

Progressive Rehabilitation and Closure Plan Schedule template

Instructions

General Instructions:

- This form can be used for completing a PRCP schedule for the submission of a progressive rehabilitation and closure plan (PRC plan).
- See the PRCP schedule section of the PRC plan guideline (ESR/2019/4964) for further information requirements.
- A default value of one (1) Rehabilitation Area (RA) is represented by one RA sheets below (RA1).
- A default value of one (1) Improvement Area (IA) is represented by one IA sheet below (IA1).
- To record additional RAs for your project make a copy of the RA sheet below and update it to the relevant RA number (i.e. RA2).
- To record additional IAs for your project make a copy of the IA sheet below and update it to the relevant IA number (i.e. IA2).
- To remove the IA sheet if there is no IA for your project, delete the IA sheet below.
- Each RA and IA sheet contains **two separate excel tables** (yellow and blue) for recording the time-based rehabilitation milestones.
- Add a new column or row to each table as required for your information requirements.
- Two (2) separate sheets below exist for recording the "Rehabilitation Area Milestones" and "Improvement Area Milestones".
- Delete the Improvement Area Milestone sheet if it does not apply to your project.
- Delete additional rows in either sheet if they do not apply to your project.
- See the PRC plan guideline for a list of reference milestones and further information for developing additional site-specific milestones where appropriate.

Further Instructions when inputting PMLUs

Headings under Rehabilitation Area (RA) sheets

Rehabilitation area - The rehabilitation area must align with the spatial information included in the rehabilitation planning part of the PRC plan. This area must have the same PMLU and same milestones applied to the whole area.

Relevant activities - The relevant activities must align with the activities identified in the rehabilitation planning part of the PRC plan. The relevant activities are those undertaken within the rehabilitation area prior to land becoming available for rehabilitation.

Total size of rehabilitation area (ha) - Total size of rehabilitation area in hectares.

Commencement of first milestone - The applicant must nominate a date for when the first milestone for the rehabilitation area will commence. The milestone reference for the first milestone must be included in the heading.

PMLU - The PMLU must align with those identified in the rehabilitation planning part of the PRC plan and in the proposed final site design.

Date area is available - The PRCP schedule must identify when land within the rehabilitation area becomes available for rehabilitation. If the whole rehabilitation area becomes available at once there should be only one date. If the rehabilitation areas becomes available progressively there should be multiple dates. These dates should reflect the information provided in the rehabilitation planning part of the PRC plan.

Cumulative area available (ha) - The PRCP schedule must identify the area of land within the rehabilitation area that will become available at a given time.

Milestone completed by - The PRCP schedule must identify completion dates for milestones to be completed.

Cumulative area achieved (ha) - The PRCP schedule must show how progressive rehabilitation is being achieved over the life of the mine. This section must reflect the proposed rehabilitation work required for the rehabilitation area to achieve stable condition. The milestone reference to be included refers back to the Rehabilitation Area Milestones sheet with the detailed milestone criteria. The milestones must be achieved consecutively.

Headings under Rehabilitation Area Milestones sheet

Rehabilitation milestone & Milestone criteria - The "rehabilitation milestone" is a short description of the rehabilitation activities. The "milestone criteria" must be able to demonstrate achievement of the milestone.

Further Instructions when inputting NUMAs

Headings under Improvement Area (IA) sheets

Improvement area - The improvement area must align with the spatial information included in the rehabilitation planning part of the PRC plan. This area must have the same NUMA and same milestones applied to the whole area.

Relevant activities - The relevant activities must align with the activities identified in the rehabilitation planning part of the PRC plan. The relevant activities are those undertaken within the improvement area prior to land becoming available for improvement.

Total size (ha) - Total size of improvement area in hectares.

Commencement of first milestone - The applicant must nominate a date for when the first milestone for the improvement area will commence. The milestone reference for the first milestone must be included in the heading.

NUMA - The NUMA must align with those identified in the rehabilitation planning part of the PRC plan and in the proposed final site design.

Date area is available - The PRCP schedule must identify when land within the improvement area becomes available for improvement. If the whole improvement area becomes available at once there should be only one date. If the improvement areas becomes available progressively there should be multiple dates. These dates should reflect the information provided in the rehabilitation planning part of the PRC plan.

Cumulative area available (ha) - The PRCP schedule must identify the area of land within the improvement area that will become available at a given time.

Milestone completed by - The PRCP schedule must identify completion dates for milestones to be completed.

Cumulative area achieved (ha) - The PRCP schedule must show how progressive improvement is being achieved over the life of the mine. This section must reflect the proposed management work required for the improvement area to achieve sufficient improvement. The milestone reference refers back to the Improvement Area Milestones sheet with the detailed milestone criteria. The milestones must be achieved consecutively.

Post-mining land uses (PMLU)										
Rehabilitation area		RA1								
Relevant activities		Creek Diversion								
Total rehabilitation area size (ha)		143 ha								
Commencement of first milestone: RM1		10/12/XXXX* + year**								
PMLU		Low intensity cattle grazing (native riparian vegetation)								
Date area is available	Year 2	Year 7								
Cumulative area available (ha)	35	143								
Milestone completed by	Year 7	Year 10	Year 15	Year 20	Year 21					
Milestone Reference	Cumulative area achieved (ha)									
RM1	35	143								
RM3	35	143								
RM5	35	143								
RM7	35	35	143							
RM9			35	143						
RM11				35	143					

* XXXX is the year of commencement of the Project and is defined as the date of first topsoil stripping

** the year refers to the year at which the land will become available after commencement of the Project and will be added to the commencement year to define the date at which land is available for rehabilitation

- 1) Insert new columns to the **yellow table** to include further rehabilitation milestone dates.
- 2) Insert new columns to the **blue table** to match rehabilitation milestone dates.
- 3) Insert new rows to the **blue table** to include additional rehabilitation milestone references.
- 4) Insert the relevant number in the "Milestone reference" column (i.e. RM1).

Post-mining land uses (PMLU)										
Rehabilitation area				RA2a						
Relevant activities				Water Management Infrastructure (Environmental, Sediment, Raw water dams)						
Total rehabilitation area size (ha)				46 ha						
Commencement of first milestone: RM1				10/12/XXXX* + year**						
PMLU				Low intensity cattle grazing						
Date area is available	Year 10	Year 15	Year 20	Year 25	Year 30					
Cumulative area available (ha)	2.3				46					
Milestone completed by	Year 15	Year 20	Year 25	Year 30	Year 35	Year 40	Year 45			
Milestone Reference	Cumulative area achieved (ha)									
RM1	2.3				46					
RM2	2.3				46					
RM3	2.3				46					
RM6		2.3				46				
RM8		2.3					46			
RM10			2.3				46			

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Post-mining land uses (PMLU)										
Rehabilitation area				RA2b						
Relevant activities				Water Management Infrastructure (Flood Levee)						
Total rehabilitation area size (ha)				7 ha						
Commencement of first milestone: RM1				10/12/XXXX* + year**						
PMLU				Low intensity cattle grazing (modified pasture)						
Date area is available	Year 7	Year 10	Year 15	Year 20						
Cumulative area available (ha)	0.2			7						
Milestone completed by	Year 10	Year 15	Year 20	Year 25	Year 30	Year 35				
Milestone Reference	Cumulative area achieved (ha)									
RM1	0.2			7						
RM3	0.2			7						
RM5	0.2			7						
RM6		0.2		7						
RM8			0.2		7					
RM10				0.2		7				

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Post-mining land uses (PMLU)										
Rehabilitation area		RA3								
Relevant activities		Mine Infrastructure Areas								
Total rehabilitation area size (ha)		132 ha								
Commencement of first milestone: RM1		10/12/XXXX* + year**								
PMLU		Low intensity cattle grazing (modified pasture)								
Date area is available	Year 32	Year 35	Year 40	Year 45	Year 52					
Cumulative area available (ha)	75 ha				132					
Milestone completed by	Year 35	Year 40	Year 45	Year 52	Year 55	Year 60	Year 65	Year 70		
Milestone Reference	Cumulative area achieved (ha)									
RM1	75				125					
RM2	75				125					
RM3	75				125					
RM5		75				125				
RM6		75				125				
RM8			75				125			
RM10				75				125		

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Post-mining land uses (PMLU)										
Rehabilitation area		RA4								
Relevant activities		Waste Disposal (Surface and in-pit TSFs)								
Total rehabilitation area size (ha)		416 ha								
Commencement of first milestone: RM1		10/12/XXXX* + year**								
PMLU		Low intensity cattle grazing (modified pasture)								
Date area is available	Year 11	Year 15	Year 20	Year 25	Year 30	Year 36				
Cumulative area available (ha)	145	272				416				
Milestone completed by	Year 15	Year 20	Year 25	Year 30	Year 36	Year 40	Year 45	Year 50	Year 55	
Milestone Reference	Cumulative area achieved (ha)									
RM1	145	272				416				
RM2	145	272				416				
RM3	145	272				416				
RM4		272				416				
RM5		272					416			
RM6		145	272				416			
RM8			145	272				416		
RM10				145	272				416	

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Post-mining land uses (PMLU)										
Rehabilitation area		RA5								
Relevant activities		In-pit and out-of-pit spoil dumps								
Total rehabilitation area size (ha)		1925 ha								
Commencement of first milestone: RM1		10/12/XXXX* + year**								
PMLU		Low intensity cattle grazing (modified pasture)								
Date area is available	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30	Year 32			
Cumulative area available (ha)	33		275	486	736	1131	1925			
Milestone completed by	Year 10	Year 15	Year 20	Year 25	Year 30	Year 32	Year 40	Year 45	Year 52	
Milestone Reference	Cumulative area achieved (ha)									
RM1	33		275	486	736	1131	1925			
RM2	33		275	486	736	1131	1925			
RM3	33		275	486	736	1131	1925			
RM5	33		275	486	736		1925			
RM6		33		275	486	736	1925			
RM8			33		275	486	736	1925		
RM10				33		275	486	736	1925	

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Post-mining land uses (PMLU)										
Rehabilitation area		RA6								
Relevant activities		Rail and services corridor								
Total rehabilitation area size (ha)		28 ha								
Commencement of first milestone: RM1		10/12/XXXX* + year**								
PMLU		Low intensity cattle grazing (modified pasture)								
Date area is available	Year 32									
Cumulative area available (ha)	27									
Milestone completed by	Year 35									
Milestone Reference	Cumulative area achieved (ha)									
RM1	27									
RM2	27									
RM12	27									

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Non-use management area (NUMA)										
Improvement area		IA1								
Relevant activities		Residual voids								
Total size (ha)		218 ha								
Commencement of first milestone: MM1		10/12/XXXX* + year**								
NUMA		Unsuitable								
Date area is available	Year 32									
Cumulative area available (ha)	218									
Milestone completed by	Year 35									
Milestone Reference	Cumulative area achieved (ha)									
MM1	218									
MM2	218									
MM3	218									

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Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	<ul style="list-style-type: none"> All non-required services disconnected and removed All concrete, bitumen and gravel roads removed (where not to be retained) All non-required operational pipelines drained and removed All fencing that is not part of PMLU requirements removed All non-required buildings and footings demolished and/or removed off-site All machinery and equipment removed All surface water drainage infrastructure that is not retained in the final landform removed All rubbish removed
RM2	Management of contaminated land status	<ul style="list-style-type: none"> Contaminated material either remediated in situ or removed/transported to an approved landfill for disposal and waste tracking information recorded and submitted Contaminated land assessment undertaken by an appropriately qualified person¹. If required, a site investigation report including a site suitability statement prepared and submitted in accordance with the provisions of Chapter 7, Part 8 of the EP Act
RM3	Landform development (re-profiling / re-shaping) of land affected by disturbance	<ul style="list-style-type: none"> All earthworks and landform reshaping / re-profiling works completed to design specifications Geotechnical assessment by an appropriately qualified person¹ confirms that long-term geotechnical stability has been achieved Certification provided by an appropriately qualified person¹ confirms that drainage features are constructed to design specifications Landform constructed to the following design parameters, where relevant: <ul style="list-style-type: none"> Waste rock emplacement: <ul style="list-style-type: none"> Slopes $\leq 10^\circ$ (17%) Uninterrupted batter length ≤ 70 m Stable berms or bunds (5 m wide) Flood levee slopes $\leq 10^\circ$ (17%) Grass cover: <ul style="list-style-type: none"> Coverage grade of 0.00158 m/m Valley length of 7.25 km and stream length of 8.25 km Stream sinuosity of approximately 1.12
RM4	Capping	<ul style="list-style-type: none"> All earthworks and landform reshaping / re-profiling works completed to design specifications Certification provided by an appropriately qualified person¹ confirms that drainage features are constructed to design specifications Groundwater monitoring program confirms no migration of contaminants Geotechnical assessment by an appropriately qualified person¹ confirms that long-term geotechnical stability has been achieved Landform constructed to design parameters including: <ul style="list-style-type: none"> Containment wall limited to 1.6 m in height Outer slope angles in the order of 1(V) in 3(H) (18°) Cover placement over the tailings (2 m) Placement of non-sodic cover materials (50 mm) Topsoil (300 mm)
RM5	Surface preparation (topdressing, contour ripping, soil amelioration)	<ul style="list-style-type: none"> Prior to each rehabilitation event, soil health and suitability are assessed and documented by an appropriately qualified person¹, and a recommendation made for ameliorants to ensure sodicity, salinity, pH and fertility levels are suitable to achieve the relevant PMLU Records of ameliorants applied and incorporated into surface, as recommended by an appropriately qualified person¹ Records of topsoil origin and placement of a target depth of 300 mm Ripping undertaken along the contour of slopes
RM6	Revegetation (seeding and / or planting) – grazing	<ul style="list-style-type: none"> Records demonstrate seeding of target species and/or planting of tube stock (where relevant) specified in: <ul style="list-style-type: none"> Table 24 Current indicative species and sowing rates for low intensity grazing PMLU; and Table 25 Current indicative species and sowing rates for shade trees in a low intensity grazing PMLU
RM7	Revegetation (seeding and / or planting) – Native (riparian) vegetation	<ul style="list-style-type: none"> Records demonstrate seeding of target species and/or planting of tube stock (where relevant) specified in: <ul style="list-style-type: none"> Table 26 Current indicative species and sowing rates for native riparian habitat PMLU
RM8	Achievement of grazing PMLU to stable condition	<ul style="list-style-type: none"> No prohibited invasive or restricted invasive plants, and weed cover is $\leq 5\%$ (excluding exotic pasture grasses). Weed abundance is no greater than at representative analogue sites Target percentage vegetation ground foliage cover of $\geq 50\%$ percentile of that of representative analogue sites with similar landform parameters Soil capability assessment undertaken by an appropriately qualified person¹ confirms that land has achieved a minimum class 4 Erosion classification³ is comparable with erosion classification³ from nearby equivalent land uses with similar landform parameters, determined using analogue sites established in accordance with section 3.7 (Monitoring and Maintenance) No active erosion present as demonstrated by no increase in erosion ratings over time Hazard and safety assessment completed by an appropriately qualified person¹ demonstrates hazards are consistent with the type and severity of hazards typical of the adjacent equivalent land use
RM9	Achievement of native vegetation PMLU to stable condition	<ul style="list-style-type: none"> Downstream water quality complies with water quality objectives or upstream / reference data No erosion classified as 'severe' nor 'extreme' gully erosion or washout features No active erosion present as demonstrated by no increase in erosion ratings over time Assessed as geotechnically stable by an appropriately qualified person¹ No prohibited invasive or restricted invasive plants, and weed cover is $\leq 5\%$ (excluding exotic pasture grasses). Weed abundance is no greater than at representative analogue sites Hazard and safety assessment completed by an appropriately qualified person¹ demonstrates hazards are consistent with the type and severity of hazards typical of the adjacent equivalent land use
RM10	Achievement of target pasture productivity criteria for grazing PMLU	<ul style="list-style-type: none"> Pasture productivity is consistently² similar to or exceeding analogue sites Vegetation structure and condition is consistently² similar to or exceeding analogue sites
RM11	Achievement of native vegetation PMLU to a sustainable condition	<ul style="list-style-type: none"> Evidence of native fauna utilisation in the form of tracks, scats, and opportunistic observations Soil capability assessment undertaken by an appropriately qualified person¹ confirms that land has achieved a minimum class 4 Evidence of flora recruitment from rehabilitation monitoring data Vegetation structure and condition is consistently² similar to or exceeding analogue sites Field-based monitoring data provided in the final rehabilitation report demonstrates that the following attributes are comparable or greater than representative analogue sites: <ul style="list-style-type: none"> Species richness of tree, shrub and groundcover functional groups; Tree canopy cover; Shrub canopy cover; and Overlaminar grass cover
RM12	Achievement of retained infrastructure PMLU to stable condition	<ul style="list-style-type: none"> Hazard and Safety Assessment completed by an appropriately qualified person¹ demonstrates hazards in RAs are consistent with the type and severity of hazards typical of neighbouring equivalent land use. Remaining hazards are considered to be low risk with no significant increase in risk expected over time Final landform survey confirms no built structures remain other than those that form part of a landholder agreement No erosion classified as 'severe' nor 'extreme' gully erosion or washout features No active erosion present as demonstrated by no increase in erosion ratings over time

Footnotes:
1. 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.
2. Consistently means that the criterion is met for a minimum of three consecutive years.
3. Erosion classification framework.

Erosion classification	Minor	Moderate	Severe
Sheet erosion	Shallow soil deposits downslope	Partial exposure of roots, moderate soil deposits downslope, etc.	Loss of surface horizons; root exposure, etc.
Rill/gully erosion	<15 rills and <0.3 m deep	15 – 30 rills and <0.3 m deep	>30 rills and/or any >0.3 m deep
Terrace erosion			Present
Mass movement			Present

1) Insert new rows below the table to record more Rehabilitation Area Milestones for the project
2) Ensure all Rehabilitation Milestones recorded in this table align with those included in the RA sheets in this form.
3) See the PRCP guideline before developing site-specific Rehabilitation Area Milestones

Milestone reference	Management milestone	Milestone criteria
MM1	Achievement of final landform design	<ul style="list-style-type: none"> • Residual void highwall with the following angles: <ul style="list-style-type: none"> ◦87° for competent rock; and ◦45° for incompetent rock. • Predictive modelling undertaken by a suitably qualified person¹, confirming that the voids will remain as a groundwater sink and that there is no risk of contaminant release to surface or groundwaters post-mining. • Voids are assessed to be geotechnically stable by an appropriately qualified person¹
MM2	Achievement of surface and safety requirements	<ul style="list-style-type: none"> • Safety infrastructure established around the void, including the following: <ul style="list-style-type: none"> ◦ Adequate bunding in place confirmed to be geotechnically stable by an appropriately qualified person¹; and ◦ Perimeter fencing and signage erected to prevent access to fauna and humans. • Bunding constructed to the following design criteria: <ul style="list-style-type: none"> ◦ Minimum base width of 4 m; ◦ Minimum height of 2 m; and ◦ Located at least 10 m beyond the area potentially affected by any instability of the pit edge. • Assessment by a suitably qualified person¹ that no environmental harm will occur outside of the relevant tenure boundary. • Certification from an appropriately qualified person¹ that the residual voids are safe to humans and livestock. • Certification from an appropriately qualified person¹ that the water quality and levels in the voids will not cause environmental harm to the surrounding environment.
MM3	Achievement of sufficient improvement	<ul style="list-style-type: none"> • Assessment by a suitably qualified person¹ that no environmental harm will occur outside of the relevant tenure boundary. • Certification from an appropriately qualified person¹ that the residual voids are safe to humans and livestock. • Certification from an appropriately qualified person¹ that the water quality and levels in the voids will not cause environmental harm to the surrounding environment.

Footnotes:

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