near McAlpine Road in Crowea block
(photo by Steve Collings)*

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1 Background and context

1.1 Purpose

The Forest Management Plan 2004-2013 introduces a range of new requirements for the management of access in informal reserves in native forests. The intent of these requirements is to protect the forest values contained in the informal reserves and reduce the severity of disturbance associated with forest management activities within and adjoining these reserves.

The purpose of this document is to outline the procedures to be used in native forest to manage the salvage of logs that have fallen into or out from informal reserves, and to provide guidance on acceptable processes, and disturbance limits.

1.2 Scope

This document applies to State forest, timber reserves managed by the Department of Environment and Conservation (DEC) and freehold land held in the name of the Department's Chief Executive Officer in the Swan, South-West and Warren Regions.

This document applies to all activities, unless the activity is covered by an authority that overrides the *Conservation and Land Management Act 1984* or the *Forest Management Plan 2004-2013*.

1.3 Background

The Forest Management Plan 2004 – 2013 states in Appendix 3 (page 90) that;

Disturbance of informal reserves

General

The following activities are not permitted in informal reserves:

- (a) *timber harvesting other than:*
 - (i) *permitted thinning in travel route zones that:*
 - *are not identified on the Department's corporate database as being accredited in the RFA as contributing to the representativeness of the reserve system;*
 - *contain regrowth forest; and*
 - *in the opinion of the relevant Regional Manager of the Department, will occur in a manner that will enhance in the long term the visual quality of the landscape;*
 - (ii) *salvage from road clearing and salvage of individual trees removed for safety reasons;*
- (b) *extraction of basic raw materials;*

(c) *craftwood collection; and*

(d) *firewood collection.*

The objective of this document is to provide guidance for the management of activities associated with the salvage of logs from trees that have fallen into or out of informal reserves and other protected areas within State forest and timber reserves, and are considered to affect access and the integrity of the reserve boundary.

In all instances, machines are not permitted to enter an informal reserve to facilitate cleanup and rehabilitation, without the specific permission of the DEC Regional Manager.

1.4 Custodianship and management of this document

The custodian of this document is the Manager of the Forest Policy and Practices Branch of the Sustainable Forest Management Division of DEC. Much of this document will become part of the proposed *Guidelines for the Management of Informal Reserves* and will be reviewed as part of the preparation of that guideline.

2 Definition of key terms

Discordant element	Any human-caused disturbance that is not in harmony with the surrounding landscape. Examples include high stumps, root balls or end cuts on logs that face the boundary, piles of tops / logs / rocks, butt damage to standing trees, severely damaged or mixed soils, extraction tracks etc.
Hard boundaries	Tenure or operational boundaries that are an accurately defined lineal feature with little ambiguity with respect to its location (e.g. surveyed tenure boundary), or an interpreted line used as a management boundary which is established in the field (e.g. commonly a road, track or firebreak).
In-forest treatment	This is the process of applying sawcuts to a fallen tree at the stump in order to prepare logs to an appropriate standard, prior to extraction. The process may include crown cutting, long butting, queen cutting, docking and trimming.
Soft boundaries	A boundary seeking to represent a feature which is not well suited to delineation. The feature may be dynamic, variable in extent or open to interpretation. They are not yet interpreted for management or delineated in the field.

3 Rationale relating to the removal of logs

The following rationale is the basis for the contents of this advisory note on the salvage of logs associated with informal reserves.

Utilisation considerations

- The volume of sawlog available to industry has been reduced in the Forest Management Plan 2004-2013 compared to previous plans making each log a valuable resource;
- Log volume contracted to customers is not dependent on the performance of the harvesting contractor. Consequently, if wood in logs felled from areas available for timber harvesting is not recovered then additional trees will be felled to replace it in the contracted supply to customers;
- Therefore if a tree that is felled or has fallen in an area available for timber harvesting is not salvaged the community loses the utilisation of this wood resource, whereas the contractor or faller loses very little;
- Any penalty for careless falling should be on the harvesting contractor and his employee, and not on the public resource;
- Manual cutting / stacking is hard work and time consuming for the faller, and should act as an incentive to limit unwanted incidents;
- Fallers who cause breaches beyond an identified threshold should be additionally penalised for their poor performance; and
- Situations where a significant portion of the tree has been felled into an informal reserve from a harvest coupe will result in the issue of a Management Letter and / or Works Improvement Notice.

Nature conservation and biodiversity considerations

- Sound logs do not contribute to ground habitat for hollow dependant species for at least many decades;
- Where the existing ground habitat is limited, trees or logs may be required to create or contribute to the required level of ground habitat. In these instances the logs should not be salvaged. Common examples of this will be in woodland areas, in wandoo stands where a large proportion of the logs are likely to contain significant hollows, or in areas with limited ground debris as a result of previous management activities; and
- In some areas it may be necessary to mark felled logs as habitat, and prescribe action to protect them from damage during burn preparation, burning or fire suppression activities.

Fire management considerations

- Logs pose an ongoing cost for mop-up during prescribed burning and fire suppression if they are within 20 m of a burn boundary; and
- If crown debris within 20 m of a burn boundary is not cut and stacked then it may result in a repeated high cost for mop-up during prescribed burning and fire suppression.

Visual Landscape Management (VLM) considerations

- Creating a cut face on a log on the edge of the informal reserve is often not desirable from VLM perspective; and
- Any proposed log salvage operation should be planned and managed to improve or maintain the visual amenity of the site, and not create any discordant element that is noticeable after more than 5 yrs.

4 Guidelines for decisions

The focus of this Advisory Note is generally aimed at salvage of logs in association with activities occurring along the boundary of the informal reserve, rather than for corridors that have the purpose of crossing the informal reserve. The following criteria are to be used to guide the decisions by Regional Managers and Incident Controllers in relation to the felling, removal or salvage of logs from informal reserves:

- Salvage of all log material produced as a result of approved clearing for roads, powerlines, utility corridors, and other community infrastructure is permitted;
- Salvage of trees felled for road user safety during road maintenance is permitted;
- Salvage of trees felled for fire-fighter safety during fire suppression is permitted, on the proviso that felling should be the last resort for maintaining burn security in old-growth patches;
- All hollow logs with a pipe > 100mm diameter and length > 3m should be retained as fauna habitat; and
- If a high level of disturbance to the soil or vegetation is likely to occur during the removal operation, then the log should generally be left.

If there is any doubt as to the interpretation of these guidelines the authority for the decision will remain with the relevant Regional Manager of DEC.

5 Removal of logs from informal reserves

5.1 Removal of logs resulting from natural windfall in informal reserves

Situation 1 When a tree in an informal reserve has fallen across a hard boundary, and needs to be moved to permit access.

- a) **When only the tree crown blocks the boundary track of the informal reserves:**
- Cutting and removal of the tops for management access or for burn security is required;
 - Removal of the log is permitted but logs in the bole and crown may only be removed where the logs can be accessed without machine entry into the informal reserve;
 - Crown debris outside the informal reserve will be stacked to facilitate burning;
 - Crown debris within the informal reserve will be cross cut to facilitate burning; and
 - Tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris.
- b) **When the bole of the tree blocks the boundary track of the informal reserve:**
- Cutting and removal of the log and tops is required for management access or for burn security;
 - The removal of the log is permitted;
 - Logs should be cut as long as is possible or manageable and removed. The log should be cut as close as possible to the root ball. Logs with broken ends should be removed in their entirety and treated outside the informal reserve;
 - Log extraction along the centreline of the log is permitted as it should not increase damage within the informal reserve;
 - No in-forest treatment should occur within the informal reserve;
 - Tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris; and
 - Crown debris outside the informal reserve will be stacked to facilitate burning.

Situation 2 When a tree in an informal reserve has fallen across a soft boundary, and needs to be moved to construct a hard boundary.

Select the appropriate boundary of the reserve and demarcate this in the field according to the selection procedure or guidelines. Where it is practicable to select a hard boundary that avoids fallen trees then this should be done.

- a) **When only the tree crown blocks the boundary track of the informal reserve:**
- The removal of the log is permitted, but logs in the bole and crown may only be removed where the logs can be accessed without machine entry into the informal reserve;

- The use of a machine to assist with removal and stacking of tops is not permitted inside the informal reserve;
- Crown debris outside the informal reserve will be stacked to facilitate burning;
- Crown debris within the informal reserve will be cut to facilitate burning; and
- Tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris.

b) When the bole of the tree blocks the boundary track of the informal reserve:

- Cutting and removal of the log and tops to allow construction of the access track is required;
- The removal of the log is permitted;
- The use of a machine to assist with removal and stacking of tops is permitted;
- Log extraction along the centreline of the log is permitted as it should not increase damage within the informal reserve;
- Logs should be cut as long as is possible or manageable and removed. The log should be cut as close as possible to the root ball. Logs with broken ends should be removed in their entirety and treated outside the reserve;
- No in-forest treatment should occur within the informal reserve;
- Crown debris and debris from log treatment outside the informal reserve should be stacked to facilitate burning; and
- Tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris.

5.2 Felling for fire suppression in informal reserves

Situation 3 When a standing tree in an informal reserve has been or needs to be felled for fire suppression purposes.

- Trees up to 100 m from the fire perimeter may need to be felled for burn security purposes;
- The decision to fell during an incident must be approved by the Incident Controller and recorded in the Incident Log;
- Stumps should be cut as low as is safely possible;
- Where the bole of the tree intersects the fire line, cutting and removal of log and tops for access or for burn security is permitted;
- The use of machines to push crown debris greater than 20 m into the fire to provide burn security and reduce mop-up is permitted;
- All trees that have intersected with the fire-line will be considered for log salvage;
- The log should only be salvaged if it can be removed without further damage to standing trees within the informal reserve;
- Any decision to allow a machine to enter an informal reserve to salvage logs or rehabilitate disturbance during an incident must be approved by the Incident Controller and recorded in the Incident Log;

- Log extraction along the centreline of the log is permitted as it should not increase damage within the informal reserve or create a new corridor of disturbance;
- The use of a machine to assist with removal of the logs and stacking of tops is permitted. The use of a machine in the informal reserve may be appropriate due to rapid recovery of understorey following the burn. Care should be taken to reduce the amount of soil that is moved in this operation, as this will affect the regeneration of understorey following the fire.;
- Tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris;
- Logs should be cut as long as is possible or manageable and removed;
- Where possible, debris should be stacked on the stump as part of the Rehabilitation Plan, to facilitate burning of the cut face;
- No in-forest treatment should occur within the informal reserve;
- Debris from log treatment outside the informal reserve should be stacked to facilitate burning; and
- Where log salvage operations are identified as part of the Rehabilitation Plan and are to be undertaken after the incident is completed, they must be approved by the relevant Regional Manager of DEC.

Situation 4 When a standing tree outside an informal reserve needs to be, or has been, felled for fire suppression purposes, and has fallen into an informal reserve.

- Trees up to 100 m from the fire perimeter may need to be felled for burn security purposes;
- The log should only be salvaged if it can be removed without further damage to standing trees within the informal reserve;
- Logs should be cut as long as is possible or manageable and removed;
- Log extraction along the centreline of the log is permitted as it should not increase damage within the informal reserve or create a new corridor of disturbance;
- The removal of logs from the crown is not permitted;
- No in-forest treatment should occur within the informal reserve;
- Debris from log treatment outside the informal reserve should be stacked to facilitate burning.
- The use of a machine to assist with removal of the logs and stacking of tops is permitted. The use of a machine in the informal reserve may be appropriate due to rapid recovery of understorey following the burn. Care should be taken to reduce the amount of soil that is moved in this operation, as this will affect the regeneration of understorey following the fire;
- Any decision to allow a machine to enter an informal reserve to salvage logs or rehabilitate disturbance during an incident must be approved by the Incident Controller and recorded in the Incident Log;
- The decision to allow a machine to enter an informal reserve as part of the Rehabilitation Plan must be approved by the relevant Regional Manager of DEC and recorded on the works prescription or operational approval;

- Where a machine cannot be used, manual cross cutting of crown material within the informal reserve to facilitate burning, may be required as part of the Rehabilitation Plan; and
- Manual tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, 5 m for material greater than 75 mm in diameter or piles of debris.

5.3 Removal of a log following felling for burn preparation in an informal reserve

Situation 5 When trees have been or need to be felled for burn security purposes during burn preparation.

- Trees may only be felled with the approval of the relevant Regional Manager. This decision, and the location of the trees, is to be recorded on the burn prescription;
- Felling should be the last resort to deal with burn security issues in old-growth forest patches;
- Stumps should be cut as low as is safely possible;
- The decision to allow a machine to enter an informal reserve as part of the burn preparation must be approved by the relevant Regional Manager of DEC and recorded on the prescription or operational approval;
- Where possible debris should be stacked on the stump to facilitate burning of the cut face, in old growth patches;
- Where the bole of the tree intersects the fire line, cutting and removal of log and tops for access or for burn security is permitted;
- Tops disposal of crown material from the base of trees in the informal reserve is required to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris;
- Logs should be cut as long as is possible or manageable and removed;
- The use of a machine to assist with removal of log and tops is permitted. The use of a machine in the informal reserve may be appropriate due to rapid recovery of understorey following the burn. Care should be taken to reduce the amount of soil that is moved in this operation, as this will affect the regeneration of understorey following the burn;
- Log extraction along the centreline of the log should be undertaken so as not to increase damage within the informal reserve; and
- No in-forest treatment should occur within the informal reserve.

5.4 Removal of logs accidentally felled into informal reserves

The Forest Management Plan 2004 – 2013 states on page 91 that:

Trees within the harvesting area leaning into informal reserves may only be felled using a tree-jacking system. Where a tree accidentally falls into an informal reserve, other than old-growth forest reserve, it is to be left where it falls unless the log can be extracted without compromising the integrity of the reserve. In the case of old-growth forest, such trees are to be left where they fall in all cases.

Where the felled tree affects access along the boundary track between the informal reserve and a harvesting area the following will apply.

Situation 6 When a tree is felled across soft patch boundaries in conjunction with a harvesting operation.

a) When less than 50 per cent of crown intrudes into the informal reserve:

- Removal of the bole of the tree is required;
- Use of a machine to extract the accessible tops back into the coupe is permitted;
- The removal of crown logs from the tops in the coupe is required;
- The faller is required to carry out manual tops disposal of crown material from the base of trees in the informal reserve to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris.
- The use of a machine to assist with tops disposal within the informal reserve is not permitted;
- All occurrences of this nature must be recorded in the coupe diary, and
- A Management Letter is generally not required, except where it is considered that the frequency of occurrences is evidence of careless work.

b) When more than 50 per cent of the crown and bole substantially intrude into the informal reserve:

- All occurrences of this nature must be recorded in the coupe diary, and DEC advised as soon as is practicable;
- Each occurrence should be considered by DEC. If it is considered a serious breach then a Management Letter is to be prepared (see SFM Advisory Note 4, 2006);
- The faller is required to cut off the bole at crown break;
- The log is required to be snigged back into the coupe along the centre line of the log;
- The removal of logs from the crown is not permitted;
- The faller is required to carry out manual cross cutting of crown material within the informal reserve to facilitate burning;
- The faller is required to carry out manual tops disposal of crown material from the base of trees in the informal reserve to a distance of 1 m for material less than 75 mm in diameter, and 5 m for material greater than 75 mm in diameter or piles of debris; and
- The use of a machine to assist with tops disposal within the informal reserve is not permitted.

6 Recording

The following records are required to be created and retained:

- The decision to fell trees in informal reserves following ignition of a prescribed burn or during fire suppression must be approved by the Incident Controller and recorded in the Incident Log;
- The decision to allow a machine to enter an informal reserve to assist with mop-up, salvage logs or rehabilitate disturbance during an incident must be approved by the Incident Controller and recorded in the Incident Log;
- The decision to allow a machine to enter an informal reserve to salvage logs or rehabilitate disturbance as part of a Rehabilitation Plan must be approved by the Regional Manager of DEC and recorded on the works prescription or operational approval;
- The decision to fell trees for burn security in an informal reserve as part of burn preparation must be approved by the relevant Regional Manager of DEC and recorded on the burn prescription or operational approval;
- The decision to allow a machine to enter an informal reserve to salvage logs or rehabilitate disturbance as a part of burn preparation must be approved by the relevant Regional Manager of DEC, and recorded on the burn prescription or operational approval.
- All instances where more than 50 per cent crown and / or log substantially intrude into the informal reserve must be recorded in the Coupe Diary, and DEC advised as soon as is practicable;
- Trees to be felled and or logs to be removed, may need to be photographed before the felling or removal occurs, and the photographic record retained for future reference; and
- All logs removed are to be marked by a DEC officer.

7 Useful reading

Conservation Commission of Western Australia (2004). *Forest Management Plan 2004-2013*. Conservation Commission of Western Australia, Perth.

Department of Environment and Conservation, 2006. Procedures for the Use of Work Improvement Notices and Management Letters. Department of Environment and Conservation, Sustainable Forest Management Series, SFM Advisory Note No.4.