



# A Guide to Preparing Revegetation Plans for Clearing Permits

Department of Environment Regulation

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## About CME

The Chamber of Minerals and Energy of Western Australia (CME) is the peak resources sector representative body in Western Australia. CME is funded by its member companies who are responsible for most of the State's mineral and energy production and are major employers of the resources sector workforce in the State.

In 2014-15, the value of Western Australia's mineral and petroleum production was \$99.5 billion. Iron ore is currently the State's most valuable commodity, accounting for more than half the State's production value at \$54 billion. Petroleum products (including LNG, crude oil and condensate) follow at \$24 billion, with gold third at \$9 billion.

The sector is a major contributor to the state and the Australian economy. The estimated value of royalties the state received from the resources sector composed almost 15 per cent of estimated total state revenue in 2015-16, or around \$3.8 billion.

## Recommendations

CME's view is overall, the document is highly prescriptive and lacks a risk-based approach. This will likely result in a disproportionate compliance, monitoring and administrative burden on permit holders without any material environmental benefit.

CME recommend:

- DER should clarify in Section 1 when a revegetation plan condition would be imposed taking in to account the specific risks associated with the revegetation programme.
- The guide should apply only to high-risk, large-scale revegetation projects and / or off-site offset revegetation related to clearing of conservation significant areas.
- The "*minimum data required*" in Section 5.3.2 and Table 1 should be changed to recommended data.
- DER should provide guidance for situations where a revegetation plan is conditioned but collection of baseline data is no longer possible.
- DER must re-instate the current guide (August 2013) online to ensure it is publicly available and used until such time as a final (approved for use) version has been issued.
- DER should include information regarding transitional arrangements (if any) and a brief summary of the need for the update including highlighting significant changes.

In addition to the above recommendations, Table 1 below provides additional recommendations for specific sections within the consultation draft.

## Context

CME welcome the opportunity to review and provide comment on the Department of Environment Regulation (DER) draft “A Guide to Preparing Revegetation Plans for Clearing Permits” (the guide).

The guide is an update of the previous version issued in August 2013 and has been developed to advise land holders and other key stakeholders of the DER’s recommended approach for revegetation plans.

This review of the guide is aimed at ensuring the decision making of DER surrounding revegetation plans is undertaken in a strategic manner which minimises environmental and community safety risks. However, **CME’s view is overall, the document is highly prescriptive and lacks a risk-based approach. This will likely result in a disproportionate compliance, monitoring and administrative burden on permit holders without any material environmental benefit.** CME recommends consideration of several matters as outlined below.

## Requirement for a Revegetation Plan and Guide Application

The guide currently provides no clarity for DER personnel or permit holders as to the circumstances in which a revegetation plan would be conditioned, nor does the guide clarify how the level of detail within a plan would vary based upon the specifics of the revegetation project. Provision of such guidance would assist applicants to understand when the guide might be relevant prior to seeking a permit and would also ensure DER officers consistently apply government guidance appropriately.

Various factors can affect revegetation outcomes such as:

- Scale of disturbance including total area, shape and continuity
- Existing terrain
- Nature of landform and soil changes post disturbance
- Duration of disturbance
- Availability of topsoil
- Availability of seed for collection
- Propagation success for key species in the vegetation community
- Climatic conditions and weather events
- Surrounding environment condition, land uses and existing environmental threats including weeds and feral herbivores

As a consequence, certain revegetation projects will require more detailed planning, monitoring and maintenance to improve the likelihood of revegetation success. Additionally, certain revegetation projects will have a higher environmental value considering factors such as presence of rare species or ecosystems, critical habitat, location, conservation reserves and the like. This variety highlights the importance of DER clearly articulating when it will condition for a revegetation plan and how the scope of the plan would vary based on the revegetation project specifics.

Revegetation activities conducted by resource sector permit holders for example are often on-site following temporary disturbance (eg: exploration tracks, laydown areas, construction areas, temporary access). The planning required to facilitate likely revegetation success in such instances is low compared to what is specified in the guide.

Many resource sector revegetation projects may only require topsoil re-spreading rather than use of seeds or direct planting. The area of both disturbance and revegetation may also be

very small within a much larger footprint and have a very high probability of revegetation success with minimal, if any, maintenance. As the guide does not clarify when revegetation plans will be conditioned, it may be interpreted the guide applies broadly for all revegetation.

**DER should clarify in Section 1 when a revegetation plan condition would be imposed taking in to account the specific risks associated with the revegetation programme.**

Given the absence of the above information, it is difficult to assess the appropriateness of some of the content of the guide. The detailed specifications currently included suggests the guide is intended for high-risk revegetation projects with uncertain outcomes and / or in areas for an off-site offsets programme related to clearing of a conservation significant area.

**The guide should apply only to high-risk, large-scale revegetation projects and / or off-site offset revegetation related to clearing of conservation significant areas.**

### **Minimum Data and Baseline Data Requirements**

Section 5.3.2 and Table 1 of the guide present the “*minimum data required*” for inclusion in a revegetation plan. This information is overly prescriptive and collecting such information, particularly for smaller revegetation projects, would represent a significant cost and resource impost.

This minimum data set would also be beyond what is currently or historically collected for smaller revegetation projects, such as those that have not undergone a Part IV environmental impact assessment.

**The “*minimum data required*” in Section 5.3.2 and Table 1 should be changed to recommended data.**

In some situations, it would also not be possible to retrospectively collect baseline data. **DER should provide guidance for situations where a revegetation plan is conditioned but collection of baseline data is no longer possible.**

### **Availability of Current Guide and Transition Arrangements**

Following release of the draft guide for consultation, the DER public website page for clearing permit guidelines<sup>1</sup> was updated resulting in the removal of the existing guide (August 2013). This was instead replaced with the draft consultation version (October 2016). Subsequent searching and enquiries to the DER Clearing Regulation section has confirmed the current, approved version of the guide is no longer available online. However, upon request, the DER Clearing Regulation section was able to provide a copy of the current, approved guide reproduced from a scan of a printed version held in the DER office.

The draft guide released for consultation is not an approved document and permit holders should not be required to adhere to a consultation draft given there is an existing, approved guide published (but not readily available). Having the consultation draft available will remain of use to permit holders as it provides insight as to the general direction and intent of DER, however, the current guide should be reinstated and used until such time as it is properly superseded by an approved final version.

**DER should re-instate the current guide (August 2013) online to ensure it is publicly available and used until such time as a final (approved for use) version has been issued.**

Additionally, the guide does not currently provide any context as to why an update of the guide was required, what the key changes were, and nor does it provide information regarding transitional arrangements.

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<sup>1</sup> <https://www.der.wa.gov.au/our-work/clearing-permits/48-guidelines-clearing-permits>

**DER should include information regarding transitional arrangements (if any) and a brief summary of the need for the update including highlighting significant changes.**

### **Other Recommendations**

In addition to the above recommendations, **Table 1** below provides additional recommendations for specific sections within the consultation draft.

### **Conclusion**

CME welcomes the opportunity to review and provide comment on the draft update to the guide and looks forward to ongoing engagement with the DER.

If you have any further queries regarding the above matters, please contact Bronwyn Bell, Policy Advisor - Environment, on (08) 9220 8533 or [b.bell@cmewa.com](mailto:b.bell@cmewa.com).

**Table 1: Detailed recommendations for specific sections**

Section Reference (Page)	Recommendation	Rationale
Definitions – general	Add a statement to clarify priority of definitions provided in guide compared to definitions in a Clearing Permit. Where applicable, removed definitions that are commonly defined within Clearing Permits.	Some of the definitions provided (for example local provenance) are defined within a Clearing Permit. As the Clearing Permit will take precedence over the guide, the provision of a different definition within the guide creates confusion. DER should remove definitions defined within Clearing Permits and add a statement to clarify how differing definitions should be treated.
Definitions – optimal time (1) 5.5.6 Tubestock and direct seeding (12)	Optimal time should state the principles that determine seeding / planting. If specific monthly time periods are presented, these should be stated as indicative rather than presented as specific constraints. Local conditions and seasonal variations should be specified as the key influence for determining times for direct seeding and planting rather than specific months.	<p>Multiple regions in Western Australia are subject to event-driven (eg: cyclone), patchy and unpredictable rainfall. These events can also present significant safety and operational issues and hence planting and seeding must take in to account the local conditions, in particular the likelihood of extreme events.</p> <p>The limited monthly windows presented will not necessary be optimal time for that entire region every year. As an example, the Pilbara periodically has late rains in to May/June and can experience an early cyclone season which, if limited to an optimal direct seeding period of November – December, would prevent any seeding from occurring for a year.</p> <p>In addition, for short-term, remote projects where rehabilitation follows directly after disturbance, it may not be practical to defer direct seeding to such restrictive windows of time as mobilisation costs would become prohibitive.</p> <p>Climatic patterns are also known to be changing and hence localised knowledge and adherence to the principles will result in improved environmental outcomes compared adherence to specific months.</p>
Definitions – Environmental specialist (1) and 2. Introduction (3)	Amend the definition to be <i>“a person who has sufficient relevant experience to the type of environmental advice that an environmental specialist is required to provide under this Permit such that sound advice will be given”</i>	<p>The current definition is restrictive. The definition does not allow for practitioners with ample local, relevant experience to provide advice. The need for CEO approval as an environmental specialist is excessive and creates an administrative burden that is unnecessary.</p> <p>The DER has the opportunity to review all revegetation plans and as part of this process should assess the plan on its merits rather than prescribe who can be consulted on during drafting.</p> <p>The definition as written may restrict use of skilled practitioners hence resulting in poorer environmental outcomes, and may also increase costs associated with preparation of a revegetation plan.</p>

Section Reference (Page)	Recommendation	Rationale
4. Reporting Requirements (4)	Section 4. Reporting Requirements may be more logically presented if merged with Section 6. Revegetation Monitoring Reports. Reporting requirements must not conflict with permit conditions.	Section 4 and Section 6 both present reporting requirements. To reduce duplication and streamline content, it may be more logical to present these together. Reporting requirements are also specified within clearing permits. DER should ensure information provided in the guide does not conflict or cause confusion with conditions in clearing permits.
5. Revegetation Plan (5) 6.1.2 Quadrats (17 <sup>2</sup> ) 7.1 General (19) 8. References (21)	DER should confirm the EPA's support for inclusion of EPA documents within the Guide.	In December 2016, the EPA's launched a revised policy and procedures framework. This has clarified the application of EPA's policies and procedures with numerous documents being updated or altered to clarify scope and application. The guide refers to EPA Guidance Statement 6 (dated June 2006) and Guidance Statement 51 (dated June 2004). Inclusion of these should be confirmed with the EPA to validate their on-going appropriateness and inter-agency support for usage in this manner following the EPA's 2016 review.
5.2.1 Maps and Shapefiles (5)	The requirement to provide electronic information on a CD-ROM should be removed.	DER should specify the requirement as provision of relevant data electronically and the file format (eg: ESRI shapefiles) however DER should not limit the media used for transmittal. USB flashdrives, email transmittal, file sharing services and other methods may be appropriate or necessary in different circumstances.
5.3.1 Reference Sites (6)	Selection of reference sites must allow for sites that are representative of existing vegetation condition prior to clearing permit disturbance rather than limiting reference sites to areas that are in excellent condition, very good condition or better.  Reference sites must also allow for alternative approaches that cater for achievable rehabilitation outcomes (in consultation with DER) where the nature of the disturbance and resulting landform is such that re-establishment of vegetation prior to	Due to historic land management and other practices in some areas (eg: grazing), it will be difficult for permit holders to find representative reference sites in excellent, very good or better condition. Additionally, depending on the vegetation condition prior to clearing permit disturbance (or prior to clearing permit rehabilitation for off-site areas), reference sites in excellent, very good or better condition would be an inappropriate benchmark as they would not reflect achievable outcomes from rehabilitation activities.  Depending on the nature of the disturbance and resultant landforms (eg: tailings storage facilities), alternative approaches must be available (in consultation with DER) so as to establish realistic and relevant reference sites. For example, a realistic reference site for a tailings storage facility may be an existing good practice rehabilitated tailings storage facility rather than an area in excellent, very good or better condition. This would allow development of realistic completion criteria and appropriate monitoring regimes linked to demonstrated achievable rehabilitation outcomes for such a landform.

<sup>2</sup> Formatting within the consultation draft has omitted numbers for pages 14-28 hence these are assumed page numbers rather than indicated page numbers.

Section Reference (Page)	Recommendation	Rationale
	disturbance is an unachievable outcome.	
5.4 Completion Criteria including Table 3 (8-10)	DER should update this section to acknowledge the normal progression of rehabilitation over time from colonising species to climax vegetation communities, and how this may be addressed with completion criteria. Section 5.3 should accordingly be amended.	Following rehabilitation activities, certain colonising species are likely to dominate. Depending on the climax vegetation community to be targeted, it may be multiple decades before a species mix and dominance can be achieved that reflects the reference sites. During early years, monitoring results may show large deviations from the completion criteria whilst colonising species dominate however this does not suggest rehabilitation outcomes will fail to be achieved in the longer term. Provision of a more relevant example that demonstrates normal progression of revegetation may be beneficial.
5.4 Completion Criteria (8-9)	The DER should state that completion criteria developed must be reasonably achievable within the time period of the clearing permit (including the post-clearing permit duration).	Clearing permits will often include a post-clearing period (eg: 5 years) when the permit is valid but no additional clearing is permitted. This allows time for revegetation and monitoring activities to occur prior to permit expiry. Depending on the climax vegetation targeted, it may take many years post-permit expiry for revegetation activities to achieve desired outcomes and hence completion criteria must focus on those that will be relevant during the permit's duration rather than the final end point for the revegetation. DER should highlight this to ensure there are no conflicts between the permit conditions (expiry) and the permit's revegetation plan.
5.4.1 including Table 2 (9)	DER should provide an example for an on-site revegetation project post-clearing rather than a project aimed at <i>"improving biodiversity"</i>	Examples specifying an aim of <i>"improving biodiversity"</i> give the impression DER expects revegetation generally to target this outcome. With the exception of off-site offset revegetation (where the aim is specifically to improve biodiversity as an offset for on-site clearing), the aim of revegetation will not be to improve biodiversity but instead by to re-establish native vegetation of a condition approaching that which existed prior to clearing. Examples are of greater use if realistic and reflective of what guide users will generally need to achieve. Additionally, DER should use examples that set realistic and achievable expectations for guide users (both government and industry). Please also refer to 5.3.1 Reference Sites recommendation above regarding use of reference sites in excellent condition, very good condition or better where this is non-representative of the condition of vegetation in the area being cleared.

Section Reference (Page)	Recommendation	Rationale
5.4.1 Developing Completion Criteria, Table 3 (10)	The word “ <i>minimum</i> ” should be removed from the column headings in Table 3	Several examples (eg: weed cover) are maximums or criteria other than minimums.
5.5.4 Weed control	Remove final sentence “ <i>An environmental specialist should be consulted to develop a site-specific weed management plan.</i> ”	In many cases, permit holders will have an existing operation-wide weed management plan. Integration of weed controls specific to the clearing area within the wider weed management strategy for the operation will provide a more holistic, landscape-scale approach and likely result in a more effective weed control outcome. Therefore permit holders should not be directed to develop a weed management plan specifically for the permit.
5.5.5 Fencing	Re-word to “ <i>Where practical and if likely to be effective, consideration may be given to fencing as part of site preparation ahead of revegetation...</i> ”	<p>In many instances, the revegetation plan area will be impractical to fence or fencing may be ineffective. This may be due to the area’s size, terrain, maintenance requirements, accessibility and other factors.</p> <p>In addition, to be effective against large herbivores such as camels and cattle, fences generally need to be electrified or barbed which may have other negative environmental impacts on native fauna (for example trapping bats or restricting native fauna movement) that may outweigh any revegetation advantages of installation.</p> <p>Fencing should therefore not be included as a “<i>should</i>” and the guide may also benefit from better examples that note local considerations and potential negative effects of fencing.</p>
5.5.6 Tubestock and direct seeding (12)	Reference and information included regarding the <i>Wildlife Conservation Act 1950</i> should be updated to refer to the <i>Biodiversity Conservation Act 2016</i> and its relevant details.	The <i>Wildlife Conservation Act 1950</i> is to be repealed by the <i>Biodiversity Conservation Act 2016</i> . Information in the guide relating to permitting should be updated to reflect requirements of the new Act. Given the transition between the two Acts (and their associated permits), it may be necessary to describe transition arrangements and treatment of existing permits.
5.7 Schedule and Budget	<p>Remove requirement to provide budget and funding source data.</p> <p>Replace with requirement to provide a statement demonstrating capability and financial capacity to complete revegetation works.</p>	Budget and funding source data may be commercially confidential but may also be a poor indicator of revegetation outcomes. For example, depending on the size of the work programme and its location, small remote works will be more expensive (per hectare) than metropolitan larger scale works however the relative costs in these cases do not have relevance to the quality of the revegetation outcome. No justification has been provided as to why the DER require this potentially commercially sensitive information. It is unclear how this information could be necessary beyond a statement demonstrating

Section Reference (Page)	Recommendation	Rationale
	Clarify how adherence to the Schedule will be treated.	<p>the permit holder is in a reasonable financial position to be able to undertake the revegetation works.</p> <p>Additionally, depending on the nature of the revegetation (scale, duration), scheduling of activities in detail well in advance may be difficult and subject to change depending on factors such as weather and progressive monitoring results. The DER should clarify the flexibility permitted for the schedules and how strictly adherence to the Schedule will be mandated. CME's view is that any scheduling information provided should be indicative only and subject to change without prior approval or advice as local conditions on-ground must drive revegetation activities to ensure desired environmental outcomes are achieved.</p>
6. Revegetation Monitoring Reports (16)	Replace " <i>regular reporting</i> " with " <i>annual reporting</i> ".	Clearing permits currently have a requirement to complete annual reporting. It is recommended that the guide refer to the existing annual reporting with this process to be used to fulfil the reporting requirements. This will prevent creation of an additional report and associated administrative burden for permit holders.
6.3 Detecting Change Through Data Analysis (18)	Change " <i>is recommended</i> " to " <i>may be required</i> "	Depending on the nature of the revegetation (particularly the scale / size) and monitoring results, analysis by an experience statistical analyst familiar with botanical data will be unwarranted and cost-prohibitive. Such analysis may also be unwarranted in early years when colonising species are dominating but provide more value in subsequent years.
Multiple sections throughout the document	All hyperlinked materials should provide sufficient information within the text so the material can still be located once the guide is printed.	<p>Throughout the guide, there are multiple locations where important material is provided with a hyperlink however the actual hyperlink text is not provided (eg: page 7 "<i>Province and bioregion maps can be viewed <a href="#">here</a></i>").</p> <p>It is highly likely that frequent or detailed users of the guide will need to print the document however the presentation of the hyperlinks renders the information untraceable in printed form. Further, external hyperlinks are subject to change and the absence of detailed text regarding the hyperlink location, author and title, limits a user's ability to search for information if the hyperlink location changes.</p>
7. Useful Resources and 8. References (19 - 21)	DER should re-confirm all listed materials are current (the most up to date) and accessible.	<p>For example:</p> <ul style="list-style-type: none"> <li>• "<i>Kings Park and Botanic Gardens (1999). Smoke to Sow and Grow</i>" does not appear to be readily available.</li> <li>• The hyperlink for "<i>Brown, K. and Brooks, K. (2002) Bushland weeds: A practical guide to their management</i>" is no longer valid.</li> </ul>

Section Reference (Page)	Recommendation	Rationale
		<ul style="list-style-type: none"> <li>The hyperlink for “Clewell, A., Reiger, J. and Munro, J. (2005). <i>Guidelines for Developing and Managing Ecological Restoration Projects</i>” is no longer valid.</li> <li>Revegetation costs from the year 2000 (or earlier) would not be current. Hence “Schirmer, J. and Field, J. (2000). <i>The Cost of Revegetation: Final Report</i>” should be replaced with a more contemporary example. The hyperlink provided for this also does not work.</li> </ul>
Appendix A and Appendix B checklist (22-28)	Once finalised, DER should provide both Appendix A and Appendix B as separate forms available on the DER website.	Provision of succinct checklists are useful. Given the checklists (Appendix A and Appendix B) are to be used and attached to submissions to the DER, it would be beneficial to have these as separate checklist forms available directly on the DER website. These forms could be established with check boxes to facilitate electronic completion thereby reducing administrative burden both for the permit holder when preparing submissions and for DER when reviewing submissions.
Appendix A (23)	Add “ <i>If applicable,</i> ” at the start of checklist item for “ <i>Details on how the long term security of the revegetation site will be ensured...</i> ”	Typically, resource sector projects and associated revegetation will occur on land leased or licensed from the Crown and hence long term security can not be ensured and will remain dependent upon the Crown’s subsequent allocation of lands.
Appendix C, Appendix D and Appendix E	Remove Appendix C, Appendix D and Appendix E.	The content for Appendix C, Appendix D and Appendix E is a reproduction of other material. Given these sources are already referenced and in common use, it is not necessary to reproduce these within the document.
Appendix F	Modify example 1 costs.	Example 1 has monitoring costs for the programme that outweigh (are almost double) the cost of on-ground rehabilitation. Given there will always be financial constraints on a project, the priority should be on ensuring expenditure is directed towards achieving on-ground revegetation outcomes rather than monitoring. DER should therefore use examples that present a more reasonable balance of costs. If DER is of the view that the monitoring costs will be double revegetation costs, this suggests the monitoring impost proposed by DER is excessive and misguided.

Authorised by	Position	Date	Signed
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