Rehabilitation Plan

for

Extractive Industry Work Authority WA007541

RRAM Designation:- PLN-001536

WA007541 – Lang Lang Sand Resources Pty Ltd

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Revision History

Document Date	Description
Jun 2021	1st draft of Rehabilitation Plan
Mar 2022	2nd draft of Rehabilitation Plan
Mar 2022	1st submission of Rehabilitation Plan to ERR
Aug 2022	2nd submission of Rehabilitation Plan to ERR
Feb 2023	3rd submission of Rehabilitation Plan to ERR

1. PURPOSE OF REHABILITATION PLAN

This Rehabilitation Plan has been developed to address the requirements of Part 2 the Mineral Resources (Sustainable Development) (Extractive Industries) Regulations 2019, and in consideration of the Preparation of Rehabilitation Plans – Guideline for Extractive Industry Projects, March 2021, Version 1.0. This Rehabilitation Plan forms part of the Work Plan for the purposes of the *Minerals Resources (Sustainable Development) Act 1990* (MRSD Act).

The background for this extractive industry operation, including descriptions of the work, site setting, risk assessment and risk management are set out in detail in the other components of the Work Plan, with reference to the included drawings, particularly Figure 3 Site Layout Plan.

1.1. Overall Rehabilitation Objective

The overall objective of the Rehabilitation Plan is to leave the site in a manner that is:

- safe (is not likely to cause injury to visitors)
- stable (is structurally, geotechnically and hydrologically sound)
- sustainable (is non-polluting and aligns with the principles of sustainable development), and
- in a form suitable to the landowner for limited farming activities.

This objective and the end land use have been approved by Kelvin Sargent, GM Strategy & Development, of Lang Lang Sand Resources Pty Ltd, the holder of the Work Authority in agreement with the landowner. The objective is consistent with broader community and local stakeholder expectations, which are routinely and specifically canvased through implementation of the site Community Engagement Plan.

The rehabilitation landform meeting this objective is represented as a concept plan on the included **Figure 4 Rehabilitation Landform**.

1.2. End Land Use

The excavation area will become a water body filling to approximately RL 19.3m with suitable areas outside the excavation returned to general farming activities, such as livestock grazing, consistent with the Farming Zone of the land.

The terminal quarry batters will be cut at a batter not steeper than 1V:3H, with a beaching zone, not steeper than 1V:5H, established at the final standing water level. A cut batter of 1V:2H will be established from below the beaching zone down to the base of the resource. The terminal batters above water level will be spread with topsoil and planted with suitable pasture grasses and, in the beaching zone, aquatic vegetation.

The northern waterway diversion will remain, as constructed, as a permanent waterway in the rehabilitated landform. This diverted waterway will be revegetated upon construction in accordance with Melbourne Water requirements. Water collecting on the rehabilitated landform that does not enter the waterway diversion will be directed to the water body.

Site access tracks around the property and pit crest will be retained to support the post-closure activities on the site. These tracks also provide access to the waterway diversion and the groundwater monitoring bores, as required by Melbourne Water and Southern Rural Water, respectively.

No additional planning permission is required for the proposed end land use for the rehabilitated site.

1.3. Rehabilitation Domains

The rehabilitation treatment required across the site will differ for the various elements of the landform and how they have been affected by the extractive industry operation. The Regulations require that this Rehabilitation Plan set out distinct rehabilitation domains that collectively amount to the landform that will be achieved upon completion of the site rehabilitation.

Section 2 of the Rehabilitation Plan sets out the strategy for rehabilitation of the site throughout the entire life of the extractive industry operation.

Section 3 of the Rehabilitation Plan sets out the rehabilitation landform design, as shown in Figure 4 Rehabilitation Landform, for each of the key components of the site and how this rehabilitation work is to be undertaken.

Section 4 of the Rehabilitation Plan sets out how the rehabilitation objectives will be achieved with reference to the detail contained within Section 5 Rehabilitation Domains Table and areas outlined in Figure 5 Rehabilitation Domains Plan.

Section 6 of the Rehabilitation Plan sets out the overall management of the site rehabilitation.

2. REHABILITATION STRATEGY

Rehabilitation for the whole site will not be a single linear process, as it will occur in parallel to extraction and processing activities for much of the quarry life, nor will the parallel rehabilitation processes follow consistent timelines for differing parts of the site.

Rehabilitation will be undertaken progressively throughout much of the quarry life, as far as reasonably practicable, i.e. without compromising the ability to work the site and the commercial viability of the operation. Once the resource extraction ceases there will be areas within the site, particularly within the extraction area, that will already be fully rehabilitated and the rehabilitation objectives satisfied.

The Rehabilitation Plan is a conceptual plan for rehabilitation and achieving site closure, based on present thinking and may be influenced in the future by changes in regulatory and/or community expectations, market forces, new technology or operational practice. Changes to the overall rehabilitation objective, as a result of matters raised by Earth Resources Regulation or by the local community through the Community Engagement Plan, will be discussed with Earth Resources Regulation to determine the most appropriate pathway forward under the relevant regulations applicable at that time.

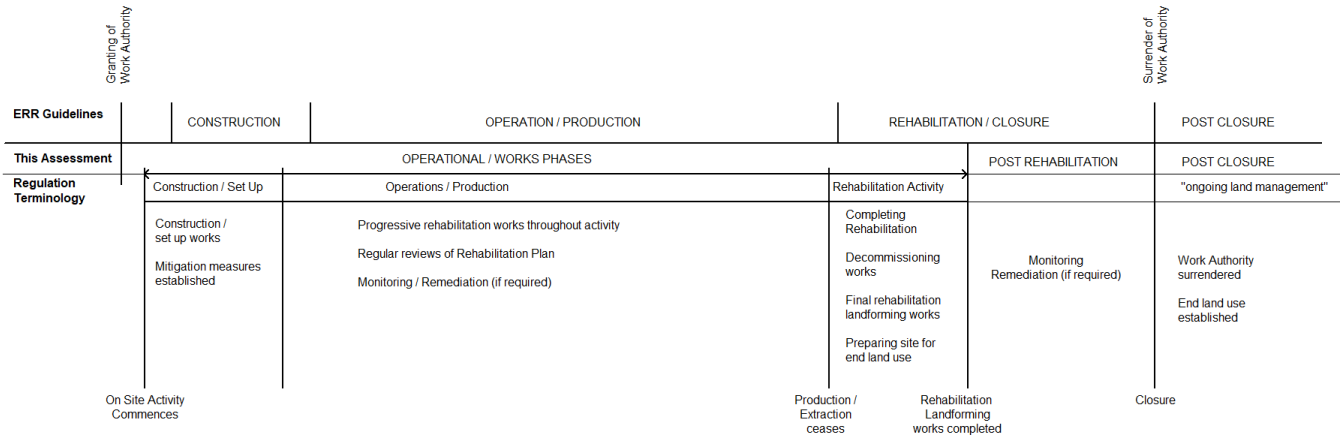
2.1. Phases of Rehabilitation

Rehabilitation for any particular part of the site will occur in a sequence of phases through the life of the quarry, and at any point in time the rehabilitation phase applicable to different parts of the site will differ.

The discussion of site rehabilitation presented in this document, along with any long-term risks associated with the rehabilitated land, aims to satisfy the Regulations while adopting extractive industry accepted norms, which do not neatly fit the requirements of the 2021 *Preparation of Rehabilitation Plans* guideline. A specific example of this is the use of the term “closure”. This is not a term commonly used in the extractive industries and not used in the applicable Regulations, but is used throughout the 2021 guidelines.

The term “closure” is used here to be the point in time, subsequent to completion of all rehabilitation works, when all the stated criteria have been satisfied to achieve the rehabilitation objectives for all rehabilitation domains, and thus allowing surrender of the Work Authority and return of the rehabilitation bond.

As is the case for the hazard identification and risk assessment process, set out in the Risk Management Plan, the rehabilitation at this site is in the context of the quarry life as represented in the following schematic, which includes the indicative rehabilitation sequence as it relates to any particular part on the site.



2.2. Progressive Rehabilitation

Progressive rehabilitation will be undertaken throughout the Operational / Works phases of the quarry to minimise, as far as reasonably practicable, the disturbed area remaining open and unrehabilitated at any given time. Progressive rehabilitation, wherever possible, will be integrated into daily operations and, within the extraction area, will occur as soon as practicable after extraction, however this will not always be possible. Factors affecting the timing of progressive rehabilitation include (but are not limited to):

- the availability at any given time of suitable areas for rehabilitation across the site
- the availability at any given time of suitable material to undertake rehabilitation works
- climatic conditions and seasonal weather variation.

The rehabilitation of available segments of terminal face, including the placement of overburden, topsoiling and revegetation, can only occur after extraction limits have been reached, which requires the temporary stockpiling of soil and overburden material until required. As much as possible, overburden will be stockpiled within the excavation area, close to where it will be required for rehabilitation. The necessary stockpiling of soil and overburden will also limit the rehabilitation of those stockpiling areas until the stockpiled material can be utilised.

The volume of overburden available on the site and the cost of rehandling overburden, along with regulatory requirements, are prime drivers for commencing the progressive rehabilitation of terminal faces as soon as possible.

Progressive rehabilitation is undertaken with the following principles applied to meet the rehabilitation objectives:

- storing adequate topsoil for use in site rehabilitation
- storing adequate overburden in nominated stockpile areas for future use
- undertake rehabilitation of available areas as soon as practicable, including the topdressing and revegetating of upper terminal batters
- where possible, directly place overburden and topsoil in areas available for rehabilitation
- initially revegetate the final rehabilitated surfaces above the designed water level with pasture grass species, and aquatic species on the beaching zones, to stabilise the surfaces and manage erosion
- actively encourage establishment of vegetation on rehabilitated batters and identify and plant out any other suitable areas
- minimising, as far as reasonably practicable, the disturbed area remaining open and unrehabilitated at any given time (including rehabilitated areas that have not yet met the rehabilitation objectives)
- continually monitor and evaluate the effectiveness of rehabilitation and revegetation, and modify as necessary, to ensure the stated objectives for individual rehabilitation domains are being achieved
- divert all surface water areas away from the extraction area
- exclude stock from the rehabilitated upper batters / water body

To establish effective screening from nearby residences early in the operation the majority of the overburden from initial extraction stages will be used in constructing the screening bund along the South Gippsland Highway frontage and part of the eastern boundary. This bund will be progressively stabilised and revegetated at the earliest opportunity and will remain in place permanently as part of the rehabilitation landform. Therefore, no further rehabilitation works in relation to this bund will be required once the vegetation is fully established and the bund is stabilised.

The northern waterway diversion will also remain, as constructed, as a permanent waterway in the rehabilitated landform. This diverted waterway will be required to be revegetated upon construction in

accordance with Melbourne Water requirements. The waterway diversion is designed with floodwater storage and will perform an ongoing role in the management and control of surface water for the site and alleviating downstream flooding. Therefore, the diversion as constructed will remain in place post closure, as required by Melbourne Water, and no further rehabilitation works in relation to this diversion will be required once it is stabilised and fully established.

The proposed staging of extraction (Figure 3, Site Layout Plan) has been designed to allow early progressive rehabilitation of the northern and eastern terminal batters, above the groundwater level, to minimise the visual impact of the operations from the south and west.

The success of progressive rehabilitation will be regularly reviewed and any required changes in the rehabilitation strategy will be implemented as appropriate. The criteria for achieving the rehabilitation objectives for individual rehabilitation domains and the monitoring frequency, as presented in Section 5 Rehabilitation Domains Table, are applied for all progressive rehabilitation undertaken on the site.

2.3. Maximum Disturbed Area

The progressive development of the extraction area is provided schematically in Figure 3 Site Layout Plan.

Extraction will commence in the initial extraction area (Stage 1A1) to create a process water storage and excavation of the northern waterway diversion will commence at an early stage. The overburden from these areas will be used to commence constructing the screening bund adjacent to the South Gippsland Highway, the base for the processing plant / stockpile area and the internal haul roads.

As a general concept, the extraction stages will progress to the east of the initial extraction area and then proceed westward along the southern portion of the site. The last extraction stages (Stage 4A and 4B) in this concept will involve removing the last of the resource in the northwest of the site, with the final Stage 4B involving relocation of the processing and stockpiling area and removal of the above-ground ('turkey nest') dam. That part of this dam outside the extraction area will also be removed and the land returned to pasture. Once all extraction stages are complete, the insitu material in the walls retained around the initial extraction area will be removed and processed.

The total area to be disturbed by this operation, including all roads, hardstands, other earthworks and extraction areas, is estimated to be 84.3 hectares. In addition, 13.5ha is disturbed to establish the northern waterway diversion that remains as a permanent waterway in the rehabilitated landform, as required by Melbourne Water. However, as set out in Section 2.2, progressive rehabilitation will be undertaken as soon as practicable after extraction reaches terminal batters. Therefore, the total area at any given time that may require rehabilitation will be significantly lower than the total disturbed area.

The maximum disturbed area open and unrehabilitated at any given time is estimated to be approximately 58 hectares – including rehabilitated areas that will have not yet met the rehabilitation objectives. This estimate is also in consideration of the areas that will need to remain open for practical operational reasons (e.g. areas required for processing, stockpiling, water management, etc.). However, it should be noted that this includes 13.5 hectares to establish the northern waterway diversion early in the operation, which will be immediately rehabilitated and then remain as a permanent waterway in the rehabilitated landform.

2.4. Achievability of Rehabilitation Outcome

The rehabilitation of the quarry will be in accordance with the overall rehabilitation objective set out above, i.e. resulting in a landform that is safe, stable and sustainable, and in a form suitable for the intended end land use. The rehabilitated landform is designed to meet this objective, as shown in Figure 4 Rehabilitation Landform, and is found to be achievable on the basis of current knowledge that is supported by relevant technical assessments.

Although the rehabilitation outcome is found to be achievable, with supporting technical assessments, there is some remaining uncertainty regarding the site's hydrogeological constraints, which cannot reasonably be resolved prior to commencing the proposed work. As extraction progresses more will be learnt about the hydrogeological conditions and allow these uncertainties to be resolved. Accordingly, two rehabilitation milestones have been implemented (Section 2.5) as major reviews to resolve these uncertainties prior to reaching defined points in the quarry development (triggers or gateways). These major reviews should provide assurance, based on increased knowledge, that the designed rehabilitation landform can be achieved and meet the overall rehabilitation objective, as accords with the current understanding. However, if it were determined that significant modifications to the rehabilitation landform would be necessary to meet the overall rehabilitation objective, unlikely based on current knowledge, then the Work Authority holder would seek a Work Plan variation, or other approval process as deemed appropriate at that point in time, to make the necessary changes.

If modifications to the rehabilitation landform were required then the alternative rehabilitation outcome would still need to form a safe, stable and sustainable landform. The stated triggers or gateways for major reviews as rehabilitation milestones are identified critical points in the development of the extraction pit (refer to individual Rehabilitation Milestones in Section 2.5), which will ensure that if modifications to the rehabilitation landform were required, then an alternative rehabilitation outcome could still be achieved that was safe, stable and sustainable.

2.5. Rehabilitation Milestones

As above, progressive rehabilitation will be undertaken throughout the life of the quarry to minimise, as far as reasonably practicable, the disturbed area remaining open and unrehabilitated at any given time. The progress of extraction for this quarry, as set out in Section 2.3, will involve continuous extraction across the defined extraction area. Given this, rehabilitation will be occurring at various parts within the site and each part will be at a different stage of rehabilitation, particularly the upper batters above the water level. The progress of rehabilitation will mainly depend on the availability of areas for rehabilitation, the availability of suitable materials for rehabilitation and the climatic / seasonal conditions at the time.

The commitment to mitigate visual impacts, particularly due to exposed batters along the northern and eastern sides of the pit, necessitates the early rehabilitation of the upper batters above the water level. Once extraction reaches the terminal limits for any stage the terminal batters will be progressively profiled to be consistent with the rehabilitation landform, and followed up with topsoiling and seeding within 3 months of completing the earthworks.

The quarry resource and the site's geotechnical constraints are all well understood and so are very unlikely to be an impediment to achieving the designed rehabilitation landform. Therefore, there are no clear points in the quarry development at which there would be any need to resolve any geotechnical uncertainties in order to ensure the designed rehabilitation landform would be achieved.

Progressive rehabilitation will be undertaken to ensure that the disturbed area remaining open and unrehabilitated at any given time will not exceed the estimated 58 hectares. Noting that:

- the maximum will occur in early stages of the quarry development with the constructed northern waterway diversion being immediately rehabilitated
- after initial disturbance most of the water body itself will not require any rehabilitation works.

The following milestones in the site rehabilitation ("significant event or step" in the Regulations) and associated actions have been identified:

Milestone: Nearing Maximum Area of Disturbance at any Time

Trigger / Gateway – nearing 58 hectares of disturbed area open and unrehabilitated at any given time (not including established areas of the pit waterbody)

- progressive rehabilitation activities will be increased as soon as possible, particularly within the extraction area, to ensure that the open and unrehabilitated area remains under 58 hectares.
- ensure progressive rehabilitation of segments of terminal batters has occurred as soon as practicable after extraction limits are attained – the treatment of these upper batters is detailed in Section 3.2.
- ensure rehabilitation of segments of terminal batter, as they become available, have included the placement of overburden (where necessary), the spreading of topsoil and revegetation.
- ensure progressively rehabilitated areas are being monitored for rehabilitation success and, where practicable, the rehabilitation objectives have been achieved within 3 years, and the rehabilitation monitoring continues at the planned year-three frequency with remedial actions, if necessary, to ensure the rehabilitation objectives are maintained.

Milestone: 1st Major review of pit lake design

Trigger / Gateway – prior to beginning extraction within the area of Stage 3 (refer to Figure 3, Site Layout Plan).

- undertake further hydrogeological assessment.
- reassess the predicted water level for the pit lake, for subsequent stages and in the long term, determining if the long-term water level could potentially exceed the lower western end of the pit or lower to such an extent that the backfill materials would be exposed.
- review pit lake rehabilitation design in consideration of reassessed pit lake water level.

The final rehabilitated pit lake within the excavation, as shown in Figure 4, is a design based on the findings of the hydrogeological investigations that have been undertaken, which found that the mean stabilised groundwater level will be about RL 19.3m and that it will fluctuate seasonally by up to 0.25m above and below that level. This factors in the effect of evaporation over the long-term (post closure), which modelling showed would lower the water level by only about 0.2m (see Section 3.3). These findings are based on certain assumptions made from the available information but there are some uncertainties in these hydrogeological assumptions that cannot reasonably be resolved prior to commencing the proposed work. As extraction progresses more will be learnt about the hydrogeological conditions, and this acquired knowledge will be captured in the site's adaptive Groundwater Management Plan (initial plan provided as Appendix F in attached Hydrogeological Assessment).

Ahead of the trigger / gateway being reached, it is expected that there will considerable additional data available to support the major review, from both the accumulated knowledge (Groundwater Management Plan) and any necessary further investigations, which may include additional groundwater monitoring bores. The review will reassess the proposed design for the rehabilitated pit lake, including the existing beaching zones design at RL 18-20m, which are based on the current understanding of the likely final lake level. The site's Groundwater Management Plan and Surface Water Management Plan will also be reviewed and revised, as necessary, as a result of this review.

Rehabilitation criteria in relation to completing the review for this rehabilitation milestone are included in Section 5 Rehabilitation Domains Table.

The trigger / gateway for this major review has been identified on the basis that it provides a point in the extraction staging where:

a) the lowest crest of the extraction pit for Stage 2 (at about RL 23.5m) is similar to that for Stage 1 (excluding the separated in pit water storage) and predicted by the Hydrogeological Assessment to be greater than 2m above the mean water level at that stage, which will be well above the predicted final water level (RL 19.3m) for the completed pit; and

b) only the upslope half of the final pit area will have been extracted, so the water level within the extraction pit will remain elevated and the total evaporative loss will only be at half its potential.

It is expected that the review will confirm that the existing rehabilitation design is likely to remain safe, stable and sustainable, and the beaching zones will not require any significant alteration to align with the likely stabilised pit lake level. Once this is confirmed, extraction will progress into Stage 3 and the rehabilitation of the terminal batters will continue as designed, although a small revision in the final water level can be accommodated with small adjustments to the constructed beaching zones.

In the unlikely event that this major review required the rehabilitation outcome to be modified, the identified trigger / gateway allows for alternative outcomes that can still produce a rehabilitated landform that is safe, stable and sustainable, based on the gained knowledge. In that event, a Work Plan variation, or other approval process as deemed appropriate at that time, can then be initiated to alter this Rehabilitation Plan. These alternative rehabilitation outcomes may include:

- redesign of the beaching zones and, if necessary, alternative disposal for some backfill material (i.e. not within the pit or offsite), in the event it was determined that at least 3m of water cannot be maintained over the backfill material in the long-term, as currently modelled, or there will be significantly more variability in the pit lake level than expected; or
- ceasing extraction earlier than planned (e.g. end of Stage 3), and modifying the beaching zones, if necessary, in accordance with the revised hydrogeological assessment for the long-term outcome; in the event it was determined that, for the existing design, at least 3m of water cannot be maintained over the backfill material in the long-term or the pit lake may overflow the lower pit crest; or
- modify the pit crest and adjacent waterway diversion design, including inlet and outlet structures to the pit lake, to capture peak / flood flows to maintain at least 3m of water over the backfill material in the long-term, with necessary approvals obtained for redirected flows, in the event it was determined that, for the existing design, at least 3m of water cannot be maintained over the backfill material in the long-term or the pit lake may overflow the lower pit crest.

Milestone: 2nd Major review of pit lake design

Trigger / Gateway – prior to beginning extraction within the area of Stages 4A or 4B (refer to Figure 3, Site Layout Plan).

- undertake further hydrogeological assessment, building on that undertaken for the 1st major review of the pit lake design.
- reassess the predicted water level for the pit lake, for subsequent stages and in the long term, determining if the long-term water level could potentially exceed the lower western end of the pit or lower to such an extent that the backfill materials would be exposed.
- review pit lake rehabilitation design in consideration of reassessed pit lake water level.

As above, the final rehabilitated pit lake within the excavation, as shown in Figure 4, is a design based on the findings of the hydrogeological investigations that have been undertaken, which found that the mean stabilised groundwater level will be about RL 19.3m and that it will fluctuate seasonally by up to 0.25m above and below that level. This factors in the effect of evaporation over the long-term (post closure), which modelling showed would lower the water level by only about 0.2m (see Section 3.3). These findings are based on certain assumptions made from the available information but there are some uncertainties in these hydrogeological assumptions that cannot reasonably be resolved prior to commencing the proposed work. As extraction progresses more will be learnt about the hydrogeological conditions, and this acquired knowledge will be captured in the site's adaptive Groundwater Management Plan (initial plan provided as Appendix F in attached Hydrogeological Assessment).

Ahead of the trigger / gateway being reached, it is expected that enough data will be available to provide certainty on the final stabilised pit lake level. Undertaking this second major review will build on the first major review, the accumulated knowledge (Groundwater Management Plan) and any necessary further investigations, which may include additional groundwater monitoring bores. The review will reassess the proposed design for the rehabilitated pit lake, including the existing beaching zones design at RL 18-20m, which are based on the current understanding of the likely final lake level. Again the site's Groundwater

Management Plan and Surface Water Management Plan will also be reviewed and revised, as necessary, as a result of this second review.

Rehabilitation criteria in relation to completing the review for this rehabilitation milestone are included in Section 5 Rehabilitation Domains Table.

The trigger / gateway for this major review has been identified on the basis that it provides a point in the extraction staging where:

a) the lowest crest of the extraction pit for Stage 3 (at about RL 22m) remains about 2m above the lowest pit crest of the completed pit and is predicted by the Hydrogeological Assessment to be about 2m above the mean water level at that stage, which is still safely about 1m above the predicted final water level (RL 19.3m) for the completed pit (refer to Hydrogeological Assessment); and

b) less than two thirds of the final pit area will have been extracted, so the total evaporative loss will be less than that occurring for the full open pit.

The Hydrogeological Assessment assesses the risk of overtopping at the end of Stage 3 as remaining low, even with the existing uncertainties in the model.

It is expected that the review will confirm that the existing rehabilitation design is likely to remain safe, stable and sustainable, and the beaching zones will not require any significant alteration to align with the likely stabilised pit lake level. Once this is confirmed, extraction will progress into Stage 4A and rehabilitation of the terminal batters will continue as designed, although a small revision in the final water level can be accommodated with small adjustments to the constructed beaching zones.

In the unlikely event that this major review required the rehabilitation outcome to be modified, the identified trigger / gateway allows for alternative outcomes that can still produce a rehabilitated landform that is safe, stable and sustainable, based on the gained knowledge. In that event, a Work Plan variation, or other approval process as deemed appropriate at that time, can then be initiated to alter this Rehabilitation Plan. These alternative rehabilitation outcomes may include:

- redesign of the beaching zones and, if necessary, alternative disposal for some backfill material (i.e. not within the pit or offsite), in the event it was determined that at least 3m of water cannot be maintained over the backfill material in the long-term, as currently predicted, or there will be significantly more variability in the pit lake level than expected; or
- ceasing extraction earlier than planned (e.g. end of Stage 3), and modifying the beaching zones, if necessary, in accordance with the revised hydrogeological assessment for the long-term outcome; in the event it was determined that, for the existing design, at least 3m of water cannot be maintained over the backfill material in the long-term or the pit lake may overflow the lower pit crest; or
- modify the pit crest and adjacent waterway diversion design, including inlet and outlet structures to the pit lake, to capture peak / flood flows to maintain at least 3m of water over the backfill material in the long-term, with necessary approvals obtained for redirected flows, in the event it was determined that, for the existing design, at least 3m of water cannot be maintained over the backfill material in the long-term or the pit lake may overflow the lower pit crest.

Milestone: Resource Extraction Ceases

Trigger / Gateway - all resource extraction has been completed.

- at completion of all extraction activities, progressive rehabilitation has been maximised, as far as practicable, with regular monitoring, remediation and reviews of the Rehabilitation Plan.
- final rehabilitation activities commence (final landforming, preparing site for end use and decommissioning works).

Once the resource extraction ceases many areas within the site, particularly the terminal batters within the extraction area, will already be fully rehabilitated and the rehabilitation objectives satisfied.

At completion of all extraction activities, progressive rehabilitation across the site will have been maximised, as far as practicable. The success of the progressive rehabilitation will have been regularly monitored, and any necessary remediation undertaken or adjustments to the rehabilitation program implemented.

The final phase of major rehabilitation activities will commence, which involves works to finalise the rehabilitation landform, works to prepare the site for the intended end uses and decommissioning works to remove plant and infrastructure that is not to be retained. The processing of stockpiles, sales activity, etc, may continue for some time after resource extraction has ceased, therefore the decommissioning and removal of particular plant and infrastructure cannot occur until these activities have finished.

Milestone: Completion of Rehabilitation Activities

Trigger / Gateway - completion of all extractive industry activities and major rehabilitation activities.

- cessation of all extractive industry activities and completion of major rehabilitation activities (earthworks, planting, decommissioning works, etc.) on the site.
- post rehabilitation phase commences – monitoring for rehabilitation success, remediation (if required) and assessment against rehabilitation / closure criteria.

Once all resource extraction ceases, it is anticipated that all earthworks and decommissioning works involved in the final rehabilitation work will be achieved within 12 months. However, revegetation will be dependent upon environmental and practical factors.

After completion of all the major rehabilitation and decommissioning works there will be a period of post rehabilitation monitoring with maintenance and remediation works completed as necessary. This monitoring phase is to confirm that rehabilitation objectives are being met and will continue until all closure criteria have been achieved.

Site Closure

Site Closure is effectively the last rehabilitation milestone. As defined previously, the term “closure” is used here to be the point in time when all the rehabilitation objectives have been achieved, i.e. when all closure criteria have been met, for all the rehabilitation domains. Therefore, allowing surrender of the Work Authority and return of the rehabilitation bond.

Site Closure is achieved once the post rehabilitation monitoring demonstrates that all closure criteria have been met for all the rehabilitation domains, in accordance with Section 5 Rehabilitation Domains Table.

The current understanding of the hydrogeological conditions indicates that the mean stabilised water level for the completed pit will be at about RL 19.3m, with a seasonal fluctuation of up to 0.25m above and below that level. Therefore, beaching zones are to be established between RL 18m-RL20m. Subject to confirmation by further studies and the results of further groundwater monitoring at the above milestones (Major reviews of pit lake design), the existing information, in consideration of potential inflows and evaporation rates, supports that the pit lake is likely to remain safe, stable and sustainable in the long-term.

2.6. Schedule for Rehabilitation

As stated previously, rehabilitation for the whole site will not be a single linear process, as it will occur in multiple areas in parallel to extraction and processing activities for much of the quarry life, nor will the individual areas undergoing rehabilitation across the site follow consistent timelines. The timing of rehabilitation works and the progress through phases of rehabilitation will differ for most of the separate rehabilitation domains. This timing is dependent on a range of factors, including the practical limits on extraction sequencing, availability of overburden / waste rock at various stages of extraction, practical operational limitations (e.g. areas required to remain open for processing, stockpiling, water management,

etc.), the need to limit double handling costs, any need to undertake remedial measures for rehabilitated areas, seasonal / climatic conditions, and also external market forces.

Planning legislation prohibits the imposition of cessation dates on extractive industries, except in some urban situations, and allows for delays in starting the use of up to 5 years and the discontinuance of the use for up to 10 years, in recognition of the inherently variable nature of the market. Given that planning permission is effectively issued for the life of the resource and allows for a highly variable market, and the factors already mentioned regarding the realities of progressive rehabilitation, a schedule of rehabilitation activities can only be stated in relative terms.

Ongoing Progressive Rehabilitation

The planned timing of progressive rehabilitation for any particular part, or segment, of the site to be rehabilitated, where this can be practicably applied, is as follows:

- ***As soon as practicable*** *(depending on a range of factors)*: Complete earthworks to achieve the rehabilitation landform for that part as the extraction sequence / quarry development allows, including the placement of overburden and topsoil.
- ***Within 3 months of completing earthworks on a segment of upper terminal batter***: Initially stabilise segments of slope through seeding with pasture and/or brush matting, including undertaking any remedial works and spreading of additional soil, if necessary.
- ***Within 12 months of the completed earthworks***: Initial pasture revegetation, where applied, will generally be established on rehabilitated segments of batters, which will be followed by seeding / fertilising with final vegetation species, as appropriate, being scattered trees and shrubs, however this is dependent upon environmental and practical factors.
- ***Each Spring and Autumn*** *(i.e. six monthly intervals)*: Review and report vegetation status of rehabilitated segments, undertake any remedial earthworks necessary and supplement vegetation as appropriate.

Progressive rehabilitation will be carried out to ensure that the total disturbed area open and unrehabilitated at any given time will remain below 58 hectares throughout the life of the operation, including rehabilitated areas that will have not yet met the rehabilitation objectives.

Final Rehabilitation Activities, Post Rehabilitation Phase and Closure

Once all resource extraction ceases, the final rehabilitation activities will involve completion of final earthworks, final revegetation works and the decommissioning of any processing plant and/or other quarry infrastructure not identified as being retained post closure. This will be followed by a period of post rehabilitation monitoring and, where necessary, remediation until all the criteria for closure have been met.

At completion of all extraction activities progressive rehabilitation will have been maximised, as far as practicable, with regular monitoring for rehabilitation success, remediation and reviews against the Rehabilitation Plan. Therefore, significant areas of the site will have already met rehabilitation objectives with vegetation well established. It is anticipated that all earthworks and decommissioning works involved in the final rehabilitation activities will be achieved within 12 months. However, the time required for full establishment of vegetation on the remaining unvegetated landform will be dependent upon environmental and practical factors.

- ***As soon as practicable after ceasing extraction***: Complete final earthworks and decommissioning works for remaining unrehabilitated areas to achieve the rehabilitation landform across the whole site, including the placement of overburden and topsoil.

  Note: processing of stockpiles, etc. may continue for some time after extraction ceases.
- ***Within 3 months of completing final earthworks and decommissioning***: Initially stabilise remaining unrehabilitated slopes through brush matting and/or seeding with pasture, including undertaking

any remedial works and spreading of additional soil where necessary, followed by later seeding / fertilising for final intended vegetation, as appropriate.

- ***Within 12 months of the completed earthworks and decommissioning***: Initial pasture revegetation, where applied, will generally be established on remaining unrehabilitated batters, however, this will be dependent upon environmental and practical factors. Once initial pasture cover is established, seeding and fertilising with final vegetation species, as appropriate, will be undertaken (generally within the 12 months).
- ***Within 12 months of the completed earthworks***: Any retained site infrastructure, hardstands, etc., prepared in accordance with requirements for end land use.
- **Post Rehabilitation Monitoring**: Continue monitoring of rehabilitation outcomes in accordance with the monitoring frequency, as presented in Section 5 Rehabilitation Domains Table, assessing against the criteria for closure to achieve the rehabilitation objectives for individual rehabilitation domains.
- ***Each Spring and Autumn*** *(i.e. six monthly intervals)*: Review and report vegetation status of rehabilitation across the site, undertake any maintenance and remedial works, where necessary, including earthworks, supplementing vegetation as appropriate, and implementing any necessary remedial actions for site drainage and retained assets.
- ***Site Closure – Meeting Criteria for Closure***: The post rehabilitation monitoring will continue until the criteria for closure have been met and the rehabilitation objectives achieved for all rehabilitation domains. This monitoring and maintenance period is planned to continue for at least three years. The post rehabilitation monitoring and remedial actions may continue for a longer period, if necessary, until the relevant authorities are satisfied. This period could potentially be shorter if all the closure criteria were to be met and the rehabilitation objectives achieved prior to the end of the planned three years.

Potentially, previously extracted areas that have been fully rehabilitated could be excised from the Work Authority at some future stage, where it is practical to do so. This could occur where it can be demonstrated that the rehabilitation objectives are achieved for those areas and that they are ready for the proposed end land use. This would allow a reassessment and potential reduction of the rehabilitation bond at that time for the ongoing extractive industry on the remainder of the Work Authority.

3. REHABILITATION LANDFORM DESIGN

A conceptual, site wide plan of the Rehabilitation Landform is attached as Figure 4.

3.1. Assets To Be Retained

The land and the Work Authority upon application are owned by separate entities, however, there is a contract of sale in place with settlement in December 2023. After which the land and the Work Authority will both be owned by Lang Lang Sand Resources Pty Ltd.

The constructed infrastructure / assets to be retained are mainly associated with the screening mound and water management, as listed below. There will be no processing infrastructure retained post closure.

Assets to be retained include:

- Site access tracks around the property and pit crest providing access to the waterway diversion and the groundwater monitoring bores
- Visual screening bund (and any vegetation) to South Gippsland Highway
- Northern waterway diversion
- Water supply bores and monitoring bores for ongoing agricultural uses
- All perimeter fencing and any internal fencing established over the life of the resource.
- Bund and drain to extraction crest

It is estimated that approximately 1.8ha of internal tracks will be retained.

The constructed northern waterway diversion is designed with floodwater storage and will perform an ongoing role in the management and control of surface water for the site and alleviating downstream flooding. Therefore, the diversion as constructed will remain in place post closure as required by Melbourne Water.

The visual screening bund established along the South Gippsland Highway frontage and part of the eastern boundary will be will remain in place permanently as part of the rehabilitation landform. Vegetation will have been established on the bund at an early stage of the quarry development, with low shrubs and other vegetation on those parts of the bund nearest the relocated power line, so as to avoid the need for future lopping of the vegetation.

These features / assets are presented on Figure 4, Rehabilitation Landform. The total area of these retained assets is approximately 21.6ha. Additionally, the pit lake will occupy about 58.3ha in the rehabilitated landform.

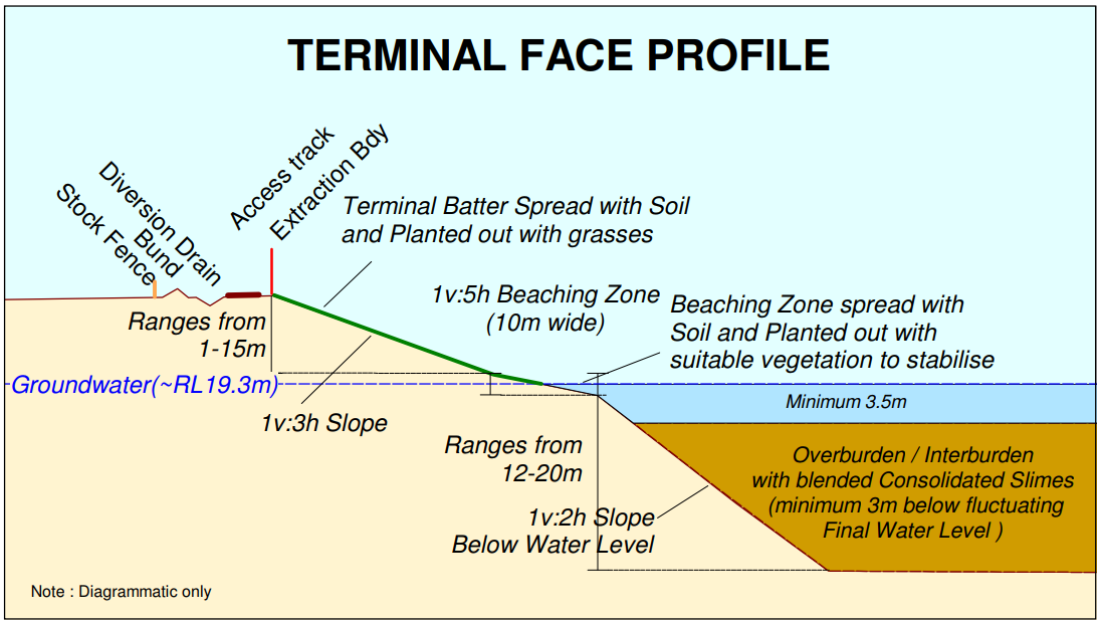
All mobile and/or any processing plant and equipment will be removed from the site.

3.2. Terminal Face Treatment

Terminal faces will be cut in insitu material and will not be constructed with backfill. Overburden and/or other unsaleable material may be used to level out or rehabilitate hardstand areas. The terminal batters will be cut from the surface to RL20m at a batter not steeper than 1V:3H. A beaching zone, not steeper than 1V:5H, will be established between RL18m-RL20m. A cut batter of 1V:2H will be established from RL18m down to the base of the resource.

Terminal faces above the designed water level will be rehabilitated as soon as practicable by placing, spreading and where necessary compacting suitable material. Where suitable, some consolidated slimes blended with overburden, interburden and plant oversize / waste may be used to aid rehabilitation of the

terminal extraction batters above water. Batter slopes will be lightly scoured, covered with minimum 200mm of topsoil and vegetated with pasture grasses within 3 months of completing the earthwork to aid in managing erosion and dust. The beaching zones will be planted with suitable aquatic species.



During the Operational / Works phases, a safety bund will be established around the crest of terminal faces. Such safety bunds will be remodelled into a small mound and swale drain once the final rehabilitation profile has been achieved. The purpose of this crest bund and drain is to prevent surface water from flowing over the rehabilitated batters and minimise the erosion potential on the batter.

A 1.2m standard stock-proof fence will be established behind the crest of terminal faces. These farm fences will be retained at closure. See Section 3.8 for further discussion.

3.3. Pit Floor / Pit Lake Treatment

The floor of the pit will be completely covered by groundwater resulting in the establishment of a pit lake. Overburden / interburden, with blended consolidated slimes material, will have been placed as backfill within the pit. Such material will have been deposited so that it will be at least 3m below the seasonal fluctuations in the water surface after the stabilisation of the water level.

The walls of insitu material around the in pit water storage will have been largely removed during the final phase of the quarry extraction. Any limited volume of slimes at its base will mix with the much greater volume of surrounding backfill material (i.e. overburden with blended consolidated slimes), which will have been deposited at the bottom of the water body throughout the operation. The surrounding backfill material will be moved into the space of the in pit water storage during the removal of the walls. All of these remaining materials will be greater than 3m below the seasonal fluctuations in the final, stabilised water surface.

The hydrogeological assessment (attached, undertaken by Nolan) estimates a mean pit lake level of RL 19.3m, based on the extraction through to the end of Stage 4, with a seasonal fluctuation of up to 0.25m above and below that level. Additionally, modelling conducted for this assessment showed that the effect of evaporation over the long-term (post closure) was to lower this water level by about 0.2m, bringing the final stabilised level down to about RL 19.3m. Beaching zones (as shown in the schematic above and on Figure 4) will be established between RL18m-RL20m, with a slope no steeper than 1V:5H, to mitigate any wave erosion risk. Additionally, the land immediately adjacent to the lower western end of the pit will have been raised by 1m due to the construction of a hardstand for the final stage of extraction, which, prior to closure, will be linked with a 1m high bund to be constructed around the remainder of the pit crest at the western end. This will effectively increase the freeboard of the final pit lake by an extra metre.

3.4. Dams and Constructed Works

There are no slimes storage dams or process water storages retained post closure. The pre-existing farm dam ('turkey nest' dam) will be entirely removed and that part outside of the extraction area returned to pasture. Slimes generated from the sand washing process will be consolidated and blended with overburden, interburden and plant oversize / waste and placed at least 3m below seasonal fluctuations in the final water level within the excavation, as partial backfill.

There will be no workshop, fuel stores, oil and grease stores, spare parts stores, amenities, weighbridge, offices, meeting room, laboratory, etc. remaining on the site.

Roads and tracks that might have been constructed as part of the works, other than those shown on Figure 4 Rehabilitation Landform, which are deemed unnecessary for the post closure land use will be removed / ripped and rehabilitated. Internal access tracks may be extended through the Work Authority buffer areas during final rehabilitation to provide practical linkages with existing external access tracks to facilitate post closure farming activities.

Hardstand and stockpile areas, that might have been constructed as part of the works and ultimately considered surplus to future farming use will be removed / ripped and rehabilitated.

The 5m high visual screening bund to the South Gippsland Highway is to be retained at closure. The screening bund is to be established early in the quarry development and rehabilitated as soon as practicable with topsoil and establishment of vegetation. Where suitable, some consolidated slimes blended with overburden, interburden and plant oversize / waste may be used to aid rehabilitation of the terminal extraction batters above water. The powerline will be permanently relocated along the southern boundary of the property and generally align with the outer toe of the screening bund. While there is no requirement forbidding the planting of trees and shrubs within the required 12m wide easement, it is proposed to limit plantings on the nearest parts of the screening bund to low shrubs to avoid the need for later lopping and maintenance. In accordance with AusNet Services advice relating to the relocation (attached to the Work Plan), there will be sufficient access retained (at least 10m) between the toe of the bund and the property boundary for any future maintenance of the relocated power poles.

The northern waterway diversion is also to be established early in the quarry development and rehabilitated as soon as practicable and then retained at closure, in accordance with Melbourne Water advice. In addition to excavating the shallow channel itself there will be some associated surficial disturbance at the margins to flatten the adjacent ground, which will also be rehabilitated as soon as practicable. Spoil from the construction of the waterway diversion, other than the topsoil, may also be used in constructing the visual screening bund. No further rehabilitation works in relation to this diversion will be required once it is stabilised, revegetated and fully established.

Water supply bores and monitoring bores will be retained for ongoing agricultural uses.

3.5. Overburden Requirements

The following estimates of material excavated have been obtained from the proposed pit design, the resource mapping, local site experience, and extrapolation.

The Fine-Medium Sand Resource contains interlayered clay/silt lenses (interburden) as well as layers of peat/organic material.

The total volume of the excavation is estimated at 14.3 million cubic metres – not including the area of shallow excavation for the northern waterway diversion (approx. 120,000 cubic metres).

- **Soil:- 165,000 cubic metres**: the top 2-300mm of material is treated as soil and stockpiled (250mm has been used for estimate)
- **Overburden :- 2,600,000 cubic metres**: the next 3-7m of material is clayey granular material, easily diggable and has been classified as overburden. This layer varies considerably across the site from virtually zero in some areas to up to 7m in other areas. An average depth of 4m has been assumed across the extraction areas.
- **Fine-Medium sand:- 13,500,000 tonnes**: the upper levels of the resource is a fine-medium sand, with variable organic content/coatings.
- **Interburden material:- 2,500,000 cubic metres**: the resource is characterised by clayey / organic lenses and bands that occur throughout the deposit in varying thickness from 2-8m, averaging 3m of the total profile.

The volume of overburden required to construct the screening bund to the South Gippsland Highway is 150,000 cubic metres: 115,000m^3 for the bund east of the site entrance and 35,000m^3 for the bund west of the site entrance.

The volume of soil required to top dress the bund with a minimum 200mm of soi is 12,000m^3: 9,000m^3 for the bund east of the site entrance and 3,000m^3 for the bund west of the site entrance.

The volume of soil required to dress disturbed areas outside the extraction area is 8,200m^3 (4.1ha at 200mm) and the terminal batters down to RL20 is 9,200m^3 (4.6ha at 200mm).

Given the excess balance of soil and overburden available to soil and overburden required for rehabilitation, some soil and overburden may be sold, blended with other materials on site or removed from the site, but will be continually monitored to ensure sufficient is available to achieve rehabilitation.

In addition to the identified overburden / interburden material, other sources of quarry waste material generated at the site include, but not limited to:

- Plant oversize / reject (estimated at approx. 3-5% of the primary raw feed (PRF))
- Unsaleable products
- Imported Material (clean fill)

Please Note:

- The timing of final treatment of the terminal faces occurs as soon as possible after extraction limits have been achieved and will initially require the temporary stockpiling of soil and overburden until required.
- The site has the potential to accept clean fill and in addition to other sources of plant waste this may result in the overall rehabilitation surface being at a higher level than proposed, or flatter batters than proposed, but will always be consistent with the overall rehabilitation objective.

Overburden / fill quantities will be continually monitored to ensure consistency with the rehabilitation objective, and if a significant deviation from the primary objective is observed the relevant authorities will be notified and the appropriate actions set in place.

Excess overburden and unsaleable material will be placed within the excavation area, initially on the surface until adequate excavated area has been established, then into worked out areas. Some excess overburden may also be blended with other materials for sale and use as select fill. Remaining stockpiles of overburden and oversize / reject material will be placed in the pit before closure, deposited at least 3m below the seasonal fluctuations in the final water's surface, and, apart from the screening bunds that are remaining in place, there will be no overburden stockpiles or oversize / reject dumps remaining post closure.

3.6. Surface Water Management

Through the Operational / Works phases surface water is managed to ensure run-off from disturbed areas (including roads, hard stand areas, stockpiles and waste rock dumps) is intercepted and directed back to the excavation. Thereby minimising the potential for dirty water run-off and erosion.

Surface water diversion bunding and swale drains associated with the excavation area will remain in place after rehabilitation and closure.

The northern waterway diversion directs surface water entering the property from the east around the disturbed areas to exit into the existing drainage line near the north-western corner of the property. This northern waterway diversion will be retained in the rehabilitated landform. The diversion is designed with broad areas for floodwater storage and the attached flood assessment and waterway diversion design by Spiire Australia Pty Ltd shows that it will easily prevent floodwaters from a 1%AEP event entering the excavation.

Water collecting in the sediment traps throughout the operating stages of the quarry will be used around the site for processing, dust suppression and irrigation. Sediment removed from sediment traps will be incorporated into products for sale or mixed with overburden or plant oversize / waste for use in site rehabilitation.

At closure, much of the surface water management infrastructure, consisting of swale drains and perimeter bunds will be retained in the rehabilitation landform, directing surface water away from the excavation, with only the incident rainfall collecting within the site directed to the retained pit lake.

3.7. Imported Material

Whilst the volume of overburden and plant waste material generated by the site is sufficient to fulfil the rehabilitation requirements (see Section 3.5), imported material may be used to supplement onsite rehabilitation or for commercial reasons. Any material imported for rehabilitation purposes will be limited to small amounts of topsoil or possibly mulch, but only if necessary to aid in the rehabilitation of areas that may be proving difficult to remediate. Imported sand, clean fill or soil may be used to blend with onsite material or products: i.e. coarse sand may be imported to blend with the sand resource, or clean fill /soil may be imported to commercial advantage.

The importation of any material will be in accordance with the Imported Fill Management Plan, which is developed in accordance with Earth Resources Regulation guidelines and Environment Protection legislation. The Imported Materials Management Plan will be regularly reviewed to continue meeting these guidelines and any other relevant guidelines issued by the Environment Protection Authority.

It is acknowledged that if “solid inert waste” were to be imported for “recycling” then separate planning permission would be required.

There will be no stockpiles of imported materials remaining on the site once rehabilitation is complete.

3.8. Site Fencing

The site has direct access to the South Gippsland Highway, hence this road frontage will be fenced and a screening mound constructed. This perimeter fence and screening mound will be retained post closure.

The Work Authority boundary and title boundary are coincident for most of the property, apart from an area in the northeast, that was removed from the Work Authority to avoid a ACHS trigger area. This area of the site, as will areas of the Work Authority not immediately required for extraction, will continue to be farmed but will be clearly identified with signage and temporary fencing as required to identify it as a no-go area for quarry operations.

All perimeter fencing and any additional fencing established for protection of vegetation, management of stock, or other activities, will be retained at the completion of operations if desired for ongoing farming activities.

The Rehabilitation Plan does not leave any steep or exposed faces, therefore no fencing or other security measures to the site's perimeter are required post closure. However, a 1.2m standard stock-proof fence will be installed behind the crest of the pit and retained at closure. This farm fencing will be utilised in the ongoing use of the site for farming after closure.

Perimeter and any additional fencing established will be reviewed at the annual reviews as required, including during site rehabilitation.

3.9. Weeds and Pest Animals

The development of any weed or pest animal issues on the site will be monitored and managed on an ongoing basis at the quarry through to site closure, to satisfy the requirements of both Earth Resources Regulation and DELWP.

Spraying to control weeds will be undertaken using approved treatments and all pest animals will be controlled using approved methods.

There will be no legacy of the extractive industry related activity that poses a post closure risk of weeds, pest animals and/or soil-borne disease on the rehabilitated land.

3.10. Revegetation

The overall rehabilitation objective includes returning the site to a form suitable for ongoing farming / grazing activities, with any treed revegetation to be suitable initially as a visual screen and post closure as shelter for any livestock.

Whilst it is not planned to establish any specific areas of endemic native vegetation, it will be necessary throughout the life of the site to establish some perimeter planting / vegetation screens or windbreaks and to manage erosion. Based on hardiness and growth rate, the following species are recommended, but may be supplemented with other species as recommended by DELWP or other agencies. Note that no trees (only shrubs) are planned for the buffer and/or the adjacent parts of the bund to the South Gippsland Highway as this will be the location of the relocated power line.

Trees:	**(approx. 1000/ha)**	Blue gum	Eucalyptus globulus	~100%
Shrubs:	**(approx. 1000/ha)**	Black Wattle	Acacia mearnsii	~40%
		Common Cassinia	Cassinia aculeata	~30%
		Rough-barked Honey-myrtle	Acacia acinacea	~40%
Pasture:		Perennial grasses		~100%
Beaching Zone		Harding grass	Phalaris aquatica	~100%

The rehabilitated terminal batters, beaching zone and other disturbed areas will be fertilised and seeded with appropriate pasture grasses as soon as possible after extraction within respective areas. In due course, some of these areas may be incorporated into the general farming activities on the remainder of the site. A variety of re-vegetation methods may be required to establish a viable vegetative cover. Where appropriate short-term cover grasses may be established to stabilise topsoil stockpiles or other disturbed areas prone to wind or surface water erosion.

The conceptual plan of rehabilitation is presented on Figure 4 Rehabilitation Landform.

4. ACHIEVING SITE CLOSURE

The Rehabilitation Domains Table in Section 5 outlines the criteria and monitoring to evaluate the success of the site's rehabilitation program. These apply to the rehabilitation works carried out throughout the Operational / Works phases, i.e. the progressive rehabilitation works during the construction and production phases, and the final rehabilitation works completed toward the end of the site's Operational / Works phases. The rehabilitation of the site has been designed such that the rehabilitated land will not, after closure, pose any risks to the environment, members of the public, or to land, property or infrastructure that would require ongoing monitoring, maintenance, treatment or land management.

4.1. Rehabilitation / Closure Criteria

The success of site rehabilitation will be regularly reviewed against stated criteria for individual rehabilitation domains that when met will demonstrate that the rehabilitation objectives have been achieved. The specific criteria and the monitoring frequency for assessing them are presented in Section 5 Rehabilitation Domains Table.

Progressive rehabilitation works will be ongoing throughout most of the quarry life, and will be particularly applicable to the rehabilitation of the terminal batters above groundwater level, and its success will be assessed against the relevant criteria for the rehabilitated parts of the site on an ongoing basis.

In line with rehabilitation objectives, a focus of the criteria during progressive rehabilitation of the various domains will initially be on measuring the success of the prevention of erosion within the extraction area and dirty water run-off from the disturbance footprint. These risks will be mitigated through cut off drains, vegetation establishment, strategic location of batter swale drains and other surface water management strategies as required.

Obtaining a quantitative measure of erosion from rehabilitated areas as erosion control measures / revegetation takes effect is difficult, therefore the erosion criteria presented in Section 5 Rehabilitation Domains Table are based on a qualitative (visual) assessment. The table below offers some generally accepted interpretations comparing quantitative soil losses to a visual assessment of any scouring on relatively uniform slopes (i.e. not involving concentrated flows).

Quantitative Assessment Soil Loss (RUSLE Equation or similar)	Qualitative / Visual assessment
Less than 5 tonnes per hectare per annum	Not noticeable to the naked eye
5-50 tonnes per hectare per annum	Scouring / erosion barely noticeable
50-200 tonnes per hectare per annum	Scouring typically up to 200mm wide and/or deep (criteria for rehabilitated batters not yet stabilised)
200-600 tonnes per hectare per annum	Scouring typically up to 5-600mm wide and/or deep

Other criteria will concentrate on the establishment and maintenance of the rehabilitated land for agricultural uses in applicable areas and ensuring the health and viability of the pit lake.

In addition to the criteria outlined in the Rehabilitation Domains Table it is understood that Earth Resources Regulation may, from time to time, require specific rehabilitation and/or site closure requirements, including any monitoring and reporting requirements. If there are additional requirements, they shall be documented appropriately (i.e. Trigger Action Response Plans / TARPs, etc.) and available for review on request.

4.2. Rehabilitation Monitoring

Monitoring of rehabilitation success against the stated criteria, particularly progressive rehabilitation and through to the final rehabilitation works, is an integral part of the Operational / Works phases of the site, and will continue after completion of all rehabilitation works (i.e. the Post Rehabilitation phase). The rehabilitation monitoring will occur at varying frequency, generally decreasing over the first three years, until the stated criteria are met. The ongoing rehabilitation monitoring records will adopt the worksheets / proformas used throughout the Operational / Works phases.

Section 5 Rehabilitation Domains Table lists the rehabilitation / closure criteria and details the monitoring frequency over the initial three years for each rehabilitation domain, during both the Operational / Works phases (throughout production and final rehabilitation works) and the period following completion of rehabilitation works (post rehabilitation). Given the projected site closure is some decades in the future it is difficult to commit to a more specific rehabilitation monitoring program at this point-in-time. For those parts of the site where progressive rehabilitation has been completed and the rehabilitation objectives already achieved, the rehabilitation monitoring will continue at the planned year-three frequency to ensure the rehabilitation objectives are maintained. The monitoring program is the subject of constant review and, if required, increased monitoring can be adopted, or more effective criteria imposed, if it becomes apparent through the Operational / Works phases that the rehabilitation objectives are not being met.

After completion of all the major rehabilitation and decommissioning works there will be a period of post rehabilitation monitoring for the final rehabilitation works, with maintenance and remedial works completed as necessary. This final post rehabilitation monitoring program is designed to demonstrate that the criteria for closure have been met and that the rehabilitation objectives have been achieved for all rehabilitation domains. This monitoring phase will continue until the closure criteria have been met and is planned to continue for at least three years.

The post rehabilitation monitoring and remedial actions may continue for more than three years, if necessary, as could also be required by Earth Resources Regulation. If so, the monitoring will be conducted at the planned year-three frequency, or more frequently if required, until the relevant authorities are satisfied that all the closure criteria have been met. It is also possible that all the closure criteria could be met and the rehabilitation objectives achieved prior to the end of the planned three years, and then the Work Authority could be surrendered ahead of schedule.

A critical review of the rehabilitation monitoring program and effectiveness of the monitoring frequency and closure criteria will be undertaken either:

- some 5 years before the anticipated cessation of resource extraction, or
- when there is less than 8ha of undisturbed extraction area remaining (i.e. approx. 50% of Stage 4);

and will address all relevant matters to the satisfaction of all the relevant authorities at that time.

To ensure that the rehabilitation monitoring reflects the stated criteria the following activities will occur:

- auditing the site for remaining plant, machinery, scrap, rubbish, etc.
- measuring suspended solids in run-off from the site
- pasture establishment that is agriculturally viable.

4.3. Remedial Works

If criteria are not being met or rehabilitation is not satisfactorily progressing, based on the monitoring, maintenance and remedial activities will be undertaken to ensure criteria are met. Example situations would include, but not limited to:

- Damage to fencing – repair fencing, investigate the cause, initiate additional measures as necessary (Note: perimeter fencing to be maintained up to site closure and then retained by agreement with landowner, but not required to manage any post closure risk associated with the rehabilitated land)
- Poor pasture development – investigate cause, engage agronomist for advice on pasture species, soil properties, fertiliser, remedial works as required
- Excessive weed presence – initiate one off weed eradication program, review weed management schedule and pasture development
- Excessive erosion – repair the area, review pasture development, review surface water management activities, consider more appropriate location of drains and/or culverts. Investigate alternative erosion control devices (e.g. rock armour, hay bales, vegetation).

4.4. Identification of Post Closure Risks

Hazards potentially associated with the rehabilitated land (post closure), as a consequence of the changes due to the extractive industry use, may pose long-term risks to the environment, members of the public, or to land, property or infrastructure. If such post closure risks are posed to these sensitive receptors and require monitoring, maintenance, treatment or any other ongoing land management activities, then these 'relevant risks' (as defined in the Regulations) must be identified and assessed in the Rehabilitation Plan.

The table below is from the Risk Management Plan and lists the hazards that are typically associated with extractive industries and rehabilitation works, with the last column specifically identifying the hazards potentially associated with the rehabilitated land (post closure). This list of hazards formed the basis of the hazard identification in relation to the whole proposal. Where such hazards are identified as being present, individual Risk Treatment Plans are provided for the Operational / Works phases in the Risk Management Plan. If the hazard is not present at the site then it is marked as such in the table below.

		OPERATIONAL / WORKS PHASES		
HAZARD	**COMMENT**	**PRODUCTION & CONSTRUCTION**	**REHABILITATION ACTIVITIES**	**POST CLOSURE**
Altered visual amenity		YES	YES	NO
Noise		YES	YES	NO
Dust		YES	YES	NO
Surface water flows		YES	YES	YES
Ground disturbance		YES	YES	NO
Ground instability		YES	YES	YES
Blasting	NOT PRESENT	NO	NO	NO
Erosion and sedimentation		YES	YES	YES
Process water and storages		YES	YES	YES
Slimes storage		YES	YES	YES
Imported materials		YES	YES	YES
Unauthorised site access		YES	YES	NO
Fuel, lubricants, other hazardous materials		YES	YES	NO
Weeds, pests and diseases		YES	YES	NO
Rubbish / general waste		YES	YES	NO
Fire		YES	YES	NO
Soil biological activity		YES	YES	NO
Vehicle sediment transport		YES	YES	NO

While there may be potential hazards associated with the rehabilitated land (post-closure), that relate to the past use of extractive industry, it firstly needs to be determined if such hazards would pose a risk that requires ongoing management after closure.

As detailed below for each hazard that is present, there will not be any 'relevant risks' (post closure) posed by the hazards potentially associated with the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities.

Altered visual amenity

The screening bund and vegetation established during the Operational / Works phases of the site will be retained post closure, however, as there is no activity proposed post closure that requires screening they are not required to manage any risk. There is no ongoing commitment, management or maintenance associated with the bund or any screening vegetation. By the time site closure comes around, the bunds and any screening vegetation will have been in place for several decades and become "part of the amenity" and removing them serves no purpose.

There is no post closure hazard posed by the rehabilitated land that requires visual screening. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Noise

There will be no ongoing vehicle or quarry related machinery operating post closure, with the Rehabilitation Plan preparing the site for a return to general farming on those parts not occupied by the water body.

There is no extractive industry related activity proposed post closure on the rehabilitated land that could generate noise. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Dust

There will be no ongoing vehicle or quarry related machinery operating post closure, with the Rehabilitation Plan preparing the site for a return to general farming, with no exposed or unvegetated areas at closure apart from the water body.

There is no extractive industry related activity proposed post closure on the rehabilitated land that could generate dust. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Surface water flows

The risks associated with this hazard occur as a result of surface water flows being modified or diverted during Operational / Works phases. The waterway permanently diverted in the north of the site early in the operation will be well established and any necessary remedial actions taken, to Melbourne Water's satisfaction, decades before site closure. The diversion design includes floodwater storage to mitigate any downstream flooding impacts, which is also a Melbourne Water requirement. So, it is concluded that there will be no risks from surface water flows, in relation to the waterway diversion, posed by the rehabilitated land post closure.

The hydrogeological assessment (attached, undertaken by Nolan) found that there was minimal risk of the pit lake level (RL 19.3m, with seasonal fluctuation up to 0.25m above and below that level), in consideration of potential inflows during high flow periods and evaporation rates, either exceeding the lower western end of the pit or lowering to such an extent that the backfill materials would be exposed. Modelling conducted for this assessment showed that the effect of evaporation over the long-term (post closure) was to lower the

lake water level by about 0.2m. The flood modelling by Spiire (refer to attached flood assessment and waterway diversion design) found that the proposed northern waterway diversion would easily accommodate a 1% AEP flood event without any overflow toward the pit. So, there will not be any external inflows to the pit during high flow periods and the lake level will be controlled by evaporation, therefore (subject to confirmation at the Major review milestones) it is very unlikely that the pit lake level would exceed the lower western end of the pit. Particularly given that the lower western end of the pit will effectively have an extra 1m of freeboard, prior to closure, due to the construction of the hardstand outside the pit, infill / rehabilitation of the former farm dam, and linkage between the two with a bund at the western pit crest.

The hydrogeological assessment (attached) also found that the occurrence of elevated turbidity in the pit water body, post closure, would be limited to inflow events, with associated risk of turbid water then flowing out of the site. However, as above, the flood modelling by Spiire shows that the waterway diversion would prevent any external inflows to the pit from that northern waterway, therefore inputs of elevated turbidity are not possible. Additionally, the hydrogeological assessment found that long-term salinity will depend on the net evaporative loss versus inflows and states that the lake level will be controlled by evaporation. The modelling long-term effect of evaporation found that it would have a minor impact and so the long-term salinity in the pit lake would likely reflect the salinity levels in the existing groundwater bores. If increased salinity and dropping water levels were to be detected during operations, then peak surface water flows could be directed into the pit (with appropriate authorisation).

The groundwater is likely to be naturally slightly acidic but the acidity could potentially be increased by exposure of acid producing materials during the quarry operations. However, during operations the exposure of such materials will be managed to minimise acidification. Together with the use of an isolated (walled off) in pit water storage to manage return waters from the processing and stockpiling areas, with the use of neutralising agents, as necessary, for water inputs and outputs from the plant as well as captured runoff, these measures will ensure that the water in the pit lake has not become acidified. If any blue-green algae is detected during operations then copper sulphate dosing will have been utilised to limit any further blooms.

With the above mitigation measures in place during the site operations, and with all site objectives achieved, the risks associated with surface water flows (including storm water) at closure will be very low and there will be no legacy of the extractive industry related activity that increases the post closure risk associated with surface water flows and flooding on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Ground disturbance

The risks associated with the hazard of ground disturbance occur when disturbing the ground. Post closure there will be no quarry related ground disturbance, the northern waterway diversion, screening bunds and vegetation established in the initial stages of the operation will remain in place, and no additional ground will be required to be disturbed to achieve the rehabilitated landform. Any topsoil or overburden mounds will have been used in rehabilitation of the pit batters or used in partial backfill, and there will be no ongoing disturbance of groundwater or any potential acid producing materials within the pit, so there will not be any ground disturbance activity in association with extractive industry occurring post closure.

At closure all areas of ground disturbance will be fully rehabilitated and there will be no legacy of the extractive industry related activity that increases the post closure risk associated with ground disturbance on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Ground instability

The majority of risks associated with the hazard of ground instability occur when excavating new ground. After completion of the final rehabilitation works some risk may still be present and a simple monitoring

program will be put in place. The rehabilitated landform will be monitored / inspected as per the Rehabilitation Plan with any recommendations and remediation implemented, or as directed by ERR.

Whilst some residual risk of ground instability remains post closure, it is concluded that given the competency of the cut terminal batters, the 1V:3H rehabilitated upper batters, and the erosion controls implemented, the likelihood of a failure is very low.

The ground instability risk at closure will be very low and there is no activity proposed post closure on the rehabilitated land that increases the risk of ground instability. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Erosion and sedimentation

Uncontrolled surface water flows have the potential to cause erosion on the rehabilitated landform, so this hazard could still exist post closure. The rehabilitated landform will have gentle (1V:3H) batters above groundwater, that will be covered in pasture grasses at closure and suitable for general farming. This landform is consistent with the surrounding land and ground cover. It is anticipated that when the rehabilitation objective of "pasture" has been achieved, the rehabilitated landform will be self-sustaining and erosion negligible. Some site drainage will be retained in the rehabilitated landform and any sedimentation that may occur, particularly as a result of any erosion on the rehabilitated batters, will be contained within the excavated landform and will not increase the risk to the surrounding environment.

The hydrogeological assessment (attached, undertaken by Nolan) found that there was minimal risk of the pit lake level (RL 19.3m, with seasonal fluctuation up to 0.25m above and below that level), in consideration of potential inflows during high flow periods and evaporation rates, either exceeding the lower western end of the pit or lowering to such an extent that the backfill materials would be exposed. Modelling conducted for the hydrogeological assessment showed that the effect of evaporation over the long-term (post closure) was to lower the lake water level by only about 0.2m. The flood modelling by Spiire (refer to attached flood assessment and waterway diversion design) found that the proposed northern waterway diversion would easily accommodate a 1% AEP flood event without any overflow toward the pit. So, there will not be any external inflows to the pit during high flow periods that could potentially disturb the backfill materials below the water's surface and lead to turbid discharge from the pit lake.

The erosion and sedimentation risk at closure will be very low and there will be no legacy of the extractive industry related activity that increases the post closure risk of erosion and sedimentation on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Process water and storages

Post closure the existing large ('turkey nest') dam will have been removed due to the expanding extraction. If needed, any sediment collected in farm dams will be cleaned from the dams during the post rehabilitation monitoring phase and used to supplement site rehabilitation, prior to closure. The in pit water storage, within the initial extraction area, will be removed during the final phase of the quarry extraction by removing the retained walls of insitu material for processing.

The risk associated with process water and storage at closure will be very low and there is no activity proposed post closure on the rehabilitated land that increases this risk. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Slimes storage

Post closure the only potential (limited) slimes storage remaining within the rehabilitated landform will be under water within the in pit water storage, within the initial extraction area, which will be largely removed during the final phase of the quarry extraction. As the in pit water storage acts as a contingency slimes storage, during plant establishment and break-downs, there may be a limited volume of slimes at its bottom. When the insitu earthen walls are removed the contained slimes will mix with the much greater volume of surrounding backfill material moved into the space, this material having been deposited in the water body throughout the operation. Any slimes that have been placed within the extraction area in the water body will be at least 3m below the seasonal fluctuations (0.25m above and below) in the final, stabilised water's surface. The capacity below RL 15.5m, down to the maximum extraction depth of 30m, below ground level, is approximately 9.0 million cubic metres, which is more than necessary to contain the volume of blended materials to be backfilled into the pit, including allowance for wetting of those materials.

The hydrogeological assessment (attached, undertaken by Nolan) found that there was minimal risk of the pit lake level (RL19.3m, with seasonal fluctuation up to 0.25m), in consideration of potential inflows during high flow periods and evaporation rates, either exceeding the lower western end of the pit or lowering to such an extent that the backfill materials would be exposed. Modelling conducted for this assessment showed that the effect of evaporation over the long-term (post closure) was to lower the lake water level by only about 0.2m.The flood modelling conducted by Spiire (refer to attached flood assessment and waterway diversion design) demonstrates that the northern waterway diversion would easily accommodate a 1% AEP flood event without any overflow toward the pit, so uncontrolled floodwaters will not enter the extraction area and cannot displace any contained slimes. Neither will the backfill materials become exposed due to a drop in lake level and potentially pose a risk to the public.

There will be no slimes storage structures remaining post closure and the Rehabilitation Plan will prepare the site for a return to general farming. The slimes deposited at the bottom of the water body below the water's surface, largely as consolidated slimes blended with overburden, interburden and plant oversize / waste, has no potential to be released into the environment or pose a risk to members of the public. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Imported materials

Any materials importation will be in accordance with the Imported Materials Management Plan and so it will be extremely unlikely that such imported materials incorporated into the site rehabilitation will pose any post closure risk. During the Operational / Works phases only clean fill', recycled inert aggregates or mulch, along with quarried sands for blending, could potentially have been imported to the site and used in constructing hardstands, etc or used in site rehabilitation. Additionally, there will be no stockpiles of imported materials remaining on the site once rehabilitation is complete.

The imported materials risk at closure will be extremely low and there will be no legacy of the extractive industry related activity that increases the post closure risk of imported materials on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Unauthorised site access

Post closure the site will retain the established fencing. However, members of the public will no longer be at risk post closure as the rehabilitated landform will eliminate steep slopes and the potential for injury that will be present during the Operational / Works phases. The water filled extraction area will be analogous to the pre-existing large farm dam ('turkey nest' dam). While unauthorised site access by the public is still possible post closure, the public will not be at risk due to any past extractive industry on the site, sharing the same risk as the surrounding farm land with regard to unauthorised access. The fencing to be retained across the site is not required to manage any risk to the public.

There will be no legacy of the extractive industry related activity that poses a post closure risk to the public, due to unauthorised site access, on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Fuel, lubricants, other hazardous materials

There will be no fuel, lubricants or hazardous materials stored on site post closure in association with extractive industry activities, with the Rehabilitation Plan preparing the site for a return to general farming, including the removal of any plant and equipment. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Weeds, pests and diseases

While weeds, pest animals and/or soil-borne disease are still possible on the site post closure, they will not be as a result of the past extractive industry on the site, sharing the same risk as the surrounding farm land. All landowners have an obligation to manage weeds, pest animals and/or soil-borne disease, and the rehabilitated landform does not introduce any new or additional risk that requires any additional controls beyond the monitoring and maintenance up to site closure that is set out in the Rehabilitation Plan.

There will be no legacy of the extractive industry related activity that poses a post closure risk of weeds, pest animals and/or soil-borne disease on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Rubbish / general waste

There will be no ongoing requirement to manage rubbish and general waste post closure in association with extractive industry activities, with the Rehabilitation Plan preparing the site for a return to general farming, including the removal of any redundant / discarded plant and equipment. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Fire

While fire is still possible on the site post closure, it will not be as a result of the past extractive industry on the site, sharing the same risk as the surrounding farm land. All landowners have an obligation to manage the risk of fire, and the rehabilitated landform does not introduce any new or additional risk that requires any additional controls beyond that set out in this Risk Management Plan that apply up to site closure.

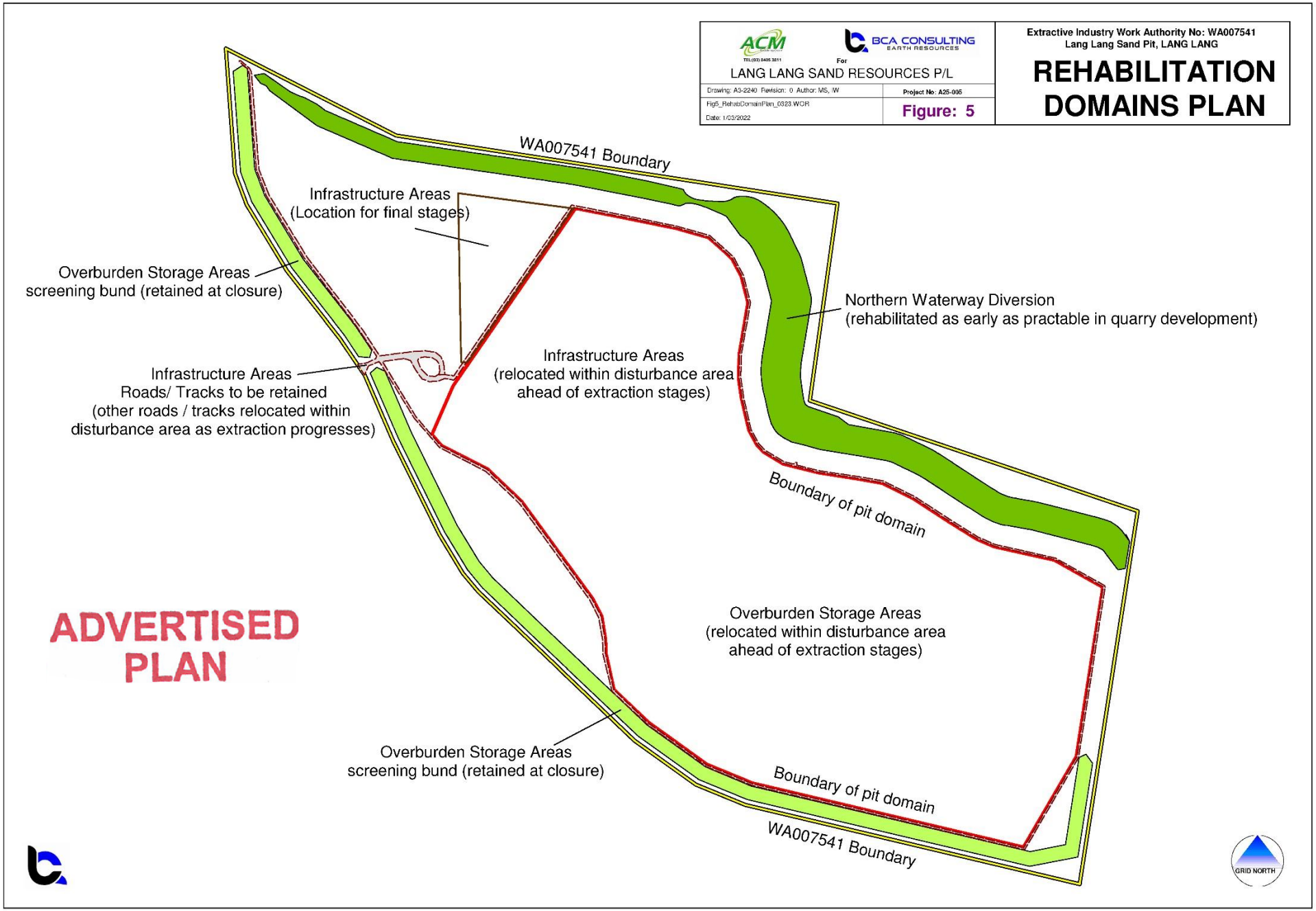
There will be no legacy of the extractive industry related activity that poses a post closure risk of fire on the rehabilitated land. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Soil biological activity

The biological activity of the soil stored in stockpiles will be maintained as much as possible to assist in achieving rehabilitation objectives, with the Rehabilitation Plan preparing the site for a return to general farming. There will be no ongoing soil storage post closure, with all stored soil used in the site rehabilitation. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.

Vehicle sediment transport

There will be no ongoing truck or vehicle movements post closure in association with extractive industry activities, with the Rehabilitation Plan preparing the site for a return to general farming. Therefore, no relevant risks will be posed to the environment, members of the public, or to land, property or infrastructure in the vicinity of the rehabilitated land that would require monitoring, maintenance, treatment or any other ongoing land management activities after closure.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Drawing: A3-2240 Revision: 0 Author: MS, IW
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Date: 1/03/2022
Project No: A25-005
Figure: 5
Extractive Industry Work Authority No: WA007541
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REHABILITATION DOMAINS PLAN
WA007541 Boundary
Infrastructure Areas
(Location for final stages)
Overburden Storage Areas
screening bund (retained at closure)
Northern Waterway Diversion
(rehabilitated as early as practable in quarry development)
Infrastructure Areas
(relocated within disturbance area
ahead of extraction stages)
Infrastructure Areas
Roads/ Tracks to be retained
(other roads / tracks relocated within
disturbance area as extraction progresses)
Boundary of pit domain
ADVERTISED PLAN
Overburden Storage Areas
(relocated within disturbance area
ahead of extraction stages)
Overburden Storage Areas
screening bund (retained at closure)
Boundary of pit domain
WA007541 Boundary
GRID NORTH

5. REHABILITATION DOMAINS TABLE

Domain: Infrastructure Areas **Objective:** At closure identified quarry infrastructure has been decommissioned and removed, with associated areas fully rehabilitated and (outside of the extraction area) suitable for use for general farming and animal husbandry.			
Subdomain	**Rehabilitation / Closure Criteria**	**Elements to be Monitored**	**Monitoring Frequency**
Administration Buildings	**Areas of Completed Progressive Rehabilitation**: Any redundant areas amongst administration office, amenities, weighbridge, small buildings and light vehicle parking infrastructure will be rehabilitated as soon as practicable. **Closure**: Administration office, amenities, weighbridge, all small buildings, light vehicle parking infrastructure and surrounding areas will be removed, areas outside extraction area rehabilitated to viable pasture. Min 90% pasture establishment. No bare patches in pasture greater than $10m^2$.	Record / photograph any redundant or derelict buildings. Record / photograph any weed infestation Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches	**Ongoing Progressive Rehabilitation** Annually review for any redundant areas that could be rehabilitated, aiding compliance with maximum disturbed area at any given time. **Post Rehabilitation Phase** Final decommissioning and removal of administration buildings Annually review adequate completion of decommissioning works. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)
Workshops, Processing / Screening Plant	**Areas of Completed Progressive Rehabilitation**: Any redundant workshop, fuel stores, oil and grease stores, and any associated buildings, containers and hardstands, will be rehabilitated as soon as practicable. **Closure**: Workshops and processing plant will be decommissioned and removed from site. No contaminated land remains on site. Workshop, fuel stores, oil and grease stores, and all associated buildings, containers and hardstands, including surrounding areas, will be removed will be rehabilitated to viable pastures. Min 90% pasture establishment No bare patches greater than $10m^2$.	Record / photograph any redundant or derelict plant or infrastructure Presence of any contamination of land, remedial works undertaken, if necessary.Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches Record / photograph any weed infestation	**Ongoing Progressive Rehabilitation** Annually review for any redundant areas that could be rehabilitated, aiding compliance with maximum disturbed area at any given time. **Post Rehabilitation Phase** Final decommissioning and removal of infrastructure Annually review adequate completion of decommissioning works. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)

Domain: Infrastructure Areas

Objective: At closure identified quarry infrastructure has been decommissioned and removed, with associated areas fully rehabilitated and (outside of the extraction area) suitable for use for general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Product Stockpile Area(s) and any Associated Hardstands	**Areas of Completed Progressive Rehabilitation**: Any redundant product stockpile areas, including any associated hardstands, will be rehabilitated as soon as practicable. **Closure**: All stockpiles removed and any hardstands outside extraction area rehabilitated to viable pastures Min 90% pasture establishment No bare patches greater than $10m^2$.	Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches Record / photograph any weed infestation	**Ongoing Progressive Rehabilitation** Annually review for any redundant areas that could be rehabilitated, aiding compliance with maximum disturbed area at any given time. **Post Rehabilitation Phase** Final removal of stockpiles and hardstands. Annually review adequate completion of decommissioning works. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)
Access Roads / Tracks	**Areas of Completed Progressive Rehabilitation**: Any redundant roads and tracks will be rehabilitated as soon as practicable. **Closure**: All redundant roads and tracks (in excess of approx. 1.8ha to be retained) rehabilitated to viable pastures. Min 90% pasture establishment. No bare patches greater than $10m^2$.	Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches Record / photograph any weed infestation 	**Ongoing Progressive Rehabilitation** Annually review for any redundant roads / tracks that could be rehabilitated, aiding compliance with maximum disturbed area at any given time. **Post Rehabilitation Phase** Final removal of roads and tracks that are not to be retained. Annually review adequate completion of road / track decommissioning works. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)
Roads / Tracks Retained post closure (see Sec 3.1)	**Closure**: Main site access and internal site access tracks (totalling approx. 1.8ha) retained. Surfaces of site access road and internal tracks maintained to standard acceptable for end use. Edge drains to roads and tracks in good repair and effectively managing surface water flows.	General description of retained road and track surfaces and edge drains Record / photograph typical sections	**Post Rehabilitation Phase** Annually for general condition.

Domain: Infrastructure Areas

Objective: At closure identified quarry infrastructure has been decommissioned and removed, with associated areas fully rehabilitated and (outside of the extraction area) suitable for use for general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Infrastructure Areas (Erosion)	**Areas of Completed Progressive Rehabilitation**: No erosion channels greater than 50mm deep and/or wide on any progressive rehabilitation. No more than 5 erosion channels greater than 20mm deep and/or wide within a 20m wide area on any progressive rehabilitation. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No erosion channels greater than 50mm deep and/or wide on any rehabilitated infrastructure areas. No more than 5 erosion channels greater than 20mm deep and/or wide within a 20m wide area on any rehabilitated infrastructure areas.	Visual inspection for erosion channels, recording depth, width and number of any channels and photographed for follow up.	**Ongoing Progressive Rehabilitation** 6 Monthly. Additional inspections after significant rainfall events. **Post Rehabilitation Phase** Y1 - 2 Monthly Y2 - 3 Monthly Y3 - 6 Monthly (and further, if required) Additional inspections after significant rainfall events.
Infrastructure Areas (Surface Water Controls)	**Areas of Completed Progressive Rehabilitation**: No turbid water leaving progressively rehabilitated infrastructure areas. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No turbid water leaving any rehabilitated infrastructure areas.	Visual inspection for water quality, specific monitoring as per Surface Water Management Plan Water quality in accordance with the Water Quality Criteria for Farm Water Supplies as per Agriculture Victoria's recommendations or specific CMA requirements	**Ongoing Progressive Rehabilitation** Monthly visual inspection Additional inspections after significant rainfall events. **Post Rehabilitation Phase** Y1 - 1 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Overburden Storage Areas

Objective: At closure all overburden stockpiles and oversize / reject dumps have been removed with associated areas fully rehabilitated and (outside of the extraction area) suitable for use for general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Overburden Mounds	**Areas of Completed Progressive Rehabilitation**: Any redundant overburden mound areas will be rehabilitated as soon as practicable. **Closure**: All overburden mounds (apart from retained perimeter bund) removed or used in rehabilitation and land rehabilitated to viable pastures. Min 90% pasture establishment No bare patches greater than $10m^2$.	General description of overburden mounds Record / photograph overburden mounds Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches	**Ongoing Progressive Rehabilitation** Annually review for any redundant areas that could be rehabilitated, aiding compliance with maximum disturbed area at any given time. **Post Rehabilitation Phase** Upon completion of rehabilitation landforming works. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)
Oversize / Reject Dumps or Imported Materials Stockpiles	**Areas of Completed Progressive Rehabilitation**: Any redundant oversize / reject dump areas or any redundant imported materials stockpile areas will be rehabilitated as soon as practicable. **Closure**: All oversize / reject dumps, including any associated hardstands, removed or used in rehabilitation and land rehabilitated to viable pastures. Any stockpiles of imported materials, including any associated hardstands, removed or used in rehabilitation and land rehabilitated to viable pastures. Min 90% pasture establishment No bare patches greater than $10m^2$.	General description of oversize / reject dumps and any imported materials stockpiles Record / photograph oversize / reject dumps and any imported materials stockpiles Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches	**Ongoing Progressive Rehabilitation** Annually review for any redundant areas that could be rehabilitated, aiding compliance with maximum disturbed area at any given time. **Post Rehabilitation Phase** Upon completion of rehabilitation landforming works, then annually. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)

Domain: Overburden Storage Areas

Objective: At closure all overburden stockpiles and oversize / reject dumps have been removed with associated areas fully rehabilitated and (outside of the extraction area) suitable for use for general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Screening Bunds Retained post closure (see Sec 3.1)	**Areas of Completed Progressive Rehabilitation**: Screening bunds graded and profiled to design. Viable pasture / screening vegetation established on bunds as soon as practicable after construction. Min 90% pasture establishment or min 80% overstorey vegetation establishment with a min 70% understorey vegetation established. No bare patches greater than $10m^2$. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: Screening bunds (approx. 6.2ha) maintained in good repair with viable vegetation established. Min 90% pasture establishment or min 80% overstorey vegetation establishment with a min 70% understorey vegetation established. No bare patches greater than $10m^2$.	Effectiveness of screening bunds in screening site operations (prior to final site rehabilitation). Visual estimate of pasture / screening vegetation establishment. General description of vegetation vitality / species survival Visual inspection for condition of swale drains. Record / photograph any bare patches Record / photograph condition of swale drains.	**Ongoing Progressive Rehabilitation** 3 Monthly following completion of construction works until initial pasture established. Then 6 monthly until vegetation fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. Annually review for any need to remediate bund faces or planted vegetation. **Post Rehabilitation Phase** Y1 – 3 Monthly Y2 – 6 Monthly Y3 - 12 Monthly (and further, if required)
Overburden Storage Areas (Associated Tracks)	**Closure**: All tracks associated with overburden storage areas rehabilitated to viable pastures. Min 90% pasture establishment No bare patches greater than $10m^2$.	Visual estimate of pasture establishment (ground cover) General description of pasture vitality Record / photograph any bare patches	**Post Rehabilitation Phase** Final removal of access tracks for overburden storage area. Annually review adequate completion of track decommissioning works. Pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)

Domain: Overburden Storage Areas

Objective: At closure all overburden stockpiles and oversize / reject dumps have been removed with associated areas fully rehabilitated and (outside of the extraction area) suitable for use for general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Overburden Storage Areas (Erosion)	**Areas of Completed Progressive Rehabilitation**: In the first year after screening bund construction: No erosion channels greater than 200mm deep and/or wide on any progressive rehabilitation. No more than 5 erosion channels greater than 150mm deep and/or wide within a 20m wide area on any progressive rehabilitation. By end of the third year after bund construction: No erosion channels greater than 50mm deep and/or wide on any progressive rehabilitation. No more than 5 erosion channels greater than 20mm deep and/or wide within a 20m wide area on any progressive rehabilitation. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No erosion channels greater than 50mm deep and/or wide on any rehabilitated overburden storage areas. No more than 5 erosion channels greater than 20mm deep and/or wide within a 20m wide area on any rehabilitated overburden storage areas.	Visual inspection for erosion channels, recording depth, width and number of any channels & photographed for follow up.	**Ongoing Progressive Rehabilitation** 6 Monthly. Additional inspections after significant rainfall events. **Post Rehabilitation Phase** Y1 - 2 Monthly Y2 - 3 Monthly Y3 - 6 Monthly (and further, if required) Additional inspections after significant rainfall events.
Overburden Storage Areas (Surface Water Controls)	**Areas of Completed Progressive Rehabilitation**: No turbid water leaving progressively rehabilitated overburden storage areas. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No turbid water leaving any rehabilitated overburden storage areas.	Visual inspection for water quality, specific monitoring as per Surface Water Management Plan Water quality in accordance with the Water Quality Criteria for Farm Water Supplies as per Agriculture Victoria's recommendations or specific CMA requirements	**Ongoing Progressive Rehabilitation** Monthly visual inspection. Additional inspections after significant rainfall events. **Post Rehabilitation Phase** Y1 – 1 Monthly Y2 – 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Northern Waterway Diversion

Objective: As early as practicable in the site development, the northern waterway diversion and associated disturbance will have been fully rehabilitated and functioning to manage diverted surface water flows, as well as being suitable at closure for land use as general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Waterway Diversion channel Retained post closure (see Sec 3.1)	**Areas of Completed Early Rehabilitation**: Waterway diversion constructed to final design and any conditions as approved by Melbourne Water. Waterway diversion functioning to manage surface water flows in accordance with Melbourne Water approval. Viable pasture established within constructed channel as soon as practicable with construction. Min 90% pasture and any other vegetation established, or in accordance with Melbourne Water approval. No bare patches greater than $5m^2$ or in accordance with Melbourne Water approval. No turbid water being generated from early rehabilitated waterway channel areas. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: Waterway diversion channel maintained in good repair with viable vegetation maintained, in accordance with Melbourne Water approval. Waterway diversion functioning to manage surface water flows in accordance with Melbourne Water approval. Min 90% pasture and any other vegetation established, or in accordance with Melbourne Water approval. No bare patches greater than $5m^2$ or in accordance with Melbourne Water approval. No turbid water being generated from waterway channel areas.	Visual inspection for performance of northern waterway diversion, specific monitoring as per Surface Water Management Plan Water quality in accordance with the Water Quality Criteria for Farm Water Supplies as per Agriculture Victoria's recommendations or specific Melbourne Water requirements Visual estimate of pasture establishment (ground cover) General description of vegetation vitality / survival Record / photograph any bare patches Record / photograph any weed infestation Record / photograph condition of northern waterway diversion channel. ADVERTISED PLAN	**Completed Early Rehabilitation** Monthly following completion of construction works until initial pasture fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. Annually review for any need to remediate waterway diversion channel or planted vegetation. Or as required by Melbourne Water approval. **Post Rehabilitation Phase** Visual inspections of condition and functioning of northern waterway diversion Y1 – 3 Monthly Y2 – 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Northern Waterway Diversion

Objective: As early as practicable in the site development, the northern waterway diversion and associated disturbance will have been fully rehabilitated and functioning to manage diverted surface water flows, as well as being suitable at closure for land use as general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Disturbed areas associated with construction of waterway diversion	**Areas of Completed Early Rehabilitation**: Viable pasture established within disturbed areas associated with construction of waterway diversion as soon as practicable after construction. Min 90% pasture and any other vegetation established, or in accordance with Melbourne Water approval. No bare patches greater than $5m^2$ or in accordance with Melbourne Water approval. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: All disturbed areas associated with construction of waterway diversion rehabilitated to viable pastures, or in accordance with Melbourne Water approval. Min 90% pasture and any other vegetation established, or in accordance with Melbourne Water approval. No bare patches greater than $5m^2$ or in accordance with Melbourne Water approval.	Visual estimate of pasture establishment (ground cover) General description of vegetation vitality / survival Record / photograph any bare patches Record / photograph any weed infestation	**Completed Early Rehabilitation** Monthly following completion of construction works until initial pasture fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. Annually review for any need to remediate waterway diversion or planted vegetation. **Post Rehabilitation Phase** Pasture and other vegetation establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)

Domain: Northern Waterway Diversion

Objective: As early as practicable in the site development, the northern waterway diversion and associated disturbance will have been fully rehabilitated and functioning to manage diverted surface water flows, as well as being suitable at closure for land use as general farming and animal husbandry.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Northern Waterway Diversion (Erosion)	**Areas of Completed Early Rehabilitation**: Erosion to be minimised for all disturbance areas in relation to construction of waterway diversion as soon as practicable after construction, or in accordance with Melbourne Water approval. Turbid water being generated as a result of constructing northern waterway diversion to be minimised as soon as practicable after construction, or in accordance with Melbourne Water approval. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No erosion occurring within original disturbance area for construction of waterway diversion. No turbid water being generated from original disturbance area for northern waterway diversion.	Visual inspection for water quality, specific monitoring as per Surface Water Management Plan Visual inspection for erosion channels, recording depth, width and number of any channels & photographed for follow up. Water quality in accordance with the Water Quality Criteria for Farm Water Supplies as per Agriculture Victoria's recommendations or specific Melbourne Water requirements	**Completed Early Rehabilitation**: Monthly following completion of construction works until initial pasture fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. Annually review for any need to remediate waterway diversion. **Post Rehabilitation Phase** Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)

Domain: Pit

Objective: At closure above water quarry batters fully rehabilitated, with established healthy vegetation cover, fringing an established, healthy pit lake that forms a safe, stable and sustainable landform.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Terminal Batters (Design and Construction)	**Areas of Completed Progressive Rehabilitation**: Upper terminal batters cut not steeper than 1V:3H (18 deg), with 1V:5H beaching slopes (10m wide), in progressively rehabilitated areas. Lower terminal batters (below final water level) cut not steeper than 1V:2H (27 deg) in progressive rehabilitated areas. Crest diversion drains constructed and functioning to manage surface water flows in progressively rehabilitated areas. Safety bund established at crest in progressively rehabilitated areas. Viable pasture initially established on upper terminal batters, as soon as practicable, in progressively rehabilitated areas. Min 90% initial pasture establishment on progressively rehabilitated areas. No bare patches greater than $10m^2$ on progressively rehabilitated areas. Fencing maintained to exclude stock access to upper batters, where necessary, while pasture is being established. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: Rehabilitated batters established in accordance with the Rehabilitation Plan, are stable and likely to remain stable in long-term. Crest diversion drains functioning to manage surface water and do not require maintenance. Raised ground (former hardstand) linking to bund (~1m high) established around lower western crest of pit to provide increased freeboard. Upper terminal batters and beaching zones have established long-term vegetation (see below).	Effectiveness of surface water diversion drains and bunding at extraction crest. Visual assessment of rehabilitated terminal batters, looking for presence/absence of landform slumping, cracks or movement Effectiveness of any temporary fencing to control stock and feral animals until vegetation established Visual estimate of pasture establishment (ground cover) and visual impact remediation General description of pasture vitality Record / photograph condition of surface water diversion drains and bunding. Record / photograph condition of rehabilitated terminal batters. Record / photograph any bare patches Record / photograph any weed infestation Rehabilitated landform constructed in accordance with the Rehabilitation Plan	**Ongoing Progressive Rehabilitation** Annually review for any terminal batters that could be rehabilitated. 3 Monthly following completion of earthworks until initial pasture established. Then 6 monthly until long-term vegetation fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. **Post Rehabilitation Phase** Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Pit

Objective: At closure above water quarry batters fully rehabilitated, with established healthy vegetation cover, fringing an established, healthy pit lake that forms a safe, stable and sustainable landform.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Upper Terminal Batters (Erosion)	**Areas of Completed Progressive Rehabilitation**: Pasture or brush matting initially established on erodible materials, as soon as practicable, on progressively rehabilitated upper batters. <u>In the first year after rehab. batter earthworks:</u> No erosion channels greater than 200mm deep and/or wide on any progressive rehabilitation. No more than 5 erosion channels greater than 150mm deep and/or wide within a 20m wide area on any progressive rehabilitation. <u>By the end of the third year after earthworks:</u> No erosion channels greater than 50mm deep and/or wide on any progressive rehabilitation. No more than 5 erosion channels greater than 20mm deep and/or wide within a 20m wide area on any progressive rehabilitation Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No erosion channels greater than 50mm deep and/or wide on any rehabilitated upper batters. No more than 5 erosion channels greater than 20mm deep and/or wide within a 20m wide area on any rehabilitated upper batters.	Visual inspection for erosion channels, recording depth, width and number of any channels and photographed for follow up.	**Ongoing Progressive Rehabilitation** 3 Monthly following completion of earthworks until initial pasture established. Then 6 monthly until long-term vegetation fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. Annually review for any need to remediate areas of erosion. **Post Rehabilitation Phase** Y1 - 2 Monthly Y2 - 3 Monthly Y3 - 6 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Pit

Objective: At closure above water quarry batters fully rehabilitated, with established healthy vegetation cover, fringing an established, healthy pit lake that forms a safe, stable and sustainable landform.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Upper Terminal Batters (Native Vegetation, where established - Trees / Shrubs)	**Areas of Completed Progressive Rehabilitation**: Viable vegetation established on upper batters and beaching zones in progressively rehabilitated areas. Min 80% overstorey vegetation establishment, with a min 70% understorey vegetation established, on progressively rehabilitated upper batters. Min 70% establishment of suitable vegetation on progressively rehabilitated beaching zones. No bare patches greater than $10m^2$ on progressively rehabilitated batters. Fencing maintained to exclude stock access to upper batters, where necessary, while vegetation is being established. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: Viable vegetation established on upper batters and beaching zones. Min 80% overstorey vegetation establishment, with a min 70% understorey vegetation established, in established plantings on upper batters. Min 70% establishment of suitable vegetation on beaching zones. No bare patches greater than $10m^2$ in established plantings.	Visual estimate of vegetation establishment (canopy cover) General description of vegetation vitality / species survival Record / photograph any bare patches	**Ongoing Progressive Rehabilitation** 3 Monthly until initial pasture established on disturbed areas. Then 6 monthly until trees / shrubs fully established and erosion minimised. Additional inspections after significant rainfall events until vegetation fully established. Annually review for any need to remediate planted vegetation. **Post Rehabilitation Phase** Y1 - 3 Monthly Y2 - 6 Monthly Y3 -12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Pit

Objective: At closure above water quarry batters fully rehabilitated, with established healthy vegetation cover, fringing an established, healthy pit lake that forms a safe, stable and sustainable landform.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Pit Floor (Design and Construction)	**Areas of Completed Progressive Rehabilitation**: Material deposited on floor of pit (overburden / interburden / plant waste with blended consolidated slimes) remains at least 3.5m below water's surface at stabilised mean level. Any necessary remedial redistribution of material undertaken as soon as practicable. **Closure**: Pit floor rehabilitated in accordance with the Rehabilitation Plan, is stable and likely to remain stable in the long-term. Material deposited on floor of pit (overburden / interburden / plant waste with blended consolidated slimes) remains at least 3.5m below water's surface at stabilised mean level. Walls of insitu material retained around the in pit water storage (initial extraction area) largely removed – remaining material at least 3.5m below water's surface at stabilised mean level.	Depth of material deposited on floor of the pit and covering of terminal batters Rehabilitation landform constructed in accordance with the Rehabilitation Plan	**Ongoing Progressive Rehabilitation** 3 Monthly for progressively backfilled areas, until maximum height and distribution of material reached. Annually review for any under-utilised pit floor areas that could be further backfilled. **Post Rehabilitation Phase** Annually review depth of deposited material below water level and the distribution of material.

Domain: Pit

Objective: At closure above water quarry batters fully rehabilitated, with established healthy vegetation cover, fringing an established, healthy pit lake that forms a safe, stable and sustainable landform.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Pit Lake	**Ongoing Progressive Rehabilitation**: Ongoing monitoring of pit water and groundwater in accordance with Groundwater Management Plan Management of acidic return water from plant, water supply and runoff from stockpiles ensures that pit water does not become acidified. If increased salinity and/or dropping water levels are detected during operations, then peak surface water flows directed into the pit (with appropriate authorisation). If any glue-green algae is detected during operations then copper sulphate dosing utilised to limit any further blooms. **Major Reviews of Pit Lake Design**: Completed reassessment of final stabilised water level in pit, confirming level about RL19.3m or minor change easily accommodated in design. Make any necessary changes to the beaching zones in accordance with reassessment. Groundwater Management Plan revised as result of reassessment of hydrogeological conditions. **Closure**: Any required modifications or remedial actions implemented following findings of Major Reviews of Pit Lake Design (above) Pit prepared for establishment of a healthy and sustainable pit lake with turbidity, pH and salinity stabilised within acceptable ranges and no blue-green algal blooms present. Water quality comparable with pre-extraction groundwater quality and consistent with EPA beneficial use segment	Pit water level Water quality of pit water Groundwater level in monitoring bores and water supply bores Water quality in groundwater monitoring bores and water supply bores Water quality in accordance with the Water Quality Criteria for Farm Water Supplies as per Agriculture Victoria's recommendations or specific CMA requirements Rehabilitation landform constructed in accordance with the Rehabilitation Plan	**Ongoing Progressive Rehabilitation** Water level and water quality monitoring in accordance with Monitoring Program in the Groundwater Management Plan Annually review water level, water quality and health of water body. **Post Rehabilitation Phase** Water level and water quality monitoring in accordance with Monitoring Program in the Groundwater Management Plan, or as revised by reassessment during Major Reviews of Pit Lake Design. Annually review water level, water quality and health of water body.

Domain: Pit

Objective: At closure above water quarry batters fully rehabilitated, with established healthy vegetation cover, fringing an established, healthy pit lake that forms a safe, stable and sustainable landform.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Upper Terminal Batters (Surface Water Controls)	**Areas of Completed Progressive Rehabilitation**: Surface water diversion drains functioning to divert surface water flows away from progressively rehabilitated extraction areas. No turbid water leaving progressively rehabilitated extraction areas. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: No turbid water leaving progressively rehabilitated extraction areas. Surface water diversion drains functioning to divert surface water flows away from all rehabilitated extraction areas and do not require maintenance. No turbid water leaving progressively rehabilitated extraction areas.	Visual inspection for performance of diversion drainage, specific monitoring as per Surface Water Management Plan Water quality in accordance with the Water Quality Criteria for Farm Water Supplies as per Agriculture Victoria's recommendations or specific CMA requirements	**Ongoing Progressive Rehabilitation** Visual inspections of surface water controls for progressively rehabilitated areas Y1 - 1 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events. **Post Rehabilitation Phase** Visual inspections of surface water controls Y1 - 1 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Residual Work Authority Area

Objective: At closure site fencing, weeds, pest animals and surface water flows in the remainder of the Work Authority will have met required standards and will not be adversely affected by past quarry operations and associated rehabilitation works.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Residual Area (Site Fencing) All retained post closure (see Sec 3.1)	**Areas of Completed Progressive Rehabilitation**: Integrity / suitability for purpose of Work Authority perimeter fencing and stock-proof fencing. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: Not required for site security – standard stock-proof fencing. The site perimeter and internal fencing (including fence established behind the crest of terminal faces) will be retained upon closure and must be suitable for end land uses. Integrity / suitability at closure for end land uses, without requiring maintenance.	Condition and effectiveness of fencing (stock proof fencing) in preventing access while works are still being undertaken, and while vegetation is being established. Condition and suitability of perimeter fencing and internal fencing for end land uses.	**Ongoing Progressive Rehabilitation** Annually review for any need to remediate site fencing. **Post Rehabilitation Phase** Annually review for suitability for end land uses.
Residual Area (Weeds)	**Areas of Completed Progressive Rehabilitation**: Weeds less than 5% total ground cover within any specific progressively rehabilitated areas Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: Weeds less than 5% total ground cover within any specific areas	Visual estimate of weed coverage Record / photograph any weed infestation	**Ongoing Progressive Rehabilitation** 6 monthly inspections for any weeds within the Work Authority area. **Post Rehabilitation Phase** 6 monthly for any weeds within the Work Authority area.
Residual Area (Pest Animals)	**Areas of Completed Progressive Rehabilitation**: Local guidelines are met for pest animals in any progressively rehabilitated areas No visible impact of pest animals on land for any progressively rehabilitated areas Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure:** Local guidelines are met for pest animals No visible impact of pest animals on land	Evidence of pest animals (photograph) Assessment of numbers (if possible)	**Ongoing Progressive Rehabilitation** 6 monthly inspections for any pest animals within the Work Authority area. **Post Rehabilitation Phase** 6 monthly for any pest animals within the Work Authority area

Domain: Residual Work Authority Area

Objective: At closure site fencing, weeds, pest animals and surface water flows in the remainder of the Work Authority will have met required standards and will not be adversely affected by past quarry operations and associated rehabilitation works.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Residual Area (Diversion Drains and Diversion Bunds) Retained post closure (see Sec 3.1)	**Areas of Completed Progressive Rehabilitation**: Surface water diversion drains and bunds in place and functioning to manage surface water flows for progressively rehabilitated areas. Surface water flows satisfactorily controlled to prevent erosion for progressively rehabilitated areas. Any necessary remedial rehabilitation undertaken as soon as practicable. **Closure**: All retained surface water diversion drains and bunds in place and functioning to manage surface water flows and do not require maintenance. Surface water flows satisfactorily controlled to prevent erosion across the site.	Visual inspection for performance of diversion drains and diversion bunds to ensure that no sediment is leaving the site, specific monitoring as per Surface Water Management Plan. Record / photograph condition of surface water diversion drains and diversion bunds.	**Ongoing Progressive Rehabilitation** Visual inspections of diversion drains and bunds for progressively rehabilitated areas Y1 - 1 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events. **Post Rehabilitation Phase** Visual inspections of diversion drains and bunds Y1 - 1 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) Additional inspections after significant rainfall events.

Domain: Residual Work Authority Area

Objective: At closure site fencing, weeds, pest animals and surface water flows in the remainder of the Work Authority will have met required standards and will not be adversely affected by past quarry operations and associated rehabilitation works.

Subdomain	Rehabilitation / Closure Criteria	Elements to be Monitored	Monitoring Frequency
Residual Area (Grazing Land)	**Areas of Completed Progressive Rehabilitation**: Any necessary remedial rehabilitation of grazing land in residual Work Authority areas undertaken as soon as practicable. Pasture is viable and in good condition for any remedial rehabilitation of grazing land in residual Work Authority areas. Min 90% pasture establishment for any remedial rehabilitation of grazing land in residual Work Authority areas. No bare patches greater than $10m^2$ for any remedial rehabilitation of grazing land in residual Work Authority areas. **Closure**: Pasture viable and in good condition for grazing land in residual Work Authority areas. Min 90% pasture cover for grazing land in residual Work Authority areas. No bare patches greater than $10m^2$ for grazing land in residual Work Authority areas.	Visual estimate of pasture cover General description of pasture vitality Record / photograph any bare patches	**Ongoing Progressive Rehabilitation** Annual inspection for any need to remediate grazing land in residual Work Authority areas. For any remedial pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required) **Post Rehabilitation Phase** Annual inspection for any need to remediate grazing land in residual Work Authority areas. For any remedial pasture establishment Y1 - 3 Monthly Y2 - 6 Monthly Y3 - 12 Monthly (and further, if required)

6. REHABILITATION MANAGEMENT

6.1. Roles and Responsibilities

The Work Authority holder will have the responsibility to ensure compliance with this Rehabilitation Plan throughout the life of the quarry and period of rehabilitation monitoring until the closure criteria are met and the rehabilitation bond is returned.

This responsibility will be delegated to the Quarry Manager (or their nominated representative) who will be responsible for managing the implementation of the Rehabilitation Plan, including:

- Delegating tasks associated with this Rehabilitation Plan where necessary.
- Providing adequate resources to implement this Rehabilitation Plan; and
- Providing adequate training to employees and contractors regarding their requirements under this Rehabilitation Plan.

6.2. Documentation

All monitoring outcomes, including any visual inspection worksheets/reports, testing or analysis, specialist reports, etc, will be recorded and retained at the quarry offices for periodic review. Where required or as appropriate this information will be available to Earth Resources Regulation or other relevant authorities.

6.3. Review

This Rehabilitation Plan will be subject to annual reviews, including when the ground is broken for each stage presented in the Site Layout Plan, with a comprehensive review undertaken prior to breaking ground in Stage 4. The purpose of the review is to ensure the Rehabilitation Plan adequately addresses current community expectations and Earth Resources Regulation requirements. As a result of the comprehensive review, some 5-8 years before the anticipated cessation of resource extraction, the Rehabilitation Plan may be revised and may initiate a Work Plan variation, or other approval process as deemed appropriate at that point in time.

Community consultation with regards to the site end use and Rehabilitation objectives will be sought via the Community Engagement process, and will be a permanent agenda item on all Community Engagement meetings, mail outs or other forms of consultation.

The Rehabilitation Plan reviews will take into consideration:

- any feedback from the community consultation process,
- changes that may have occurred on site,
- the results of any monitoring,
- advice from any specialist,
- the effectiveness or otherwise of any progressive rehabilitation and
- any directives by ERR.

Depending on the nature of any changes to the plan discussions will be undertaken with Earth Resources Regulation to determine if there is any significant change in the risk profile of the site to determine if a variation or other approval process is required. This decision will be assessed at the time of the review and the most appropriate pathway undertaken.