

# OFFICE BASED REVIEW OF REGENERATION

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DISTRICT OFFICE: {.....}

COUPE ID: {.....}

EPA – Office Based Review of Regeneration

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Code Ref	Code Requirement	Silviculture guideline	Audit Criterion	Audit Team Member	Score	Comments and positive observations
2.2.1.1	<b>Regeneration:</b> The current selection, shelterwood, seed tree and clearfelling silvicultural systems will continue to be used to harvest and regenerate coupes and will continue to be refined in accordance with findings from on-going research.	[Aerial sowing]... <i>is the most common procedure in forests where the clearfelling silvicultural system is employed</i> (NFSG8, p1).  <i>If the seed tree system is to be used, the main requirement is that the trees to be retained must be carrying an adequate seed crop. Refer to the relevant silvicultural Decision Support System (eg, ERDAG 2000) to assist in the choice of the best system for the coupe in question</i> (NFSG8, p21).	0 = No evidence of current silvicultural systems being used to harvest and regenerate coupes.  1 = Evidence that current silvicultural systems are being used to harvest and regenerate coupes, and appropriate procedure is followed.		/ 1	
2.2.1.2	<b>Regeneration:</b> Where necessary, harvest debris shall be burnt to provide a receptive seedbed for regeneration and to reduce the fire hazard associated with large accumulations of flammable material. In other cases, a receptive seedbed may be achieved by mechanical disturbance where this does not degrade the soil, or planting can be used to re-establish the forest.	<i>Seedbeds suitable for eucalypt germination and growth are ... broadly classified as uncompacted bare soil or uncompacted ashbed</i> (NFSG6, p3).  <i>The standard for the distribution and quantity of receptive seedbeds is a minimum of 75% of 4-milacre plots should comprise at least 50% receptive seedbed types. No discrete area greater than 1 ha should consist of plots &lt;50% receptive</i> (NFSG6, p4).	0 = No evidence of processes followed to prepare receptive seed bed.  1 = Evidence of processes followed to prepare receptive seed bed  N/A = No seedbed preparation required.		/ 1	

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2.2.2.1	<b>Reforestation:</b> Reforestation Plans, which set out, among other things, the proposed site preparation, establishment and tending methods must be prepared and approved for each site.	Refer to NFSG 6 (Site Preparation), 8 (Sowing and Seedfall), 9 (Eucalypt Planting) and 11 (Bark Disposal and Landing Rehabilitation).	N/A = Not a reforestation plan 0 = Reforestation Plan detailing the proposed site preparation, establishment and tending methods not prepared or approved. 1 = Reforestation Plan detailing the proposed site preparation, establishment and tending methods prepared and approved for each site		/ 1	
2.2.2.2	<b>Reforestation:</b> Sites to be reforested are to be prepared to suit the particular species and site conditions.	Refer to NFSG6 for optimal timing of site preparation by forest type (p8), priority for site preparation by forest type and site conditions (p9) and selection of site preparation treatments (p10).	N/A = Not a reforestation plan 0 = Sites to be reforested not prepared according to guidelines for particular species and site conditions 1 = Sites to be reforested prepared according to guidelines for particular species and site conditions (including no treatment necessary)		/1	

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2.2.2.3	<b>Reforestation:</b> Tree species will be established by the sowing of seed of by planting of seedlings of species native to the locality, unless an adverse microclimate or disease potential requires the use of alternative native species for survival and growth.	<p><i>Use seed collected from the coupe if possible; i.e. regenerate with seedfall from retained trees and/or logging slash, or sow the coupe with seed collected from that coupe. Otherwise use seed that, as far as possible, meets the following criteria:</i></p> <ul style="list-style-type: none"> <li>- <u>Transfer distance:</u> Limit of 25km between collection site and coupe to be sown</li> <li>- <u>Elevation:</u> Mid-elevation of collection site should be within 350m above, to 150m below, the mid elevation of the coupe to be sown.</li> <li>- <u>Aspect:</u> For slopes &gt;10 degrees, separate 'drier' aspects (W, NW, N, NE) from 'wetter' aspects (SW, S, SE, E).</li> <li>- <u>Soils:</u> Similar soil type derived from similar parent material.</li> </ul> <p>NFSG2 p3-5. Also refer to notes on NFSG2 p5.</p>	<p>N/A = Not a reforestation plan</p> <p>0 = Tree species not established by the sowing of seed of by planting of seedlings of species native to the locality</p> <p>1 = Tree species established by the sowing of seed of by planting of seedlings of species native to the locality or adverse microclimate or disease potential requires the use of alternative native species for survival and growth.</p>		/1	
2.2.2.4	<b>Reforestation:</b> Sites to be reforested by planting should be subject to similar practices with respect to site preparation and tending as for hardwood plantations.	See NFSG 9	<p>N/A = Not a reforestation plan</p> <p>0 = Sites reforested by planting not subject to similar practices with respect to site preparation and tending as for hardwood plantations.</p> <p>1 = Sites to be reforested by planting subject to similar practices with respect to site preparation and tending as for hardwood plantations.</p>		/1	

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2.2.3.1	<p><b>Code regeneration goal regarding origin of seed:</b></p> <p>Native forest stands should be regenerated with species and provenances native to the area, or general locality, with the objective of maintaining the local genetic pools and species mixes.</p>	<p><i>Use seed collected from the coupe if possible; i.e. regenerate with seedfall from retained trees and/or logging slash, or sow the coupe with seed collected from that coupe. Otherwise use seed that, as far as possible, meets the following criteria:</i></p> <ul style="list-style-type: none"> <li>- <u>Transfer distance:</u> Limit of 25km between collection site and coupe to be sown;</li> <li>- <u>Elevation:</u> Mid-elevation of collection site should be within 350m above, to 150m below, the mid elevation of the coupe to be sown;</li> <li>- <u>Aspect:</u> For slopes &gt;10 degrees, separate 'drier' aspects (W, NW, N, NE) from 'wetter' aspects (SW, S, SE, E);</li> <li>- <u>Soils:</u> Similar soil type derived from similar parent material.</li> </ul> <p>NFSG2 p3-5. Also refer to notes on NFSG2 p5.</p>	<p>0 = Tree species and provenances established by forest manager not native to the area or general locality.</p> <p>1 = Tree species and provenances established by forest manager are native to the area or general locality in accordance with NFSG 2, where applicable.</p>		/1	
2.2.3.2	<p><b>Tree species and Seed source for regeneration:</b> Seedfall, sowing or planting operations should aim to approximate the composition and spatial distribution of species present on the coupe prior to harvesting</p>	<p>See NFSG 8 for operational details on sowing rates and methods (including seed tree and slash seed).</p> <p><i>The minimum standard (species composition) is at least 10 acceptable seedlings (or coppice) of those eucalypt species present on the site, prior to harvesting or other disturbance, must be present on the regenerated site. NFSG 10, p12</i></p>	<p>0 = No evidence of attempts to approximate the composition and spatial distribution of species present on the pre-harvest coupe</p> <p>1 = Documentation exists that pre-harvest composition used as basis for regeneration</p>		/1	

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2.2.3.3	<b>Tree species and Seed source for regeneration:</b> Where past management practices may have altered species composition, regeneration operations may aim to approximate the composition and spatial distribution of species present on the coupe prior to such practices.		0 = No evidence of attempts to approximate the composition and spatial distribution of species prior to past management.  1 = Evidence that composition and spatial distribution of species prior to previous management was used as basis for regeneration.  N/A= past management practices have not altered species composition.		/ 1	
2.2.3.4	<b>Tree species and Seed source for regeneration:</b> The source of seed used should be recorded on Forest Coupe Plans.		0 = No record on Forest Coupe Plans (or appropriate document) of the seed source.  1 = Records exist on Forest Coupe Plans (or appropriate document) of the seed source.		/ 1	
2.2.4.1	<b>Stocking and early growth:</b> Regenerating harvested coupes should be assessed within three years of treatment.	<u>Even-aged stands</u> See guidelines for choice of survey method in Section 2.1 NFSG 10, p3. See guidelines for timing, field procedure and standards for survey techniques in Sections 2.2, 2.3 and 2.4, NFSG 10, p5-16. <u>Uneven-aged stands</u> See guidelines for choice of survey method in Section 2.1 NFSG 10, p3. See guidelines for survey technique, timing, field procedure and standards in	0 = No evidence of assessment of regeneration on harvested coupes within three years of treatment  1 = Evidence of assessment of regenerating harvested coupes within three years of treatment, in accordance with NFSG 10 where applicable.		/ 1	

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		Sections 3.4-3.8, NFSG 10, 18-24.				
2.2.4.1	<b>Stocking and early growth:</b> Where stocking, health or early growth is below the applicable standard, remedial work should be undertaken to obtain adequate establishment of eucalypts.	Refer to relevant sections of NFSG 6, 7, 8, 9, 10 or 12.	N/A = No requirement for remedial work.  0 = No evidence of remedial work where stocking, spatial distribution, health or early growth is below the applicable standard.  1 = Evidence of remedial action and follow-up treatment having been conducted or scheduled where stocking, spatial distribution, health and early growth is below applicable standard.		/ 1	
2.2.4.3	<b>Stocking and early growth:</b> Results of assessments and details of any further silvicultural treatments should be recorded.		0 = Appropriate records of results of assessments and details of further silvicultural treatments not available  1 = Appropriate records of results of assessments and details of further silvicultural treatments available,		/1	