

Guideline

Progressive rehabilitation and closure plans (PRC plans)



Contents

Contents.....	2
1 Introduction.....	4
1.1 Purpose.....	5
1.2 Structure.....	5
2 PRC plan assessment process.....	6
2.1 Application stage.....	7
2.2 Public interest evaluation (PIE).....	9
2.3 Information stage.....	9
2.4 Notification stage.....	12
2.5 Decision stage.....	13
2.5.1 Decision criteria.....	14
2.6 After the decision about the PRCP schedule.....	16
3 PRC plan—rehabilitation planning part.....	17
3.1 Project planning.....	17
3.2 Post-mining land use.....	20
3.3 Non-use management areas.....	22
3.4 Voids in flood plains.....	26
3.5 Community consultation.....	27
3.6 Rehabilitation and management methodology.....	28
3.6.1 General rehabilitation practices.....	29
3.6.2 Tailings storage facilities.....	33
3.6.3 Voids.....	33
3.6.4 Underground mining.....	34
3.6.5 Built infrastructure.....	35
3.7 Risk assessment.....	36
3.7.1 Rehabilitation trials.....	37
3.8 Monitoring and maintenance.....	37
4 PRCP schedule.....	38
4.1 Steps for developing a PRCP schedule.....	38
Step 1. Final site design.....	39
Step 2. Divide PMLU/NUMA into rehabilitation areas/improvement areas.....	39
Step 3. Determine when land becomes available.....	39
Step 4. Develop relevant milestones.....	40
Step 5. Develop site-specific milestone criteria.....	41
Step 6. Propose when the first milestone must commence.....	42
Step 7. Propose timing for when each milestone will be completed.....	42
4.2 PRCP schedule conditions.....	43
4.3 Non-compliance with a condition of PRCP schedule.....	43
5 PRCP schedule post approval processes.....	43

5.1	Amendments by application.....	44
5.1.1	Types of amendment applications	44
5.2	Subsequent updates to the rehabilitation planning part	44
5.3	Amalgamations	44
5.4	De-amalgamations.....	44
5.5	PRCP schedule audit.....	44
5.6	Annual return	45
5.7	Progressive certification.....	45
5.8	Surrender	45
6	Transitional provisions	46
6.1	Entering the framework.....	46
6.2	Offence	47
6.3	Assessment	47
6.3.1	Timeframes	47
6.3.2	Non-use management area requirements	47
6.3.3	Exceptional circumstances when land is taken to not be available for rehabilitation	49
6.3.4	PIE requirements	49
6.3.5	Public notification requirements.....	49
6.3.6	Regulatory requirements	49
6.3.7	Decision criteria	49
6.3.8	Amending the EA.....	50
6.4	Transitioning rehabilitation and closure outcomes into PRCP schedule	50
	Step 1. Identify rehabilitation and closure outcomes in land outcome documents	50
	Step 2. Identify PMLU or NUMA.....	50
	Step 3. Rehabilitation or improvement areas within PMLU or NUMA.....	50
	Step 4. Identify milestones	50
	Step 5. Identify milestone criteria	51
	Step 6. Identify when the first milestone must commence and completion dates for milestones	51
7	Further information	51
8	Glossary.....	53
	References.....	55
	Appendices	56
	Appendix 1. PRCP schedule template	56
	Appendix 2. PRCP schedule example	59
	Appendix 3. Reference milestones	70

1 Introduction

Persons (including organisations) carrying out mining activities in Queensland are legally obligated to rehabilitate the land. The Queensland Government has improved rehabilitation and financial assurance outcomes in the resources sector by delivering a broad package of reforms.

A key element of this reform package is the *Mineral and Energy Resources (Financial Provisioning) Act 2018* (MERFP Act) that forms a part of the government's response to issues raised in the [Review of Queensland's Financial Assurance Framework](#) (Queensland Treasury Corporation, 2017) and the [Better Mine Rehabilitation for Queensland](#) (State of Queensland, 2017) discussion paper.

Passed by Parliament on 30 November 2018, the MERFP Act:

1. replaces the financial assurance arrangements for resource activities under the *Environmental Protection Act 1994* (EP Act) with a new financial provisioning scheme
2. changes how the estimated rehabilitation cost for an environmental authority (EA) is calculated
3. Amends the EP Act to introduce new requirements for the progressive rehabilitation and closure of mined land.

A progressive rehabilitation and closure plan (PRC plan) is a critical element of the [Queensland Government's Mined Land Rehabilitation Policy](#). When submitting a site-specific application for an EA for a new mining activity relating to a mining lease, applicants are required to develop and submit a proposed PRC plan as part of their application.

The MERFP Act includes transitional provisions for the application of the PRC plan requirement concerning existing mines. Holders of an existing EA for a mining activity relating to a mining lease approved through a site-specific application will be issued with a notice from the administering authority within the first three years following the PRCP start date¹. Where an applicant applied for an EA before 1 November 2019 and the EA is issued on or after the PRCP start date, the holder will be issued a notice from the administering authority within 6 months after the EA is issued.

The notice will specify a date by which a PRC plan must be developed and submitted to the Department of Environment and Science (the administering authority).

The main purposes of the PRC plan are to:

- require the holder of an EA to plan for how, where and when activities will be carried out on land in a way that maximises the progressive rehabilitation of the land to a stable condition
- provide for the condition to which the holder must rehabilitate the land before the EA may be surrendered.

As the PRC plan is based on the rehabilitation and closure of land for surrender, residual risk is not included in this process. The residual risk framework will be applied to an EA as part of the surrender application.

The EP Act requires that all areas disturbed within the relevant mining tenure must be rehabilitated to a post-mining land use (PMLU) or managed as a non-use management area (NUMA). Any undisturbed land within the relevant mining tenure must also be identified as a PMLU. NUMAs will only be considered appropriate where justified under section 126D(2) of the EP Act. NUMAs identified in a proposed PRC plan, which are justified on public interest grounds (section 126D(2)(b) of the EP Act), are subject to a public interest evaluation (PIE). The PIE is requested by the administering authority and carried out by an independent qualified entity. All NUMAs are required to meet best practice management.

A PRC plan will consist of two parts:

1. rehabilitation planning part
2. PRCP schedule.

The rehabilitation planning part of the PRC plan must include the information required under section 126C of the EP Act, as described below. The purpose of this section is to provide evidence and justification to support the development of the proposed PRCP schedule.

The content requirements for the rehabilitation planning part include, but are not limited to:

- general information about the site and operation
- information about community consultation
- analysis and justification of PMLUs and NUMAs

¹ The prescribed PRCP start date is 1 November 2019.

- justification of timeframes for land being available for rehabilitation (section 126D of the EP Act) and available for improvement (Schedule 6 Part 1 of the Environmental Protection Regulation 2019 (EP Regulation))
- details of the rehabilitation methodologies and techniques that will be used to develop rehabilitation milestones and management milestones and supporting documentation.

The PRCP schedule is approved by the administering authority and will include maps of final rehabilitation and closure outcomes for the site and tables of time-based milestones for achieving each PMLU and/or NUMA. The PRCP schedule consists of the following:

- rehabilitation and management milestones
- milestone criteria
- identification of PMLUs or NUMAs
- when land becomes available for rehabilitation and available for improvement
- rehabilitation areas and improvement areas
- milestone completion dates.

The administering authority may impose conditions on the approval that it considers necessary or desirable. The PRCP schedule operates separately to the EA. The EA authorises the carrying out of an environmentally relevant activity (ERA) and includes conditions to avoid, mitigate, or manage environmental harm that could occur during an activity. The PRCP schedule contains milestones and conditions that relate to the completion of progressive rehabilitation and mine closure. Both the EA and the PRCP schedule apply to the entire life of the mining activities, irrespective of when the underlying tenure expires. As per section 202E of the EP Act, where there is an inconsistency between an EA and a PRCP schedule the EA prevails to the extent of the inconsistency.

Application materials relating to the EA and PRC plan, the final version of a PRC plan (with approved PRCP schedule) and any PIE report (subject to section 316PE of the EP Act) are available on the Public Register at www.des.qld.gov.au. For more information on the Public Register please see the information sheet 'Progressive rehabilitation and closure plan (PRC plan) documents on the public register portal' (ESR/2023/6334²).

1.1 Purpose

This guideline assists applicants in developing a PRC plan as part of a site-specific application for a new mining activity and for existing EA holders who will be required to develop a PRC plan under section 754 of the EP Act.

It identifies statutory information requirements applicable to most mining activities in Queensland. However, information necessary to support each application is likely to vary based on site-specific characteristics and may result in a requirement for more extensive documentation or additional information. Section 6 of this guideline provides more detailed information to assist existing EA holders transition their mining activity to the PRC plan framework.

The administering authority must consider this guideline when deciding whether to approve a proposed PRCP schedule under section 176A of the EP Act. It was developed using contemporary best practice and industry standards, in line with the EP Act and the Mined Land Rehabilitation Policy.

1.2 Structure

This guideline is structured as follows:

- **Section 1: Introduction.** This section introduces the PRC plan framework.
- **Section 2: PRC plan assessment process.** This section explains the legislative process and how PRC plans are considered by the administering authority.
- **Section 3: Rehabilitation planning part.** This section sets out the content requirements for the rehabilitation planning part of the PRC plan.
- **Section 4: PRCP schedule.** This section explains how the PRCP schedule should be developed, including a process to assist development of milestones.
- **Section 5: PRC plan post-approval dealings.** This section details the processes PRC plans may be subject to after the administering authority approves the PRCP schedule.

² This is the publication number. The publication number can be used as a search term to find the latest version of a publication at www.qld.gov.au.

- **Section 6: Transitional provisions.** This section explains the transitional provisions that apply to existing EAs that relate to mining activities approved through a site-specific application. This includes considerations for translating existing land use outcomes into the PRCP schedule.
- **Section 7: Glossary.** Contains the definitions of terms used throughout this guideline.
- **Section 8: Appendices.**

2 PRC plan assessment process

The assessment process for a proposed PRC plan consists of four stages: application stage, information stage, notification stage and decision stage. The following assessment process is generally applicable for a proposed PRC plan submitted as part of a new or existing EA relating to a mining activity approved through a site-specific application. This also includes certain circumstances where an applicant may be required to or choose to carry out an environmental impact statement (EIS) in addition to the site-specific application.

The proposed PRC plan will be considered concurrently as part of the EA application or, for transitional PRC plans, as though it was submitted as part of an EA application. Figure 1 shows the assessment process for a new site-specific EA application relating to a mining lease with a proposed PRC plan. The PRC plan must be completed in the approved form: Submission of a progressive rehabilitation and closure plan (ESR/2019/4957²) and lodged in accordance with the form requirements.

Details about how the assessment process applies to existing EA holders transitioning into the new framework is outlined in section 6.3 of this guideline. Please note that, for a transitional PRC plan, some of the stages may not apply and timeframes may differ from what is outlined in this section.

This section of this guideline does not detail the processes and timeframes that will apply during the carrying out of an EIS process. For full information on the EIS process under the EP Act please see the guideline 'The environmental impact statement process for resource projects under the *Environmental Protection Act 1994*' (ESR/2016/2171²).

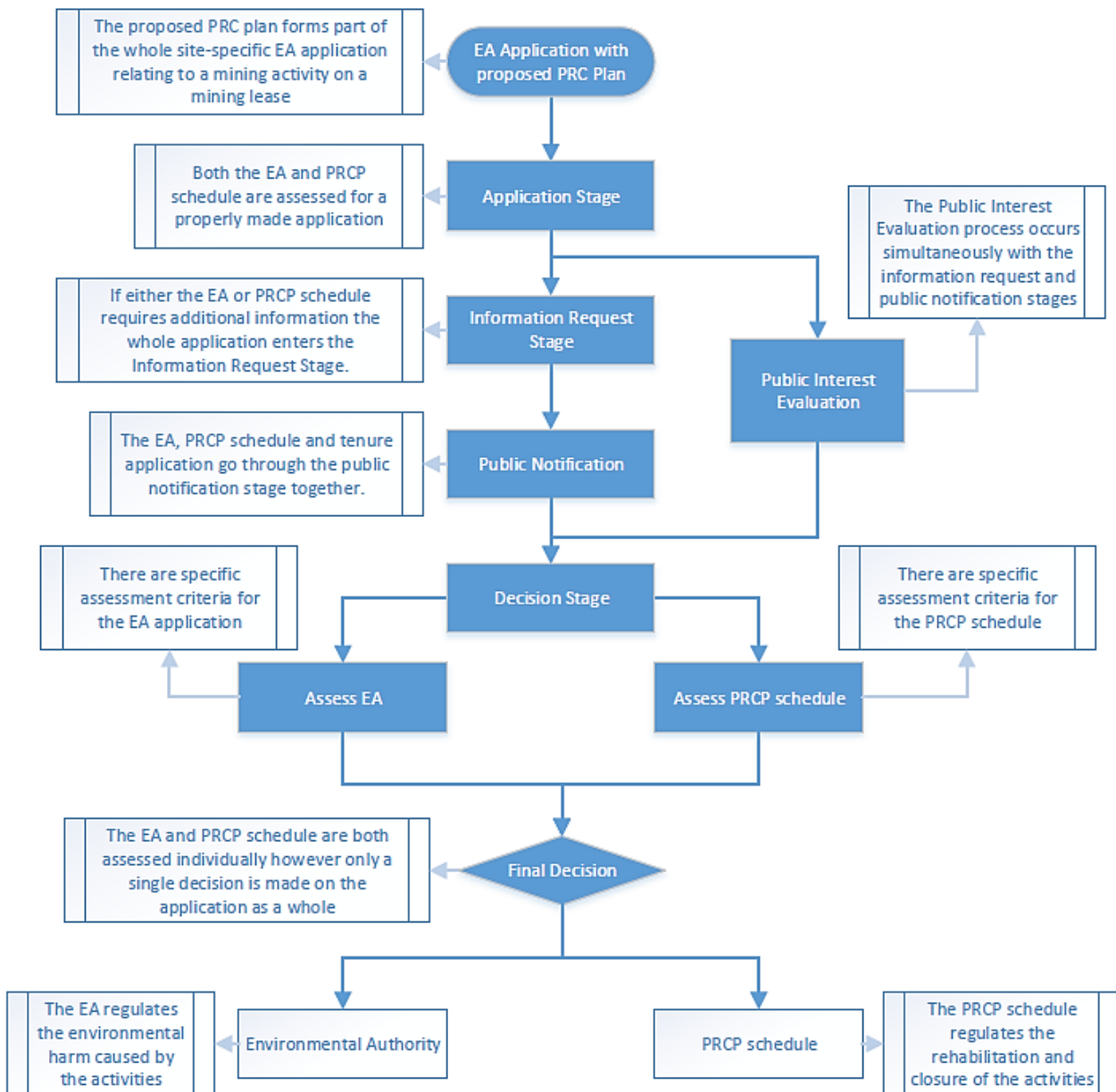


Figure 1. Assessment process for a new site-specific EA application with no EIS process for a mining activity relating to a mining lease with a proposed PRC plan³.

2.1 Application stage

The application stage for a PRC plan that is submitted with an EA application starts when the administering authority receives the application⁴. Figure 2 provides an overview of the application stage.

Within 10 business days of receiving the application⁵, the administering authority must determine whether the application is properly made under section 127 of the EP Act, which requires an EA application and proposed PRC plan (if accompanying the application) to comply with sections 125-127 of the EP Act.

If an application does not comply, a not properly made notice will be issued to the applicant. The notice will provide

³ The assessment process outlined in Figure 1 does not apply in certain circumstances where an EIS is to be completed, or is being undertaken, and a PRC plan has not yet been submitted.

⁴ Where an EIS process is to be completed, a site-specific application for a mining activity relating to a mining lease does not need to be accompanied by a proposed PRC plan at the time of application, in certain circumstances but a proposed PRC plan will need to be submitted at a later stage in the application process (see section 125(6)) and section 114A).

⁵ Under section 114A of the EP Act, if a proposed PRC plan did not accompany the site-specific application, Parts 3 to 5 of the assessment process apply to the proposed PRC plan as if the plan were part of the application.

the reasons why the application is not properly made, the action(s) required to make the application properly made and a period of at least 20 business days during which the applicant must carry out the required action(s). The applicant can discuss the timeframe for completing the required action(s) with the administering authority. If any required action is not carried out within the stated period, the application will lapse and the application process will not proceed further.

Refer to the Information Sheet – Common Issues with PRCP applications (ESR/2021/5775²) for further information.

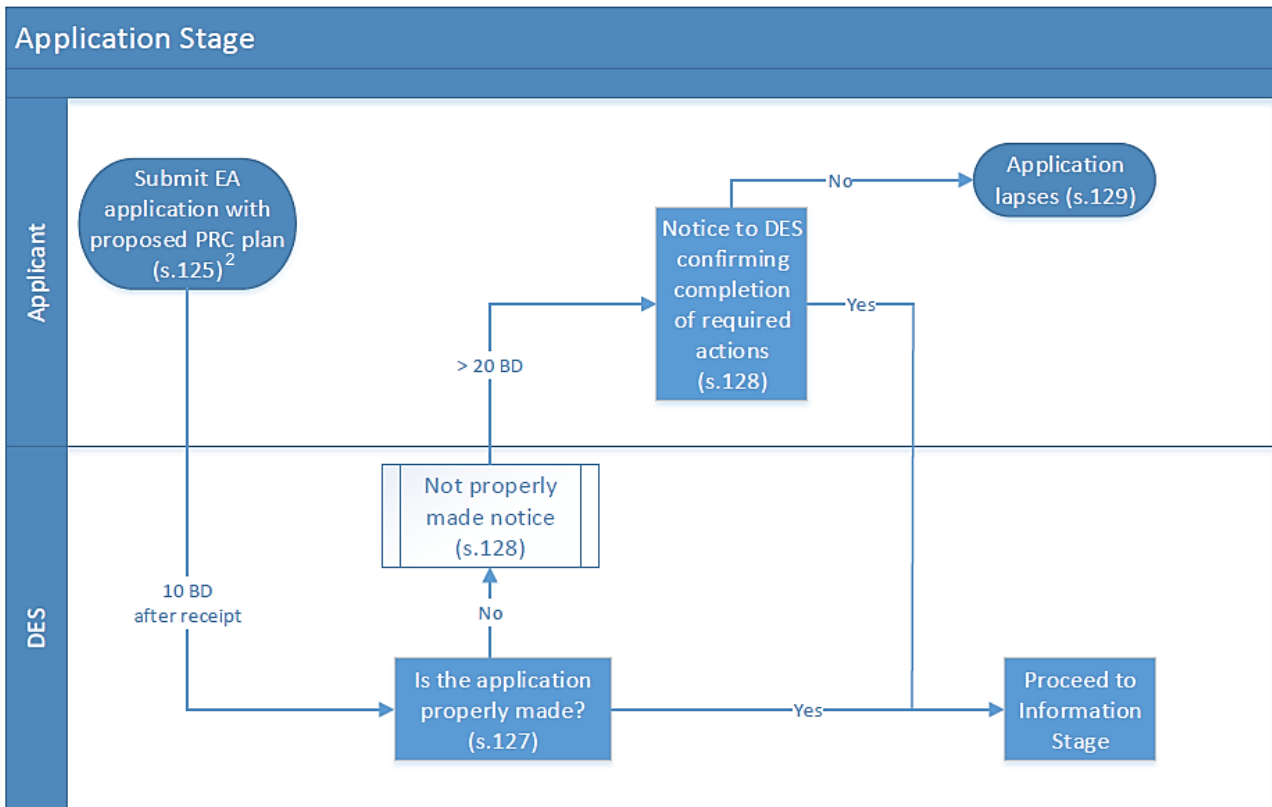


Figure 2: Overview of the PRC plan application stage under the Environmental Protection Act 1994⁶

Application requirements where an EIS process has been completed

For mining activities that have completed an EIS, either under Chapter 3 of the EP Act or under the *State Development and Public Works Organisation Act 1971* (SDPWO Act), the Terms of Reference (TOR) may have required a proposed PRC plan as part of the EIS.

If it was required, the proposed PRC plan would need to comply with all of the requirements of the TOR, the EP Act and this guideline. The EIS, including the proposed PRC plan and any required PIE report, will then form part of the application for an EA. If a proposed PRC plan was included, it would have been reviewed as part of the EIS process, but the approval of the PRCP schedule will be carried out as part of the application process outlined in this section. The proposed PRC plan developed as part of the EIS process must accompany the EA application at the time of submission.

Where an EIS has been completed, but a proposed PRC plan was not required or was not submitted as part of the EIS process, the applicant must prepare a proposed PRC plan and submit it along with the EA application.

Application requirements where an EIS process is currently underway or will occur at a later time

Under section 125(6) of the EP Act, the requirement for a proposed PRC plan to accompany a site-specific application for a mining activity relating to a mining lease does not apply if:

- the chief executive has approved the voluntary preparation of an EIS for the project (under Chapter 3, Part 2 or Part 3) of the EP Act and the applicant has;
 - started the EIS process for the application (i.e. submitted a draft TOR to the department); or

⁶ Figure 2 In some circumstances the PRC plan may not need to be submitted with the EA application, but will accompany the EA application at a later stage.

- stated in the application that they intend to prepare an EIS; or
- the chief executive has decided that an EIS is required for the application under Chapter 3, Part 2 of the EP Act; or
- the Coordinator-General has, under the SDPWO Act, declared that the project the subject of the application is a coordinated project for which an EIS under that Act is required.

For an EIS prepared under the EP Act, completion of a proposed PRC plan will be included in the TOR. The EA applicant will need to complete the approved form for submission of a draft terms of reference for environmental impact statement (ESR/2017/4038²) and include PRC plan that complies with the requirements of the EP Act and the requirements of the approved form (ESR/2019/4957²).

For an EIS prepared under the SDWOP Act, the administering authority will coordinate with the Coordinator-General to include completion of the PRC plan in the coordinated project EIS TOR.

Where the proposed PRC plan is provided in response to the TOR requirements, it must be prepared in accordance with the Application form: Submission of a progressive rehabilitation and closure plan.

If a PRC plan is not completed during the EIS process, the administering authority must include in an information request for the application a requirement that the applicant submit a proposed PRC plan for the application during the information stage.

Application requirements if an EIS is not required under Chapter 3, Part 3

If the chief executive decided under section 73C that an EIS will not be required for the project, a proposed PRC plan will need to accompany the EA application.

In summary:

- A PRC plan for an application must be lodged using the Application form: Submission of a progressive rehabilitation and closure plan (ESR/2019/4967²).
- A PRC plan for a project under assessment by EIS under the EP Act or SDPWO Act must be included in the EIS document if the TOR for the project required a PRC plan be provided in the EIS. Following completion of the EIS process, the PRC plan provided with the EIS must be lodged with the department using the approved Application form: Submission of a progressive rehabilitation and closure plan (ESR/2019/4967²).

Legislative requirement

In accordance with section 126C a proposed PRC Plan must be submitted using the approved form.

2.2 Public interest evaluation (PIE)

A PIE recommends whether the approval of a NUMA is in the public interest. A PIE will apply if the proposed PRCP schedule identifies land as a NUMA under section 126D(2)(b) of the EP Act. In this case, the administering authority must request a PIE to be carried out by a qualified entity as soon as practicable after the application stage for the site-specific application ends or after the proposed PRC plan is submitted.

For transitional PRC plans, statutory provisions may affect whether a proposed PRC plan is required to carry out a PIE. Additional information is provided in section 6 of this guideline.

EIS Process

Under the EP Act EIS assessment process, if a proposed PRC plan (submitted as part of an EIS) includes a proposed PRCP schedule that identifies a NUMA under section 126D(2)(b) of the EP Act, the PIE must be carried out as part of the EIS process. In this case, the chief executive must request a PIE to be carried out by a qualified entity as soon as practicable after making the decision on whether an EIS may proceed.

Similarly, under the SDPWO Act EIS process, if a proposed PRC plan provided in the EIS includes a proposed PRCP schedule that identifies a NUMA as defined under section 126D(2)(b) of the EP Act, the Coordinator-General can require a PIE to be carried out as part of the EIS process.

If a PIE process has been completed as part of an EIS under the EP Act or SDPWO Act and the proposed NUMA has not changed, a PIE is not required to be carried out in the assessment of the site-specific EA application.

2.3 Information stage

The information stage provides the administering authority the opportunity to request further information about the

application, including the proposed PRC plan. For some large projects and those with the potential to cause significant environmental impacts, the information request may require the proponent to prepare an EIS. If the application contains sufficient information, the administering authority may determine that an information request is not necessary and the application process may proceed.

Figure 3 shows an overview of the information stage.

Information requests

Site specific applications accompanied by a PRC plan

For a site-specific application that is accompanied by a proposed PRC plan, if an information request is required, the administering authority must issue an information request to the applicant within 30 business days from the end of the application stage.

Site specific application not accompanied by a PRC plan

If a site-specific application was not accompanied by a proposed PRC plan the period for issuing an information request will depend on when the proposed PRC plan is submitted;

- if a proposed PRC plan is submitted within 20 business days from when the application stage ends, the administering authority will have 30 business days after the application stage ends to issue an information notice
- if a proposed PRC plan is submitted after 20 business days from when the application stage ends (in response to an information request made in that period), the administering authority will have 10 business days after the proposed PRC plan is submitted to make an information request on the application.

This will ensure the administering authority has sufficient time to review the proposed PRC plan prior to the end of the period in which it can make an information request.

General information request requirements

The information request states the date by which the applicant must respond. The response period must be at least six months, or at least two years if an EIS is required. The administering authority may extend the information request period by up to an additional 10 business days, without consent of the applicant, by providing the applicant with written notice of the extension. The period can be further extended by agreement between the applicant and the administering authority.

In accordance with section 146(1) of the EP Act, the applicant must respond to an information request within the stated period by giving the administering authority one of the following:

- all of the information requested
- an EIS
- part of the information requested together with a written notice asking the administering authority to proceed with the assessment of the application
- a written notice:
 - stating that the applicant does not intend to supply any of the information requested, and
 - requesting the administering authority to proceed with the assessment of the application.

Legislative requirements

Despite section 146(1) of the EP Act, if the information request requires the applicant to submit a proposed PRC plan for the application under section 143A, a proposed PRC plan must be submitted (s.146(3)). The proposed PRC plan must comply with the EP Act and be in the approved form.

If the applicant does not respond within the information request period, the application will lapse, and the application process will not proceed further. The information stage ends, in accordance with section 148 of the EP Act, when—

- a) if an information request has been made—the applicant has finished responding to the request and the administering authority has received the response, or
- b) if an information request has not been made, the earlier of the following:
 - i. when the administering authority decides not to make an information request
 - ii. the information request period has ended.

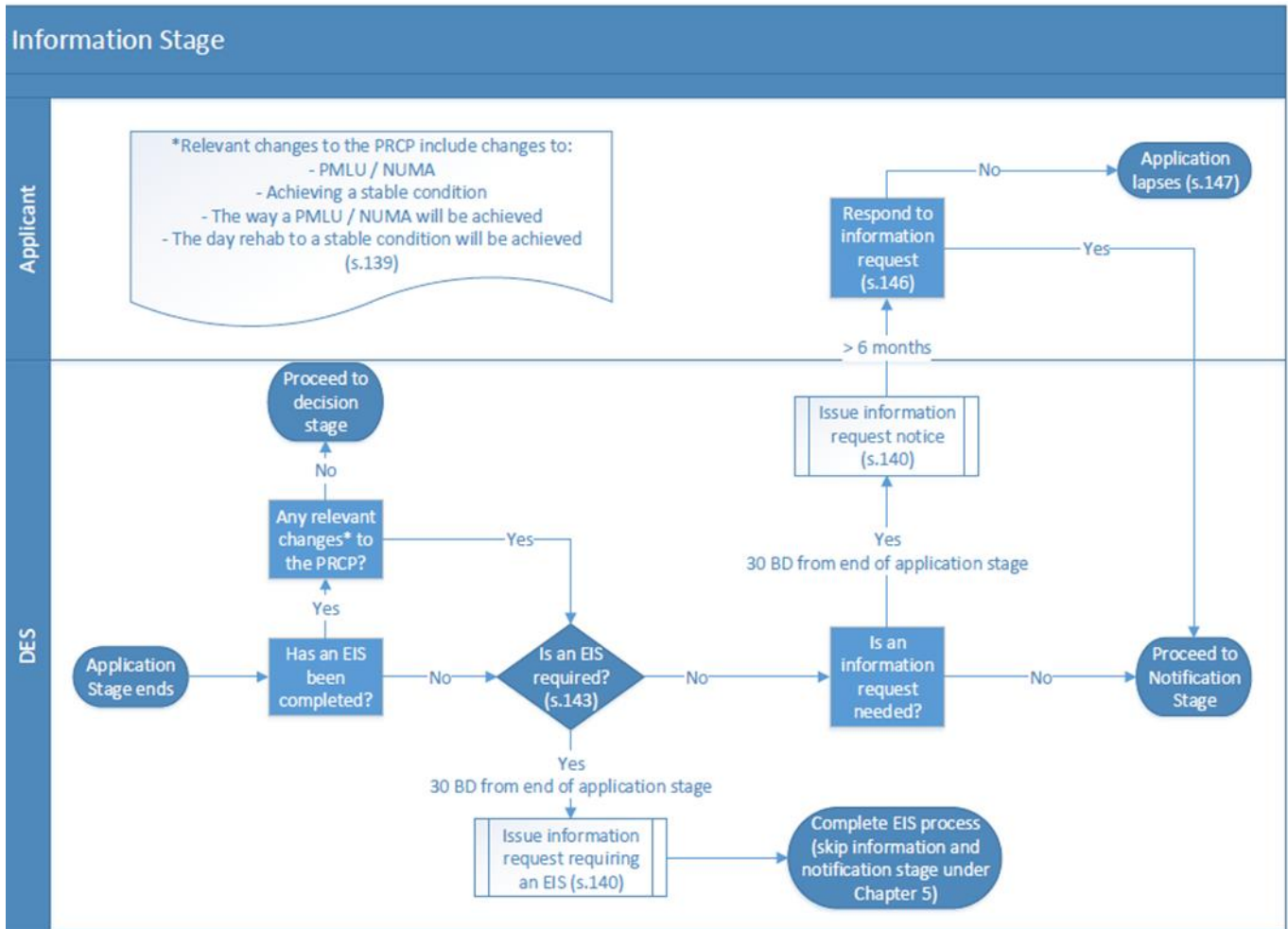


Figure 3: Overview of the PRC plan information stage under the Environmental Protection Act 1994 for site-specific applications accompanied by a proposed PRC plan⁷.

EIS process and PRC plans

Completed EIS

In some circumstances, where an EIS for all relevant activities has been completed prior to the application being made, the information stage does not apply to the proposed PRC plan. As per section 139 of the EP Act the information stage does not apply if there is a proposed PRC plan for the EA application and the EIS assessment report relating to each relevant activity has not lapsed under section 59A or since the EIS has been completed or the Coordinator-General has evaluated the EIS, the following aspects of the proposed PRC plan have not changed—

- a) a PMLU or NUMA
- b) achieving a stable condition for land
- c) the way a PMLU will be achieved, or a NUMA will be managed, has not changed in a way likely to result in significantly different impacts on environmental values under the EIS
- d) the day by which rehabilitation of land to a stable condition will be achieved.

Otherwise, the information stage will apply to the PRC plan and the administering authority may issue an information request.

Current EIS process

For an EIS that:

- the chief executive has approved the voluntary preparation of an EIS for the project under Chapter 3, Part 2 or Part 3 of the EP Act and the applicant has:

⁷ Figure 3 applies to EA applications that are accompanied by a PRC plan. It does not apply in circumstances where an EIS has been required, or is being undertaken, and a PRC plan has not yet been submitted

- started the EIS process for the application (i.e. submitted a draft TOR to the department); or
- stated in the application that they intend to prepare an EIS; or
- the chief executive has decided that an EIS is required for the application under Chapter 3 of the EP Act; or
- the Coordinator-General has, under the SDPWO Act, declared that the project the subject of the application is a coordinated project for which an EIS under that Act is required.

The TOR should include preparation of a PRC plan. Where there is no proposed PRC plan included in the TOR the administering authority must include in an information request for the application, a requirement that the applicant submit a proposed PRC plan for the application.

EIS may be required

If an EIS has not been completed prior to submitting the EA application, and the administering authority has not previously decided whether an EIS is required under section 73C of the EP Act, the decision on whether an EIS will be required is made during the information stage of the application process in accordance with section 143 of the EP Act. When an EIS is required, the administering authority will issue an information request notice to the applicant detailing the requirement to complete the EIS process. The notice must provide an information response period of at least two years after the final TOR is given to the applicant. The final TOR may include a requirement to prepare a proposed PRC plan.

In summary, there is no exemption from the information stage for a site-specific application relating to a mining lease if a proposed PRC plan was not included with the application. Where a relevant proposed PRC plan did not accompany the application, the information stage is used to ensure that information on impacts on environmental values and a proposed PRC plan are provided.

For full information on the EIS process under the EP Act please see the guideline 'The environmental impact statement process for resource projects under the *Environmental Protection Act 1994*' (ESR/2016/2171²).

Legislative requirements

In accordance with section 143A, if an EA application for a site-specific mining activity is not accompanied by a proposed PRC plan, the administering authority must include in an information request a requirement that the applicant submit a proposed PRC plan.

2.4 Notification stage

During the notification stage, the applicant makes their application available to the public for review. The public may send a written submission about the application or proposed PRC plan to the administering authority during the submission period. The notification stage applies to proposed PRC plan applications, as well as transitional PRC plans for existing EA holders if the specific matters in section 755B of the EP Act cannot be satisfied. The notification stage may start at any time after the application stage ends and may be concurrent with the information stage. However, the applicant may only start the notification stage if there is a proposed PRC plan for the application. Figure 4 shows an overview of the notification stage.

Legislative requirement

In accordance with section 151 the notification stage may start at any time after the application stage ends but only if there is a proposed PRC plan for the application.

In carrying out public notification, the applicant must publish a public notice about the application in a newspaper as stipulated in section 252A(3) of the *Mineral Resources Act 1989* (MR Act). They must also give the notice to every affected person as stipulated in section 252A of the MR Act. The application notice must be given and published simultaneously or together with any public notice for the relevant tenure application under resource legislation.

The applicant must also keep copies of the following documents for the application available on a website for the duration of the access period, which is defined in section 156(2) of the EP Act—

- a) the application notice
- b) the application documents (including proposed PRC plan)
- c) the response to any information request.

The administering authority must also keep a copy of the application documents on its website as well as keep them available for inspection by members of the public during office hours for the duration of the access period in accordance with section 157 of the EP Act.

The applicant must submit a declaration within five business days after the submission period ends stating whether they have met the requirements in section 158 of the EP Act. If the applicant has not complied with the requirements within the required timeframe, the administering authority may allow the application to proceed in accordance with section 159(3) of the EP Act or notify the applicant to give or publish the application notice in an alternative manner in accordance with section 159(5) of the EP Act. A new submission period for the application will also apply.

EIS process

As per section 150 of the EP Act, where an EIS for all relevant activities has been notified prior to the application being made, and notification of the EIS included a proposed PRC plan for the application, the notification stage does not apply to the application provided that, since the EIS was notified, the following aspects of the proposed PRC plan have not changed—

- a) a PMLU or NUMA; or
- b) the day by which rehabilitation of land to a stable condition will be achieved.

Where an EIS assessment process was carried out prior to the application being made, but notification was triggered due to changes to a PMLU or NUMA or a change to the day land will be rehabilitated, submissions can only be made about matters relating to these changes (section 160 of the EP Act).

If an EIS under chapter 3 of the EP Act was requested in the information stage of the application, the public notification carried out as part of the EIS is taken to be the public notification of the application. Please see the guideline ‘The environmental impact statement process for resource projects under the *Environmental Protection Act 1994*’ (ESR/2016/2171²), for more information on the EIS process.

All properly made submissions on an EIS are taken to be a properly made submission about the application.

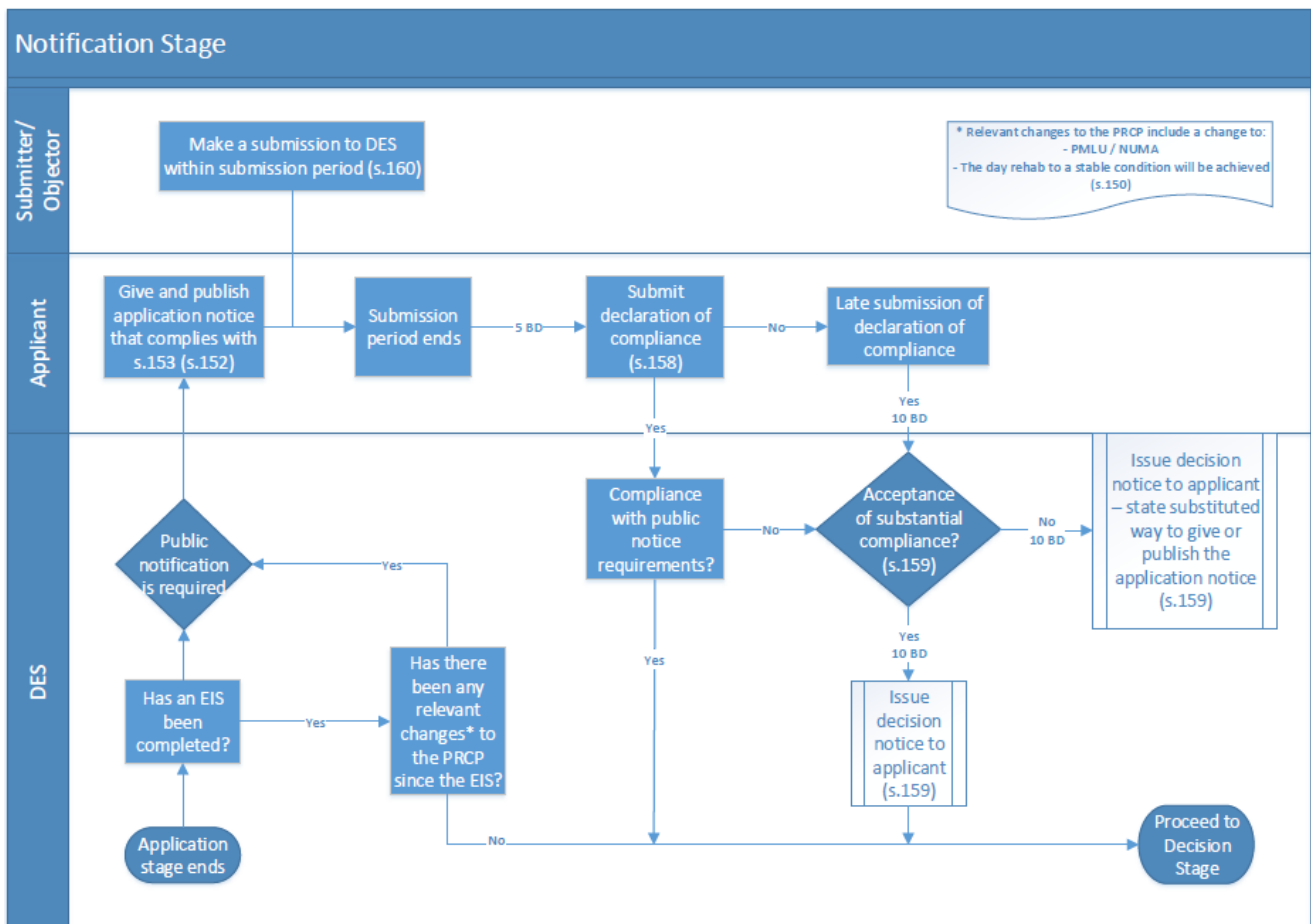


Figure 4: Overview of the PRC plan notification stage under the Environmental Protection Act 1994

2.5 Decision stage

The decision stage for an EA application accompanied by a proposed PRC plan starts the day all other stages have ended. If there is a proposed PRC plan for which a public interest evaluation has been requested the decision

stage cannot start until the day the public interest evaluation report is given to the administering authority. A decision must be made within 30 business days after the decision stage starts in accordance with section 168(1)(a) of the EP Act. This period may be extended once by written notice from the administering authority (for a period up to 30 business days) or further extended by agreement with the applicant. Figure 5 shows an overview of the decision stage.

In assessing the proposed PRCP schedule, the administering authority must decide to either:

- approve the proposed PRCP schedule for the plan, with or without conditions or amendment, or
- refuse the proposed PRCP schedule.

The PRCP schedule and EA will be assessed with separate decision considerations; however, the application as a whole will have only one decision. Under section 172(5) of the EP Act, if the PRCP schedule is refused, the EA application must also be refused. The proposed PRC plan is part of the EA application (section 125 of the EP Act); therefore, if the EA application is refused the proposed PRCP schedule is also refused. An applicant is unable to carry out any relevant activities until an EA with a PRCP schedule is approved. If both the EA and PRCP schedule are approved, the site-specific EA application as a whole will be approved with a single decision notice. However, the application decision will be accompanied by two statutory documents, the EA and the PRCP schedule. It is important to note the administering authority may amend the proposed PRCP schedule prior to approval.

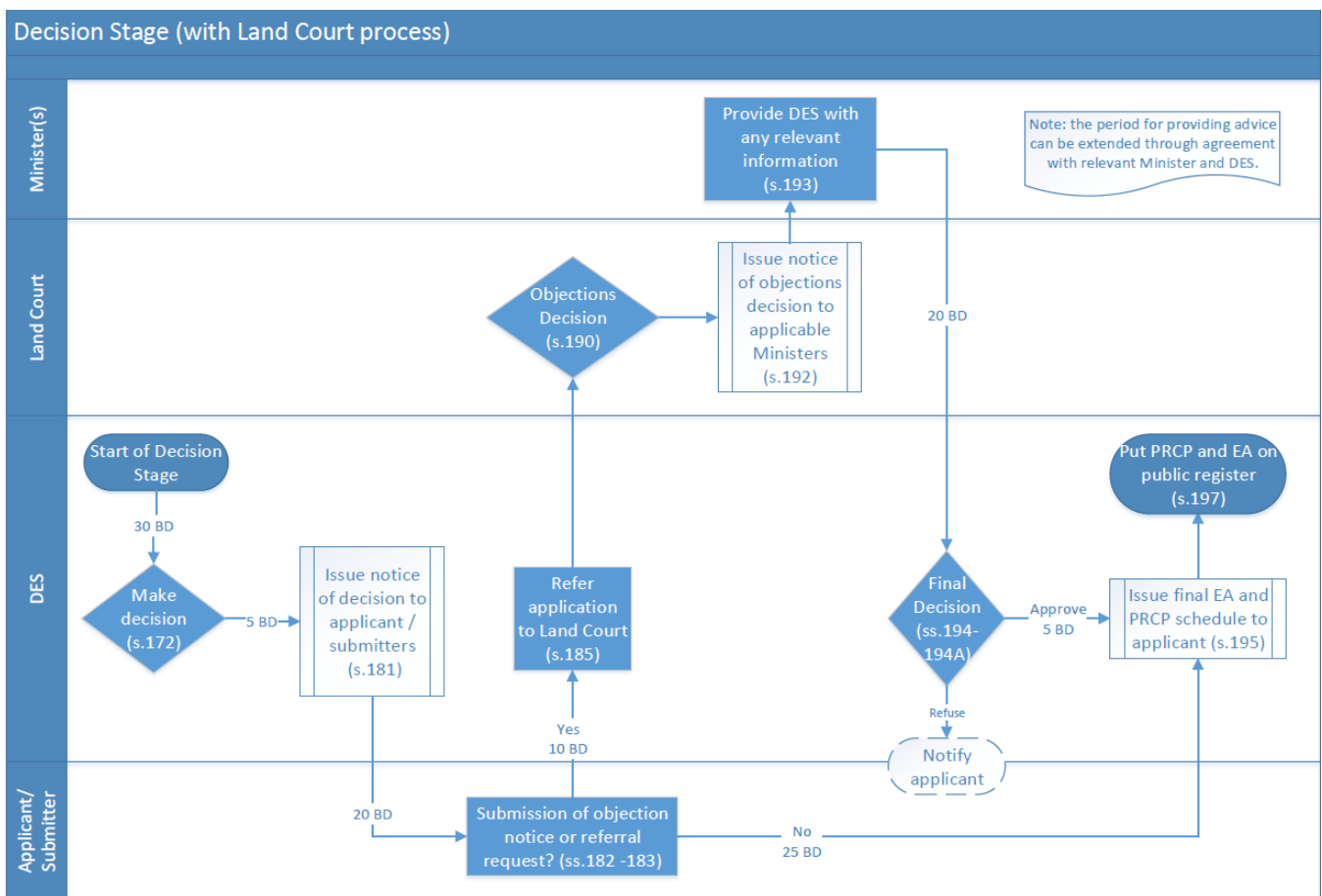


Figure 5: Overview of the decision stage for a PRC plan accompanying an EA application

2.5.1 Decision criteria

This section outlines the different decision criteria the administering authority will consider when assessing a proposed PRC plan. Section 176A of the EP Act stipulates the criteria the administering authority must use when deciding a proposed PRCP schedule.

In deciding whether to approve the proposed PRCP schedule for the plan, the administering authority must:

- comply with any relevant regulatory requirements
- subject to complying with regulatory requirements, have regard to:
 - the site-specific application
 - the proposed PRC plan
 - any response given for an information request for the proposed PRC plan

- the standard criteria
- the PRC plan guideline made under section 550 of the EP Act (this guideline)
- any relevant advice, report or guidance published by the rehabilitation commissioner under section 444K of the EP Act.

The administering authority must not approve the proposed PRCP schedule unless:

- a) each proposed NUMA under the schedule has been properly identified as a NUMA, and
- b) if a PIE is required for a proposed NUMA under the schedule—the report for the evaluation recommends it is in the public interest to approve the area as a NUMA, and
- c) the administering authority is satisfied the schedule provides for all land the subject of the schedule to be
 - i. rehabilitated to a stable condition, or
 - ii. managed as a NUMA in a way that achieves best practice management of the area and minimises risks to the environment.

Regulatory requirements

As required in section 176A(2)(a) of the EP Act, the administering authority must comply with any relevant regulatory requirements when deciding whether to approve a proposed PRCP schedule for a plan. Under section 41B(1) of the EP Regulation, for making a PRCP schedule decision, the administering authority must:

- a) carry out a PRCP objective assessment against each PRCP objective and PRCP performance outcome for each objective, mentioned in Schedule 8A, part 3; and
- b) consider any environmental values declared under the EP Regulation; and
- c) consider each of the following under any relevant environmental protection policies—
 - i. the management hierarchy
 - ii. environmental values
 - iii. quality objectives
 - iv. the management intent.

Under section 41B(2) of the EP Regulation, the administering authority may make a PRCP schedule decision to approve a proposed PRCP schedule, or amend a PRCP schedule, only if each PRCP objective for the PRCP schedule is achieved under schedule 8A of the EP Regulation.

Site-specific EA application

The administering authority must consider the relevant EA application accompanying the proposed PRC plan. The EA application will have information about the type of mining operation, the level of disturbance proposed and the potential impacts to environmental values. These factors will help inform the adequacy of the proposed PRCP schedule to ensure environmental values, as it relates to rehabilitation and closure, are protected and risks are minimised. For example, if a site is proposing a watercourse diversion, the administering authority can consider the design and final location when determining if the milestone criteria in the proposed PRCP schedule is appropriate for achieving the intended PMLU.

Proposed PRCP schedule

When assessing the proposed PRCP schedule, the administering authority must consider the extent to which the information provided in the rehabilitation planning part justifies the PMLUs and/or NUMAs as well as the associated milestones and milestone criteria contained in the PRCP schedule. In particular, the administering authority should ensure, that based on the information contained in the rehabilitation planning part, the proposed PRCP schedule:

- provides for any void that is contained wholly or partly in a flood plain to be rehabilitated to a stable condition, as required under section 126D(3) of the EP Act
- provides for land to be rehabilitated as soon as practicable after the land becomes available, as required under section 126D(4) of the EP Act
- only includes a NUMA where sufficient evidence is provided to demonstrate that one of the following (section 126C(2) of the EP Act) applies:
 - rehabilitating the land would cause a greater risk of environmental harm than not carrying out rehabilitation, or
 - the risk of environmental harm caused by not rehabilitating the land is confined to the area of the resource tenure and the applicant considers, having regard to each public interest consideration, that it is in the public interest for the land not to be rehabilitated to a stable condition.

Where the proposed PRCP schedule does not achieve those requirements, or it is inconsistent with the information contained within the rehabilitation planning part, the administering authority has the ability to either amend the proposed PRCP schedule or refuse the proposed PRCP schedule. In making a decision to amend the PRCP schedule, under section 172(4) of the EP Act, the administering authority can only amend to the extent necessary

to enable the approval under section 176A(2) and (3) (criteria for decision).

Response to an information request

The administering authority must consider any response given for an information request for the proposed PRC plan. Where the information provided in the proposed PRC plan, including any additional information provided in response to an information request, is insufficient to assess a proposed PRCP schedule for the activities under the EA, the administering authority may consider refusing the proposed PRCP schedule.

Standard criteria

Standard criteria are defined in Schedule 4 of the EP Act. These criteria must be considered under section 176A of the EP Act when deciding whether to approve a proposed PRCP schedule.

The administering authority must consider all standard criteria, even though not all the criteria may be relevant to every application.

PRC plan guideline

The administering authority must have regard to this guideline when considering whether to approve a proposed PRCP schedule. In particular, the officer should assess whether the information required under this guideline has been provided in the rehabilitation planning part of the PRC plan. If the applicant fails to provide this information, the administering authority may decide to amend the proposed PRCP schedule, impose conditions or not approve the proposed PRCP schedule.

Rehabilitation commissioner

The administering authority must have regard to any relevant advice, report or guidance published by the rehabilitation commissioner under section 444K of the EP Act when deciding whether to approve a proposed PRCP schedule.

The administering authority is not bound to comply with the advice, guidance or report but must consider it.

The advice must be considered if it is published before a decision is made about whether to approve, approve with or without conditions, or refuse a proposed PRCP. If there is no advice, report or guidance published at the time of the decision, then it need not be considered (for example, draft advice need not be considered).

2.6 After the decision about the PRCP schedule

After the administering authority has decided to approve or refuse the proposed PRCP schedule, it must then decide on the EA application (note that where the PRCP schedule is refused the EA application must be refused). For more information regarding the EA decision process, refer to the guideline 'Approval processes for Environmental Authorities' (ESR/2015/1743²).

Within five business days of making the decision, the administering authority must provide a decision notice to the applicant and any submitters. If the decision is to approve the PRCP schedule and EA, the notice of decision must have the draft PRCP schedule and draft EA attached.

If the applicant or a submitter is dissatisfied with the draft PRCP schedule, they must refer their application to the Land Court or submit their objection notice within 20 business days after the draft PRCP schedule is given. The Land Court processes (sections 184 to 198 of the EP Act) then commence. See the section below regarding the final decision for the process should an objection or referral be made.

Where no objections are received or requests for referral made, the administering authority must issue the final PRCP schedule and EA to the applicant within 25 business days after the decision notice is given. Once the instruments are issued, both the EA and the PRC plan (including the PRCP schedule and rehabilitation planning part) will be available on the public register.

Land Court

The following criteria are only relevant to an application if:

- the administering authority referred the application to the Land Court and an objections decision is made about the application, or
- the administering authority referred the application to the Land Court because of an objection notice; however, before an objections decision is made about the application, all objection notices for the application are struck out or withdrawn.

The Land Court process for referral and objections is part of the existing EA application process.

If an objections decision has been made, or if all objections have been withdrawn before an objections decision is

made, the administering authority must make a final decision based on the recommendation of the Land Court and the advice received under section 193 of the EP Act.

The following matters must be considered in making a final decision (section 194B of the EP Act):

- any objections decision
- any advice given by the MRA Minister or the State Development Minister under section 193 of the EP Act
- the draft EA and PRCP schedule, including any conditions.

The term of the PRCP schedule

The PRCP schedule takes effect on the same day the EA takes effect and continues in force until the EA is cancelled or surrendered. The PRCP schedule continues to apply even if the relevant resource tenure expires or is cancelled or if the EA is suspended.

3 PRC plan—rehabilitation planning part

The purpose of the rehabilitation planning part of the PRC plan is to support and justify the development of the proposed PRCP schedule. Although not approved by the administering authority, this part must include the information required under the EP Act and described in this guideline under section 126C(1)(j) of the EP Act. This part must detail how progressive rehabilitation and closure will be carried out over the entire site and on a rehabilitation and improvement area basis. All required information in the legislation and this guideline must be included in the proposed PRC plan submission with no required information to be provided later. Some information requirements may not apply to all operations. In this case specific information requirements may be omitted where justification has been provided or where the applicant has been informed by the administering authority that those information requirements are not applicable.

The subsections below detail the information that must be included in the rehabilitation planning part and provide links to the relevant aspects of the PRCP schedule. This includes an explanation of how that requirement will apply to existing EA holders who are transitioning into the PRC plan framework.

All applicants are encouraged to arrange a pre-lodgement meeting with the administering authority to help understand the extent of information required.

Legislative requirements

In accordance with section 126C(1)(b) and (c)(ii) of the EP Act, the rehabilitation planning part of the PRC plan must include a description of:

- each resource tenure, including the area of each tenure
- the relevant activities to which the application relates
- the likely duration of the relevant activities
- how and where the relevant activities are to be carried out, including maps.

3.1 Project planning

Baseline information

In addition to the legislative requirements, the following information about the site, where relevant, is considered necessary by the administering authority (as per section 126C(1)(j) of the EP Act) to decide whether to approve the PRCP schedule:

- site topography (local and regional)
- climate (general and specific (rain, evaporation, temperatures)), including long term projections
- geological setting
- site hydrology and fluvial networks
- groundwater levels and properties
- soil types, properties and productivity
- land stability (pre-existing land degradation/erosion and predisposition to ongoing stability issues)
- vegetation communities and ecological data (including existing regional ecosystem mapping)
- fauna presence and populations
- pre-mining land use

- identification of underlying landholders.

Project description

As required in sections 126C(1)(b) and (c)(ii) of the EP Act, a description of the proposed project must be included in the rehabilitation planning part. The project description must include the following details:

- mining tenements
- primary mine features/infrastructure on site (e.g. TSF, waste rock dump, etc.)
- type of mining operation
- proposed duration of operation as a whole.

It is the intent of the PRC plan to include information relating to all mining tenures on the EA including exploration permits, mineral development licences and mining claims. If the relevant EA application includes a petroleum tenure this must be noted in the project description, but the PRC plan and PRCP schedule do not need to include any further detail of the petroleum activities.

Design for closure

One of the main purposes of the PRC plan is for applicants to plan for how and where environmentally relevant activities will be carried out on land in a way that maximises the progressive rehabilitation of the land to a stable condition. The rehabilitation planning part of the PRC plan must explain how progressive rehabilitation and closure has been considered in the design of the mine site.

Proactively designing for closure will maximise the progressive rehabilitation of the land to a stable condition and will minimise the long-term management requirements and costs at closure. All aspects of the mine site should be designed for closure including mine landform locations, construction and operation of the mine. For example, the locations of mine structures should be planned to ensure they do not limit options for future rehabilitation or delay an area of land becoming available for rehabilitation or improvement.

To demonstrate that rehabilitation will be maximised for the mine site, the rehabilitation planning part of the PRC plan for new or expanding sites must include a description of how the following aspects have been designed for closure:

- location of mine features/infrastructure, having regard to the following considerations:
 - protection of environmental values of the site and receiving environment, including matters of National Environmental Significance, matters of State Environmental Significance and matters of Local Environmental Significance
 - surrounding land uses and proximity to sensitive receptors
 - proximity to the open-pit exit(s)
 - the gradient of the footprint area, both for the direction of drainage from the landform and for the dumping costs
 - local and regional topography
 - surface and ground water features (quality, quantity and seasonal variation)
 - geotechnical conditions (i.e. soil/rock characteristics) and suitability for the structure type (i.e. presence of structural features that may transmit seepage)
 - competing water and land uses
 - visual impact
- size, shape and design of mine features/infrastructure (e.g. waste rock dump design)
- mining methods (such as underground methods versus open cut).

Rehabilitation/improvement planning

Progressive rehabilitation must be maximised by commencing and completing rehabilitation as soon as practicable after land becomes available. The administering authority has the expectation that all disturbed land, which is available for rehabilitation or improvement, should be progressively rehabilitated throughout the operation of the mine. If there is land that is unavailable for rehabilitation or improvement until operations have ceased, justification must be provided in the rehabilitation planning part.

To meet the legislative requirements in sections 126C(1)(b) and (c)(ii) of the EP Act, the rehabilitation planning part must include:

- identification of all relevant activities on the mine site
- the predicted duration of each of the relevant activities proposed for the mine site
- the size/extent of the relevant activities
- whether the different relevant activities can be progressively rehabilitated.

This information could be provided in the proposed PRC plan in a variety of formats including maps, tables or lists.

The appropriate format for any particular site/operation should be discussed with the administering authority through the pre-lodgement process.

This information should be used by the applicant when determining how and when to carry out rehabilitation and closure activities. The PRC plan must identify and justify when land becomes available for rehabilitation or improvement. The definition of available for rehabilitation and available for improvement are further explained in step 3, section 4 of this guideline.

Spatial information

The following spatial information must be submitted as part of the PRC plan:

- the location and maximum extent of disturbance footprint for the mine life
- the PMLUs and NUMAs for the area within the resource tenures
- any sensitive receptors.

In addition to the list above, the PRC plan must include spatial information outlining the rehabilitation and improvement areas that correspond to the proposed PRCP schedule. Rehabilitation and improvement areas are defined in section 4 of this guideline. The spatial information must show the locations of the rehabilitation and improvement areas for a 10-year period (minimum). The administering authority expects that this spatial information will be continually updated.

The PRC plan approved form will include details of what this information should contain. All spatial information must be prepared and submitted in accordance with the guideline 'Spatial Information Submission' (ESR/2018/4337²).

Relationship with PRCP schedule

Baseline data may assist the applicant in determining a PMLU for the proposed PRCP schedule. The rehabilitation/improvement planning information will be used to identify when land will become available for rehabilitation or improvement, and the soonest practicable date for the first milestone for an area. The relevant activities identified in the planning part must reflect the relevant activities in the proposed PRCP schedule under each rehabilitation/improvement area. The project description and spatial information will assist the administering authority to assess the proposed PRCP schedule by providing context to the operation.

Applicability to transitional PRC plans

Transitional PRC plans must include any baseline information collected as part of an EIS process or original EA application. If this information is unavailable, the reasons should be explained in this section of the rehabilitation planning part. Transitional PRC plans are not required to demonstrate how aspects of the mine site have been designed for closure for existing or approved disturbance. However, any expansion to an existing site must demonstrate how it has been designed for closure. The rehabilitation/improvement planning must include data from when mining first commenced up until planned surrender. The transitional provisions of the EP Act include an exceptional circumstance for when land is available for rehabilitation. Details about the circumstances are included in section 6.3.3 of this guideline.

Under section 126C(1)(j) of the EP Act, transitional PRC plans must also include the following details about any existing rehabilitation already completed at the time of submission of the proposed PRC plan:

- a description of the rehabilitation works previously carried out
- when the rehabilitation works commenced and were completed
- whether the rehabilitation has been applied for or approved as progressively certified under the EP Act.

Spatial information outlining the location of all existing rehabilitation must also be submitted as part of the proposed PRC plan.

3.2 Post-mining land use

Legislative requirements

In accordance with section 126C(1)(d) of the EP Act, the rehabilitation planning part of the PRC plan must state the extent to which each post-mining land use for land identified in the PRCP schedule for the plan is consistent with:

- a) the outcome of consultation with the community in developing the plan, and
- b) any strategies or plans for the land of a local government, the State or the Commonwealth.

The PRC plan must identify to the administering authority and the community what the final use of all land within the relevant tenures will be and how rehabilitation outcomes will be achieved progressively throughout the life of the mine. Selecting and justifying appropriate PMLUs is fundamental to the PRC plan framework and underpins the statutory obligations in the PRCP schedule.

The Mined Land Rehabilitation Policy sets out the government's expectations that mine operators will propose suitable land uses following consideration of the surrounding landscape, community views and the objectives of any local and regional planning strategies.

A PMLU is defined under section 112 of the EP Act as the purpose for which the land will be used after all relevant activities for the PRC plan carried out on the land have ended. Relevant activity for a PRC plan is defined in the EP Act as the relevant activities to be carried out on land the subject of the plan. It is not the intention of this definition to include third-party activities or assets that continue to exist once mining activities have ceased, such as third-party pipeline easements, power easements or overlapping tenures for other EAs.

Several examples of PMLUs are provided below; however, it is not the intent of this guideline to develop a hierarchy or prescribe PMLUs for a resource activity. Examples of potential PMLUs include (but are not limited to):

- native ecosystem
- habitat and ecosystem services
- grazing
- agriculture
- forestry
- cropping
- industrial
- land fill
- water storage.

Infrastructure (such as buildings, roads, dams, and power lines) may be accepted as part of a PMLU where the relevant landholder has agreed through a signed landholder statement declaring that they will accept responsibility for the infrastructure once mining has ceased. All infrastructure to be retained onsite should be safe, stable and not cause environmental harm. An example of an acceptable landholder statement could include a compensation agreement that specifies the retainment of permanent infrastructure. If the underlying landholder is also the EA holder (or a parent corporation or a subsidiary corporation) they must justify how the infrastructure will provide a benefit or improvement to the use of the land and/or community once mining has ceased. If the landholder changes, the EA holder should inform the administering authority as soon as practicable after becoming aware of the change to confirm the new landholder agrees with the previous landholder statement. Please note separate approvals under the MR Act may be required where infrastructure is to be retained onsite after the termination of the mining lease.

For the development of a proposed PRC plan, an applicant must propose a PMLU (or NUMA) for all land within the relevant resource tenures of the EA (this includes land that will be undisturbed). It is the applicant's responsibility to provide sufficient evidence and justification regarding any proposed PMLU and the location considered for establishment.

Proposals for a NUMA will only be considered if they can be justified under section 126D(2) of the EP Act.

PMLU criteria

Determining the appropriate PMLUs is a critical first step in mine rehabilitation planning. It will support and inform the remainder of the proposed PRC plan, including rehabilitation and management strategies, and the PRCP schedule. The administering authority will not prescribe a PMLU; however, it will assess any proposed PMLUs against the criteria prescribed in the EP Act and EP Regulation.

For a proposed PMLU to be accepted, the PRCP schedule must demonstrate that the land can be rehabilitated to a

stable condition in accordance with the following definition from section 111A of the EP Act:

Land is in a stable condition if -

- a) the land is safe and structurally stable, and
- b) there is no environmental harm being caused by anything on or in the land, and
- c) the land can sustain a PMLU.

The EP Regulation requires that each PMLU-

- a) is viable, having regard to the use of land in the surrounding region, and
- b) satisfies at least one of the following-
 - i. the use is consistent with how the land was used before a mining activity was carried out on the land
 - ii. the use is consistent with a development approval relating to the land
 - iii. the use is consistent with a use of the land, other than a use that is mining, permitted under a State or Commonwealth Act, including, for example, a planning instrument under the Planning Act
 - iv. the use will deliver, or is aimed at delivering, a beneficial environmental outcome.

As per section 126C(1)(j) of the EP Act, the administering authority considers the following information, as to be provided in the rehabilitation planning part, necessary to decide whether to approve the PRCP schedule:

- 1) Consideration of PMLU options having regard to (where relevant):
 - any regulatory constraints on, or objectives for, the proposed land use (e.g. Indigenous Land Use Agreements, site management plan (contaminated land), local and regional land use plans, endangered species, or registered heritage places)
 - physical constraints (e.g. slopes, voids, geology)
 - chemical characteristics (e.g. residual contamination from tailings or other waste disposal)
 - available rehabilitation methods, including best practice (e.g. backfill, profile, capping)
 - relative costs of each rehabilitation option
 - potential economic benefits of each option for the community or landholder (e.g. tourism, public use, grazing)
 - potential environmental benefits of each option; (e.g. create wildlife corridors, revegetation)
 - potential social benefits of each option (e.g. recreational use, public amenity, employment)
 - compatibility with surrounding land uses (e.g. agriculture, ecosystem)
 - the land use before the mining activity commenced
 - options for retaining/transitioning infrastructure and utilities such as road and rail transport accessibility as well as power, communications and water management systems.
- 2) Identification of State or Commonwealth legislation relevant to the land use of the surrounding area. Including any planning instruments under the *Planning Act 2016* or development approvals relevant to the land.
- 3) Evidence based comparison and justification for each proposed PMLU against alternative options.
- 4) Identification of any statutory constraints that may need to be imposed to prevent or limit the likelihood of an inappropriate land use in the future. It is recognised that land with constraints may still have a viable PMLU and will not necessarily be considered a NUMA. For instance, if contaminated materials are retained but encapsulated on site, it may be appropriate to consider developing a site management plan as defined in section 370 of the EP Act to ensure that contaminated material continues to be managed appropriately (e.g. capping is maintained), and that any future land use is appropriate given the type and levels of contamination.

The rehabilitation planning part of the PRC plan must include a detailed description of the nominated PMLU(s) for the site. The description must include (where relevant), but is not limited to:

- a description of the use of the land
- if applicable, the specific vegetation types (e.g. RE 13.2.9) or land suitability classification (e.g. Class 4)
- identification of any permanent or essential management infrastructure to be included as part of the PMLU
- completion criteria for measuring whether the PMLU has been successfully achieved.

Permanent infrastructure may be considered as part of the PMLU where it is consistent with the land use. For example, the PMLU may be grazing with existing roads to be used by the landholder. However, permanent infrastructure retained, such as processing plants, for industrial uses would form its own industrial PMLU. Essential management infrastructure may include fencing, access of fire management access and control; and may be included as part of the PMLU where it is consistent with the land use. Infrastructure must not cause a material impact on the PMLU.

Relationship with PRCP schedule

The information requirements in this section will assist the applicant in developing appropriate PMLUs that will form part of the proposed PRCP schedule (section 4.1.3 of this guideline). The primary PMLUs identified in the rehabilitation planning part must align with those shown in the final site design in the proposed PRCP schedule. The completion criteria for the PMLU will be used as milestone criteria for the final milestone in the proposed PRCP schedule, which shows achievement of the PMLU to a stable condition at surrender. The supporting information will assist the administering authority in assessing the proposed PRCP schedule.

Applicability to transitional PRC plans

Where a PMLU has been previously addressed in a land outcome document and is able to be transitioned into the PRCP schedule, the holder is not required to complete the information requirements under section 126C(1)(j) of the EP Act in this section for those PMLUs.

However, the legislative requirements under section 126C(1)(d) of the EP Act still apply. For information on how pre-approved PMLUs can be transitioned into the PRCP schedule see section 6 of this guideline. All PMLUs transitioned into the PRCP schedule must still meet the requirements of a PMLU explained in this section, particularly that the PMLU can be rehabilitated to a stable condition.

Where PMLUs have not been pre-approved, the applicant must include all of the requirements stated in this section.

3.3 Non-use management areas

Legislative requirements

In accordance with section 126C(1)(d), (g) and (h) of the EP Act, for each proposed non-use management area, the rehabilitation planning part of the PRC plan must:

- state the reasons the applicant considers the area cannot be rehabilitated to a stable condition
- include copies of reports or other evidence relied on by the applicant for each proposed non-use management area
- state the extent to which the proposed non-use management area is consistent with the outcome of consultation with the community in developing the plan, and
- state the extent to which the non-use management area is consistent with any strategies or plans for the land of a local government, the State or the Commonwealth.

A NUMA is defined in the EP Act as an area of land the subject of a PRC plan that cannot be rehabilitated to a stable condition after all relevant activities for the PRC plan carried out on the land have ended. Proposed NUMAs must be justified under the criteria set out in section 126D(2) of the EP Act. As with PMLUs, proposed NUMAs must be identified in a proposed PRCP schedule and justified in the rehabilitation planning part of a PRC plan.

A NUMA can only be nominated after PMLU options have been assessed in accordance with section 3.2 of this guideline. The applicant must demonstrate that the land cannot be rehabilitated to a stable condition due to either of the following reasons:

- a) carrying out rehabilitation of the land would cause greater risk of environmental harm than not carrying out the rehabilitation; or
- b) both of the following apply:
 - i. The risk of environmental harm as a result of not carrying out rehabilitation of the land is confined to the area of the relevant resource tenure.
 - ii. The applicant considers, having regard to each public interest consideration, that it is in the public interest for the land not to be rehabilitated to a stable condition.

Reason—greater risk of environmental harm

If an applicant is seeking approval of a NUMA on the basis that rehabilitation of land would cause greater risk of environmental harm than not carrying out rehabilitation; in accordance with section 126C(1)(j) of the EP Act, the rehabilitation planning part of the PRC plan must include a report that:

- a) is prepared by an appropriately qualified person(s)
- b) identifies the environmental values of the site and surrounding area that are potentially impacted by the NUMA
- c) details the type and extent of environmental harm that is likely to occur if the NUMA is not rehabilitated to a stable condition (this assessment should factor in any best practice management measures that will be implemented (as identified in the PRCP schedule as management milestones) to mitigate environmental impacts now and into the future)

- d) identifies the most achievable rehabilitation option from those considered for the land as part of the PMLU assessment carried out in accordance with section 3.2 of this guideline
- e) includes an assessment of the potential for environmental harm associated with rehabilitation of the land to the PMLU identified in (d) (details must be provided of the type, extent and degree of environmental impact that could reasonably be expected to occur as a result of rehabilitation work).

The justification for a NUMA based on the risk of environmental harm cannot be based on the cost of the PMLU. These matters would only be relevant for the public interest justification for a NUMA.

Example:

A residual void proposed to collect and contain contaminants at a metalliferous hard rock mine may be considered to have a lower risk of environmental harm than if it was rehabilitated. Studies would be required to demonstrate that having a final land use as a residual void containing contaminants would be of less environmental harm than rehabilitating to a PMLU. For example, it may be demonstrated that retaining the void will limit the risk of contaminant migration and protect local groundwater resources. An assessment of the likely water quality through the life of the residual void, its long-term geotechnical stability, and hydrogeology of the residual void would need to be provided. As residual voids become permanent modifications to hydrological and hydrogeological systems, these aspects must be investigated and considered. The applicant would need to consider the level of ongoing management required for the residual void, including the maintenance of drainage structures to limit its catchment, pumping or movement of water and maintenance of fences and signage.

A receiving environment that has been impacted by the release of contaminants and remediation of the contaminants may be considered a greater risk of environmental harm due to remobilisation of contaminants during remedial activities.

Reason—public interest

This section applies if a NUMA is being proposed because the environmental risks from the area are localised and the applicant considers that it is in the public interest for the land not to be rehabilitated to a stable condition. The rehabilitation planning part of the PRC plan must include, as per section 126C(1)(j) of the EP Act, a report that satisfies (a) to (d) above and must include the following:

- f) Information demonstrating that any contaminants associated with the NUMA will not cause environmental harm beyond the area of the relevant resource tenure. Examples of offsite impacts include, but are not limited to, airborne contamination/dust, impacts of erosion and sediment runoff on surface waters or seepage of contaminants into groundwater.
- g) Consideration of each of the public interest considerations outlined in section 316PA of the EP Act.

Please note that all information contained in the PRC plan is publicly available and therefore confidential information should not be included in the proposed PRC plan.

Requirements for a NUMA

The administering authority will not approve a NUMA within a proposed PRCP schedule unless it is satisfied that the NUMA will be managed in a way that complies with best practice standards and strategies and minimises risks to the environment. It is not the intent of the administering authority to impose or prescribe best practice management solutions for a NUMA given the variability across sites. However, any management solutions proposed by the applicant must be determined based on current technical knowledge, consistency with the regulatory requirements and obligations, the site's unique characteristics, and detailed consultation with the community and the administering authority.

In addition to the information listed above for the justification of the relevant reason, the rehabilitation planning part of the PRC plan must also include:

- a) information demonstrating that the proposed footprint of each NUMA is as small as practicable
- b) an assessment of the NUMA location options, having regard to the constraints of the resource location, with an analysis of the potential environmental harm and sensitivity of the surrounding environment of each option
- c) a description of the proposed location of each NUMA and the environmental values of the surrounding environment
- d) evidence showing how the proposed location will prevent or minimise environmental harm.

All proposed NUMAs should have a footprint as small as practicable to limit environmental risk and future liability. The proposed PRCP schedule must include a final site design with the proposed location of each NUMA (more detail in section 4 of this guideline). Each proposed NUMA should be located to prevent or minimise environmental harm having regard to—

- a) all reasonably practical alternatives for the location, and

- b) the nature of the environmental harm that may be caused because of the proposed location, and
- c) the sensitivity of the environment surrounding the proposed location.

The total area of land proposed as a NUMA must be minimised to the extent possible by demonstrating that the land, or any part of the land, cannot be used for any PMLU. A NUMA should only be proposed in the PRCP schedule where all other alternative PMLUs have been assessed and deemed inappropriate. Applicants should be planning for the rehabilitation of all areas to PMLUs as a priority with NUMAs as a last resort. Figure 6 shows the process for determining a NUMA.

In accordance with section 126D(1)(c) of the EP Act, the applicant must develop and implement management milestones within the PRCP schedule which achieve best practice management and minimise environmental harm for any NUMAs contained in the proposed PRC plan. As part of the development of management milestones, the applicant must conduct a NUMA-specific risk assessment to identify and quantify risks and associated controls. The risk assessment should have an overarching goal of identifying and controlling any significant risks to the community and the environment. See section 3.6 of this guideline for more details on the risk assessment.

The proposed PRC plan must include a detailed description of the nominated NUMA(s) for the site. The description must include, but is not limited to:

- description of the land at surrender
- any relevant safety features
- completion criteria for measuring whether the NUMA has achieved sufficient improvement.

On achieving sufficient improvement of a NUMA, each of the following is minimised—

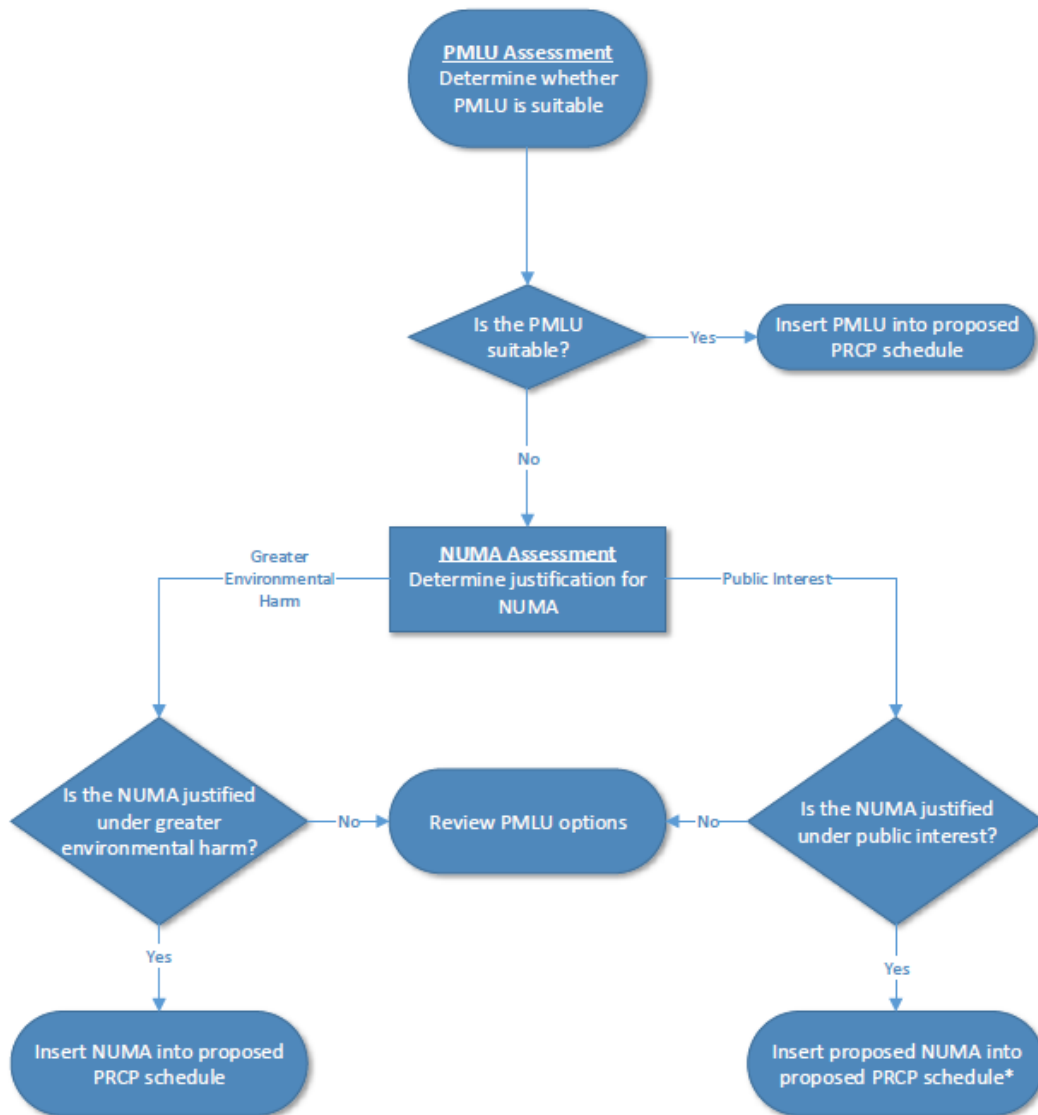
- a) the risk of the area collapsing, eroding or subsiding,
- b) the need to actively manage the area, and
- c) access to the area by an animal or person by, for example, fencing the boundary of the area.

Refer to the Information Sheet – Non-Use Management Areas (ESR/2019/4965²) for further information.

Relationship with PRCP schedule

The information requirements in this section will assist the applicant in determining if an area may be considered as a NUMA, which will form part of the proposed PRCP schedule (section 4.1.3 of this guideline). The NUMAs identified in the rehabilitation planning part must align with those shown in the final site design in the proposed PRCP schedule. The completion criteria for the NUMA will be used as milestone criteria for the final milestone in the proposed PRCP schedule, which shows achievement of sufficient improvement. The supporting information will assist the administering authority in assessing the proposed PRCP schedule.

PMLU and NUMA Options Analysis Process



*A public interest evaluation (PIE) must be carried out if a proposed NUMA is justified under s.126D(2)(b)

Figure 6. NUMA determination process

Applicability to transitional PRC plans

Where a NUMA has already been identified in a land outcome document and is able to be transitioned into the PRCP schedule, the applicant is not required to comply with sections 126C(1)(g) or (h) or 126D(2) or (3) of the EP Act. Section 6 of this guideline provides additional information regarding the process to transition a NUMA into a PRCP schedule. Any NUMAs transitioned into the PRCP schedule are not required to complete the information requirements under section 126C(1)(j) of the EP Act in this section for those NUMAs. However, the legislative requirements under section 126C(1)(d) of the EP Act still apply.

Where a NUMA has not been pre-approved and is proposed as part of the transition into the PRC plan, the applicant must include all of the requirements identified in this section.

3.4 Voids in flood plains

Legislative requirement

In accordance with section 126D(3) of the EP Act, if land the subject of the proposed PRCP schedule will contain a void situated wholly or partly in a flood plain, the schedule must provide for the rehabilitation of the land to a stable condition.

The Mined Land Rehabilitation Policy articulates the Queensland Government's expectations relating to voids situated in flood plains – the administering authority will not approve a proposed PRCP schedule that includes a void situated wholly or partly in a flood plain unless the void will be rehabilitated to a stable condition. New proposals to locate a void wholly or partly in a flood plain during the operational phase of a mine, must provide for the rehabilitation of the void to a stable condition at the end of the mine's life. Flood plain modelling is required for all sites with a void proposed as a NUMA (note that an assessment of the flooding susceptibility and influence is still required—see section 3.6.1).

Section 41C of the EP Regulation states the decision considerations for a void situated wholly or partly in a flood plain. A void is considered to be located in a flood plain if the flood plain modelling shows that, when all relevant activities carried out on the land have ended, the land is the same height as, or lower than, the level modelled as the peak water level 0.1% AEP for a relevant watercourse under the guideline Australian Rainfall and Runoff (2019) (ARR).

Flood plain modelling must be carried out in accordance with the ARR and exclude any artificial features for the land within the tenure boundary. For further information on how a flood plain is defined, contact your relevant business centre.

In accordance with section 126C(1)(j) of the EP Act, the administering authority considers the following information necessary to make a decision on the PRCP schedule. The rehabilitation planning part must include a flood plain model report developed by an appropriately qualified person that includes, but is not limited to:

- details of the data used to develop the model in accordance with section 4.13.3. of the ARR
- identification of all artificial features proposed or present within the tenure boundary
- identification of all watercourses within the immediate catchment with the Strahler method of stream ordering applied
- identification of any approved permanent watercourse diversions within the tenure boundaries and the relevant approval of the diversion
- consideration of how groundwater may impact the flood plain extent
- a hydrologic model
- a hydraulic model
- model assumptions and limitations
- model calibration and sensitivity analysis
- spatial data outlining the extent of the flood plain.

Refer to the Information Sheet – Voids in Flood Plains (ESR/2019/4966²) for further information.

Relationship with PRCP schedule

All voids situated wholly or partly in a flood plain must be identified in the proposed PRCP schedule as having an associated PMLU. The spatial data outlining the extent of the floodplain must be included in the final site design in the proposed PRCP schedule.

Applicability to transitional PRC plans

Where a NUMA has already been identified in a land outcome document and is able to be transitioned into the PRCP schedule, the applicant is not required to comply with sections 126C(1)(g) or (h) or 126D(2) or (3) of the EP Act. Section 6 of this guideline provides additional information regarding the process to transition a NUMA into a PRCP schedule.

Where a land outcome document has a pre-approved land outcome for a void with a location specified, flood plain modelling is not required (note that an assessment of the flooding susceptibility and influence is still required—see section 3.6.1). If a void has been identified as a NUMA in a land outcome document but the location is not identified, the applicant is required to carry out flood plain modelling in accordance with this section of the guideline. While the provision in the EP Act relating to voids located within a floodplain having to rehabilitate to a stable condition does not apply, the PRC plan must include how the proposed location of the void minimises risks to the environment. Therefore, the flood plain modelling is required to support the assessment of the proposed

location of the void.

If there are no land outcomes identified in a land outcome document, the applicant is required to carry out flood plain modelling in accordance with this section of the guideline.

Legislative requirement

In accordance with section 126C(1)(c)(iii) and (iv) of the EP Act, the rehabilitation planning part of the PRC plan must include:

- details of the consultation undertaken by the applicant in developing the proposed PRC plan, and
- details of how the applicant will undertake ongoing consultation in relation to the rehabilitation to be carried out under the plan.

3.5 Community consultation

Community consultation is a key component of the PRC plan and is intended to ensure that anyone impacted by proposed rehabilitation and closure activities at the site has an opportunity to provide input to the planning process. The applicant should consult the community early and continuously throughout the development of the PRC plan and generally throughout the life of the mine to establish and maintain relationships. This will allow the applicant to better understand and manage community expectations and the potential environmental, economic, and social risks associated with mine closure. Early engagement with the community also builds awareness and understanding of their needs and objectives, while managing community expectations of how the applicant would operate.

Community consultation differs from the public notification process required as part of the assessment of an EA or EIS under the EP Act. Public notification is an important part of the overarching decision-making process required to approve an activity such as a new mine. Public notification informs members of the public of the proposal and allows them the opportunity to make submissions that must be considered before the EA is decided. A properly made submission secures the right of a submitter to make an objection about the administering authority's decision if they disagree with part or all of the decision. These objections are referred to the Land Court.

The community consultation process should be used to inform the outcomes stated in the PRC plan. The administering authority must be satisfied that the applicant has attempted to consult all relevant members of the community. The administering authority has the ability to require further information if it considers the applicant has not consulted all relevant community members.

The administering authority expects applicants to identify, notify and engage the community regarding the proposed project and to provide them with an opportunity to comment. If the community does not respond, the PRC plan application will not be impacted. However, the applicant must demonstrate that sufficient effort has been made in engaging the community. The community may include, but are not limited to:

- affected landholders (such as underlying and adjoining landholders, and holders of land necessary for access to the land to which the proposed PRC plan relates)
- traditional owners
- Local government
- Local community groups.

To comply with section 126C(1)(c)(iii) of the EP Act, the rehabilitation planning part must include a community consultation register identifying the consultation carried out in developing the PRC plan. The community consultation register must include:

- consultation date(s)
- identification of each community member
- description of consultation type (workshop, quarterly meetings, etc.)
- information provided to the community
- issues raised/discussed by the community
- how issues have been considered
- decisions/outcomes of engagement
- commitments made by the applicant.

To comply with section 126C(1)(c)(iv) of the EP Act, the rehabilitation planning part must include a community consultation plan detailing how ongoing consultation will be carried out in relation to the rehabilitation to be carried

out under the PRC plan. The community consultation plan must include details of:

- the objectives for community consultation
- how the community will be engaged
- proposed consultation frequency
- what information will be released for community consultation
- how feedback/comments will be considered.

Consultation should occur prior to any PRCP schedule amendments that are likely to impact the community and the register should be updated when this consultation is undertaken.

In developing the proposed PRC plan, the community should at least be engaged on the plan for the mine, PMLUs or NUMAs, areas of disturbance, rehabilitation and management methods, progressive rehabilitation and closure timeframes. Ongoing community consultation should continue throughout the stages of the mine life so that progressive rehabilitation and the socio-economic and environmental impacts related to mine closure can be discussed with the community.

Community consultation carried out through different processes (such as an EIS) may be used to address the requirements in section 126C(1)(c) of the EP Act. The details of this consultation must be provided in the rehabilitation planning part of the proposed PRC plan.

Refer to the Information Sheet – Community Consultation for PRCP (ESR/2019/5101²) for further information.

Relationship with PRCP schedule

The information requirements in this section will assist the applicant in developing appropriate PMLUs and NUMAs that are consistent with, or have regard to community expectations, in line with the process detailed in sections 3.2 and 3.3 of this guideline. Community consultation supports the identification and justification of PMLUs and NUMAs and any expectations relating to the PRCP schedule (section 4 of this guideline). The administering authority will consider the type and results of community consultation carried out when assessing proposed PMLUs and NUMAs in the PRCP schedule.

Applicability to transitional PRC plans

Transitional PRC plans are still required to meet the legislative requirements in section 126C(1)(c) of the EP Act. All proposed PRC plans must contain a community consultation plan regardless of whether the site has an existing EA.

The community consultation register should include all recorded previous engagements with the community. Where there are land outcomes identified in a land outcome document, the applicant must include the details of any previous community consultation undertaken. If previous consultation has not been recorded or is unknown, the applicant must record this in the proposed PRC plan. Where there are no land outcomes identified in a land outcome document or previous consultation cannot be demonstrated, the applicant is required to comply with the requirements above as if it was a new application. It is recommended that applicants discuss the level of consultation expected in a pre-lodgement meeting prior to developing the PRC plan.

3.6 Rehabilitation and management methodology

Legislative requirement

In accordance with section 126C(1)(e) and (i), the rehabilitation planning part of the PRC plan must:

- For each proposed post-mining land use for land, state the proposed methods or techniques for rehabilitating the land to a stable condition in a way that supports the rehabilitation milestones under the proposed PRCP schedule.
- For each proposed non-use management area, state the proposed methodology for achieving best practice management of the area to support the management milestones under the proposed PRCP schedule for the area.

The proposed rehabilitation or management methodologies will underpin the development of the milestone criteria and support how the proposed PMLU will be achieved or the NUMA will be managed. As per section 126C(1)(j) of the EP Act, the administering authority requires information describing how the proposed rehabilitation or management methodologies have been developed and will be implemented.

This section identifies several studies or reports that must be provided in the proposed PRC plan. If any of the required information outlined below is not relevant to the specific operation, the applicant must provide justification in the PRC plan outlining why the information is not required. Alternatively, if the applicant has been informed by

the administering authority that certain information requirements are not required for the site, justification is not required for excluding those information requirements. Applicants are encouraged to have a pre-lodgement meeting with the administering authority prior to submitting a proposed PRC plan to discuss information requirements specific to your circumstances.

If the proposed PRCP schedule includes a NUMA, the management methodologies must have regard to:

- the current technical knowledge available about managing risks of the NUMA to the environment
- preventing the production of contaminants or, if prevention is not possible, minimising the impact of the release of contaminants.

Relationship with PRCP schedule

The information requirements specified below are required to support the development and assessment of the milestones, milestone criteria, timeframes, rehabilitation and improvement areas, PMLUs and NUMAs as outlined in section 4.1 of this guideline. The proposed methodologies will help inform appropriate timeframes to achieve milestones and support the proposed PMLUs and/or NUMAs in the PRC plan.

Applicability to transitional PRC plans

The information requirements in this section will apply to all applicants whether or not they are an existing EA holder. However, existing holders may already have the required information available from previously submitted plans/reports/applications that, if still valid, could be used in the PRC plan. All existing information used in the proposed PRC plan must be included in the approved form.

3.6.1 General rehabilitation practices

This section outlines the range of information that the administering authority considers is necessary to underpin the development of the rehabilitation or management methodologies applicable to new and existing mines for most domains. The applicant must include the information as appendices to the rehabilitation planning part. The range of required information is separated into those that may be applicable to the whole site and those that are relevant to specific infrastructure (such as TSFs, voids, underground mining areas, and built infrastructure).

Hydrogeology

Assess the hydrogeology of the site and all connected strata, and develop a conceptual model of the mine site's groundwater systems. This information must be integrated into the design of rehabilitation strategies and choice of PMLU or NUMA. The hydrogeological assessment should include the following steps:

- determining the groundwater occurrence including the existence of, and depth to, aquifers and aquitards
- locating groundwater recharge and discharge locations locally and regionally
- groundwater quality within each of the aquifers and from surface expressions (i.e. seeps and springs)
- current and potential future uses of groundwater including existing groundwater extraction bores
- groundwater flow direction and velocity, including field tests to determine hydraulic conductivity
- the development of potentiometric mapping and hydro stratigraphic cross sections
- groundwater modelling to determine contaminant transport and potential changes to groundwater level from dewatering or waste storage.

The prediction of water quality impacts from mining activities is necessary to determine appropriate measures for the containment and management of contaminants and the potential impacts on environmental values should they be released.

Flooding

Section 3.4 of this guideline requires flood plain modelling for the purpose of voids located within a flood plain being rehabilitated to a stable condition. In addition to this, the applicant must also assess the flooding susceptibility and influence across the site. If flooding is a consideration, develop a hydrologic model of the catchment and a hydraulic model of the proposed mining area. Knowledge of flooding is integral to the rehabilitation planning process, including the placement and design of mine domains. When assessing flooding, you must at least:

- consider the location of domains in relation to potential flood levels
- consider alteration of flow upstream and downstream
- model flood levels (including probable maximum flood levels) for a range of design storm events
- develop a flooding risk profile.

Soil and capping material assessment

The conservation of soil is a critical component of rehabilitation planning. The rehabilitation and management methodology should include that soil assessment activities are supplemented by additional surveys conducted at appropriate intervals to assess soil resources in planned disturbance areas. In addition to the assessment of soils, the proposed rehabilitation methodologies in the rehabilitation planning part must also address topsoil management. Topsoil management must ensure sufficient topsoil quantity and quality is available in those instances that waste rock or tailings cannot support the proposed PMLU. Integrated soil and waste rock characterisation and mapping should form the foundation of the rehabilitation strategies.

The available soil resources and capping material should be assessed prior to the commencement of operations. A soil assessment must be carried out that, at a minimum, identifies and characterises the following:

- the quality and quantity of available resources (such as topsoil, clay material and competent rock) required to complete the target rehabilitation methodology
- the location (i.e. with respect to haul distance) and accessibility of cover material (i.e. is the material located on the tenure or are other approvals required?)
- an assessment to determine the need for ameliorants and fertilisers
- the relationship between soils and vegetation ecosystems for the PMLU and rehabilitation methodology.

Waste characterisation

Waste characterisation is a crucial contributing factor when choosing appropriate rehabilitation strategies and suitable PMLUs. Depending on the waste on site, there may be the potential for acid mine drainage (AMD), which would require special attention when planning for closure.

Characterise mine wastes in a report that describes the likely physical behaviour and chemical reactivity of the waste materials under the conditions in which they would be stored. The report must address the constituent elements present, and their likely future speciation and mobility. Characterisation of mine waste materials should begin as early as possible to contribute to the mine planning.

It is essential that the characterisation of waste continue during the operation of the mine, particularly where the ore grade and mine plan change (e.g. in response to altered market conditions). The mine waste characterisation report should investigate the character of waste rock, low grade ore and tailings and include identification of any contaminants that pose a risk to the environment, such as contaminants associated with AMD, neutral mine drainage and saline mine drainage. The report should achieve the following outcomes:

- demonstrate that the sampling regime meets best practice standards, is spatially representative of all material being mined (i.e. the ore body, exposed pit walls and overburden etc.) and representative of all lithologies
- be capable of confidently classifying mine waste streams based on environmental risk and managements requirements
- be capable of generating block models and estimating the volume of mine waste based on waste type (i.e. level of environmental risk)
- provide recommendations for the management and mitigation of waste streams to manage environmental risk and achieve proposed rehabilitation methods and objectives.

Develop an exploration and drilling program to be implemented in the early stages of the project for preliminary geochemical characterisation. Representative sampling should identify the number and type of lithologies, along with the alteration and weathering of sub-variants that constitute the bulk of the material to be excavated or exposed to oxidising conditions.

As part of the exploration and drilling program, identify the physical and chemical properties of rock material that could be removed, disturbed or exposed to oxidation through the mining activities. Maintain a database to store the characteristics of each rock type that would be mined or disturbed.

All mined material should be classified on its propensity to be potentially acid or non-acid forming, to generate neutral metalliferous or saline drainage, and its susceptibility to weathering. The characterisation of waste material should continue throughout the operation of the mine and should include the following:

- static tests, such as:
 - chemical composition (whole rock and elemental analysis)
 - mineralogical analysis
 - acid base accounting (paste pH, sulfur speciation, neutralising potential (NP) or acid neutralising capacity (ANC) and total inorganic carbon)
 - net acid generation
 - water extraction (batch extraction) tests – with solution assay
- kinetic tests, such as:

- humidity cell leach testing
- column leach testing.

While static testing may be sufficient to indicate the potential to generate AMD, kinetic testing is required to predict the rate of oxidation and concentrations of contaminants that may be leached from the material under the relevant environmental conditions. This information is used to inform the cover design and determine the on-going requirements for managing leachate production.

The conceptual site model for waste rock dumps, low-grade ore stockpiles, heap leach pads and TSFs must also identify site-specific factors that may result in geochemical risks, including consideration of the interaction of natural and anthropogenic processes that influence management controls.

Landform design

A final landform design is a key component of rehabilitation and closure planning. The final landform design must be based on the proposed PMLUs and NUMAs and demonstrate that the land will be safe and structurally stable. The final landform design must include:

- 3D design plans of the final landform
- method of determining landform design
- modelling predicting the long-term stability of the final landform design
- method of construction
- Quality Assurance / Quality Control (QA/QC) requirements
- trial methodology to verify the predicted success of the final landform design
- limitations and assumptions of the landform design.

Key considerations of the landform design report must also include:

- structure location, footprint and height (including proposed lift heights) – these factors may be influenced by location of environmental values, local topography, location of sensitive receptors or visual impact
- whether the structure requires a lining to prevent water or air ingress and minimise the potential for seepage release and/or a seepage collection system
- whether the landform is ‘water-retaining’ or ‘water-shedding’, considering rainfall patterns, and intensity, and the composition and texture of the waste
- the identification of materials available for landform rehabilitation including their ability to achieve the required landform design outcomes
- erosion assessments to determine landform heights, gradients, profiles, and material placement
- slope profile design considering the interactions between soil erodibility, rainfall erosivity, landform height, gradient and vegetation cover to identify acceptable erosion rates over a long-term average
- settling and subsidence over time, which may impact the availability of areas for rehabilitation
- hydrological and hydrogeological assessments
- a waste placement strategy developed to mitigate environmental and rehabilitation risks during the construction and decommissioning phase
- specific landform requirements committed to in stakeholder consultation, mine planning or other sources, which could include rock incorporation, designed flow paths, aesthetic considerations, non-linear batter slopes and targeted placement of materials
- monitoring to determine performance of control measures (i.e. liners or seepage collection systems).

The landform design objective must be targeted at achieving long-term stability. To demonstrate this, the applicant must provide an analysis of future stability based on the factors described above (e.g. landform evolution modelling). Rehabilitation trials should be carried out during the rehabilitation planning stage to confirm the landform design predictions prior to the construction of the final site design.

Cover design

A cover design is required for the surface treatment of a mine landform or other waste material. Exposure of waste rock, low-grade ore, heap leach material or tailings can result in chemical reactions that cause an acidic, neutral or alkaline discharge with elevated metal or sulfate concentration. The management of mined and waste material to ensure contaminants are not released to the receiving environment is critical to rehabilitation success.

Hence, the cover system design must be appropriate for the type(s) of waste the project will generate and reflect a risk-based approach. Where waste has the potential for AMD, neutral mine drainage or saline mine drainage, an appropriate cover system must be designed taking into consideration:

- results from geochemical characterisation
- type and physical characteristics of the material being covered (from the material balance developed for

the site)

- site conditions
- availability of suitable cover materials (both quality and quantity)
- criteria for discharge (i.e. to protect environmental values)
- suitable vegetation.

The cover design should include:

- identification and specification of the objectives of the cover system
- a detailed description of the design including the thickness of each layer
- a detailed description of construction methodology including any proposed staging of the cover system
- a quantitative assessment that identifies the location and quantity of proposed capping material available on site
- proposed QA/QC for the construction of the cover system including the timely implementation of corrective actions where deviations from the design are identified.

Water management

The management of surface and groundwater is a key consideration in achieving long-term rehabilitation success. The rehabilitation planning part must include a description of the following:

- a description of the contaminants that pose a risk to environmental values of the receiving environment
- source, pathway and fate of contaminants that have the potential to impact environmental values
- infiltration and seepage intervention and collection controls
- surface water diversions and long-term management requirements
- dewatering requirements
- on-going water management and reduction requirements (i.e. treatment).

Revegetation

Include a revegetation plan in the rehabilitation planning part of the PRC plan. The revegetation plan must propose activities that will establish self-sustaining vegetation communities that are appropriate for the intended PMLU (e.g. natural ecosystems, grazing, forestry and some agricultural and other land uses). Revegetation should, therefore, not only establish a ground cover, but also, in some domains, establish associated fauna habitat and other ecological services. The revegetation plan must (but is not limited to):

- clearly articulate revegetation objectives for the site that are consistent with the PMLUs, NUMAs, and rehabilitation milestones identified in the PRCP schedule
- identify key flora species including pasture plants and tree and shrub species representative of the proposed PMLU
- identify any species of conservation significance relevant to the mine's approval
- identify any fauna habitat and use requirements - where fauna habitat is proposed, a management and monitoring plan to describe how the rehabilitated areas will be utilised by fauna and what other management measures would need to be implemented
- include evidence and justification for any analogue sites of the monitoring plan
- describe the works for establishing and managing the revegetation, including a description of proposed site preparation and the timeframe for works
- identify what plant/seed mixes are appropriate for the PMLU and where the mixes will be sourced—locally sourced seed should be used where appropriate
- identify seed density application rate and timing of seeding
- identify the proposed location of any infrastructure required to protect revegetation
- identify the growth media that would be suitable to sustain the PMLU and whether this is available on site
- identify topsoil depth requirements for revegetation success and sustainable PMLU.

The rehabilitation planning part must include details of the site preparation required for rehabilitation activities. The following elements must be included in the site preparation strategies:

- the application and incorporation of ameliorants (if required for chemical balance) and bulk ameliorants such as gypsum, lime and other organic materials
- spreading of growth medium layer (topsoil, topsoil/rock mix, or suitable waste if appropriate) to a depth suitable for the target vegetation
- the application of seed, fertiliser and, where applicable, irrigation.

3.6.2 Tailings storage facilities

Tailings storage facilities (TSF) commonly contain some of the most hazardous materials on a mine site and may represent a significant long-term risk to environmental values. They must be constructed to a suitable standard with significant consideration given to decommissioning and rehabilitation/closure.

These facilities vary widely and can include valley fill, in-pit, backfill and above ground structures. There is no single solution for the safe management of tailings given the variety of site-specific environmental conditions, climate, ore types, geochemistry, topography and other constraints.

Proposed tailings management options must minimise interactions between the tailings and the surrounding environment to prevent the release of contaminants to the receiving environment.

The tailings require characterisation to determine the geochemistry, rheology and geotechnical parameters that influence the rehabilitation or management strategies and the capacity of the site to support revegetation. In addition, the geotechnical characterisation of tailings must also include:

- Particle size distribution analysis based on conditions in the TSF. Particle size distribution of tailings affects their hydraulic sorting down the tailings beach, and their settling, consolidation and desiccation on atmospheric exposure.
- Specific gravity testing. The specific gravity of tailings affects their hydraulic sorting down the tailings beach, and their settling and consolidation.
- Atterberg limit testing to determine the plasticity of the tailings, which affects their settling, consolidation and desiccation on atmospheric exposure.
- The moisture content and dry density profiles with depth of the indicative tailings. The dry density profile indicates the efficiency to which the available storage volume for tailings is utilised. Rheological testing to determine the pumpability of the tailings.
- Settling testing of the tailings used as an indicator of the settling density of the tailings.
- Shear strength testing of the indicative tailings, both peak and remoulded shear strengths. The shear strength profile of deposited tailings affect their bearing capacity on rehabilitation.
- Consolidation testing of the tailings to estimate their consolidated density and saturated hydraulic conductivity.
- Soil water characteristic curve testing to assess the unsaturated behaviour of the tailings on desiccation and calculate the unsaturated hydraulic conductivity function.
- Instrumented column testing of the tailings to assess their settling, self-weight consolidation and desiccation.

The design for a TSF must include relevant elements:

- lining of TSF (i.e. embankments and base of structure)
- leak detection systems
- cellular design of TSF
- seepage collection systems
- design storage allowance
- spillway location
- designing TSF for progressive rehabilitation.

The development and implementation of QA/QC program during construction is critical to the prevention of contaminant release and achieving rehabilitation success.

3.6.3 Voids

The information requirements of this domain are dependent on the nature of the proposed PMLU or NUMA for the void. Information on voids proposed on flood plains is included in section 3.4 of this guideline.

For mine sites with voids, the rehabilitation planning part must include a void closure plan that includes, but is not limited to, the following:

- options available for minimising final void area and volume (where a final void is proposed)
- proposed final dimensions of the void (i.e. depth, length and width)
- pit wall geotechnical and geochemical stability, considering the effects of long-term erosion and weathering of the pit wall and the effects of significant hydrological events
- proposed final slope angles of high wall, low wall and end walls of each final void
- void hydrology, addressing the long-term water balance and water level in the voids, stratification connections to groundwater resources and potential for overflow
- groundwater modelling to determine whether the void is acting as a sink or a source for groundwater

- a water balance study including an assessment of void surface and groundwater interactions such as:
 - groundwater lowering/reduction in hydraulic head (from new voids) (e.g. caves/karst systems)
 - cones of depression and associated impacts
 - the drainage and flooding behaviours of surface waters in the vicinity of the void
 - the potential extent of flooding and implications of interactions with the void
 - a conceptual model that incorporates all projected inflows, outflows, and recharge rates
 - water storage and long-term water balance
 - each of the major water fluxes into and out of the void
 - the sources of surface water within the mine catchment that are likely to influence the water quality in the void
- predicted water quality in the long-term including potential stratification
- a 3D void design plan
- rehabilitation strategies.

A geotechnical report should focus on how the void will achieve post-closure slopes that will exhibit stability characteristics consistent with the planning and design of the post-closure mine void.

Mechanisms for achieving acceptable geotechnical stability must be detailed in the plan. This includes void filling, partial void filling, reshaping and void configuration through earthwork methods such as back filling, regrading, buttressing and benching. Where applicable, methods and techniques for achieving safe slopes must be detailed.

If floodwaters are likely to move over backfilled material, an assessment of the hydraulic properties must be conducted to assess whether instability may occur. If instability is possible, modification to the landform design of the backfilled void may be required. If floodwaters are allowed to enter the void this may compromise the stability of the wall, which can increase the volume of floodwater entering the void. Where relevant, consideration must be given to the impacts of floodwater interaction on erosion.

The rehabilitation and management strategies in the plan must include the supervision, verification and auditing of engineering works carried out to achieve the post-closure void landform, to ensure construction is consistent with the geotechnical design. Supervision, verification and auditing can be assisted by developing 'as built' profiles for comparison to the design surfaces. The 'as built' earthworks criteria such as compaction and settlement criteria should also be compared against the design specification and any variances should be analysed and subsequently rectified.

The rehabilitation and management strategy must also include confirmation that the post-closure landform demonstrates the level of stability as specified by the design. This is best achieved by means of detailed visual assessments in conjunction with surveying of the final landform both during the construction phase as well as at the end of construction to ensure all void areas requiring mitigation have been successfully treated and are suitably stable. If exclusion measures are part of the post-closure void management plan, they should be detailed in the rehabilitation strategy.

A proposed void in a flood plain must provide for the rehabilitation of the void to a stable condition, that is, it must be safe and structurally stable; there is no environmental harm being caused by anything on or in the land; and the land can sustain a PMLU (section 126D(3) of the EP Act).

3.6.4 Underground mining

For underground mining operations, the rehabilitation planning part must include:

- a geotechnical study
- an assessment of groundwater interactions and potential lowering of groundwater levels that includes:
 - consideration of the potential exposure of previously saturated geological formations to air - leading to AMD generation
 - consideration of measures to avoid or minimise groundwater discharges to the surface through appropriate mine access planning, including post mining sealing off of tunnels, shafts, adits, boreholes, and other openings
- the development of a hydrogeological conceptual model
- subsidence analysis and modelling and a subsidence vegetation/habitat impact assessment
- consideration of how potential entries to underground workings will be sealed (i.e. through some form of capping or back filling)
- how surface ponding and cracking will be mitigated
- identification of post-closure stabilisation of underground workings in order to manage the potential for unplanned surface subsidence and unplanned ground collapse such as sinkholes and pot holing.

The geotechnical study must include an assessment of:

- post-closure stabilisation of underground workings—including geotechnical assessments of the stability of

the underground openings, assessment of groundwater conditions and groundwater impacts on the design of stabilisation methods

- the requirements for sealing off surface openings to underground workings—including geotechnical assessments of bulkhead materials, competency and stability of the ground containing the bulkhead, the need if any for additional ground support and reinforcement including grouting, and assessment of groundwater conditions and groundwater impacts on the design of bulkheads
- the magnitude and spatial extent of post-closure residual subsidence of underground workings—this would include but not be limited to geotechnical assessments of the stability of the underground openings and overburden, assessment of adverse surface effects, and assessment of surface water and groundwater conditions and groundwater impacts on subsidence.

A conceptual model must be developed of the hydrological processes that would occur post-closure. A numerical model must also be developed and included in the rehabilitation planning part to enable analytical assessment of the hydrological evolution within the underground workings post closure. This model should include groundwater and surface water interaction and would utilise the hydrogeological model developed for the site.

Subsidence modelling must be carried out to predict potential subsidence, surface strain and tilt resulting from the underground mining operations and be used to inform implications for the rehabilitation strategies. An underground mining method should be adopted that provides for planned subsidence of the ground surface in a predictable and controlled manner. Planned subsidence means lowering the ground surface above the underground operation within predictable limits as to spatial extent, magnitude and surface distortion. Alternatively, prevention or minimisation of planned subsidence is more appropriate; this is best achieved through the adoption of a mining method that allows for permanent post-closure support.

The subsidence analysis and modelling which will inform rehabilitation strategies must address potential management issues including:

- vegetation/habitat impacts such as:
 - damage to vegetation in the vicinity of surface cracks
 - impacts associated with changed hydrogeological characteristics⁸
- community, wildlife and livestock safety and access issues associated with changes to topography and large surface cracking
- potential impacts to surface infrastructure including houses, roads, and power lines, etc.
- changes to hydrological regimes
- changes to pre-existing surface water characteristics due to cracks in the bed and banks of waterways
- destabilisation of waterway bed and banks as a result of the new, post-mining trough and ridge profile along the waterway which may be geomorphologically unstable
- changes to the hydrogeological regime as a result of new cracks in the rock mass which can provide new flow paths in what could have previously been impermeable rock
- potential for vertical connections between previously separated aquifers
- changes in surface topography and local drainage characteristics—this may result in some areas becoming more free-draining while runoff may be reduced in other areas, resulting in the ponding of water in areas where previously no ponding occurred
- changes in surface drainage, leading to changes in the composition of vegetation communities and distribution of flora and fauna species.

The rehabilitation and management strategy must include in the construction and decommissioning phase of rehabilitation, confirmation that underground workings and surface impacts have been decommissioned or remediated as planned. A monitoring regime should be developed for areas subject to subsidence to monitor the effects of subsidence; see section 3.8 of this guideline.

3.6.5 Built infrastructure

The administering authority's expectation of rehabilitation relating to built infrastructure is that it will be decommissioned, demolished, salvaged and/or disposed of unless it is being formally retained by the landholder to achieve an appropriate PMLU.

The rehabilitation planning part must include:

- Identification of infrastructure that will be decommissioned and the methods for decommissioning.
- A description of infrastructure that will remain post rehabilitation and the identification of ongoing

⁸ In areas identified with potential significant impacts to vegetation/habitat, a subsidence impact minimisation and remediation plan should be developed which describes the proposed management and rehabilitation activities for the affected areas.

maintenance requirements.

- Evidence of agreement for any infrastructure that will have ownership transferred.

If spillage or accumulation of hazardous substances in the infrastructure areas has occurred for an existing operation that may result in contamination of the soil (i.e. oil spills), the management of the residual contamination must be included in the rehabilitation plan.

Legislative requirement

In accordance with section 126C(1)(f) of the EP Act, the rehabilitation planning part of the PRC plan must identify the risks of a stable condition for land described as a post-mining land use not being achieved, and how the applicant intends to manage or minimise the risks.

3.7 Risk assessment

For the applicant to comply with the legislative requirements outlined above, a PRC plan must include a risk assessment identifying the risks of a stable condition for land not being achieved and how the applicant intends to manage or minimise the identified risks.

In addition to the above, as per section 126C(1)(j) of the EP Act, the administering authority considers it necessary for the proposed PRC plan to contain a risk assessment of all proposed NUMAs. The risk assessment must be carried out to identify the risks of the NUMA causing environmental harm and not being safe and structurally stable and detail how the applicant intends to manage and minimise the identified risks.

The AS ISO 31000:2018 *Risk Management – Guidelines* (Standards Australia, 2018) describes risk assessment as the overall process of risk identification, risk analysis, risk evaluation and risk treatment. Each of these aspects must be included in the risk assessment in the rehabilitation planning part.

Risk identification involves identifying sources of risk, areas of impacts, events and their causes and their potential consequences. The identification of risks should include risks whether or not they are in the applicants' ability to control (e.g. weather events), as the potential impact of these risks on the completion of milestones may still need to be considered when choosing appropriate completion dates for the PRCP schedule. The potential consequences, cascade and cumulative effects should be examined. The objective of this step is to create a comprehensive list of risks based on events, which may impede, enhance, delay or accelerate the rehabilitation of land to a stable condition or the potential for environmental harm and inability of a NUMA being safe and structurally stable.

The risk analysis step involves developing an understanding of the risks identified. This should be achieved by determining the causes and sources of risk, their positive and negative consequences, and the likelihood that those consequences can occur. The level of confidence in the analysis and any assumptions made should be clearly identified in the risk assessment.

The risk evaluation should assist in making decisions, based on the risk analysis, about what risks need to be managed and prioritised. This step involves comparing the level of risk found during the analysis process and using this to determine the need of risk treatment.

The purpose of risk treatment is to select and implement options for addressing the risks identified in the assessment. The most appropriate risk treatment options should be selected after consideration of multiple factors including cost benefit, regulatory obligations, social responsibility and protection of the surrounding environment. The risk treatment step in the risk assessment must detail:

- the reasons for selecting the treatment option
- those responsible for the approval and implementation of the plan
- proposed actions
- resource requirements
- performance measures and constraints
- reporting and monitoring requirements
- timing and scheduling.

Relationship with PRCP schedule

The risk assessment will assist the applicant in deciding appropriate completion dates. This is done by considering how potential events can affect the completion time of land being rehabilitated to a stable condition or managed as a NUMA. The proposed PMLUs will include consideration of the risk of failure that may occur to certain PMLUs.

Applicability to transitional PRC plans

Information requirements in this section apply to all applicants whether or not they are an existing EA holder. Existing holders may have the required information available from previously submitted plans/reports/applications that, if still valid, can be used in the PRC plan.

3.7.1 Rehabilitation trials

Rehabilitation trials can improve the chances of achieving a nominated rehabilitation outcome. This is a method for managing and minimising the risks of a stable condition not being achieved. To maximise the benefit of rehabilitation trials, they must have a stated purpose and start as soon as possible. Monitoring data from baseline studies can be used to design rehabilitation trials and monitoring programs, especially if analogue sites have been proposed to provide a more realistic characterisation of local conditions.

In accordance with section 126C(1)(j) of the EP Act, if rehabilitation trials are planned, the rehabilitation planning part must state:

- the objective of the trial(s)
- the trial design including, but not limited to, the location, underlying land characteristics and potential issues
- the details of how the trial(s) will be carried out
- when the trial(s) will commence
- the duration of the trial(s)
- how the trial(s) will be assessed for success
- how the results of the trial(s) will be incorporated into rehabilitation strategies and the development of milestones, and
- where the trials have previously been carried out by the applicant.

Rehabilitation trials can offer considerable benefits to mining companies by assessing what rehabilitation strategies are most successful. Before carrying out trials, companies should review existing literature on rehabilitation trials for relevance to their site-specific conditions and rehabilitation requirements. Rehabilitation trials should be aimed to fill gaps in existing knowledge and should be a clearly identified part of ongoing mine planning.

While rehabilitation trials can be a useful way of gaining information and assist in identifying ways to improve initial rehabilitation strategies, they should not result in the delay of rehabilitation and are not considered rehabilitation or management milestones for the proposed PRCP schedule.

Relationship with PRCP schedule

Information about any planned rehabilitation trials will support the rehabilitation methodology and assist in the development of milestones. Please note that carrying out rehabilitation trials is not considered a milestone itself, as the trials should occur prior to land becoming available for rehabilitation.

Applicability to Transitional PRC plans

The information requirements in this section will apply to all applicants, whether or not they are an existing EA holder, who have planned or commenced rehabilitation trials. Existing EA holders can provide details of any rehabilitation trials that have occurred prior to the submission of the proposed PRC plan.

3.8 Monitoring and maintenance

Under section 126C(1)(j) of the EP Act, the administering authority considers monitoring and maintenance necessary to decide if the PRC plan is consistent with the requirements of the legislation. The rehabilitation planning part must contain a monitoring and maintenance program that identifies and describes the monitoring systems that will be carried out in order to demonstrate a milestone and milestone criteria have been achieved. The program must include, where relevant to the milestone and milestone criteria (but is not limited to):

- schedule of monitoring, reporting and review for each milestone
- description of methodologies and standards, which could include field-based assessments and the application of new remote sensing, GIS and other relevant emerging technologies
- monitoring that enables the repeatable collection of relevant statistically valid data
- monitoring using appropriate quality assurance and data management processes and systems
- regular analysis of site data including multi-year comparison trends and bench-marking against analogue/reference sites
- contingency strategies if monitoring data indicates milestone criteria are not being met
- post-closure monitoring to ensure milestone criteria has been demonstrated
- intent of monitoring reports, such as provision of results and key findings.

The program will also help identify and quantify problems, risks and opportunities for corrective actions and adaptive management. The program should describe the processes and activities that will be used to determine the biophysical state of rehabilitation and closure. A standardised and repeatable approach to the measurement of certain biophysical attributes and processes must be identified that can be compared against the PRCP schedule.

Presentation of a long time series of monitoring data is one way to demonstrate that the risk of rehabilitation or management failure is low and/or quantifiable. The monitoring will also assist in improving the validity of the PRCP schedule. Any risks that remain upon surrender and post-surrender will be accounted for under the residual risk framework.

Relation to PRCP schedule

The information requirements in this section will assist the applicant in developing the milestone criteria in the proposed PRCP schedule (section 4.1 of this guideline). A monitoring and maintenance program will be necessary to provide evidence to the administering authority that the milestone criteria have been achieved and that

Legislative requirements:

In accordance with section 126D(1) of the EP Act, the PRCP schedule in the PRC plan must:

- a) describe the area of each resource tenure either a post-mining land use or non-use management area, and
- b) for each post-mining land use state:
 - i. each rehabilitation milestone required to achieve a stable condition, and
 - ii. when each rehabilitation milestone is to be achieved, and
- c) for each non-use management area state:
 - i. each management milestone, and
 - ii. when each management milestone is to be achieved, and
- d) include maps showing the land mentioned in (a), (b) and (c).

progressive rehabilitation and closure is occurring.

Applicability to transitional PRC plans

The information requirements in this section will apply to all applicants whether or not they are an existing EA holder. However, existing holders may already have the required information available from previously submitted plans/reports/applications that, if still valid, could be used in the PRC plan. If there are any monitoring or maintenance of areas already rehabilitated, details must be included in the PRC plan.

4 PRCP schedule

The development and implementation of the PRCP schedule is an essential element of a PRC plan. The administering authority approves a PRCP schedule and applicants are required to comply with the conditions and milestones of the schedule. A PRCP schedule must include:

- either a PMLU or NUMA for all land within the relevant resource tenures, including undisturbed land
- identification of when land becomes available for rehabilitation or improvement
- rehabilitation or management milestones to achieve the PMLU or NUMA outcomes
- milestone criteria that demonstrate when each milestone has been completed
- completion dates for each milestone to be achieved
- any conditions considered necessary or desirable.

Applicants are required to develop and submit a proposed PRC plan when they make a site-specific application for an EA or receive a notice from the administering authority requiring the submission of a proposed PRC plan. The administering authority will assess the proposed PRCP schedule in conjunction with the rehabilitation planning part (see section 3 of this guideline) and decide whether to approve or refuse the PRCP schedule, amend the proposed PRCP schedule as necessary or impose milestones and conditions as necessary and impose conditions as necessary or desirable (see section 2.5 of this guideline). Once approved by the administering authority, the PRCP schedule becomes a legally binding and enforceable instrument with which the holder must comply.

4.1 Steps for developing a PRCP schedule

The methodology for developing a PRCP schedule is outlined in this section. The process consists of the seven steps below. When preparing a proposed PRCP schedule, applicants must use the PRC plan approved form

template (ESR/2019/4957²). The PRCP schedule template is provided in Appendix 1 of this guideline. The PRCP schedule will consist of separate tables for PMLUs and, if relevant, NUMAs. An example of a complete PRCP schedule template has been provided in Appendix 2. Note it is not the intent of the example to provide a standard for approval on a PRCP schedule.

Step 1. Final site design

The final site design must delineate the total area of the PRC plan as planned for surrender, including all proposed undisturbed areas (and their proposed uses identified as PMLUs), all proposed PMLUs and any proposed NUMAs. The PMLUs/NUMAs on the final site design must reflect the final determination made as part of the information required in sections 3.2 and 3.3 of this guideline. The final site design will form part of the PRCP schedule.

The final site design is a map showing:

- the maximum disturbance footprint
- resource tenure boundaries
- PMLU(s) and NUMA(s) for the land within the resource tenure(s)
- flood plain extent.

The purpose of the final site design is to show the community what the site will look like post surrender.

Step 2. Divide PMLU/NUMA into rehabilitation areas/improvement areas

PMLUs identified in the final site design (only where disturbance has occurred or will occur) must be broken down into rehabilitation areas, and NUMAs identified in the final site design must be broken down into improvement areas. A rehabilitation area is defined in the EP Regulation as an area of land in the PMLU to which a rehabilitation milestone for the post-mining use relates. An improvement area is defined in the EP Regulation as, for a NUMA, an area of land in the NUMA to which a management milestone for the NUMA relates. The purpose of breaking down the site into rehabilitation and improvement areas is to allow for progressive rehabilitation and closure of the site over the life of the mine. Only areas of disturbance need to be included in the rehabilitation areas/improvement areas.

Rehabilitation areas and improvement areas must be based on the proposed rehabilitation or management methodology applicable to the PMLU or NUMA. Land that requires a specific type of rehabilitation strategy cannot be included into a broader area as there will be specific milestones only relating to a specific area of land within the larger area. For example, if a site has a TSF that requires capping and a pit that requires backfilling, these two disturbances must be separate rehabilitation areas as they have different rehabilitation methods required. If the material from the TSF was to be placed in the pit as part of the rehabilitation strategy both relevant activities could form one rehabilitation area as the rehabilitation is linked. Rehabilitation areas/improvement areas may only contain one primary PMLU/NUMA as the rehabilitation or management methodology will be different for different land outcomes. Infrastructure associated with the relevant activity may be included in the rehabilitation area / improvement area as long as the PMLU/NUMA for the area will still be achieved. For example, roads may be included in a rehabilitation area for a waste rock dump with a PMLU of grazing where the road will be used by the landholder for grazing and achieves the PMLU objectives.

Spatial information for the rehabilitation areas / improvement areas are required to be submitted as part of the rehabilitation planning part of the PRC plan (see section 3.1 of this guideline). The scale of the rehabilitation areas / improvement areas are to be nominated by the applicant in the proposed PRCP schedule. Rehabilitation areas / improvement areas can be scaled up or down depending on the operation. The rehabilitation areas / improvement areas represent where the milestones and milestone criteria will apply.

The applicant must state in the proposed PRCP schedule the relevant activities within the rehabilitation area / improvement area and the total area in hectares. The relevant activities must be consistent with the relevant activities identified in section 3.1 of this guideline.

Reference maps

Reference maps must be attached to the proposed PRCP schedule identifying the boundary of each rehabilitation area and improvement area. Reference maps may contain more than one rehabilitation area/improvement area and must be to a scale that allows for easy interpretation. An example of reference maps is in Appendix 2. All maps must be prepared in accordance with the guideline 'Spatial Information Submission' (ESR/2018/4337²).

Step 3. Determine when land becomes available

In the proposed PRCP schedule, the applicant must state the year the rehabilitation area/improvement area is available for the commencement of rehabilitation/improvement. The identification and justification of when land becomes available, as required in the rehabilitation planning part of the PRC plan must be reflected in the

proposed PRCP schedule.

For PMLUs, disturbed land is considered available for rehabilitation if the land is not being mined and will be required to be rehabilitated unless, as per section 126D(5) of the EP Act:

- a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility, or
- b) the land is identified in the proposed PRCP schedule or the application for an EA for relevant activities to which the schedule relates as containing a probable or proved ore reserve that is to be mined within 10 years after the land would otherwise have become available for rehabilitation, or
- ba) the land is required for the mining of a probable or proved ore reserve mentioned in (b), or
- c) the land contains permanent infrastructure identified in the proposed PRCP schedule as remaining on the land for a PMLU.

For NUMAs, disturbed land is considered available for improvement if the land is not being mined and will be required to be managed unless, as per Schedule 8A, Part 1 of the EP Regulation:

- a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility, or
- b) the land is identified in the proposed PRCP schedule or the application for an EA relating to the schedule as containing a probable or proved ore reserve that is to be mined within 10 years after the land would otherwise have become available for improvement, or
- c) the land is required for the mining of a probable or proved ore reserve mentioned in (b).

If an applicant is proposing that certain land is unavailable for rehabilitation because land is being used for operating infrastructure or machinery or contains permanent infrastructure, then the applicant must provide sufficient evidence and justification to confirm compliance with the legislation.

The provisions relating to a probable or proved ore reserve to be mined within 10 years was included to address areas where mining has occurred and has temporarily ceased, but there is further probable or proved ore reserve deeper that may be mined in the future. Probable or proved ore reserve means a probable ore reserve or proved ore reserve mentioned in the listing rules made by ASX Limited (ACN 008 624 691) for the listing of corporations on the Australian stock exchange. Even if the applicant is not on the Australian stock exchange, they must use the listing rules to demonstrate that there is probable or proved ore reserve on the site. If this provision applies to an applicant, the location of the probable or proved ore reserve and the likely timing of the further mining of the reserve must be identified in the PRC plan.

Although these provisions allow for land with a probable or proved ore reserve to sit until it is further mined within 10 years, the land may require management until the further mining is carried out. For example, for a pit with a probable or proved ore reserve not planned to be mined again for 7 years, there is an obligation to ensure surface and ground water interactions are managed to prevent or minimise environmental harm.

The provisions relating to land required for the mining of a probable or proved ore reserve was included to address areas of disturbance that may need to be utilised, and therefore be unavailable for rehabilitation or improvement, to support the mining of the future probable or proved ore reserve identified under section 126D(5)(b) of the EP Act or paragraph (b) of Schedule 8A, Part 1 of the EP Regulation.

Step 4. Develop relevant milestones

The applicant will develop appropriate rehabilitation or management milestones for each PMLU or NUMA as required in section 126D of the EP Act.

Rehabilitation milestones are required for all rehabilitation areas that have a PMLU as identified in step 2. Rehabilitation milestones identify each significant event or step necessary to rehabilitate the land to a stable condition.

Management milestones are required for all improvement areas that have a NUMA as identified in step 2. These identify each significant event or step necessary to:

- achieve best practice management of the area
- minimise risks to the environment.

The administering authority has compiled a list of common milestones that it considers represent a “significant event or step” according to the above definitions. These are referred to as ‘reference milestones’ and are detailed in Appendix 3 - Reference milestones. Where relevant, milestones in this reference list should be adopted in the proposed PRCP schedule. Notwithstanding, this list is not intended to be exhaustive, and applicants should develop site-specific milestones where appropriate.

Milestones are legally enforceable commitments once the PRCP schedule is approved. Therefore, it is essential that milestones be written in a manner that delivers on SMART principles, meaning that they are:

- **Specific**—it is clear what must be done
- **Measurable**—it must be possible to know when it has been achieved
- **Achievable**—it is capable of being achieved
- **Reasonable/relevant**—there is a clear connection between the milestone and the desired outcomes. The requirement is reasonable
- **Time Specific**—it is clear when the milestone will be completed.

The administering authority recognises that during the life of the mine, rehabilitation and management options, methodologies, and technologies are likely to evolve and broader mining industry practices are refined over time. The administering authority encourages EA holders to periodically review their PRC plan to confirm the proposed rehabilitation and management strategies, along with milestones in the PRCP schedule that continue to reflect the best practice options. This includes reviewing whether there may be new rehabilitation methods available that could improve the PMLU outcome or achieve a preferable outcome where a NUMA was previously proposed. In those instances where amendments to the PRCP schedule may be required, provisions in the EP Act allow the PRCP schedule, including milestones and milestone criteria, to be amended at any time through an application process.

Step 5. Develop site-specific milestone criteria

Applicants are required to propose milestone criteria for each milestone. Milestone criteria, for management and rehabilitation milestones, means parameters that are measurable for achieving the milestone. Milestone criteria will be assessed to determine whether a rehabilitation or management milestone is achieved by the date stated in the PRCP schedule. The criteria must clearly demonstrate through SMART principles that the milestone has been successfully completed. Milestone criteria are used to demonstrate completion of progressive rehabilitation and improvement steps and events, however the milestone criteria for the final milestone will act as completion criteria for the achievement of either a PMLU or NUMA. The final milestone for each rehabilitation or improvement area must include milestone criteria for the area either achieving stable condition of the land for PMLUs or achieving sufficient improvement of the NUMAs.

For each PMLU, rehabilitation milestones must be supported by milestone criteria that:

- a) are appropriate for achieving the milestone
- b) facilitate achieving subsequent rehabilitation milestones.

For example, if the PMLU were a water storage facility for livestock, the last rehabilitation milestone for the PMLU would be the achievement of the PMLU to a stable condition. The milestone criteria must demonstrate that the PMLU is safe, stable, does not cause harm to the environment and can sustain the use. To show that the area can sustain the PMLU of water storage facility for livestock, the criteria might include water quality parameters required to demonstrate suitability for livestock drinking water over a certain period (e.g. pH and salinity).

For each NUMA, management milestones must be supported by milestone criteria that:

- a) are the most appropriate for achieving the milestone, and
- b) facilitate achieving subsequent management milestones, and
- c) have regard to the technical knowledge available when the PRCP objective assessment is being conducted about managing risks of the NUMA to the environment, and
- d) achieve the prevention of the production and release of contaminants or, if prevention is not possible, minimise the impact of the release of contaminants.

Each mine site will have circumstances that are specific to that mine site that will be considered in the development of milestone criteria. Milestone criteria should provide quantitative indicators of progress towards achieving overall rehabilitation or closure objectives.

In accordance with the SMART principles outlined in step 4, milestone criteria help to ensure that successful completion of milestones is measurable. To ensure that this measurement is meaningful, the applicant must demonstrate in the rehabilitation planning part that:

- the selection of each criterion is justified, including how the relationship between the criteria and the milestone has been established (i.e. supported by reference to scientifically valid methodology)
- sufficient criteria are developed to adequately measure success in achieving a milestone (i.e. for water quality, relevant parameters are nominated)
- the criteria define outcomes that support the proposed PMLU and achieve stable condition, or best practice management for NUMAs
- the manner the criteria will be measured against is clear, scientifically justified, and meaningful

- the data relating to proposed criteria will be reviewed and analysed to establish progress towards and achievement of target outcomes.

The applicant may develop multiple criteria for a milestone as applicable, and criteria may be replicated across more than one milestone (e.g. to verify long-term success with an aspect of rehabilitation).

As milestone criteria are site-specific, this guideline does not attempt to provide standardised milestone criteria. Examples of milestone criteria are included in Appendix 2 (noting that these examples are not to be used as a standard for approval). It is expected that milestone criteria will be specific to each individual mine site. The rehabilitation or management objectives, proposed milestones, and rehabilitation or management methodology, which should be supported by information obtained through rehabilitation trials, will guide the development of relevant milestone criteria.

The proposed outcome of a particular criterion may vary significantly from site to site or even between rehabilitation and improvement areas within a single site depending on the nature of the disturbance and environmental factors (including environmental values of the receiving environment, climate, topography and soil characteristics). The applicant will be required to provide sufficient evidence to justify the selection of milestone criteria. For example, criteria could require that erosion of materials from rehabilitated areas not exceed natural erosion rates for the locality.

It is recommended that the monitoring of milestone criteria commence as soon as possible after land becomes available or a previous milestone has been achieved. Evidence of an appropriate time series of monitoring data may be an effective way to demonstrate that milestone criteria has been achieved and to quantify and address the risk of potential rehabilitation or closure failure. Apart from demonstrating that rehabilitation or management has been completed in accordance with the milestone criteria, monitoring also allows tracking of rehabilitation or closure progress against a target trajectory, enabling early identification of any performance issues and adaptive management intervention where required.

Step 6. Propose when the first milestone must commence

For rehabilitation areas, applicants and the administering authority must have regard to land being rehabilitated 'as soon as practicable' when developing or assessing the rehabilitation milestones within a proposed PRCP schedule. The EP Regulation states that the first rehabilitation milestone for a rehabilitation area will start as soon as practicable after the land in the area becomes available for rehabilitation by, for example, starting within 6 months after the area becomes available for rehabilitation. The applicant must state in the PRCP schedule the date the first milestone must commence.

For improvement areas, the EP Regulation states that, each management milestone for an improvement area will be achieved as soon as practicable after the land becomes available for improvement. The first management milestone for an improvement area will start within a reasonable period after the area becomes available for improvement by, for example, starting within one year after the area becomes available for improvement. The applicant must state in the PRCP schedule the date the first milestone must commence.

The administering authority acknowledges there may be challenges in forecasting a specific year that land will become available for rehabilitation or improvement; however, an applicant can apply to amend the PRCP schedule at any time. The administering authority will consider the amendment application to nominate an alternative date for land becoming available based on the circumstances, evidence, and justification of the application.

Step 7. Propose timing for when each milestone will be completed

The completion date is the date by which each milestone must be completed. Milestone completion dates will be nominated by the applicant in their proposed PRCP schedule. Where insufficient evidence or justification regarding a proposed completion date is provided, the administering authority may impose an alternative completion date (see section 2.5 of this guideline). Milestones will have a completion date of the 10 December of the calendar year nominated by the applicant. For example, if a milestone were intended to be completed by October 2030, the applicant would nominate 10 December 2030. Therefore, the annual reporting period for all sites across Queensland will be the same day (10 December) to allow consistent reporting on a state-wide basis.

The EP Act states that the PRCP schedule must provide for each rehabilitation milestone to be achieved as soon as practicable after the land becomes available for rehabilitation. Similarly, the EP Regulation states for NUMAs that each management milestone for an improvement area will be achieved as soon as practicable after land becomes available for improvement.

Considerations for determining when rehabilitation or improvement can be achieved 'as soon as practicable' include, but are not limited to:

- the size of the area to be rehabilitated or improved

- the complexity of the rehabilitation or improvement methods
- the suitability of weather seasonality for the rehabilitation or improvement.

The availability of resources or equipment is not considered a factor for delaying when land must be rehabilitated or improved. It is the expectation of the administering authority that rehabilitation and improvement of the land is planned and, therefore, equipment and resources are appropriately allocated.

Timing impacts due to undesirable weather need to be considered in the risk assessment in the rehabilitation planning part of the PRCP plan and incorporated into the development of the proposed completion dates. Undesirable weather will not be considered a valid reason for milestones not being achieved by the completion date.

The completion date of the last milestone is intended to be when the land as a whole has reached stable condition or sufficient improvement. The completion date of the last milestone must have regard to any time frames agreed to during consultation with the community about the PRCP plan.

It is acknowledged that, despite all reasonable efforts, there are a range of unanticipated issues that may affect original completion timeframes. It is critical for holders to monitor progress with completing milestones to enable early identification of any challenges to achieving the milestone within the required timeframe. Early engagement with the administering authority is recommended to identify options such as revising the sequence of the milestones or an application to amend the PRCP schedule.

4.2 PRCP schedule conditions

In accordance with section 202D of the EP Act, the PRCP schedule includes any conditions imposed on the schedule. The administering authority may impose a condition on a PRCP schedule or draft PRCP schedule if it considers the condition is necessary or desirable. PRCP conditions are not intended to be used to replace or clarify requirements that can otherwise be included in the PRCP schedule as a milestone.

Two deemed conditions are included in all PRCP schedules in accordance with section 206A of the EP Act. The first condition states that when carrying out a relevant activity under the PRCP schedule, the holder must comply with a requirement stated in the EA relevant to carrying out the activity. This condition applies even if the EA is suspended. The second condition states that the holder must comply with the following matters stated in the schedule:

- a) each rehabilitation milestone and management milestone
- b) when each rehabilitation milestone and management milestone is to be achieved.

The administering authority must impose on the PRCP schedule any conditions for the schedule stated in the Coordinator-General's report for the EIS or impact assessment report (IAR) for the project as conditions for the relevant activity. However, if a report for a PIE includes a recommendation that is inconsistent with the Coordinator-General's conditions, the conditions imposed by the administering authority must be consistent with the PIE report. Any other condition imposed on the PRCP schedule cannot be inconsistent with a Coordinator-General's condition.

4.3 Non-compliance with a condition of PRCP schedule

In accordance with section 431A of the EP Act, the EA holder must not carry out, or allow the carrying out of, an environmentally relevant activity under the EA unless there is a PRCP schedule for the activity. The definition of a relevant activity is provided in sections 18 and 19 of the EP Act. The maximum penalty for carrying out or allowing the carrying out of an environmentally relevant activity unless there is a PRCP schedule for the activity is 4,500 penalty units. Please note the legislation provides commencement timeframes and provisions for existing EA holders to transition into the new framework, as outlined in sections 6.1 and 6.2 of this guideline.

A person who is the holder, or acting under the PRCP schedule, must comply with the conditions of the PRCP schedule. If a condition is wilfully contravened the maximum penalty is 6,250 penalty units or 5 years imprisonment. If a condition is not wilfully contravened, but contravened nonetheless, the maximum penalty is 4,500 penalty units. Contravention of a PRCP schedule condition by another person acting under the schedule may be considered an offence by the holder if they have failed to ensure the other person complies with the conditions (section 431A of the EP Act).

5 PRCP schedule post approval processes

Once a PRCP schedule is approved, there are several post-approval processes that may apply to the schedule, including:

- amendments

- amalgamations
- de-amalgamations
- PRCP schedule audits
- annual returns
- progressive rehabilitation certification
- surrenders.

This section generally outlines how the PRCP schedule relates to each of these processes and, where applicable, provides details of the application process.

5.1 Amendments by application

The holder of a PRC plan may, at any time, apply to the administering authority to amend their PRCP schedule (an amendment application). An application may be made to amend only the PRCP schedule, or as part of an amendment application for an EA. However, if amending only the PRCP schedule or the EA would make it inconsistent with the other document, they must both be amended to ensure the environmental requirements are consistent. An amendment application must be submitted in the approved form and be accompanied by the relevant fee and an amended rehabilitation planning part for the holder's PRC plan that complies with section 126C of the EP Act.

5.1.1 Types of amendment applications

An amendment application may be:

- a minor amendment (PRCP threshold) as defined under section 223 of the EP Act (referred to herein as a minor amendment), or
- a major amendment, which is an amendment that is not a minor amendment.

Amendment applications must be made in accordance with sections 224 and 225 of the EP Act and meet the requirements outlined in sections 226 and 226B of the EP Act. In accordance with section 226AA, due to the dependencies between an EA and the PRCP schedule, an applicant must consider whether a proposed amendment to the PRCP schedule requires a concurrent amendment to the EA in order to ensure consistency between both instruments.

Further information about the amendment assessment process and PRCP schedule minor amendment triggers can be found in the guideline 'Major and minor amendments' (ESR/2015/1684²).

5.2 Subsequent updates to the rehabilitation planning part

Once a PRCP schedule has been amended, the applicant must review the rehabilitation planning part of the PRC plan and make any necessary or appropriate changes. The applicant must provide the administering authority with a copy of the amended PRC plan within 10 business days of receiving a copy of the amended PRCP schedule (or receiving written notice under section 211 of the EP Act), unless the administering authority agrees to a longer period. Failure to do so is an offence under section 316H of the EP Act with a maximum penalty of 100 penalty units. The updated PRC plan including the amended PRCP schedule will be included on the public register.

5.3 Amalgamations

The EA holder may, under certain circumstances, apply to the administering authority to amalgamate an EA. If a PRC plan relates to more than one of the EAs that are the subject of the amalgamation application, the PRC plans must also be amalgamated. The application must include a proposed amalgamated PRC plan for the activities. If the amalgamation of the EAs is approved, the administering authority will issue an amalgamated PRCP schedule.

5.4 De-amalgamations

The EA holder may, under certain circumstances, apply to the administering authority to de-amalgamate the EA. If a PRC plan relates to the EAs that are the subject of the de-amalgamation application, the PRC plan must also be de-amalgamated. The application must include a proposed de-amalgamated PRC plan for the activities. If de-amalgamation of the EAs is approved, the administering authority will issue a de-amalgamated PRCP schedule.

5.5 PRCP schedule audit

All holders of a PRCP schedule must commission a rehabilitation auditor to carry out an audit of the PRCP

schedule every three years (section 285 of the EP Act). The first audit must be for the three-year period that commences from the day the schedule takes effect. Each subsequent audit period is for the three years commencing on the day after the previous audit period ended.

The purpose of the audit is to assess for the audit period:

- what steps the holder has taken towards achieving milestones
- whether the holder has complied with all the conditions imposed on the PRCP schedule
- whether any information that has been given to the administering authority about rehabilitation is accurate
- whether the PMLUs are likely to be achieved, having regard to the rehabilitation that has and will be carried out.

Information of the above points must be included in an audit report that the holder submits to the administering authority within four months of the end of each audit period. The report must include a declaration by the holder stating that they have not knowingly given false or misleading information to the rehabilitation auditor, and that they have given all relevant information to the rehabilitation auditor.

The audit report may also include recommendations, if required, on what actions the holder should take to ensure milestones are achieved and conditions are complied with. Failure to give an audit report to the administering authority within the required timeframe is an offence, carrying a maximum penalty of 100 penalty units.

Within 10 business days of receiving the audit report, the administering authority may request additional information from the holder in order to decide whether to take action to amend the PRCP schedule. The holder of the PRCP schedule has a period of at least 20 business days to provide the additional information. After receiving the audit report, the administering authority may also carry out any of the following:

- amend the PRCP schedule under section 215 of the EP Act
- take appropriate compliance action if a non-compliance is identified
- take no further action.

PRCP schedule audit reports are available on the public register.

5.6 Annual return

In addition to the annual return requirements that relate to EAs, if a PRCP schedule applies for the activities, the annual return must also include an evaluation of the effectiveness of the PRCP schedule, including the environmental management carried out under the schedule, for the year to which the annual return relates. Pursuant to section 316J(3) of the EP Act, this evaluation must include:

- whether any milestones to be completed under the PRCP schedule during the year have been met
- whether the holder has complied with the conditions imposed on the PRCP schedule.

The annual return will also include the requirement for PRCP schedule holders to submit spatial information relating to the location of rehabilitation or improvement. Annual returns will be made available on the public register.

5.7 Progressive certification

The EA holder can apply for progressive certification of an area of land within a relevant tenure that has been rehabilitated under the requirements of the EP Act, EA, PRCP schedule and any other relevant legislation or guideline. An area that has been certified must be maintained under the requirements of the EA and PRCP schedule until the EA is surrendered. Any application for progressive certification must include a progressive certification report for the relevant EA and PRCP schedule. The requirements for the progressive rehabilitation report are the same as the requirements for the post-mining management report required at surrender; see section 5.8 of this guideline.

If the administering authority approves a progressive certification application over an area of land for which a PRCP schedule applies, the administering authority may then amend the PRCP schedule to the extent necessary due to the progressive certification. If the administering authority updates the schedule it must give the holder, an information notice about the amendment and a copy of the amended PRCP schedule. The administering authority must also record the amendment against the schedule in the public register.

5.8 Surrender

A holder cannot surrender a PRCP schedule on its own. However, on approval of an EA surrender application, the PRCP schedule will cease to have effect (section 269A of the EP Act).

If an EA holder applies to surrender their EA, and there is a PRCP schedule in place, they must submit a post-surrender management report

The post-surrender management report must:

- be in the approved form
- state whether particulars of the land are included in the contaminated land register or the environmental management register
- state whether a site management plan exists for any part of the land
- include a map of the land showing the location of where the resource activities were undertaken and any site features of the land (e.g. wells, bores, dams, voids, pipelines)
- state any assumptions made in relation to the rehabilitation or future use of the land
- include a risk assessment of the land that complies with the residual risk assessment guideline include a risk management plan (where required under section 264A(2) of the EP Act).

The surrender application must also include a compliance statement for the EA and the PRCP schedule. The compliance statement must state:

- the extent to which the relevant activities carried out under the EA have complied with the conditions of the authority
- whether the rehabilitation milestones and management milestones under the schedule have been met
- the extent to which conditions imposed on the schedule have been complied with
- the extent to which the post-surrender management report is accurate and complies with the content requirements listed above.

In deciding the surrender application, the administering authority will have regard to the post-surrender management report and the compliance statement. The administering authority may only approve a surrender application where a PRCP schedule applies if the administering authority is satisfied the rehabilitation milestones and management milestones under the schedule have been met.

Where the administering authority approves a partial surrender application for an EA with an associated PRCP schedule, the administering authority may amend the PRCP schedule under section 275A of the EP Act. - Amendments can only be made if, due to the surrender, the holder is no longer required to comply with a certain requirement or condition of the PRCP schedule.

In this circumstance, the administering authority must amend the PRCP schedule to remove the requirement or condition within 10 business days of the surrender decision. The administering authority must also provide the holder with an information notice about the amendment and a copy of the amended PRCP schedule. The amended schedule will then be included in the public register.

6 Transitional provisions

This section of this guideline adds clarity and provides direction to existing EA holders who must transition into the new PRC plan framework.

6.1 Entering the framework

Following the PRCP start date, there will be a three-year transitional period where all existing plan of operations for mining activities will be phased out and all existing mining EA holders will be required to develop and submit a PRC plan. During this period, a plan of operations, as well as sections 289, 290 and 291 of the pre-amended EP Act, will continue until the earlier of the following days:

- a) the plan of operations period ends
- b) a PRCP schedule is approved for the EA
- c) if the holder of the mining lease re-applies for an ERC decision under the amended EP Act—the day the ERC decision for the application is made.

The administering authority will issue a notice (transition notice) to each holder of an existing EA relating to a mining activity approved through a site-specific application. Where the EA is issued on or after the PRCP start date for an application made prior to the PRCP start date, the transition notice will be issued within 6 months after the EA is issued. The transition notice will require the EA holder to develop and submit a proposed PRC plan which complies with sections 126C and 126D of the EP Act by a specified date (not less than six months from the day the notice is given), subject to any exemptions (see below) for complying with sections 126C(1)(g) or (h) or 126D(2) or (3) of the EP Act.

Where the plan of operations expires before a PRCP schedule is in force, section 753 of the EP Act permits the EA

holder to continue operating without a plan of operations or PRC plan. Once a transition notice is received, the applicant must develop and submit a proposed PRC plan, by the specified date.

A transition notice is automatically withdrawn where an EA is amalgamated or de-amalgamated prior to the PRCP schedule being approved. However, transitional provisions will continue to apply to the new holder of any amalgamated or de-amalgamated EAs as if they were the original holder. The administering authority must issue a notice to the new holder requiring a PRC plan to be submitted within 6 months of the date an amalgamated EA was issued, or for a de-amalgamated EA, within 6 months of the EA taking effect. A land outcome document in relation to the original EA will be considered to the extent it relates to the land that is the subject of the new EA. EA holders wishing to voluntarily develop a proposed PRC plan before receiving the transition notice should contact the administering authority. Under section 754 of the EP Act, the administering authority is only required to start assessing a transitional PRC plan once it has been submitted in accordance with a transition notice. It is the decision of the administering authority when to issue a transition notice to the EA holder.

An application for a PRC plan can also be made in particular circumstances (section 802 of the EP Act). This includes where a transition notice has been issued and the holder has failed to comply or where the PRCP schedule that was submitted has been refused. Additionally, if a transitional notice was not issued by the administering authority as required under section 754, an application may be made by the EA holder.

The administering authority acknowledges that the degree of information required to be developed will depend on site-specific circumstances. Applicants are encouraged to carry out a pre-lodgement meeting with the administering authority to determine the information requirements for their site and an estimated timeframe to develop a PRC plan. While some applicants are likely to have most of the required information available, some applicants will be required to obtain information that has not been previously developed as outlined in section 3 of this guideline.

6.2 Offence

Section 431A of the EP Act requires that EA holders do not carry out, or allow the carrying out, of a relevant activity under the EA unless there is a PRCP schedule in force for the activity. The maximum penalty for non-compliance with this provision is 4,500 penalty units.

For EA holders transitioning into the framework, this offence does not apply until the earlier of the following days (section 753 of the EP Act):

- the applicant fails to submit a proposed PRC plan as required by a transition notice issued to the EA holder
- the PRCP schedule has been approved for the EA holder
- the day a PRCP schedule is refused for the EA holder for the first time, unless the holder re-applies for another PRCP schedule within 40 business days of the refusal
- a proposed PRCP schedule is refused for the second time.

6.3 Assessment

Where a holder submits a proposed PRC plan under the transitional provisions, the administering authority will consider the plan as though it were a new proposed PRC plan (chapter 5, parts 2 to 5), subject to the process outlined below and in the EP Act. The transitional provisions of the EP Act operate to preserve existing outcomes where the administering authority considers that the requirements of a PRC plan have otherwise been met.

6.3.1 Timeframes

Section 755(3) of the EP Act states that an assessment of a transitional PRC plan does not include the additional timeframes provided where an EA application is accompanied by a PRC plan. For example, under section 144 of the EP Act, the administering authority will have 20 business days for making an information request when assessing a transitional PRC plan, rather than the 30 business days that would apply if the PRC plan were accompanying an EA application.

6.3.2 Non-use management area requirements

A key component of the rehabilitation reforms is that they will not be retrospective and that existing approvals will be maintained. In order to preserve these existing approvals, certain provisions of the EP Act will not apply to existing EA holders where a NUMA has already been approved by the administering authority ('pre-approved NUMA').

Establishing a pre-approved NUMA

A NUMA will be taken to be pre-approved if a land outcome, the same or substantially similar to a NUMA, is contained in a 'land outcome document'. Land outcome documents are defined in section 750 of the EP Act and

are limited to:

- a) an EA
- b) a document made under a condition of an EA that:
 - i. relates to the management or rehabilitation of land (e.g. rehabilitation and closure plan or residual void management plan); and
 - ii. was provided to the administering authority, and had not been superseded, before 30 November 2018; and
 - iii. before 15 January 2019, the administering authority had not notified the EA holder that the document was insufficient.
- c) a document made under a condition of an EA that:
 - i. relates to the management or rehabilitation of land (e.g. rehabilitation and closure plan or residual void management plan); and
 - ii. was provided to the administering authority between 20 November 2019 and to 30 November 2021; and
 - iii. within 20 business days after receiving the document, the administering authority had not notified the EA holder that the document was insufficient.
- d) a report evaluating an EIS under section 34D of the SDPWO Act
- e) an EIS assessment report
- f) a written agreement between the EA holder and the State that is in force on 30 November 2018.

A written agreement includes formal written correspondence between the EA holder and a delegate of the administering authority that clearly identifies an agreed outcome for a particular area of a mine site. The administering authority must keep a register of an extract of a written agreement that identifies the location and area of the land.

These documents have been selected because they give operators rights. Application documents are not included and cannot be used as a source of existing approvals, because they do not provide rights to operators.

The land outcome documents list is hierarchical; if there is an inconsistency between these documents, on either the final outcome or details of the outcome, then the document appearing first in the list will prevail to the extent of the inconsistency.

Assessing a pre-approved NUMA

Where a NUMA has been pre-approved and is being translated into the PRC plan, the EA holder is not required to:

- justify the proposed NUMA
- provide evidence to support the justification of the NUMA
- go through the Public Interest Evaluation process
- comply with the prohibition of voids located within a flood plain having to be rehabilitated to a stable condition.

However, if the land outcome document(s) does not state the area or the location of the proposed NUMA, the PRC plan must state how the total area of the land will be minimised, and how the EA holder will ensure the location of the NUMA minimises risks to the environment.

If a pre-approved NUMA is included in a proposed PRCP schedule, the decision criteria in section 176A(3) if the EP Act does not apply to the approval of the relevant NUMA insofar as it relates to the requirements for a NUMA to be justified on grounds which are supported by evidence, subject to a PIE, and located outside of a flood plain.

However, all NUMAs, regardless of whether they have been identified in a land outcome document, are required to be managed in way that achieves best practice management and minimise risks to the environment. When deciding whether to approve the proposed PRCP schedule, the administering authority will assess whether the management milestones for the pre-approved NUMA achieve the required level of management.

Please note that in preparing a proposed PRC plan, EA holders may propose a PMLU for areas of land that are pre-approved NUMAs if they wish.

Where an existing site has no pre-approved NUMAs, the EA holder can still propose a NUMA in the PRC plan, but it will be subject to the relevant provisions of the EP Act and be assessed as if it was contained in a new site-specific application.

If an EA holder believes that a land outcome document identifies land as a NUMA, then early consultation with the administering authority is encouraged.

6.3.3 Exceptional circumstances when land is taken to not be available for rehabilitation

Section 187B of the EP Regulation prescribes a special circumstance where land that is not being mined is taken to not be available for rehabilitation, despite otherwise being captured by the definition of 'available for rehabilitation' contained in the EP Act. This section is only applicable to transitional PRC plans and cannot be used once a PRCP schedule is granted.

This provision can only be used if a transitional PRC plan is proposing to rehabilitate a pre-approved NUMA into a PMLU and the mining of a probable or proved ore reserve is needed to achieve this outcome. The extent of the probable or proved ore reserve to be mined must not be in excess of what is required for the rehabilitation of the pre-approved NUMA to a PMLU. Through this provision, the area with the probable or proved ore reserve needed for the rehabilitation of the pre-approved NUMA to a PMLU may have an 'available for rehabilitation' date past the 10 years specified in section 126D(4) of the EP Act. For further information, please contact your relevant business centre.

6.3.4 PIE requirements

Where a NUMA has been proposed in a PRCP schedule because of public interest and is not a pre-approved NUMA, there may be additional considerations for the PIE report (section 755A of the EP Act). The PIE report must include a consideration of the stage of, and the land outcome documents relating to, the mining activity or resource project, if:

- a) a PIE is required for the assessment of the proposed PRC plan, and
- b) the qualified entity carrying out the evaluation considers an alternative option to approving the area as a NUMA, and
- c) the financial viability of the mining activity or resource project would be jeopardised if the alternative option were implemented.

6.3.5 Public notification requirements

The public notification requirements, under Chapter 5, Part 4 of the EP Act, do not apply to pre-approved PMLUs or NUMAs or where there is a pre-approved NUMA but the PRCP schedule has proposed the land as a PMLU instead (section 755B of the EP Act).

If there is an inconsistency in a land outcome document, the document appearing first in the list in section 750 of the EP Act (shown above) prevails to the extent of the inconsistency.

If public notification is required because the PRCP schedule proposes a land outcome that is different to a land outcome document, a submission under section 160 of the EP Act may only relate to the difference in the land outcome for the area.

Where public notification is required for a transitional PRC plan, under section 755(3)(b) of the EP Act, the submission period will be a period of at least 20 business days after the application notice is published.

6.3.6 Regulatory requirements

The EP Regulation includes a PRCP objective assessment for PRCP schedule decisions. Under section 213(2) of the EP Regulation, Table 1 – final site design (schedule 8A, part 3, table 1 of the EP Regulation) does not apply to pre-approved PMLUs or NUMAs.

Under section 213(3) and (4) of the EP Regulation, Table 2 – Post-mining land use assessment 'Rehabilitation Milestones' do not apply to pre-approved PMLUs and Table 3 – Non-use management area assessment 'Management Milestones', do not apply to pre-approved NUMAs.

If there is an inconsistency in a land outcome document, the document appearing first in the list in section 750 of the EP Act (shown above) prevails to the extent of the inconsistency.

6.3.7 Decision criteria

In addition to the matters the administering authority would consider when deciding a proposed PRC plan that accompanies an EA application (see section 2 of this guideline), section 755(6) of the EP Act provides the following additional criteria which must be considered when deciding a transitional PRC plan:

- each land outcome document for land to which the proposed PRC plan relates, and
- to the extent possible, the matters the administering authority would have had regard to, had the proposed PRC plan accompanied an application for the holder's EA.

6.3.8 Amending the EA

Where the administering authority approves the PRCP schedule for a transitional PRC plan, it may amend the holder's EA to the extent necessary to remove matters relating to rehabilitation that are now dealt with under the approved PRCP schedule. The administering authority may also make any necessary clerical or formal changes to the EA as a result of approving the PRCP schedule, such as condition numbering (section 756 of the EP Act).

Where the administering authority makes such amendments it must do so under the process contained in chapter 5, part 6 of the EP Act as if the amendment were a matter mentioned in section 215(2) of the EP Act. A copy of the amended EA must then be included in the public register.

6.4 Transitioning rehabilitation and closure outcomes into PRCP schedule

Existing rehabilitation and closure outcomes in the EA and other land outcome documents can be transitioned into the PRCP schedule. However, not all EA conditions and other land outcome documents will cover every aspect of a PRCP schedule (e.g. milestone criteria, completion date and descriptions of PMLU/NUMA, etc.). The aspects that are clearly specified in the EA or other land outcome documents can be translated into the PRCP schedule template with the outstanding aspects completed through the process outlined in section 4 of the guideline.

The process for transitioning rehabilitation and closure outcomes from land outcome documents into a proposed PRCP schedule are outlined below.

Step 1. Identify rehabilitation and closure outcomes in land outcome documents

The first step the applicant should do is to identify rehabilitation and closure outcomes in the EA and other land outcome documents which have the same components as the PRCP schedule (e.g. a clear description of the land to which the EA conditions apply, a clear statement of the PMLU or a clear description that an area will be a NUMA at surrender, milestone criteria, completion dates, etc.). If the applicant has multiple land outcome documents with relevant rehabilitation and closure outcomes, the applicant must adhere to the hierarchy in the definition for land outcome documents in section 750 of the Act for the use of the information. Information in the land outcome documents at the top of the hierarchy must be used where there are any conflicts in the information.

Step 2. Identify PMLU or NUMA

The applicant will need to identify if any rehabilitation and closure outcomes in the EA or other land outcome documents contain a PMLU or NUMA. If the location of these areas is not included in a land outcome document, then the applicant will need to provide this information as required by section 755 of the Act. Transitioned PMLUs and NUMAs must be included in the final site design (see step 1 of section 4.1 of this guideline for more information on final site design).

Where there is ambiguity about whether a land outcome is a PMLU or NUMA, the applicant should consider whether the land outcome document:

- details that an area of disturbance will have a specific land use (e.g. grazing, water storage)
- states that the land will have to meet the definition of stable condition (e.g. safe, structurally stable, cause no environmental harm and sustain a PMLU)
- details that the land will have to be rehabilitated (with or without specifying a PMLU)
- states that the land will have no PMLU
- is unclear about the rehabilitation of the land.

Where there are different PMLUs identified in multiple land outcome documents for one area of land, the PMLU included in the document appearing first in the list of land outcome documents in section 750 of the Act would take precedence.

Step 3. Rehabilitation or improvement areas within PMLU or NUMA

If identified PMLUs or NUMAs have been broken down into smaller areas in a land outcome document, those areas may be able to be transitioned into the PRCP schedule as rehabilitation or improvement areas.

If the information is not included, then follow step 2 in section 4.1 of this guideline.

Step 4. Identify milestones

Significant events or steps required to achieve a PMLU or manage a NUMA specified in the EA or land outcome documents may be transitioned into the PRCP schedule as milestones provided they are consistent with the requirements of section 126D of the EP Act. Significant events identified in the EA conditions or other land outcome

documents should be compared to the milestone reference list in Appendix 3. If there are reference milestones with the same objectives in the land outcome documents, the reference milestone should be imposed on the PRCP schedule for consistency. Milestones may include any references to rehabilitation or closure procedures.

If there are no milestones in the land outcome documents then new milestones will need to be developed using the process outlined in section 4.1 of this guideline. Note that while a milestone may not be clearly stated in land outcome documents, there may still be milestone criteria that can then be aligned to a reference milestone in the proposed PRCP schedule.

Step 5. Identify milestone criteria

Criteria for showing success or completion of the PMLU or NUMA in a land outcome document may be able to be transitioned into the PRCP schedule as milestone criteria. Any criteria being transitioned into the PRCP schedule must meet the SMART principles outlined in section 4.1 (Steps 3 and 4) of this guideline. This means the criteria may need to be reviewed and re-worded in order to meet those principles. The applicant should identify which criteria will apply to the different milestones and insert it into the proposed PRCP schedule. The applicant may need to provide new or additional milestone criteria to support the achievement of each milestone; these will need to be developed in accordance with section 4.1 (Step 4) of this guideline.

Step 6. Identify when the first milestone must commence and completion dates for milestones

If there are timeframes stated in land outcome documents for completing a particular rehabilitation or closure activity or outcome, these may be able to be transitioned directly into the PRCP schedule as completion dates for a milestone. Some timeframes in the existing EA conditions may only be relevant to achieving a PMLU or NUMA rather than specific rehabilitation or closure activities. These could be transitioned as completion dates for the final milestone for the relevant rehabilitation or improvement area.

If the land outcome documents specify a timeframe for rehabilitation or improvement to commence, this may be able to be transitioned into the PRCP schedule as the date the area becomes available for rehabilitation or closure.

For timeframes to be directly transitioned into the proposed PRCP schedule, the land outcome document must state a specific year or timeframe (it may also include a relative date). However, if an EA or other land outcome document states that rehabilitation 'must be completed within a maximum of 10 years', this timeframe could be transitioned into the proposed PRCP schedule by calculating 10 years from the issue date of the EA (i.e. by including a specific year).

7 Further information

Contact your project manager for further advice or for general enquiries please contact Permit and Licence Management.

Additional information is also available on the Queensland Government's Business Queensland website at [www.business.qld.gov.au\(search 'Progressive rehabilitation and closure plan'\)](http://www.business.qld.gov.au(search%20Progressive%20rehabilitation%20and%20closure%20plan)).

Disclaimer

While this document has been prepared with care it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment and Science should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

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Version	Date	Description of changes
1.00	1 November 2019	First version of this guideline.
2.00	17 March 2021	Updated to reflect changes introduced by the <i>Environmental Protection and Other Legislation Act 2020</i> .
3.00	04 April 2023	Updated to reflect changes introduced by the <i>Environmental Protection and Other Legislation Amendment Act 2023</i> .

8 Glossary

The following terms used throughout this guideline are defined below. The initial use of the term in this guideline has been italicised to highlight the term has been defined below.

***Definition included in the EP Act**

AEP has the meaning given under the ARR.

ARR means the guideline called the Australian Rainfall and Runoff published by the Commonwealth.

Appropriately qualified person means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

Artificial feature, for land the subject of a PRCP schedule, means—

- a) a structure or feature that is temporary and, under the PRCP schedule or otherwise, is to be removed from the land, or
- b) a structure or feature that, under the PRCP schedule, will require a level of maintenance after the land is surrendered that is greater than the level of maintenance that would be required for the land if the relevant activities the subject of the PRCP schedule had not been carried out, or
- c) a feature forming part of the landform of the land, other than a natural landform, if the feature interferes with or affects –
 - i. a relevant watercourse, or
 - ii. the natural flow of water on the land.

Available for improvement means if the land is not being mined, unless—

- a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility, or
- b) the land is identified in the PRCP schedule or the application for an EA relating to the schedule as containing a probable or proved ore reserve, under section 126D(6) of the EP Act, that is to be mined within 10 years after the land would otherwise have become available for improvement, or
- c) the land is required for the mining of a probable or proved ore reserve mentioned in paragraph (b).

***Available for rehabilitation** means if the land is not being mined, unless—

- a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility, or
- b) the land is identified in the proposed PRCP schedule or the application for an EA for relevant activities to which the schedule relates as containing a resource to be mined within 10 years after the land would otherwise have become available for rehabilitation, or
- ba) the land is required for the mining of a probable or proved ore reserve mentioned in paragraph (b), or
- c) the land contains permanent infrastructure identified in the proposed PRCP schedule as remaining on the land for a PMLU.

***Contaminant** is defined in section 11 of the EP Act:

A contaminant can be-

- a) a gas, liquid or solid, or
- b) an odour, or
- c) an organism (whether alive or dead), including a virus, or
- d) energy, including noise, heat, radioactivity and electromagnetic radiation, or
- e) a combination of contaminants.

Draft PRCP schedule is the PRCP schedule issued to the applicant and any submitters with the administering authority's decision on the PRCP schedule. The applicant may refer the draft PRCP schedule to Land Court or a submitter can make an objection to the draft PRCP schedule. A final PRCP schedule is issued separately and this is the document that is enforceable.

Flood plain modelling, for land the subject of a PRCP schedule, means modelling of the landform of the land—

- a) carried out under the ARR, and
- b) excluding any artificial features for the land.

Improvement area, for a NUMA, means an area of land in the NUMA to which a management milestone for the NUMA relates.

***Land outcome document**, for land, means the following documents relating to the land-

- a) an EA for a resource activity on the land,
- b) a document made under a condition of an EA, if-
 - i. the document relates to the management of a void on the land, or the rehabilitation of the land, and
 - ii. the document was received by the administering authority before the assent date, and
 - iii. the administering authority has not, within 20 business days after the assent date, given notice to the EA holder that the document is insufficient in a material particular relevant to a matter mentioned in paragraph (i), and
 - iv. before the assent date, the document has not been superseded,
- c) a document made under a condition of an EA, if-
 - i. the document relates to the management of a void on the land, or the rehabilitation of the land; and
 - ii. the EA requires the document to be given to the administering authority on a stated day that is on or after the assent date, or does not state a day when the document must be given, and
 - iii. the document is received by the administering authority within three years after the assent date, and
 - iv. the administering authority does not, within 20 business days after receiving the document, give the EA holder a notice that the document is insufficient in a material particular relevant to a matter in paragraph (i),
- d) a report evaluating an EIS under the SDPWO Act, section 34D,
- e) an EIS assessment report,
- f) a written agreement between the EA holder and the State that is in force on the assent date.

***Management milestone**, for a NUMA, means each significant event or step necessary to achieve best practice management of the area and to minimise risks to the environment (section 112 of the EP Act).

Milestone criteria, for a management milestone or a rehabilitation milestone, means a requirement that must be met to achieve the milestone.

***Mined** means mine within the meaning of the MR Act, section 6A.

***Non-use management area (NUMA)** means an area of land the subject of a PRC plan that cannot be rehabilitated to a stable condition after all relevant activities for the PRC plan carried out on the land have ended (section 112 of the EP Act).

Operating infrastructure or machinery means infrastructure or machinery required for the operation of the mine site, for example a dam or water storage.

Operational phase means the period including the prospecting, exploration, development and production stages of the life of the mine.

***Post-mining land use (PMLU)**, for land, means the purpose for which the land will be used after all environmentally relevant activities carried out on the land have ended (section 112 of the EP Act).

PRCP start date the day prescribed is 1 November 2019.

***Probable or proved ore reserve** means a probable ore reserve or proved ore reserve mentioned in the listing rules made by ASX Limited (CAN 008 624 691) for the listing of corporations on the Australian stock exchange (section 126D of the EP Act).

Proposed PRC plan is the PRC plan submitted by the applicant for the administering authority to assess. The proposed PRC plan is not enforceable until it is approved by the administering authority and a final PRCP schedule is issued. The proposed PRC plan may be changed by the administering authority.

For an application, a proposed PRC plan means a PRC plan proposed for land the subject of a mining lease that (a) complies with Chapter 5, part 2, division 3; and

(b) either – accompanies the application; or is submitted for the application after the application is made.

***Progressive Rehabilitation and Closure Plan (PRC plan)** for land the subject of an ineligible mining activity, means a progressive rehabilitation and closure plan for the land that consists of two part—

- the rehabilitation planning part – PRC plan, and
- the approved part - PRCP schedule that includes milestones and conditions.

***Public interest consideration** is listed in section 316PA of the EP Act, including—

- a) the benefit, including the significance of the benefit, to the community resulting from the mining activity or resource project the subject of the EA application to which the PRCP schedule relates,
- b) any impacts, including long-term impacts for the environment or the community, that may reduce the benefit mentioned in (a) or have other negative impacts on the environment or community,
- c) whether there are any alternative options to approving the area as a NUMA having regard to-

- i. the costs or other consequences of the alternative options, and
 - ii. the impact of the costs or other consequences on the financial viability of the mining activity or resource project,
- d) whether the benefit to the community mentioned in (a), weighed against the impacts mentioned in (b), is likely to justify the approval of the NUMA having regard to any alternative options mentioned in (c),
- e) another matter prescribed by regulation.

***Public interest evaluation (PIE)** means an evaluation of a proposed NUMA conducted under section 316PA of the EP Act.

***Qualified entity** means an entity, other than the applicant, that has the experience and qualifications, prescribed by regulation, necessary to carry out a PIE (section 136A of the EP Act).

Rehabilitation area, for a PMLU, means an area of land in the PMLU to which a rehabilitation milestone for the post-mining use relates.

***Rehabilitation milestone**, for the rehabilitation of land, means each significant event or step necessary to rehabilitate the land to a stable condition (section 112 of the EP Act).

Relevant watercourse means—

- a) a watercourse that, under the Strahler method, is a stream ordered as a fourth order stream or higher, or
- b) if a watercourse mentioned in paragraph (a) is permanently diverted under—
 - i. a condition, or proposed condition, of an environmental authority mentioned in the *Water Act 2000*, section 98, or
 - ii. a water licence or proposed water licence under the *Water Act 2000*,

the watercourse as permanently diverted.

Spatial information is defined in the guideline 'Spatial Information Submission' (ESR/2018/4337²).

***Stable condition** as defined in section 111A of the EP Act:

Land is in a stable condition if—

- the land is safe and structurally stable, and
- there is no environmental harm being caused by anything on or in the land, and
- the land can sustain a PMLU.

Sufficient improvement, of a NUMA, means the last management milestone for the area has been achieved.

Transitional PRC plan means the holder of an existing EA for an ineligible mining activity relating to a mining lease that is transitioning into the new PRC plan framework.

***Void** means an area of land to be excavated in the carrying out of a mining activity (section 126D of the EP Act).

References

Australian Standards, 2018, AS ISO 31000:2018 Risk Management Guidelines, <https://www.saiglobal.com/>, accessed November 2018

Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors) Australian Rainfall and Runoff: A Guide to Flood Estimation, © Commonwealth of Australia (Geoscience Australia), 2019.

Appendices

Appendix 1. PRCP schedule template

Post-mining land uses										
Rehabilitation area										
Relevant activities										
Total size of rehabilitation area (ha)										
Commencement of first milestone <insert milestone reference>										
PMLU										
Date area is available	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX
Cumulative area available (ha)										
	Milestone completed by									
	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX
Milestone reference	Cumulative area achieved (ha)									
RM1										
RM2										
RM3										
RM4										
RM5										
Rehabilitation area										
Relevant activities										
Total size (ha)										
Commencement of first milestone <insert milestone reference>										
PMLU										
Date area is available (ha)	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX

Guideline—Progressive rehabilitation and closure plans (PRC plans)

Cumulative area available (ha)										
	Milestone completed by									
	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX
Milestone reference	Cumulative area achieved (ha)									
RM6										
RM7										
RM8										
RM9										
RM10										
Milestone reference	Rehabilitation milestone	Milestone criteria								
RM1										
RM2										
RM3										
RM4										
RM5										
RM6										
RM7										
RM8										
RM9										
RM10										

Non-use management areas										
Improvement area										
Relevant activities										
Total size (ha)										
Commencement of first milestone <insert milestone reference>										
NUMA										
Date area is available	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX
Cumulative area available (ha)										
Milestone completed by										
	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX	10 Dec XXXX
Milestone reference	Cumulative area achieved (ha)									
MM1										
MM2										
MM3										
Milestone reference		Management milestone			Milestone criteria					
MM1										
MM2										
MM3										

Appendix 2. PRCP schedule example

Please note that the following example is not intended to be used as a standard for a PRCP schedule. All proposed PRCP schedule must be site-specific and suit the individual circumstances of each mine site. For further guidance on creating a PRCP schedule, please organise a pre-lodgement meeting with your relevant business centre.

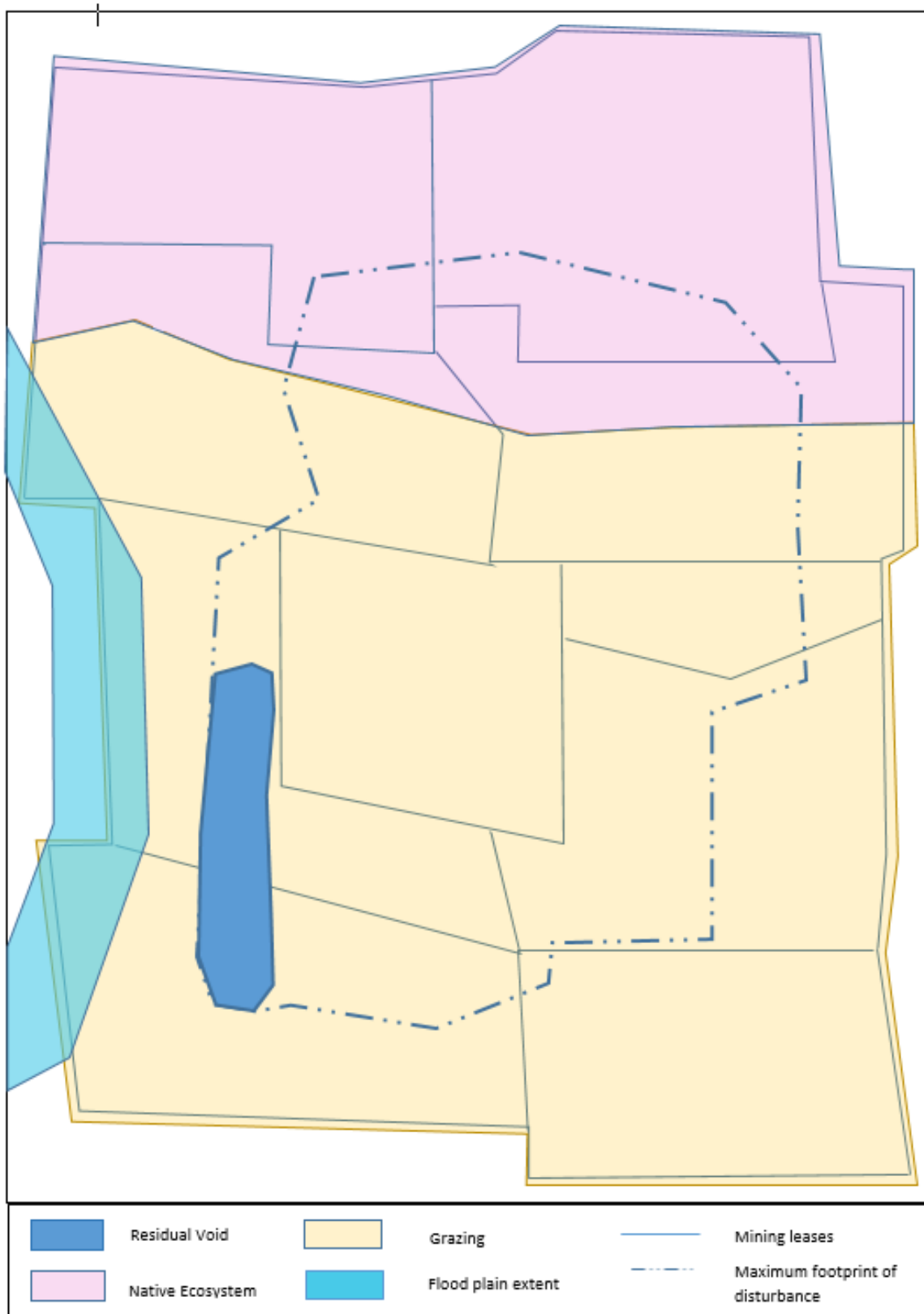


Figure 7: Final Site Design

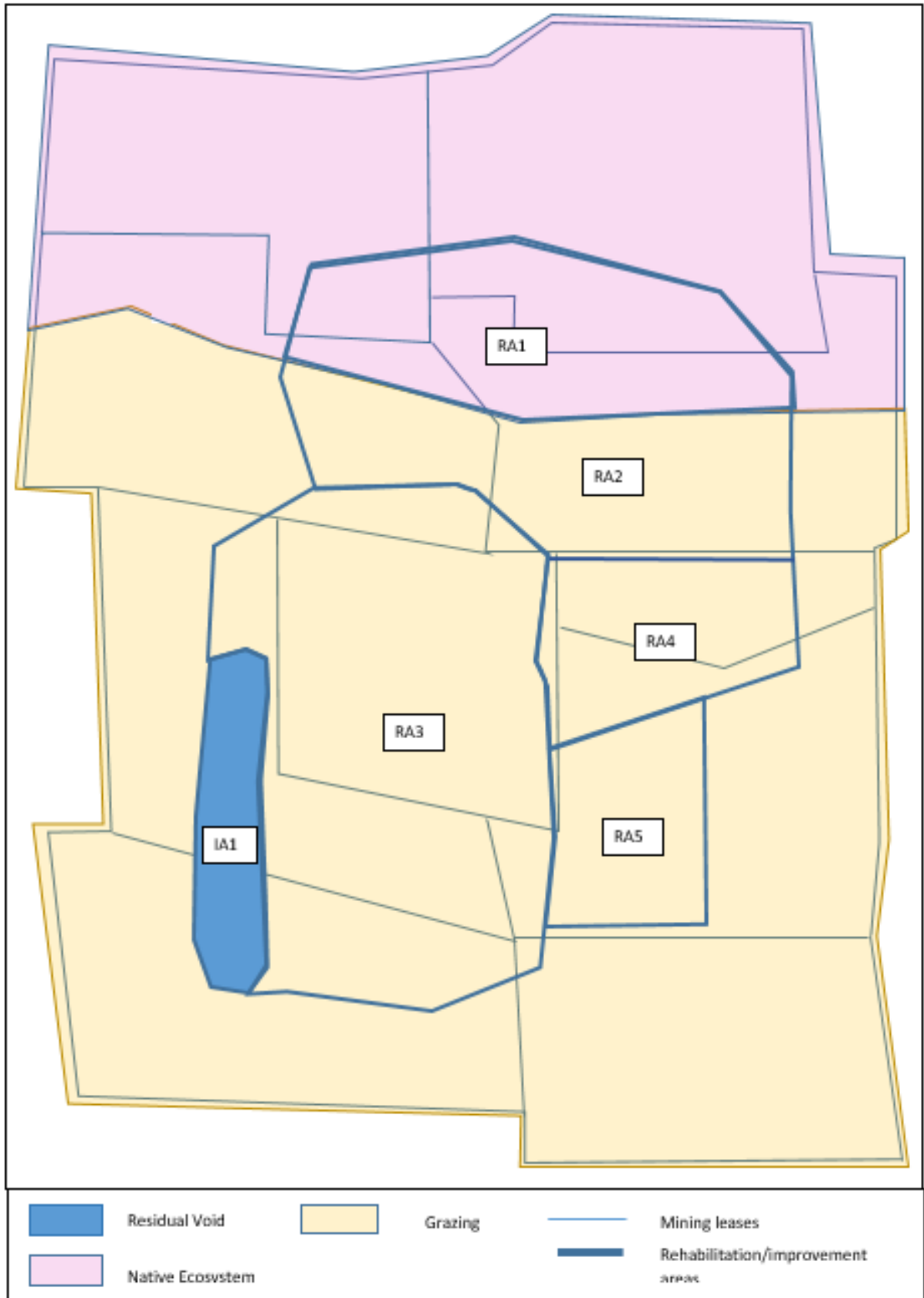


Figure 8. Reference Map 1

Post-mining land uses—example only										
Rehabilitation area				RA1						
Relevant activities				Waste rock dump 1 and associated infrastructure						
Total rehabilitation area size (ha)				65						
Commencement of first milestone RM1				1 Jun 2021						
PMLU				Native Ecosystem						
Date area is available	10 Dec 2020	10 Dec 2023	10 Dec 2025	10 Dec 2030	10 Dec 2035	10 Dec 2040	10 Dec 2042			
Cumulative area available (ha)	10	15	25	35	45	60	65			
Milestone completed by										
	10 Dec 2023	10 Dec 2025	10 Dec 2030	10 Dec 2035	10 Dec 2040	10 Dec 2042	10 Dec 2045	10 Dec 2048	10 Dec 2052	10 Dec 2060
Milestone reference	Cumulative area achieved (ha)									
RM1	10	15	25	35	45	60	65			
RM2	8	12	25	35	40	50	65			
RM3	3	8	15	20	30	40	55	65		
RM5		3	10	15	25	30	45	65		
RM7				10	15	20	30	45	65	
RM9										65
Rehabilitation area										
Rehabilitation area				RA2						
Relevant activities				Pit 2, waste rock dump and associated infrastructure						
Total size (ha)				35						
Commencement of first milestone RM1				1 Jun 2021						
PMLU				Native ecosystem						
Date area is available (ha)	10 Dec 2020	10 Dec 2025	10 Dec 2030	10 Dec 2035	10 Dec 2040	10 Dec 2045	10 Dec 2050			
Cumulative area available (ha)	5	10	15	20	25	30	35			
Milestone completed by										
	10 Dec 2025	10 Dec 2030	10 Dec 2035	10 Dec 2040	10 Dec 2045	10 Dec 2050	10 Dec 2055	10 Dec 2060	10 Dec 2065	10 Dec 2070

Milestone reference	Cumulative area achieved (ha)									
RM1	5	10	15	20	25	30	35			
RM2	2	8	10	10	20	25	35			
RM3		4	7	8	10	15	35			
RM4			5	7	8	10	20	35		
RM6				5	7	8	10	25	35	
RM8										35
Rehabilitation area		RA3								
Relevant activities		Pit 2 and 3, waste rock dump 2 and associated infrastructure								
Total size (ha)		90								
Commencement of first milestone RM1		1 Jun 2026								
PMLU		Grazing								
Date area is available (ha)	10 Dec 2025	10 Dec 2030	10 Dec 2035	10 Dec 2040	10 Dec 2045	10 Dec 2050				
Cumulative area available (ha)	20	40	50	60	80	90				
	Milestone completed by									
	10 Dec 2030	10 Dec 2035	10 Dec 2040	10 Dec 2045	10 Dec 2050	10 Dec 2055	10 Dec 2060	10 Dec 2065	10 Dec 2070	10 Dec 2078
Milestone reference	Cumulative area achieved (ha)									
RM1	20	40	50	60	80	90				
RM2	20	30	45	60	70	90				
RM3	10	25	35	50	60	75	90			
RM4		10	20	30	45	60	70	90		
RM6				10	30	45	60	70	90	
RM8										90
Rehabilitation area		RA4								
Relevant activities		Infrastructure, offices, camp, waste treatment facility, processing plant, power station, roads								
Total size (ha)		20								
Commencement of first milestone RM9		1 Jun 2051								
PMLU		Grazing								

Date area is available (ha)	10 Dec 2050									
Cumulative area available (ha)	20									
	Milestone completed by									
	10 Dec 2052	10 Dec 2055	10 Dec 2057	10 Dec 2060	10 Dec 2065	10 Dec 2070				
Milestone reference	Cumulative area achieved (ha)									
RM1	20									
RM2		20								
RM3			20							
RM4				20						
RM6					20					
RM8						20				
Rehabilitation area		RA5								
Relevant activities		Tailings Storage Facility								
Total size (ha)		200								
Commencement of first milestone RM9		10 Dec 2051								
PMLU		Grazing								
Date area is available (ha)	10 Dec 2050									
Cumulative area available (ha)	20									
	Milestone completed by									
	10 Dec 2057	10 Dec 2059	10 Dec 2065	10 Dec 2070	10 Dec 2075					
Milestone reference	Cumulative area achieved (ha)									
RM10	20									
RM3		20								
RM4			20							
RM6				20						
RM8					20					

Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	<ul style="list-style-type: none"> a) All services disconnected a) All buildings demolished and removed
RM2	Landform development and reshaping/re-profiling	<ul style="list-style-type: none"> b) Stable landform and angle <to be determined from landform design> % for final landform design. c) All major earthworks completed. d) The installation of contour or graded drains as per construction design has been certified by an appropriately qualified person. e) Back-filled pits assessed as geotechnically stable by a suitably qualified geotechnical engineer.
RM3	Surface preparation	<ul style="list-style-type: none"> a) Placement of <to be determined from soil assessment> mm of topsoil. b) An assessment of soil health and suitability has been completed by an appropriately qualified person to confirm soil is suitable for target vegetation establishment.
RM4	Revegetation (grazing)	<ul style="list-style-type: none"> a) Completed seeding of target species at <to be determined from revegetation plan> kg/ha. b) <to be determined from revegetation plan> stems per ha of target species c) Groundcover biomass is <to be determined from revegetation plan> %
RM5	Revegetation (native ecosystem)	<ul style="list-style-type: none"> a) Completed seeding of target species at <to be determined from revegetation plan> kg/ha. b) <to be determined from revegetation plan> stems per ha of target species c) Groundcover biomass is <to be determined from revegetation plan> %
RM6	Achievement of surface requirements (grazing)	<ul style="list-style-type: none"> a) Planting success for <to be determined from revegetation plan> % strike rate and <to be determined from revegetation plan> % uptake. b) Revegetation <to be determined from revegetation plan> % comparable to analogue site or target regional ecosystem. c) Groundcover biomass is <to be determined from revegetation plan> % for <to be determined from revegetation plan> consecutive years d) Minimum of <to be determined from revegetation plan> target species established e) Target species <to be determined from revegetation plan> over <to be determined from revegetation plan> m of <to be determined from revegetation plan> stems per ha

		<p>f) Weeds are a maximum of <to be determined from revegetation plan> % of groundcover</p> <p>g) No active areas of rill or gully erosion and drainage follows appropriate drainage paths</p> <p>h) Resilience to fire can be demonstrated</p> <p>i) Native fauna identified at reference sites prior to mining are present or indicators of these species have been recorded.</p>
RM7	Achievement of surface requirements (native ecosystem)	<p>a) Planting success for <to be determined from revegetation plan> % strike rate and <to be determined from revegetation plan> % uptake.</p> <p>b) Revegetation <to be determined from revegetation plan> % comparable to analogue site or target regional ecosystem.</p> <p>c) Groundcover biomass is <to be determined from revegetation plan> % for <to be determined from revegetation plan> consecutive years</p> <p>d) Minimum of <to be determined from revegetation plan> target species established</p> <p>e) Target species <to be determined from revegetation plan> over <to be determined from revegetation plan> m of <to be determined from revegetation plan> stems per ha</p> <p>f) Weeds are a maximum of <to be determined from revegetation plan> % of groundcover</p> <p>g) No active areas of rill or gully erosion and drainage follows appropriate drainage paths</p> <p>h) Resilience to fire can be demonstrated</p> <p>i) Native fauna identified at reference sites prior to mining are present or indicators of these species have been recorded.</p>
RM8	Achievement of post-mining land use to stable condition (grazing)	<p>a) Certification from an appropriately qualified person that the area has achieved stable condition.</p> <p>b) Maximum erosion rate of <to be determined from landform design> t/ha/yr.</p> <p>c) Groundcover <to be determined from revegetation plan> %</p> <p>d) Surface water quality from the area complies with the following:</p> <ul style="list-style-type: none"> • pH between <to be determined from water management plan> • Electrical conductivity <to be determined from water management plan> µS/cm

		<ul style="list-style-type: none"> • Dissolved oxygen <to be determined from water management plan> % • Temperature between <to be determined from water management plan> • Total nitrogen <to be determined from water management plan> mg/L • Total phosphorus <to be determined from water management plan> mg/L <p>e) Groundwater level is <to be determined from water management plan> m AHD</p> <p>f) Groundwater quality complies with the following:</p> <ul style="list-style-type: none"> • pH between <to be determined from water management plan> • Electrical conductivity <to be determined from water management plan> µS/cm • Dissolved arsenic <to be determined from water management plan> mg/L • Dissolved copper <to be determined from water management plan> mg/L • Dissolved manganese <to be determined from water management plan> mg/L • Dissolved zinc <to be determined from water management plan> mg/L <p>g) A contaminated land survey carried out by an appropriately qualified person indicates that no contamination unsuitable for the post-mining land use is occurring.</p> <p>h) Certification of no weed and pest species abundance identified in rehabilitated areas are no greater than at reference sites.</p>
RM9	Achievement of post-mining land use to stable condition (native ecosystem)	<p>a) Certification from an appropriately qualified person that the area has achieved stable condition.</p> <p>b) Maximum erosion rate of <to be determined from landform design> t/ha/yr.</p> <p>c) Groundcover <to be determined from revegetation plan> %</p> <p>d) Surface water quality from the area complies with the following:</p> <ul style="list-style-type: none"> • pH between <to be determined from water management plan>

		<ul style="list-style-type: none"> • Electrical conductivity <to be determined from water management plan> µS/cm • Dissolved oxygen <to be determined from water management plan> % • Temperature between <to be determined from water management plan> • Total nitrogen <to be determined from water management plan> mg/L • Total phosphorus <to be determined from water management plan> mg/L <p>e) Groundwater level is <to be determined from water management plan> m AHD</p> <p>f) Groundwater quality complies with the following:</p> <ul style="list-style-type: none"> • pH between <to be determined from water management plan> • Electrical conductivity <to be determined from water management plan> µS/cm • Dissolved arsenic <to be determined from water management plan> mg/L • Dissolved copper <to be determined from water management plan> mg/L • Dissolved manganese <to be determined from water management plan> mg/L • Dissolved zinc <to be determined from water management plan> mg/L <p>g) A contaminated land survey carried out by an appropriately qualified person indicates that no contamination unsuitable for the post-mining land use is occurring.</p> <p>h) Certification of no weed and pest species abundance identified in rehabilitated areas are no greater than at reference sites.</p>
RM10	Installation of cover system/cap	<p>a) The construction and maintenance design has been certified by an appropriately qualified person that is consistent with the <cover design>, including:</p> <ul style="list-style-type: none"> • Capping thickness of <to be determined from cover design> m. • Permeability of capping material to <to be determined from cover design> %.

		<ul style="list-style-type: none"> • Certification of groundwater monitoring in accordance with monitoring and maintenance program confirms cap is functioning as designed and there is no migration of contaminants.
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Non-use management areas—example only										
Improvement area		IA1								
Relevant activities		Pit 3								
Total size (ha)		20								
Commencement of first milestone MM1		10 Dec 2041								
NUMA		Residual void								
Date area is available	10 Dec 2040									
Cumulative area available (ha)	20									
	Milestone completed by									
	10 Dec 2042	10 Dec 2043	10 Dec 2045							
Milestone reference	Cumulative area achieved (ha)									
MM1	20									
MM2		20								
MM3			20							
Milestone reference	Management milestone		Milestone criteria							
MM1	Highwall treatment		a) High walls battered to a maximum slope of <to be determined from void closure plan> %.							
MM2	Achievement of surface requirements		a) Fencing of <to be determined from void closure plan> m high erected around the perimeter of the residual void b) Warning signage posted every <to be determined from void closure plan> m of the perimeter							

		<p>c) Safety bund constructed at <to be determined from void closure plan> m high, base width of <to be determined from void closure plan> m and crest width of <to be determined from void closure plan> m.</p>
MM3	Achievement of sufficient improvement	<p>a) Certification from an appropriately qualified person that the residual void will not cause environmental harm outside of the relevant tenure boundary.</p> <p>b) Certification from an appropriately qualified person that the residual void is safe to humans and livestock.</p> <p>c) Certification from an appropriately qualified person that the water level and quality in the void will not cause environmental harm to the surrounding environment.</p> <p>d) Battered slopes with <to be determined from void closure plan> % vegetation cover.</p>

Appendix 3. Reference milestones

This is a list of reference milestones that should only be used if appropriate. The description provides an idea of the activities that might fall under the broader milestone but these are not exclusive. Please use site-specific milestones where the reference milestones are not suitable.

Reference milestones	Description
Infrastructure decommissioning and removal	<ul style="list-style-type: none"> • Disconnect and terminate services such as water, electricity and gas. • Demolish and remove buildings (administration, accommodation, bath house, workshops, warehouses, etc.) • Remove bitumen, blue metal, aggregate, etc. • Remove fencing • Decommission boreholes
Remediation of contaminated land	<ul style="list-style-type: none"> • Carry out preliminary and intrusive contaminated land investigations. • Removal or onsite-treatment of contaminated water (e.g. affected by hydrocarbons, brine, metals, etc.) • Removal and appropriate disposal of contaminated materials (PCBs, dioxins, mercury, hydrocarbon contaminated soils) • On-site remediation of hydrocarbon contaminated soils • Removal and disposal of asbestos • Removal and disposal of plastic (geofabric) liners from dams, leach pads, etc. • Conduct validation testing to confirm that contaminated soils have been removed/remediated.
Installation of cover system / cap	<ul style="list-style-type: none"> • Source, cart, spread, and compact a suitable volume of material with appropriate chemical and physical properties. • Install additional materials (capillary breaks, geofabric, etc.) as required • Finalise engineering and design plans. • Prepare engineering report on completed cover
Landform development and reshaping/re-profiling	<ul style="list-style-type: none"> • Finalise engineering and design plans • Bulk earthworks to achieve required landform and slopes • General reshaping and pushing/trimming to achieve final landform • Fill dams, voids, etc. • Backfill and seal shafts, portals/adits • Erosion and sediment control systems
Surface preparation	<ul style="list-style-type: none"> • Remediate any erosion or subsidence • Source, cart and spread growth media (topsoil) • Adding ameliorants to improve or stabilise soils (e.g. lime) • Trim, rock rake and deep rip
Revegetation	<ul style="list-style-type: none"> • Direct seeding • Planting tube stock • Planting mature trees • Hydro-seeding

	<ul style="list-style-type: none"> • Applying fertiliser • Install stock fencing to protect planting
Achievement of surface requirements	<ul style="list-style-type: none"> • Monitoring to determine whether vegetation is self-sustaining. • Monitoring to determine whether species richness, diversity and density meets required criteria • Assemble fencing • Build bunding • Place signage
Achievement of post-mining land use to stable condition	<ul style="list-style-type: none"> • Be able to show that the land is safe, structurally stable, does not cause environmental harm and is able to sustain the PMLU
Achievement of sufficient improvement	<ul style="list-style-type: none"> • Be structurally stable • Cause no environmental harm outside of the relevant tenure